



City Council Meeting
Temple Terrace, Florida
Tuesday, September 15, 2026
6:00 PM
City Hall Council Chambers

Agenda

- 1. Call to Order**
- 2. Invocation**
- 3. Pledge of Allegiance to the Flag**
- 4. Historical Fact**
- 5. Recognition and Proclamations**
 - 5.A. Employee of the Month - August
 - 5.B. Proclamation and Certificates of Recognition for King High School Math Students
 - 5.C. Proclamation for Fire Prevention Week 2026
- 6. Presentations**
- 7. Board Appointments**
 - 7.A. School Support Committee - One Regular Reappointment
 - 7.B. Bicycle/Pedestrian Advisory Committee - One Alternate Reappointment
 - 7.C. Municipal Code Enforcement Board - One Regular Appointment
 - 7.D. River Watch Task Force - One Regular Appointment
- 8. Consideration of Minutes from Previous Meetings**
 - 8.A. Approval of the September 1, 2026 City Council Meeting Minutes
- 9. Public Comment**

Persons Wishing to Heard on Items on the Consent Agenda or Non-Agenda Items. (The public may comment on an agenda item during the public comment period for each agenda action item. There will be a 30-minute time limit for all public comment to be continued at the end of the meeting if more time is needed):

NOTE: A three-minute time limit will be imposed on ALL comments from the public, regardless of the subject matter. Individual members of the public who are present in the audience may designate in writing a representation spokesperson to speak on their behalf and thereby relinquish their time to that spokesperson. Thereafter, they may not be heard on the agenda item for which designation was made. The representative spokesperson shall be allowed to speak for 1 minute for each such designation up to a maximum of 10 minutes. Appropriate dress when appearing before the Mayor and City Council is appreciated. Cell phones must be silenced while in the Council Chambers.

10. Communications and Petitions

11. Consent Agenda

11.A. Resolution Approving the Fiscal Year 2027 Interlocal Agreement for Distribution of Enhanced 911 Emergency Telephone Service Fee Revenues
A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF TEMPLE TERRACE, FLORIDA, APPROVING THE FISCAL YEAR 2026-2027 INTERLOCAL AGREEMENT BETWEEN THE CITY OF TEMPLE TERRACE AND HILLSBOROUGH COUNTY; PROVIDING FOR THE TERMS AND CONDITIONS FOR DISBURSEMENT AND EXPENDITURE OF ENHANCED 9-1-1 EMERGENCY TELEPHONE SERVICE FEE REVENUES IN THE AMOUNT OF \$134,522.00; DESIGNATING \$68,883.36 FOR NON-ADDITIONAL EXPENDITURES FROM ACCOUNT 001-1440-521.12-11 BY USING PROJECT CODE "911;" DESIGNATING THE REMAINING \$65,638.64 AS RESTRICTED 9-1-1 REVENUE IN ACCOUNT 001-0000-281.00-00; AUTHORIZING THE CITY MANAGER TO EXECUTE THE INTERLOCAL AGREEMENT ON BEHALF OF THE CITY; PROVIDING AN EFFECTIVE DATE.

11.B. Resolution Approving Interlocal Agreement with Hillsborough County for Landscape Maintenance of Certain Medians within 56th Street from Fowler Avenue to Fletcher Avenue
A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF TEMPLE TERRACE, FLORIDA, APPROVING AND AUTHORIZING THE EXECUTION OF AN INTERLOCAL AGREEMENT BETWEEN THE CITY OF TEMPLE TERRACE AND HILLSBOROUGH COUNTY FOR LANDSCAPE MAINTENANCE OF CERTAIN MEDIANS WITHIN 56TH STREET FROM FOWLER AVENUE TO FLETCHER AVENUE; AUTHORIZING THE CITY MANAGER TO EXECUTE THE AGREEMENT; PROVIDING AN EFFECTIVE DATE.

11.C. Resolution Approving an Interlocal Agreement for School Facilities Planning, Siting, and Concurrency
A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF TEMPLE TERRACE, FLORIDA, APPROVING THE REVISION OF THE INTERLOCAL AGREEMENT FOR SCHOOL FACILITIES PLANNING, SITING, AND CONCURRENCY BETWEEN THE CITY, THE SCHOOL BOARD OF HILLSBOROUGH COUNTY, AND THE HILLSBOROUGH COUNTY CITY-COUNTY PLANNING COMMISSION; PROVIDING AN EFFECTIVE DATE.

11.D. Resolution Approving City-Wide Paving Projects
A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF TEMPLE TERRACE, FLORIDA, APPROVING A WORK AUTHORIZATION ORDER

WITH SUPERIOR ASPHALT, INC. FOR CITY OF TEMPLE TERRACE ROADWAY RESURFACING PROJECTS FOR A TOTAL PROJECT AMOUNT OF \$1,261,008.34; AUTHORIZING THE CITY MANAGER TO EXECUTE ALL RELATED DOCUMENTS; PROVIDING FUNDING FROM THE STREET IMPROVEMENT FUND; PROVIDING AN EFFECTIVE DATE.

12. Public Hearings, Ordinances, and Resolutions

- 12.A. Public Hearing and First Reading of an Ordinance Approving the Voluntary Annexation (ANX-26-02) of Approximately 12.29 Acres of Real Property (Folio No. 061363-0100) Located at the Southeast Quadrant of US Highway 301 and Harney Road

AN ORDINANCE OF THE CITY OF TEMPLE TERRACE, FLORIDA, APPROVING THE VOLUNTARY ANNEXATION (ANX-26-02) OF ONE PARCEL TOTALING 12.29± ACRES OF REAL PROPERTY LOCATED SOUTH OF HARNEY ROAD AND EAST OF U.S. HIGHWAY 301, WITH FOLIO NUMBER 061363-0100, LYING WITHIN THE UNINCORPORATED AREA OF HILLSBOROUGH COUNTY; DIRECTING THAT THIS ORDINANCE BE RECORDED WITH THE CLERK OF CIRCUIT COURT OF HILLSBOROUGH COUNTY; DIRECTING THAT THE CORPORATE BOUNDARIES OF THE CITY BE REDEFINED TO INCLUDE THE ANNEXED PARCEL; PROVIDING FOR SEVERABILITY; PROVIDING FOR CORRECTION OF TYPOGRAPHICAL ERRORS; REPEALING ALL ORDINANCES OR PARTS OF ORDINANCES IN CONFLICT HEREWITH; PROVIDING FOR AN EFFECTIVE DATE.

- 12.B. Public Hearing and First Reading of an Ordinance Approving Comprehensive Plan Future Land Use Amendment, Case CPA-26-01 for Folio No. 061363-0100 from Hillsborough County Community Mixed Use-12 (CMU-12) to Temple Terrace Community Mixed Use-12 (CMU-12)

AN ORDINANCE OF THE CITY OF TEMPLE TERRACE, FLORIDA, APPROVING COMPREHENSIVE PLAN AMENDMENT PETITION CPA 26-01 (TT/CPA-26-01) TO CHANGE THE “IMAGINE 2040: TEMPLE TERRACE COMPREHENSIVE PLAN” FUTURE LAND USE MAP FROM HILLSBOROUGH COUNTY COMMUNITY MIXED USE-12 (CMU-12) TO TEMPLE TERRACE COMMUNITY MIXED USE-12 (CMU-12) FOR ONE PARCEL OF LAND TOTALING 12.29± ACRES OF REAL PROPERTY LOCATED SOUTH OF HARNEY ROAD AND EAST OF U.S. HIGHWAY 301 (US 301), WITH FOLIO NUMBER 061363-0100, LYING WITHIN THE CITY OF TEMPLE TERRACE, LEGALLY DESCRIBED IN EXHIBIT "A" ATTACHED HERETO, ; PROVIDING FOR AMENDMENT OF THE OFFICIAL FUTURE LAND USE MAP OF THE CITY; PROVIDING FOR SEVERABILITY; PROVIDING FOR CORRECTION OF TYPOGRAPHICAL ERRORS; REPEALING ALL ORDINANCES OR PARTS OF ORDINANCES IN CONFLICT HEREWITH; PROVIDING AN EFFECTIVE DATE.

- 12.C. Resolution Accepting the City of Temple Terrace Water Treatment Facilities Master Plan Prepared by CHA Consulting, Inc.

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF TEMPLE TERRACE, FLORIDA, ACCEPTING THE CITY OF TEMPLE TERRACE WATER TREATMENT FACILITIES MASTER PLAN PREPARED BY CHA CONSULTING, INC.; RECOGNIZING THE MASTER PLAN AS A LONG-

RANGE PLANNING AND CAPITAL IMPROVEMENT DOCUMENT FOR THE CITY'S POTABLE WATER TREATMENT FACILITIES; PROVIDING FOR COORDINATION WITH APPLICABLE REGULATORY AGENCIES; PROVIDING THAT ACCEPTANCE OF THE MASTER PLAN DOES NOT CONSTITUTE REGULATORY APPROVAL OR AUTHORIZATION TO CONSTRUCT ANY INDIVIDUAL PROJECT; PROVIDING AN EFFECTIVE DATE.

12.D. Resolution Directing the City Manager to Implement Water Treatment Plant Upgrades Including a Nanofiltration System

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF TEMPLE TERRACE, FLORIDA, DIRECTING THE CITY MANAGER TO COMMENCE WATER TREATMENT PLANT UPGRADES AS RECOMMENDED BY CHA CONSULTING, INC.'S 2026 WATER TREATMENT FACILITIES MASTER PLAN INCLUDING THE IMPLEMENTATION OF A NANOFILTRATION SYSTEM TO SOFTEN THE UTILITY'S WATER AND REDUCE PFAS; PROVIDING AN EFFECTIVE DATE.

13. Council Business

14. New Business and Board Reports

15. City Manager's Report

16. City Attorney's Report

17. Persons Wishing to be Heard on Items NOT Listed on the Agenda (continued if necessary):

Americans for Disabilities Act

The City of Temple Terrace is committed to making our website accessible to all users, including those with disabilities. While we strive to adhere to the accepted guidelines and standards for accessibility and usability, it is not always possible as it relates to attachments on the agenda that don't meet Federal standards for Americans with Disabilities Act (ADA) compliance. Please call the City Clerk's office at (813) 506-6440 for information on how to access these documents.

Adjournment

The Temple Terrace City Council meets the first and third Tuesday of each month and the meetings held at City Hall are broadcast "live" on Spectrum Channel 641 and Frontier Channel 39, beginning at 6:00 p.m. A rebroadcast of the latest meeting (or a taped version of the meeting if held at locations other than City Hall) can be seen on Wednesday and Friday at 2:00 p.m. and on Monday and Thursday at 7:00 p.m. Please be advised that there may be a scheduling delay in the rebroadcast of meetings held in locations other than City Hall, such as the Lightfoot Center, to allow time for the camera footage to be reformatted for broadcast. Meetings can also be viewed on the City's official YouTube channel at <https://youtube.com/user/cityoftempleterrace>.

Minutes of the City Council meetings can be obtained from the City Clerk's office. The meetings are recorded, but the minutes are not transcribed verbatim. Persons requiring a verbatim transcript may make arrangements with the City Clerk to duplicate the recordings or arrange to have a court reporter present at the meeting. The cost of duplication and/or court reporter will be at the expense of the requesting party.

Persons who wish to appeal any decision made by the City Council with respect to any matter considered at this meeting will need a record of the proceedings, and for such purpose may need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is based.

In accordance with Section 282.26, Florida Statutes, persons with disabilities needing special accommodations to participate in this meeting should contact the Mayor through the City Clerk's office no later than 5:00 p.m. two business days prior to the meeting.

Item Cover Page

City Council Item Report

Date: September 15, 2026
From: Jeannie Barlow, Senior Executive Assistant
Item Type: Recognitions/Proclamations
Subject: Employee of the Month - August
Presenter: Andy Ross, Mayor

Recommendation:

Discussion:

We are proud to recognize Laura Guerrero as our August Employee of the Month. Laura celebrated her one-year anniversary with the City this past July, and in that short time, she has made a significant and lasting impact not only within the Human Resources Department but across our entire organization.

One of Laura's most notable accomplishments has been transforming the Leadership and Management Program from an initial idea into a highly successful initiative that develops and supports our organization's future leaders. Through her dedication and creativity, she has built a strong network of employees across various departments, opening new doors for cross-functional collaboration and professional development.

In addition to this program, Laura played a lead role alongside her intern, Jenny Pham, in redesigning and modernizing departmental SharePoint sites into professional, organized, and user-friendly hubs for City staff. Laura demonstrated an impressive level of independence throughout this project by researching solutions, learning new functionalities, and taking complete ownership of how best to organize and present departmental information.

This initiative proved to be an invaluable asset to our IT Department. With several major Citywide technology implementations currently underway, IT simply did not have the bandwidth to tackle this project for months, or potentially even a year. Laura's willingness to step up allowed this vital modernization effort to move forward seamlessly without pulling critical IT resources away from other high-priority City projects.

Laura consistently goes above and beyond, approaching every challenge with a

genuine commitment to helping others succeed. Her proactive mindset and dedication perfectly reflect our organization's core values, making her a true representation of the future of our City.

Congratulations to Laura Guerrero on being selected as the City's August Employee of the Month!

Resolution/Ordinance Information:

Appropriation Code:

Requirements:

Cost:

Attachments:

None

Item Cover Page

City Council Item Report

Date: September 15, 2026

From: Jeannie Barlow, Senior Executive Assistant

Item Type: Recognitions/Proclamations

Subject: Proclamation and Certificates of Recognition for King High School Math Students

Presenter: Andy Ross, Mayor

Recommendation:

Discussion:

We are proud to recognize 15 outstanding students from King High School who represented the Tampa Bay community at the Mathematics Association of America's Mu Alpha Theta National Convention in Texas, competing among the nation's top high school mathematicians. The students achieved remarkable results, earning top 10 national finishes in every team division: 5th in the Mu Division, 9th in the Alpha Division, and 10th in the Theta Division. The Mu Division calculus team's 5th-place finish also earned King High School recognition as the highest-ranking public school calculus team in the country. In individual competition, Alexander Heidrick placed 10th in the Alpha Division and Aiden Mathew placed 17th in the highly competitive Mu Division.

These accomplishments reflect the students' extraordinary talents, hard work, and dedication, as well as the commitment of their teachers, families, and the entire King High School community to fostering excellence in mathematics and critical thinking. The team's historic national success would not have been possible without the time, energy, and leadership of team coaches Jennifer Hall and Jason Consolo, whose unwavering guidance and mentorship supported these students every step of the way.

Resolution/Ordinance Information:

Appropriation Code:

Requirements:

Cost:

Attachments:

1. Honoring King High School Mathematics Students Proclamation

PROCLAMATION



TEMPLE TERRACE

Amazing City. Since 1925.

WHEREAS, the City of Temple Terrace recognizes and celebrates the outstanding achievements of students who demonstrate exceptional talent, dedication, and commitment to academic excellence; and

WHEREAS, fifteen talented students from King High School recently represented their school at the Mathematics Association of America's Mu Alpha Theta National Convention in Texas, one of the nation's premier high school mathematics competitions; and

WHEREAS, competing against the finest mathematics students from across the country, the King High School students demonstrated extraordinary skill, perseverance, and teamwork, earning top 10 national finishes in every team division; and

WHEREAS, the King High School Mu Division team earned 5th place nationally, the Alpha Division team earned 9th place nationally, and the Theta Division team earned 10th place nationally; and

WHEREAS, the Mu Division calculus team's fifth-place national finish earned King High School recognition as the highest-ranking public school calculus team in the nation; and

WHEREAS, the City of Temple Terrace is proud to recognize Chan-Young Park, Mitul Shukla, Muhammad Taha, Ingrid Curtis, Alexander Heidrick, Yooan Kim, Anderson Lee, Alexia Steele, Lucas Chen, Jerry Lee, Frederick Li, Aiden Mathew, Satchel Puhr, Alice Hu, and Sean Nishihori for their remarkable accomplishments, while also honoring the extraordinary leadership and commitment of their coaches, Jennifer Hall and Jason Consolo; and

WHEREAS, the accomplishments of these exceptional students bring great pride to the Tampa Bay community and serve as an inspiration to students throughout Florida and across the nation.

NOW, THEREFORE, I, ANDREW ROSS, by virtue of the authority vested in me as Mayor of the City of Temple Terrace, Florida, do hereby recognize and congratulate the outstanding mathematics students of King High School for their exceptional achievements at the Mathematics Association of America's Mu Alpha Theta National Convention and commend them for representing their school and community with distinction.

Honoring King High School Mathematics Students



IN WITNESS WHEREOF, I have hereunto set my hand and caused the Great Seal of the CITY OF TEMPLE TERRACE to be affixed, at TEMPLE TERRACE, FLORIDA, this 15th day of September 2026.

X

Andrew Ross
Mayor

Item Cover Page

City Council Item Report

Date: September 15, 2026
From: Brianne Holacik, Executive Assistant
Item Type: Recognitions/Proclamations
Subject: Proclamation for Fire Prevention Week 2026
Presenter: Andy Ross, Mayor

Recommendation:

To present a proclamation recognizing October 4 -10, 2026, as Fire Prevention Week in the City of Temple Terrace.

Discussion:

Fire Prevention Week is observed annually to promote fire safety awareness and education throughout the community. The 2026 theme, “Charge into Fire Safety: Safe Charging Is a Superpower,” focuses on the importance of safely using and charging lithium-ion battery-powered devices.

The Temple Terrace Fire Department encourages residents to practice safe charging habits, use manufacturer-approved charging equipment, recognize warning signs such as overheating or swelling, and follow proper safety precautions when using lithium-ion battery-powered devices.

As part of Fire Prevention Week, the Temple Terrace Fire Department will host its Annual Open House at Fire Station 2 on Saturday, October 10, 2026, from 9:00 a.m. – 1:00 p.m., providing residents and families an opportunity to meet our firefighters and learn more about fire prevention and safety.

Resolution/Ordinance Information:

Appropriation Code:

Requirements:

Cost:

Attachments:

1. Fire Prevention Week 2026 Proclamation

PROCLAMATION



TEMPLE TERRACE

Amazing City. Since 1925.

WHEREAS, fire prevention and safety education are essential to protecting the lives and property of residents in the City of Temple Terrace; and

WHEREAS, lithium-ion batteries power many of the devices used in our homes every day, including smartphones, tablets, laptops, power tools, e-bikes, e-scooters, and toys, and can pose a fire risk when damaged, improperly used, or improperly charged; and

WHEREAS, residents can help reduce the risk of lithium-ion battery fires by using manufacturer-approved charging equipment, charging devices on hard, flat surfaces, watching for warning signs such as overheating or swelling, and practicing safe charging habits; and

WHEREAS, the Temple Terrace Fire Department remains committed to reducing the occurrence of fires and protecting our community through fire prevention, public safety education, and community outreach; and

WHEREAS, the 2026 Fire Prevention Week theme, "Charge into Fire Safety: Safe Charging Is a Superpower," reminds residents that making safe choices when charging lithium-ion battery-powered devices can help prevent fires and protect our homes and community.

NOW, THEREFORE, I, ANDREW ROSS, by virtue of the authority vested in me as Mayor of the City of Temple Terrace, Florida, do hereby proclaim October 4th - 10th, 2026 as

Fire Prevention Week



IN WITNESS WHEREOF, I have hereunto set my hand and caused the Great Seal of the CITY OF TEMPLE TERRACE to be affixed, at TEMPLE TERRACE, FLORIDA, this 15th day of September, 2026.

X

Andrew Ross
Mayor

Item Cover Page

City Council Item Report

Date: September 15, 2026
From: Margaret Persell, Administrative Assistant III
Item Type: Board Appointments
Subject: School Support Committee - One Regular Reappointment
Presenter: Andy Ross, Mayor

Recommendation:

Consideration of one reappointment to the School Support Committee to fill a vacancy for a term extending from September 19, 2026 until September 19, 2029.

Discussion:

There is one vacancy on the School Support Committee for a term extending from September 19, 2026 until September 19, 2029. According to the City Council policy, this opportunity for service was broadcast on the City's webpage and the electronic board in the City Hall lobby.

The City received one application from Karen Adler, who currently serves as a member of the School Support Committee.

Resolution/Ordinance Information:

Appropriation Code:

Requirements:

Motion

Cost:

Attachments:

1. SSC Application - Karen Adler



TEMPLE TERRACE

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APPLICATION FOR APPOINTMENT TO BOARDS AND COMMITTEES

Your Service to the City is earnestly solicited. Service on a Board or Committee provides citizens with an opportunity to help shape policy and direction for the City of Temple Terrace.

Please check Boards/Committees for which you wish to be considered:

- | | |
|--|--|
| ☐ Bicycle/Pedestrian Advisory Committee | ☐ Hillsborough County Planning Commission |
| ☐ Board of Adjustment | ☐ Community Action Board |
| ☐ Library Board | ☐ Hillsborough County Electrical Board of Adjustment |
| ☐ Parking Enforcement Hearing Officer | ☐ Hillsborough County Historical Advisory Council |
| ☐ Municipal Code Enforcement Board | ☐ Hillsborough County Maritime Law Advisory Committee |
| ☐ River Watch Task Force | ☐ Hillsborough County Mechanical Board of Adjustment |
| ☒ School Support Committee | ☐ Hillsborough County Plumbing Board of Adjustment |
| ☐ Hillsborough County Building Board of Adjustment | ☐ Hillsborough County Plumbing Board of Adjustment |
| ☐ Hillsborough County Bicycle/Pedestrian Advisory Committee | ☐ Hillsborough River Technical Advisory Committee |
| ☐ Hillsborough County City County Planning Commission | ☐ MPO Citizens Advisory Committee |
| ☐ Hillsborough County City County Planning Commission New Appointment | |

Application is for:

- ☐ New Appointment
- ☐ If you currently serve on a City Board or Committee, please state which Board(s):
School Support Committee
- ☐ Have you previously served on a City Board or Committee (if yes, include years you served)?

PERSONAL CONTACT INFORMATION:

Name: KAREN ADLER E-mail Address: ALWONDERfullymade@aol.com

Residential Address: 626- Gail Ave Temple Terrace 33617 Temple Terrace

Telephone Number: (813) 382-4351 Cell Number: (813) 382-4351

EMPLOYMENT:

Employer: Progressive Drs. How Long: 38 years

Title/Occupation: Resolution lead

Work Phone Number: (440) 620-7135

Professional Qualifications and/or Work Experience:

- 4 yr. degree - marketing from USF
- 38 yrs loyalty to one company
- Have worked in multiple depts. & gained multiple skills
 - marketing / leadership / customer service / training

Other Qualifications: Briefly describe any specific expertise and/or abilities that would pertain to your service on a City Board or Committee:

- Serve as children's ministry volunteer - 30 year experience
- Served on PTAs over many years

Community Activities/Memberships:

- TT School Support Committee
- TT Junior Women's group

Educational Background:

Bachelor's degree - Business marketing USF

Indicate reasons for desiring to serve:

- Wanting to serve my community
- Wanting to make a positive impact in my community

How long have you been a resident of Temple Terrace? 36 yrs.

Florida Statute Section 760.80 requires the City of Temple Terrace to maintain and report the following information:

- ☐ Race: White
- ☐ Gender: female
- ☐ Disability: none
- ☐ Prefer not to say: _____

A resume or separate sheet with additional information may be included.

If the Applicant is not appointed at the next City Council meeting scheduled for the purpose of making appointments, this application will be retained on file for six months.

ACKNOWLEDGEMENT:

By filing this application with the City of Temple Terrace, I do hereby acknowledge the following:

- 1) This application when completed is a public record and open to public inspection.
- 2) Florida Law requires that members of certain Boards file a financial disclosure form. I consent to the filing of the State Form, Statement of Financial Interest (Form 1), if required by law for the position.
- 3) If appointed, I agree to faithfully, impartially and fully perform the duties of my office, will make every endeavor to serve my full term, and will comply with all laws or ordinances of the City, County, and State of Florida, particularly the Florida Sunshine Law.

Signature: [Signature] Date: 8/24/2026

Item Cover Page

City Council Item Report

Date: September 15, 2026
From: Margaret Persell, Administrative Assistant III
Item Type: Board Appointments
Subject: Bicycle/Pedestrian Advisory Committee - One Alternate Reappointment

Presenter:

Recommendation:

Consideration to move Jonathan Forbes, who currently serves as a regular member on the Bicycle/Pedestrian Advisory Committee, to the alternate vacancy position, and complete his term which extends until August 19, 2028.

Discussion:

Jonathan Forbes is a regular member of the Bicycle/Pedestrian Advisory Committee, but is interested in becoming an alternate member. His term extends until August 19, 2028. If approved, this transition would open a regular member vacancy on the Committee which will be advertised in accordance with Council policy.

Resolution/Ordinance Information:

Appropriation Code:

Requirements:

Motion

Cost:

Attachments:

1. BPAC Jonathan Forbes 8-19-2025



TEMPLE TERRACE

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APPLICATION FOR APPOINTMENT TO BOARDS AND COMMITTEES

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Please check Boards/Committees for which you wish to be considered:

- | | |
|--|--|
| ☒ Bicycle/Pedestrian Advisory Committee | ☐ Community Action Board |
| ☐ Board of Adjustment | ☐ Hillsborough County Electrical Board of Adjustment |
| ☐ Library Board | ☐ Hillsborough County Historical Advisory Council |
| ☐ Parking Enforcement Hearing Officer | ☐ Hillsborough County Maritime Law Advisory Committee |
| ☐ Municipal Code Enforcement Board | ☐ Hillsborough County Mechanical Board of Adjustment |
| ☐ River Watch Task Force | ☐ Hillsborough County Plumbing Board of Adjustment |
| ☐ School Support Committee | ☐ Hillsborough River Technical Advisory Committee |
| ☐ Hillsborough County Building Board of Adjustment | ☐ MPO Citizens Advisory Committee |
| ☐ Hillsborough County Bicycle/Pedestrian Advisory Committee | |
| ☐ Hillsborough County City County Planning Commission | |

Application is for:

- ☒ New Appointment
☐ If you currently serve on a City Board or Committee, please state which Board(s):

- ☒ Have you previously served on a City Board or Committee (if yes, include years you served)?

I was the city's appointee on the Hillsborough County BPAC from 2016 to 2018.

PERSONAL CONTACT INFORMATION:

Name: Jonathan Forbes E-mail Address: forbesj1@verizon.net

Residential Address: 414 Forest Park Ave Temple Terrace

Telephone Number: — Cell Number: 727-808-2342

EMPLOYMENT:

Employer: Retired How Long: 1 year

Title/Occupation: Fmr. Severity Claim Manager for Travelers Ins.

Work Phone Number: —

Professional Qualifications and/or Work Experience:

I worked in the liability claims field for two major insurance companies for over 30 years. I recently retired. My last role was managing a team of claim professionals handling major auto accidents, losses, resulting in fatalities, major/significant injuries that were life changing. While working, I was a regular bicycle commuter downtown for the last 10 years.

Other Qualifications: Briefly describe any specific expertise and/or abilities that would pertain to your service on a City Board or Committee:

I believe my work experience overseeing thousands of traffic losses involving pedestrians + bicyclists involved is beneficial. I also served the Hillsborough County's BPAC as the chairperson from 2018 through 2022. I currently remain on that committee. If appointed, I will resign from that committee + focus on Temple Terrace's BPAC efforts.

Community Activities/Memberships:

I am a current member of Hillsborough County's BPAC, at large since 2018. I was chair of that committee from 2018 through 2022.

Educational Background:

I graduated High School in St. Petersburg, I have a Bachelor of Arts from the University of Florida in Criminal Justice. I also have a variety of trade certifications.

Indicate reasons for desiring to serve:

Since I am no longer working, I no longer have any business impact at the county level. I would prefer to help at the local level

How long have you been a resident of Temple Terrace?

11 years, since 2014.

Florida Statute Section 760.80 requires the City of Temple Terrace to maintain and report the following information:

☐ Race: White/Caucasian

☐ Gender: Male

☐ Disability: n/a

☐ Prefer not to say:

A resume or separate sheet with additional information may be included.

If the Applicant is not appointed at the next City Council meeting scheduled for the purpose of making appointments, this application will be retained on file for six months.

ACKNOWLEDGEMENT:

By filing this application with the City of Temple Terrace, I do hereby acknowledge the following:

- 1) This application when completed is a public record and open to public inspection.
- 2) Florida Law requires that members of certain Boards file a financial disclosure form. I consent to the filing of the State Form, Statement of Financial Interest (Form 1), if required by law for the position.
- 3) If appointed, I agree to faithfully, impartially and fully perform the duties of my office, will make every endeavor to serve my full term, and will comply with all laws or ordinances of the City, County, and State of Florida, particularly the Florida Sunshine Law.

Signature:

Jaime Forbes

Date:

7/4/2025

Item Cover Page

City Council Item Report

Date: September 15, 2026
From: Margaret Persell, Administrative Assistant III
Item Type: Board Appointments
Subject: Municipal Code Enforcement Board - One Regular Appointment
Presenter: Andy Ross, Mayor

Recommendation:

Consideration of one appointment to the Municipal Code Enforcement Board to fill a vacancy for a term extending from September 19, 2026 until September 19, 2029.

Discussion:

There is one vacancy on the Municipal Code Enforcement Board to fill a vacancy for a term extending from September 19, 2026 until September 19, 2029. According to the City Council policy, this opportunity for service was broadcast on the City's webpage and the electronic board in the City Hall lobby.

The City received one application from Keenan Knopke.

Resolution/Ordinance Information:

Appropriation Code:

Requirements:

Motion

Cost:

Attachments:

1. MCEB Application - Keenan Knopke



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APPLICATION FOR APPOINTMENT TO BOARDS AND COMMITTEES

Your Service to the City is earnestly solicited. Service on a Board or Committee provides citizens with an opportunity to help shape policy and direction for the City of Temple Terrace.

Please check Boards/Committees for which you wish to be considered:

- | | |
|--|--|
| ☐ Bicycle/Pedestrian Advisory Committee | ☐ Hillsborough County Planning Commission |
| ☐ Board of Adjustment | ☐ Community Action Board |
| ☐ Library Board | ☐ Hillsborough County Electrical Board of Adjustment |
| ☐ Parking Enforcement Hearing Officer | ☐ Hillsborough County Historical Advisory Council |
| ☒ Municipal Code Enforcement Board | ☐ Hillsborough County Maritime Law Advisory Committee |
| ☐ River Watch Task Force | ☐ Hillsborough County Mechanical Board of Adjustment |
| ☐ School Support Committee | ☐ Hillsborough County Plumbing Board of Adjustment |
| ☐ Hillsborough County Building Board of Adjustment | ☐ Hillsborough River Technical Advisory Committee |
| ☐ Hillsborough County Bicycle/Pedestrian Advisory Committee | ☐ MPO Citizens Advisory Committee |
| ☐ Hillsborough County City County Planning Commission | |

Application is for:

- ☒ New Appointment
- ☐ If you currently serve on a City Board or Committee, please state which Board(s):
-
- ☒ Have you previously served on a City Board or Committee (if yes, include years you served)?
- 2018 and 2019
-
-

PERSONAL CONTACT INFORMATION:

Name: Keenan Knopke E-mail Address: KRHK@AOL.COM
Residential Address: 725 Grand Circle Temple Terrace
Telephone Number: _____ Cell Number: 727-512-5770

EMPLOYMENT:

Employer: Curlew Hills Memory Gardens How Long: 23 years
Title/Occupation: President & CEO
Work Phone Number: 727-789-2000

Professional Qualifications and/or Work Experience:

Previous service on code enforcement and River Watch Taskforce

Other Qualifications: Briefly describe any specific expertise and/or abilities that would pertain to your service on a City Board or Committee:

Community Activities/Memberships:

60 years resident of city of Temple Terrace

Educational Background:

Graduate King High School 1968

Associates in science, Miami Dade Junior College

Indicate reasons for desiring to serve:

Giving back to the city I love and want to help make it beautiful

How long have you been a resident of Temple Terrace? 60 years more or less

Florida Statute Section 760.80 requires the City of Temple Terrace to maintain and report the following information:

☐ Race: white

☐ Gender: male

☐ Disability: none

☐ Prefer not to say: _____

A resume or separate sheet with additional information may be included.

If the Applicant is not appointed at the next City Council meeting scheduled for the purpose of making appointments, this application will be retained on file for six months.

ACKNOWLEDGEMENT:

By filing this application with the City of Temple Terrace, I do hereby acknowledge the following:

- 1) This application when completed is a public record and open to public inspection.
- 2) Florida Law requires that members of certain Boards file a financial disclosure form. I consent to the filing of the State Form, Statement of Financial Interest (Form 1), if required by law for the position.
- 3) If appointed, I agree to faithfully, impartially and fully perform the duties of my office, will make every endeavor to serve my full term, and will comply with all laws or ordinances of the City, County, and State of Florida, particularly the Florida Sunshine Law.

Signature: _____

Date: August 24, 2026

Item Cover Page

City Council Item Report

Date: September 15, 2026
From: Margaret Persell, Administrative Assistant III
Item Type: Board Appointments
Subject: River Watch Task Force - One Regular Appointment
Presenter: Andy Ross, Mayor

Recommendation:

Consideration of one appointment to the River Watch Task Force to fill a vacancy for a term extending from September 15, 2026 until November 15, 2027.

Discussion:

There is one vacancy on the River Watch Task Force for a term extending from September 15, 2026 until November 15, 2027. According to the City Council policy, the opportunity for service was broadcast on the City's webpage and the electronic board in the City Hall lobby.

The City received one application from Matthew Crowell.

Resolution/Ordinance Information:

Appropriation Code:

Requirements:

Motion

Cost:

Attachments:

1. RWTF Application - Michael Crowell



TEMPLE TERRACE

Amazing City. Since 1925.

APPLICATION FOR APPOINTMENT TO BOARDS AND COMMITTEES

Your Service to the City is earnestly solicited. Service on a Board or Committee provides citizens with an opportunity to help shape policy and direction for the City of Temple Terrace.

Please check Boards/Committees for which you wish to be considered:

- | | |
|--|---|
| ☐ Bicycle/Pedestrian Advisory Committee | ☐ Hillsborough County Planning Commission |
| ☐ Board of Adjustment | ☐ Community Action Board |
| ☐ Library Board | ☐ Hillsborough County Electrical Board of Adjustment |
| ☐ Parking Enforcement Hearing Officer | ☐ Hillsborough County Historical Advisory Council |
| ☐ Municipal Code Enforcement Board | ☐ Hillsborough County Maritime Law Advisory Committee |
| ☒ River Watch Task Force | ☐ Hillsborough County Mechanical Board of Adjustment |
| ☐ School Support Committee | ☐ Hillsborough County Plumbing Board of Adjustment |
| ☐ Hillsborough County Building Board of Adjustment | ☒ Hillsborough River Technical Advisory Committee |
| ☐ Hillsborough County Bicycle/Pedestrian Advisory Committee | ☐ MPO Citizens Advisory Committee |
| ☐ Hillsborough County City County Planning Commission | |

Application is for:

- ☒ New Appointment
- ☐ If you currently serve on a City Board or Committee, please state which Board(s):
- ☐ Have you previously served on a City Board or Committee (if yes, include years you served)?
-
-

PERSONAL CONTACT INFORMATION:

Name: Michael Crowell E-mail Address: msjphoto@mac.com

Residential Address: 1405 N Riverhills Dr Temple Terrace

Telephone Number: _____ Cell Number: 813 220 2048

EMPLOYMENT:

Employer: Self employed commercial advertising photographer How Long: 40yrs / retired 2020

Title/Occupation: Owner commercial advertising photography

Work Phone Number: 8132202048

Professional Qualifications and/or Work Experience:

advertising photography / retail nursery / landscaping / military

Other Qualifications: Briefly describe any specific expertise and/or abilities that would pertain to your service on a City Board or Committee:

I live on the river, and have a keen interest in all things related (protection, enforcement, observations)

Community Activities/Memberships:

Rec Center

Educational Background:

College Degree

Indicate reasons for desiring to serve:

I'm very interested in preservation of all natural resources

How long have you been a resident of Temple Terrace? 12

Florida Statute Section 760.80 requires the City of Temple Terrace to maintain and report the following information:

- ☐ Race: _____
- ☐ Gender: _____
- ☐ Disability: _____
- ☐ Prefer not to say: _____

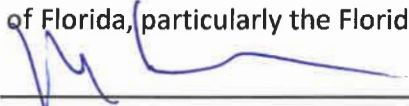
A resume or separate sheet with additional information may be included.

If the Applicant is not appointed at the next City Council meeting scheduled for the purpose of making appointments, this application will be retained on file for six months.

ACKNOWLEDGEMENT:

By filing this application with the City of Temple Terrace, I do hereby acknowledge the following:

- 1) This application when completed is a public record and open to public inspection.
- 2) Florida Law requires that members of certain Boards file a financial disclosure form. I consent to the filing of the State Form, Statement of Financial Interest (Form 1), if required by law for the position.
- 3) If appointed, I agree to faithfully, impartially and fully perform the duties of my office, will make every endeavor to serve my full term, and will comply with all laws or ordinances of the City, County, and State of Florida, particularly the Florida Sunshine Law.

Signature:  Date: 9/7/26

Item Cover Page

City Council Item Report

Date: September 15, 2026
From: Lynda Sader, City Clerk
Item Type: Minutes
Subject: Approval of the September 1, 2026 City Council Meeting Minutes
Presenter: Andy Ross, Mayor

Recommendation:

Approve the September 1, 2026 City Council Meeting Minutes

Discussion:

Resolution/Ordinance Information:

Appropriation Code:

Requirements:

Motion

Cost:

Attachments:

1. 09-01-2026 Council Regular Minutes Final

**CITY OF TEMPLE TERRACE, FLORIDA
CITY COUNCIL MEETING MINUTES**

Having been duly advertised as required by law, the regular meeting of the Mayor and City Council of the City of Temple Terrace, Florida, was held on Tuesday, September 1, 2026, in the Council Chambers at City Hall.

Present were: Mayor Andy Ross, Council Members James Chambers, Alison Fernandez, Gil Schisler and Erik Kravets, City Manager Carlos Baia, City Clerk Lynda Sader, and City Attorney Ernest Mueller.

Absent was: None

Also present were: Police Chief Robert Staley, Leisure Services Interim Director Cori Collins, Finance Director Jim Ingram, IT Director Sally Cabrera, Public Works Director Jason Warrenfeltz, Fire Chief Ian Kemp, Community Development Director Greg Pauley, Code Compliance Director Jack Shanks, City Arborist Joe Ferris, Deputy City Attorney Nicole Donnell, Assistant Finance Director Jennifer Newman, Senior Planner Alyssa Livingstone, and several others.

There being a quorum present, Mayor Ross called the meeting to order at 6:00 p.m., led the invocation, and the Pledge of Allegiance to the Flag.

4. Historical Fact

Council Member Schisler presented a historical fact focused on a brief history of C. Leon King High School, better known simply as King High School. For more than six decades, King High School had been an important part of Tampa's educational, athletic, and civic history. Located on North 56th Street in Tampa, the school opened its doors in 1960 to serve students in the rapidly growing East Tampa area. King began with approximately 960 students and 58 faculty members under the leadership of its first principal, W. E. George.

The opening of King High School came during a period of significant growth when the population boomed following World War II had created an urgent need for additional schools throughout the county. In response, a major school construction program during the late 1950s and early 1960s resulted in the development of numerous new elementary, junior high, and high schools.

In 1942, the property had been developed as Ridgewood Cemetery, which served local African American residents. During the late 1950s, approximately 40 acres of the property were acquired by the school district and subsequently used for school-related agricultural activities. That same land later became the site of King High School. Because of poor historical recordkeeping, the

existence of the cemetery beneath the school property was not fully recognized for many years. In 2019, ground-penetrating radar identified 145 graves on the school property.

In recognition of those individuals and their final resting place, the school district created a monument south of the school parking lot to memorialize the gravesites and ensure that their existence would be remembered by future generations.

King High School had been established to serve students from East Tampa and surrounding communities, including Temple Terrace, which experienced substantial population growth during the late 1960s and 1970s. During the 1970s, overcrowding at King became so severe that the school operated on double sessions for several years until new schools could be constructed to accommodate the increasing number of students.

During the 1990s, Hillsborough County reorganized its schools into clusters centered around individual high schools. The schools that became part of the King cluster included Temple Terrace Elementary, Riverhills Elementary, and Lewis Elementary, which was later joined by Pizzo and Folsom schools. Students then progressed to Orange Grove Sixth Grade Center, followed by Sligh for seventh grade, Greco Junior High, and ultimately King High School.

In the mid-1990s, the Temple Terrace City Council created the School Improvement Task Force to assist the member schools and help make the King cluster a stronger and more effective educational system. He was a charter member of that group. Over time, the task force evolved into what became the School Support Committee, which remained in existence and continued its work in supporting local schools.

King High School had been named in honor of C. Leon King, who had served for 18 years as a member of the Hillsborough County Board of Public Instruction. From its earliest years, the school adopted the Lion as its mascot, and the Lions eventually became associated with the enduring slogan and tradition, "Many Lions, One Pride."

A major chapter in King's modern history was the development of advanced academic programs. In 1994, King became an International Baccalaureate World School, giving students the opportunity to participate in the rigorous International Baccalaureate curriculum. During the 2000s, additional academic opportunities were established, including Advanced Placement courses, dual enrollment, career and technical education, advanced mathematics programs through Mu Alpha Theta competitions, and extensive music and performing arts programs.

Over the years, King received recognition for its academic achievements. At one point, Newsweek ranked the school among the top 10 percent of high schools in America. However, the school

later faced increasing competition from school-choice options, including magnet and charter schools, as well as numerous private and parochial schools throughout the region. As a result, enrollment in both the traditional and International Baccalaureate programs declined in the years that followed.

Athletics had been an important part of King High School's identity since its opening. King teams competed as the Lions in numerous sports, including football, baseball, basketball, track and field, wrestling, swimming and diving, golf, volleyball, soccer, and tennis.

The connection between King High School athletics and Temple Terrace had also been particularly strong. In fact, Council Member James Chambers and his future wife, Beth, had both been members of the King tennis teams during the early 1970s.

For many years, Temple Terrace Little League provided access to senior baseball through its winter program, which offered members of the King baseball program valuable opportunities for offseason training. That connection between the city and the school continued through the use of community facilities. The King tennis teams practiced and competed at the Whiteway tennis courts, while the King swim team utilized the Family Complex for swim meets and practices. These longstanding relationships demonstrated the deep ties that existed between Temple Terrace and King High School.

King also developed a proud reputation for producing outstanding athletes who went on to compete at the collegiate and professional levels. Major League Baseball players associated with King included Tim Crews, Calvin Pickering, and Derek Bell. Professional golfer and television analyst Gary Koch was also a King graduate. The school produced National Football League players including Edmund Nelson, Eric Hayes, George Peoples, Gene Branton, Stephen Griffin, and Tim Colston. Over the years, King teams won numerous district, regional, and state championships, adding to the school's proud athletic tradition.

One of the strongest measures of King High School's influence had been the accomplishments of its alumni. Thousands of graduates went on to make important contributions to Tampa, the State of Florida, and the nation in public service, business, education, medicine, the military, athletics, and many other professions.

Among the notable graduates and members of the King community were Pam Iorio, who served as Mayor of Tampa from 2003 to 2011; Pam Bondi, who served as Florida Attorney General and later as U.S. Attorney General; his wife, Lisa, and both of his children; and grandson, Alexander, who was enrolled in the International Baccalaureate program. The King family also included

Council Member James Chambers and his wife, Beth; Council Member Alison Fernandez; and Chief Staley.

These individuals represented only a small portion of the thousands of students who passed through the halls of King High School and went on to make their mark on the community and beyond. Looking through old King yearbooks was almost like looking through a "Who's Who" of Temple Terrace. The pages reflected generations of students, families, educators, athletes, public servants, and community leaders whose lives were connected to the school.

King High School's history had been much more than the story of a school building. It had been the story of generations of students, teachers, coaches, administrators, parents, and community members who contributed to the development of Tampa and Temple Terrace. It had reflected the growth of the community, the challenges faced by the public school system, the importance of athletics and academics, and the enduring relationships between the school and the communities it served.

Today, the legacy of C. Leon King High School continued under the banner of the Lions. Its history represented more than six decades of educational achievement, athletic accomplishment, community involvement, and personal connections. Above all, it represented the thousands of individuals who had been part of the King family and who helped give meaning to the school's enduring tradition: "Many Lions, One Pride."

5. Recognitions and Proclamations:

5.A. Employee of the Month -July

Mayor Ross introduced Maggie Persell as the City's Employee of the Month for July in recognition of her exceptional customer service, dedication, and willingness to go above and beyond in supporting both the public and her colleagues.

Maggie consistently provides excellent customer service to citizens and staff and works diligently to ensure that public records requests are completed accurately, efficiently, and in a timely manner. When she was a relatively new member of the City Clerk's Office, Maggie stepped into a challenging situation when she became the office's only Administrative Assistant while the City Clerk was out on medical leave and the Deputy City Clerk position was vacant. Later, she maintained her regular responsibilities while helping to train two new Administrative Assistants as they joined the office. In addition to her responsibilities in the City Clerk's Office, Maggie provides administrative support to three City advisory boards. Her contributions extend well

beyond clerking meetings as she dedicates significant time to assisting with the projects and initiatives undertaken by these boards.

Maggie is also always willing to lend a hand, even when a question or issue falls beyond the responsibilities of the City Clerk's Office. She readily takes on challenges without complaint and consistently demonstrates dedication, adaptability, professionalism, and a strong work ethic.

Congratulations to Maggie Persell on being selected as the City's July Employee of the Month!

Ms. Persell thanked Mayor Ross, the Council and the City Clerk/City Attorney's office for this recognition.

6. **Presentations: None**

7. **Board Appointments: None**

8. **Consideration of Minutes from Previous Meetings:**

8.A. Approval of the August 17, 2026, City Council Meeting Minutes

Upon motion of Council Member Schisler, seconded by Council Member Fernandez, the **MINUTES** of the August 17, 2026, City Council Meeting, were **APPROVED** as presented with the following vote.

Vote on the motion being: Mayor Ross and Council Members Chambers, Fernandez, Schisler and Kravets voting "aye," no "nay."

9. **Persons Wishing to be Heard on Items NOT Listed on the Agenda or Items on the Consent Agenda:**

Mayor Ross stated the process for Public Comments.

Charles Loeb commented on property taxes, Amendment 3 on the November Election Ballot and that local communities should have local control over spending and taxing.

Charles Harper commented on the water quality of Temple Terrace and of his own residential water quality.

Mayor Ross verified there were no other public comment requests and closed the public comments section.

10. Communications and Petitions: None

11. Consent Agenda: None

12. Public Hearings, Ordinances, and Resolutions:

12.A. Resolution Authorizing the Issuance of Not to Exceed \$50 Million General Obligation Bonds.

City Manager Baia introduced Chrisopher Roe of Bryant Miller Olive P.A., bond counsel for the City of Temple Terrace.

Mr. Roe stated he had been before the Council on prior occasions. He explained that he had assisted with the referendum process to obtain approval for the general obligation bonds and had prepared the resolution that was before the Council for consideration that evening. He explained that the resolution represented the next step in a series of actions the City would need to take in order to issue the debt and that it was not the final step or the final approval required for the issuance of the bonds. Rather, it constituted an additional step toward reaching the point at which the City would be prepared to issue the bonds.

He explained that the resolution provided additional details regarding the bonds and the manner in which they would be repaid over time when the Council was prepared to proceed with an actual bond issuance. The resolution also served as the basis for bond validation. He explained that bond validation was a judicial proceeding through which he, acting as the City's bond counsel, would file a complaint in circuit court requesting that the court review the steps that had been taken to date to authorize the issuance of the bonds. This review would include the resolution, the referendum conducted on August 18, the actions leading up to the referendum, including the publication of required notices, and the results of the referendum.

He further explained that, if the trial court determined that all required actions had been taken in accordance with Florida law, the court would enter a judgment validating and confirming the City's authority to issue bonds in the future, up to the authorized dollar amount and for the stated purpose of the public safety complex. Once the validation order was entered, it would conclusively resolve any future legal challenges concerning the bonds and the City's authority to issue them.

He noted that bond validation generally constituted a relatively streamlined proceeding compared with other types of civil litigation. Under the statutes governing bond validation, such proceedings were entitled to expedited treatment. Typically, from the time the complaint was filed, the entire process could be completed within approximately two to three months. At the conclusion of the process, the City would have a court order confirming its authority to issue the bonds and establishing that the steps taken leading up to the bond issuance had complied with Florida law.

He also explained that bond validation was generally a cost-effective approach. The cost of obtaining validation was relatively low compared with the potential expense of defending a legal challenge if a member of the community objected to the issuance of the bonds and filed a lawsuit. Such litigation could potentially take a year or more to resolve, whereas the bond validation process was designed to be expedited and could generally be completed much more quickly.

He added that interest rates applicable to debt were, in most cases, a function of perceived risk. A lender would evaluate a borrower's creditworthiness and financial capacity before extending a loan, and the interest rate offered would generally correspond to the lender's assessment of the risk involved. He used the example of an individual applying for a mortgage, explaining that a bank would review the applicant's financial history and credit score to determine whether the applicant represented a relatively safe or risky borrower. Generally, stronger credit would result in more favorable interest rates.

He explained that having a bond validation order in place would effectively eliminate the possibility of future legal challenges concerning the City's authority to issue the bonds. As a result, lenders would have greater certainty that no subsequent legal challenge would arise several years later questioning the City's authority to repay the amounts borrowed under the bonds. That increased certainty would typically result in a more favorable interest rate for the City, which could produce significant savings over the life of the bonds through reduced interest costs.

He stated that he was available to answer any questions the Council might have regarding the resolution, the bond validation process, or the steps that would follow. He explained that, if the Council approved the resolution, he intended to file the necessary court documents within approximately the following week and would keep the City Attorney's Office and City Manager apprised of the progress. The anticipated schedule was to be in court sometime around October or November, with the goal of having the validation process completed by December. At that time, another resolution would be brought before the Council containing the specific details of the proposed bond issuance for the Council's approval and consideration.

Finally, he clarified that the resolution before the Council did not obligate the City to issue any debt, nor did it commit the City to issuing any particular amount of debt. Rather, the resolution

represented the next procedural step and authorized the bond validation process that had been described.

Mayor Ross asked for public comments.

Alec Hassey, Vice President of the Temple Terrace Professional Firefighters Local 2160, thanked the residents of Temple Terrace for passage of the bond referendum on the August 18, 2026, election.

Council Member Fernandez asked if this is basically to have the City's ability to issue bonds affirmed by the court and asked what the next step would actually be.

Mr. Roe noted in the affirmative and the resolution approved the general parameters for a future bond issuance, including the maximum amount that could be borrowed, which was \$50 million, the maximum interest rate that could be paid, and the maximum term of the bonds. Once the bond validation proceeding is concluded, the specific dollar amount to be borrowed and the applicable interest rates will be determined. An additional resolution would then be brought before the Board for final approval, providing an opportunity to review the exact terms of the issuance, including the precise borrowing amount. While the amount could be the full \$50 million, the final structure could vary depending on market conditions and the best available sales opportunity, including the potential for a premium or discount. The City's financial adviser would assist with evaluating these details following completion of the bond validation process. It was also noted that the City might not borrow the full \$50 million at one time and could instead issue a smaller portion initially and return to the Board several months later to issue the remaining amount. Ultimately, the Board would determine the final structure and terms of the bond issuance after the bond validation process had been completed.

Council Member Schisler asked what type of issues could produce an adverse ruling from the court?

Mr. Roe stated the bond validation proceeding unfolds as a civil action in which the City serves as the plaintiff. The City files a complaint pursuant to the applicable statutes governing bond validation, specifically Chapter 75 of the Florida Statutes. The complaint names the State of Florida, as well as the taxpayers and citizens of the jurisdiction, as defendants in the validation proceeding. Under the bond validation statutes, the local State Attorney's Office, which was primarily responsible for prosecuting criminal matters, will be assigned to represent the defendants in the proceedings. Accordingly, the State Attorney's Office represents the State of Florida and the affected citizenry.

Although the proceeding is adversarial in structure because it involves a plaintiff and defendants, it is generally considered a friendly proceeding. The State Attorney's Office typically has no

independent interest in challenging the issuance of the bonds or taking a philosophical position against the bonds. Rather, its role is generally to ensure that all required procedural and legal steps have been properly completed in accordance with Florida law. Those requirements have been addressed and briefed extensively as part of the validation process.

The circumstances present a particularly favorable case for bond validation because the bonds were general obligation bonds that have been approved by referendum. The community achieved a strong result, with approximately 60% of voters approving the referendum. That level of voter approval provided a favorable basis for presenting the matter to the court. Nevertheless, the proceeding will not merely be a rubber-stamping exercise. The court is expected to conduct an inquiry to confirm that all legal requirements have been satisfied. The City will therefore be prepared to demonstrate that the necessary steps have been properly completed, including presenting the results of the referendum and establishing compliance with the applicable provisions of Florida law.

Council Member Kravets asked about the pricing of the bonds. His understanding was that the bond would typically be priced at a specified interest rate and then offered in the market, where potential purchasers would determine whether to bid for it based on their assessment of whether it represented a favorable investment.

Mr. Roe stated the bonds will be sold through either a negotiated sale or a competitive sale. In a negotiated sale, an underwriter will be identified in advance and retained to serve as an intermediary between the issuer and the bond market. The underwriter will purchase the bonds from the issuer, potentially at a discount or premium, and will then assume responsibility for reselling the bonds in the open market. This method will offer certain advantages depending on the circumstances of the bond issuance.

Alternatively, the bonds may be sold through a competitive sale. Under this approach, the bond underwriting community will be notified in advance that bids will be accepted for the purchase of the bonds at a specified date and time. At the designated time, participating underwriting firms will submit their bids electronically by offering interest rates for the bonds. Typically, the underwriting firm offering the lowest interest rate will be awarded the bond sale.

Regardless of whether a negotiated or competitive sale is used, the selection of the appropriate method will be guided by the recommendations and advice of the financial adviser, or municipal adviser. The municipal adviser will assist in assessing the market for the bonds and determining which sale method will be most advantageous for the community.

Council Member Kravets asked to confirm that the financial adviser will basically structure the terms of the sale and then bond counsel will implement that legally?

Mr. Roe affirmed that his firm, as bond counsel, will take care of all the paperwork associated with it.

Upon motion by Council Member Schisler, seconded by Council Member Chambers, **RESOLUTION 85-26, Adopted** the Resolution, Authorizing the issuance of not to exceed \$50 million in General Obligation Bonds.

Vote on the motion being: Mayor Ross, Council Members Chambers, Fernandez, Schisler and Kravets voting “aye,” no “nay.”

12.B. Public Hearing on a Resolution to Approve Final Site Plan SPR-25-08 for the Development of Two Multi-Tenant Buildings Located at 11801 North 56th Street.

Mayor Ross opened the Public Hearing.

This item is Quasi-Judicial and City Clerk Sader administered the Oath to all that would speak to the item.

City Attorney Mueller inquired on ex-parte communications of the Mayor and Council Members.

Council Member Fernandez and Council Member Chambers stated they had none.

Mayor Ross stated he has had informal contacts over the years of what is going in there, what's the timetable or what's going on, but none regarding the site plan.

City Attorney Mueller confirmed that Mayor Ross could be a fair and impartial decision maker and would base his decision on the evidence presented at this hearing.

Mayor Ross stated he could be fair and impartial.

Council Member Schisler stated he had the same type of communications as the Mayor, discussions during the original items and votes, communications with the developer from St. Petersburg originally that were previously disclosed, and residents and the Raintree Home Association just asking what is going in there.

City Attorney Mueller confirmed that Council Member Schisler could be a fair and impartial decision maker and would base his decision on the evidence presented at this hearing.

Council Member Schisler stated he could be fair and impartial.

Council Member Kravets stated he had none.

Senior Planner Alyssa Livingstone presented for consideration of approval of Final Site Plan SPR 258 for a unified project site located at 11801 North 56th Street and 11714 North 58th Street. As background, a renovation permit had been issued on October 20, 2023, for the former Golden Corral restaurant. After staff determined that the scope and extent of the proposed work triggered the requirement for a new site plan, the applicant had been directed to submit a site plan application. The property encompassed approximately 3.57 acres and was located within a Planned Development zoning district established by Ordinance No. 1577, which had been approved on January 21, 2025. The proposed development consisted of a multi-tenant, two-building project totaling approximately 42,624 square feet and included a mix of restaurant, retail, and professional uses. The property was bordered by a private lodge and multifamily residential dwellings to the north; a quick-service restaurant and professional offices to the south; multifamily residential and single-family residences to the east; and a quick-service restaurant, specialty lounge, and professional offices to the west.

The 11801 North 56th Street portion of the site will accommodate the redevelopment of an existing building and the development of a second building. The 11714 North 58th Street portion of the site will serve as additional parking and storm water management. There are two phases within this project. Phase one involves the redevelopment of the existing building one and phase two involves the new construction of the second building. The site provides 195 on-site vehicle parking spaces including 10 ADA accessible spaces and 20 bicycle parking spaces. Access to the site for both vehicles and pedestrians will be along the western frontage along North 56th Street. Storm water ponds are located on the northeast and southeast portions of the site and storm water management will be supplemented by an underground vault retention system throughout the site. Building one currently exists on the northwest portion of the project site.

There are five conditions within this approval. These include standard conditions regarding land development code language. Final site plan SPR 258 upon approval by city council allows for the redevelopment of an existing building and the development of a second building for restaurant, retail and office uses. Both buildings shall conform to and be limited by the configuration and details of the approved site plan and elevations. A sign package must be submitted at the time of permitting. The site's utilities are serviced by the City of Tampa. Final site plan approval is conditioned upon compliance with all City of Tampa utility requirements. Prior to the issuance of any building permits, the applicant must confirm that the lift station details have been approved by the City of Tampa. The certificate of occupancy for building one shall only be issued upon the full and complete finish of phase one of the project in its entirety. Phase two may commence immediately following the total completion of phase one. However, the entire project encompassing both phase one and phase 2 must be fully completed within a maximum period of 48 months from the date this resolution is signed. Where standards are not specified, the city's land development code standards or current standards will apply.

Applicant representative Giancarlo Giusti, Modulo Design Studio stated during architectural education, professors often emphasized the importance of avoiding building designs that contributed to disconnected or automobile-oriented environments. That guidance encouraged a more thoughtful approach to urban interventions, with particular attention given to storefronts, pedestrian circulation, proximity to educational activities, and connections to surrounding destinations. Those principles became important considerations in the design of the project, particularly in creating a development that engaged with its context and provided a meaningful experience for pedestrians and visitors.

The project involved the design of an approximately 18,000-square-foot restaurant that was under construction on a site near 56th Street and Fowler Avenue. The property had previously been occupied by a Golden Corral restaurant. Initially, the project appeared to be a straightforward renovation; however, a closer examination of the site revealed significant opportunities for redevelopment. The surrounding area consisted primarily of a McDonald's, undeveloped parcels, and nearby neighborhoods that did not establish a strong relationship with the site. At the same time, the property's proximity to the University of South Florida presented a significant opportunity, particularly as the university continued to contribute to increasing density and activity in the surrounding area.

The program created opportunities to introduce a destination focused on restaurant and hospitality uses. In addition to the primary dining function, the development incorporated spaces capable of accommodating catering, cafés, events, weddings, graduations, and other gatherings. The design therefore focused on creating a building capable of supporting multiple activities simultaneously while establishing a destination that could contribute positively to the surrounding community. An early phase of the design explored the building as a prominent destination within the site and established the architectural direction for the project.

As the project developed, the owner expressed interest in adding a second building to the property. Through civil engineering investigations, water-retention studies, parking analysis, and other site evaluations, it was determined that an additional structure could be accommodated. The revised site organization positioned the primary restaurant building toward the North and the second building toward the South, allowing the development to function as a more comprehensive mixed-use destination.

Material selection played an important role in reinforcing the character and quality of the development. The design incorporated weathering steel, natural wood, stone elements, cast-in-place concrete, dark bronze windows, and neutral stone materials. These materials were selected

for their durability, craftsmanship, and ability to enhance the overall experience of the restaurant. The use of weathering steel also introduced a changing patina over time, adding depth and character to the architectural expression while maintaining a relatively clean and restrained design.

Landscape architecture was another significant component of the project. A talented landscape architect was engaged to develop landscape intervention across both the ground level and rooftop areas. The landscape design was integrated with the architecture to create a stronger relationship between the interior and exterior environments. Planting, landscape elements, and site organization were used to enhance the visitor experience while also providing visual buffering around parking areas and other functional portions of the site.

As the second building was incorporated into the project, the architectural team used the established organizational principles, column grids, and structural systems to explore a complementary façade design. The resulting architecture developed a consistent material and structural language across the site while allowing each building to respond to its individual program and orientation. The design process demonstrated how the conceptual qualities established during the early stages could translate effectively into the constructed architecture. The relationship between the interior and exterior environments was also carefully considered. The architecture responded to the Florida climate by creating spaces that connected indoor and outdoor experiences while addressing issues of shade, comfort, landscape, and circulation. The design sought to create an environment in which the building, landscape, and surrounding site worked together rather than functioning as isolated elements.

The second building was approximately 19,000 square feet and was planned to accommodate smaller restaurants, retail spaces, and offices. Because the building faced west, the design incorporated architectural overhangs and shading strategies to address solar exposure. The primary entrance was developed as a significant arrival point, incorporating landscape elements and water features to create a stronger sense of entry while helping buffer the parking areas. Unlike the primary restaurant building, the second structure was designed as a 360-degree architectural experience, requiring articulated façades on all sides of the building.

The material palette for the second building included weathering steel, cast-in-place concrete, dark bronze windows, and neutral stone. These materials reinforced the visual relationship between the two buildings while providing the second structure with its own architectural identity. The overall design maintained a balance between contemporary architectural expression, durable materials, landscape integration, and sensitivity to the Florida environment. Ultimately, the project was intended to introduce an economically viable development that also contributed to the surrounding community. Rather than functioning solely as a restaurant or

commercial property, the development was conceived as a destination that could support dining, retail, office, hospitality, and community-oriented activities. The project sought to demonstrate how thoughtful architecture, landscape design, material selection, and site planning could transform an underutilized property into a place that offered both economic value and a meaningful experience for the people who visited it.

Mayor Ross asked for public comments, hearing none moved to Council Member questions.

Council Member Schisler stated that Council had approved two buildings several years ago, so why is this coming back, what is the difference between what was approved then and what is being proposed now.

Ms. Livingstone stated when the applicant put in for a renovation permit, staff discovered that the scope of work exceeded what a renovation permit covers and directed the applicant to submit a final site plan.

City Manager Baia noted the reason the site plan may have been familiar was that, as part of the rezoning to the PD designation, the applicant had been required to submit a conceptual site plan as part of the rezoning process. The members of the Council and staff had previously seen the layout, which showed the building oriented on the site with a restaurant to the north and another restaurant to the south. However, that submission had not constituted a site plan approval; rather, it had been part of the rezoning process. As Ms. Livingstone had indicated, the applicant subsequently submitted for a permit. At that time, renderings had not been provided, and the submission consisted primarily of the site layout. A third-party provider had been retained to conduct inspections for the renovation of the existing Golden Corral building, which was consistent with the plan previously presented to the Council to renovate the existing structure. It was later determined that the proposed work was substantially more extensive than what would ordinarily have been considered a typical renovation. Once the scope of the work became apparent and the extent of the improvements was recognized, staff approached the owner and advised that the project had triggered the requirement for a formal site plan because the proposed work exceeded the scope of a standard renovation. This determination initiated the subsequent process and resulted in the timeline outlined in the staff report, ultimately bringing the matter before the Council for consideration.

Council Member Schisler asked about the egress and ingress on 58th Street.

Ms. Livingstone stated that 58th Street will be used for possible temporary construction traffic but then when construction is complete, that will be closed off and only 56th Street will be used for traffic and pedestrian traffic.

Council Member Kravets asked how the 48-month construction allowance was derived?

Ms. Livingstone stated staff reached out to the applicant to get a reasonable timeline of how long they believed their construction of both buildings would take. Staff agreed on the 48-month cap and this should prevent the applicant from having to come back to City Council and request more time in the event that there are any constraints such as natural disasters in the future or funding issues.

Council Member Kravets asked if there are any legal consequences if they go beyond the 48 months.

Ms. Livingstone stated the applicant would have to come back for either an administrative approval for another extension or perhaps come back to Council depending on how much time they're asking for.

Council Member Kravets asked how large the property is because the resolution states approximately 3.58 acres, it was stated by Ms. Livingstone of approximately 3.57 acres, and Hillsborough County stated 3.54 acres.

Ms. Livingstone stated the most recent survey says it is approximately 3.57 acres.

Council Member Kravets asked about the Tampa lift station and what does the connection to Tampa mean for the City with respect to the lift station.

Ms. Livingstone stated either way there should not be a utility impact to the City of Temple Terrace but asked the applicant to provide more information on that.

Applicant representative Mazen Marie, PE, Global Consulting Engineers, Inc. stated that the utilities are with the City of Tampa so there is no impact to the City of Temple Terrace. The right-of-way is Hillsborough County, so the applicant has applied for permits from both the City of Tampa and Hillsborough County. He stated they are still working on the water connection with the City of Tampa and have commitments but no final approval.

Council Member Chambers asked for the location of bicycle parking to be explained and if they are on the sidewalks.

Ms. Livingstone, along with Mr. Giusti, noted that the bicycle parking is located on the sidewalks on the south side of building one and the northeast side of building two.

Council Member Chambers asked to confirm that the bike parking will not displace any parking spaces for vehicles and if bike parking was required by the City or was this just put in by the applicant.

Ms. Livingstone answered in the affirmative and the bike parking was a requirement of the development plan.

Council Member Chambers asked with phase one completing early, would there be enough parking for phase one with the construction of phase two by the City's standards.

Ms. Livingstone answered in the affirmative.

Council Member Fernandez asked for the stormwater plan to be explained for this project, as there's always a concern in the public when more space becomes impervious.

Mr. Giusti stated they try to encourage pavers, and they have a lot of green on the side that can be used as retention. He stated they have the retention ponds on the north, east and on the southeast of the building.

Council Member Fernandez asked about the landscape buffering not just visual but for sound, since the east and southeast portion of property backs up to residential areas.

Mr. Giusti mentioned that they plan on trees, he stated he thought 97 are written in, that exceeds what is required, and that is what they propose. He stated they are providing 40 and then the City is requiring 32 and then with the landscape design that will be introduced into the site as well.

Council Member Fernandez noted her concern is if nothing happens at the end of four years, if the 48 months lapses, would the project come back in front of Council for a full site plan review, or would it be just extending the current site plan?

Ms. Livingstone stated it depends on how much extra time the applicant would require further than the 48 months. It could either come through as an administrative decision or come back before Council and is up to the discretion of the City Manager.

City Manager Baia stated if he has discretion on this, after 4 years, he would still bring it back to Council.

Council Member Fernandez asked what is the requirement for special events or community activities? With the good amount of meeting space, is there a permit requirement, parking requirement or anything for a larger event?

Code Compliance Director Jack Shanks stated the City does have a permit requirement for special events. If it is outside, it will require a fire inspection. If it's inside and contained, it is going to be according to the use of that building originally given to them.

Mayor Ross noted from experience where projects linger, he asked if the 48 months is a fair arrangement. He also asked if the City could cap the time.

Ms. Livingstone stated this time frame was agreed upon by both staff and the applicant. She also stated that she had capped it at 48 months.

Mayor Ross further asked if an extension is approved, can they cap that?

City Manager Baia stated the Council has the discretion on the extension and would not be obligated to extend the time. He stated the item before them was four years to complete the project.

Community Development Director Greg Pauley noted that the City Manager was correct. He added that a different site plan in the past, in a different part of the City was up for expiration and it came back for a renewal, and it was extended for one year. He noted that the City code states 24 months, but it was realized that would not be enough time to complete the project. In this case, after the applicant was approached, the 48 months' timeframe came from the applicant.

Mayor Ross closed the public hearing and asked the Clerk to read the title of the Resolution.

The City Clerk therefore read the title.

A RESOLUTION OF THE CITY OF TEMPLE TERRACE, FLORIDA, APPROVING SITE PLAN REVIEW APPLICATION SPR-25-08 FOR 3.58 ± ACRES OF PROPERTY LOCATED EAST OF NORTH 56TH STREET AND NORTH OF EAST FOWLER AVENUE, WITH FOLIO NUMBERS 036908-0000 AND 036917-0000, ADDRESSED AS 11801 N 56TH STREET AND 11714 N 58TH STREET, TO ALLOW FOR THE REDEVELOPMENT OF AN EXISTING BUILDING AND THE DEVELOPMENT OF A SECOND BUILDING FOR RESTAURANT, RETAIL AND OFFICE USES IN A PLANNED DEVELOPMENT ZONING DISTRICT, SUBJECT TO ANY CONDITIONS OF APPROVAL; PROVIDING FOR CORRECTION OF

TYPOGRAPHICAL ERRORS; REPEALING ALL RESOLUTIONS OR PARTS OF RESOLUTIONS IN CONFLICT HEREWITH; PROVIDING AN EFFECTIVE DATE.

Upon motion by Council Member Schisler, seconded by Council Member Kravets, **RESOLUTION 86-26, Adopted** the Resolution, Approving Final Site Plan SPR-25-08 for development of two multi-tenant buildings located at 11801 North 56th Street and the adjoining parcel at 11714 North 58th Street, “with the five conditions as listed”.

[Clerk’s note: “with the five conditions as listed” was asked to be considered to be included in the motion and Council Member Schisler and Council Member Kravets accepted that addition.]

Vote on the motion being: Mayor Ross, Council Members Chambers, Fernandez, Schisler and Kravets voting “aye,” no “nay.”

12.C. Public Hearing and Second Reading of Ordinance 1602 Amending Driveways Regulations.

Mayor Ross opened the Public Hearing.

Public Works Director Jason Warrenfeltz presented revisions to Section 12-921 regarding off-street parking and driveway requirements. These were developed following staff’s review of driveway permit applications and field inspections. During this review, staff identified several areas where the existing code lacked sufficient detail, resulting in inconsistent driveway designs, inspection challenges, and avoidable drainage concerns. The revisions established driveway apron design standards, including slope requirements and minimum elevations above the pavement, and clarified driveway width, allowable cycle changes, and the process for addressing nonconforming conditions. The revisions also required utility notifications, compliance with ADA standards, inspections, and the removal of tree roots prior to construction. In addition, standards were established for paver installations that incorporated the applicable county standard details. Overall, the revisions were intended to improve consistency, simplify the permitting process, promote safer driveway designs, reduce future maintenance concerns, and provide clear expectations for homeowners and contractors.

Mayor Ross asked for public comments.

Jasmine Bennett commented that they would like to have a secondary driveway and with the current code, they would have to connect the two driveways. She noted with this proposed ordinance, that would not require the connection.

Mayor Ross clarified with City Manager Baia that this ordinance would eliminate what Ms. Bennett commented on.

City Manager Baia stated in the affirmative and added that today the requirement says the driveway additions need to be adjoined, the changes proposed with this ordinance eliminates the adjoining requirement.

Council Member Chambers asked if this is approved, when would the changes take affect?

City Manager Baia stated that it would be affective as of the date of adoption.

Council Member Kravets asked for an Arborist review be included, if doing a driveway would mean taking out roots, down to 6 inches which would destroy a grand oak.

Mr. Warrenfeltz noted that they include the Arborist now and would in the future, dependent on the tree substance and species.

Council Member Kravets asked if there would be any objection to including an arborist review in the ordinance because right now it does not include that. Section 2 (c) states all tree roots shall be removed.

Mr. Warrenfeltz stated he would rather do it administratively.

Council Member Kravets requested wording be included for an arborist review if any protected trees are affected by the driveway request or change, in which the arborist would need to protect.

Council Member Fernadez noted she thought there were two issues. One is protecting a tree that is part of our protected tree canopy, taking all the roots out where a driveway is going could damage the tree irreparably. The other thing is if you leave any tree roots under the concrete of the driveway, you'll develop voids possibly and the driveway could collapse. Or the tree roots raise the driveway and are a safety issue. She thought this was more about preservation of the trees and then the location of the driveway and not having roots under it for the correct foundation. She stated she is not sure including the arborist is the right way to handle it.

Mr. Warrenfeltz stated in the land development code, the arborist reviews permits, any and all permits if there are trees impacted. That would be prior to the engineering's final review of the

driveway piece. His understanding is everything is covered because it is already part of the land development piece.

Council Member Kravets asked to be briefed on how the arborist would protect a grand oak and what the legal mechanism is for him to do that.

City Arborist Joe Ferris stated it is part of the Permitting Department's review. A resident or contractor is required to submit topographic surveys, which shows where the trees are located and their proposed work. He reviews that. In a situation like this, he would have already worked with the City Engineer and gone out and looked at the tree. Every site is going to be different. It depends on the tree, where it is located and how close it is to the root flare. There are certain trees that are more tolerant of root pruning. It is also correct if a tree is taken down and there are roots under the driveway, they will decay and leave a void. It case is specific to the site based on that tree. But it goes through that whole full review process by him, where he goes out for a site visit to see what can be done to save the tree and get what the applicant is looking for. He stated he does have the ability to say "no" after Council inquired of the arborist's authority.

Council Member Kravets asked about requiring a building permit in subsection B which seems to be old text, but the agenda item lists it as a right-a-way use permit. Why not a building permit? He stated he is interested in that because a Florida statute recently exempts any nonstructural work under \$7,500 from a building permit and since concrete pouring is not actually a licensed trade, it seems like this is completely exempted work under that state statute.

Community Development Director Greg Pauley noted a question of right-a-way permit versus a building permit. He stated a driveway requires both. They go through the same review process, with the Engineering department overseeing the final call on the right-a-way piece and Permitting overseeing the final call on the inbound piece. It is two separate permits. If it is a very small project, it may be exempt, but they do not automatically get the exemption, they must apply for it. The exemption is then reviewed by the same people who would review the permit if it were required. The exemption form is called the 803 Exemption Request and there is a process in place to handle these requests. He stated the only time a tree is allowed to be removed is if the City Arborist "greenlights" it.

Mayor Ross closed the public hearing and asked the Clerk to read the title of the ordinance.

The City Clerk therefore read the title.

AN ORDINANCE OF THE CITY OF TEMPLE TERRACE, FLORIDA, AMENDING SECTION 12-921 OF THE CITY CODE OF ORDINANCES; PROVIDING FOR CLARIFICATION OF STANDARDS FOR OFF-STREET PARKING AND DRIVEWAY REQUIREMENTS; REVISING THE TEXT REGARDING DIFFERENT

ELEMENTS OF THE INSTALLATION OF DRIVEWAYS; MORE SPECIFICALLY, PROVIDING CLARIFICATION REGARDING SECURING BLOCK PAVERS, SIGHT DISTANCE, REDUCING IMPACTS FROM TREE ROOTS, SIDEWALK SLOPES AND THE PROTECTION OF UTILITIES; ADOPTING THE HILLSBOROUGH COUNTY TYPICAL DETAIL DRAWING AS A REFERENCE; PROVIDING FOR SEVERABILITY; PROVIDING FOR CONFLICT; PROVIDING FOR THE CORRECTION OF SCRIVENERS' ERRORS; PROVIDING FOR CODIFICATION; PROVIDING FOR AN EFFECTIVE DATE.

Upon motion by Council Member Fernandez, seconded by Council Member Chamber, **Approved Ordinance 1602** on Second reading, Amending Code Section 12-921 Driveways Regulations,

Vote on the motion being: Mayor Ross, Council Members Chambers, Fernandez, Schisler and Kravets voting "aye," no, "nay."

12.D. Resolution Approving the Ballot Language for the Municipal Election on November 3, 2026.

City Clerk Lynda Sader stated as the Qualifying Officer, she noted that the qualifying for the 2026 Temple Terrae Municipal Election was held from noon Monday, August 10, 2026 until noon Friday, August 14, 2026. Five residents of the City of Temple Terrace submitted the required documents necessary to qualify for their names to be placed on the ballot for the City Council for the 2026 Temple Terrace Municipal Election on November 3, 2026 as shown on the exhibit A ballot language. The following qualified: Alison McGillivray Fernandez, Ryan Gessman, Karen Michalski, Eugene Papantoniou, and Amber Treat.

Upon motion by Council Member Chambers, seconded by Council Member Schisler, **RESOLUTION 87-26, Adopted** the Resolution, Approving the Ballot Language for the Municipal Election on November 3, 2026.

Vote on the motion being: Mayor Ross, Council Members Chambers, Fernandez, Schisler and Kravets voting "aye," no "nay."

13. Council Business: NONE.

14. New Business and Board Reports: NONE.

15. City Manager's Report:

City Manager Baia noted the water plan improvements from August 11, 2026, budget workshop, the consensus that staff took away from it was two things. It seemed like the City solution for nano membrane filtration was the long-term permanent solution and then were directed to look at a comparison and seek other quotes and pricing for an interim solution. The City had one vendor that actually pilot tested as part of the CHA water master plan and were directed to see if other competing quotes could be received. On the short-term solution, staff is still working through that, being more complex than it first seemed at the outset because the one price that the City had was from a vendor that had pilot tested for the City. We knew the vendors' composition of carbon and how it reacted with our water. To get accurate quotes from other vendors, it is a little challenging because we do not have that same ability yet. The City would have to do some pilot testing to get that information. Staff are reviewing and seeing what that would mean and how long it would take.

For the long-term solution, staff is working on the detail and on costs for the County connections that have been proposed. He suggested, if it is the Council's will, that at the next meeting of September 15, having two items related to the water addressed. One is accepting the water master plan and submit that to vendors because that becomes the basis for all the subsequent permitting for the water plant improvements. That is the foundational piece that they would have to review.

Second, a resolution that formally says to move forward on the long-term permanent solution. Not ignoring the short-term solution but moving forward with the long-term permanent solution.

Council Member Kravets asked when it comes to pilot testing, is there no way to use the results from the previous pilot test for the other vendors as a specification?

City Manager Baia stated that his understanding is the composition of the granulated activate carbon may not be the same between vendors, the type of density of it. That will impact the results.

Mr. Warrenfeltz stated for the permitting process for the temporary solution, the companies are going to have to submit bench testing for the permits. Wording received from one vendor was "the calcon material that we bench tested is somewhat similar to what this company offers." Somewhat similar doesn't meet the qualification, so they will need bench testing and analysis for the permit. The other companies will have to bench test. The companies reached out to have their own proprietary media and that is what they're basing their quotes on. The quote received that's somewhat similar is not the calcon material.

Council Member Kravets stated so his understanding is that the first group that developed their estimate based on how much material was being consumed, not on the chemical attribute of the water example.

Mr. Warrenfeltz stated that when CHA did their bench testing, the calcon material was the material that had the longest lasting effect as far as GAC on our water. He stated this is the material used by that vendor, but the other vendors have their own product and it becomes a proprietary issue.

Council Member Kravets asked why they cannot just name a price and say this is the per vessel price and the City can do a side by side and then the risk would be on our end if we picked one that burned through in less days than another would have.

Mr. Warrenfeltz stated this is not an internal test; the manufacturers need to do that. To do this, the City would need to do an RFP, similarly what the City did with CHA.

Council Member Kravets asked of the cost to do a pilot study.

Mr. Warrenfeltz stated those numbers have been asked for but the City has not received those.

Council Member Fernandez noted regarding the permanent infrastructure investment, does some of that work need to be done in conjunction with implementing a temporary measure for the PFAS removal.

Mr. Warrenfeltz stated one of the easiest examples is the high service pumps. Currently the City's water system runs about 62 PSI. With adding the additional canisters with the temporary solution, the pressure will not be able to be maintained at 62 PSI. Pump upgrades would be needed. We do not have a design to tell the manufacturers what is needed for the pumps and the electrical needs are. He said a project manager and a scope are needed first, and a design is needed.

Council Member Fernandez stated that clarification is needed from Council for staff to move forward with the full project, there's no way to implement the temporary measures until elements of the full investment are started.

City Manager Baia stated there are a lot of moving parts and would like to get started. He would like direction of moving on the permanent solution with trying to work on the short-term solution, but the permanent solution will include a lot of electrical upgrades to the plan and other things. For those reasons, he would like to get a construction manager hired as soon as possible to start running point on this project.

Council Member Fernandez asked if approval on this, or guidance for the permanent solution is given, there is a timeline before any kind of temporary solution could be put in place? Is there time to explore because it could not be put in place immediately.

Mr. Warrenfeltz stated he cannot give a timeline of start and finish because they do not have the direction of where they are headed. The City does not have all the quotes, noting that one vendor opted for 24 vessels and another was four vessels. That is a large space difference that would have to be accommodated. With this particular item, April of 2029, the City must show substantial progress of treating the water to get the extension for the other two years. The master plan was presented in May and it's September. Time is shrinking to get this done.

Mayor Ross stated the issue before Council is the City Manager is advising that unless there is an objection, this item will be placed on the agenda at the next Council meeting for discussion and some decision points. He stated a motion is not needed unless the Council does not want to hear this item on September 15.

Council Member Kravets moved to Instruct and Authorize the City Manager to move ahead with the hiring of a construction manager for this project.

Mayor Ross stated he hoped the Council would not do this, because there is not an approved project, and that would be premature to hire a construction manager for a project that's not been approved by Council.

Council Member Kravets stated he thought the City could post the position and start getting applications because in all likelihood, the project would be approved considering the direction that has been voted on in the past.

Mayor Ross asked if City Manager Baia recommends this proposal of Council Member Kravets.

City Manager Baia stated he appreciated this but if it is implied that it would be a City staffer, he is not sure that is the best option. With a project of this scope, it may be worthwhile to actually hire an engineering firm that has more resources than just one dedicated staff member. There would be a premium cost for this but that has been accounted for in the calculations.

Council Member Kravets withdrew his motion.

City Manager Baia stated that at a previous meeting, Council adopted an ordinance which allowed for speed camera enforcement for school zones and were directed to put together an RFP. He stated they were planning to move ahead but noted in the last few weeks, there has been national and state news of the debate of the cameras. The debate has been on flock cameras, but the technology is similar. With the Governor weighing in last week on the issue, and

history of the legislature, he asked the Council if they would consider a pause in this process rather than continuing, then have the legislature potentially putting restrictions on these cameras. He stated that it could be paused, work through the session and see what comes of it and then regroup.

Mayor Ross asked for the opinion of the City Attorney and what action would be needed.

City Attorney Mueller recommended a motion to take official action.

Council Member Kravets asked if it would be valuable to take some of the concerns that were raised about the speed cameras, and instead of moving ahead to implement, we use those as the basis of a policy that Council could adopt to give people some peace of mind. Put these points together and if ever have the cameras, this is what we would want from them. He stated there were a lot of very specific ideas and he thought the likelihood of finding a vendor that could do all that is really low but could come back to that in the future. He thought there would be value in making a motion to change the direction that staff was going away from the implementation and away from that ordinance toward drafting a policy that incorporates all of Council's thoughts.

Council Member Fernandez stated she is opposed to them regardless and would vote "no" either way.

Mayor Ross stated he is opposed to that too, not on a fundamental difference. He did not think it matters what is put together in policy. Wait six months and there will be a new state law. He stated that Council and staff had a lot of good discussions and had put some guard rails on it, and thought that what comes out of the state legislature will look a lot like what was put together here in Temple Terrace. He thought staff spending time on a policy at this time is pointless.

Upon motion by Council Member Chambers, seconded by Council Member Schisler, **RESOLUTION 88-26, Adopted** the Resolution, approving to postpone the implementation of the camera policy or program until brought back by the City Staff.

Council Member Fernandez stated she will vote for the postponement, but her vote is not in favor of the cameras.

Council Member Chambers stated as in the past, the public should slow down, stop at stop signs and adhere to speed limits.

Council Member Kravets stated he would prefer a time certain for the item to be brought back.

Council Member Chambers stated this is a postponement and then to bring back. If it is a time certain, then staff would need to wait to bring it back until that date.

Vote on the motion being: Mayor Ross, Council Members Chambers, Fernandez, Schisler and Kravets voting “aye,” no “nay.”

Community Development Director Greg Pauley provided a brief update regarding discussions with the developer, Enigma Events. Following the meeting held on the 17th of the previous month, staff engaged the commercial property broker, Mr. Lochner, and shared the feedback and considerations that had been raised during the meeting. Mr. Lochner subsequently engaged the developer and communicated the relevant information. The developer acknowledged that Option Two of the conceptual renderings was the preferred option and recognized that Council had provided additional feedback and identified further considerations for the design. Due to the time constraints associated with the process, the developer indicated that there was insufficient time to return to the architect and design team, make revisions, and provide updated renderings within the required timeframe. The design process had already experienced delays due to the unavailability of a member of the design team, followed by the architect's absence from the area. As a result, the developer requested that the most preferred concept, Option Two, be utilized as the basis for moving forward, with the understanding that the additional feedback provided by Council would be incorporated into the final design to the greatest extent reasonably possible. The developer also provided clarification regarding several elements of the renderings. In reviewing the recording of the meeting, the developer addressed a question concerning the horizontal structure shown beneath one of the large archways, which appeared to obstruct clear sightlines through the opening. It was clarified that this element was intended to appear in all of the renderings but had inadvertently been omitted from some of them. The structure represented an enclosed interior space that could potentially be occupied by a tenant and used for purposes such as a lounge or indoor dining area adjacent to the outdoor dining space. The element was therefore an intentional component of the design rather than an artifact or unintended feature of the rendering. It was also acknowledged that this structure was the element that created the visual obstruction of the sightline through the archway. The developer also commented on the columns and the differences in their appearance, including the desire to streamline their design. It was clarified that Option Two, which had ultimately been identified as the preferred concept, incorporated elevated storefronts. These storefronts projected substantially farther than the lower, more traditional 10- to 12-foot storefronts, which accounted for the more pronounced appearance of the columns. The columns were therefore considered an intentional design feature and served a structural purpose. The developer indicated that the columns would consist of simple vertical elements and would be constructed without additional

ornate molding or similar decorative detailing. The developer acknowledged the preference for a more streamlined appearance while noting that the columns would continue to serve their necessary structural function. The developer recognized the limited timeframe and requested that Option Two, previously identified in staff materials as Option B, be used as the preferred concept moving forward. The developer further indicated that the concept would be modified as the design progressed in a manner that addressed the feedback and considerations discussed during the meeting. The developer concluded by stating: "The city can be assured that our team will work closely with the architect and make every reasonable effort to keep the final design aligned with the city's requirements and expectations." Accordingly, the request was to proceed with the preferred Option Two with the understanding that the design would continue to be refined and modified in a manner that incorporated and supported the feedback discussed at the previous meeting.

Mayor Ross asked if Council would get to look at more defined elevations.

Mr. Pauley stated at site plan review Council would have that opportunity.

Upon motion by Council Member Fernandez, seconded by Council Member Schisler, **RESOLUTION 88-26, Adopted** the Resolution, approving to accept the renderings of "B", also known as #2, in the agreement for the sale of 8447 North 56th Street.

Vote on the motion being: Mayor Ross, Council Members Chambers, Fernandez, Schisler and Kravets voting "aye," no "nay."

City Arborist Joe Ferris noted the September 10th Tree Giveaway at the Family Complex and there would also be a company providing paper shredding. These would be fruit trees for the give away.

Council Member Kravets noted how in the Code, fruit is treated as debris and he would like to exempt fallen fruit from the Code.

16. City Attorney's Report:

City Attorney Mueller presented the City Attorney Liens Report.

With respect to the property located at 400 Ridgedale Road, the property was found to be in violation of the applicable municipal code due to staining on the exterior walls. The Municipal

Code Enforcement Board (“MCEB”) imposed a fine of \$25.00 per day, commencing in November 2025. The violations were corrected in April 2026, at which time the lien had accrued to \$3,650.00. The lien was subsequently reduced to \$500.00, and the City also collected \$124.92 in costs, for a total amount of \$624.92. The reduced lien and associated costs were paid in full on August 10, 2026.

With respect to the property located at 7788 Rosewood, the violation involved the absence of a perimeter fence required as part of the approved development. The MCEB imposed a fine of \$25.00 per day, commencing in December 2025. The violation was corrected in April 2026, at which time the lien had accrued to \$3,500.00. The lien was subsequently reduced to \$1,000.00, together with \$144.60 in City costs, for a total payment of \$1,144.60. The reduced amount was paid in full on August 17, 2026.

With respect to the property located at 206 Green Castle Avenue, the violation involved a roof in disrepair. A tree from a neighboring property had fallen onto the residence, resulting in damage to the roof. The removal of the tree and subsequent repair of the roof required an extended period of time. The MCEB imposed a fine of \$25.00 per day, commencing in May 2023, which continued to accrue until August 2023. The lien ultimately accrued to \$2,625.00. The lien was reduced to \$500.00, and the City collected \$144.50 in associated costs, for a total amount of \$644.50. The reduced lien and costs were paid in full on August 31, 2026.

With respect to the property located at 7604 Leon Avenue, the code enforcement case originated in 2008 and involved significant deterioration of the property's exterior walls and roof. Due to the extent and duration of the violations, the MCEB imposed a fine of \$100.00 per day, commencing in June 2008. The violations remained uncorrected for an extended period, during which time the condition of the exterior walls and roof continued to deteriorate. In 2023, the City pursued the matter in County Court through criminal proceedings. Following the commencement of those proceedings, the property owner began substantial rehabilitation of the property, including repairs to the exterior walls and roof, and expended significant funds to bring the property into compliance. Compliance was ultimately achieved in July 2024, at which time the lien had accrued to approximately \$587,000.00. In consideration of the substantial costs incurred by the property owner to correct the violations, as well as the resolution of the matter through the court proceedings, the lien was reduced to \$5,000.00. In addition, the City collected \$491.90 in code compliance and clerk's costs, resulting in a total payment of \$5,491.90. The reduced lien and costs were paid in full on August 31, 2026.

Finally, with respect to property at 5112 E. 122nd Avenue that became subject to foreclosure proceedings, the property was found to be in violation due to an offense involving a fence in disrepair. The MCEB imposed a fine of \$25.00 per day, commencing in August 2022. The property

subsequently entered foreclosure and was sold at auction. At the time of the foreclosure sale, the accrued fines totaled \$36,725.00. The property was purchased at the foreclosure auction for an amount exceeding the outstanding mortgage debt, resulting in a surplus. The City applied to recover a portion of the surplus and received \$20,000.00. The purchaser at the foreclosure sale subsequently corrected the fence violation and brought the property into compliance. The City received the \$20,000.00 surplus payment on August 28, 2026.

Council Member Kravets asked about litigation cases, and subjects that could be discussed in shade meetings.

City Attorney Mueller stated ones that could possibly qualify for a shade meeting would be ones that are actually in litigation. It qualifies if it is for litigation strategy or settlement. He stated that everything except the forfeiture is being handled by outside counsel.

Council Member Kravets asked why the PFAS lawsuit is not under the litigation tab.

City Attorney Mueller stated that it is not in litigation but in settlement. The City never engaged in litigation on that, only the settlement class.

Council Member Kravets asked if any reserves have been built for any of these claims.

City Attorney Mueller stated that the City uses FMIT, our insurance and they are addressing these and will pay on those if within the policy limits.

Human Resource Director/Assistant City Manager Antonio Nazario noted that we are a small municipality and are fully insured. This is the way it is structured currently.

Council Member Kravets stated that the City Council is directly in charge of the City Manager, the City Clerk and the City Attorney. He is trying to figure out what is going on with litigation. He said this reflects directly on the City Council.

Adjournment:

Meeting adjourned at 8:32 p.m.

X

Andrew R. Ross
Mayor

X

Gil Schisler
Council Member

X

James Chambers
Vice Mayor

X

Alison Fernandez
Council Member

X

Erik Kravets
Council Member

Attest:

X

Lynda Sader
City Clerk

Item Cover Page

City Council Item Report

Date: September 15, 2026

From: Amy Huchla, Public Safety Telecommunications Supervisor

Item Type: Resolution - Agreement/Contract

Subject: Resolution Approving the Fiscal Year 2027 Interlocal Agreement for Distribution of Enhanced 911 Emergency Telephone Service Fee Revenues

Presenter: Amy Huchla, Public Safety Telecommunications Supervisor

Recommendation:

It is recommended that the City Council adopt a resolution approving the Fiscal Year 2026-2027 Interlocal Agreement between the City of Temple Terrace and Hillsborough County regarding the distribution of Enhanced 9-1-1 Emergency Telephone Service Fee Revenues.

Discussion:

In compliance with the aforementioned Florida Statute, \$68,883.36 shall be designated for non-additional expenditures from account 001-1440-521.12-11 using project code "911" for authorized 9-1-1 personnel salaries and \$65,638.64 will be placed into General Fund Restricted Account Number 001-0000- 281.00-00 (sub account 9-1-1) and used as permissible for other 9-1-1 related costs.

Resolution/Ordinance Information:

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF TEMPLE TERRACE, FLORIDA, APPROVING THE FISCAL YEAR 2026-2027 INTERLOCAL AGREEMENT BETWEEN THE CITY OF TEMPLE TERRACE AND HILLSBOROUGH COUNTY; PROVIDING FOR THE TERMS AND CONDITIONS FOR DISBURSEMENT AND EXPENDITURE OF ENHANCED 9-1-1 EMERGENCY TELEPHONE SERVICE FEE REVENUES IN THE AMOUNT OF \$134,522.00; DESIGNATING \$68,883.36 FOR NON- ADDITIONAL EXPENDITURES FROM ACCOUNT 001-1440-521.12-11 BY USING PROJECT CODE "911;" DESIGNATING THE REMAINING \$65,638.64 AS RESTRICTED 9-1-1 REVENUE IN ACCOUNT 001-0000- 281.00-00; AUTHORIZING THE CITY MANAGER TO EXECUTE THE INTERLOCAL AGREEMENT ON BEHALF OF THE CITY; PROVIDING AN EFFECTIVE DATE.

Appropriation Code:

001-1440-521.12-11 and 001-0000- 281.00-00

Requirements:

Resolution

Cost:**Attachments:**

1. Resolution - 911 v3
2. 911 Interlocal Agreement FY27

RESOLUTION

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF TEMPLE TERRACE, FLORIDA, APPROVING THE FISCAL YEAR 2026-2027 INTERLOCAL AGREEMENT BETWEEN THE CITY OF TEMPLE TERRACE AND HILLSBOROUGH COUNTY PROVIDING FOR THE TERMS AND CONDITIONS FOR DISBURSEMENT AND EXPENDITURE OF ENHANCED 9-1-1 EMERGENCY TELEPHONE SERVICE FEE REVENUES IN THE AMOUNT OF \$134,522.00; APPROVING THE EXPENDITURE OF \$68,883.36 OF THE MONIES FOR PERSONNEL SALARIES; APPROVING THE EXPENDITURE OF THE REMAINING \$65,638.64 FOR OTHER 9-1-1 RELATED COSTS; AUTHORIZING THE CITY MANAGER TO EXECUTE THE INTERLOCAL AGREEMENT ON BEHALF OF THE CITY; PROVIDING AN EFFECTIVE DATE.

Whereas, in accordance with Section 365.172(10), Florida Statutes, Hillsborough County receives Enhanced 9-1-1 Emergency Telephone Service fees from the State of Florida, a portion of which the County has budgeted for disbursement to the City of Temple Terrace; and

Whereas, the proposed Interlocal Agreement between the City of Temple Terrace and Hillsborough County (attached hereto as Exhibit A) outlines the terms and conditions under which the County allocates to the City its share of the fees it receives from the State; and

Whereas, the City agrees to appropriate the funds for the Police Communications Officers' salaries, education and training, and 9-1-1 related expenses consistent with Section 365.172(10), Florida Statutes; and

Whereas, the funding allocated for the City for Fiscal Year 2026-2027 is \$134,522.00; and

Whereas, the City administration recommends approval of the Interlocal Agreement between the City of Temple Terrace and Hillsborough County outlining the terms and conditions to disburse and expend enhanced 9-1-1 Emergency Telephone Service Fee revenue; and

Whereas, in accordance with Section 365.172(10), Florida Statutes, \$68,883.36 shall be designated for authorized expenditures from account 001-1440-521.12-11 using project code "911" for authorized 9-1-1 personnel salaries; and

Whereas, the balance of \$65,638.64 will be designated as restricted 9-1-1 revenue in account 001-0000-281.00-00 and used for other permissible 9-1-1 related costs.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF TEMPLE TERRACE, that:

1. The Interlocal Agreement between the City of Temple Terrace and Hillsborough County, attached as Exhibit "A," is approved.
2. The expenditure of \$68,883.36 of the monies provided by the County for 9-1-1 personnel salaries from Account 001-1440-521.12-11 with project code 911 is approved.

3. The expenditure of \$65,638.64 of the monies provided by the County for other permissible 9-1-1 related costs from General Fund Restricted Account 001-0000-281.00-00 (sub account 9-1-1) is approved.
4. The City Manager is authorized to execute the Interlocal Agreement on behalf of the City.
5. This Resolution shall become effective immediately upon adoption.

Passed and adopted by the City Council of the City of Temple Terrace, Florida, this 15th day of September 2026.

(Corporate Seal)



X

Andrew Ross, Mayor
Chair of the City Council

Attest:

X

Lynda Sader
City Clerk

**INTERLOCAL AGREEMENT
WITH THE CITY OF TEMPLE TERRACE FOR
DISTRIBUTION OF FY27 PUBLIC SAFETY EMERGENCY COMMUNICATIONS SYSTEMS
FEE REVENUES
WITHIN PUBLIC SAFETY ANSWERING POINTS**

THIS INTERLOCAL AGREEMENT, made and entered into this ____ day of _____, 20__ by and between Hillsborough County, a political subdivision of the State of Florida, hereinafter referred to as "COUNTY" and the City of Temple Terrace, a municipal corporation organized and existing under the laws of the State of Florida, hereinafter referred to as "CITY".

WITNESSETH

WHEREAS, Florida Statutes section 365.172, the Emergency Communications Act, authorizes the State of Florida to collect the Public Safety Emergency Communications Systems fee and remit to the COUNTY for the recurring and nonrecurring charges which may be incurred by the COUNTY for enhanced 9-1-1 service and operation and maintenance of 9-1-1 service and equipment; and

WHEREAS, The COUNTY's Public Safety Emergency Communications Systems fee set by the State of Florida is to be collected and used for purposes as described in Florida Statutes section 365.172 (10); and

WHEREAS, the Board of County Commissioners approved budgeted appropriations of Public Safety Emergency Communications Systems fee funds for the CITY to be used for salaries of 9-1-1 call takers, education and training of 911 call takers, and other authorized expenses as described in Florida Statutes section 365.172(10).

NOW, THEREFORE, in consideration of the promises contained herein, the parties agree as follows:

Section 1: Subject to the provisions of Section 4: Operating Expenses, the COUNTY agrees to provide the CITY funding, in the amount of \$134,522.00 for the period specified in Section 3, for use by the CITY for 9-1-1 call taker salaries, 9-1-1 call taker education and training, operating supplies related to 9-1-1 call taking, and other authorized expenses as described in Florida Statutes section 365.172(10).

Section 2: The CITY agrees to use these funds in the manner described in Section 1 and will submit an account of the expended funds each year to the Hillsborough County 9-1-1 Manager.

Section 3: The amount specified below for recurring operating expenses shall be paid to the CITY and shall be used as specified above for the period starting October 1, 2026 through September 30, 2027. The payment process to the CITY shall be initiated by the Hillsborough County 9-1-1 Agency.

CITY may have informed COUNTY of their intent to procure during fiscal year capital items with a unit price of \$5,000 or greater and listed in Section 4: Capital Expenses. For those capital items if listed below, COUNTY shall reimburse CITY for these nonrecurring capital expenses, up to the maximum allowable reimbursement, upon receipt of documentation of the purchase of identified capital items specified below.

Section 4: The following allocation will be used:

Operating Expenses:

Operating expenses shall include dispatcher headsets, certification / recertification fees, call-taker education and training, operating supplies related to and other recurring expenses as allowed in Section 1.

City of Temple Terrace	\$134,522.00
------------------------	--------------

Capital Expenses:

CITY shall be eligible for reimbursement, up to maximum amount below, for the following delineated capital item(s):

NONE

Section 5: In the event the funds are not all spent in the time frame as described in Section 3, the funds shall be used in the next fiscal year on expenditures as described in Section 1.

Section 6: This agreement and any subsequent amendments hereto shall be filed with the Hillsborough County Clerk of the Circuit Court.

(Remainder of Page Intentionally Left Blank)

IN WITNESS WHEREOF, the parties have caused this agreement to be executed by their duly authorized representatives.

ATTEST:
VICTOR D. CRIST, CLERK

HILLSBOROUGH COUNTY, FLORIDA

BY: _____
DEPUTY CLERK

BY: _____
CHAIR
BOARD OF COUNTY COMMISSIONERS

DATE: _____

BY: _____
PRINTED NAME/TITLE

DATE: _____

APPROVED AS TO FORM:

SENIOR ASSISTANT COUNTY ATTORNEY

ATTEST:

CITY OF TEMPLE TERRACE

BY: _____

BY: _____
MAYOR

DATE: _____

BY: _____
PRINTED NAME/TITLE

DATE: _____

APPROVED AS TO FORM:

ATTORNEY

Item Cover Page

City Council Item Report

Date: September 15, 2026

From: Karmen Pitts, Executive Assistant

Item Type: Resolution - Agreement/Contract

Subject: Resolution Approving Interlocal Agreement with Hillsborough County for Landscape Maintenance of Certain Medians within 56th Street from Fowler Avenue to Fletcher Avenue

Presenter: Jason Warrenfeltz, Public Works Director

Recommendation:

Staff recommends City Council adopt a resolution authorizing City Manager to execute an Interlocal Agreement with Hillsborough County for Landscape Maintenance of certain medians within 56th Street from Fowler Avenue to Fletcher Avenue.

Discussion:

The City of Temple Terrace and Hillsborough County propose to enter into an Interlocal Agreement for Landscape Maintenance for certain medians along 56th Street from Fowler Avenue to Fletcher Avenue. This type of agreement is intended to streamline operations, reduce duplicative efforts, and ensure consistency in the maintenance of shared or adjacent public spaces. The purpose of the agreement establishes a formal partnership between agencies or jurisdictions to manage landscape maintenance collaboratively and ensures that public spaces such as roadway medians, rights-of-way, parks or shared boundaries are maintained to a consistent standard. Operational benefits include improved efficiency by centralizing or coordinating services rather than having each entity perform separate maintenance and avoiding gaps or overlaps in service coverage.

Under this Agreement, the County will install Tuscarora crape myrtle trees at designated median locations, while the City will assume responsibility for the ongoing care and maintenance of the landscaped areas through the Public Works Department's existing operations and within its current budget, resulting in no additional cost to the City. The Agreement will have an initial five-year term with automatic five-year extensions unless terminated in accordance with its terms.

Approval of the Agreement will enhance the appearance and maintenance of the 56th Street corridor and is in the best interest of the City and its residents.

Resolution/Ordinance Information:

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF TEMPLE TERRACE, FLORIDA, APPROVING AND AUTHORIZING THE EXECUTION OF AN INTERLOCAL AGREEMENT BETWEEN THE CITY OF TEMPLE TERRACE AND HILLSBOROUGH COUNTY FOR LANDSCAPE MAINTENANCE OF CERTAIN MEDIANS WITHIN 56TH STREET FROM FOWLER AVENUE TO FLETCHER AVENUE; AUTHORIZING THE CITY MANAGER TO EXECUTE THE AGREEMENT; PROVIDING AN EFFECTIVE DATE.

Appropriation Code:

Requirements:

Resolution

Cost:

Attachments:

1. Resolution - Landscape Maintenance 56th St. from Fowler to Fletcher v2
2. City-County Interlocal Agreement - 56th Street Median Maintenance - final

RESOLUTION

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF TEMPLE TERRACE, FLORIDA, APPROVING AND AUTHORIZING THE EXECUTION OF AN INTERLOCAL AGREEMENT BETWEEN THE CITY OF TEMPLE TERRACE AND HILLSBOROUGH COUNTY FOR LANDSCAPE MAINTENANCE OF CERTAIN MEDIANS WITHIN 56TH STREET FROM FOWLER AVENUE TO FLETCHER AVENUE; AUTHORIZING THE CITY MANAGER TO EXECUTE THE AGREEMENT; PROVIDING AN EFFECTIVE DATE.

Whereas, Section 163.01, Florida Statutes, known as the Florida Interlocal Cooperation Act of 1969, authorizes local governmental units to cooperate with one another to provide services and facilities in a manner that makes efficient use of their respective powers and resources; and

Whereas, Hillsborough County (the “County”) and the City of Temple Terrace (the “City”) desire to enter into an Interlocal Agreement for Landscape Maintenance (the “Agreement”) setting forth their respective duties and responsibilities for landscaping and maintenance of certain medians located within 56th Street from Fowler Avenue to Fletcher Avenue (the “Maintained Area”); and

Whereas, pursuant to the Agreement, the County will install *Lagerstroemia indica* ‘Tuscarora’ (Tuscarora crape myrtle) trees at various median locations within the Maintained Area in accordance with the landscape plans attached to the Agreement; and

Whereas, pursuant to the Agreement, the City will provide or cause to be provided the applicable care and maintenance of the Maintained Area, including those landscape maintenance services identified in the Agreement, with such maintenance to be performed as part of the Department’s existing operations and absorbed within its current budget without any additional cost to the City; and

Whereas, the Agreement provides for an initial term of five (5) years and automatic extensions for successive five-year periods, unless terminated in accordance with its terms; and

Whereas, the City Council finds that entering into the Agreement with Hillsborough County will enhance the appearance and maintenance of the 56th Street corridor and is in the best interest of the City and its residents.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF TEMPLE TERRACE, FLORIDA AS FOLLOWS:

Section 1. The Interlocal Agreement between the City of Temple Terrace and Hillsborough County for landscape maintenance of certain medians withing 56th Street from Fowler Avenue to Fletcher Avenue, attached as Exhibit “1,” is hereby approved.

Section 2. The City Manager is authorized to execute this Interlocal Agreement.

Section 3. This Resolution becomes effective immediately upon adoption.

Passed and adopted by the City Council of the City of Temple Terrace, Florida, this 15th day of September, 2026.

(Corporate Seal)



X

Andrew Ross, Mayor
Chair of the City Council

Attest:

X

Lynda Sader
City Clerk

INTERLOCAL AGREEMENT FOR LANDSCAPE MAINTENANCE

This Interlocal Agreement (the "Agreement") made this ____ day of ____, 20__, by and between Hillsborough County, Florida, a political subdivision under the laws of the State of Florida (the "County") with offices at 601 East Kennedy Boulevard, P.O. Box 1110, Tampa, Florida 33601 and the City of Temple Terrace, FL, (the "City") with offices at 11250 N. 56th Street, Temple Terrace, Florida 33617. The County and the City shall individually be referred to as a "Party" and collectively as the "Parties."

WITNESSETH:

WHEREAS, the Florida Interlocal Cooperation Act of 1969, Section 163.01, Florida Statutes, permits local government units to cooperate with other localities on the basis of mutual advantages to provide services and facilities to meet the needs and development of the local community; and

WHEREAS, it has been deemed to be in the best interest of the County to encourage corporations and organizations, including municipal corporations, to provide the care and maintenance necessary to state highways within the County as well as the County's medians, rights-of-way, and other public lands (hereinafter referred to as the "Maintained Area"); and

WHEREAS the City desires to provide the care and maintenance to the Maintained Area, as further defined below; and

WHEREAS, it has been deemed to be in the best interest of the County to enter into an agreement with the City setting forth the duties and responsibilities of the respective Parties and the terms and conditions for the proposed care and maintenance of the Maintained Area.

NOW THEREFORE, in consideration of the mutual covenants, promises, and representations contained herein, the Parties agree as follows:

ARTICLE I. SCOPE OF SERVICES

A. The Maintained Area

The Maintained Area is described herein as follows:

Location of Maintained Area: Medians on 56th Street from Fowler Ave to Fletcher Ave, see Exhibit A.

B. The County shall install crepe myrtles into the Maintained Area as set forth below and in a manner that does not create sight obstructions or other situations that would pose a danger to drivers, pedestrians, or other users of the abutting roadway. The cost of the installation shall not exceed One Hundred Fifty Thousand and 00/100 dollars (\$150,000.00)

Location of Landscape within the Maintained Area: Various medians within 56th Street. See, Exhibit A attached plans for exact median planting locations.

Landscape Materials to be Utilized: *Lagerstroemia indica*
'Tuscarora' – Tuscarora Crape myrtle

C. The City shall initial each applicable service that shall be performed by the City under this Agreement. The City shall perform or cause to be performed the following Services in the Maintained Area:

- (a) ☒ Pick up litter and debris as necessary.
- (b) ☒ Cut grass as needed.
- (c) ☒ Remove weeds and vines.
- (d) ☒ Remove and replace dead or diseased plants and trees in accordance with FDOT and County landscaping guidelines, as applicable.
- (e) ☐ Water plants as needed; provided however, such watering shall be in accordance with the County's and SWFMWD water conservation measures and restrictions.
- (f) ☐ Treat turf and other plants for pests (if using restricted chemicals, Participant must be licensed by the State of Florida).
- (g) ☐ Fertilize as needed per FDOT Guidelines and per the Environmental Protection Commission of Hillsborough County Fertilizer Rule.
- (h) ☐ Maintain irrigation system (if any) with like parts.
- (i) ☐ Maintain plants in accordance with the landscape plan approved by FDOT. NO substitutions shall be made without the prior written approval of FDOT.

- (j) ☒ Follow all landscaping guidelines as described in “Guidelines for Landscaping Hillsborough County Roadways,” as adopted by the Board of County Commissioners.
- (k) ☐ Hire a landscape contractor or utilize qualified volunteers or landscape personnel to maintain the Maintained Area.
- (l) ☐ Follow all FDOT guidelines if Maintained Area is located along a State Road.
- (m) ☒ Follow all safety guidelines as instructed by County personnel and State personnel, including, but not limited to, FDOT Maintenance of Traffic Specifications Standard Indices 613, 615, and 619.
- (n) ☐ Utilization of xeriscape plant material is preferred.

- D. If the Services to be performed by the City are on County Road right-of-way, medians, or other County lands, the City shall apply to the County for a Right-of-Way Use Permit prior to commencing work.
- E. If the trees to be installed by the County are on State highways within the County, the County shall submit, for approval, a landscape plan/design of the Maintained Area to FDOT. Approval of the landscape plans/designs by FDOT does not relieve the Parties from complying with all federal, state, and local laws, rules, regulations, and ordinances.
- F. The City shall notify the Transportation Maintenance Department if problems arise or if repairs to the Maintained Area are required and the City is unable or not authorized to do so.

F. The City shall assume total responsibility and bear the entire costs of the maintenance of the lawn and vegetation in the Maintained Area, including, but not limited to, all operational costs and all costs associated with soil irrigation, lawn mowing, fertilizing, tree trimming, shrubbery trimming, replacement of all diseased plants and other vegetation and any other maintenance necessary to insure a well-maintained and safe area.

G. In the event that the City fails to perform the Services hereunder, the County shall notify the City in writing and shall provide a specific time period within which the City must perform in accordance with this Agreement or address the issue of noncompliance. If the City does not comply or perform the Services within that time

period, the County may terminate this Agreement and remove the landscaping material installed by the County and return the Maintained Area to its original condition in order to protect the health, safety, and welfare of the general public.

H. The County shall not have any obligation to replace any plants, trees, or shrubs which subsequently die, whether such death is the result of neglect by the City, the County, or otherwise.

I. Prior to installing the trees, the County shall make sure that there are no utility facilities that are in conflict with the installation or Services to be performed. The County shall resolve any conflicts and/or concerns raised by any utility company prior to the installation of the trees or the commencement of the Services hereunder.

J. It is understood between the Parties hereto that any or all of the Maintained Area may be adjusted at any time in the future as determined to be necessary by the County or FDOT in order that the adjacent road be widened, altered, or otherwise changed to meet the future criteria or planning of the County or FDOT as applicable. The County shall give the City notice of any road widening or other adjustment of the adjacent road.

ARTICLE II. TERM OF THE AGREEMENT

The term of this Agreement shall be for five years from the date hereinabove set forth and shall be automatically extended for successive five-year periods upon the same terms and conditions hereof unless terminated as set forth herein. Either Party may terminate this Agreement, at any time, upon giving the other Party thirty (30) days' prior written notice of such termination. In the event the Agreement is terminated in accordance with the provisions hereof, the County may return the Maintained Area to its original condition.

ARTICLE III. INSPECTION

The County has the right, at all times, to inspect or otherwise evaluate the Services being performed by the City. Neither observations, inspections, nor evaluations of said Services shall relieve the City from performing the Services in accordance with all federal, state, and local laws, rules, regulations, and ordinances and this Agreement.

ARTICLE IV. WARRANTY

The City hereby represents to the County that: (a) it has the experience and skill necessary to perform the Services set forth in this Agreement and (b) it shall comply with all applicable federal, state, and local laws, rules, regulations, codes, ordinances, and orders of any public, quasi-public, or other governmental authority in the performance of the Services hereunder.

ARTICLE V. NO ASSUMPTION OF LIABILITY

The County shall not be responsible for, nor shall the County incur any liability for the actions, inactions, omissions, or commissions of the City, or any officers, employees, agents, contractors, or subcontractors of the City in performing the Services under this Agreement.

ARTICLE VI. ASSIGNMENT

The Parties shall not assign or transfer this Agreement nor any rights or obligations under this Agreement. Any purported assignment by the Parties hereunder shall be void.

ARTICLE VII. NOTICE

Any notice or communication required to be given by one Party to the other shall be in writing and may be delivered, mailed by certified mail, postage prepaid, or sent by facsimile or similar telecommunication device and shall be deemed delivered if addressed as follows:

Hillsborough County:

Hillsborough County Public Works Department
Attn: Director of Public Works
601 East Kennedy Blvd.
P.O. Box 1110
Tampa, FL 33601
Tel: (813) 272-5912
Fax: (813) 272-5811

City

City of Temple Terrace
Public Works Department
Attn: Director of Public Works
11250 N. 56th Street
Tel: (813) 506-6574

ARTICLE VIII. LEGALLY REQUIRED STATEMENT AND PROVISIONS REGARDING ACCESS TO RECORDS FOR SERVICES CONTRACTS

The Parties acknowledge and agree that the statement and provisions below are required by Florida Statute to be included in this contract for services.

IF THE CITY HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CITY'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT:

- i) Public Works Customer Service Center**
- ii) (813) 635-5400**
- iii) 601 East Kennedy Blvd., Tampa FL 33602**

If under this Contract, the City is providing services and is acting on behalf of the County as provided under Section 119.011(2), Florida Statutes, the City will comply with public records law, and agrees to:

- i) Keep and maintain public records required by the County to perform the services.
- ii) Upon request from the County's custodian of public records, provide the County with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119 Florida Statutes or as otherwise provided by law.
- iii) Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except at authorized by law for the duration of the contract term and following completion of the Contract if the City does not transfer the records to the County.
- iv) Upon completion of the Contract, transfer at no cost to the County, all public records in possession of the City or keep and maintain public records required by the County to perform the service. If the City transfers all public records to the County upon completion of the Contract, the City shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the City keeps and maintains public records upon completion of the Contract, the City shall meet all applicable requirements for retaining

public records. All records stored electronically must be provided to the County, upon request from the County's custodian of public records, in a format that is compatible with the information technology systems of the County.

Failure of the City to comply with Chapter 119, Florida Statutes, and/or the provisions set forth above, where applicable, shall be grounds for immediate unilateral termination of this Agreement by the County.

ARTICLE IX. ENTIRE AGREEMENT

This Agreement constitutes the entire understanding between the City and the County with respect to the subject matter hereof and supersedes any prior or contemporaneous agreement or understanding between the Parties. The Parties shall not be bound by or be liable for any statement, prior negotiations, correspondence, representation, promise, draft agreements, inducement or understanding of any kind or nature not set forth or provided for herein. No prior course of dealing, usage of trade, or course of performance shall be used to supplement or explain any term, condition, or instruction used in this Agreement.

ARTICLE X. APPLICABLE LAW

This Agreement is entered into in the State of Florida and shall be construed and interpreted in accordance with its laws. In the event litigation is commenced for the enforcement of this Agreement, the Parties hereby agree and stipulate that venue for such action shall be in the Circuit Court for the Thirteenth Judicial Circuit in and for Hillsborough County, Florida.

ARTICLE XI. MODIFICATION

No oral explanation or oral information by either of the Parties hereto shall alter the meaning or interpretation of this Agreement. No amendment or change hereof or addition hereto shall be effective or binding on any of the Parties hereto unless reduced to writing and executed by the respective duly authorized representatives of each of the Parties hereto.

ARTICLE XII. WAIVER/RESERVATION OF RIGHTS

Any waiver by the Parties of any term, condition, or breach of this Agreement shall not be construed or deemed to be a waiver of any other provision or condition of this Agreement, nor a waiver of a subsequent breach of the same or another term or condition

and shall not in any way affect, limit, or waive the Parties' right thereafter to enforce strict compliance with every other term and condition hereof.

ARTICLE XIII. SEVERABILITY

In the event any one or more of the provisions contained in this Agreement shall, for any reason, be held to be invalid, illegal, or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provision of this Agreement, and this Agreement shall be construed as if such invalid, illegal, or unenforceable provision had not been contained herein.

ARTICLE XIV. CAPTIONS

Section headings in this Agreement are for convenience or references only and shall be given no effect in the construction or interpretation of this Agreement or any provisions thereof.

ARTICLE XV. ACKNOWLEDGMENT

Both Parties acknowledge that they have had the opportunity to have this Agreement reviewed by legal counsel of their choice, and that they understand the terms and conditions herein.

IN WITNESS WHEREOF, the County and the City respectively, have caused this Agreement to be executed by their duly authorized representatives as of the date first set forth above.

CITY OF TEMPLE TERRACE, FL

By: _____
City Manager

Witness: _____
(Corporate Seal)

ATTEST:
VICTOR CRIST
CLERK OF CIRCUIT COURT

HILLSBOROUGH COUNTY

By: _____
Deputy Clerk

By: _____
Ken Hagan, Chair
Board of County Commissioners

Date: _____

Approved as to Form and Legal Sufficiency:

By: _____
Vivian Arenas-Battles
Senior Assistant County Attorney

HILLSBOROUGH COUNTY

DEVELOPMENT AND INFRASTRUCTURE SERVICES, PUBLIC WORKS DEPARTMENT



PLANS OF PROPOSED

56th STREET PLANTING

THIS CONTRACT PLAN SET INCLUDES:

INDEX OF PLANS	
SHEET NO.	SHEET DESCRIPTION
1-9	COVERSHEET
10	LANDSCAPE PLANS
11	LANDSCAPE NOTES
	LANDSCAPE LIST AND DETAILS



LOCATION MAP
TOWNSHIP 27S., RANGE 18E.

"INVESTIGATE BEFORE YOU EXCAVATE"

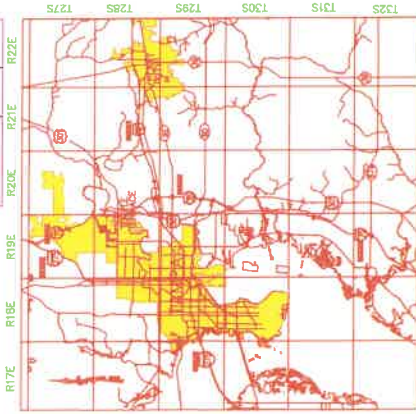


CALL SUNSHINE • 1-800-432-4770
ALL EXCAVATION WORK REQUIRES A
MIN. 10-DAY NOTICE PERIOD
AND 3-DAY NOTICE BEFORE YOU EXCAVATE

PROJECT COORDINATOR/MANAGER

ALLEN L. HOWELL

PROJECT NO.	FISCAL YEAR	SHEET NO.
	25	0



VICINITY MAP

THE BOARD OF COUNTY COMMISSIONERS

KEN HAGAN	CHAIRMAN
CHRISTINE MILLER	VICE-CHAIRMAN
GWEN MYERS	CHAPLAIN
HARRY COHEN	COMMISSIONER
DONNA CAMERON CEPEDA	COMMISSIONER
CHRIS BOLES	COMMISSIONER
JOSHUA WOSTAL	COMMISSIONER

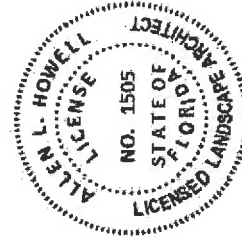
PREPARED BY:

HILLSBOROUGH COUNTY PUBLIC WORKS DEPARTMENT,
ENGINEERING & OPERATIONS DIVISION
601 E. KENNEDY BLVD. TAMPA, FL 33601.

LANDSCAPE ARCHITECT OF RECORD:

ALLEN L. HOWELL LA0001505

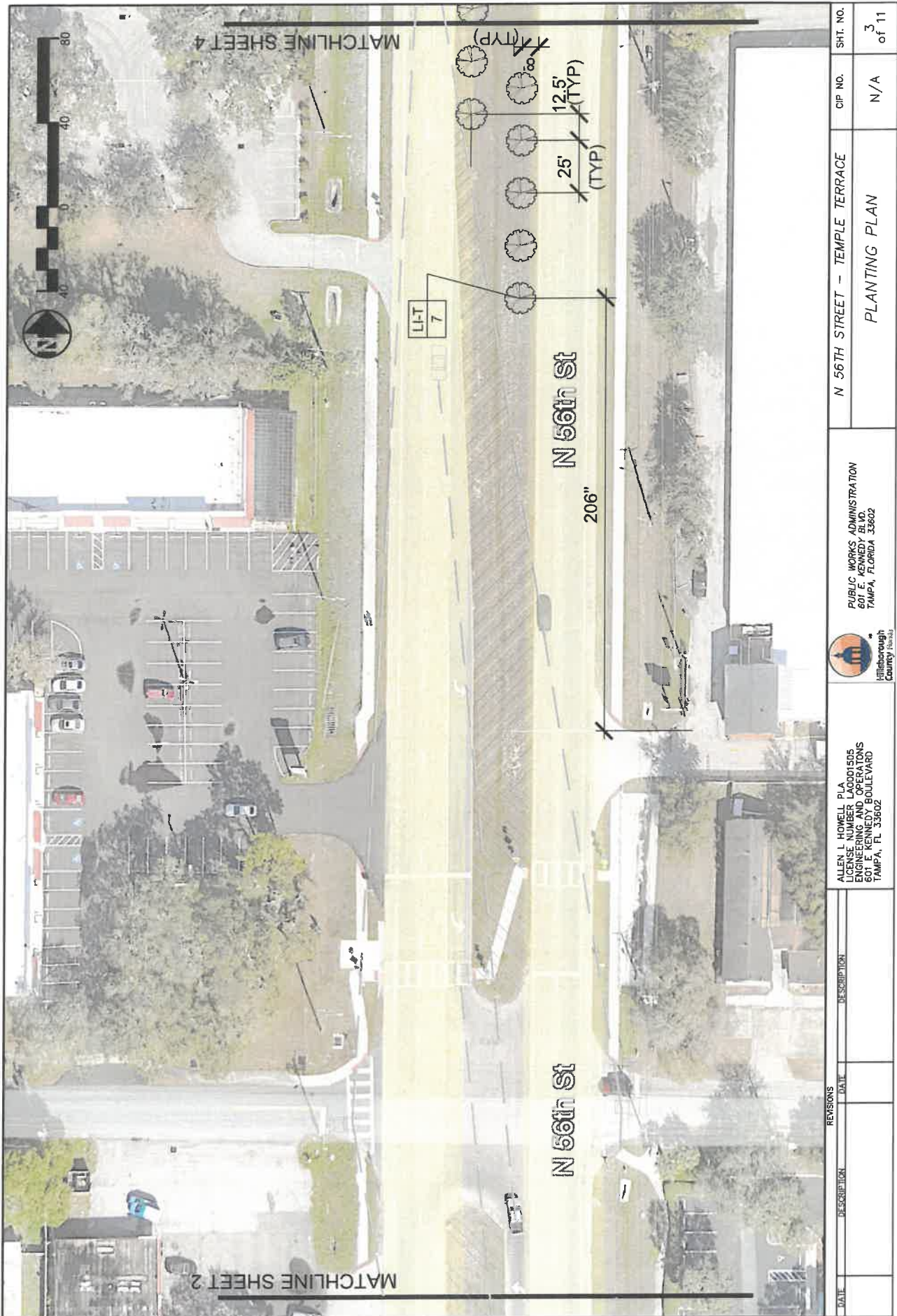
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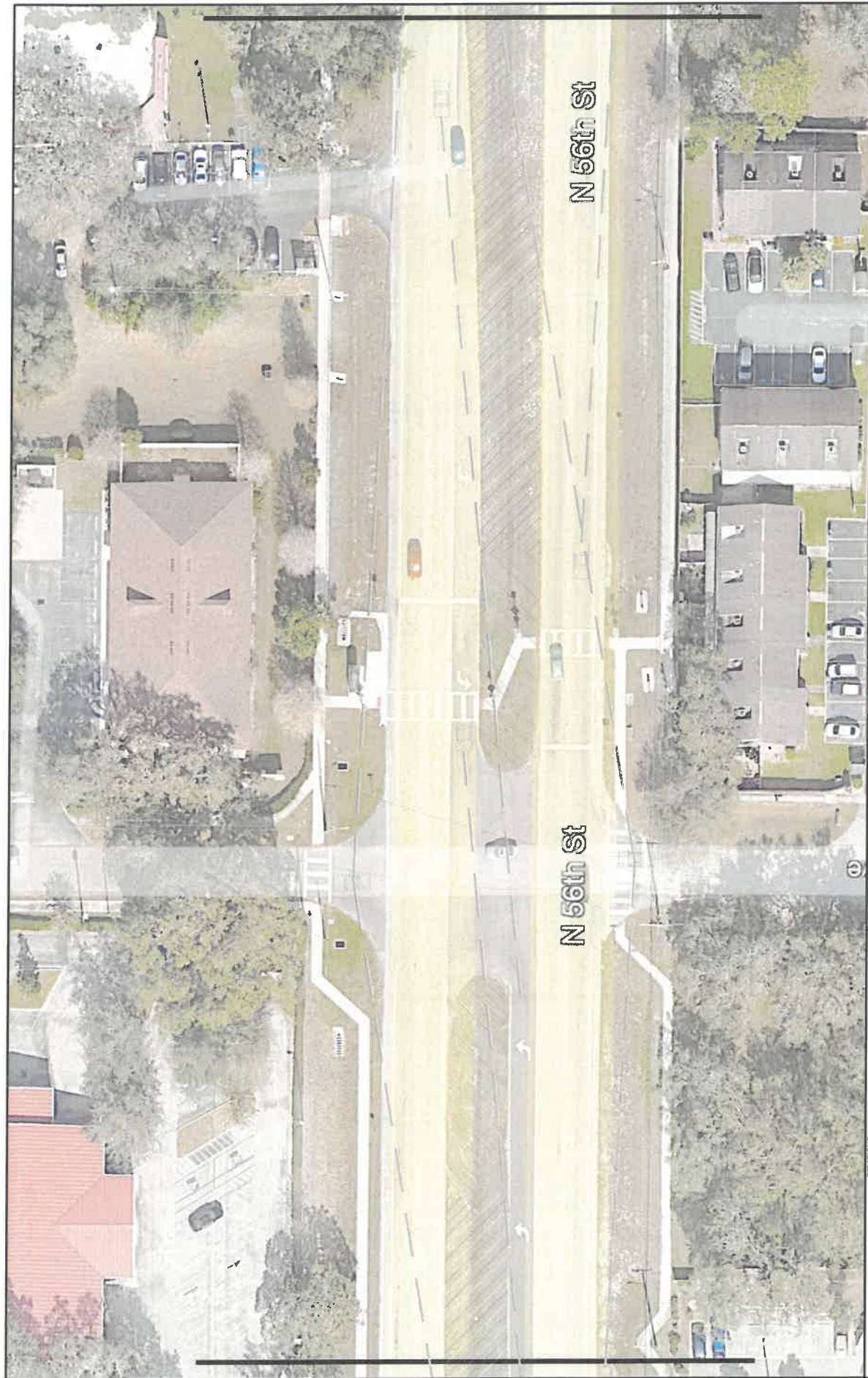
ATTENTION IS DIRECTED TO THE FACT THAT THESE PLANS
MAY HAVE BEEN REDUCED IN SIZE BY REPRODUCTION.
THIS MUST BE CONSIDERED WHEN OBTAINING SCALED DATA.

REVISIONS		DESCRIPTION	DATE	SHT. NO.	SHT. OF
DATE	DESCRIPTION				
		ALLEN L HOWELL PLA LICENSE NUMBER LA0001505 ENGINEERING AND OPERATIONS 1111 N. GULF BLVD TAMPA, FL 33602	PUBLIC WORKS ADMINISTRATION 601 E. KENNEDY BLVD. TAMPA, FLORIDA 33602	N 56TH STREET - TEMPLE TERRACE	1 of 11
		 HILLSBOROUGH COUNTY		PLANTING PLAN	

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REVISIONS			DESCRIPTION	DATE	CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE				
			ALLEN I. HOWELL, P.L.A. LICENSE NUMBER LA0001505 ENGINEERING AND OPERATIONS 601 E. KENNEDY BOULEVARD TAMPA, FL 33602  PUBLIC WORKS ADMINISTRATION 601 E. KENNEDY BLVD. TAMPA, FLORIDA 33602  N 56TH STREET – TEMPLE TERRACE PLANTING PLAN N/A 4 of 11			



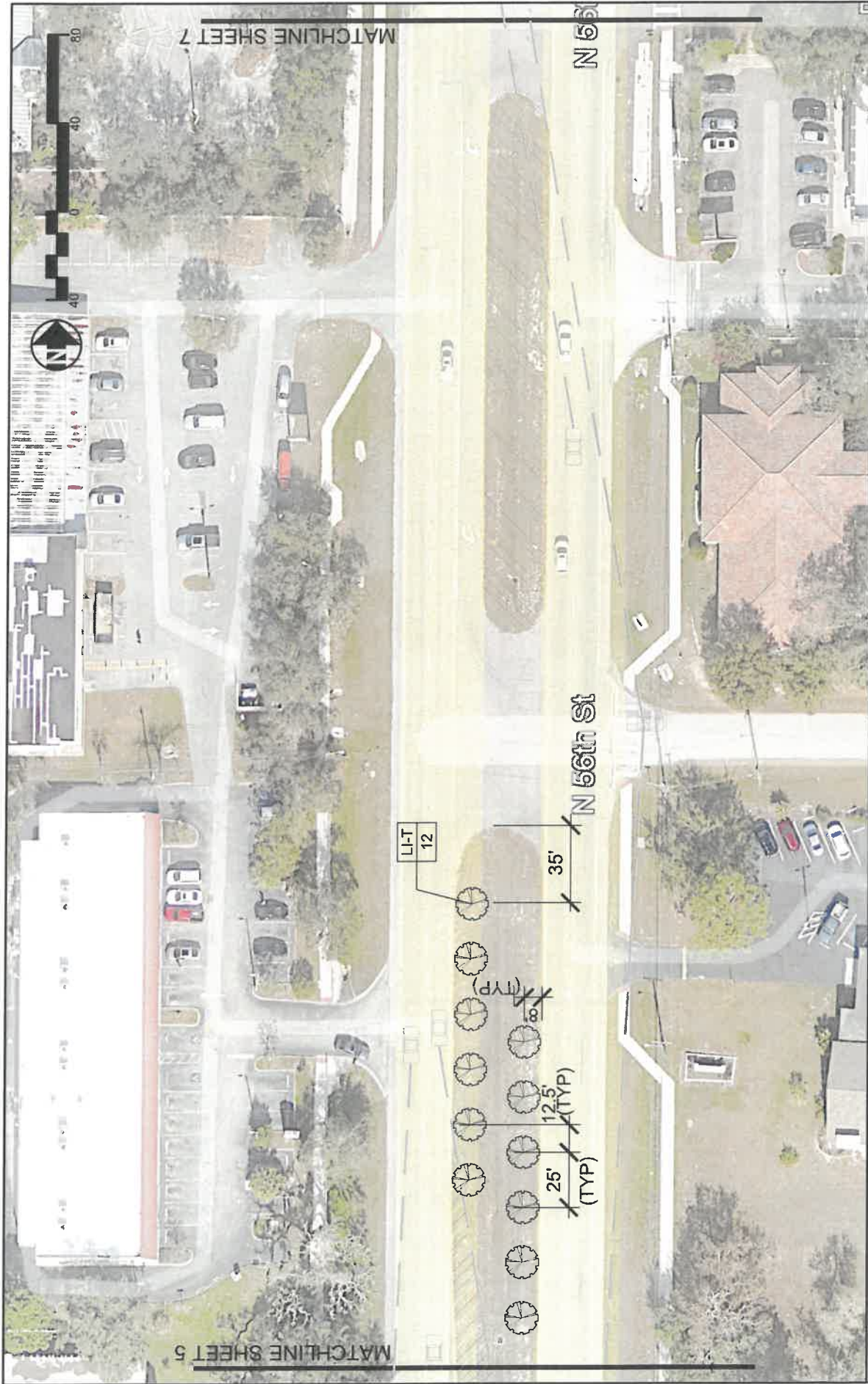
REVISIONS		DESCRIPTION		CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		
				N/A	5 of 11

N 56TH STREET — TEMPLE TERRACE
PLANTING PLAN

PUBLIC WORKS ADMINISTRATION
601 E. KENNEDY BLVD.
TAMPA, FLORIDA 33602

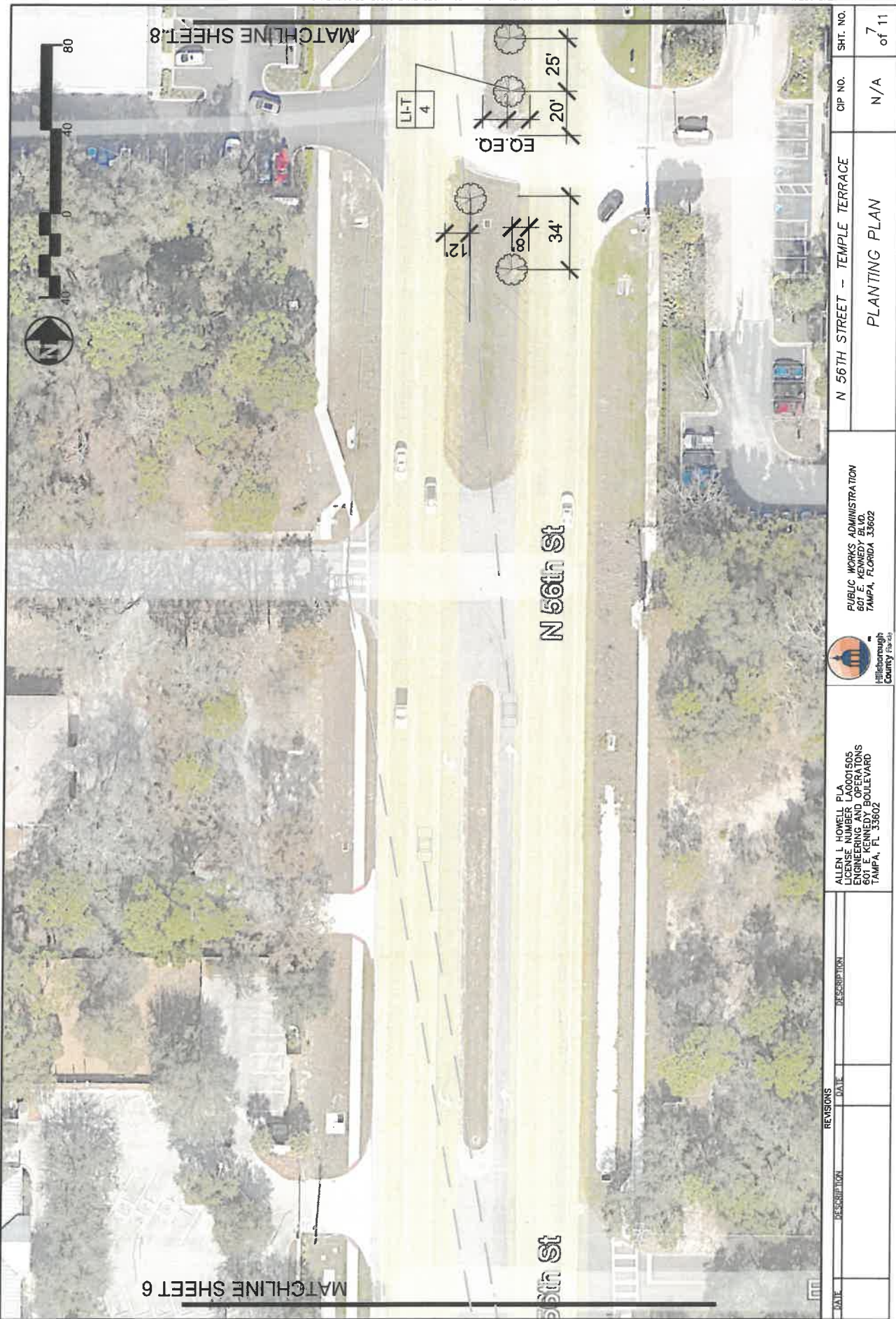


ALLEN L. HOWELL, P.L.A.
LICENSE NUMBER LA0001505
ENGINEERING AND OPERATIONS
601 E. KENNEDY BOULEVARD
TAMPA, FL 33602

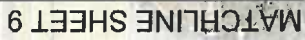


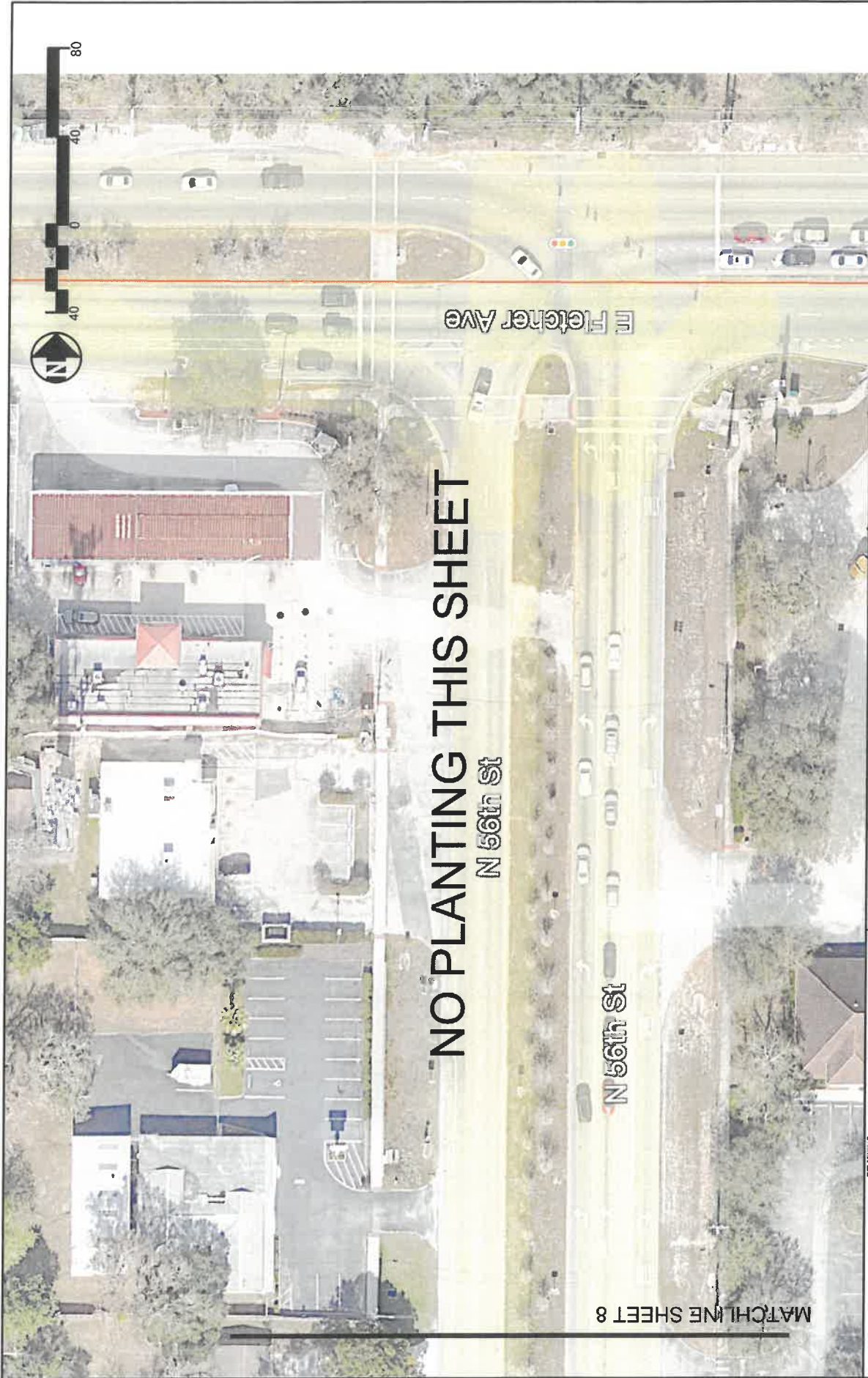
DATE		DESCRIPTION	DATE	REVISIONS	ALLEN L. HOWELL, P.L.A. LICENSE NUMBER LA0001505 ENGINEERING AND OPERATIONS 601 E. KENNEDY BOULEVARD TAMPA, FL 33602	 PUBLIC WORKS ADMINISTRATION 601 E. KENNEDY BLVD. TAMPA, FLORIDA 33602	N 56TH STREET - TEMPLE TERRACE		CIP NO.	SHT. NO.
							PLANTING PLAN		N/A	6 of 11

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



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REVISIONS		N 56TH STREET – TEMPLE TERRACE		CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION	N/A	9 of 11
ALLEN L. HOWELL, P.L.A. LICENSE NUMBER LA0001505 ENGINEERING AND OPERATIONS 601 E. KENNEDY BOULEVARD TAMPA, FL 33602		PUBLIC WORKS ADMINISTRATION 601 E. KENNEDY BLVD. TAMPA, FLORIDA 33602		PLANTING PLAN	
					

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SYMBOL	SCIENTIFIC NAME	COMMON NAME	QTY.*	SIZE	SPACING	COMMENTS
LI-T	LAGERSTROEMIA INDICA	'TUSCARORA'	58	30 Gal.	As shown	10'-12' ht., 2" cal., standard, full, dense canopy

* Quantity is estimated by the grower.

STAKE/ANCHOR

WEBBING

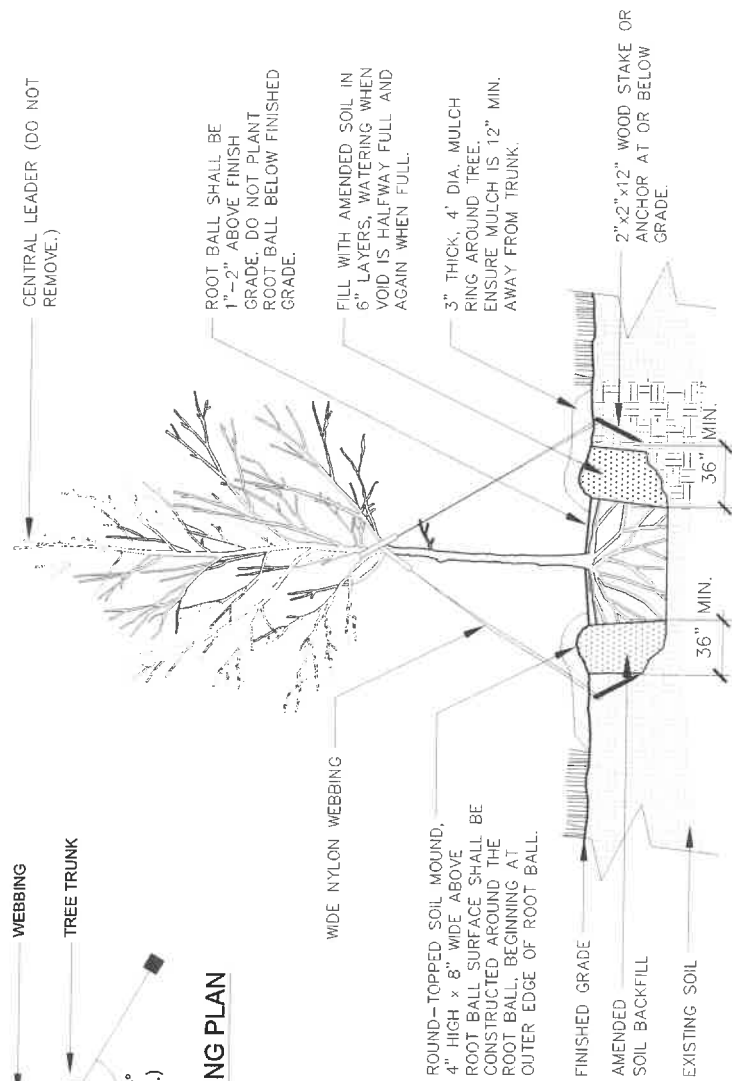
TREE TRUNK

120° (TYP.)

CENTRAL LEADER (DO NOT REMOVE.)

ROOT BALL SHALL BE

TREE STAKING PLAN



TREE PLANTING

[illegible]

Item Cover Page

City Council Item Report

Date: September 15, 2026
From: Greg Pauley, Community Development Director
Item Type: Resolution - Agreement/Contract
Subject: Resolution Approving an Interlocal Agreement for School Facilities Planning, Siting, and Concurrency
Presenter: Greg Pauley, Community Development Director

Recommendation:

Staff recommends approval of the updated Interlocal Agreement for School Facilities Planning, Siting, and Concurrency.

Discussion:

Hillsborough County Public Schools District requested an update to the existing Interlocal Agreement for School Facilities Planning, Siting, and Concurrency (ILA) to ensure statutory compliance and standardize cooperation between the School District and all local agencies throughout Hillsborough County for public school planning, site locations, and concurrency.

Michelle Orton, General Manager of Growth Management, Planning, and Siting, is representing this item on behalf of Hillsborough County Public Schools District.

Resolution/Ordinance Information:

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF TEMPLE TERRACE, FLORIDA, APPROVING THE REVISION OF THE INTERLOCAL AGREEMENT FOR SCHOOL FACILITIES PLANNING, SITING, AND CONCURRENCY BETWEEN THE CITY, THE SCHOOL BOARD OF HILLSBOROUGH COUNTY, AND THE HILLSBOROUGH COUNTY CITY-COUNTY PLANNING COMMISSION; PROVIDING AN EFFECTIVE DATE.

Appropriation Code:

Requirements:

Resolution

Cost:

Attachments:

1. Resolution 2026 Interlocal Agreement v2
2. Exhibit A - Temple Terrace Interlocal Agreement
3. 2016 Interlocal Agreement for School Facilities Planning, Siting, and Concurrency
- Full Redline Markup
4. Planning Commission - Resolution adopting Interlocal Agreement

RESOLUTION

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF TEMPLE TERRACE, FLORIDA, APPROVING THE REVISION OF THE INTERLOCAL AGREEMENT FOR SCHOOL FACILITIES PLANNING, SITING, AND CONCURRENCY BETWEEN THE CITY, THE SCHOOL BOARD OF HILLSBOROUGH COUNTY, AND THE HILLSBOROUGH COUNTY CITY-COUNTY PLANNING COMMISSION; PROVIDING AN EFFECTIVE DATE.

Whereas, Sections 1013.33 and 163.31777, Florida Statutes require coordination between school boards and local governing bodies regarding public educational facility planning, siting, and school concurrency; and

Whereas, on March 18, 2003, the City entered into an Interlocal Agreement for School Facilities Planning, Siting and Concurrency ("Agreement") with the School Board of Hillsborough County and the Hillsborough County City-County Planning Commission ("Parties") ensure compliance with statutory requirements; and

Whereas, the Agreement has been amended from time to time to ensure consistency with the City's Comprehensive Plan; and

Whereas, this latest version of the Agreement (attached hereto as Exhibit A) is being revised again to reflect current statutory requirements, coordination procedures, concurrency implementation measures, annual reporting requirements, and processes related to public school facility planning, development review, student enrollment projections, infrastructure coordination, and land use consistency; and

Whereas, the current revision ensures the Parties recognize their mutual roles and responsibilities, and administer activities and procedures related to school facilities planning, siting, and concurrency in a consistent manner and in compliance with statutory requirements and the City's Comprehensive Plan.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF TEMPLE TERRACE, THAT:

Section 1. The revised Interlocal Agreement for School Facilities Planning, Siting, and Concurrency, attached as Exhibit "A," is hereby approved.

Section 2. This resolution shall become effective immediately upon adoption.

Passed and adopted by the City Council of the City of Temple Terrace, Florida, this 15th day of September 2026.

(Corporate Seal)



X

Andrew Ross, Mayor
Chair of the City Council

Attest:

X

Lynda Sader
City Clerk

**Interlocal Agreement
for
School Facilities Planning,
Siting, and Concurrency**

City of Temple Terrace

_____, 2026

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Statutory Basis and Intent

This is an Interlocal Agreement (the "Agreement") for public educational facility planning, siting, and school concurrency in the City of Temple Terrace. This Agreement is made and entered into this ____ day of _____ 2026, by and between the City of Temple Terrace, a political subdivision of the State of Florida, located at 11250 N. 56th Street, Temple Terrace, FL 33617 ("City") and the School Board of Hillsborough County, Florida, a public body corporate, located at 901 East Kennedy Boulevard, Tampa, Florida 33602 ("School Board") and the Hillsborough County City-County Planning Commission, located at 601 E. Kennedy Blvd., Tampa, FL 33602 (the "Planning Commission").

WHEREAS, this Agreement was initially executed on March 18, 2003; and

WHEREAS, this Agreement has been modified from time to time to ensure consistency with the *City of Temple Terrace Comprehensive Plan*; and

WHEREAS, this Agreement was further updated to reflect changes in the state concurrency legislation relating to public school concurrency, as amended; and

WHEREAS, the City and the School Board recognize their mutual obligation and responsibility for the education, nurturance and general well-being of the children of the City of Temple Terrace; and

WHEREAS, it is mutually beneficial for the City, the Planning Commission, and School Board to support efforts that facilitate coordination of planning for the location and development of public educational facilities to serve the children of the City of Temple Terrace and to ensure that the impacts of new development occur only in accordance with the ability of the City and School Board to maintain adequate level of service standards; and

WHEREAS, Sections 1013.33(1), 163.31777, Florida Statutes, require coordination of planning between the school boards and local governing bodies; and

WHEREAS, Sections 1013.33(2) and (3), Florida Statutes, require this Agreement to address the process by which the City and School Board will share and coordinate information related to existing and planned educational facilities; local government plans for development and redevelopment; and the determination of need and timing of onsite and offsite infrastructure improvements to support the educational facilities, including identification of the party or parties responsible for said improvements; and

WHEREAS, Section 1013.33(4), Florida Statutes, requires that the location of public educational facilities shall be consistent with the comprehensive plan of the appropriate local governing bodies and any applicable implementing land development regulations, to the extent that the regulations are not in conflict with, or the subject regulated is not specifically addressed by this Chapter 1013, Florida Statutes, the State Requirements for Educational Facilities (SREF), or the Florida Building Code, unless mutually agreed by the City and the School Board; and

WHEREAS, Section 163.31777(1) and 1013.33(2), Florida Statutes, further require each county, all the non-exempt municipalities within the county, and the school board to establish jointly the specific ways in which the plans and processes of the school board and local governments are to be coordinated; and

WHEREAS, public schools should be provided in proximity to the actual and projected population of school age children to be served by such schools; and

WHEREAS, the City has determined that schools create a sense of place in a community and are the cornerstones of effective neighborhood design and a focal point for development of neighborhood plans and improvements including, but not limited to, parks, recreation, libraries, children's services and other related uses; and

WHEREAS, the School Board has determined that the location of schools, as part of stable and well-designed neighborhoods, enhances, educational programs, encourages community support and supports safe, secure and effective educational environments for the children that utilize these facilities; and

WHEREAS, to the extent it may be required by Florida law, the City provides certain public facilities necessary to support public school facilities and/or programs; and

WHEREAS, the City has recognized the importance of neighborhood participation for public facility siting; and

WHEREAS, the School Board, the City and the Planning Commission have mutually agreed that coordination of School Board facility planning and planning for Hillsborough County (hereinafter the "County") and the cities of Plant City, Temple Terrace and Tampa is in the best interests of the citizens of the City; and

WHEREAS, the Planning Commission is the local Land Planning Agency for the County and its municipalities, including the City; and

WHEREAS, the Planning Commission has agreed to provide planning services as described herein; and

WHEREAS, Section 163.3180 (6), Florida Statutes, authorizes the City and School Board to implement a school concurrency program; and

WHEREAS, the City and the School Board are mandated to enter into this Agreement pursuant to Section 163.01, Section 163.3177, Section 163.3180, and Section 1013.33(2), Florida Statutes; and

WHEREAS, Sections 163.31777 and 163.3180(6), Florida Statutes set forth the school concurrency requirements that must be implemented through interlocal coordination between the City and the School Board; and

WHEREAS, the City, the School Board, and the municipalities within the County have met and coordinated with respect to the statutory requirements for a countywide, uniform school concurrency program; and

WHEREAS, the School Board is obligated to maintain and implement a financially feasible, district facilities plan for a five (5)-year period, based on the level of service standards provided for in this Agreement; and

WHEREAS, the City is required to amend its Comprehensive Plan and Land Development Code (LDC), as appropriate and necessary, in order to effectuate its obligations under this Agreement and state statute; and

WHEREAS, the School Board has a constitutional and statutory obligation to provide a uniform system of free public schools on a countywide basis; and

WHEREAS, the City and the Planning Commission undertake land use planning, and the City implements the land use planning through necessary land development regulations within its jurisdiction; and

WHEREAS, this Agreement neither is intended to, nor does it delegate or transfer any land use planning or regulatory authority to the School Board; and

WHEREAS, by entering into this Agreement, the City and the School Board are fulfilling their statutory obligations and requirements recognizing the benefits that will accrue to their citizens and students described above.

NOW THEREFORE, be it mutually agreed between the School Board of Hillsborough County, the City of Temple Terrace and the Planning Commission that the following requirements and procedures shall be utilized in coordinating land use and the siting and development of public-school facilities.

Section 1 Applicability

1.1.1 Pursuant to Section 1013.33(9), Florida Statutes, existing educational facilities shall be considered consistent with the applicable local government Comprehensive Plan. School sites owned or acquired prior to the date of this Agreement, which were submitted for a determination of consistency and found consistent under the requirements of an adopted Interlocal Agreement are exempt from the requirements of Section 4 herein.

1.1.2 The City's review or approval is not required for:

(a) relocatables as follows:

1. the placement of temporary (three (3) years or less) classrooms (relocatables) for the purpose of renovation or construction; or
2. the placement of relocatables intended to expand the capacity of permanent school facilities which results in a fifteen percent (15%) increase or less in the square footage of the permanent school facility.

(b) renovation or construction on existing school sites (with the exception of construction that changes the primary use of a facility, including stadiums) resulting in a fifteen percent (15%) increase or less in the square footage of the permanent school facility; or

(c) school sites that have been and/or will be specifically designated within development plans approved by the City. Such sites shall be subject to the conditions, standards and procedures established for such development plans.

- 1.1.3** If the School Board submits an application to expand an existing school site, when required, the review shall be conducted in accordance with the procedures in Section 4 herein. The City may impose development standards and conditions on the expansion in a manner consistent with Section 1013.51(1), Florida Statutes.
- 1.1.4** Construction on all other sites shall be subject to the provisions contained herein. Ancillary Facilities shall be subject to the development review process identified in Sections 3.5 and 6.1.

Section 2 Coordination and Sharing of Information

Section 2.1 Annual Joint Meetings and Reporting

- 2.1.1** Staff of the County, the cities of Plant City, Temple Terrace and Tampa, the School Board and the Planning Commission shall meet at least once annually to discuss issues regarding coordination of land use and school facilities planning. The discussion shall include issues such as population and student projections, development trends, school needs, co-location and joint use opportunities, and infrastructure improvements needed to support schools and ensure safe student access. The School Board staff shall be responsible for making meeting arrangements.
- 2.1.2** As a result of the annual meeting described in Section 2.1.1., the School Board staff will lead the preparation of a report which will summarize the effectiveness of this Agreement and summarize any recommendations regarding amendments to the Agreement or related documents proposed in the joint meeting. The School Board staff will be responsible for the final preparation of the report and distribution to the elected Chair and/or Mayor of each local government, the Chair of the Planning Commission, and the Chair of the School Board. The report may also be presented to any of the local government bodies.

Section 2.2 Student Enrollment, Population Projections, Growth and Development Trends

- 2.2.1** In fulfillment of their respective planning duties, the City and the School Board shall coordinate plans based upon consistent projections of the amount, type, and distribution of population growth and student enrollment that are developed in coordination with the Planning Commission.
- 2.2.2** The School Board shall utilize both (i) district-wide student population projections that are based on information produced by the demographic, revenue, and education estimating conferences pursuant to Section 216.136, Florida Statutes, where available, and (ii) projections based on the Concurrency Service Areas (CSA) established in Section 6 of this Agreement. These projections include both student membership and Capital Outlay Full Time Equivalent (COFTE) and may be modified by the School Board based on local development trends and data with agreement of the Florida Office of Educational Facilities for any modifications of state calculated COFTE projections. For purposes associated with this Agreement, student membership projections are deemed more relevant.
- 2.2.3** Annually, but no later than April 30 of each calendar year, the City and the Planning Commission staff shall provide the School Board with a report on growth and development trends within the jurisdiction of Temple Terrace for the previous calendar year, by

Transportation Analysis Zone (TAZ). This report shall be in tabular, graphic, textual and/or digital formats.

In addition, the City and the Planning Commission staffs shall provide the School Board staff with the information set forth below.

- (a) The City shall provide the following on at least a quarterly basis starting on July 1 of each calendar year:
 - 1. all rezoning applications and proposed modifications to planned development zoning districts and the results of the City's actions on such applications;
 - 2. the type, number, and location of residential units which have received zoning approval or site plan approval;
 - 3. information, to the extent available, regarding the proposed conversion or redevelopment of housing or other structures into residential units which are likely to generate new students;
 - 4. a listing of all preliminary plats, subdivision construction plans, final plats and site development plans that include residential dwelling units and which were submitted, approved, or which expired within the previous three (3) months. Such listing shall include the date of approval and prospective expiration dates of any such plats or plans, inventory of potential dwelling units and/or type, as applicable. This information may also be presented in the form of a dashboard;
 - 5. information on Building Permits and Certificates of Occupancy issued. This information may also be presented in the form of a dashboard; and
 - 6. the identification of any development orders issued which contain a requirement for the provision of a school site as a condition of development approval.
- (b) The Planning Commission staff shall provide the following on at least a quarterly basis:
 - 1. information regarding future land use map amendments or text amendments and community plans;
 - 2. published report of building permits issued and/or newly built parcels for the preceding year and their location; and
 - 3. updated population projections apportioned geographically.

2.2.4 The School Board staff will use the information described in Section 2.2.3 to project student enrollment to make the most efficient use of public-school facilities. The distribution of projected student enrollment will be presented at staff meetings described in Section 2.1.1.

Section 2.3 Local Planning Agency, Comprehensive Plan Amendments, Rezoning, and Development Approvals

- 2.3.1** A nonvoting representative (ex-officio) appointed by the School Board shall be included on the Planning Commission, to attend those meetings at which the Planning Commission, considers applications that would impact school planning, operations and/or facilities.
- 2.3.2** The City staff shall provide the School Board staff notification of land use applications and development proposals filed with the City that may affect student enrollment, enrollment projections, or school facilities, including preliminary plats, site development plans, rezonings, and developments of regional impact. If a public hearing is required, the notification must be provided at least forty-five (45) days prior to the first public hearing for consideration of the development application. If no public hearing is required, the notification must be provided concurrent with the transmittal of the applications to other reviewing agencies and departments. The City shall refer any rezoning application that includes residential uses to the School Board and shall include the School Board's comments in the City Department Reports required by the Land Development Code.
- 2.3.3** The Planning Commission staff shall provide the School Board staff notice of proposed comprehensive plan future land use text or map amendments filed with the Planning Commission that may affect student enrollment, enrollment projections, or school facilities, including community plans, adopted pursuant to the comprehensive plan. Such notice will be provided at least forty-five (45) days prior to the first Planning Commission public hearing for consideration of the plan amendment or community plan. School Board comments shall be included in the Planning Commission staff reports.
- 2.3.4** Within the following number of days after applications, as described in Sections 2.3.2 and 2.3.3, have been deemed complete by City staff and School Board staff, and all applicable review fees, including school concurrency, have been paid in full, the School Board shall provide the estimated school enrollment impacts anticipated to result from the proposed land use application or development proposal, as well as whether sufficient capacity exists or is planned to accommodate the impacts:
- thirty (30) calendar days for a Planned Development District (PD) zoning;
 - twenty (20) calendar days for standard rezoning; and
 - thirty (30) calendar days for Comprehensive Plan Amendments.

School capacity shall be reported consistent with the LOS methodology in this Agreement.

Section 2.4 Co-location and Shared Use

- 2.4.1** Co-location and shared use of facilities are important to both the School Board and the City. The City will look for opportunities to co-locate and share use of City facilities when preparing the annual update to the City Comprehensive Plan's schedule of capital improvements and when planning and designing new or renovating existing, community facilities. The School Board will look for opportunities to co-locate and share use of educational facilities when preparing the Educational Facilities Plan. In addition, when

the School District acquires property for a school site, the City staff shall be given an opportunity to consider simultaneously acquiring property for an adjoining neighborhood park or other appropriate use. In designing the arrangement and layout of buildings, parking facilities, and recreational areas for schools, consideration shall be given to the effective utilization of the adjacent neighborhood park.

- 2.4.2** A separate agreement may be developed for each instance of co-location and shared use which addresses legal liability, operating and maintenance costs, scheduling use of the facilities, and facility supervision or any other issues that may arise from co-location and shared use.

Section 3 Planning Process

Section 3.1 Tentative Educational Facilities Plan

- 3.1.1** Annually, the School Board shall submit a draft Tentative Educational Facilities Plan to the City and the Planning Commission staffs for review and comment sixty (60) days prior to the public hearing for adoption by the School Board. The plan shall be consistent with the requirements of Section 1013.35, Florida Statutes, and shall include the projected student population apportioned geographically, an inventory of existing school facilities, projections of facility space needs, information on leased, loaned, and donated space and relocatable classrooms, general locations of new schools and anticipated closures of existing schools for the 5, 10, and 20 year time periods, as well as options to reduce the need for additional permanent student stations.
- 3.1.2** The plan also shall include the Educational Facilities Plan for the five (5)-year period. The Educational Facilities Plan shall include:
- (a) all planned school facility projects, which include new construction, expansions, remodeling, and renovations that will create additional capacity;
 - (b) existing and projected enrollment of existing and planned school facilities;
 - (c) the year in which each planned school facility will be undertaken;
 - (d) the source of funding for each planned school facility and the year in which the funding becomes available;
 - (e) the capacity created by each planned school facility;
 - (f) proportionate fair share mitigation amounts anticipated from agreements;
 - (g) off-site infrastructure concerns and/or other comprehensive plan issues; and
 - (h) necessary data and analysis supporting the proposed Educational Facilities Plan.
- 3.1.3** Within thirty (30) days of submittal:
- (a) The City staff shall review the Educational Facilities Plan and provide a report to the School Board regarding infrastructure and service needs associated with the

proposed educational facilities and other applicable information. The report shall include a proposed schedule for the infrastructure and public facilities within the City's Five-Year Capital Improvement Program; and

- (b) The Planning Commission staff shall review the Educational Facilities Plan and provide written comment to the City and the School Board on the consistency of the Educational Facilities Plan with the City's Comprehensive Plan. The Planning Commission staff shall provide written comment to the School Board on whether a Comprehensive Plan amendment will be necessary for any proposed educational facility.

3.1.4 Prior to the annual meeting of the staff, the School Board will identify potential future school sites to meet the demand anticipated in the Long-Range School Planning Study (LRSP). These school sites may be owned by the School Board, under contract for purchase, or under consideration for possible acquisition. The School Board will identify potential future school sites to meet demand based on timeframes associated with:

- (a) Immediate Need – School construction is imminent and school opening is anticipated to be in three years or less;
- (b) Near Term Need – School construction is anticipated within the Educational Facilities Plan and school opening is anticipated in the fourth or fifth year of the Educational Facilities Plan;
- (c) Projected Need – School construction is projected in the 6-10 years of the Tentative Educational Facilities Plan and the LRSP;
- (d) Future Need – School construction is outside of the ten (10)-year plan and the site is for the purposes of land banking and consistent with the LRSP.

3.1.5 The School Board shall adopt a financially feasible Educational Facilities Plan that includes school capacity sufficient to meet anticipated student demand as projected by the City and the County, based on the Level of Service (LOS) standards set forth in this Agreement and the LRSP. The School Board shall construct school facilities sufficient to maintain the LOS and LRSP standards set forth herein, consistent with the adopted Educational Facilities Plan.

Section 3.2 Public School Facilities Element Development and Updates

3.2.1 The City shall cooperate with the School Board and the other municipalities within the County to develop, adopt and maintain a common Public Schools Facilities Element (PSFE). The PSFE shall be updated as necessary to be consistent with the Educational Facilities Plan.

3.2.2 In the event that the City wishes to amend the agreed upon PSFE, it will follow the procedures set forth in Section 163.3184, Florida Statutes.

Section 3.3 Updates to Capital Improvements and Intergovernmental Coordination Elements

The procedure for updating the Capital Improvements Element and Intergovernmental Coordination Elements of the Comprehensive Plan shall be as provided by Sections 163.3177 and 163.3180, Florida Statutes.

Section 3.4 Neighborhood Meeting

For sites that were not platted nor planned for school use as part of a master or planned development plan, and for sites that have adjacent neighbors, during design development phase, the School Board shall conduct at least one neighborhood meeting. The purpose of the neighborhood meeting is to provide information on the pending school construction and to receive public input. The School Board staff shall provide written notice to the City and the Planning Commission staff of the date, time and location of the neighborhood meeting no later than fifteen (15) days prior to the date indicated. This requirement shall be considered met if the School Board went through a public rezoning hearing process prior to acquisition.

The School Board shall provide written notice to property owners of parcels of record with the Hillsborough County Property Appraiser's Office within one hundred fifty (150) feet in every direction of the subject property, excluding streets and street rights-of-way and homeowners' associations within one mile of the proposed school site of the neighborhood meeting to discuss the pending site selection determination. Said notice shall be provided no later than fifteen (15) days prior to the meeting.

To the extent practical, the neighborhood meeting shall be conducted within the general area of the proposed educational facility. The meeting may be held either prior to or subsequent to a request to the Planning Commission staff for a determination of consistency with the City Comprehensive Plan, and to the City staff for an evaluation of consistency with the requirements of Section 3. Evidence of the neighborhood meeting, including a list of property owners to whom the neighborhood meeting notice was sent, meeting summary, attendance record, and comment sheets shall be submitted within twenty-five (25) days following the meeting.

Section 3.5 School Facilities Location Considerations and Review Procedures

Pursuant to Section 1013.33, Florida Statutes, the School Board, City, and the Planning Commission, agree to the following procedures to coordinate the location of new educational facilities:

Section 3.6 Preliminary Consistency Finding for Site Acquisition

Florida Statutes Section 1013.33(5) requires a preliminary consistency finding for site acquisition which is separate from a finding of consistency for a school site development plan under Section 1013.33(6), Florida Statutes. It is recognized by the parties that some issues associated with consistency are relevant at the time the site is developed rather than when the site is acquired. As such, the School Board staff shall identify the facility development schedule using the timeframes defined in Section 3.1.4 of this Agreement when presenting sites for consideration. City and the Planning Commission staffs shall consider the relevant issues for consistency based on these timeframes recognizing that preliminary consistency is focused primarily on whether the school site is located within a reasonable and proximate area to serve residential development.

Section 3.7 Future Land Use Classifications in which Public Schools are Permitted

Public schools are community facilities which are necessary to serve residential development in the City. Public Schools shall be permitted in the Future Land Use Classifications which allow for public schools, as delineated on the Future Land Use Map and as provided for in the City of Temple Terrace Comprehensive Plan.

Section 3.8 Zoning Categories in which Schools are Permitted

Public schools shall be permitted by right in all zoning districts with the exception of i) Light Industrial and ii) properties located within areas subject to the Hillsborough County Aviation Authority Airport Zoning Regulations. Public schools shall also be permitted within all planned development ("PD") zoning districts; however, if an existing PD does not currently designate or permit a school use, School Board staff would be required to pursue a PD modification through the applicable approval process before a public school site could be considered or developed within that PD.

Section 3.9 Application for Determination of Consistency

3.9.1 At least sixty (60) days prior to acquiring or leasing property, the School Superintendent shall send written notice as follows:

- (a) to the Planning Commission staff requesting a determination of consistency with the City's Comprehensive Plan. Planning Commission staff will provide a copy of its draft determination to City staff for comment, and any comments received will be attached to the final finding; and
- (b) to the City requesting an analysis of infrastructure and service needs associated with the proposed educational facility including:
 - availability of sewer and water and location of points of connection;
 - suitability of site access and adjacent roadways;
 - stormwater; and
 - other applicable infrastructure and service needs.

3.9.2 Such request shall include an existing available aerial photograph and a conceptual site plan including site boundaries, property address and tax folio identification numbers, drawing scale, proposed student enrollment capacity, driveway access locations, site acreage, building envelopes, and parking and recreation areas.

3.9.3 Within forty-five (45) days after receipt of the request, the Planning Commission staff shall notify the School Board and the City if the proposed new school site is consistent with the land use categories and policies of the City's Comprehensive Plan. The City shall provide a report to the School Board and the City Commission regarding their analysis of infrastructure and service needs associated with the proposed educational facility as specified above.

3.9.4 Pursuant to Section 1013.33(7), Florida Statutes, the City may impose reasonable development standards and conditions in accordance with Section 1013.51(1), Florida

Statutes, and consider the site plan and its adequacy as it relates to environmental concerns, health, safety and welfare, and effects on adjacent property. Standards and conditions may not be imposed which conflict with those established in Chapter 1013, Florida Statutes, the State Requirements for Educational Facilities (SREF), or the Florida Building Code, unless mutually agreed upon. The City Manager or his/her designee shall forward the Planning Commission staff's determination of consistency of the proposed site with the Comprehensive Plan to the School Board and the City Commission in writing.

- 3.9.5 The School Board shall hold an advertised public hearing pursuant to Section 5 of this Agreement.
- 3.9.6 Requests for determination of consistency with the Comprehensive Plan for elementary, middle, and high schools and other public education facilities may, at the discretion of the School Board, be processed concurrently with an application for a special use permit or rezoning.
- 3.9.7 If the School Board does not commence construction of the proposed educational facility in the application within twenty-four (24) months after the date the City issues its written approval letter for the application, the School Board shall be required to resubmit the application for determination of consistency for City review and approval in accordance with this Section. For purposes of this Agreement, "commence construction" shall mean the School Board's good-faith initiation of on-site work in furtherance of the proposed educational facility, which may include, without limitation, site clearing, demolition, grading, installation of erosion or stormwater controls, utility installation or relocation, or other preparatory site work authorized by applicable permits, and shall not require vertical construction of improvements.

Section 4 Site Design/Development Plan Submittal

At least ninety (90) days prior to initiating construction, the School Board shall submit a site design/development plan to the City and within forty-five (45) days after receiving the submittal, the City shall certify in writing whether the proposed educational facility is in compliance with the determination of consistency with the Comprehensive Plan. The site design/development plan shall include the following transportation information:

- 1. Points of ingress and egress and/or driveways and curb-cuts;
- 2. Right-of-way width, both public and private;
- 3. Pavement width;
- 4. Type of surface and surface conditions;
- 5. Number of existing lanes at mid-block and intersections;
- 6. Locations of sidewalks, bikeways, and transit stops in the right-of-way;
- 7. Location and type of all existing and proposed median openings; and
- 8. Location and type of existing traffic devices.

The City shall not charge the School Board with an application or plan review fee. The parties shall work cooperatively and collaboratively to ensure the development review process is not protracted.

Consistent with Section 1013.33(7), Florida Statutes, the City may not deny the site based on adequacy of the site plan as it relates solely to the needs of the school. If the site is consistent with the Comprehensive Plan's land use policies and categories in which public schools are identified as allowable uses, the City may not deny the application, but it may impose reasonable development standards and conditions in accordance with Section 1013.51(1), Florida Statutes, and consider the site plan and its adequacy as it relates to environmental concerns, health, safety and welfare, and effects on adjacent property. Standards and conditions may not be imposed that conflict with federal or state law or provisions of the State Requirements for Educational Facilities (SREF) or the Florida Building Code Section 453, unless mutually agreed.

Pursuant to Section 163.31777, Florida Statutes, the City and the School Board agree to reasonably cooperate regarding access to public easements and public rights-of-way reasonably necessary for the siting, development, operation, maintenance, repair, expansion, and improvement of public school facilities and charter school facilities located within the City. The City shall reasonably coordinate with the School Board regarding the School Board's use of, or access across, public easements and rights-of-way owned or controlled by the City for lawful school purposes, including utility connections, vehicular and pedestrian access, drainage, sidewalks, signalization, transportation improvements, and related infrastructure improvements, subject to applicable engineering standards, permitting requirements, and public safety considerations. In the event the School Board determines that additional access rights or use authorizations are reasonably necessary for a school project, the parties agree to work in good faith to negotiate any supplemental easement, license, permit, maintenance agreement, or right-of-way use agreement reasonably required for such project.

Pursuant to Section 1013.33(6), Florida Statutes, if the determination is affirmative, school construction may commence, and further local government approvals are not required; provided that the City may inspect the property for conformity with the applicable provisions of SREF and the Florida Building Code.

Section 5 School Board Public Meetings

At a regularly scheduled meeting that has been properly noticed the School Board shall consider the Planning Commission staff's determination of consistency and the City's comments regarding infrastructure as they determine whether to approve acquisition or leasing of the proposed school site.

It is mutually agreed that in the event the School Board acquires a proposed site which the Planning Commission has determined is not consistent with the land use categories and policies of the Comprehensive Plan, the School Board assumes the risk associated with a potential future finding that the site design/development plan for a school on such site may be found inconsistent with the City Comprehensive Plan and/or inconsistent with the City's Land Development Code.

Section 6 School Concurrency Implementation

Section 6.1 Capital Infrastructure

6.1.1 Annually, the School Board shall update the Educational Facilities Plan, addressed in Section 3.1 of this Agreement.

- 6.1.2** Annually, the City will consider an amendment to the Comprehensive Plan's Capital Improvement Element (CIE) in order to incorporate the School Board's adopted Educational Facilities Plan. Following the Educational Facilities Plan update or amendment, made in accordance with this Agreement, the City will consider further amendments to its CIE to incorporate such updates or amendments during the immediately subsequent round of Comprehensive Plan amendments.

Section 6.2 Concurrency Service Area Level of Service Standards

- 6.2.1** Pursuant to Section 163.3180(6)(b), Florida Statutes, the LOS standards set forth herein shall be applied consistently by the City and the School Board in implementing school concurrency within the County, based on data and analysis supporting the adopted Comprehensive Plan.
- 6.2.2** The LOS standards set forth herein shall be included in the capital improvements element of the City's Comprehensive Plan and shall be applied consistently by the City and the School Board districtwide to all schools of the same type.
- 6.2.3** The LOS standards may be amended only pursuant to the procedure set forth in Section 6.3.2 of this Agreement.
- 6.2.4** The LOS standard to be used by the City and the School Board to implement school concurrency for elementary, middle, high and combination schools is 100% of Permanent FISH Capacity as adjusted by the School Board annually to account for measurable programmatic changes.

Section 6.3 School Concurrency Service Areas

- 6.3.1** School Concurrency Service Areas (CSAs) shall be coterminous with the school attendance boundaries for elementary, middle, high, and combination schools.
- 6.3.2** Amendments to the CSAs, other than periodic redistricting to school attendance boundaries, may be accomplished by the School Board only after review and comment by the City and municipalities within the County as provided in Section 8 of this Agreement. CSAs shall be established and subsequently modified to maximize available school capacity and make efficient use of new and existing public-school facilities in accordance with the LOS standards set forth in this Agreement, considering school policies to:
- (a) minimize transportation costs;
 - (b) limit maximum student travel times;
 - (c) effect desegregation plans;
 - (d) recognize capacity commitments resulting from local governments' development approvals for the CSA; and
 - (e) recognize capacity commitments resulting from local governments' development approvals for contiguous CSAs.

- 6.3.3** CSAs will be described in the City Comprehensive Plan pursuant to Section 163.3180(6)(f)2.a., Florida Statutes. Maps of the CSA boundaries will be included as support documents and may be updated from time to time by the School Board

Section 6.4 Applicability and Capacity Determination

6.4.1 Applicability

- (a) School concurrency applies only to residential development, or a phase of residential development requiring subdivision plat approval or site development plan approval, or its functional equivalent, approved after the effective date of the PSFE, as implemented in Section 163.318, Florida Statutes.
- (b) Residential development shall only be considered exempt from the requirements of school concurrency in accordance with the applicable City LDC provision.

6.4.2 Process for Determining School Facilities Concurrency

- (a) In accordance with Section 163.318, Florida Statutes, an application for a mandatory determination of capacity shall be submitted concurrently with either a subdivision preliminary plat or preliminary site development plan.
- (b) Upon the receipt of a complete School Concurrency Application, the City will transmit the application to the School Board for a determination of adequate school capacity, at each school level, to accommodate the proposed development. This determination is based on the LOS standards, CSAs, and other standards set forth herein and in the LDC.
- (c) The School Board may elect to establish a school concurrency review fee to be paid by the applicant that will accompany the completed application sent by the City or delivered to the School Board prior to commencement of any school concurrency review.
- (d) For the purposes of reviewing development applications for school concurrency provided in this Agreement, the School Board shall apply the following review parameters:
 - 1. Fifteen (15) business days for preliminary plat and preliminary site development plans.
- (e) Within the number of days identified in Section 6.4.2(d), the School Board shall report in writing to the City:
 - 1. whether adequate school capacity exists for each school level, based on the standards set forth in this Agreement; or
 - 2. if adequate capacity does not exist, whether appropriate mitigation can be accepted, and if so, acceptable options for mitigation, consistent with this Agreement.

- (f) If the School Board determines that adequate capacity will not be in place or under actual construction within three (3) years after the issuance of subdivision final plat or site development construction plan approval and mitigation is not an acceptable alternative, the City will not issue a School concurrency determination and shall not approve the applicable development application.
- (g) If the School Board determines that adequate capacity does not exist, but that mitigation is an acceptable alternative, the development application will remain active pending the conclusion of the mitigation negotiation period described below.
- (h) The City will issue a School concurrency determination only upon:
 1. The School Board's written determination that adequate school capacity will be in place or under actual construction within three (3) years after the issuance of subdivision final plat or site development construction plan approval for each level of school without any required mitigation; or
 2. The execution of a legally binding mitigation agreement between the School Board, the City, and the applicant, as provided by this Agreement.

Notification by the School Board that capacity is available for a development that has tendered a written, legally binding commitment to provide mitigation proportionate to the demand for public school facilities to be created by actual development of the property in accordance with Section 163.3180 (6)(h)2, Florida Statutes.

- (i) The School Board currently has an inventory of future sites in Temple Terrace that have been discussed with the City for infrastructure planning purposes. Prior to accepting a mitigation proposal addressed by this subsection, the School Board shall identify to the City potential school sites that could be used to create the necessary school capacity and meet with the City to discuss potential infrastructure needs and ensure coordination for siting well in advance of any school building or planning.
- (j) This Agreement neither is intended to, nor does it delegate or transfer any land use planning or regulatory authority to the School Board.

Section 6.5 Mitigation Alternatives

In the event that the School Board reports that mitigation may be accepted in order to offset the impacts of a proposed development, where the LOS standards set forth in this Agreement otherwise would be exceeded, the following procedure shall be used.

- (a) The applicant shall provide the City and the School Board staff with a Tendered Commitment pursuant to Section 163.3180(6), Florida Statutes, and this Agreement. Within thirty (30) days of receipt of the Tendered Commitment, the School Board may execute the Tendered Commitment and notify the City whether school capacity is available for the development. However, a Tendered Commitment will not be processed for review until such time that a completed

School Concurrency Application is processed by the School Board and applicable fees paid by the applicant.

(b) Acceptable forms of mitigation may include:

1. The donation, construction, or funding of school facilities sufficient to offset the demand for public school facilities to be created by the proposed development;
2. The creation of mitigation banking within designated areas based on the construction of a public-school facility in exchange for the right to sell capacity credits. Capacity credits shall be sold only to developments within the same concurrency service area or an adjacent concurrency service area;
3. Establishment of a charter school with facilities constructed in accordance with the SREF and consistent with the School District's Prototype Educational Specifications in use at the time of construction and subject to guarantees that the facility will be conveyed to the School Board at no cost to the School Board if the charter school ceases to operate; and
4. Establishment of an Educational Benefit District.

(c) The following standards apply to any mitigation accepted by the School Board:

1. Proposed mitigation must be directed toward a permanent school capacity improvement identified in the School Board's financially feasible Educational Facilities Plan, which satisfies the demands created by the proposed development; and
2. Relocatable classrooms will not be accepted as mitigation.

(d) In accordance with Section 163.3180(6)(h), Florida Statutes, the applicant's total proportionate-share mitigation obligation to address a capacity deficiency shall be calculated based on the cost of providing school capacity to satisfy the demand created by the actual development of the property, as determined for the applicable school year. Pursuant to Section 163.3180(6)(h)2.b, Florida Statutes, the applicant's proportionate-share mitigation obligation will be credited toward any other impact fee or exaction imposed by local ordinance for the same need, on a dollar-for-dollar basis, at fair market value. The credit must be based on the total impact fee assessed and on the impact fee for any particular type of school.

(e) Mitigation must be proportionate to the capacity deficiency for public school facilities to be created by the actual development of the property.

Section 7 Definitions

Ancillary facility(ies) – non-instructional buildings and/or sites utilized for such facilities as vehicle maintenance, warehouses, maintenance, or administrative buildings necessary to provide support services to an educational program.

Available school capacity – the circumstance where there is sufficient school capacity, based on adopted LOS standards, to accommodate the demand created by a proposed residential development.

COFTE – Capital Outlay Full Time Equivalent is the basis for student allocation for the Florida Education Finance Program for K-12 established in facilities operated by the School Board, provided annually.

Combination School – a public school that contains any combination of or all of the grade levels from kindergarten through grade 12. This definition does not include schools defined as elementary, middle, or high school.

Concurrency – the requirement that adequate public school facilities are available or will be in place or under actual construction within the timeframes required by law to accommodate the impacts of proposed residential development, consistent with the adopted level of service standards and this Agreement.

Concurrency Service Area (CSA) – the specific geographic unit within a school district in which school concurrency is applied and measured. In determining whether there is sufficient school capacity to accommodate a proposed development, the School Board will:

- (a) consider whether the CSA in which the proposed development is situated has available school capacity; and
- (b) in the event that the CSA in which the proposed development is situated does not have available school capacity, the School Board will determine whether a contiguous CSA has available school capacity in accordance with the policies adopted in the Public Schools Facilities Element.

Concurrency Service Area Level of Service Standards – the maximum acceptable percentage of school utilization determined by dividing the total number of students for all schools of each type in each CSA by the total number of permanent student stations for that type of school in each CSA.

Educational Facilities Plan – the financially feasible 5-Year Educational Facilities Plan adopted pursuant to Section 1013.35, Florida Statutes, which includes a table of expenditures and revenues from the Capital Outlay Budget that details how the School District shall achieve and maintain the LOS for public school facilities. Financial feasibility shall be determined using professionally accepted methodologies.

Existing school facilities – school facilities constructed and operational at the time a School Concurrency Application is submitted to the City.

Florida Inventory of School Houses (FISH) – the official inventory of district-owned educational facilities published by the Florida Department of Education, Office of Educational Facilities.

Measurable programmatic change – a change to the operation of a school that has consistent and measurable capacity impacts including, but not limited to double sessions, floating teachers, year-long schools, and special educational programs.

Permanent FISH Capacity – the estimated number of students that can be satisfactorily housed in an educational facility at any given time, as reflected in FISH, based on the number of satisfactory permanent student stations attributable to permanent buildings (as defined in FISH).

Planned school facilities – school facility capacity that will be in place or under actual construction within three (3) years after the issuance of subdivision final plat or site development construction plan approval, pursuant to the School Board’s adopted Educational Facilities Plan.

Relocatable (also known as “portable”) – a building or portion of a building made of prefabricated units that can be disassembled and reassembled frequently, or a single unit of construction consisting of walls, roof and floor that is movable as a unit either on wheels or by truck. Mobile, demountable, dividable, modular and portable buildings are types of relocatable units.

Reserved capacity – school facility capacity set aside for a residential development (also known as Development Reservations).

SREF – State Requirements for Educational Facilities, which dictates the standards for school construction pursuant to Florida Department of Education.

School attendance boundary – the geographic area by which the School Board determines student membership at specific schools.

School Capacity Calculations – the School Board will determine whether adequate school capacity exists for a proposed development, based on the LOS standards, CSAs, and other standards set forth in this Agreement, as follows:

- (a) calculate total school facilities by adding the capacity provided by existing school facilities to the capacity of any planned school facilities;
- (b) calculate available school capacity by subtracting from the total school facilities the sum of:
 - 1. used capacity;
 - 2. the portion of reserved capacity projected to be developed within three (3) years;
 - 3. the portion of previously approved development projected to be developed within three (3) years; and
 - 4. the demand on schools created by the proposed development.

Tendered Commitment – a tendered legally binding commitment to provide mitigation proportionate to the demand for public school facilities created by actual development of property consistent with Section 163.3180 (6)(h)(2)(a), Florida Statutes and this Agreement.

Tentative Educational Facilities Plan – the comprehensive planning document prepared annually by the district school board’s staff and submitted to the Office of Educational Facilities and the affected general-purpose local governments.

Used capacity – school facility capacity consumed by or reserved for preexisting development. For the purpose of concurrency reviews, the forty (40)-day membership count at existing school facilities will be used to determine “capacity consumed”.

Section 8 Implementation and Amendments

It is understood that the School Superintendent, the City Manager or his/her designee and the Planning Commission Executive Director may, in the implementation and administration of this agreement, act on behalf of their respective Boards in any manner that is customarily delegated. It is also understood that references to the School Superintendent, City Manager or his/her designee or the Executive Director of the Planning Commission shall include their duly appointed representatives.

To the extent that the procedures and requirements referenced from the LDC require interpretation and adjustment to meet the intent of this Agreement, the City Manager or his/her designee may exercise discretion as prescribed by the LDC.

This Agreement may be amended only by the written consent of the City and the School Board and the Planning Commission, as applicable. Amendments proposed to this Agreement and accepted by the School Board and the City, which do not affect the Planning Commission’s responsibilities hereunder, will not require approval by the Planning Commission.

Section 9 Effective Date and Termination

Pursuant to Sections 163.01 and 1013.33, Florida Statutes, this Agreement is effective upon the date this Agreement is recorded in the public records of Hillsborough County. The Clerk of the Board of County Commissioners for Hillsborough County is hereby authorized and directed, after approval of this Agreement by the respective governing bodies of the School Board and the City and execution thereof by the duly qualified and authorized representatives of each of the parties hereto, to file this Agreement with the Clerk of the Circuit Court of Hillsborough County, Florida, for recording in the public records of Hillsborough County, Florida. Within two (2) days of the execution of this Agreement by the last of the City and the School Board, the Clerk shall record the Agreement in the public records of Hillsborough County.

This Agreement shall continue in full force and effect and shall automatically be renewed for one (1)-year periods unless the City or the School Board signifies in writing to the other its intent to terminate the Agreement at least one hundred twenty (120) days prior to the renewal date. It is further provided that either of the two aforementioned parties may terminate this Agreement by giving at least one hundred twenty (120) days written notice of its intent; provided, however, neither party may provide written notice of termination unless the parties are prepared to replace this Agreement with an updated interlocal agreement, which updated interlocal agreement shall supersede any previous version.

Section 10 Resolution of Disputes

Except as otherwise provided in this Agreement, if the parties to this Agreement are unable to resolve any issue(s) in which they may be in disagreement that are covered in this Agreement, such dispute will be resolved as follows: comprehensive plan amendments shall be resolved in accordance with Part II, Chapter 163, Florida Statutes. Those issues not involving comprehensive plan amendments shall be resolved in accordance with governmental conflict resolution procedures specified in Chapter

164, Florida Statutes or other acceptable means of alternative dispute resolution agreed upon by the parties. Each party shall bear its own attorney's fees.

IN WITNESS WHEREOF, this Interlocal Agreement has been executed by and on behalf of the City by its Chairman of the City Commission and the seal of the City affixed hereto and attested by the City Clerk and the School Board of Hillsborough County, Florida by its Chairman and its corporate seal affixed hereto and attested by the Superintendent of Schools on this ____ day of _____, 2026.

ATTEST:

**SCHOOL BOARD OF
HILLSBOROUGH COUNTY, FL**

Superintendent of Schools

Chair

CITY OF TEMPLE TERRACE

City Clerk, City of Temple Terrace

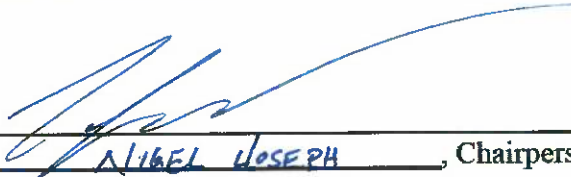
Mayor _____

Approved as to form and correctness.

City Attorney

The Planning Commission, by executing this Interlocal Agreement, accepts that its role, pursuant to this Agreement, is limited to the provisions of those planning services described herein.

HILLSBOROUGH COUNTY CITY-COUNTY PLANNING COMMISSION



MIGUEL JOSEPH, Chairperson



Melissa Zornitz, Executive Director

~~EXHIBIT No. 1~~

~~Interlocal Agreement
for
School Facilities Planning and Siting and School
Concurrency
Temple Terrace~~

~~RESOLUTION NO. 101-16~~

~~A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF TEMPLE TERRACE, FLORIDA,
APPROVING THE INTERLOCAL AGREEMENT FOR SCHOOL FACILITIES PLANNING-
AND SITING AND SCHOOL CONCURRENCY AMONG THE CITY AND THE
HILLSBOROUGH COUNTY CITY COUNTY PLANNING COMMISSION AND THE SCHOOL
BOARD OF HILLSBOROUGH COUNTY.~~

~~WHEREAS, the~~
Interlocal Agreement
for
School Facilities Planning and,
Siting, and School Concurrence-
~~(Agreement) in the form attached~~
~~hereto as Exhibit No. 1 provides~~
~~locational criteria for schools as well~~
~~as the mechanism for implementing~~
~~and administering school concurrency~~
~~in accordance with Chapter 2005-290,~~
~~Laws of Florida (Senate Bill 360); and~~

~~WHEREAS, this Agreement was initially executed on March 18, 2003, and subsequently amended on~~
~~May 6, 2008, and contemplates changes to meeting schedules for staffs of each local government, the Planning~~
~~Commission and School Board, as well as for the Council of Governments;~~

~~WHEREAS, specifically, the Agreement provides level of service standards, ensures concurrency service~~
~~areas will be school attendance boundaries, obligates the City to only approve residential development if there is~~
~~available student capacity in existing schools or those planned in the first three years of the five-year work plan,~~
~~includes the City in the five-year work plan review process, and outlines procedures for concurrency reviews and~~
~~amending concurrency components; and~~

~~WHEREAS, the Hillsborough County City County Planning Commission reviewed the Agreement on~~
~~May 9, 2016 and found it consistent with the City's 2040 Comprehensive Plan; and~~

~~WHEREAS, the School Board is scheduled to consider the Agreement in July, 2016; and~~

~~WHEREAS, the City Council finds the Agreement consistent with the City's 2040 Comprehensive~~
~~Plan; and~~

~~WHEREAS, the City Council finds it to be in the best interests of the residents of the City to enter~~
~~into the Interlocal Agreement for School Facilities Planning and Siting and School Concurrence among the~~
~~City and the Hillsborough County City County Planning Commission and the School Board of Hillsborough~~
~~County to coordinate planning and other necessary activities between the parties and satisfy requirements of~~
~~Florida Law including Chapter 163 and Chapter 1013, Florida Statutes.~~

~~NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE~~

(Del)

CHERAL A.
CITY CLERK

~~CITY OF TEMPLE TERRACE, that:~~

~~The City Council hereby approves the Interlocal Agreement for School Facilities Planning and Siting and School Concurrence among the City and the Hillsborough County City County Planning~~

~~Commission and the School Board of Hillsborough County in the form attached hereto as Exhibit~~

City of Temple Terrace

~~No. 1. The Mayor is hereby authorized to execute such Agreement on behalf of the City.~~

~~PASSED AND ADOPTED BY THE CITY COUNCIL OF THE CITY OF TEMPLE TERRACE, FLORIDA, this 21st day of June, 2016.~~

~~APPROVED BY THE MAYOR THIS 21st DAY OF JUNE, 2016.~~

~~Attest:~~

~~/s/~~

~~(Del)~~

~~FRANK M. CHILLURA, MAYOR~~

~~JOHN J. GOONEY~~

, 2026

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City of Temple Terrace:

INTERLOCAL AGREEMENT

Statutory Basis and Intent

This is an Interlocal Agreement (the “Agreement”) for public educational facility planning-
~~and~~, siting, and ~~Public~~school concurrency in the City of Temple Terrace. This Agreement is
made and entered into this
~~School Concurrency requirements for nvelopme in the City of Temple Terrace. This~~
~~agreement is made and entered into this~~ ____ day of ~~016~~ 2026, by and between the
City of
Temple Terrace, a political subdivision of the State of ~~Flida~~Florida, located at 11250 N.
56th Street, Temple Terrace, ~~Florida~~FL 33617 (~~“City”~~); and the School Board of
Hillsborough County, Florida, a public body corporate, located at 901 ~~E.~~East Kennedy
Boulevard, Tampa, Florida 33602; (~~“School Board”~~) and the Hillsborough County
City-County Planning Commission (~~The “Planning Commission”~~), located at 601 E. Kennedy
~~Boulevard, 18th Floor~~Bld., Tampa, FL 33602 (the “Planning Commission”).

WHEREAS, this ~~interlocal agreement~~Agreement was initially executed on March 18, 2003;
and ~~has been~~

WHEREAS, this Agreement has been modified from time to time to ensure consistency
with the
City of Temple Terrace Comprehensive Plan; and

WHEREAS, this Agreement was further updated to reflect changes in the state
concurrency legislation relating to public ~~schools as provided in Laws 2005, c. 2005-290 (“S.B.~~
~~360”), which became effective July 1, 2005~~school concurrency, as amended; and

~~WHEREAS, this interlocal agreement was subsequently updated on May 6, 2008, and has been~~
~~further modified to be consistent with Imagine 2040 Temple Terrace Comprehensive Plan, which was~~
~~adopted on January 19, 2016; and~~

WHEREAS, the City and the School Board recognize their mutual obligation and
responsibility for the education, nurturance and general well-being of the children of the
City of Temple Terrace; and

WHEREAS, it is mutually beneficial for the City, the Planning Commission, and School
Board to support efforts that facilitate coordination of planning for the location and
development of public educational facilities to serve the children of the City of Temple
Terrace; and to ensure that the impacts of new development occur only in accordance with
the ability of the City and School- Board to maintain adequate level of service standards;
and

WHEREAS, Sections 1013.33(1), 163.31777, Florida Statutes, require coordination of
planning between the school boards and local governing bodies; and

WHEREAS, ~~Section~~Sections 1013.33(~~32~~) and (~~93~~), Florida Statutes, require this ~~interlocal agreement~~Agreement to address the process by which the ~~city~~City and School Board will share and coordinate information related to existing and planned ~~school~~educational facilities; local government plans for development and redevelopment; and the determination of need and timing of onsite and offsite infrastructure improvements to support the ~~school~~educational facilities, including identification of the party or parties responsible for said improvements~~;~~; and

~~WHEREAS, Sections 1013.33(1), 163.31777, and 163.3180(13), Florida Statutes, requires coordination of planning between the school boards and local governing bodies to ensure that new or expanded public educational facilities are coordinated in time and place with plans for residential development concurrently with other necessary services; and~~

WHEREAS, Section 1013.33(~~10~~4), Florida Statutes, requires that the location of public educational facilities shall be consistent with the comprehensive plan of the appropriate local governing bodies and any applicable implementing land development regulations, to the extent that the regulations are not in conflict with, or the subject regulated is not specifically addressed

by this Chapter 1013, Florida Statutes~~-or,~~ the State ~~Uniform~~Requirements for Educational Facilities (SREF), or the Florida Building Code, unless mutually agreed by the City and the School Board; and

WHEREAS, Section 163.31777(1)~~(a)~~ and 1013.33(2)~~(a)~~, Florida Statutes, further require each county, all the non-exempt municipalities within the county, and the ~~district~~ school board to establish jointly the specific ways in which the plans and processes of the ~~district~~ school board and local governments are to be coordinated; and

WHEREAS, public schools should be provided in proximity to the actual and projected population of school age children to be served by such schools; and

WHEREAS, the City has determined that schools create a sense of place in a community and are the cornerstones of effective neighborhood design and a focal point for development of neighborhood plans and improvements including, but not limited to, parks, recreation, libraries, children's services and other related uses; and

WHEREAS, the School Board has determined that the location of schools, as part of stable and well- designed neighborhoods, enhances educational programs, encourages community support and supports safe, secure and effective educational environments for the children that utilize these facilities; and

WHEREAS, to the extent it may be required by Florida law, the City provides certain public facilities necessary to support public school facilities and/or programs; and

WHEREAS, the City has recognized the importance of neighborhood participation for public facility siting; and

WHEREAS, the School Board, the City and ~~The~~the Planning Commission have mutually agreed that coordination of School Board facility planning and planning for ~~the Hillsborough~~ County (hereinafter the "County") and the ~~Cities~~cities of Plant City, Temple Terrace and Tampa is in the best interests of the citizens of ~~Hillsborough County~~the City; and

WHEREAS, the ~~Hillsborough County City County~~ Planning Commission is the local Land Planning Agency for the County and its municipalities, including the City; and

WHEREAS, the ~~Hillsborough County City County~~ Planning Commission has agreed to provide planning services as described herein; and

WHEREAS, Section 163.3180 (~~136~~), Florida Statutes ~~requires~~, authorizes the City and School Board to implement a school concurrency program; and

WHEREAS, the City and the School Board are mandated to enter into this ~~Interlocal~~ Agreement

pursuant to Section 163.01, Section 163.3177(~~6~~)(~~h~~)2, Section 163.3180, and Section 1013.33(2)(~~a~~),
Florida
Statutes; and

WHEREAS, Sections 163.3177, ~~Section 163.3180 (13) (9)~~ and 163.3180(~~g~~)6, Florida Statutes ~~sets~~set forth the school concurrency requirements that must be implemented through interlocal coordination between the City and the School Board; and

WHEREAS, the City, the School Board, ~~City of Tampa, City of Plant City and Hillsborough~~ and the municipalities within the County have met and coordinated with respect to the statutory requirements for a countywide, uniform school concurrency program; and

WHEREAS, the School Board is obligated to maintain and implement a ~~financially feasible, 5-year capital facilities program~~ financially feasible, district facilities plan for a five (5)-year period, based on the level of service standards provided for in this Agreement; and

WHEREAS, the City is required to amend its Comprehensive Plan and Land Development Code (LDC), as appropriate and necessary, in order to effectuate its obligations under this Agreement and state statute; and

WHEREAS, the School Board has a constitutional and statutory obligation to provide a uniform system of free public schools on a countywide basis; and

WHEREAS, the City and the Planning Commission undertake land use planning, and the City implements the land use planning through necessary land development regulations within its jurisdiction; and

WHEREAS, this Agreement neither is intended to, nor does it delegate or transfer any land use planning or regulatory authority to the School Board; and

WHEREAS, by entering into this ~~agreement~~ Agreement, the City and the School Board are fulfilling their statutory obligations and requirements recognizing the benefits that will accrue to their citizens and students described above.

NOW THEREFORE, be it mutually agreed between the School Board of Hillsborough County, ~~The Hillsborough County City-County Planning Commission and~~ the City of Temple Terrace and the Planning Commission that the following requirements and procedures shall be utilized in coordinating land use and the siting ~~of public school~~ and development of public-school facilities:.

Section 1 Applicability

1.1.1 Pursuant to Section 1013.33(9), Florida Statutes, existing educational facilities shall be considered consistent with the applicable local government Comprehensive Plan. School sites owned or acquired prior to the date of this Agreement, which were submitted for a determination of consistency and found consistent under the requirements of an adopted Interlocal Agreement are exempt from the requirements of Section 4 herein.

1.1.2 The City's review or approval is not required for:

(a) relocatables as follows:

1. the placement of temporary (three (3) years or less) classrooms (relocatables) for the purpose of renovation or construction; or
2. the placement of relocatables intended to expand the capacity of permanent school facilities which results in a fifteen percent (15%) increase or less in the square footage of the permanent school facility.

(b) renovation or construction on existing school sites (with the exception of construction that changes the primary use of a facility, including stadiums) resulting in a fifteen percent (15%) increase or less in the square footage of the permanent school facility; or

(c) school sites that have been and/or will be specifically designated within development plans approved by the City. Such sites shall be subject to the conditions, standards and procedures established for such development plans.

1.1.3 If the School Board submits an application to expand an existing school site, when required, the review shall be conducted in accordance with the procedures in Section 4 herein. The City may impose development standards and conditions on the expansion in a manner consistent with Section 1013.51(1), Florida Statutes.

1.1.4 Construction on all other sites shall be subject to the provisions contained herein. Ancillary Facilities shall be subject to the development review process identified in Sections 3.5 and 6.1.

Section ~~1~~ 2 Coordination and Sharing of

Information Section 2.1 Annual Joint Meetings and

Reporting

Section 1.1 Joint Meetings

2.1.1 ~~1.1.1~~ Staff of the County, the cities of Plant City, Temple Terrace and Tampa, the School Board and ~~the~~the Planning Commission shall meet at least once annually to discuss issues regarding coordination of land use and school facilities planning, ~~including such. The discussion shall include~~ issues such as population and student projections, development trends, school needs, co-location and joint use opportunities, ~~ancillary~~and infrastructure improvements needed to support schools and ensure safe student access. ~~The effectiveness of the implementation of the Interlocal Agreement and any changes that might be needed to those agreements related to the coordination of land uses and school facilities planning will also be discussed. The~~ School Board staff shall be responsible for making meeting arrangements.

2.1.2 ~~1.1.2~~ As a result of the annual meeting described in ~~PSF Policy 3.1.2~~Section 2.1.1., the School Board staff will lead the preparation of a report which will summarize the effectiveness of ~~the Interlocal~~this Agreement, ~~and~~ summarize any recommendations regarding amendments to the Agreement or related documents proposed in the ~~Joint Meeting~~joint meeting. The School Board staff will be responsible for the final preparation of the report and distribution to the elected Chair and/or Mayor of each local government, the Chair of the Planning Commission, and the Chair of the School Board. The report may also be presented to any of the local government bodies ~~and the Council of Governments (COG) as requested.~~

Section 1.2 Oversight Process

~~If the annual report identifies the need for any amendments to the Interlocal Agreements or if there are recommendations for other changes related to the coordination of land use and school facilities planning, a~~

~~meeting with the Council of Governments (COG) shall be requested by the Superintendent of Schools or designee through the appropriate coordinating staff. The proposed amendments will be presented to the COG for input and allow the opportunity for public comment on the proposed amendments before they proceed to each elected or appointed body for review and processing.~~

Section ~~1.3.2~~2.2 Student Enrollment, Population Projections, Growth and Development Trends

2.2.1 ~~1.3.1~~ In fulfillment of their respective planning duties, the City and the School Board shall coordinate ~~their plans for growth~~ based upon consistent projections of the amount, type, and distribution of population growth and student enrollment that are developed in coordination with ~~The~~the Planning Commission.

2.2.2 ~~1.3.2~~ The School Board shall utilize both (i) district-wide student population projections ~~which~~that are based on information produced by the demographic, revenue, and education estimating conferences pursuant to Section 216.136, Florida Statutes, where available, and

(ii) projections based on the Concurrency Service Areas (CSA) established in Section ~~56~~ of this Agreement. These projections include both student membership and Capital Outlay Full Time Equivalent (COFTE) and may be modified by the School Board based on local development trends and data with agreement of the Florida Office of Educational Facilities. for any modifications of state calculated COFTE projections. For purposes associated with this Agreement, student membership projections are deemed more relevant.

2.2.3 ~~1.3.3~~ Annually, but no later than April 30 of each calendar year, the City and ~~The~~the Planning Commission staff ~~will~~shall provide the School Board with a report on growth and development trends within the jurisdiction of Temple Terrace for the previous calendar year, by ~~CSA, as established in Section 5 of this Agreement~~ Transportation Analysis Zone (TAZ). This report ~~will~~shall be in tabular, graphic, ~~and~~ textual and/or digital formats.

In addition, the City and the Planning Commission staffs shall provide the School Board staff with the information set forth below.

(a) ~~a) Temple Terrace will~~ The City shall provide the following on at least a quarterly basis starting on July 1 of each calendar year:

1. all rezoning applications and proposed modifications to planned development zoning districts and the results of the City's actions on such applications;
2. ~~1. The~~the type, number, and location of residential units which have received zoning approval or site plan approval; ~~and~~
3. ~~2. Information~~information, to the extent available, regarding the proposed conversion or redevelopment of housing or other structures into residential units which ~~may~~are likely to generate new students; ~~and~~

~~3. An inventory of potential dwelling units that have received final plat or site development plan approval but have not yet received certificate of occupancy approval and a projection of the amount of the number of these units that are anticipated to receive certificate of occupancy approval in the next three years to the fullest extent.~~

possible; and

4. a listing of all preliminary plats, subdivision construction plans, final plats and site development plans that include residential dwelling units and which were submitted, approved, or which expired within the previous three (3) months. Such listing shall include the date of approval and prospective expiration dates of any such plats or plans, inventory of potential dwelling units and/or type, as applicable. This information may also be presented in the form of a dashboard;
5. information on Building Permits and Certificates of Occupancy issued. This information may also be presented in the form of a dashboard; and
6. ~~4. The~~the identification of any development orders issued which contain a requirement for the provision of a school site as a condition of development approval;

(b) ~~b)~~ The Planning Commission staff ~~will~~shall provide the following on at least a quarterly basis:

1. ~~1. Information~~information regarding future land use map amendments; or text amendments and community plans;
~~amendments and community plans which may have an impact on school facilities; and~~

2. ~~2.~~ ~~A~~ published report of building permits issued and/or newly built parcels for the preceding year

and their location; and

3. ~~3. Updated~~updated population ~~projects~~projections apportioned geographically.

2.2.4 ~~1.3.4~~ The School Board staff will use the information described in Section ~~1.3.3 to apportion projected~~2.2.3 to project student enrollment ~~geographically based on adopted CSAs,~~ to make the most efficient use of ~~public school~~public-school facilities. The distribution of projected student enrollment will be presented at staff meetings described in ~~subsection 1.1.1 and provided in written format to the City and the Planning Commission~~Section 2.1.1.

Section ~~1.4~~2.3 Local Planning Agency, Comprehensive Plan Amendments, Rezonings, and Development Approvals

2.3.1 ~~1.4.1~~ A nonvoting representative (ex-officio) appointed by the School Board shall be included on ~~The~~the Planning Commission, ~~or other appropriate agencies,~~ to attend those meetings at which ~~The~~the Planning Commission, ~~or other agencies, consider comprehensive plan amendments that would, if approved, increase residential density on the property that is the subject of the application.~~considers applications that would impact school planning, operations and/or facilities.

2.3.2 ~~1.4.2~~ The City ~~agrees to give~~staff shall provide the School Board staff notification of land use applications and development proposals ~~pending before them that may be expected to affect student enrollment, enrollment projections, or school facilities including rezonings, developments of~~

~~regional impact, and other major residential or mixed-use development projects. The Planning Commission agrees to give the School Board notice of proposed amendments to the comprehensive plan future land use map pending before them~~ filed with the City that may affect student enrollment, enrollment projections, or school facilities, including preliminary plats, site development plans, rezonings, and developments of regional impact. If a public hearing is required, the notification must be provided at least forty-five (45) days prior to the first public

hearing for consideration of the development application. If no public hearing is required, the notification must be provided ~~at least 30 days prior to any action or decision to approve or deny the application~~ concurrent with the transmittal of the applications to other reviewing agencies and departments. The City shall ~~distribute~~ refer any rezoning application that includes residential uses to the School Board and shall include the School Board's comments in the City Department Reports required by the Land Development Code.

2.3.3 The Planning Commission staff shall provide the School Board staff notice of proposed comprehensive plan future land use text or map amendments filed with the Planning Commission that may affect student enrollment, enrollment projections, or school facilities, including community plans, adopted pursuant to the comprehensive plan. Such notice will be provided at least forty-five (45) days prior to the first Planning Commission public hearing for consideration of the plan amendment or community plan. School Board comments shall be included in the Planning Commission staff reports.

2.3.4 ~~1.4.3~~ Within the following number of days after ~~notification~~ applications, as described in ~~1.4.2~~ Sections 2.3.2 and 2.3.3, have been deemed complete by City staff and School Board staff, and all applicable review fees, including school concurrency, have been paid in full, the School Board shall provide ~~the City of Temple Terrace and Planning Commission~~ the estimated school enrollment impacts anticipated to result from the proposed land use application or development proposal, as well as whether sufficient capacity exists or is planned to accommodate the impacts:

- ~~=~~ • thirty (30) calendar days for a Planned Development ~~zoning-reclassification or a Comprehensive Plan Amendment~~ District (PD) zoning;
- ~~=~~ • twenty (20) calendar days for ~~a standard zoning-reclassification~~ rezoning;
and
- ~~=~~ • thirty (30) calendar days for Comprehensive Plan Amendments.

School capacity ~~will~~ shall be reported consistent with ~~State Requirements for Educational Facilities~~ the LOS methodology in this Agreement.

Section ~~1.5 Colocation~~ 2.4 Co-location and Shared Use

2.4.1 ~~1.5.1~~ ~~Colocation~~ Co-location and shared use of facilities are important to both the School Board and the City. The City will look for opportunities to ~~collocate~~ co-locate and share use of City facilities when preparing the annual update to the City Comprehensive Plan's ~~Plan's~~ schedule of capital improvements and when planning and designing new or renovating existing, community facilities. ~~Likewise, the~~ The School Board will look for

opportunities to ~~relocate~~co-locate and share use of ~~school~~educational facilities when preparing the ~~District~~ Educational Facilities Plan. In addition, when the School District acquires property for a school site, the City staff shall be given an opportunity to consider simultaneously acquiring property for an adjoining neighborhood park or other appropriate use. In designing the arrangement and layout of buildings, parking facilities, and recreational areas for schools, consideration shall be given to the effective utilization of the adjacent neighborhood park.

- 2.4.2 ~~1.5.2~~—A separate agreement ~~shall~~may be developed for each instance of ~~relocation~~co-location and shared use which addresses legal liability, operating and maintenance costs, scheduling ~~of use, loss of use~~use of the facilities, and facility supervision or any other issues that may arise from ~~relocation~~co-location and shared use.

Section ~~23~~ Planning Process

Section ~~2.1~~ Educational Plant Survey

~~At least one year prior to preparation of the Educational Plant Survey, the staff representatives described in subsection 1.1.1 will provide input in the preparation of the Educational Plant Survey update. The Educational Plant Survey (required at a minimum once every 5 years) shall be consistent with the requirements of Section 1013.35, Florida Statutes, and include at least an inventory of existing educational facilities, existing and projected enrollment of existing school facilities, recommendations for planned and existing facilities, and the general location of each in coordination with the Temple Terrace Comprehensive Plan. The staff representatives will evaluate and comment on the location and need for new educational facilities or significant renovation and expansion of existing educational facilities. The Educational Plant Survey shall reflect the CSAs as provided in Section 5 of this Agreement.~~

Section ~~2.23.1~~ Tentative ~~District~~ Educational Facilities Plan

- 3.1.1 ~~2.2.1~~ ~~The~~Annually, the School Board shall submit a draft Tentative ~~District~~ Educational Facilities Plan ("~~Work Plan~~") to the City and ~~The~~the Planning Commission ~~staffs~~ for review and comment ~~45~~sixty (60) days prior to ~~the~~ public hearing for adoption by the School Board. The ~~Tentative Educational Facilities Plan is defined in Chapter 1013.35 as "the comprehensive planning document prepared annually by the district school board and submitted to the Office of Educational Facilities and the affected general-purpose local governments".~~ The Work Plan~~plan~~ shall be consistent with the requirements of Section 1013.35, Florida Statutes, and shall include the projected student population apportioned geographically ~~by CSA~~, an inventory of existing school facilities, projections of facility space needs, information on leased, loaned, and donated space and ~~relocatable~~relocatable classrooms, general locations of new schools and anticipated closures of existing schools for the 5, 10, and 20- year time periods, as well as options to reduce the need for additional permanent student stations ~~including the criteria and method jointly determined by the City and the School Board for determining the impact of proposed development on public school capacity.~~

- ~~2.2.2~~ The Work Plan shall also include a financially feasible district facilities work program ("~~Work Program~~") for the subsequent 5-year period, each year adding an additional "fifth year." The Work Plan shall include:

- 3.1.2 The plan also shall include the Educational Facilities Plan for the five (5)-year period. The Educational Facilities Plan shall include:

- (a) ~~(a)~~ all planned school facility projects, which include new construction, expansions, remodeling, and renovations that will create additional capacity;
- (b) ~~(b)~~ existing and projected enrollment of existing and planned school facilities;
- (c) ~~(c)~~ the year in which each ~~construction will be initiated for each~~ planned school facility will be undertaken;
- (d) ~~(d)~~ the source of funding for each planned school facility and the year in which the funding becomes available;
- (e) ~~(e)~~ the capacity created by each planned school facility; ~~and~~
- (f) proportionate fair share mitigation amounts anticipated from agreements;
- (g) off-site infrastructure concerns and/or other comprehensive plan issues; and
- (h) ~~(f)~~ necessary data and analysis supporting the proposed ~~Work Program~~ Educational Facilities Plan.

3.1.3 ~~2.2.3~~ Within thirty (30) days of ~~the City's receipt of the "Work Plan"~~ submittal:

- (a) ~~(a)~~ The City staff shall review the ~~plan~~ Educational Facilities Plan and provide a report to the School Board regarding infrastructure and service needs associated with the proposed educational facilities and other applicable information. The report shall include a proposed schedule for the infrastructure and public facilities within the City's Five-Year Capital Improvement Program; and ~~and the impact on capacity from proposed and approved development; and~~
- (b) ~~(b)~~ The Planning Commission staff shall review the ~~plan~~ Educational Facilities Plan and provide written ~~comments~~ comment to the City and the School Board on the consistency of the ~~"Work"~~ Educational Facilities Plan with the ~~City's~~ City's Comprehensive Plan. The Planning Commission staff shall provide written comment to the School Board on whether a ~~comprehensive plan~~ Comprehensive Plan amendment will be necessary for any proposed educational facility.

3.1.4 Prior to the annual meeting of the staff, the School Board will identify potential future school sites to meet the demand anticipated in the Long-Range School Planning Study (LRSP). These school sites may be owned by the School Board, under contract for purchase, or under consideration for possible acquisition. The School Board will identify potential future school sites to meet demand based on timeframes associated with:

- (a) Immediate Need – School construction is imminent and school opening is anticipated to be in three years or less;
- (b) Near Term Need – School construction is anticipated within the Educational

Facilities Plan and school opening is anticipated in the fourth or fifth year of the Educational Facilities Plan;

(c) Projected Need – School construction is projected in the 6-10 years of the Tentative Educational Facilities Plan and the LRSP;

(d) Future Need – School construction is outside of the ten (10)-year plan and the site is for the purposes of land banking and consistent with the LRSP.

3.1.5 ~~2.2.4 Based on the written comments of the City and Planning Commission, the~~ The School Board shall adopt a ~~financially feasible Work Program~~ financially feasible Educational Facilities Plan that includes school capacity sufficient to meet anticipated student demand as projected by the City and the ~~Planning Commission~~ County, based on the Level of Service (LOS) standards set forth in this Agreement and the LRSP. The School Board shall construct school facilities sufficient to maintain the LOS and LRSP standards set forth herein, consistent with the adopted ~~5-Year~~ Educational Facilities ~~Work Program~~ Plan.

Section ~~2.3.2~~ Public School Facilities Element Development and Updates

3.2.1 The City shall cooperate with the School Board and the other municipalities within the County to develop, adopt and maintain a common Public Schools Facilities Element (PSFE). The PSFE shall be updated as necessary to be consistent with the Educational Facilities Plan.

3.2.2 ~~2.3.1~~ In the event that the City wishes to amend the agreed upon ~~Public Schools Facilities~~

~~Element (PSFE), it will follow the procedures set forth in Section 5.1.1 of this Agreement before transmitting same to the Department of Community Affairs pursuant to Section 163.3184, Florida Statutes.~~

Section 3.3 Updates to Capital Improvements and Intergovernmental Coordination Elements

~~2.3.2~~ The procedure for updating the Capital Improvements Element and Intergovernmental Coordination Elements of the Comprehensive Plan shall be as provided by ~~general law and the Plan Amendment Procedures Manual and Appendix Documents for the City of Temple Terrace, Florida (September 2003 edition), as amended~~ Sections 163.3177 and 163.3180, Florida Statutes.

~~Section 2.4 Future Land Use Classifications in which Public Schools are Allowed~~

~~Public schools are public facilities which are necessary to serve residential development approved by the City. Public Schools shall be permitted in such Future Land Use Classifications on the Future Land Use Map of the City of Temple Terrace Comprehensive Plan as provided therein.~~

~~Section 2.5 Zoning Categories in which Schools are Allowed~~

~~Public schools shall be permitted in the zoning districts as specified in the Land Development Code provided that they meet any applicable criteria and site development standards contained in the Land Development Code.~~

Section 3 School Siting Procedures

Section 3.0 School Siting Criteria

~~Pursuant to Section 1013.33, Florida Statutes, the School Board and the City agree to the following procedures to coordinate the location of educational facilities. In general the following are items to be considered in the selection of future school sites and facilities and expansion of existing schools agreed upon by the City of Temple Terrace and the School Board:~~

- ~~1. Schools located in established redeveloping residential and non residential neighborhoods may be allowed on smaller sites consistent with Policy 1.3.4 of the City of Temple Terrace Comprehensive Plan's Public Schools Facilities Element;~~
- ~~2. The proposed location is compatible with present and projected uses of adjacent property;~~
- ~~3. Adequate public facilities and services are, or will be, available concurrent to support the proposed public school;~~
- ~~4. The site does not contain significant environmental constraints that would preclude a public school on the site;~~
- ~~5. The proposed location is well drained and soils are suitable for development or are adaptable for development and outdoor educational purposes with drainage improvements;~~
- ~~6. The proposed site should be sufficiently sized to accommodate the required parking and circulation of vehicles;~~
- ~~7. The current and projected levels of service by CSA the site is located in, including development approvals issued by the City based on school capacity in a contiguous CSA;~~
- ~~8. A determination of the need for and timing of on-site and off-site improvements and public facilities necessary to support the proposed school and the party or parties responsible for the improvements;~~
- ~~9. Sites will be selected which allow for future expansions to accommodate future enrollment and other facility needs which promote the City's annexation, development and redevelopment objectives and are deemed beneficial for joint-uses, as identified by the School Board and the City;~~
- ~~10. Coordination of the location, phasing, and development of future school sites shall ensure that site development occurs in conjunction with the provision of required infrastructure to serve the school facility;~~
- ~~11. Sites will be selected to serve local students so that vehicle trips are limited from outside the neighborhood as much as possible;~~
- ~~12. Expansion and rehabilitation of existing schools or redevelopment will be pursued to add school capacity to support neighborhoods and redevelopment efforts;~~
- ~~13. Elementary schools should be proximate to and within walking distance, where possible, of the residential neighborhoods served and are discouraged on arterial roads;~~
- ~~14. High schools and middle schools should be conveniently located to the residential community(s) they are intended to serve with access to major roads;~~
- ~~15. Proposed locations lie outside the area regulated by section 333.03(3) Florida Statutes, regarding the construction of public educational facilities in the vicinity of an airport;~~
- ~~16. Where feasible, proposed sites are located so as to allow for collocation with parks, libraries and community~~

centers;

~~17. Public middle and high schools shall be located on collector or arterial roadways which have sufficient capacity to carry student and parent traffic and are suitable for high volume traffic during evening and special events as determined by acceptable traffic engineering standards.~~

~~18. Proposed locations are not within a velocity flood zone or floodway; and~~

~~19. There will be no adverse impact on archaeological or historic sites listed in the National Register of Historic Places or designated by Hillsborough County or the City of Temple Terrace as a locally significant historic or archaeological resource.~~

Section 3.05 Pre-submittal Conference

~~The School Board shall request in writing that the City arrange a pre-submittal meeting for the review of a proposed school site. The request shall occur at least 15 days and no more than 120 days prior to submittal of an application for school location review. The purpose of the meeting is to review the location of a proposed school and to identify and discuss potential issues related to the school location. Representatives of the City's Development Review Committee will be requested to attend.~~

~~At minimum the School Board will provide for the meeting:~~

- ~~1. The type of school (elementary, middle or high school)~~
- ~~2. A scaled aerial photograph depicting the school site boundaries, surrounding land uses and roadways within the area~~
- ~~3. Site acreage~~
- ~~4. Tentative attendance boundary~~
- ~~5. Number of students and staff to be accommodated by the school~~
- ~~6. Proposed construction schedule and opening date of school~~
- ~~7. Location of water and waste water facilities~~

Section ~~3.13~~ 3.4 Neighborhood Meeting

~~At least 60 days prior to acquiring or leasing property that may be used for a new public educational facility~~For sites that were not platted nor planned for school use as part of a master or planned development plan, and for sites that have adjacent neighbors, during design development phase, the School Board shall conduct at least one neighborhood meeting. The purpose of the neighborhood meeting is to provide information on the pending school construction and to receive public input. The School Board staff shall provide written notice to the City and the Planning Commission staff of the date, time and location of the neighborhood meeting no later than 30fifteen (15) days prior to the date indicated. This requirement shall be considered met if the School Board went through a public rezoning hearing process prior to acquisition.

The School Board shall provide written notice to property owners of parcels of record with the Hillsborough County Property ~~Appraiser's~~Appraiser's Office within ~~three~~one hundred ~~fifty~~(300150) feet in every direction of the subject property, excluding streets and street rights-of-way and ~~Homeowners Associations~~homeowners' associations within one mile of the proposed school site ~~who are known to the City~~ of the neighborhood meeting to discuss the pending site selection determination. Said notice shall be provided no later than fifteen (15) days prior to the meeting.

To the extent practical, the neighborhood meeting shall be conducted within the general area of the proposed educational facility. The meeting may be held either prior to or subsequent to ~~the submittal of a request to the Planning Commission staff~~ for a determination of consistency with the City Comprehensive Plan, ~~pursuant to Section 3.2, but no more than 15 days after a submittal of a request for a determination~~and to the City staff for an evaluation of consistency with the requirements of Section 3.

Evidence of the neighborhood meeting, including a list of property owners to whom the neighborhood meeting notice was sent, meeting summary, attendance record, and comment sheets shall be submitted ~~to the City of Temple Terrace and the Planning Commission within 30 days of a request for consistency determination~~ within twenty-five (25) days following the meeting.

Section 3.5 School Facilities Location Considerations and Review Procedures

Pursuant to Section 1013.33, Florida Statutes, the School Board, City, and the Planning Commission, agree to the following procedures to coordinate the location of new educational facilities:

Section 3.6 Preliminary Consistency Finding for Site Acquisition

Florida Statutes Section 1013.33(5) requires a preliminary consistency finding for site acquisition which is separate from a finding of consistency for a school site development plan under Section 1013.33(6), Florida Statutes. It is recognized by the parties that some issues associated with consistency are relevant at the time the site is developed rather than when the site is acquired. As such, the School Board staff shall identify the facility development schedule using the timeframes defined in Section 3.1.4 of this Agreement when presenting sites for consideration. City and the Planning Commission staffs shall consider the relevant issues for consistency based on these timeframes recognizing that preliminary consistency is focused primarily on whether the school site is located within a reasonable and proximate area to serve residential development.

Section 3.7 Future Land Use Classifications in which Public Schools are Permitted

Public schools are community facilities which are necessary to serve residential development in the City. Public Schools shall be permitted in the Future Land Use Classifications which allow for public schools, as delineated on the Future Land Use Map and as provided for in the City of Temple Terrace Comprehensive Plan.

Section 3.8 Zoning Categories in which Schools are Permitted

Public schools shall be permitted by right in all zoning districts with the exception of i) Light Industrial and ii) properties located within areas subject to the Hillsborough County Aviation Authority Airport Zoning Regulations. Public schools shall also be permitted within all planned development ("PD") zoning districts; however, if an existing PD does not currently designate or permit a school use, School Board staff would be required to pursue a PD modification through the applicable approval process before a public school site could be considered or developed within that PD.

Section ~~3.23.9~~ Application for Determination of Consistency

3.9.1 At least sixty (60) days prior to acquiring or leasing property, the School Superintendent shall send written notice as follows:

- (a) ~~1. to The~~ the Planning Commission staff requesting a determination of consistency with the ~~City's~~ City's Comprehensive Plan. Planning Commission staff will provide a copy of its draft determination to City staff for comment, and any comments received will be attached to the final finding; and
- (b) ~~2. to the City requesting an analysis of compatibility with surrounding existing land uses and necessary mitigation strategies and~~ an analysis of infrastructure and service

needs associated with the proposed educational facility including:

- ~~Availability~~availability of sewer and water and location of points of connection;
 - ~~Suitability~~suitability of site access and adjacent roadways;
 - ~~Stormwater standards~~stormwater; and
 - ~~Other~~other applicable infrastructure and service needs; ~~and~~.
- ~~Analysis in a written narrative that the project meets criteria in Section 3.0, including compatibility and necessary mitigation strategies.~~

3.9.2 ~~The notice provided to the Planning Commission and City of Temple Terrace~~Such request shall include an existing available aerial photograph and ~~7 copies of~~ a conceptual site plan including; ~~site boundaries, property address and tax folio identification numbers, estimated building floor area, drawing scale, proposed student enrollment capacity, driveway access locations, site acreage, building envelopes, planned buffering techniques and parking and recreation areas.~~

3.9.3 Within forty-five (45) days after receipt of the request, ~~The~~the Planning Commission staff shall notify the School Board and the City if the proposed new school site is consistent with the land use categories and policies of the ~~City's~~City's Comprehensive Plan. The City shall provide a report to the School Board and the City ~~Council~~Commission regarding their analysis of infrastructure and service needs associated with the proposed educational facility as specified above. ~~The City's report shall be provided in 45 days from the City's receipt of a complete notice package from the School Board and shall include the Planning Commission staff analysis, the analysis of infrastructure and service needs and compatibility criteria, and development concerns associated with the proposed educational facility proposed as specified above including the site selection criteria established in Section 3.0.~~

3.9.4 Pursuant to Section 1013.33(~~137~~), Florida Statutes, the City may impose reasonable development standards and conditions ~~for development of the site as it relates to the infrastructure and service needs listed above in accordance with Section 1013.51(1), Florida Statutes,~~ and consider the ~~conceptual~~ site plan and its ~~compatibility with existing land uses and its~~ adequacy as it relates to environmental concerns, health, safety and welfare, and effects on adjacent property. ~~Conditions~~Standards and conditions may not be imposed which conflict with those established in Chapter 1013 ~~or, Florida Statutes,~~ the State ~~Uniform~~Requirements for Educational Facilities (SREF), or the Florida Building Code, unless mutually agreed upon. ~~{{s.1013.51}}.~~ The City Manager or his/her designee shall forward the Planning Commission ~~staffs~~staff's determination of consistency of the proposed site with the Comprehensive Plan to the School Board and the City ~~Council~~Commission in writing.

3.9.5 The School Board shall hold an advertised public hearing ~~to consider the determination of the City. The advertisement for the public hearing shall be published in a newspaper of general paid circulation in the County and of general interest and readership in the community, not one of limited subject matter, pursuant to Chapter 50, Florida Statutes. The advertisement shall not be placed in that portion of the newspaper where legal notices and classified advertisements appear and shall appear at least 10 days prior to the date of the scheduled public hearing. The advertisement shall include the time, place and purpose of the meeting and the general location~~

~~or address of the proposed school site(s) being considered by the School Board. It is mutually agreed that the School Board will not act in a manner contrary to the determination for consistency; however, such determination may be appealed as prescribed in Section 3.3 of this agreement.~~pursuant to Section 5 of this Agreement.

~~In conjunction with the consistency determination described in this section or at the appropriate time in the site design process, the School Board and the City will jointly determine the need for and timing of on-site and off-site improvements. Such improvements shall be deemed necessary to support each new school or the proposed renovation or expansion of an existing school, and will identify the timing, location and the parties responsible for financing, constructing, operating and maintaining the required improvements for new public school sites.~~

3.9.6 Requests for determination of consistency with the Comprehensive Plan for elementary, middle, and high schools and other public education facilities may, at the discretion of the School Board, be processed concurrently with an application for a special use permit or rezoning.

3.9.7 If the School Board does not commence construction of the proposed educational facility in the application within twenty-four (24) months after the date the City issues its written approval letter for the application, the School Board shall be required to resubmit the application for determination of consistency for City review and approval in accordance with this Section. For purposes of this Agreement, “commence construction” shall mean the School Board’s good-faith initiation of on-site work in furtherance of the proposed educational facility, which may include, without limitation, site clearing, demolition, grading, installation of erosion or stormwater controls, utility installation or relocation, or other preparatory site work authorized by applicable permits, and shall not require vertical construction of improvements.

~~Section 3.3 Appeals to the City Council~~

~~The School Board may appeal the decision of The Planning Commission and/or the City staff to the City Council within 30 days of the receipt of the City’s consistency determination report.~~

~~The City Council may elect to review the determination of the City or Planning Commission as applicable, and shall schedule the review at the next available City Council meeting following the date of the determination report.~~

Section 4 Site Design/Development Plan ~~Review~~Submittal

At least ninety (90) days prior to initiating construction, the School Board shall submit a site design/development plan to the City and within forty-five (45) days after receiving the submittal, the City shall certify in writing whether the proposed educational facility is in compliance with the determination of consistency with the Comprehensive Plan ~~(as determined in Section 3.2 herein), the conditions imposed and any applicable provisions of the Land Development Code.~~

. The site design~~Design~~/development ~~plans~~plan shall include the following transportation information:

1. Points of ingress and egress and/or driveways and curb-cuts;
2. Right-of-way width, both public and private;

~~1. Name, or if not yet determined, the letter designation of the school and the names of any~~

~~architect(s), engineer(s), and planner(s) associated with the project;~~

~~2. A signed and sealed survey with boundaries, topography, existing conditions and trees~~

3. ~~located on the site~~ Pavement width;

4. Type of surface and surface conditions;

5. Number of existing lanes at mid-block and intersections;

6. Locations of sidewalks, bikeways, and transit stops in the right-of-way;

7. ~~3. Location, size, height and use~~ type of all existing and proposed ~~structures~~ median openings; and

~~4. Proposed or existing location of fire hydrants and distance to structures;~~

~~5. Location and method of buffering from adjacent properties;~~

~~6. Location and method of stormwater retention including preliminary drainage calculations;~~

~~7. Location, size and total amount of recreation areas;~~

~~8. Location, number and dimensions of proposed parking and service areas; and~~

~~9. Proposed means of vehicular and pedestrian access from the site to adjacent streets and/or alleys.~~

~~10. Location and size of water and sewer lines;~~

~~11. Location, dimension and screening of solid waste collection area;~~

~~12. The on-site vehicular circulation pattern and the length of on-site vehicular storage for student drop off and pick up;~~

~~13. Existing and proposed cross access between the school site and adjacent properties~~

~~14. Location of existing and proposed sidewalks;~~

~~15. Identification of needed access improvements (i.e. auxiliary lands, left turn lanes, medians, etc.) and~~

~~16. Delineation of jurisdictional wetland areas water courses, lakes, wooded areas, upland habitat areas or other such natural physical features within the school site boundaries;~~

8. ~~17. Location and type~~ of all existing ~~trees (indicating trees greater than 5" DBH and species)~~ traffic devices.

The City shall not charge the School Board with an application or plan review fee. The parties shall work cooperatively and collaboratively to ensure the development review process is not protracted.

Consistent with Section 1013.33(7), Florida Statutes, the City may not deny the site based on adequacy of the site plan as it relates solely to the needs of the school. If the site is consistent with the Comprehensive Plan's land use policies and categories in which public schools are identified as allowable uses, the City may not deny the application, but it may impose reasonable development standards and conditions in accordance with Section 1013.51(1), Florida Statutes, and consider the site plan and its adequacy as it relates to environmental concerns, health, safety and welfare, and effects on adjacent property. Standards and conditions may not be imposed that conflict with federal or state law or provisions of the State Requirements for Educational Facilities (SREF) or the Florida Building Code Section 453, unless mutually agreed.

Pursuant to Section 163.31777, Florida Statutes, the City and the School Board agree to reasonably cooperate regarding access to public easements and public rights-of-way reasonably necessary for the siting, development, operation, maintenance, repair, expansion, and improvement of public school facilities and charter school facilities located within the City. The City shall reasonably coordinate with the School Board regarding the School Board's use of, or access across, public easements and

rights-of-way owned or controlled by the City for lawful school purposes, including utility connections, vehicular and pedestrian access, drainage, sidewalks, signalization, transportation improvements, and related infrastructure improvements, subject to applicable engineering standards, permitting requirements, and public safety considerations. In the event the School Board determines that additional access rights or use authorizations are reasonably necessary for a school project, the parties agree to work in good faith to negotiate any supplemental easement, license, permit, maintenance agreement, or right-of-way use agreement reasonably required for such project.

~~18. The current and projected levels of service by CSA the site is located in, including development approvals issued by the City based on school capacity in a contiguous CSA;~~

~~19. A Transportation Study performed using professionally accepted methodology for the proposed school. The study shall be signed and sealed by a Professional Engineer.~~

~~Pursuant to 1013.33(13), the City may impose reasonable development standards and conditions and consider the site plan and its adequacy as it relates to environmental concerns, health, safety and welfare and effects on adjacent properties.~~

Pursuant to Section 1013.33(126), Florida Statutes, if the determination is affirmative, school construction may commence, and further local government approvals are not required; provided ~~the conditions placed upon the determination are met including conditions from other agencies including but not limited to: EPC/DEP/Florida Fish and Wildlife, FDOT, Hillsborough County (ROW), and the City of Tampa (Water service area).~~that the City may inspect the property for conformity with the applicable provisions of SREF and the Florida Building Code.

Section 5 School Board Public Meetings

At a regularly scheduled meeting that has been properly noticed the School Board shall consider the Planning Commission staff's determination of consistency and the City's comments regarding infrastructure as they determine whether to approve acquisition or leasing of the proposed school site.

It is mutually agreed that in the event the School Board acquires a proposed site which the Planning Commission has determined is not consistent with the land use categories and policies of the Comprehensive Plan, the School Board assumes the risk associated with a potential future finding that the site design/development plan for a school on such site may be found inconsistent with the City Comprehensive Plan and/or inconsistent with the City's Land Development Code.

~~The review of the site plan as submitted will include applicable sections of the Land Development Code and the following criteria:~~

~~1. No sites or parts of sites shall be developed which do not demonstrate that any protected forests, wetlands, fish, marine life, and wildlife are conserved to maintain their environmental, economic, aesthetic, and recreational values; nor shall endangered species be destroyed; and their habitats shall be protected;~~

~~2. There will be no adverse impact on archaeological or historic sites listed in the National Register of Historic Places or designated by Hillsborough County or Temple Terrace as a locally significant historic or archaeological resource;~~

~~3. The location, arrangement and lighting of playing fields and playgrounds shall be located and buffered as may be necessary to minimize impacts to adjacent residential property;~~

~~4. The arrangement and height of buildings on site shall be planned to ensure compatibility with existing and future residential uses on adjacent parcels;~~

~~5. Driveway access to public school sites shall be governed by the City's land development code on roads that are adjacent to or running through the school site;~~

~~6. Design will improve access and safety for pedestrians and include as possible linkages between the schools, parks, libraries and other public facilities with bikeways, trails and sidewalks; and~~

~~7. School sites shall be designed with safe access ways for pedestrians and vehicles.~~

Section ~~5~~ 6 School Concurrency

Implementation Section 6.1 Capital

Infrastructure

6.1.1 Annually, the School Board shall update the Educational Facilities Plan, addressed in Section 3.1 of this Agreement.

~~Section 5.1 Procedures~~

~~5.1.1 School Concurrency Components~~

~~(a) The procedures set forth in paragraph (b) shall apply in the event that the City or School Board wishes to amend any of the following:~~

- ~~1. Public school facilities Level of Service (LOS) standards (see Section 5.2);~~
- ~~2. Public school facilities Concurrency Service Areas (see Section 5.3);~~
- ~~3. Procedures for monitoring school demand and capacity (see Section 5.4); 4. Procedures and methodology for making public schools facilities concurrency determinations for development approvals (see Section 5.5);~~
- ~~5. Public school facilities concurrency mitigation options and processes (see Section 5.6);~~
- ~~6. The School District's 5-Year Work Program for facilities whose CSA includes a portion of the City; (See Section 5.1.3) and~~
- ~~7. Those aspects of the Public Schools Facilities Element of the Comprehensive Plan that are common to the City and the County or other municipalities in the County.~~

~~(b) Procedures for Amendments to School Concurrency Components:~~

- ~~1. The party wishing to amend one of the above listed School Concurrency Components shall be the "Initiating Party." The Initiating Party may be the City, County, School Board, or another municipality within Hillsborough County subject to the requirements of school concurrency.~~
- ~~2. The party reviewing and commenting on a proposed amendment shall be the "Reviewing Party." The Reviewing Party shall include the City, County, School Board, or another municipality within Hillsborough County subject to the requirements of school concurrency. The Planning Commission shall review the proposed amendment and advise the City on whether the proposed amendment is consistent with the Comprehensive Plan as required by sections 163.3177 and 163.3187, Florida Statutes~~
- ~~3. Before officially considering an amendment to one of the School Concurrency Components listed in Section 5.1.1 (a), and prior to submitting such amendments to the~~

~~Department of Community Affairs, if required, the Initiating Party shall transmit to the Reviewing Parties a memorandum outlining the proposed amendment, including a narrative describing the purpose of the proposed amendment and a statement regarding the impact of the proposed amendment on the City's Comprehensive Plan and other elements of school concurrency addressed by this Agreement. The memorandum also must include all data and analysis supporting the proposed amendment.~~

~~4. Within sixty (60) days of its receipt of a proposed amendment from the Initiating Party, the Reviewing Party shall provide any written comments or objections to the Initiating Party, the County, and other municipalities within Hillsborough County. The Reviewing Party shall indicate whether it agrees with the proposed amendment or, if it does not, the reasons for objecting. Designees of the parties, and designees of the County and other municipalities within Hillsborough County, may meet and confer prior to the Reviewing Party's submission of written comments in order to resolve any objections to the proposed amendment.~~

~~5. If the Reviewing Party is unable to agree with the proposed amendment, the matter will be resolved in accordance with Part II, Chapter 163, Florida Statutes or Chapter 164 Florida Statutes as applicable.~~

~~This agreement neither is intended to nor does it delegate or transfer any land use planning or regulatory authority to the School Board.~~

~~5.1.2 Land Development Code~~

~~Following the amendment of the City's Comprehensive Plan, as provided herein, the City will adopt a "School Concurrency Management Ordinance" and make other necessary changes to the Land Development Code to implement school concurrency consistent with the Comprehensive Plan, state law (Sections 163.3180 and 163.3202, Florida Statutes), and the terms of this Agreement.~~

~~5.1.3 Five-Year Facilities Work Program~~

~~(a) Amendments to the 5-Year Work Program~~

~~Amendments to the Work Program, other than the annual updates addressed in Section 2.2 of this Agreement, may occur only pursuant to the process set forth in Section 5.1.1 of this Agreement.~~

~~(b) Capital Improvements Element~~

6.1.2 ~~Annually, following adoption of this Agreement,~~ the City will consider an amendment to the ~~plan's~~Comprehensive Plan's Capital ~~Improvements~~Improvement Element (CIE) in order to incorporate the School ~~Board's~~Board's adopted ~~Work Program~~Educational Facilities Plan. Following ~~a Work Program~~the Educational Facilities Plan update or amendment, made in accordance with this Agreement, the City will consider further amendments

to its CIE to incorporate such updates or amendments during the immediately subsequent round of Comprehensive Plan amendments.

~~Section 5.2 Public School Facilities Level-of-Service~~6.2 Concurrency Service Area Level of Service Standards

6.2.1 ~~5.2.1~~Pursuant to Section 163.3180(~~136~~)(b), Florida Statutes, the ~~level-of-service~~(LOS)

standards set forth herein shall be applied consistently ~~within each local government in Hillsborough County for purposes of~~by the City and the School Board in implementing school concurrency,~~including determining whether sufficient school capacity exists to accommodate a~~

~~particular development proposal, and determining the financial feasibility of the School Board's Work Program.~~ within the County, based on data and analysis supporting the adopted Comprehensive Plan.

6.2.2 ~~5.2.2~~ The LOS standards set forth herein shall be included in the capital improvements element of the ~~City's~~ City's Comprehensive Plan and shall be applied consistently by the City and the School Board ~~district-wide~~ districtwide to all schools of the same type.

6.2.3 ~~5.2.3~~ The LOS standards may be amended only pursuant to the procedure set forth in Section ~~5.1.1~~ 6.3.2 of this Agreement.

6.2.4 ~~5.2.4~~ The LOS standard to be used by the City and the School Board to implement school concurrency ~~shall be as follows:~~

for elementary, middle, high and combination schools is 100% of Permanent FISH Capacity as adjusted by the School Board ~~(a) Elementary: 100% of permanent FISH capacity as adjusted by the school board annually to account for measurable programmatic changes.~~

(b) ~~Middle: 100% of permanent FISH capacity as adjusted by the school board annually to account for measurable programmatic changes.~~

(c) ~~High: 100% of permanent FISH capacity as adjusted by the school board annually to account for measurable programmatic changes.~~

(d) ~~Special Purpose: 100% of permanent FISH capacity as adjusted by the school board annually to account for measurable programmatic changes.~~

~~For purposes of this subsection, a "measurable programmatic change" means a change to the operation of a school that has consistent and measurable capacity impacts including, but not limited to: double sessions, floating teachers, year-long schools and special educational programs.~~

Section ~~5.36.3~~ 5.36.3 School Concurrency Service Areas

6.3.1 ~~5.3.1~~ School Concurrency Service Areas (CSAs) shall be coterminous with the school attendance zones ~~boundaries~~ for elementary, middle, ~~and~~ high, and combination schools.

6.3.2 ~~5.3.2~~ ~~Future~~ amendments ~~Amendments~~ to the CSAs, other than periodic ~~adjustments~~ redistricting to school attendance ~~zone~~ boundaries, may be accomplished by the School Board ~~and City of Temple Terrace~~ only after review and comment by the City, ~~the County~~ and other municipalities within ~~Hillsborough~~ the County as provided in Section ~~5.1.18~~ of this Agreement. CSAs shall be established and subsequently modified to maximize available school capacity and

make efficient use of new and existing ~~public school~~ public-school facilities in accordance with the LOS standards set forth in this ~~agreement, taking into account~~ Agreement, considering school policies to:

(a) ~~(a)~~ minimize transportation costs;

- (b) ~~(b)~~ limit maximum student travel times;2
- (c) ~~(c)~~ effect desegregation plans;2
- ~~(d)~~ achieve socio-economic, racial and cultural diversity objectives,
- (d) ~~(e)~~ recognize capacity commitments resulting from local governments' development approvals for the CSA;2 and
- (e) ~~(f)~~ recognize capacity commitments resulting from local governments' development approvals for contiguous CSAs.

~~If the School Board changes the use of a school or reconfigures the schools (i.e. change of a regular education school to an exceptional education center or a K-5 school to a K-8 school), the relevant procedures in Section 5.1.1 (b) will be followed to obtain input.~~

~~The City shall receive notice at least 2 weeks prior any community meetings scheduled by the School Board to discuss proposed changes to school attendance boundaries.~~

~~Other considerations for amending the concurrency service areas may include safe access (including factors such as the presence of sidewalks, bicycle paths, turn lanes and signalization, and general walkability) and geographic or manmade constraints to travel.~~

6.3.3 ~~5.3.3~~ CSAs will be described ~~geographically~~ in the City Comprehensive Plan pursuant to Section 163.3180(~~136~~)(~~g~~)(~~5~~)2.a., Florida Statutes. Maps of the CSA boundaries will be included as "support documents" ~~as defined in Section 9J-50.003 F.A.C.~~ and may be updated from time to time by the School Board ~~and distributed to the City and the Planning Commission.~~

~~Section 5.4 School Demand Monitoring and Evaluation~~

~~The City shall provide the following information to the School Board on a quarterly basis to facilitate demand projections and student generation rate trends:~~

- ~~1. Geo-referenced building permit and certificate of occupancy data;~~
- ~~2. Summary of actions on preliminary and final plats;~~
- ~~3. Summary of site development plan approvals for multi-family projects; and~~
- ~~4. Summary of exemption determinations pursuant to the School Concurrency Management Ordinance of the City Code and other actions that affect demands for public school facilities~~

Section 5.56.4 Applicability and ~~Public School Facilities~~ Capacity Determination

6.4.1 ~~5.5.1~~ **Applicability**

- (a) ~~(a) Except as provided in subsection (b) below, school~~ School concurrency applies only to residential ~~uses that generate demands for public school facilities and are~~
development, proposed or established or a phase of residential development requiring subdivision plat approval or site development plan approval, or its functional

equivalent, approved after the effective date of the ~~Public Schools Facilities Element~~PSFE, as implemented in ~~the City's School Concurrency Management Ordinance~~Section 163.318, Florida Statutes.

- (b) ~~(b)~~ Residential ~~uses~~development shall only be considered exempt from the requirements of school

concurrency in accordance with the ~~Public Schools Facilities Element~~applicable City LDC provision.

6.4.2 ~~5.5.2~~ **Process for Determining School Facilities Concurrency**

~~(a) The City will require that all residential development applications as defined in Section 5.5.3 include documentation from the School Board showing adequate school capacity is available, as provided in this subsection and the Public Schools Facilities Element, prior to approval of a final plat and final site plan.~~

- (a) In accordance with Section 163.318, Florida Statutes, an application for a mandatory determination of capacity shall be submitted concurrently with either a subdivision preliminary plat or preliminary site development plan.
- (b) ~~(b)~~ Upon the receipt of a complete School Concurrency Application, the City will transmit the application to the School Board for a determination of ~~whether there is~~ adequate school capacity, ~~for~~at each school level~~-of school~~, to accommodate the proposed development; This determination is based on the LOS standards, CSAs, and other standards set forth herein and in the ~~Land Development Code~~LDC.
- (c) ~~(c)~~ The School Board may elect to establish a school concurrency review fee to be paid by the applicant that will accompany the completed application sent by the City or delivered to the School Board prior to commencement of any school concurrency review~~-commences~~.

~~(d) Within 15 working days of the receipt of a complete application, the School Board will review the School Concurrency Application and based on the standards set forth in this Agreement, report in writing to the City:~~

- (d) For the purposes of reviewing development applications for school concurrency provided in this Agreement, the School Board shall apply the following review parameters:
1. Fifteen (15) business days for preliminary plat and preliminary site development plans.
- (e) Within the number of days identified in Section 6.4.2(d), the School Board shall report in writing to the City:
1. ~~1.~~ whether adequate school capacity exists for each school level~~-of school~~, based on the ~~LOS~~ standards set forth in this Agreement; or
2. ~~2.~~ if adequate capacity does not exist, whether appropriate mitigation can

be accepted, and if so, acceptable options for mitigation, consistent with this Agreement.

(f) ~~(e)~~ If the School Board determines that ~~after approval of the development application,~~ adequate capacity will not be in place or ~~planned for~~ under actual construction within ~~the first three~~ (3) years ~~of the School Board's Work Program,~~ after the issuance of subdivision final plat or site development construction plan approval and mitigation is not an acceptable alternative, the City will not issue a School ~~Concurrency Determination and will not accept or process a Development Application~~ concurrency determination and shall not approve the applicable development application.

(g) ~~(f)~~ If the School Board determines that adequate capacity does not exist, but that mitigation is an acceptable alternative, the development application will remain active

pending the conclusion of the mitigation negotiation period described ~~in 5.6~~ below.

(h) ~~(g)~~ The City will issue a School ~~Concurrency Determination and approve the development application~~ concurrency determination only upon:

1. ~~1. the~~ The School ~~Board's~~ Board's written determination that adequate school capacity will be in place ~~in place or planned for~~ or under actual construction within ~~the first three~~ (3) years ~~of~~

~~the School Board's 5 Year Work Program~~ after the issuance of ~~final~~ subdivision final plat or site development construction plan approval for each level of school without any required mitigation; or

2. ~~2. the~~ The execution of a legally binding mitigation agreement between the ~~applicant, the City and the~~ School Board, the City, and the applicant, as provided by this Agreement.

Notification by the School Board that capacity is available for a development that has tendered a written, legally binding commitment to provide mitigation proportionate to the demand for public school facilities to be created by actual development of the property in accordance with Section 163.3180 (6)(h)2, Florida Statutes.

(i) The School Board currently has an inventory of future sites in Temple Terrace that have been discussed with the City for infrastructure planning purposes. Prior to accepting a mitigation proposal addressed by this subsection, the School Board shall identify to the City potential school sites that could be used to create the necessary school capacity and meet with the City to discuss potential infrastructure needs and ensure coordination for siting well in advance of any school building or planning.

(j) This Agreement neither is intended to, nor does it delegate or transfer any land use planning or regulatory authority to the School Board.

(a) ~~Definitions. The terms used in this subsection shall be defined as follows:~~

1. ~~Available school capacity — the circumstance where there is sufficient school capacity, based on adopted LOS standards, to accommodate the demand created by a proposed development.~~

2. ~~Capacity — "capacity" as defined in the FISH Manual.~~

3. ~~Development Application — an application for residential development that is subject to School Concurrency and meets one of the following:~~

a) ~~For developments undergoing subdivision review, the application is the final plat~~

b) ~~for developments not undergoing subdivision review, the application in the final site plan~~

5. ~~Educational Benefit District — An alternative financing mechanism, as specified by Section 1013.355, Florida Statutes, for district school boards and local governments to establish, through interlocal agreements, to assist in the financing, construction and maintenance of educational facilities.~~

5. ~~Existing school facilities — school facilities constructed and operational at the time a School Concurrency Application is submitted to the City.~~

6. ~~FISH Manual — the document entitled "Florida Inventory of School Houses (FISH)," that is published by the Florida Department of Education, Office of Educational Facilities (hereinafter the "FISH Manual").~~

7. ~~Permanent FISH Capacity — capacity that is added by "permanent buildings," as defined in the FISH Manual.~~

8. ~~Planned school facilities — school facility capacity that will be in place or under actual construction within three (3) years after the issuance of final subdivision or site plan approval, pursuant to the School Board's adopted 5-Year Work Program.~~

9. ~~Previously Approved Development — development approved as follows:~~

a) ~~Single family lots of record having received final plat approval prior to the effective date of the City's School Concurrency Management Ordinance.~~

b) ~~Multi-family residential development having received final site plan approval prior to the effective date of the City's School Concurrency Management Ordinance.~~

10. ~~Reserved capacity — School facility capacity set aside for a development.~~

11. ~~Total school facilities — Existing school facilities and planned school facilities.~~

12. ~~Used capacity — School facility capacity consumed by or reserved for preexisting development. For the purpose of concurrency reviews, the 40th day membership count at existing school facilities will be used to determine "capacity consumed."~~

13. ~~Work Program — the financially feasible 5-year school district facilities work program adopted pursuant to section 1013.35, Florida Statutes. Financial feasibility shall be determined using professionally accepted methodologies.~~

(b) ~~School Capacity Calculations. The School Board will determine whether adequate school capacity exists for a proposed development, based on the LOS standards, CSAs, and other standards set forth in this Agreement, as follows:~~

- ~~1. Calculate total school facilities by adding capacity provided by existing school facilities to the capacity of any planned school facilities.~~
- ~~2. Calculate available school capacity by subtracting from the total school facilities the sum of:~~
 - ~~a. used capacity;~~
 - ~~b. the portion of reserved capacity projected to be developed within three years;~~
 - ~~c. the portion of previously approved development projected to be developed within three years; and~~
 - ~~d. the demand on schools created by the proposed development.~~
- ~~(e) Concurrency Service Areas (CSA). In determining whether there is sufficient school capacity to accommodate a proposed development, the School Board will:~~
 - ~~1. Consider whether the CSA in which the proposed development is situated has available school capacity, based on the formula above.~~
 - ~~2. In the event that the CSA in which the proposed development is situated does not have available school capacity, the School Board will determine whether a contiguous CSA has available school capacity in accordance with the policies adopted in the Public Schools Facilities Element.~~

Section 5.66.5 Mitigation Alternatives ~~and Process~~

In the event that the School Board reports that mitigation may be accepted in order to offset the impacts of a proposed development, where the LOS standards set forth in this Agreement otherwise would be exceeded, the ~~School Board shall provide the City with a written determination that mitigation is an acceptable alternative and that the School Board does not object to the processing of the development application pending the execution of a mitigation agreement. The~~ following procedure shall be used.

- (a) ~~(a)~~ The applicant shall ~~initiate in writing a mitigation negotiation period with~~ provide the City and the School Board ~~in order to establish an acceptable form of mitigation;~~ staff with a Tendered Commitment pursuant to Section 163.3180(~~e~~6), Florida Statutes, ~~the City's School Concurrency Ordinance,~~ and this Agreement. Within thirty (30) days of receipt of the Tendered Commitment, the School Board may execute the Tendered Commitment and notify the City whether school capacity is available for the development. However, a Tendered Commitment will not be processed for review until such time that a completed School Concurrency Application is processed by the School Board and applicable fees paid by the applicant.
- (b) ~~(b)~~ Acceptable forms of mitigation may include:
 1. ~~1.~~ The donation, construction, or funding of school facilities sufficient to offset the demand for public school facilities to be created by the proposed development; ~~and~~
 2. ~~2.~~ The creation of mitigation banking ~~(as established in the Comprehensive Plan's Public Schools Facilities Element)~~ within designated

areas based on the construction of a ~~public school~~public-school facility in exchange for the right to sell capacity credits. Capacity credits shall be sold only to developments within the same concurrency service area or an adjacent concurrency service area;

3. ~~3.~~ Establishment of a ~~Charter School~~charter school with facilities constructed in accordance with the ~~State Requirements for Educational Facilities (SREF)~~SREF and consistent with the School ~~District of Hillsborough County's~~District's Prototype Educational Specifications in use at the time of construction and subject to guarantees that the facility will be conveyed to the School Board at no cost to the School Board if the ~~Charter School~~charter school ceases to operate; and

4. ~~4.~~ Establishment of an Educational Benefit District ~~(as established in the Comprehensive Plan's Public Schools Facilities Element).~~

(c) ~~(c)~~ The following standards apply to any mitigation accepted by the School Board:

1. ~~1.~~ Proposed mitigation must be directed toward a permanent school capacity improvement identified in the School ~~Board's~~Board's financially feasible ~~Work Program as amended~~Educational Facilities Plan, which satisfies the demands created by the proposed development; and

2. ~~2.~~ Relocatable classrooms will not be accepted as mitigation. ~~Type 2 (non-combustible) modular units shall not be considered relocatables for the purpose of proportionate share mitigation; and~~

(d) ~~(d)~~ In accordance with ~~section~~Section 163.3180(~~136~~)(eh), Florida Statutes, the ~~applicant's~~

applicant's total proportionate-share mitigation obligation to ~~resolve~~address a capacity deficiency shall be calculated based on the ~~formula set forth in the Public School Facilities Element Policy, 2.4.5, the costs referenced in Public Schools Facilities Element 2.4.5 as those costs not included in the "state average cost per student station" ("additional costs") may be added to the applicant's total proportionate share mitigation obligation as appropriate~~cost of providing school capacity to satisfy the demand created by the actual development of the property, as determined for the applicable school year. Pursuant to Section 163.3180(~~136~~)(h)2, b, Florida Statutes, the ~~applicant's~~applicant's proportionate-share mitigation obligation will be credited toward any other ~~school~~-impact fee or exaction imposed by local ordinance for the same need, on a dollar-for-dollar basis, at fair market value. The credit must be based on the total impact fee assessed and on the impact fee for any particular type of school.

(e) Mitigation must be proportionate to the capacity deficiency for public school facilities to be created by the actual development of the property.

~~Summary of the Concurrency Evaluation and Proportionate Share Mitigation~~

Step 1: Determine the number of students to be generated by the development

Number of Dwelling Units in the proposed development (by unit type)

~~EQUALS~~ Section 7 Definitions

Ancillary facility(ies) – non-instructional buildings and/or sites utilized for such facilities as vehicle maintenance, warehouses, maintenance, or administrative buildings necessary to provide support services to an educational program.

Available school capacity – the circumstance where there is sufficient school capacity, based on adopted LOS standards, to accommodate the demand created by a proposed residential development.

COFTE – Capital Outlay Full Time Equivalent is the basis for student allocation for the Florida Education Finance Program for K-12 established in facilities operated by the School Board, provided annually.

Combination School – a public school that contains any combination of or all of the grade levels from kindergarten through grade 12. This definition does not include schools defined as elementary, middle, or high school.

Concurrency – the requirement that adequate public school facilities are available or will be in place or under actual construction within the timeframes required by law to accommodate the impacts of proposed residential development, consistent with the adopted level of service standards and this Agreement.

Concurrency Service Area (CSA) – the specific geographic unit within a school district in which school concurrency is applied and measured. In determining whether there is sufficient school capacity to accommodate a proposed development, the School Board will:

- (a) consider whether the CSA in which the proposed development is situated has available school capacity; and
- (b) in the event that the CSA in which the proposed development is situated does not have available school capacity, the School Board will determine whether a contiguous CSA has available school capacity in accordance with the policies adopted in the Public Schools Facilities Element.

Concurrency Service Area Level of Service Standards – the maximum acceptable percentage of school utilization determined by dividing the total number of students for all schools of each type in each CSA by the total number of permanent student stations for that type of school in each CSA.

Educational Facilities Plan – the financially feasible 5-Year Educational Facilities Plan adopted pursuant to Section 1013.35, Florida Statutes, which includes a table of expenditures and revenues from the Capital Outlay Budget that details how the School District shall achieve and maintain the LOS for public school facilities. Financial feasibility shall be determined using professionally accepted methodologies.

Existing school facilities – school facilities constructed and operational at the time a School Concurrency Application is submitted to the City.

Florida Inventory of School Houses (FISH) – the official inventory of district-owned educational

facilities published by the Florida Department of Education, Office of Educational Facilities.

Measurable programmatic change – a change to the operation of a school that has consistent and measurable capacity impacts including, but not limited to double sessions, floating teachers, year-long schools, and special educational programs.

Permanent FISH Capacity – the estimated number of students that can be satisfactorily housed in an educational facility at any given time, as reflected in FISH, based on the number of satisfactory permanent student stations attributable to permanent buildings (as defined in FISH).

Planned school facilities – school facility capacity that will be in place or under actual construction within three (3) years after the issuance of subdivision final plat or site development construction plan approval, pursuant to the School Board’s adopted Educational Facilities Plan.

Relocatable (also known as “portable”) – a building or portion of a building made of prefabricated units that can be disassembled and reassembled frequently, or a single unit of construction consisting of walls, roof and floor that is movable as a unit either on wheels or by truck. Mobile, demountable, dividable, modular and portable buildings are types of relocatable units.

Reserved capacity – school facility capacity set aside for a residential development (also known as Development Reservations).

SREF – State Requirements for Educational Facilities, which dictates the standards for school construction pursuant to Florida Department of Education.

School attendance boundary – the geographic area by which the School Board determines student membership at specific schools.

School Capacity Calculations – the School Board will determine whether adequate school capacity exists for a proposed development, based on the LOS standards, CSAs, and other standards set forth in this Agreement, as follows:

- (a) calculate total school facilities by adding the capacity provided by existing school facilities to the capacity of any planned school facilities;
- (b) calculate available school capacity by subtracting from the total school facilities the sum of:
 - 1. used capacity;
 - 2. the portion of reserved capacity projected to be developed within three (3) years;
 - 3. the portion of previously approved development projected to be developed within three (3) years; and
 - 4. ~~Number Students Stations needed to serve~~ the demand on schools created by the proposed development.

~~Step 2: Comparing the available capacity to the number of student stations calculated in Step 1 to assess the need for mitigation~~

~~Available Capacity (see §5.5.3 (b) of this agreement)-~~
~~MINUS-~~
~~The Number of new Students Stations needed to accommodate the~~
~~proposed development-~~
~~EQUALS-~~
~~The shortfall (negative number) or surplus (positive number) of capacity-~~
~~to serve the development~~

~~Step 3: Evaluating the available capacity in contiguous service areas If Step 2 results in a negative number, repeat that step for one or more contiguous service areas. If this step results in a negative number, then proceed to step 4 to calculate the proportionate share mitigation.~~

~~Step 4: Calculating proportionate share mitigation~~

~~Needed additional Student Stations from Step 3-~~
~~MULTIPLIED BY-~~
~~Average cost per Student Station plus additional costs identified in-~~
~~Section 5.6 (d)-~~
~~EQUALS-~~
~~Proportionate Share Mitigation Obligation~~

~~(e) If within 90 days of the date the applicant initiates the mitigation negotiation period, the applicant and the School Board are able to agree to an acceptable form of mitigation, a legally binding mitigation agreement shall be executed, which sets forth the terms of the mitigation, including such issues as the amount, nature, and timing of donations, construction, or funding to be provided by the developer, and any other matters necessary to effectuate mitigation in accordance with this Agreement. The mitigation agreement shall specify the amount and timing of any impact fee credits or reimbursements that will be provided by the City as required by state law.~~

~~(f) If, after 90 days, the applicant and the School Board are unable to agree to an acceptable form of mitigation, the School Board will report an impasse to the City in writing and the City will not issue a School Concurrence Determination for the proposed development or approval the development application.~~

~~(g) The School Board may grant two (2) 90-day extensions to the mitigation negotiation period.~~

~~(h) Mitigation must be~~ Tendered Commitment – a tendered legally binding commitment to provide mitigation proportionate to the demand for public school facilities ~~to be~~

created by actual development of ~~the property~~ consistent with Section 163.3180 (6)(h)(2)(a), Florida Statutes and this Agreement.

Tentative Educational Facilities Plan – the comprehensive planning document prepared annually by the district school board’s staff and submitted to the Office of Educational Facilities and the affected general-purpose local governments.

Used capacity – school facility capacity consumed by or reserved for preexisting development. For the purpose of concurrency reviews, the forty (40)-day membership count at existing school facilities will be used to determine “capacity consumed”.

~~(i) The School Board agrees to amend the 5 year work plan during the next annual update to include the School Capacity improvement being offered as Proportionate share mitigation. The Proportionate share mitigation agreement must be signed by the applicant and the School Board before the development~~

~~application is approved. The City shall execute the Proportionate Share Mitigation Agreement following approval of the Development Application.~~

Section 6 8 Implementation and Amendments

It is understood that the School Superintendent, the City Manager ~~and The~~ or his/her designee and the Planning Commission Executive Director may, in the implementation and administration of this agreement, act on behalf of their respective Boards in any manner that is customarily delegated. It is also understood that references to the School Superintendent, City Manager or his/her designee or the Executive Director of The the Planning Commission shall include their duly appointed representatives.

To the extent that the procedures and requirements referenced from the ~~Land Development Code~~ LDC require interpretation and adjustment to meet the intent of this ~~agreement, the Community Development Department~~ Agreement, the City Manager or his/her designee may exercise discretion as prescribed by the ~~Land Development Code~~ LDC.

This Agreement may be amended only by the written consent of the City, ~~and the~~ the School Board and the Planning Commission, as applicable. Amendments proposed to this ~~agreement~~ Agreement and accepted by the School Board and the City, which do not affect the Planning ~~Commission's~~ Commission's responsibilities hereunder, will not require approval by the Planning Commission.

Section 7 9 Effective Date and Termination

Pursuant to Sections 163.01 and 1013.33, Florida Statutes, this Agreement is effective upon the date this Agreement is recorded in the public records of Hillsborough County. The Clerk of the Board of County Commissioners for Hillsborough County is hereby authorized and directed, after approval of this Agreement by the respective governing bodies of the School Board and the City and execution thereof by the duly qualified and authorized representatives of each of the parties hereto, to file this Agreement with the Clerk of the Circuit Court of Hillsborough County, Florida, for recording in the public records of Hillsborough County, Florida. Within two (2) days of the execution of this Agreement by the last of the City and the School Board, the Clerk shall record the Agreement in the public records of Hillsborough County.

~~Pursuant to 1013.33 this~~ This Agreement ~~is effective upon the date of execution and~~ shall continue in full force and effect; ~~provided however, that the Agreement and~~ shall automatically be renewed for one (1)-year periods unless the City or the School Board signifies in writing to the other its intent to terminate the Agreement ~~within~~ at least one hundred twenty (120) days prior to the renewal date. It is further provided that either of the two aforementioned parties may terminate this ~~agreement~~ Agreement by giving at least one hundred twenty (120)

) days written notice of its intent. ~~Pursuant to Section 6 herein this Agreement shall be renewed annually;~~ provided, however, neither party may provide written notice of termination unless the parties are prepared to replace this Agreement with an updated interlocal agreement, which updated interlocal agreement shall supersede any previous version.

Section 8 10 Resolution of Disputes

~~If~~ Except as otherwise provided in this Agreement, if the parties to this ~~agreement~~ Agreement are unable to resolve any issue(s) in which they may be in disagreement that are covered in this ~~agreement~~ Agreement, such dispute will be resolved as follows: comprehensive plan amendments

shall be resolved in accordance with Part II, Chapter 163, Florida Statutes. Those issues not involving comprehensive plan amendments shall be resolved in accordance with governmental conflict resolution procedures specified in Chapter

164, Florida Statutes or other acceptable means of alternative dispute resolution agreed upon by the parties. Each party shall bear its own ~~attorney's~~attorney's fees.

Section 9 Applicability of School Site Criteria and Standards

9.1 Pursuant to 1013.33(15) existing educational facilities shall be considered consistent with the applicable local government Comprehensive Plan. School sites owned, or reserved in approved development plans prior to April 2008 which were submitted for a determination of consistency and found consistent under the requirements of an adopted Interlocal Agreement are exempt from the requirements of Section 3.2 herein.

9.2 The City's review or approval is not required for:

a) Relocatables as follows:

1) The placement of temporary (two years or less) classrooms (relocatables) for the purpose of renovation or construction.

2) The placement of relocatables intended to expand the capacity of permanent school facilities which results in a 15 percent increase or less in the square footage of the permanent school facility.

b) Renovation or construction on existing school sites (with the exception of construction that changes the primary use of a facility, including stadiums) resulting in a 15 percent increase or less in the square footage of the permanent school facility.

c) School sites that have been and/or will be specifically designated within development plans approved by the City. Such sites shall be subject to the conditions, standards and procedures established for such development plans as outlined in Section 4.

d) If no detailed site plan has been approved, development of a school site shall follow Section 4 Site Design/Development Plan review as stated above.

9.3 If the School Board submits an application to expand an existing school site, when required, the City may impose development standards and conditions on the expansion in a manner consistent with Section 1013.51(1), Florida Statutes.

9.4 Construction on all other sites shall be subject to the provisions contained herein.

Section 10 Severability

If any item or provision of this Agreement is held invalid or unenforceable, the remainder of this Agreement shall not be affected and every other item and provision of this Agreement shall be deemed valid and enforceable to the extent permitted by law.

Section 11 Notice and General Conditions

All notices which may be given pursuant to this Agreement, except notices for meetings provided for elsewhere in this Agreement, shall be in writing to the parties at their respective addresses indicated below or as the same may be changed in writing from time to time. Such notice shall be deemed given on the day on which personally served, or if by mail, on the fifth day after being posted or the date of actual receipt, whichever is earlier.

City of Temple Terrace: Community Development Department, 11250 N 56th Street, Temple Terrace, FL 33617

School Board: Chief Facilities Office, 901 E Kennedy Blvd. Tampa, FL 33602

[/325061/7#62682238 v5](#)

The Planning Commission: Executive Director, 601 E. Kennedy Blvd. 18th Floor, Tampa, FL 33601

~~Title and paragraph headings are for convenient reference and are not intended to confer any rights or obligations upon the parties to this Agreement.~~

~~City of Temple Terrace
Interlocal Agreement~~

IN WITNESS WHEREOF, this Interlocal Agreement has been executed and on behalf of the City by its Chairman of the City ~~Council~~ Commission the seal of the City affixed hereto and attested by the City Clerk and the

(Del) 

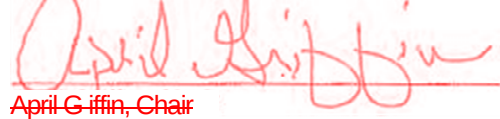
~~Schools on this day of, -~~ -016-

ATTEST:

(Del) 
Jeff Eakins, Superintendent of Schools

ATTEST:

~~School Board of Hillsborough County, FL~~


~~April Giffin, Chair~~

by

and

School Board of Hillsborough County, Florida by its Chairman and its corporate seal affixed hereto and attested by the Superintendent of Schools on this day of
, 2026.

~~corporate seal affixed hereto and attested by the Superintendent of~~

SCHOOL BOARD OF
HILLSBOROUGH
COUNTY, FL

Superintendent of Schools

, Chair

CITY OF TEMPLE TERRACE

~~City of Temple Terrace~~

(Del) 

Mayor
~~Frank Chillura, Mayor~~ City Clerk, City of Temple Terrace

Approved as to form and correctness.

City Attorney
The Planning ~~as to form and legal sufficiency:~~
executing this Interlocal ~~City~~ Commission, by
pursuant to this Agreement, is Agreement, accepts that its role,
planning services described herein. limited to the provisions of those

~~Upon mutual agreement of the City and the School Board, amendments to this Agreement may be made as needed in addition to the annual renewal. Amendments proposed to this Agreement and accepted by the School Board and the City will not require approval by The Planning Commission.~~

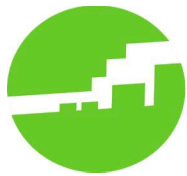
HILLSBOROUGH COUNTY CITY-COUNTY PLANNING COMMISSION

M (*) oe4), Chairperson
~~Mitch Thrower, Chair~~

~~ii: 1: 22~~

, Executive Director

Summary report: Litera Compare for Word 11.14.0.42 Document comparison done on 8/31/2026 2:34:48 PM	
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Intelligent Table Comparison: Active	
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Modified filename: ILA- Temple Terrace (HCSD 6_9_2026)(62682238.5).docx	
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Delete	765
Move From	0
Move To	0
Table Insert	0
Table Delete	0
Table moves to	0
Table moves from	0
Embedded Graphics (Visio, ChemDraw, Images etc.)	6
Embedded Excel	0
Format changes	0
Total Changes:	1468



**Hillsborough County
City-County
Planning Commission**

Resolution: Interlocal Agreement (ILA) for School Facilities Planning, Siting, and Concurrency for the City of Temple Terrace

July 13, 2026

WHEREAS, Section 163.31777 of the Florida Statutes requires that the county and municipalities located within the geographic area of a school district shall enter into an interlocal agreement with the district school board which jointly establishes the specific ways in which the plans and processes of the district school board and the local governments are to be coordinated; and

WHEREAS, the interlocal agreement was developed in 2016 between: the City of Temple Terrace and the School Board of Hillsborough County which is consistent with the statutory requirements of Section 163.31777 of the Florida Statutes; and

WHEREAS, the Hillsborough County City-County Planning Commission (Planning Commission) was a limited party and signatory to this agreement; and

WHEREAS, the Planning Commission received the Interlocal Agreement (ILA) for School Facilities Planning, Siting and Concurrency for the City of Temple Terrace; and

WHEREAS, the Planning Commission staff reviewed amendments to the interlocal agreement; and

WHEREAS, these amendments generally include provisions to implement school concurrency in accordance with Section 163.3180(13) of Florida Statutes; and

WHEREAS, the Planning Commission continues to be identified in the interlocal agreement as having certain responsibilities in the preparation of the Long-Range School Plan (LRSP), providing data and population projections, for reviewing new or expanded school sites for consistency with the Comprehensive Plan, and for reviewing the School District's Tentative District Facilities Plan for consistency with the Comprehensive Plan;

NOW, THEREFORE, BE IT RESOLVED, that the Hillsborough County City-County Planning Commission authorizes the Chair to execute the Interlocal Agreement for School Facilities Planning, Siting and Concurrency for City of Temple Terrace.

The above resolution for the updated Interlocal Agreement for School Facilities Planning, Siting and Concurrency for the City of Temple Terrace was adopted by the Planning Commission on July 13, 2026.

By motion of Commissioner Louk
Seconded by Commissioner Jemison

Commissioner Bowden

Aye

Commissioner Cardenas

Aye

Commissioner Jemison

Aye

Commissioner Joseph, Ph.D., Chair	Nay
Commissioner Kugler	Aye
Commissioner Linkous, Ph.D., AICP	Aye
Commissioner Louk, Vice-Chair	Aye
Commissioner Sieben, Member-at-Large	Aye
Commissioner Sienk	Aye

DocuSigned by:

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Commissioner Joseph, Ph.D., **Chair**

DocuSigned by:

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Melissa Zornitta, FAICP
Executive Director

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Item Cover Page

City Council Item Report

Date: September 15, 2026
From: Karmen Pitts, Executive Assistant
Item Type: Resolution
Subject: Resolution Approving City-Wide Paving Projects
Presenter: Jason Warrenfeltz, Public Works Director

Recommendation:

It is recommended that Council adopt a resolution authorizing the City Manager to execute contract with Superior Asphalt, Inc. to conduct asphalt paving services for select City funded street projects.

Discussion:

In June 2025, the City advertised an Invitation to Bid (25-009) for Continuing Services for General Asphalt Resurfacing for an initial two-year term with the option of three one year extensions. The purpose of the solicitation was to secure qualified contractors to provide asphalt paving services on an as-needed basis. Work may consist of: Asphaltic Surface Treatment Specifications, Full Depth Reclamation with Asphaltic Emulsion Specifications, Micro surfacing Specifications, Cold-In-Place Asphalt Recycling Special Conditions, Milling and Resurfacing Specifications, Cape Seal and Crack Filling/Sealing. The Invitation to Bid was setup to allow the City to select numerous contractors to address our asphalt resurfacing needs and included City-funded requirement language, which will permit the City to utilize City-funded initiatives for roadway resurfacing moving forward. Six contractors were selected by City Council Resolution 157-25 in December 2025.

The Fiscal Year 2026 budget includes funding for the City's planned road resurfacing projects. This year, three of the City's contractors "on retainer," Ajax Paving Industries of Florida, LLC, Superior Asphalt, Inc., and Asphalt Paving Systems, submitted proposals to complete select paving projects. Following review of the proposals, Superior Asphalt, Inc. submitted the lowest responsive and responsible proposal for the City-funded street projects. In reviewing this proposal, the pricing was affordable enough to allow the City to pursue more streets in the FY 26 budget than the original 5-year plan presented to Council during the budget workshops contemplated. The proposed work now includes the following:

1. Milling and asphalt overlay consisting of 5,291 feet in total pavement

- length consisting of 10 individual streets totaling \$454,502.40; and
- 2. Milling and asphalt overlay consisting of 2,260 feet in total pavement length consisting of 8 individual streets totaling \$192,062.98; and
- 3. Milling and asphalt overlay expected consisting of 3,917 feet in total pavement length consisting of 9 individual streets totaling \$396,101.64; and
- 4. Milling and asphalt overlay consisting of 2,637 feet in total pavement length consisting of 9 individual streets totaling \$218,341.32.

For reference, thanks to the better pricing, the above street segments now proposed to be funded from FY 26 are identified in the attached, original 5-year plan as FY 26 **and** years #1-3.

The aforementioned work is expected to be completed over the next several months. The total project amount is \$1,261,008.34 to be paid from Account No. 130-1724-541.63-11.

Resolution/Ordinance Information:

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF TEMPLE TERRACE, FLORIDA, APPROVING A WORK AUTHORIZATION ORDER WITH SUPERIOR ASPHALT, INC. FOR CITY OF TEMPLE TERRACE ROADWAY RESURFACING PROJECTS FOR A TOTAL PROJECT AMOUNT OF \$1,261,008.34; AUTHORIZING THE CITY MANAGER TO EXECUTE ALL RELATED DOCUMENTS; PROVIDING FUNDING FROM THE STREET IMPROVEMENT FUND; PROVIDING AN EFFECTIVE DATE.

Appropriation Code:

130-1724-541.63-11

Requirements:

Resolution

Cost:

\$1,261,008.34

Attachments:

- 1. Resolution Approving Superior Asphalt for City-Funded Paving Projects v4
- 2. Temple Terrace Bid Form
- 3. 5-Year_Paving_Program v2

RESOLUTION

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF TEMPLE TERRACE, FLORIDA, APPROVING A WORK AUTHORIZATION ORDER WITH SUPERIOR ASPHALT, INC. FOR CITY OF TEMPLE TERRACE ROADWAY RESURFACING PROJECTS FOR A TOTAL PROJECT AMOUNT OF \$1,261,008.34; AUTHORIZING THE CITY MANAGER TO EXECUTE ALL RELATED DOCUMENTS; PROVIDING FUNDING FROM THE STREET IMPROVEMENT FUND; PROVIDING AN EFFECTIVE DATE.

WHEREAS, in June 2025, the City issued Invitation to Bid No. 25-009, Continuing Services for General Asphalt Resurfacing, for an initial two-year term with the option of three (3) one-year renewals; and

WHEREAS, the purpose of the solicitation was to establish contracts with qualified contractors to provide asphalt paving and roadway resurfacing services on an as-needed basis for City roadway improvement projects; and

WHEREAS the solicitation included requirements necessary for the City to utilize funding for eligible roadway improvement projects; and

WHEREAS, pursuant to Resolution No. 157-25, Superior Asphalt, Inc. was selected as one of the qualified contractors to provide asphalt paving and resurfacing services under Invitation to Bid No. 25-009; and

WHEREAS, the Fiscal Year 2026 budget includes funding for the City's planned road resurfacing projects; and

WHEREAS, City staff has identified the following roadway resurfacing projects for completion by Superior Asphalt, Inc. over the next several months:

1. Milling and asphalt overlay expected consisting of 5,291 feet in total pavement length consisting of 10 individual streets totaling \$454,502.40; and
2. Milling and asphalt overlay consisting of 2,260 feet in total pavement length consisting of 8 individual streets totaling \$192,062.98; and
3. Milling and asphalt overlay consisting of 3,917 feet in total pavement length consisting of 9 individual streets totaling \$396,101.64; and
4. Milling and asphalt overlay consisting of 2,637 feet in total pavement length consisting of 9 individual streets totaling \$218,341.32.

WHEREAS, funding for these projects is available in Account No. 130-1724-541.63-11;
and

WHEREAS, the City Council finds that authorizing these roadway improvement projects is in the best interest of the health, safety, and welfare of the residents of the City of Temple Terrace.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF TEMPLE TERRACE, that:

Section 1. The work authorization order with Superior Asphalt, Inc. for City of Temple Terrace roadway resurfacing projects as identified in this Resolution pursuant to the continuing services contract is approved.

Section 2. The City Manager is authorized to execute all documents necessary to issue a work authorization order to Superior Asphalt, Inc., for the roadway resurfacing projects.

Section 4. The total project amount of \$1,261,008.34 to be paid from Account No. 130-1724-541.63-11 is approved.

Section 5. This Resolution becomes effective immediately upon its adoption.

Passed and adopted by the City Council of the City of Temple Terrace, Florida, this 15th day of September 2026.

(Corporate Seal)



X

Andrew Ross, Mayor
Chair of the City Council

Attest:

X

Lynda Sader
City Clerk



Superior Asphalt, Inc.

Superior Quality, Superior Service, Superior Asphalt

3197 Premier Dr Brooksville, FL 34604

Phone: (352)-678-3537

Fax: (352)-678-3660

Mailing Address:

P.O. Box 15025, Brooksville, FL 34604

To:	CITY OF TEMPLE TERRACE	Contact:	JASON WARRENFELTZ		
Address:	11250 N 56TH STREET	Phone:			
	TEMPLE TERRACE, FL 33617	Fax:			
Project Name:	TEMPLE TERRACE SURTAX - S RIVERHILLS	Bid Number:	E26-0418		
Project Location:	S RIVERHILLS , TEMPLE TERRACE, FL	Bid Date:	9/4/2026		
Item #	Item Description	Estimated Quantity	Unit	Unit Price	Total Price

FY 2026 ROADWAYS

0010	Milling Of Existing Asphalt (2" +/-)	13,701.00	SY	\$5.50	\$75,355.50
	-LAMONT PL 1,011 SY				
	-CHICAGO AVE 777 SY				
	-CHICAGO AVE 128 SY				
	-E 98TH AVE 2,186 SY				
	-E 98TH AVE 1,768 SY				
	-TERRACE TRAIL LN 873 SY				
	-BANNOCKBURN AVE 1,709 SY				
	-MAROLDY DR 3,769 SY				
	-S GLEN ARVEN AVE 691 SY				
	S GLEN ARVEN AVE 789 SY				
0020	Asphaltic Concrete Type "S-1"	1,513.00	TON	\$200.00	\$302,600.00
	-LAMONT PL 112 TONS				
	-CHICAGO AVE 86 TONS				
	-CHICAGO AVE 15 TONS				
	-E 98TH AVE 241 TONS				
	-E 98TH AVE 195 TONS				
	-TERRACE TRAIL LN 97 TONS				
	-BANNOCKBURN AVE 188 TONS				
	-MAROLDY DR 415 TONS				
	-S GLEN ARVEN AVE 77 TONS				
	S GLEN ARVEN AVE 87 TONS				
0030	Hillsborough County Speed Hump	1.00	EACH	\$5,800.00	\$5,800.00
0040	6" Solid Traffic Stripe (paint)	5,470.00	LF	\$0.60	\$3,282.00
0050	12" Solid Traffic Stripe (paint)	201.00	LF	\$2.00	\$402.00
0060	24" Solid Traffic Stripe (paint)	292.00	LF	\$2.50	\$730.00
0070	6" Solid Traffic Stirpe/Extru. Thermo.	5,470.00	LF	\$1.75	\$9,572.50
0080	12" Solid Stripe/Extru. Thermo.	201.00	LF	\$7.00	\$1,407.00
0090	24" Solid Stripe/Extru. Thermo.	292.00	LF	\$15.00	\$4,380.00
0100	Reflective Pavement Markers (RPM's)	130.00	EACH	\$7.00	\$910.00
0110	MOT (5%)	1.00	LS	\$20,659.20	\$20,659.20
0120	MOB (5%)	1.00	LS	\$20,659.20	\$20,659.20
0130	Inlet Protection System	6.00	EACH	\$240.00	\$1,440.00
710-3	18" Solid Traffic Stripe (paint)	50.00	LF	\$2.50	\$125.00
710-8	Pavement Messages (Paint)	1.00	EACH	\$115.00	\$115.00
711-3	18" Solid Stripe/Extru. Thermo.	50.00	LF	\$10.00	\$500.00
711-8	Pavement Messages / Extru. Thermo.	1.00	EACH	\$290.00	\$290.00
425-1	Adjusting Manholes (Metal Riser Rings)	11.00	EACH	\$465.00	\$5,115.00

Item #	Item Description	Estimated Quantity	Unit	Unit Price	Total Price
425-2	Adjusting Valve Boxes (Metal Riser Rings)	4.00	EACH	\$290.00	\$1,160.00
Total Price for above FY 2026 ROADWAYS Items:					\$454,502.40

PRIORITY 1 ROADWAYS

0010	Milling Of Existing Asphalt (2" +/-)	5,818.00	SY	\$5.50	\$31,999.00
	-BELMONT AVE 768 SY -GRANDVIEW DR 662 SY -GRANDVIEW DR 757 SY -SHIRLEY DR 590 SY -SHIRLEY DR 1,789 SY -CHILKOOT ST 260 SY -PINEHURST AVE 367 SY -PINEHURST AVE 625 SY				
0020	Asphaltic Concrete Type "S-1"	643.00	TON	\$200.00	\$128,600.00
	-BELMONT AVE 85 TONS -GRANDVIEW DR 73 TONS -GRANDVIEW DR 84 TONS -SHIRLEY DR 65 TONS -SHIRLEY DR 197 TONS -CHILKOOT ST 29 TONS -PINEHURST AVE 41 TONS -PINEHURST AVE 69 TONS				
0040	6" Solid Traffic Stripe (paint)	2,112.00	LF	\$0.60	\$1,267.20
0060	24" Solid Traffic Stripe (paint)	109.00	LF	\$2.50	\$272.50
0070	6" Solid Traffic Stirpe/Extru. Thermo.	2,112.00	LF	\$1.75	\$3,696.00
0090	24" Solid Stripe/Extru. Thermo.	109.00	LF	\$15.00	\$1,635.00
0100	Reflective Pavement Markers (RPM's)	74.00	EACH	\$7.00	\$518.00
0110	MOT (5%)	1.00	LS	\$8,730.14	\$8,730.14
0120	MOB (5%)	1.00	LS	\$8,730.14	\$8,730.14
0130	Inlet Protection System	14.00	EACH	\$240.00	\$3,360.00
425-1	Adjusting Manholes (Metal Riser Rings)	7.00	EACH	\$465.00	\$3,255.00
Total Price for above PRIORITY 1 ROADWAYS Items:					\$192,062.98

PRIORITY 2 ROADWAYS

0000	ADD FOR COLOR AND STAMP IF NECESSARY **OUT OF CONTRACT SCOPE**	4.00	EACH	\$9,150.00	\$36,600.00
0010	Milling Of Existing Asphalt (2" +/-)	9,769.00	SY	\$5.50	\$53,729.50
	-TREVOR OAK DR 613 SY -WOODMONT AVE 1,090 SY -MISSION HILLS AVE 2,093 SY -UNIVERSITY SQUARE DR 315 SY -GLEN OAKS AVE 1,001 SY -GLEN OAKS AVE 534 SY -BEVERLY DR 657 SY -BEVERLY DR 2,275 SY -CAROLYNE ST 1,191 SY				
0020	Asphaltic Concrete Type "S-1"	1,080.00	TON	\$200.00	\$216,000.00
	-TREVOR OAK DR 68 TONS -WOODMONT AVE 120 TONS -MISSION HILLS AVE 231 TONS -UNIVERSITY SQUARE DR 35 TONS -GLEN OAKS AVE 111 TONS -GLEN OAKS AVE 59 TONS -BEVERLY DR 73 TONS -BEVERLY DR 251 TONS -CAROLYNE ST 132 TONS				
0030	Hillsborough County Speed Hump	4.00	EACH	\$5,800.00	\$23,200.00

Item #	Item Description	Estimated Quantity	Unit	Unit Price	Total Price
0040	6" Solid Traffic Stripe (paint)	4,894.00	LF	\$0.60	\$2,936.40
0050	12" Solid Traffic Stripe (paint)	295.00	LF	\$2.00	\$590.00
0060	24" Solid Traffic Stripe (paint)	164.00	LF	\$2.50	\$410.00
0070	6" Solid Traffic Stirpe/Extru. Thermo.	4,894.00	LF	\$1.75	\$8,564.50
0080	12" Solid Stripe/Extru. Thermo.	295.00	LF	\$7.00	\$2,065.00
0090	24" Solid Stripe/Extru. Thermo.	164.00	LF	\$15.00	\$2,460.00
0100	Reflective Pavement Markers (RPM's)	201.00	EACH	\$7.00	\$1,407.00
0110	MOT (5%)	1.00	LS	\$18,004.62	\$18,004.62
0120	MOB (5%)	1.00	LS	\$18,004.62	\$18,004.62
0130	Inlet Protection System	6.00	EACH	\$240.00	\$1,440.00
710-8	Pavement Messages (Paint)	1.00	EACH	\$115.00	\$115.00
711-8	Pavement Messages / Extru. Thermo.	1.00	EACH	\$290.00	\$290.00
425-1	Adjusting Manholes (Metal Riser Rings)	19.00	EACH	\$465.00	\$8,835.00
425-2	Adjusting Valve Boxes (Metal Riser Rings)	5.00	EACH	\$290.00	\$1,450.00
Total Price for above PRIORITY 2 ROADWAYS Items:					\$396,101.64

PRIORITY 3 ROADWAYS

0010	Milling Of Existing Asphalt (2" +/-)	6,652.00	SY	\$5.50	\$36,586.00
	-GRAND CT 1,571 SY -OLEANDER DR 639 SY -SUNNYSIDE RD 551 SY -TEMPLE VALLEY DR 610 SY -HIBISCUS DR 491 SY -HIBISCUS DR 222 SY -BRENTWOOD DR 674 SY -BRENTWOOD DR 1,031 SY -SUNNINGDALE AVE 863 SY				
0020	Asphaltic Concrete Type "S-1"	737.00	TON	\$200.00	\$147,400.00
	-GRAND CT 173 TONS -OLEANDER DR 71 TONS -SUNNYSIDE RD 61 TONS -TEMPLE VALLEY DR 68 TONS -HIBISCUS DR 55 TONS -HIBISCUS DR 25 TONS -BRENTWOOD DR 75 TONS -BRENTWOOD DR 114 TONS -SUNNINGDALE AVE 95 TONS				
0040	6" Solid Traffic Stripe (paint)	256.00	LF	\$0.60	\$153.60
0050	12" Solid Traffic Stripe (paint)	48.00	LF	\$2.00	\$96.00
0060	24" Solid Traffic Stripe (paint)	73.00	LF	\$2.50	\$182.50
0070	6" Solid Traffic Stirpe/Extru. Thermo.	256.00	LF	\$1.75	\$448.00
0080	12" Solid Stripe/Extru. Thermo.	48.00	LF	\$7.00	\$336.00
0090	24" Solid Stripe/Extru. Thermo.	73.00	LF	\$15.00	\$1,095.00
0100	Reflective Pavement Markers (RPM's)	70.00	EACH	\$7.00	\$490.00
0110	MOT (5%)	1.00	LS	\$9,924.61	\$9,924.61
0120	MOB (5%)	1.00	LS	\$9,924.61	\$9,924.61
0130	Inlet Protection System	11.00	EACH	\$240.00	\$2,640.00
425-1	Adjusting Manholes (Metal Riser Rings)	17.00	EACH	\$465.00	\$7,905.00
425-2	Adjusting Valve Boxes (Metal Riser Rings)	4.00	EACH	\$290.00	\$1,160.00
Total Price for above PRIORITY 3 ROADWAYS Items:					\$218,341.32

Bid Price Subtotal:

\$1,261,008.34

Total Bid Price:

\$1,261,008.34

ACCEPTED: The above prices, specifications and conditions are satisfactory and hereby accepted. Buyer: Signature: Date of Acceptance:	CONFIRMED: Central Florida Authorized Signature: Estimator: Greg Wasson 941.705.7528 gwasson@superiorasphaltinc.net
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Year	GSID	Street	From	To	Pavement		PCI 2025	PCI 2020	Sgmnt Avg PCI	+/-
					Length (ft)	Area (yd2)				
FY26	4560	LAMONT PL	WEST RIVER DR	COURTNEY DR	394	1011	29	49	39	-20
FY26	2200	CHICAGO AVE	DS@442E SOP	SPRINGDALE PL	256	777	31	45	38	-14
FY26	2190	CHICAGO AVE	SOP	DS@442E SOP	50	128	35	45	40	-10
FY26	3220	E 98TH AVE	DS@81E N 55TH ST	DS@131E N 55TH ST	986	2186	35	64	49.5	-29
FY26	3230	E 98TH AVE	DS@131E N 55TH ST	EOP	689	1768	38	62	50	-24
FY26	8870	TERRACE TRAIL LN	TREVOR OAK DR	TRIPLE OAKS RD	374	873	37	63	50	-26
FY26	1170	BANNOCKBURN AVE	N GLEN ARVEN AVE	MISSION HILLS AVE	637	1709	40	50	45	-10
FY26	4690	MAROLDY DR	SOP	RICHLYNE ST	1346	3769	40	51	45.5	-11
FY26	7670	S GLEN ARVEN AVE	BRENTWOOD DR	S BURLINGAME AVE	237	691	34	71	52.5	-37
FY26	7630	S GLEN ARVEN AVE	S RIVERHILLS DR	FERN CLIFF AVE	322	789	46	64	55	-18
1	1460	BELMONT AVE	SOP	GILLETTE AVE	202	768	41	64	52.5	-23
1	3910	GRANDVIEW DR	RAINBOW DR	BEVERLY DR	258	662	33	67	50	-34
1	3900	GRANDVIEW DR	RIDGEWAY RD	RAINBOW DR	295	757	48	67	57.5	-19
1	8190	SHIRLEY DR	RAINBOW DR	GROVE HILL RD	241	590	41	60	50.5	-19
1	8180	SHIRLEY DR	RIDGEWAY RD	RAINBOW DR	730	1789	41	67	54	-26
1	2210	CHILKOOT ST	SOP	N 52ND ST	131	260	42	74	58	-32
1	6630	PINEHURST AVE	FERN CLIFF AVE	ST AUGUSTINE AVE	121	367	37	55	46	-18
1	6640	PINEHURST AVE	ST AUGUSTINE AVE	BRENTWOOD DR	282	625	46	62	54	-16
2	8910	TREVOR OAK DR	QUEEN BROOKS CT	TERRACE TRAIL LN	250	613	43	53	48	-10
2	9720	WOODMONT AVE	RIDGEDALE RD	N GREENFIELD AVE	292	1090	43	46	44.5	-3
2	4860	MISSION HILLS AVE	WOODBINE AVE	INVERNESS AVE	897	2093	44	64	54	-20
2	8940	UNIVERSITY SQUARE DR	N 52ND ST	OVERLOOK DR	159	315	44	56	50	-12
2	3790	GLEN OAKS AVE	BRENTWOOD DR	LIVE OAK AVE	429	1001	42	51	46.5	-9
2	3800	GLEN OAKS AVE	LIVE OAK AVE	SUNNYSIDE RD	183	534	47	60	53.5	-13
2	1560	BEVERLY DR	DS@169W SOP	GRANDVIEW DR	256	657	40	66	53	-26
2	1630	BEVERLY DR	DS@83W SEWAHA RD	TEMPLE HEIGHTS RD	975	2275	47	69	58	-22
2	2130	CAROLYNE ST	AMBER LN	TEMPLE VALLEY DR	486	1191	45	50	47.5	-5
3	3890	GRAND CT	GRAND CIR	EOP	612	1571	45	50	47.5	-5

3	6420 OLEANDER DR	PRIMROSE LN	EOP	238	639	45	62	53.5	-17
3	8440 SUNNYSIDE RD	BRENTWOOD DR	LIVE OAK AVE	128	551	45	65	55	-20
3	8670 TEMPLE VALLEY DR	HIBISCUS DR	CAROLYNE ST	249	610	45	65	55	-20
3	4090 HIBISCUS DR	SOP	PRIMROSE LN	183	491	43	74	58.5	-31
3	4070 HIBISCUS DR	HOLLAND AVE	AMBER LN	100	222	49	47	48	2
3	1840 BRENTWOOD DR	S GLEN ARVEN AVE	PINEHURST AVE	251	674	44	51	47.5	-7
3	1850 BRENTWOOD DR	PINEHURST AVE	S RIVERHILLS DR	465	1031	48	61	54.5	-13
3	8410 SUNNINGDALE AVE	BELLE TERRE AVE	EOP	411	863	46	54	50	-8
4	7610 S BURLINGAME AVE	S LOCKMOOR AVE	BON AIRE AVE	65	167	46	77	61.5	-31
4	8340 SPRINGDALE PL	CHICAGO AVE	SHADOW LN	571	1399	46	62	54	-16
4	4950 MONTROSE AVE	GASCON PL	BANNOCKBURN AVE	247	663	47	67	57	-20
4	5860 N 78TH ST	DS@1207N SOP	RENALD BLVD	365	937	47	53	50	-6
4	6710 PYRAMID DR	VANDERBAKER RD	EOP	659	1538	48	61	54.5	-13
4	5310 N 52ND ST	DS@1326N WHITEWAY DR	EOP	1343	3760	48	86	67	-38
4	7070 RICHLYNE ST	DRUID HILLS RD	HOLLAND AVE	575	1476	48	60	54	-12
4	9610 WOOD DUCK PL	SOARING AVE	TANAGER PL	309	757	49	95	72	-46
5	1430 BELLEMEADE CIR	BELLEMEADE AVE	EOP	131	321	50	52	51	-2
5	8860 TERRACE TRAIL LN	TERRA OAKS RD	TREVOR OAK DR	224	575	50	60	55	-10
5	8510 SYCAMORE PL	SOP	EOP	333	777	50	67	58.5	-17
5	6840 RAINBOW DR	RIDGEWAY RD	SHIRLEY DR	1022	2623	50	85	67.5	-35
5	1830 BRENTWOOD DR	GLEN OAKS AVE	S GLEN ARVEN AVE	235	603	51	58	54.5	-7
5	7720 S GLEN ARVEN AVE	BON AIRE AVE	N GLEN ARVEN AVE	600	1330	51	59	55	-8
5	7660 S GLEN ARVEN AVE	ST AUGUSTINE AVE	BRENTWOOD DR	489	2054	51	60	55.5	-9
5	4870 MISSION HILLS AVE	INVERNESS AVE	BANNOCKBURN AVE	327	649	51	67	59	-16

Item Cover Page

City Council Item Report

Date: September 15, 2026

From: Alyssa Livingstone, Senior Planner

Item Type: Ordinance

Subject: Public Hearing and First Reading of an Ordinance Approving the Voluntary Annexation (ANX-26-02) of Approximately 12.29 Acres of Real Property (Folio No. 061363-0100) Located at the Southeast Quadrant of US Highway 301 and Harney Road

Presenter: Alyssa Livingstone, Senior Planner

Recommendation:

Staff recommends City Council approve the ordinance for ANX-26-02 on first reading and schedule a public hearing and second reading for October 6, 2026.

Discussion:

The applicant is seeking a voluntary annexation of approximately 12.29 acres of land in unincorporated Hillsborough County into the municipal limits of Temple Terrace. A concurrent Comprehensive Plan Amendment CPA-26-01 (TT/CPA-26-01) is currently pending the outcome of this annexation application.

Resolution/Ordinance Information:

AN ORDINANCE OF THE CITY OF TEMPLE TERRACE, FLORIDA, APPROVING THE VOLUNTARY ANNEXATION (ANX-26-02) OF ONE PARCEL TOTALING 12.29± ACRES OF REAL PROPERTY LOCATED SOUTH OF HARNEY ROAD AND EAST OF U.S. HIGHWAY 301, WITH FOLIO NUMBER 061363-0100, LYING WITHIN THE UNINCORPORATED AREA OF HILLSBOROUGH COUNTY; DIRECTING THAT THIS ORDINANCE BE RECORDED WITH THE CLERK OF CIRCUIT COURT OF HILLSBOROUGH COUNTY; DIRECTING THAT THE CORPORATE BOUNDARIES OF THE CITY BE REDEFINED TO INCLUDE THE ANNEXED PARCEL; PROVIDING FOR SEVERABILITY; PROVIDING FOR CORRECTION OF TYPOGRAPHICAL ERRORS; REPEALING ALL ORDINANCES OR PARTS OF ORDINANCES IN CONFLICT HERewith; PROVIDING FOR AN EFFECTIVE DATE.

Appropriation Code:

Requirements:

Ordinance

Cost:**Attachments:**

1. Staff Report-ANX-26-02 Southeast Quadrant of 301 Highway & Harney Road
2. Ordinance-ANX-26-02 Southeast Quadrant of 301 Highway & Harney Road v3
3. ANX-26-02 General Area Map
4. ANX-26-02 Aerial Map

**COMMUNITY DEVELOPMENT DEPARTMENT
PLANNING AND DEVELOPMENT DIVISION
STAFF REPORT FOR CITY COUNCIL**

Annexation Application No. ANX-26-02 (SE Quadrant of Harney Road and US Highway 301)

Date: 09-15-2026
 To: Mayor Andrew Ross and City Council
 Through: Carlos Baía, City Manager
 Prepared by: Alyssa Livingstone, Senior Planner

Agenda: Voluntary Annexation ANX-26-02

Request: A request for the voluntary annexation of one parcel of land from Hillsborough County into the municipal limits of the City of Temple Terrace.

Subject Property: Section 19, Township 28 South, Range 20 East; Folio No. 061363-0100. A complete legal description is on file with the Planning and Zoning Division.

Acreage: Approximately 12.29 ± acres

Current Zoning: Agricultural Rural-1 (Hillsborough County)

Future Land Use: Adopted – Community Mixed Use-12 (Hillsborough County)
 Proposed – Community Mixed Use – 12 (Temple Terrace, pending CPA-26-01)

Surrounding Comprehensive Plan Designation (Future Land Use Map - FLUM):

North – Urban Mixed Use-12 (Hillsborough County)
 South – Community Mixed Use-12 (Hillsborough County)
 East – Community Mixed Use-12 (Hillsborough County)
 West – Research Corporate Park (Temple Terrace)

Surrounding Land Development Code Designation (Official Zoning Atlas Map):

North – Commercial General (Hillsborough County)
 South – Planned Development (Hillsborough County)
 East – Residential-Duplex Conventional & Residential Single-Family
 Conventional (Hillsborough County)
 West – Planned Development (Temple Terrace)

Surrounding Area: North – Vacant
 South – Commercial buildings
 East – Single-family residential homes
 West – Distribution center/Warehouse

Background:

The subject property consists of a single vacant parcel approximately 12.29 acres in size, located in the southeast quadrant of the intersection of US Highway 301 and Harney Road. The property currently lies within the Temple Terrace Utilities Service Area and is situated within the designated Future Economic Development Area. The site is bordered by vacant land to the north, commercial buildings to the south, single-family residential dwellings to the east, and a distribution/warehouse center to the west.

There is a concurrent pending Comprehensive Plan Amendment application (CPA-26-01) to amend the Future Land Use designation from Hillsborough County Community Mixed Use-12 (CMU-12) to Temple Terrace Community Mixed Use-12 (CMU-12).

Analysis:

The applicant is requesting approval for a voluntary annexation of the 12.29-acre parcel into the municipal limits of the City of Temple Terrace. This annexation constitutes the first of two consecutive legislative land actions being undertaken by the property owner; the second action is the pending Comprehensive Plan Amendment. This report solely addresses the voluntary annexation request.

No development shall be permitted on the subject property until the applicant or property owner successfully completes the rezoning process to assign an applicable City of Temple Terrace zoning classification to the parcel.

171.043 Character of the area to be annexed. A municipal governing body may propose to annex an area only if it meets the general standards of subsection (1) and the requirements of either subsection (2) or subsection (3).

(1) The total area to be annexed must be contiguous to the municipality's boundaries at the time the annexation proceeding is begun and reasonably compact, and no part of the area shall be included within the boundary of another incorporated municipality.

Staff Comment: In this instance, the area proposed for annexation meets the criteria set forth in Subsection 171.043(1), F.S. regarding the character of the area to be annexed. The parcel is contiguous to the City of Temple Terrace municipal limits, separated from the City jurisdictional boundary only by a public roadway (right-of-way) as permitted in Subsection 171.031(3); the property is reasonably compact; the proposed annexation is not part of another incorporated municipality.

(2) Part or all of the area to be annexed must be developed for urban purposes. An area developed for urban purposes is defined as any area which meets any one of the following standards:

(a) It has a total resident population equal to at least two persons for each acre of land included within its boundaries;

Staff Comment: In this instance, the area proposed for annexation does not meet the criteria set forth in Subsection 171.043(2)(a), F.S. regarding the character of the area to be annexed.

(b) It has a total resident population equal to at least one person for each acre of land included within its boundaries and is subdivided into lots and tracts so that at least 60 percent of the total number of lots and tracts are 1 acre or less in size;

Staff Comment: In this instance, the area proposed for annexation does not meet the criteria set forth in Subsection 171.043(2)(b), F.S. regarding the character of the area to be annexed. The parcel is developed for urban purposes and meets the requirement of subsection 171.043(1)(a), F.S.

(c) It is so developed that at least 60 percent of the total number of lots and tracts in the area at the time of annexation are used for urban purposes, and it is subdivided into lots and tracts so that at least 60 percent of the total acreage, not counting the acreage used at the time of annexation for nonresidential urban purposes, consists of lots and tracts 5 acres or less in size.

Staff Comment: In this instance, the area proposed for annexation does not meet the criteria set forth in Subsection 171.043(2)(c), F.S. regarding the character of the area to be annexed.

(3) In addition to the area developed for urban purposes, a municipal governing body may include in the area to be annexed any area which does not meet the requirements of subsection (2) if such area either:

(a) Lies between the municipal boundary and an area developed for urban purposes, so that the area developed for urban purposes is either not adjacent to the municipal boundary or cannot be served by the municipality without extending services or water or sewer lines through such sparsely developed area; or

Staff Comment: In this instance, the area proposed for annexation does not meet the criteria set forth in Subsection 171.043(3)(a), F.S. regarding the character of the area to be annexed.

(b) Is adjacent, on at least 60 percent of its external boundary, to any combination of the municipal boundary and the boundary of an area or areas developed for urban purposes as defined in subsection (2).

Staff Comment: In this instance, the area proposed for annexation meets the criteria set forth Subsection 171.043(3)(b), F.S. regarding the character of the area to be annexed. At least 60 percent of its external boundary is adjacent to the municipal boundary and a combination of areas developed for urban purposes as defined in subsection (2).

Planning Commission Review:

The Hillsborough County City-County Planning Commission (HCCCPC) staff reviewed the Voluntary Annexation application and recommended approval, finding that it complies and is consistent with long-range planning goals of the City's Comprehensive Plan.

Comprehensive Plan Policies to Support Annexation:

LU Policy 8.6.3: Continue to process voluntary annexations for non-residential and residential properties at the request of the property owner.

LU Policy 8.6.4: In order to promote orderly urban growth, vacant property within the Utility Service Area shall not be provided city services, including water and sewer service, without annexation or establishment of an annexation agreement between the City and the property owner.

LU Policy 8.6.5: Extension of the utilities, including water and sewer, will be granted only if landowners requesting service have begun the annexation process or have made prior agreements with the city.

Recommendation:

Based on the information reported herein, supported by documentation attached hereto, the Community Development Department recommends approval of this application.

ORDINANCE

AN ORDINANCE OF THE CITY OF TEMPLE TERRACE, FLORIDA, APPROVING THE VOLUNTARY ANNEXATION (ANX-26-02) OF ONE PARCEL TOTALING 12.29± ACRES OF REAL PROPERTY LOCATED SOUTH OF HARNEY ROAD AND EAST OF U.S. HIGHWAY 301, WITH FOLIO NUMBER 061363-0100, LYING WITHIN THE UNINCORPORATED AREA OF HILLSBOROUGH COUNTY; DIRECTING THAT THIS ORDINANCE BE RECORDED WITH THE CLERK OF CIRCUIT COURT OF HILLSBOROUGH COUNTY; DIRECTING THAT THE CORPORATE BOUNDARIES OF THE CITY BE REDEFINED TO INCLUDE THE ANNEXED PARCEL; PROVIDING FOR SEVERABILITY; PROVIDING FOR CORRECTION OF TYPOGRAPHICAL ERRORS; REPEALING ALL ORDINANCES OR PARTS OF ORDINANCES IN CONFLICT HERewith; PROVIDING FOR AN EFFECTIVE DATE.

Whereas, Florida Statute Section 171.044, provides for voluntary annexation of real property located in the unincorporated area of any county where the real property to be annexed is contiguous to a municipality and is reasonably compact; and

Whereas, DCH Citrus LLC, the owners of the real property more particularly described in Exhibit "A" attached hereto (hereinafter "Subject Property"), has petitioned through its Authorized Agent, Ryan Companies US, Inc., for voluntary annexation into the City of Temple Terrace; and

Whereas, application CPA-26-01 (TT/CPA-26-01) (Comprehensive Plan Amendment) is pending the outcome of this application; and

Whereas, the City Council has determined that the petition bears the signature of the owner of the Subject Property and that the annexation request otherwise complies with all the prerequisites to voluntary annexation as set forth in Florida Statutes, Chapter 171; and

Whereas, pursuant to Florida Statutes Section 171.044(6), the City of Temple Terrace provided a copy of the Notice of Proposed Annexation to the Board of County Commissioners of Hillsborough County.

NOW, THEREFORE, BE IT ORDAINED BY THE MAYOR AND CITY COUNCIL OF THE CITY OF TEMPLE TERRACE, FLORIDA:

Section 1. That the petition for voluntary annexation of the Subject Property located south of Harney Road and east of U.S. Highway 301 (Folio No. 061363-0100) more particularly described in Exhibit "A" attached hereto and made a part hereof, is hereby approved and the corporate boundaries of the City of Temple Terrace are hereby redefined to include the annexed parcel, and the legal description of the City

of Temple Terrace contained in the City's official documents shall be amended accordingly.

Section 2. That this ordinance shall be recorded with the Clerk of the Circuit Court of Hillsborough County and with the Florida Department of State.

Section 3. That if any part of this ordinance is declared invalid by a court of competent jurisdiction, such part or parts shall be severable, and the remaining part or parts hereof shall continue to be in full force and effect.

Section 4. That the correction of typographical errors which do not affect the intent of this ordinance may be authorized by the City Clerk or Clerk's designee upon approval of the City Attorney without public hearing, and the corrected ordinance shall be recorded by the Clerk.

Section 5. That all ordinances or parts of ordinances not specifically in conflict herewith are hereby continued in full force and effect, but all ordinances or parts of ordinances in conflict herewith are hereby repealed.

Section 6. That this ordinance shall become effective upon its adoption.

Passed and ordained by the City Council of the City of Temple Terrace, Florida, this 6th day of October 2026.

(Corporate Seal)



X

Andrew Ross, Mayor
Chair of the City Council

Attest:

X

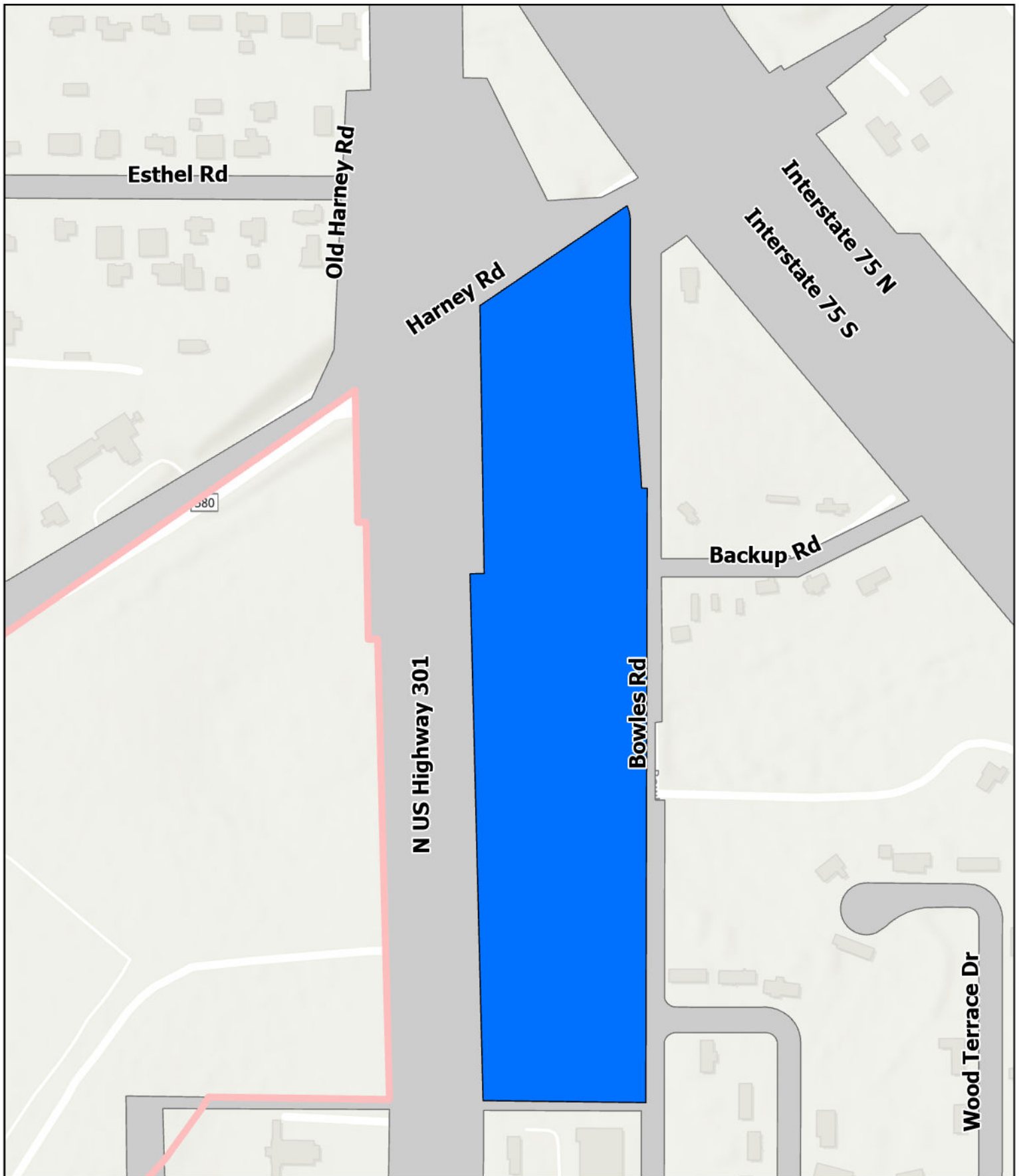
Lynda Sader
City Clerk

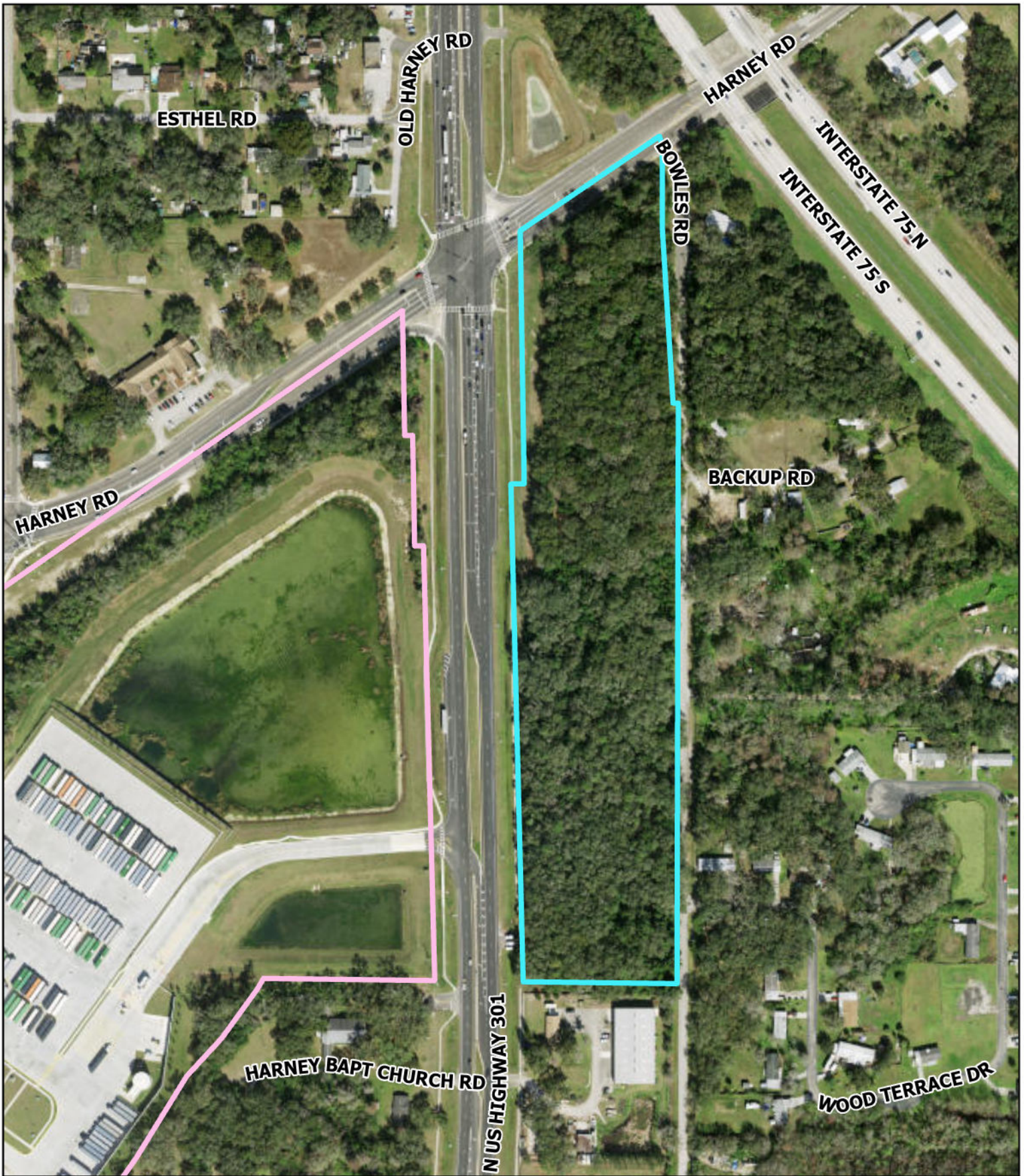
EXHIBIT "A"

LEGAL DESCRIPTION

DESCRIPTION: A parcel of land lying in Section 19, Township 28 South, Range 20 East, Hillsborough County, Florida, and being more particularly described as follows:

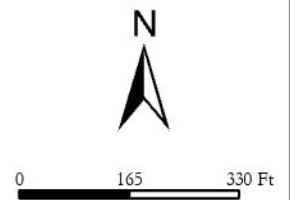
COMMENCE at the Northeast corner of the Southwest 1/4 of the Southwest 1/4 of Section 19, Township 28 South, Range 20 East, run thence along the North line of said Southwest 1/4 of the Southwest 1/4 of Section 19, N.89°22'59"W., a distance of 18.32 feet to the **POINT OF BEGINNING**; thence N.89°22'59"W., a distance of 334.33 feet to the East Right-of-Way; thence departing said North line Run thence along the East Right-of-Way line of North US HIGHWAY 301 the following seven (7) courses: (1) N.01°01'09"W., a distance of 163.10 feet; (2) N.88°57'08"E., a distance of 15.00 feet; (3) N.00°51'23"E., a distance of 60.19 feet; (4) N.01°02'52"W., a distance of 500.00 feet; (5) N.07°28'59"E., a distance of 101.12 feet; (6) N.03°14'29"E., a distance of 401.12 feet; (7) N.00°23'11"E., a distance of 366.96 feet; thence departing said East Right-of-Way N.48°42'52"E., a distance of 210.68 feet; thence N.59°28'40"E., a distance of 38.46 feet; thence N.50°11'42"E., a distance of 107.48 feet to a point on the West Right-of-Way line of BOWLES ROAD thence along said West Right-of-Way the following twenty four (24) Courses: (1) Southerly, 35.74 feet along the arc of a non-tangent curve to the right having a radius of 90.02 feet and a central angle of 22°44'41" (chord bearing S.11°22'38"E., 35.50 feet); (2) S.00°00'17"E., a distance of 91.54 feet; (3) S.03°08'54"E., a distance of 58.71 feet; (4) S.46°23'13"E., a distance of 3.61 feet; (5) S.00°03'56"W., a distance of 20.79 feet; (6) S.02°43'06"E., a distance of 97.69 feet; (7) S.00°00'50"E., a distance of 88.38 feet; (8) S.00°12'19"E., a distance of 94.88 feet; (9) S.03°26'41"E., a distance of 18.00 feet; (10) S.00°15'15"W., a distance of 82.74 feet; (11) S.01°08'08"E., a distance of 96.73 feet; (12) thence S.00°28'05"W., a distance of 94.85 feet; (13) thence S.00°47'08"W., a distance of 93.44 feet; (14) S.00°26'44"E., a distance of 87.88 feet; (15) S.00°08'45"W., a distance of 91.37 feet; (16) S.00°05'41"E., a distance of 94.45 feet; (17) S.00°02'39"E., a distance of 86.53 feet; (18) thence S.00°31'38"E., a distance of 96.03 feet; (19) S.00°14'20"W., a distance of 94.29 feet; (20) S.00°23'02"E., a distance of 97.03 feet; (21) S.00°47'42"W., a distance of 93.63 feet; (22) S.00°09'53"W., a distance of 96.57 feet; (23) S.00°24'53"W., a distance of 91.19 feet; (24) S.00°27'14"E., a distance of 18.37 feet to the **POINT OF BEGINNING**.





General Area Map ANX-26-02
 Folio: 061363-0100
 Applicant: Kami Corbett, Esq. - Hill Ward Henderson

City Parcels Subject Site City Limits



Item Cover Page

City Council Item Report

Date: September 15, 2026

From: Alyssa Livingstone, Senior Planner

Item Type: Ordinance

Subject: Public Hearing and First Reading of an Ordinance Approving Comprehensive Plan Future Land Use Amendment, Case CPA-26-01 for Folio No. 061363-0100 from Hillsborough County Community Mixed Use-12 (CMU-12) to Temple Terrace Community Mixed Use-12 (CMU-12)

Presenter: Alyssa Livingstone, Senior Planner

Recommendation:

Staff recommends City Council approval on first reading and scheduling a public hearing and second reading for October 6, 2026.

Discussion:

This is a privately initiated small-scale Comprehensive Plan Future Land Use Map amendment request to change the Future Land Use designation of the subject property from Hillsborough County Community Mixed Use-12 (CMU-12) to Temple Terrace Community Mixed Use-12 (CMU-12).

Resolution/Ordinance Information:

AN ORDINANCE OF THE CITY OF TEMPLE TERRACE, FLORIDA, APPROVING COMPREHENSIVE PLAN AMENDMENT PETITION CPA 26-01 (TT/CPA-26-01) TO CHANGE THE "IMAGINE 2040: TEMPLE TERRACE COMPREHENSIVE PLAN" FUTURE LAND USE MAP FROM HILLSBOROUGH COUNTY COMMUNITY MIXED USE-12 (CMU-12) TO TEMPLE TERRACE COMMUNITY MIXED USE-12 (CMU-12) FOR ONE PARCEL OF LAND TOTALING 12.29± ACRES OF REAL PROPERTY LOCATED SOUTH OF HARNEY ROAD AND EAST OF U.S. HIGHWAY 301 (US 301), WITH FOLIO NUMBER 061363-0100, LYING WITHIN THE CITY OF TEMPLE TERRACE, LEGALLY DESCRIBED IN EXHIBIT "A" ATTACHED HERETO, ; PROVIDING FOR AMENDMENT OF THE OFFICIAL FUTURE LAND USE MAP OF THE CITY; PROVIDING FOR SEVERABILITY; PROVIDING FOR CORRECTION OF TYPOGRAPHICAL ERRORS; REPEALING ALL ORDINANCES OR PARTS OF ORDINANCES IN CONFLICT HEREWITH; PROVIDING AN EFFECTIVE DATE.

Appropriation Code:

Requirements:

Ordinance

Cost:

Attachments:

1. Staff Report-CPA-26-01 Harney & 301 Road
2. Ordinance-CPA-26-01 v5
3. CPA-26-01 General Map
4. CPA-26-01 Aerial Map
5. HCCPC Signed Resolution TT CPA 26-01

**COMMUNITY DEVELOPMENT DEPARTMENT
PLANNING AND DEVELOPMENT DIVISION
STAFF REPORT FOR CITY COUNCIL**

Comprehensive Plan Amendment Application No. CPA-26-01

Date: 09-15-2026
To: Mayor Andrew Ross and City Council
Through: Carlos Baía, City Manager
Prepared by: Alyssa Livingstone, Senior Planner

Agenda: Comprehensive Plan Amendment CPA-26-01

Request: A request to amend the “Imagine 2040: Temple Terrace Comprehensive Plan” future land use map for one parcel of land from Hillsborough County Community Mixed Use-12 (CMU-12) to Temple Terrace Community Mixed Use-12 (CMU-12)

Subject Property: Section 19, Township 28 South, Range 20 East; Folio No. 061363-0100. A complete legal description is on file with the Planning and Development Division.

Acreage: Approximately 12.29 ± acres

Future Land Use: Community Mixed Use-12 (Hillsborough County)

Surrounding Comprehensive Plan Designation (Future Land Use Map - FLUM):

North – Urban Mixed Use-12 (Hillsborough County)
South – Community Mixed Use-12 (Hillsborough County)
East – Community Mixed Use-12 (Hillsborough County)
West – Research Corporate Park (Temple Terrace)

Surrounding Area: North – Vacant
South – Commercial buildings
East – Single-family residential homes
West – Distribution Center/Warehouse

Discussion

The Hillsborough County City-County Planning Commission received a privately initiated Comprehensive Plan Amendment (TT/CPA-26-01) proposing a Future Land Use designation change for 12.29 acres of property located at the southeast quadrant of the intersection of U.S. Highway 301 and Harney Road. The application proposes changing the site’s designation from Hillsborough County Community Mixed Use-12 (CMU-12) to Temple Terrace CMU-12. Because the property encompasses fewer than 50 acres, the proposed change qualifies as a small-scale amendment under Florida Statutes, exempting it from formal review by Florida Commerce (formerly the Department of Economic Opportunity) or other state agencies.

The subject property is located within the Designated Future Economic Development Area and the Temple Terrace Utilities Service Area. The applicant has also submitted a concurrent application for a proposed Voluntary Annexation (AN-26-02). The allowable development intensity and range of permitted uses under the proposed Temple Terrace designation align with the entitlements under the existing County designation. A rezoning application for the subject property has not yet been submitted.

Per the Temple Terrace CMU-12 Land Use description, a Planned Development district will be required at the rezoning stage. This requirement mandates mitigation measures to separate the site from the residential area located to the east, satisfying the Comprehensive Plan requirement to protect residential uses from non-residential encroachment. Planning staff determined that the proposed designation maintains the established development potential for the subject site. In addition to this staff report, this proposed map amendment is further explained in the attached Hillsborough County City-County

Commission staff report. No development shall be permitted on the subject property until the applicant or property owner successfully completes the rezoning process to assign an applicable City of Temple Terrace zoning classification to the parcel.

According to the Temple Terrace Comprehensive Plan for the CMU-12 District:

These areas provide the opportunity for mixed use developments within the Interstate 75 Corridor, and elsewhere in the City, if appropriate; and may serve as transitional or holding use for agricultural and industrial uses, as required, in annexation areas surrounding the I-75 corridor. Two purposes are served:

1. To identify a broad range of existing uses characterized by a mixture of residential, commercial, industrial, and agricultural activities that lack an identifiable development trend, and to recognize them as legally conforming uses with the potential for future transition to more compatible uses in the City, until such time as an identifiable trend emerges or is created through a future plan.
2. To provide a flexible transitional rea in the eastern portion of the City that will accommodate future development and redevelopment within and suitable to the U.S. 301 and Interstate 75 Corridor, featuring redevelopment of large parcels with mixed uses, limited highway access and high quality professional employment, as envisioned in the City's Visioning documents.

The areas are suburban in character, including intensity and density of land use. New development and substantial expansion of existing uses shall be approved through a planned unit development rezoning process that requires integrate site plans, controlled through performance standards, to achieve developments compatible with surrounding land use patterns, the City's master plan for annexation and for guiding the future development of areas adjacent to Interstate 75, and the Comprehensive Plan's Goals, Objectives, and Policies.

Planning Commission Review:

The Hillsborough County City-County Planning Commission (HCCCPC) held a public hearing and adopted a resolution for TT/CPA-26-01 on June 8, 226, and found the requested map amendment is consistent with the Imagine 2040: Temple Terrace Comprehensive Plan. The Planning Commission staff report, and resolution are included in the additional materials associated herewith.

Strategic Connections:

This request addresses Goal 9, Objective 9F which encourages the promotion of sustainable, safe, attractive, and desired development and promoting economic development for the City.

Consistency with the Comprehensive Plan:

All development applications shall demonstrate complete compliance with the Comprehensive Plan. A full analysis and additional policies are detailed in the Planning Commissions' staff report, The following policies of the Comprehensive Plan are relevant to the application.

LU Objective 3.5: The transformation of major multi-modal corridors and major activity centers to include a broader mix of uses, both horizontal and vertical, that provides opportunities for medium density housing while also addressing neighborhood and citywide demand for retail and services.

LU Objective 3.6: I-75/Fletcher Avenue and US 301/Harney Road intersections and surrounding areas will be developed as regional activity centers and recognized as target industry employment centers.

LU Objective 8.1: In all actions of the City, urban sprawl shall be discouraged and a compact urban pattern of development, infill, and redevelopment shall be provided for in a manner which will promote the full utilization of existing public infrastructure and allow for the orderly extension and expansion of municipal facilities in a fiscally responsible manner and in accordance with the adopted level of service standards established in the Public Facilities and Capital Improvements Sections of the Plan and for the designated Temple Terrace TCEA and the Temple Terrace Multimodal Transportation District (TT MMTD).

LU Objective 8.5: All development approvals shall be consistent with the development regulations and timeframe outlined in Chapter 163, Florida Statutes.

Concurrency:

LU Policy 1.4.7: Continue to pursue its opportunities to grow within the confines of its utility service area, as conditions make it advantageous to do so. Simultaneously, keep its options open and continue to communicate with the County regarding mid- to long-term opportunities to expand further, or at least jointly plan areas, particularly to the southeast of the City, where future economic advantages can enhance the City's strategic competitiveness.

Findings of Fact:

1. The request is to re-designate one parcel of land from Hillsborough County CMU-12 to Temple Terrace CMU-12 on the City's Future Land Use Map.
2. The proposed change is consistent with the City of Temple Terrace Comprehensive Plan.
3. The Hillsborough County City-County Planning Commission (HCCCPC) held a public hearing and adopted a resolution confirming the proposed application is consistent with the City's Comprehensive Plan.

Recommendation:

Based on the information reported herein, supported by documentation attached hereto, or included in the additional materials, the Community Development Department recommends approval of this application.

ORDINANCE

AN ORDINANCE OF THE CITY OF TEMPLE TERRACE, FLORIDA, APPROVING COMPREHENSIVE PLAN AMENDMENT PETITION CPA 26-01 (TT/CPA-26-01) TO CHANGE THE "IMAGINE 2040: TEMPLE TERRACE COMPREHENSIVE PLAN" FUTURE LAND USE MAP FROM HILLSBOROUGH COUNTY COMMUNITY MIXED USE-12 (CMU-12) TO TEMPLE TERRACE COMMUNITY MIXED USE-12 (CMU-12) FOR ONE PARCEL OF LAND TOTALING 12.29± ACRES OF REAL PROPERTY LOCATED SOUTH OF HARNEY ROAD AND EAST OF U.S. HIGHWAY 301 (US 301), WITH FOLIO NUMBER 061363-0100, LYING WITHIN THE CITY OF TEMPLE TERRACE, LEGALLY DESCRIBED IN EXHIBIT "A" ATTACHED HERETO; PROVIDING FOR AMENDMENT OF THE OFFICIAL FUTURE LAND USE MAP OF THE CITY; PROVIDING FOR SEVERABILITY; PROVIDING FOR CORRECTION OF TYPOGRAPHICAL ERRORS; REPEALING ALL ORDINANCES OR PARTS OF ORDINANCES IN CONFLICT HERewith; PROVIDING AN EFFECTIVE DATE

Whereas, The Imagine 2040: Temple Terrace Comprehensive Plan was adopted by Ordinance 1384 on January 19, 2016, which provided an update of the City's Comprehensive Plan; and

Whereas, the Hillsborough County City-County Planning Commission held a public hearing on June 8, 2026, during which the Commission reviewed the map amendment set forth in TT/CPA-26-01, considered existing and expected future development patterns and community facilities in the area, as well as the Comprehensive Plan's adopted goals, objectives, and policies, and made the determination that the proposed map amendment is consistent with the Imagine 2040: Temple Terrace Comprehensive Plan; and

Whereas, DCH Citrus, LLC, the owner of the real property particularly described in Exhibit "A" attached hereto (hereinafter the "Subject Property"), has petitioned through its Authorized Agent, Kami Corbett, Esq., for a Comprehensive Plan Amendment; and

Whereas, the amendment set forth in CPA-26-01 (Planning Commission - TT/CPA-26-01) is considered a small-scale map amendment which does not require a Florida Commerce (formerly "Florida Department of Economic Opportunity") review; and

Whereas, no development shall be permitted on the subject property until the applicant or property owner successfully completes the rezoning process to assign an applicable City of Temple Terrace zoning classification to the parcel; and

Whereas, pursuant to Florida Statute Section 163.3184 and the Comprehensive Plan Amendment Procedures Manual, the City Council of the City of Temple Terrace conducted the first reading of this ordinance September 15, 2026, and conducted the second reading and public hearing on October 6, 2026, during which the public was able to submit comments on the proposed map amendment set forth in CPA-26-01 (TT/CPA-26-01).

NOW, THEREFORE, BE IT ORDAINED BY THE MAYOR AND CITY COUNCIL OF THE CITY OF TEMPLE TERRACE, FLORIDA THAT:

Section 1. The petition for a Comprehensive Plan Amendment (CPA-26-01) (TT/CPA-26-01) of the Subject Property located south of Harney Road and east of U.S. Highway 31 (US 301), with Folio number 061363-0100, more particularly described in Exhibit “A”, attached hereto and made a part hereof, changing the future land use map designation from Hillsborough County Community Mixed Use-12 (CMU-12) to Temple Terrace Community Mixed Use-12 (CMU-12) for one parcel of property consisting of approximately 12.29± acres is hereby approved.

Section 2. The official future land use map of the City shall be amended accordingly.

Section 3. If any part of this ordinance is declared invalid by a court of competent jurisdiction, such part or parts shall be severable, and the remaining part or parts hereof shall continue to be in full force and effect.

Section 4. All ordinances or parts of Ordinances not specifically in conflict herewith are hereby continued in full force and effect, but all ordinances or parts of ordinances in conflict herewith are hereby repealed.

Section 5. The provisions of this Ordinance may be renumbered or re-lettered to accomplish such intention. The City Clerk is given authority to correct scriveners’ errors, such as incorrect Code cross references, grammatical, typographical, misspellings, and similar errors.

Section 6. This ordinance shall become effective thirty-one (31) days after adoption if no challenge is filed. If this Ordinance is challenged within (30) days after adoption, small scale development amendments do not become effective until the State Land Planning Agency or the Administrative Commission, respectively, issues a final order determining that the adopted small-scale development amendment is in compliance with the law. No development order, development permits, or land uses dependent on the Comprehensive Plan amendments set forth in this Ordinance may be issued or commenced before it has become effective.

Passed and ordained by the City Council of the City of Temple Terrace, Florida, this 6th day of October 2026.

(Corporate Seal)



X

Andrew Ross, Mayor
Chair of the City Council

Attest:

X

Lynda Sader
City Clerk

Approved As To Form & Content:

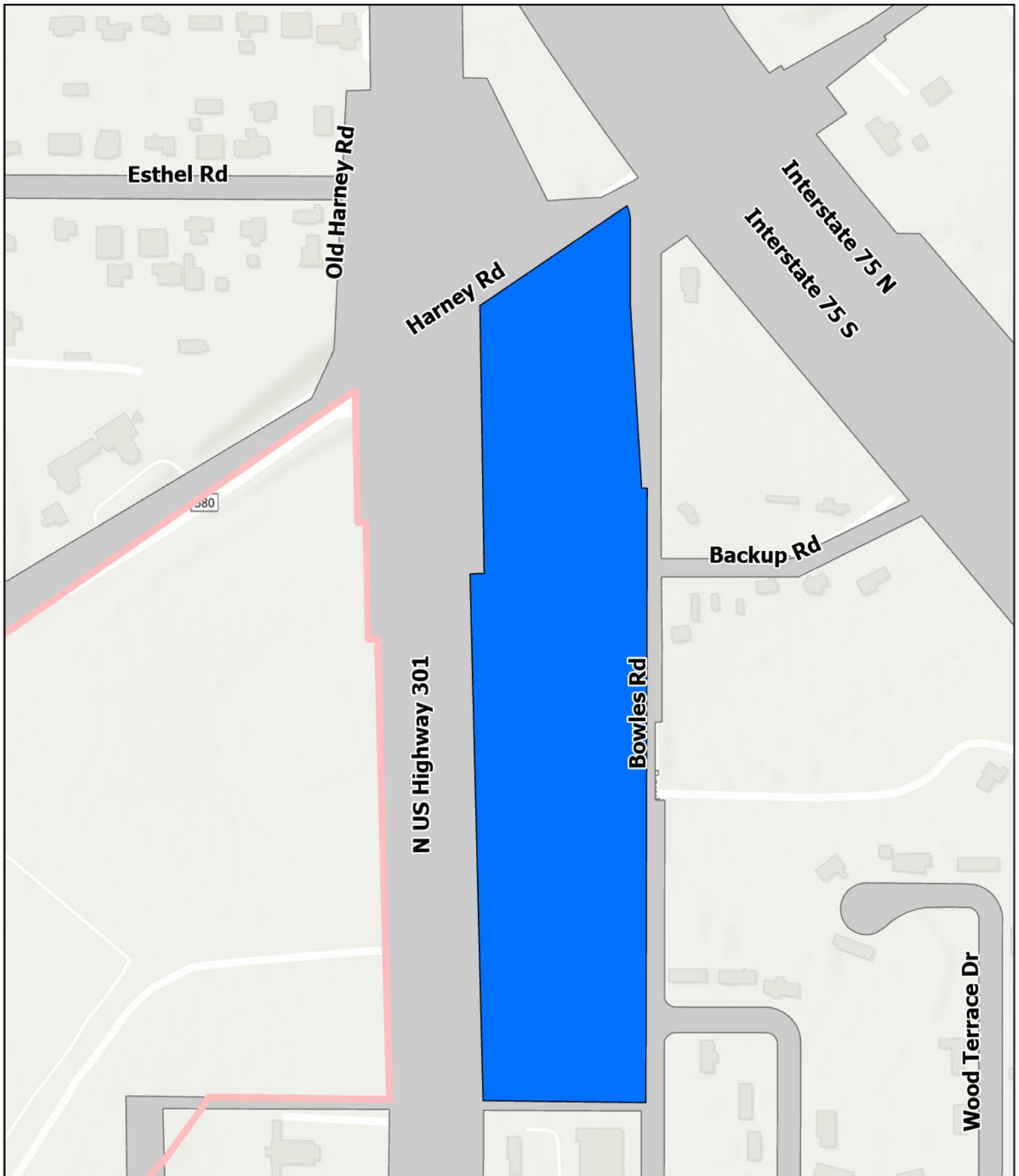
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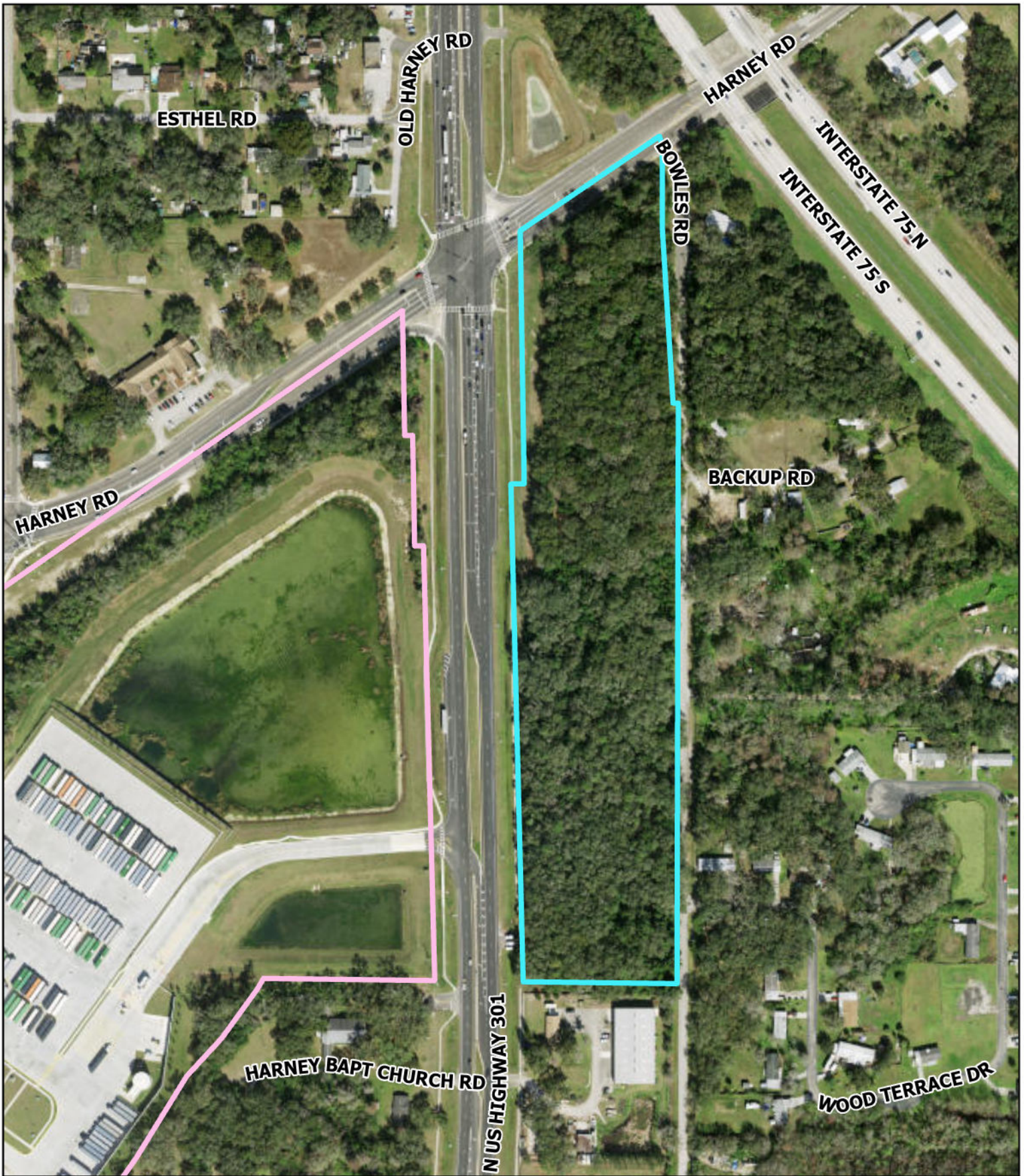
Ernest Mueller
City Attorney

EXHIBIT "A"

DESCRIPTION: A parcel of land lying in Section 19, Township 28 South, Range 20 East, Hillsborough County, Florida, and being more particularly described as follows:

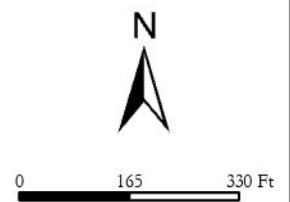
COMMENCE at the Northeast corner of the Southwest 1/4 of the Southwest 1/4 of Section 19, Township 28 South, Range 20 East, run thence along the North line of said Southwest 1/4 of the Southwest 1/4 of Section 19, N.89°22'59"W., a distance of 18.32 feet to the **POINT OF BEGINNING**; thence N.89°22'59"W., a distance of 334.33 feet to the East Right-of-Way; thence departing said North line Run thence along the East Right-of-Way line of North US HIGHWAY 301 the following seven (7) courses: (1) N.01°01'09"W., a distance of 163.10 feet; (2) N.88°57'08"E., a distance of 15.00 feet; (3) N.00°51'23"E., a distance of 60.19 feet; (4) N.01°02'52"W., a distance of 500.00 feet; (5) N.07°28'59"E., a distance of 101.12 feet; (6) N.03°14'29"E., a distance of 401.12 feet; (7) N.00°23'11"E., a distance of 366.96 feet; thence departing said East Right-of-Way N.48°42'52"E., a distance of 210.68 feet; thence N.59°28'40"E., a distance of 38.46 feet; thence N.50°11'42"E., a distance of 107.48 feet to a point on the West Right-of-Way line of BOWLES ROAD thence along said West Right-of-Way the following twenty four (24) Courses: (1) Southerly, 35.74 feet along the arc of a non-tangent curve to the right having a radius of 90.02 feet and a central angle of 22°44'41" (chord bearing S.11°22'38"E., 35.50 feet); (2) S.00°00'17"E., a distance of 91.54 feet; (3) S.03°08'54"E., a distance of 58.71 feet; (4) S.46°23'13"E., a distance of 3.61 feet; (5) S.00°03'56"W., a distance of 20.79 feet; (6) S.02°43'06"E., a distance of 97.69 feet; (7) S.00°00'50"E., a distance of 88.38 feet; (8) S.00°12'19"E., a distance of 94.88 feet; (9) S.03°26'41"E., a distance of 18.00 feet; (10) S.00°15'15"W., a distance of 82.74 feet; (11) S.01°08'08"E., a distance of 96.73 feet; (12) thence S.00°28'05"W., a distance of 94.85 feet; (13) thence S.00°47'08"W., a distance of 93.44 feet; (14) S.00°26'44"E., a distance of 87.88 feet; (15) S.00°08'45"W., a distance of 91.37 feet; (16) S.00°05'41"E., a distance of 94.45 feet; (17) S.00°02'39"E., a distance of 86.53 feet; (18) thence S.00°31'38"E., a distance of 96.03 feet; (19) S.00°14'20"W., a distance of 94.29 feet; (20) S.00°23'02"E., a distance of 97.03 feet; (21) S.00°47'42"W., a distance of 93.63 feet; (22) S.00°09'53"W., a distance of 96.57 feet; (23) S.00°24'53"W., a distance of 91.19 feet; (24) S.00°27'14"E., a distance of 18.37 feet to the **POINT OF BEGINNING**.





General Area Map CPA-26-01
 Folio: 061363-0100
 Applicant: Kami Corbett, Esq. - Hill Ward Henderson

City Parcels Subject Site City Limits





Resolution: TT/CPA 26-01: Southeast Quadrant of Harney Road and US Highway 301

June 8, 2026

City of Temple Terrace Comprehensive Plan Amendment

WHEREAS, the Hillsborough County City-County Planning Commission developed a Comprehensive Plan for the City of Temple Terrace, pursuant to the provisions of Chapter 163, Florida Statutes, which was originally adopted by the Temple Terrace City Council on January 19, 2016, as amended; and

WHEREAS, the Hillsborough County City-County Planning Commission received a privately initiated map amendment to the City of Temple Terrace Comprehensive Plan, and

WHEREAS, the Hillsborough County City-County Planning Commission and Temple Terrace City Council adopted the Procedures Manual for Amendments to the City of Temple Terrace Comprehensive Plan on February 6, 2020; as amended; and

WHEREAS, the Hillsborough County City-County Planning Commission staff reviewed TT/CPA 26-01 that proposes a future land use designation of Temple Terrace Community Mixed Use-12 for the subject parcel on 12.2± acres, designated with folio #61363.0100; and

WHEREAS, the Hillsborough County City-County Planning Commission reviewed the proposed map amendment, considered the existing and future development patterns and community facilities, as well as the adopted goals, objectives, and policies of the City of Temple Terrace Comprehensive Plan, as follows:

LU Policy 1.1.6: *Recognize that its City Form is shaped by the fact that it is a City of Neighborhoods; and that among these are, now or in the future:*

- *its commercial areas on the west side of 56th Street between the future major activity centers at 56th Street and Fowler Avenue and at 56th Street and Fletcher Avenue; and on the north side of Fowler Avenue between the Hillsborough River on the east and Raintree on the west; and its "industrial" areas, mainly comprised at present by Tampa Telecom Park south of Fletcher Avenue and east of the Hillsborough River, but in the future could include such areas southeast of the City along either side of US 301 and as far southeast as Tampa Executive Airport and the Interstates I-75 Interchange, all of which are potential future economic development areas of research and development parks and high-end manufacturing facilities associated with the University of South Florida.*

(Edited to remove unrelated text – for full text see the Imagine 2040: Temple Terrace Comprehensive Plan)

Concurrency

CAP Policy 1.3.1: Consider the location, timing and financial prioritization of new public facility construction in requests for land use plan amendments.

CAP Policy 1.3.3: Encourage compact development, infill development and maximum density development when considering land use plan amendments to make optimal use of existing public facilities.

LU Policy 1.4.7: Continue to pursue its opportunities to grow within the confines of its utility service area, as conditions make it advantageous to do so. Simultaneously, keep its options open and continue to communicate with the County regarding mid- to long-term opportunities to expand further, or at least jointly plan areas, particularly to the southeast of the City, where future economic advantages can enhance the City's strategic competitiveness.

Community Development

LU GOAL 3: To sustain the viability of existing and emerging, major activity centers, commercial corridor, and research corporate park areas and to achieve an integrated land use fabric which will offer a full range of employment, shopping, and leisure opportunities to support the City's residential areas.

Multi-modal Corridors and Major Activity Centers

LU Objective 3.5: The transformation of major multi-modal corridors and major activity centers to include a broader mix of uses, both horizontal and vertical, that provides opportunities for medium density housing while also addressing neighborhood and citywide demand for retail and services.

LU Policy 3.5.1: 56th Street/Busch Boulevard/Bullard Parkway; and 56th Street/Fowler Avenue; and 56th Street/Fletcher Avenue; and US 301/Harney Road/Temple Terrace Highway intersections will be developed as the major office and commercial activity centers of the City. 56th Street; Fowler Avenue; Fletcher Avenue; and Busch Boulevard/Bullard Parkway/Temple Terrace Highway will be developed as the City's multi-modal corridors. The quadrants surrounding the intersection of 56th Street and Busch Boulevard/Bullard Parkway, as defined by the CRA and DMU-35 land use category is the City's traditional and historic downtown, and shall be the most recognizably dominant of the City's major activity centers.

LU Policy 3.5.5: Require that the scale and massing of new development in major activity centers and along major multi-modal corridors provide appropriate transitions in building height and bulk that are sensitive to the physical and visual character of adjoining neighborhoods that have lower development intensities and building heights.

LU Policy 3.5.6: Promote densities, mixes of uses, and transportation improvements that support walking, biking, and use of public transportation.

LU Policy 3.5.7: Accommodate planned levels of population and employment growth along multi-modal corridors and Future Land Use within major activity centers. Depending on the characteristics of each area, establish concentrations of employment and housing at varying densities and with varying mixes of uses

Economic Development Areas

LU Objective 3.6: *I-75/Fletcher Avenue and US 301/Harney Road intersections and surrounding areas will be developed as regional activity centers and recognized as target industry employment centers.*

LU Policy 3.6.1: *Encourage the industries identified and research by the corporate following activities, Tampa-Hillsborough target as Economic Development Corporation, within the I-75/Fletcher and US 301/Harney Road intersection areas:*

- *Biotechnology & Medical Devices*
- *Medicine & Medical Management*
- *Electronic Health Records*
- *Medical Simulation & Training*
- *Cross-Business Functions*
- *Shared Services*
- *Business Analytics*
- *Information Technology*
- *Headquarters Enabling Functions*
- *Financial Services*
- *Middle/Back Office Operations*
- *High-Tech Electronic & Instruments*
- *Defense & Security*
- *Security and Technology*
- *Security/Intelligence Consulting*

Complete Streets

LU Goal 4: *Ensure that land use patterns and development encourage walking, bicycling, and public transportation use, and make these transportation options a safe and convenient choice.*

LU 4.1.2: *Encourage transit-oriented development by encouraging higher density and compact infill development whenever feasible near public transportation facilities.*

LU Policy 4.3.3: *Large scale shopping centers and mixed use developments must provide ample connections to arterial roads and to adjoining properties, where feasible.*

Growth Management

LU GOAL 8: *To manage growth so that the delivery of public facilities and services will occur in a fiscally and environmentally responsible manner, which will support development and redevelopment in the City.*

LU Objective 8.1: *In all actions of the City, urban sprawl shall be discouraged and a compact urban pattern of development, infill, and redevelopment shall be provided for in a manner which will promote the full utilization of existing public infrastructure and allow for the orderly extension and expansion of municipal facilities in a fiscally responsible manner and in accordance with the adopted level of service standards established in the Public Facilities and Capital Improvements Sections of the Plan and for the designated Temple Terrace TCEA and the Temple Terrace Multimodal Transportation District (TT MMTD).*

Annexation

LU Objective 8.6: *Diversify and expand the City's tax base through development of a strategic annexation program focused on eliminating enclaves and other unincorporated areas within the Temple Terrace Utility Service Area.*

LU Policy 8.6.3: *Continue to process voluntary annexations for non-residential and residential properties at the request of property owners.*

LU Policy 8.6.4: *In order to promote orderly urban growth, vacant property within the Utility Service Area shall not be provided city services, including water and sewer service, without annexation or the establishment of an annexation agreement between the City and the property owner.*

Land Development Code

LU Objective 8.5: *All development approvals shall be consistent with the development regulations and timeframe outlined in Chapter 163, Florida Statutes.*

LU Policy 8.5.1: *Development shall not exceed the densities and intensities established within the Comprehensive Plan and shall be consistent with the Plan.*

LU Policy 8.5.3: *Developments will meet or exceed the requirements of all Land Development Code as established and adopted by the City of Temple Terrace, the State of Florida and the federal government unless such requirements have been previously waived by those governmental bodies.*

PSF Policy 1.5.1: *The City shall take into consideration the School Board comments and findings on the availability of adequate school capacity in the evaluation of comprehensive plan amendments and Developments of Regional Impacts as provided for in Florida Statutes.*

WHEREAS, Planning Commission staff determined that TT/CPA 26-01 is consistent with the goals, objectives, and policies of the City of Temple Terrace Comprehensive Plan.

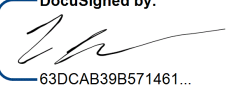
NOW, THEREFORE, BE IT RESOLVED, that the Hillsborough County City-County Planning Commission finds the City of Temple Terrace Comprehensive Plan Amendment 26-01 **CONSISTENT** with the City of Temple Terrace Comprehensive Plan and forwards it to the Temple Terrace City Council for approval.

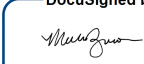
The above resolution for TT/CPA 26-01 was adopted by the Planning Commission on June 8, 2026

By motion of Commissioner Linkous, Ph.D., AICP
Seconded by Commissioner Kugler

Commissioner Bowden	Absent
Commissioner Cardenas	Aye
Commissioner Cona	Absent
Commissioner Jemison	Absent
Commissioner Joseph, Ph.D., Chair	Aye

Commissioner Kugler	Aye
Commissioner Linkous, Ph.D., AICP	Aye
Commissioner Louk, Vice Chair	Absent
Commissioner Sieben, Member-at-Large	Aye
Commissioner Sienk	Aye

DocuSigned by:

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Commissioner Joseph, Ph.D., Chair

DocuSigned by:

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Melissa Zornitta, FAICP
Executive Director

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Item Cover Page

City Council Item Report

Date: September 15, 2026

From: Judy Nicklin, Executive Assistant

Item Type: Resolution

Subject: Resolution Accepting the City of Temple Terrace Water Treatment Facilities Master Plan Prepared by CHA Consulting, Inc.

Presenter: Jason Warrenfeltz, Public Works Director

Recommendation:

Staff recommends City Council adopt a resolution accepting the City of Temple Terrace Water Treatment Facilities Master Plan prepared by CHA Consulting, Inc.

Discussion:

The purpose of the Master Plan is to provide the City with a twenty-year roadmap for the renewal and modernization of its two water treatment plants, guide the allocation of capital improvement funds, and ensure the continued provision of high-quality water while preparing for future regulatory requirements and water demands. The Master Plan evaluates the City's long-term water treatment needs and recommends improvements including renewal of the Whiteway Water Treatment Plant, incorporation of nanofiltration to address hardness and PFAS reduction, electrical and general plant upgrades, and continued operation and evaluation of the Sunningdale Water Treatment Plant. Upon acceptance by the City Council, the Master Plan will be submitted to the Department of Health and will provide the framework for advancing these improvements, including future permitting, regulatory coordination, design, and implementation of the recommended water facilities improvement projects.

Resolution/Ordinance Information:

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF TEMPLE TERRACE, FLORIDA, ACCEPTING THE CITY OF TEMPLE TERRACE WATER TREATMENT FACILITIES MASTER PLAN PREPARED BY CHA CONSULTING, INC.; RECOGNIZING THE MASTER PLAN AS A LONG-RANGE PLANNING AND CAPITAL IMPROVEMENT DOCUMENT FOR THE CITY'S POTABLE WATER TREATMENT FACILITIES; PROVIDING FOR COORDINATION WITH APPLICABLE REGULATORY AGENCIES; PROVIDING THAT ACCEPTANCE OF THE MASTER PLAN DOES NOT CONSTITUTE REGULATORY APPROVAL OR AUTHORIZATION TO CONSTRUCT ANY INDIVIDUAL PROJECT; PROVIDING AN EFFECTIVE DATE.

Appropriation Code:

Requirements:

Resolution

Cost:

Attachments:

1. Resolution - CHA Water Treatment Facilities Master Plan v4
2. WTPsMasterPlanFinal-05.12.2026

RESOLUTION

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF TEMPLE TERRACE, FLORIDA, ACCEPTING THE CITY OF TEMPLE TERRACE WATER TREATMENT FACILITIES MASTER PLAN PREPARED BY CHA CONSULTING, INC.; RECOGNIZING THE MASTER PLAN AS A LONG-RANGE PLANNING AND CAPITAL IMPROVEMENT DOCUMENT FOR THE CITY'S POTABLE WATER TREATMENT FACILITIES; PROVIDING FOR COORDINATION WITH APPLICABLE REGULATORY AGENCIES; PROVIDING THAT ACCEPTANCE OF THE MASTER PLAN DOES NOT CONSTITUTE REGULATORY APPROVAL OR AUTHORIZATION TO CONSTRUCT ANY INDIVIDUAL PROJECT; PROVIDING AN EFFECTIVE DATE.

Whereas, the City of Temple Terrace, Florida (the "City"), through its Utilities Water Division, owns and operates the Sunningdale and Whiteway Water Treatment Plants, which provide potable water service to the City's residents and customers; and

Whereas, the City engaged CHA Consulting, Inc. ("CHA") to prepare a Water Treatment Facilities Master Plan for the City's potable water treatment facilities; and

Whereas, the Water Treatment Facilities Master Plan, dated May 12, 2026 (the "Master Plan"), evaluates the City's Sunningdale and Whiteway Water Treatment Plants and associated water supply facilities and establishes a twenty-year planning framework for facility renewal, treatment-process improvements, capacity improvements, capital improvements, funding, and implementation through the year 2045; and

Whereas, the stated purpose of the Master Plan is to provide the City with a twenty-year plan addressing upgrade needs for the City's two water treatment plants and to serve as a guide for allocating capital improvement plan funds while maintaining water quality and addressing future regulations and water demands; and

Whereas, the Master Plan evaluates existing treatment processes, projected future conditions, treatment capacity, water-quality goals, regulatory compliance, treatment needs, alternatives, facility condition, asset risk, projected renewal needs, and capital costs; and

Whereas, the Master Plan identifies the need for continued renewal and modernization of the City's water treatment facilities and recommends, among other improvements, renewal of the Whiteway Water Treatment Plant, incorporation of nanofiltration treatment for hardness and PFAS reduction, electrical and general plant renewal, and continued operation and evaluation of the Sunningdale Water Treatment Plant; and

Whereas, the Master Plan identifies a recommended capital improvement program and implementation sequence for water treatment facility improvements, including immediate needs and projects extending through the 2045 planning horizon; and

Whereas, the Master Plan further recommends that the City coordinate with applicable regulatory agencies, including the Florida Department of Environmental Protection ("FDEP"), the Florida Department of Health ("FDOH"), and the Southwest Florida Water Management District ("SWFWMD"), concerning water supply, treatment, permitting, and related regulatory matters; and

Whereas, Section 403.861(7), Florida Statutes, authorizes the Department of Environmental Protection to issue permits for constructing, altering, extending, or operating public water systems and provides for review of preliminary design reports, plans and specifications, permit applications, and other information required by Department rule; and

Whereas, Section 403.861(9), Florida Statutes, authorizes the Department of Environmental Protection to adopt rules necessary to implement the Florida Safe Drinking Water Act and the public water system regulatory program; and

Whereas, Section 403.861(10), Florida Statutes, provides for Department review and approval of record drawings prior to operation of applicable new, altered, or extended public water system facilities; and

Whereas, Section 403.862(1)(c), Florida Statutes, provides that designated and approved county health departments with qualified sanitary engineering staffs and available legal resources shall review, evaluate, and approve or disapprove applications for construction, modification, or expansion of public water systems to determine compliance with applicable federal, state, and local requirements; and

Whereas, Rule 62-555.320, Florida Administrative Code ("F.A.C."), provides that public water systems shall be designed and constructed to provide sufficient drinking water of a quality meeting applicable standards and requires new or altered public water system components to be designed in accordance with sound engineering practice; and

Whereas, Rule 62-555.348, F.A.C., establishes requirements concerning the timely planning, design, permitting, and construction of necessary public water system source, treatment, and storage facilities and establishes requirements for source, treatment, and storage capacity analysis for qualifying community water systems; and

Whereas, Rule 62-555.520, F.A.C., generally requires a construction permit for construction or alteration of a public water system component and establishes information and engineering documentation requirements applicable to projects involving new or altered drinking water treatment facilities; and

Whereas, Rule 62-555.530, F.A.C., provides for regulatory review of specific public water system construction permit applications, including preliminary design reports, drawings, specifications, and design data, for compliance with applicable drinking water, design, construction, and permitting requirements; and

Whereas, Rule 62-555.345, F.A.C., establishes requirements concerning certification of construction completion and regulatory clearance for applicable public water system components constructed or altered pursuant to a Department permit; and

Whereas, the Master Plan is a planning-level document intended to guide the City's long-range capital planning and does not itself constitute a construction permit, preliminary design approval, regulatory permit, or authorization to construct any individual water treatment facility improvement; and

Whereas, acceptance of the Master Plan by the City Council will provide a formal municipal planning framework for evaluating, prioritizing, funding, designing, permitting, and implementing future improvements to the City's potable water treatment facilities; and

Whereas, the City Council finds that acceptance of the Master Plan is in the best interests of the health, safety, and welfare of the residents and customers of the City of Temple Terrace.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF TEMPLE TERRACE, FLORIDA:

Section 1. The foregoing Whereas clauses are hereby incorporated into this resolution and made a part hereof.

Section 2. The City of Temple Terrace Water Treatment Facilities Master Plan prepared by CHA Consulting, Inc. is hereby accepted.

Section 3. This Resolution shall become effective immediately upon adoption.

PASSED AND ADOPTED by the City Council of the City of Temple Terrace, Florida, this 15th day of September, 2026.



X

Andrew Ross, Mayor
Chair of the City Council

X

Lynda Sader
City Clerk



WATER TREATMENT FACILITIES MASTER PLAN

The City of Temple Terrace

May 12, 2026



PREPARED FOR:

Jason Warrenfeltz
Public Works Director
The City of Temple Terrace
11250 N 56th St
Temple Terrace, FL 33617

FOR MORE INFORMATION CONTACT:

Ed Talton, PE
Client Service Director
Cell: (407) 789-1892
ETalton@chasolutions.com

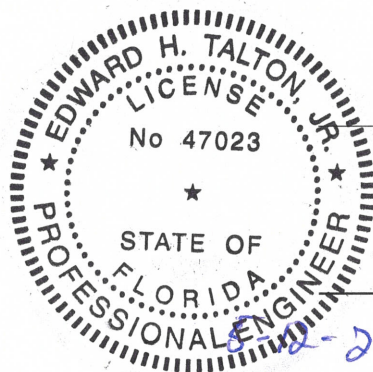


CERTIFICATION

I, the undersigned, certify that I am currently a State of Florida registered professional engineer and that this Water Treatment Facilities Master Plan Report was prepared in accordance with all applicable statutes and regulations.

I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class “A” misdemeanor, pursuant to Section 210.45 of the Penal Law. I, the undersigned, of CHA Consulting, Inc. have been designated by the Site owner to sign this certification for the Site.

For CHA Consulting, Inc.:



Edward H. Talton, Jr., P.E.

Printed Name of Certifying Engineer

Edward H. Talton, Jr.

Signature of Certifying Engineer

Senior Engineer

Title

5/12/2026

Date of Certification

License Number: 47023

FL Professional Engineer Registration Number

Florida

Registration State



HISTORY AND BACKGROUND

HISTORY

CHA is engineering support hired by the City in 2024 to complete a water treatment master plan to provide the Utility with a framework for needed capital and process improvements.

2025 PFAS SAMPLING

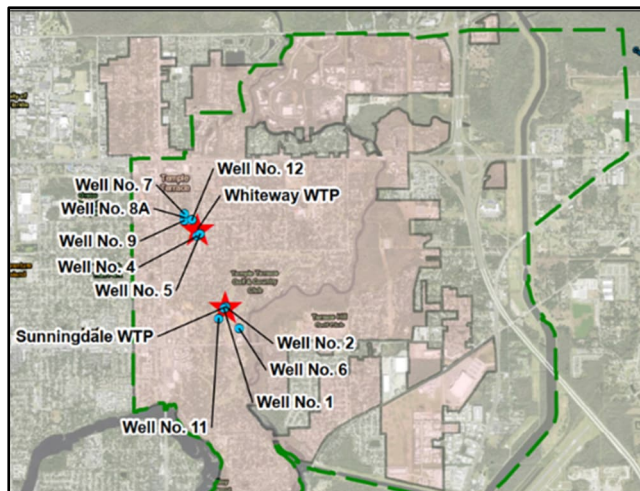
In response to the Environmental Protection Agencies (EPA) Unregulated Contaminant Monitoring Requirement-5 (UCMR5) and the upcoming 2031 EPA compliance deadline proposed for the regulation of PFAS, the Utility commissioned CHA to perform an additional, concurrent analysis to determine most appropriate mitigation method for PFAS.

TREATMENT MASTER PLAN

CHA conducted an examination of WTP construction as-builts, interviewed City staff, conducted site inspections, ran PILOT treatment systems both at Whiteway WTP and at UCF, researched comparable plant size production and filtration technologies, produced cost estimates and investigated alternative funding options as part of its work. The findings of these activities inform this report.

PLANNING RESULTS

Based on the findings, CHA developed a 20-year approach for Temple Terrace Utilities to phase in the various elements of their proposed work program in a manner that takes into account the WTP's physical plant capacity and that of City staff and is conscious of spreading the costs over time.



BACKGROUND

Temple Terrace Utilities Water Division maintains and operates the City's two potable Water Treatment Plants (WTPs) – Sunningdale and Whiteway – that provide reliable, high-quality potable water service to over 30,000 Temple Terrace residents.

SUPPLY

Established in the 1920's, the City's potable water system has grown and evolved to include productive Upper Floridan aquifer well fields supplying the City's two WTPs, two remote storage and repump stations and extensive distribution system. The City draws water from the Upper Floridan Aquifer through 10 production wells; this master plan's focus is the two WTPs and their supply.



MASTER PLANNING PROCESS

WATER SUPPLY & TREATMENT

The City's Whiteway and Sunningdale Water Treatment Plants (WTPs) and supply wells were evaluated for needed improvements to continue to reliably deliver potable water to City customers for now and the future.

IDENTIFY CITY QUALITY GOALS

In addition to meeting current State and Federal drinking water regulations:

- Reduce calcium hardness to <150 mg/l
- Reduce PFAS to below EPA limits
- Enable removal of future contaminants

DEFINE/PRIORITIZE WTP NEEDS

Onsite inspections, full WTP facility renewal and treatment process evaluations were performed in concert with City staff to identify and prioritize major needs:

- Increase WTP reliability
- Renew aged WTP components
- Reduce calcium hardness
- Meet EPA future PFAS compliance date

EVALUATE OPTIONS

1. Non-treatment options
2. Upgrade existing-no PFAS removal
3. Add Adsorptive PFAS removal
4. Add Nanofiltration + Concentrate
5. Convert Sunningdale to Booster Pump

SELECT THE BEST OPTIONS

Compare alternatives on a capital, operating and life cycle (\$/1,000 gallon) cost basis.



PRIORITIZE AND BUDGET

CHA assisted the City to develop a Water Treatment Facilities Master Plan (Master Plan) to evaluate the physical condition and treatment process performance of both WTPs to renew and improve, budgeting future capital needs.

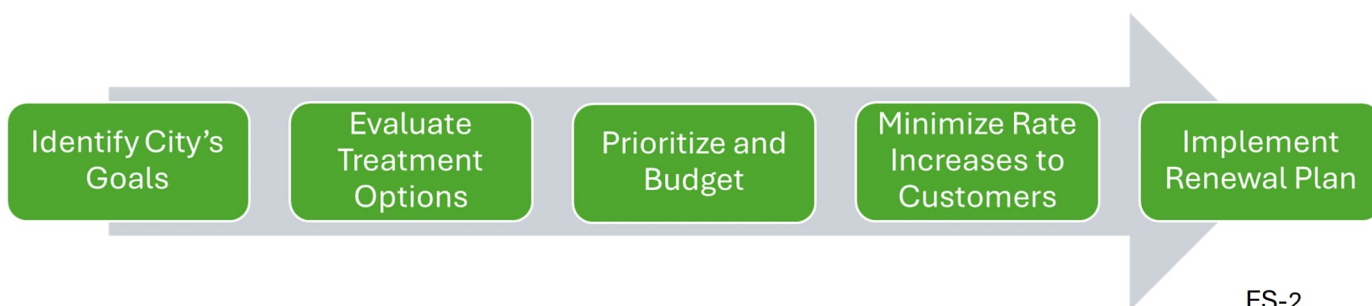
FUNDING TO MINIMIZE RATES

Source water testing per EPA's Unregulated Contaminant Monitoring Rule 5 revealed the presence of per- and poly-fluoroalkyl (PFAS) species. The National Primary Drinking Water Regulation PFAS compliance date is currently set for April 2029, but the EPA has proposed an extension to 2031.

DEVELOP RENEWAL PLAN

Address critical WTP renewal needs and meet PFAS regulations by year 2031:

1. Coordinate with Local Regulators
2. Funding plan actions
3. Organize into 4 Construction Projects
4. Refine PFAS Disposal/Destruct plan
5. Prepare site for new NF treatment
6. Design, pre-purchase, bid, construct



WATER TREATMENT PLANT PHYSICAL CONDITION

WTP RELIABILITY AND RISK

WTP components (pumps, tanks, mixers, blowers, injection systems, and controls) experience predictable deterioration, occasional sudden failures and gradual obsolescence. WTPs need high-reliability and effective serviceability requiring:

- Condition-ratings and service status
- Risk of failure and renewal costs
- Deterioration forecast curves
- Proactive renewal budgeting

FACING END OF SERVICE LIFE

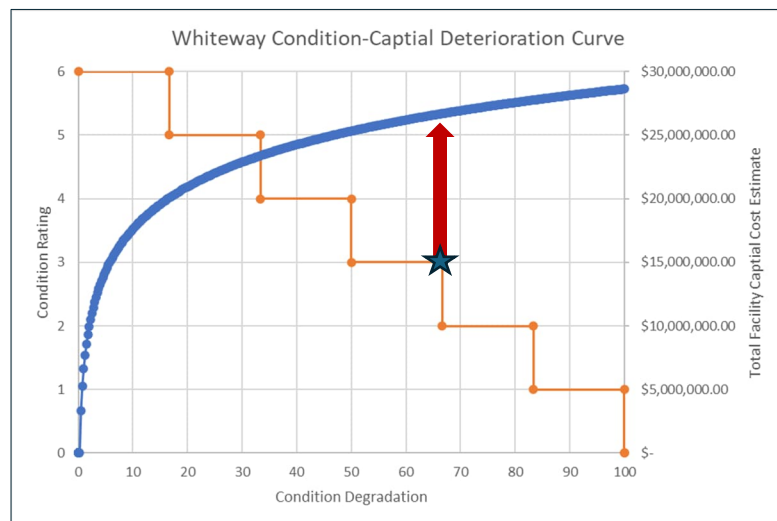
Both the City's WTPs are nearing the end of service life, having supplied the City with clean water for 40+ years. Whiteway's softening process cannot meet hardness goals with reliability issues. Both WTPs currently have higher-than-acceptable risks and need extensive rehabilitation.

SUNNINGDALE CONVERSION

While adding NF treatment to Sunningdale was considered, the site area is small with significant logistical, capital and operating cost advantages to consolidating treatment at Whiteway. To consolidate treatment, it is recommended to convert Sunningdale WTP to booster pumping and increasing Whiteway WTP from 5 to 6 MGD capacity. Conversion includes conversion/demo, well transfer and distribution capacity increase.

WHITEWAY RENEWAL COST

The City is facing at \$30M+ to just renew its WTPs without considering PFAS removal. Major cost items include replacement of process equipment (lime softening, chlorination) and refurbishment of electrical, plant controls, structural and demolition.



PRIORITIZING RENEWAL

Water treatment plant component physical condition was evaluated and ranked to prioritize replacement/renewal:

1. Electric power feed/looping/grounding
2. Motor control centers
3. Mechanical equipment
4. Replace softeners with new process



WTP RENEWAL BUDGETING

This master plan identified plant component by-component needs prioritized by risk of and consequence of failure. The resulting year-by-year renewal costs were estimated to help facilitate City budget upgrades.

MEETING PFAS AND HARDNESS GOALS

PFAS REMOVAL NEEDED

City supply well testing per EPA's National Primary Drinking Water Regulations revealed the presence of per- and poly-fluoroalkyl (PFAS) species. PFAS is nearly ubiquitous globally and nationally and contaminated the City's supply wells, due to extensive use as fire retardant and water repellant in firefighting, carpets, clothing, cookware, wearables, etc.

PFAS TREATMENT TESTING

Bench and pilot scale testing was performed to assess treatment systems to comply with PFAS limits. Granular activated carbon (GAC) and ion exchange (IX) media testing indicated inefficient PFAS removal due to high media changeouts and operating costs.

ALTERNATIVES EVALUATED

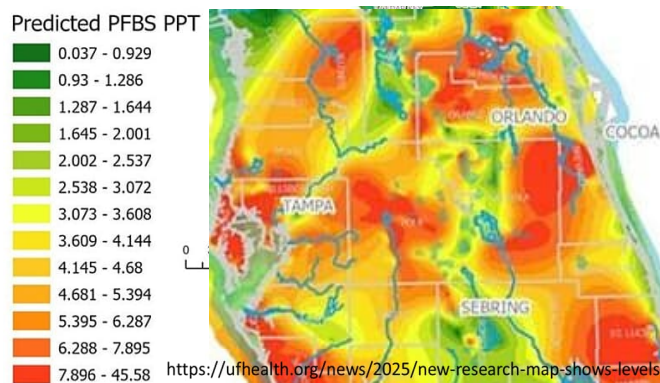
- Baseline - No PFAS Removal
- Non-treatment – Bulk purchase from neighboring utilities or new City wells
- Full treatment – softening + PFAS
- PFAS Disposal/Destruction

ALTERNATIVES CONCLUSIONS

- ✓ \$36.5M capital to renew WTPs, no PFAS removal
- ✓ NF softening cost is equivalent to Lime softening replacement cost and provides PFAS removal
- ✓ NF selected for softening and PFAS removal capabilities

PFAS PROCESS DECISION

Bench scale testing for nanofiltration (NF), technology that treats hardness and PFAS, showed promising results meeting the City's treatment goals. NF also removed smaller chain PFAS present that GAC/IX could not.



Water Quality Parameter	MCL	MCLG	Whiteway	Sunningdale
			May 2025	May 2025
PFOA	4	0	8.7	7.7
PFOS	4	0	19	16
PFHxS	10	10	8.2	8.6
PFNA	10	10	< 3.7	< 4.1
HFPO-DA (Gen-X)	10	10	< 4.6	< 5.2
PFBS	-	-	12.2	9.2
Hazard Index	1	1	0.92	0.96

All units in ppt, except Hazard Index (calculated, unitless).

HARDNESS PROCESS DECISION

NF has the capability to remove nearly all PFAS and is highly effective softening Florida groundwater. NF is marginally more costly than lime softening but can remove PFAS and future unregulated contaminants.

NON-TREATMENT OPTIONS

New City wells and supply from adjacent utilities were considered. Interconnection with neighboring systems (City of Tampa and Hillsborough County) was evaluated at a planning level. Interconnect options present significant constraints, including limited available capacity from regional suppliers, complex interagency agreements, and substantial infrastructure costs in the \$30M or more range. With the highest life cycle costs, risks and complexity, interconnection is not considered practical or cost-effective compared to improvements within the City's existing system.

WATER TREATMENT RENEWAL PLAN

RECOMMENDED PLAN

- Immediate Electrical Renewal
- **Renew and Add Nanofiltration to Whiteway WTP for 6 MGD**
- Convert Sunningdale to booster
- **Pursue Funding initiatives**

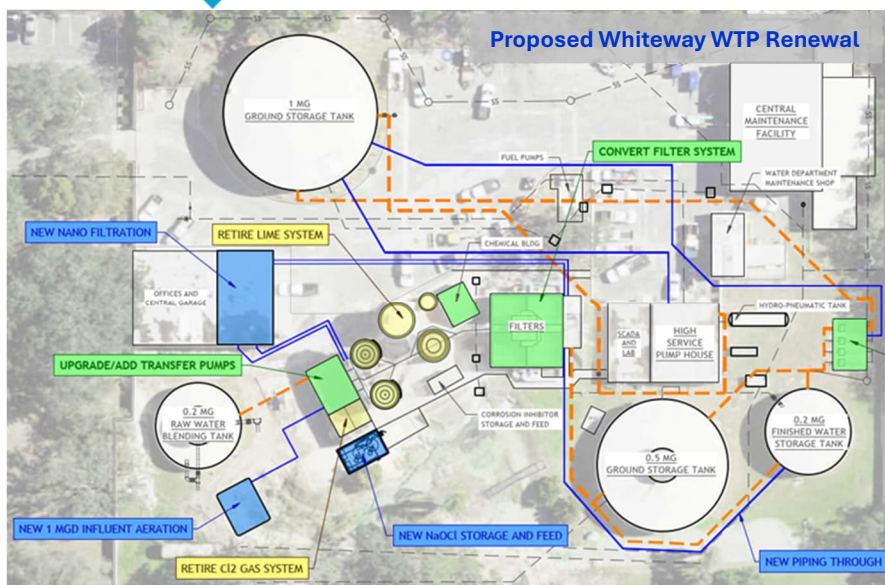
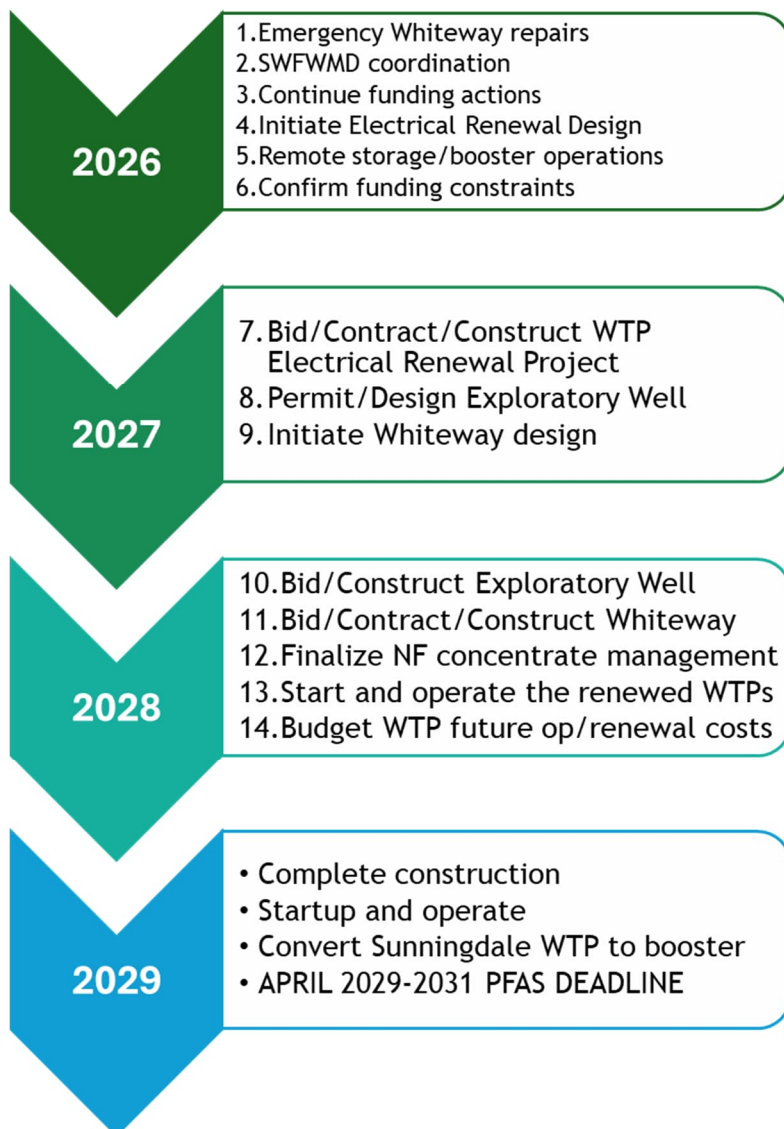
PROJECTS TO COMPLETE

- A. Emergency – Recarb bypass, remote tank operations
- B. Exploratory Well – Less PFAS
- C. Electrical R&R – Renew electrical, SCADA, NF-ready
- D. General Plant – Renew facilities, add NF and concentrate disposal



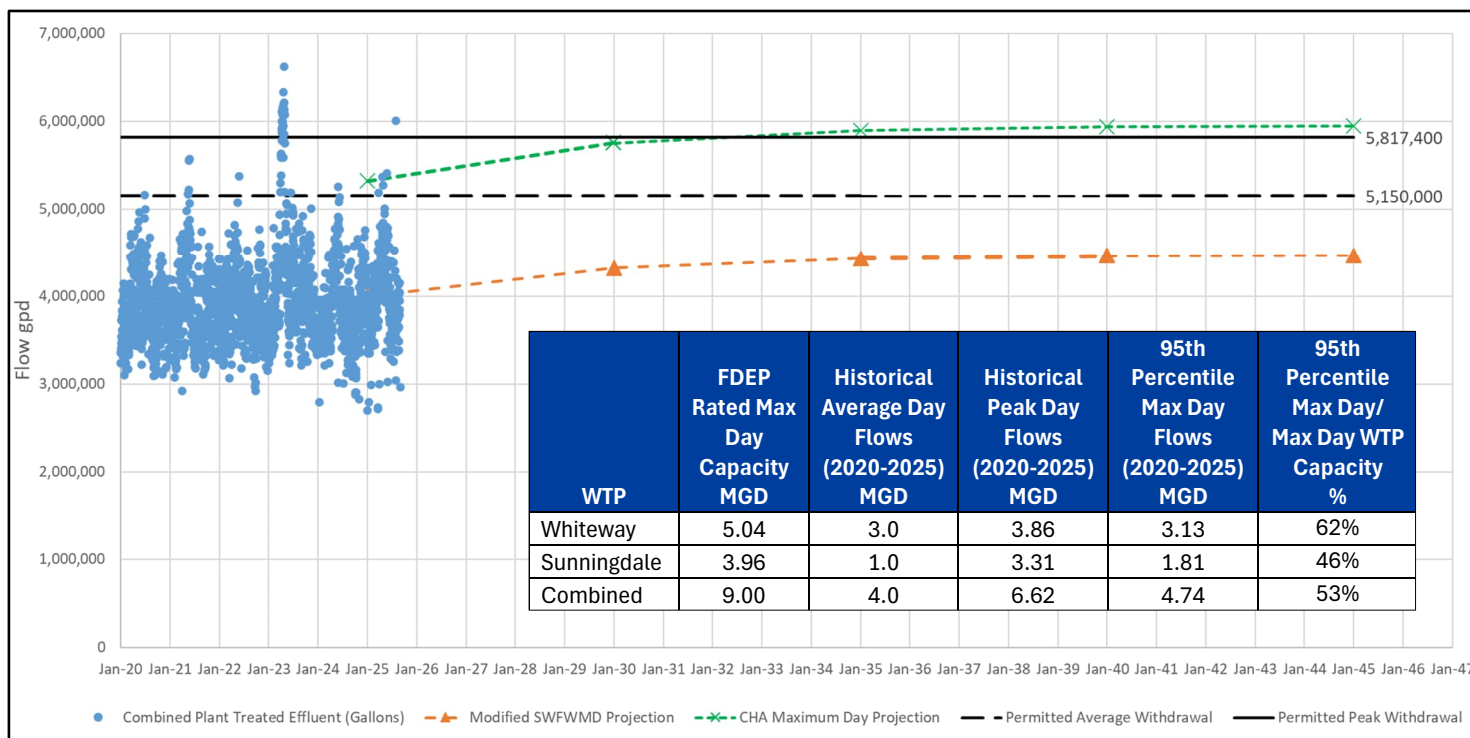
NF CONCENTRATE STREAM

Nanofiltration results in “concentrated” flow to account for 90% raw to product water conversion (recovery). NF concentrate can be classified as hazardous, especially with PFAS. The best practice is to further concentrate the PFAS by various methods and ultimately destroy, landfill or deep well inject. Destruction is preferred; the technology is evolving with deep well as this plan’s base option.



CAPACITY AND COSTS

NEEDED WTP CAPACITY



WATER USE PERMIT INCREASE

Future Condition	WTP ADF MGD	ADF WUP Surplus/Deficit MGD	Peak Month Flow MGD	Peak Month WUP Deficit MGD
SWFWMD Permitted Withdrawal	5.15	--	5.817	--
Projected Flows (2029, PFAS Compliance Deadline)	4.26	+ 0.89	5.66	+ 0.155
Flows Required for Membrane Treatment at 85% recovery (2029)	5.01	+ 0.14	6.66	- 0.84
Projected Flows (2045)	4.47	+ 0.68	5.95	- 0.133
Flows Required for Membrane Treatment at 85% recovery (2045)	5.26	- 0.11	6.99	- 1.173

CAPITAL COST ESTIMATE (2025\$)

Project	Whiteway	Sunningdale	Total
Emergency	\$300,000	--	\$300,000
Exploratory Well	\$7,152,500	--	\$7,152,500
Electrical R&R	\$2,300,000	\$1,621,773	\$3,921,773
General WTP	\$56,868,624	\$4,191,013	\$61,059,637
WTP R&R	\$6,668,624	\$4,191,013	\$10,859,637
NF Softening+PFAS Removal	\$23,400,000	--	\$23,400,000
Concentrate Management	\$26,800,000	--	\$26,800,000
Total	\$66,621,124	\$5,812,786	\$72,433,910



Project	2026-2027	2027-2028	2028-2029	2029-2030	2030-2031	5-Year Total
Project A-Emergency Repairs	\$300,000	\$0	\$0	\$0	\$0	\$300,000
Project B-Exploratory Well	\$0	\$852,500	\$800,000	\$5,500,000	\$0	\$7,152,500
Project C-Electrical WTP Upgrades	\$3,819,473	\$68,200	\$34,100	\$0	\$0	\$3,921,773
Project D-Whiteway NF+Deep Well	\$3,951,899	\$12,021,049	\$20,015,232	\$21,226,449	\$3,845,009	\$61,059,637
Totals	\$8,071,371	\$12,941,749	\$20,849,332	\$26,726,449	\$3,845,009	\$72,433,910

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Appendix B	PFAS Report and Pilot Attachment (Pending)
Appendix C	Funding Strategy
Appendix D	Electrical Asset Inventory

LIST OF ACRONYMS & ABBREVIATIONS

AACE	Association for the Advancement of Cost Engineering
AACEI	Association for the Advancement of Cost Engineering, International
ACS	American Chemical Society
ADD	Average Day Demand
ADEQ	Arizona Department of Environmental Quality
AER	Anion Exchange Resins
AFFF	Aqueous Film Forming Foam
ANSI	American National Standards Institute
AOP	Advance Oxidation Processes
ASTM	American Society for Testing and Materials
AWWA	American Water Works Association
BAT	Best Available Technology
BGS	Below the Ground Surface
BLDG	Building
CAA	Clean Air Act
CaCO ₃	Calcium Carbonate
CCL	Contaminant Candidate List
CCL3	Third Contaminant Candidate List
CCL4	Fourth Contaminant Candidate List
CCPP	Calcium Carbonate Precipitation Potential
CCRO	Closed Circuit Reverse Osmosis
CFU	Colony Forming Unit
CIP	Capital Improvement Plan
CL ₂	Chlorine
CSMR	Chloride to Sulfate Mass Ratio
CY	Calendar Year
DBP	Disinfection By-Product
DBPR	Disinfection By-Product Rule
DOC	dissolved organic carbon
DoD	Department of Defense
DOH	Department of Health
EA	Each
EBCT	Empty Bed Contact Time
EPA	Environmental Protection Agency
EPDS	Entry Point to the Distribution System
ERV	Expected Replacement Value
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FDOH	Florida Department of Health
FL	Florida

FRRO	Flow Reversal Reverse Osmosis
FY	Fiscal Year
GAC	Granular Activated Carbon
GIS	Geographic Information System
GPM	Gallons Per Minute
GST	Ground Storage Tank
GWR	Ground Water Rule
H ₂ S	Hydrogen Sulfide
HAA	Halo-Acetic Acid
HASP	Health and Safety Plan
HFPO-DA	Hexafluoropropylene dimer acid
HI	Hazard Index
HP	Horsepower
HPC	Heterotrophic Plate Count
IDSE	Initial Distribution System Evaluation
IN	Inch
IX	Ion Exchange
LCR	Lead and Copper Rule
LRAAs	Locational Running Annual Averages
LSI	Langelier Saturation Index
MCL	Maximum Contaminant Limit
MCLG	Maximum Contaminant Level Goal
MDD	Maximum Day Demand
MDL	Method Detection Limit
MG	Million Gallon
MGD	Million Gallons per Day
MOR	Monthly Operating Report
MRDL	Maximum Residual Disinfectant Level
MWCO	Molecular Weight Cut Off
NaCl	Sodium Chloride
NaOCl	Sodium Hypochlorite
NDAA	National Defense Authorization Act
NDMA	N-nitrosodimethylamine
NELAC	National Environmental Laboratory Accreditation Conference
NELAP	National Environmental Laboratory Accreditation Program
NF	Nanofiltration
NMR	Nuclear Magnetic Resonance
NPDWR	National Primary Drinking Water Regulations
NSDWR	National Secondary Drinking Water Regulations
NSF	National Science Foundation
NTU	Nephelometric Turbidity Unit
OPCC	Opinion of Probable Construction Cost
PAC	Powder Activated Carbon

PACI	Polyaluminum Chloride
PCC	Probable Construction Cost
PFAS	Per- and Poly- Fluoro Alkyl substances
PFBA	Perfluorobutanoic Acid
PFBS	Perfluorobutanesulfonic acid
PFHxS	Perfluorohexanesulfonic acid
PFNA	Perfluorononanoic acid
PFOA	Perfluorooctanoic acid
PFOS	Perfluorooctanesulfonic acid
PMCLs	Primary MCLs
PQL	Practical Quantitation Limit
PSI	Pounds per Square Inch
PVC	Polyvinyl Chloride
PWS	Public Water System
QA	Quality Assurance
QC	Quality Control
RAA	Running Annual Average
RCRA	Resource Conservation and Recovery Act
RO	Reverse Osmosis
RPM	Revolutions per Minute
RSSCT	Rapid Small-Scale Column Testing
RTCR	Revised Total Coliform Rule
RWSP	Regional Water Supply Plan
SAC	Strong-Acid Cation
SBA	Strong-Base Anion
SCADA	Supervisory Control and Data Acquisition
SDI	Silt Density Index
SDWA	Safe Drinking Water Act
SMCL	Secondary Minimum Contaminant Level
SRBs	Sulfate Reducing Bacteria
SUVA	Specific Ultraviolet Absorbance
SWFWMD	Southwest Florida Water Management District
T.O.N.	Threshold Odor Number
TDS	Total Dissolved Solids
THMs	Trihalomethanes
TOC	Total Organic Carbon
TSDF	Treatment, Storage, and Disposal Facility
TSS	Total Suspended Solids
TTHM	Total Trihalomethanes
TYP	Typical
U.S.	United States
UCMR	Unregulated Contaminant Monitoring Rule
UCMR5	Unregulated Contaminant Monitoring Rule

UFA	Upper Floridan Aquifer
UV	Ultraviolet
UV254	Ultraviolet - 254nm
VFD	Variable Frequency Drives
VOC	Volatile Organic Carbon
WAC	Weak-Acid Cation
WBA	Weak-Base Anion
WQP	Water Quality Parameter
WTF	Water Treatment Facility
WTPs	Water Treatment Plants
WUP	Water Use Permit

1.0 INTRODUCTION

1.1 Project Background

Temple Terrace Utilities Water Division maintains and operates the City's two (2) potable Water Treatment Plants (WTPs) – Sunningdale and Whiteway – that provide reliable, high-quality potable water service to over 30,000 residents living in the Temple Terrace service area. Established in the 1920's, the City's potable water system has grown and evolved to include productive Upper Floridan aquifer well fields supplying the City's two WTPs, two remote storage and repump stations and extensive distribution system. The City draws water from the Upper Floridan Aquifer through 10 production wells ranging from 155 feet to 505 feet in depth, under SWFWMD's Water Use Permit #450.011. This master plan is focused on the two WTPs and their supply. **Figure 1-1** shows the City's topographic map; **Figure 1-2** depicts the WTPs and well fields.

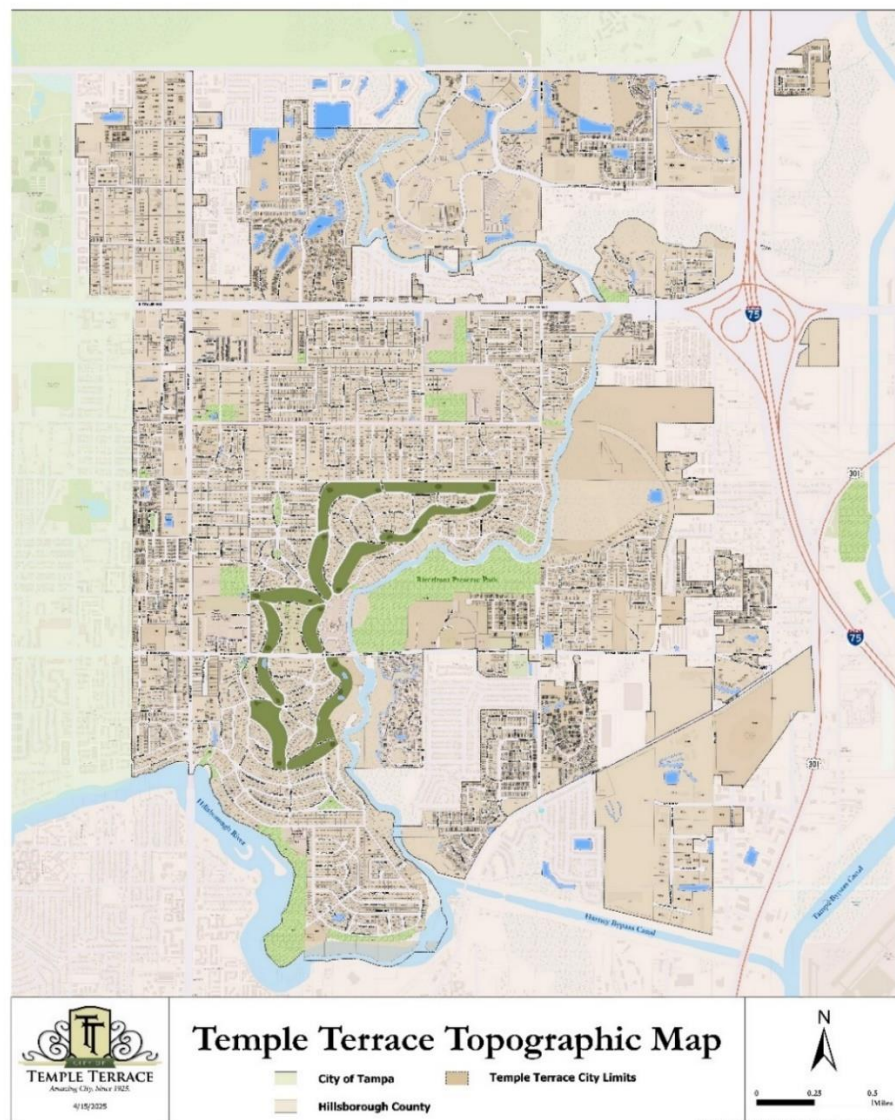


Figure 1-1. Map of Temple Terrace

Source: City of Temple Terrace GIS

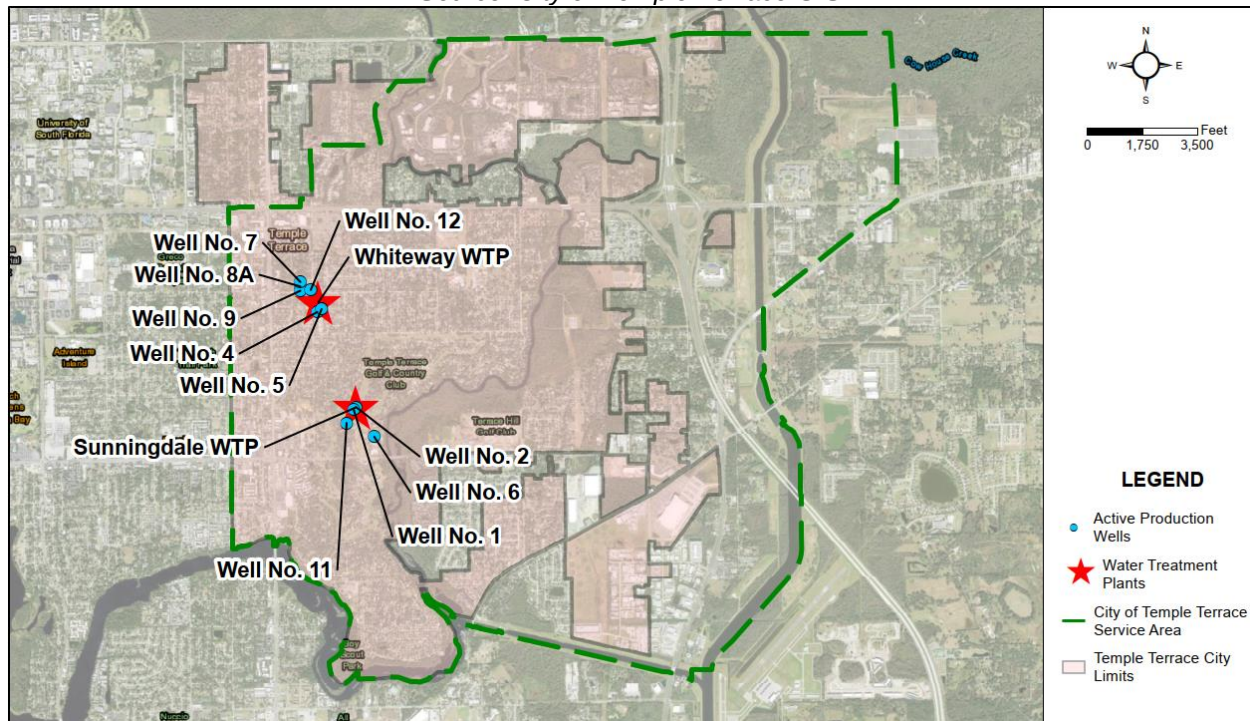


Figure 1-2. Temple Terrace Wellfields

The Whiteway WTP, located in north Temple Terrace, is the larger of the two water treatment facilities. Whiteway WTP draws water from six (6) production wells; four wells from Richlyne Wellfield (Wells No. 7, 8A, 9, and 12) located adjacent to the WTP, and two wells located on-site (Wells No. 4 and 5). The site originally was fitted only for water collection and distribution with a storage tank and high-service pumps. In the 1980's the plant was upgraded to add several water treatment facilities and was further upgraded in 1993 to construct a new ground storage tank. Currently, the Whiteway WTP is designed to provide aeration, lime softening, recarbonation, multi-media filtration, free-chlorine disinfection and corrosion-inhibitor addition. Whiteway's fluoridation process was recently retired due to Florida legislation preventing the addition of water quality "additives," such as fluoride, via Senate Bill (SB) 700 passed July 1, 2025. State-certified water treatment plant operators monitor both WTPs 24 hours per day, 365 days per year, via SCADA located in the Whiteway plant's operations building.

The Sunningdale WTP, located in south Temple Terrace, is smaller than Whiteway, and operates during peak flow needs. Sunningdale draws water from four (4) wells; two are at a nearby well field (Wells No. 6 and 11) and two are located on-site (Wells No. 1 and 2). The on-site production wells were previously self-contained wells until the plant was constructed in 1993 to supplement the water distribution system during high demand periods. The plant has capabilities for chlorination, fluoridation, and corrosion-inhibitor addition. Sunningdale's fluoridation process is

still functional but will be retired in conjunction with Whiteway's fluoridation system retirement. The plant can be monitored remotely through SCADA at the Whiteway facility.

1.2 Purpose

The purpose of this Master Plan Update is to provide the City of Temple Terrace (the City) with a 20-year plan addressing upgrade needs, for the City's two water treatment plants (WTPs), that may serve as a guide for allocating capital improvement plan (CIP) funds to maintain a high level of water quality that keeps up with future regulations and water demands. This Master Plan will identify repair/renewal, capital and operational efficiency opportunities to continue meeting and exceeding the City's standard of service. The City has requested CHA Consulting, Inc. (CHA) support the master planning effort, focused on the following specific goals:

- Update the City's delivered potable water quality parameter service-level goals
- Develop a capital improvement plan for the WTPs spanning 20 years to 2045
- Define future requirements for operation and performance of the Sunningdale and Whiteway WTPs based on existing and future drivers
- Perform evaluations of the condition of buildings, building systems, and process facilities at the WTPs and well fields, and recommend a schedule for improvements or replacement
- Evaluate the performance, capacity, and suitability of existing process facilities and systems at the WTPs, and recommend improvements to meet current and future regulatory requirements, demand projections, and permitting needs
- Evaluate and recommend new process systems and facilities at Sunningdale and Whiteway WTPs required to meet current and future needs
- Develop revised site plans for the WTPs to support recommended improvements

The WTP evaluations are divided into two major sections:

- WTP Treatment Process Evaluation
 - o Existing conditions
 - o Future conditions (Demand projections and regulatory changes)
 - o Capacity vs. projected demands
 - o Water quality goals, regulatory compliance and treatment needs
 - o Alternatives life cycle cost evaluation
- WTP Conditions Assessment
 - o Major WTPs asset inventory
 - o Asset condition/risk ranking
 - o Projected R&R needs and costs

1.2.1 WTP Treatment Process Evaluation

The treatment process evaluation involves capacity assessment to meet the 2045 planning horizon and water quality assessment to meet current and future regulations characterizing trends and the performance of each facility. This is done by CHA performing on-site walkthroughs of the WTPs and utilizing City staff's experience and knowledge of the plant to supplement and provide context to what is observed. In addition, sampling and analysis for a broad spectrum of analytes was performed to ensure full compliance with primary drinking water standards.

The observations of the City's treatment performance are then compared to existing and emerging regulations, to determine whether the City meets the treatment goals, and what deficiencies exist in that regard including PFAS regulatory compliance. Using the data collected, several alternative upgrade plans were developed to address current and future treatment needs.

1.2.2 WTP Condition Assessment

The condition assessment involves a visual inspection of each unit process in the WTPs, focusing on the physical condition and remaining lifespan of different components. This is to assess the likelihood of failure, which, combined with the criticality of the component to the overall treatment process, determines the priority of replacement. The condition assessment focuses on four major aspects: Structure and foundation, Process (capacity and condition of process equipment), electrical (compliance, capacity, condition), and Instrumentation and control.

1.3 Project Scope

The Water Treatment Facilities Master Plan for the City of Temple Terrace establishes a comprehensive framework for evaluating, maintaining, and improving the City's potable water treatment infrastructure. This effort focuses on the Sunningdale and Whiteway Water Treatment Plants (WTPs) and associated well fields, ensuring that these facilities continue to deliver reliable, high-quality drinking water to residents over a 20-year planning horizon. CHA was not scoped to evaluate the City's water distribution infrastructure needs or water quality in the distribution system. The scope of services is organized as follows:

Project Initiation and Data Collection

The project begins with a structured initiation phase to align objectives, define success criteria, and establish communication protocols. Workshops with City staff to facilitate knowledge transfer from City staff and confirm project goals, schedule, and milestones. Historical and operational data, including water quality records, facility studies, and maintenance documentation was compiled to support technical evaluations.

Treatment Process Evaluation

An assessment of existing treatment processes at both WTPs. Site visits and historical performance reviews identified operational trends, chemical usage, and compliance with regulatory standards. Water quality sampling and analysis supported future treatment strategies considering emerging regulatory requirements, technology advancements, and resiliency needs, culminating in conceptual recommendations for process modifications and enhancements.

Condition Assessments

A systematic visual inspection of major process systems, electrical infrastructure, and instrumentation was conducted to assess physical condition, remaining service life, and potential risks. Findings were documented (in Chapter 5) with needs identification and planning-level cost estimates for repair or replacement. This assessment will prioritize improvements necessary to maintain reliability.

Upgrade Plan Development

Building on the process and condition evaluations, a prioritized Capital Improvement Program (CIP) that addresses near-term and long-term facility needs will be developed in conjunction with the City. The CIP includes planning-level cost opinions and an implementation timeline based on risk mitigation and regulatory compliance. A master site plan will be prepared to accommodate future improvements and support operational efficiency.

1.4 Regulatory Framework and Water Quality Goals

Finalized regulations promulgated by EPA include primary and secondary drinking water standards. Primary standards address contaminants that may deteriorate water quality as it affects human health, whereas secondary standards address contaminants that may affect the aesthetic and economic qualities of the water. Primary standards are enforceable and are enforced by state agencies having primacy. For Temple Terrace, the Florida Department of Health (FDOH) monitors and enforces federal and state drinking water regulations.

This section provides a summary of the current drinking water regulations (EPA and FDOH) applicable to the operation of the City's potable water system, also referenced here: (<https://www.epa.gov/ground-water-and-drinking-water/national-primary-drinking-water-regulations>).

1.4.1 Primary Drinking Water Standards

Within the National Primary Drinking Water Regulations (NPDWR), several contaminants, including turbidity, microorganisms (e.g., total coliforms and turbidity that indicate the presence of disease-causing organisms), radionuclides, inorganic contaminants, and organic contaminants exist. Maximum contaminant levels (MCLs) and maximum contaminant level goals (MCLGs) have been set for these several contaminants and disinfectants (e.g., chlorine), and several other

contaminants have requirements established for treatment techniques. The City was compliant with primary drinking water standards for the period that available data and parameters were reviewed.

In addition, the following primary drinking water standards set by the EPA are relevant to the operation of the City water system and the Whiteway and Sunningdale WTFs:

- Stage 1 Disinfectants and Disinfection By-products Rule (Stage 1 D/DBPR)
- Stage 2 Disinfectants and Disinfection By-products Rule (Stage 2 D/DBPR)
- Groundwater Rule

1.4.1.1 Stage 1 and 2 D/DBP Rule

Stage 1 D/DBPR was the first of a staged set of rules that were created to reduce the allowable levels of DBPs in drinking water. The existing Maximum Contaminant Levels (MCLs) included in the Stage 1 D/DBPR (published in 1998) are contained in **Table 1-1**. The MCL for Stage 1 is based on a system-wide four-quarter running annual average (RAA).

Table 1-1. Maximum Residual Disinfectant Levels

Disinfection Byproduct	Unit	MCL
TTHMs	ppb or µg/L	80
HAAs	ppb or µg/L	60
Bromate	ppb or µg/L	10

µg/L = microgram(s) per liter
HAA = haloacetic acid
MCL = Maximum Contaminant Level
ppb = part(s) per billion
TTHM = total trihalomethane

The limits on disinfectants in the Stage 1 D/DBP Rule were finalized as Maximum Residual Disinfectant Levels (MRDLs) instead of MCLs (**Table 1-2**). The WTPs currently use chlorine as the disinfectant in the distribution system.

Table 1-2. Maximum Residual Disinfectant Levels

Disinfectant	Unit	MRDL
Chlorine (as Cl ₂)	ppm or mg/L	4.0
Chloramines (as Cl ₂)	ppm or mg/L	4.0

mg/L = milligram(s) per liter
MRDL = Maximum Residual Disinfectant Level
ppm = part(s) per million

The Stage 2 Disinfectants and Disinfection By-products Rule (Stage 2 D/DBPR), promulgated in 2006, addresses risks from disinfectants and disinfection byproducts. DBPs as currently regulated

under Stage 2 of the D/DBP rule retain the same MCLs for DBPs from Stage 1, but also require that reporting of DBPs be site-specific, based on locational running annual averages (LRAAs) instead of reporting running annual average values (RAAs). Sampling sites for the Stage 2 DBP Rule are selected through the Initial Distribution System Evaluation (IDSE) process as required by Stage 2 of the D/DBPR. The City has historically been consistently within the Stage 2 D/DBPR limits and PFAS treatment processes also remove DBP precursors, therefore, evaluation of DBP formation was not a focus off this Master Plan.

1.4.2 EPA Drinking Water Standards on PFAS

In April 2024, the U.S. Environmental Protection Agency (EPA) announced the final National Primary Drinking Water Regulation (NPDWR) that establishes Primary Maximum Contaminant Levels (MCLs) and Maximum Contaminant Level Goals (MCLGs) for six PFAS substances in drinking water. Individual MCLs are set for Perfluorooctanoic acid (PFOA), Perfluorooctanesulfonic acid (PFOS), Perfluorohexanesulfonic acid (PFHxS), Perfluorononanoic acid (PFNA), Hexafluoropropylene dimer acid (HFPO-DA) and its ammonium salt, and a combined Hazard Index (HI) MCL is set for the mixture of PFHxS, PFNA, HFPO-DA, and Perfluorobutanesulfonic acid (PFBS). Details are summarized in **Table 1-3**.

Table 1-3. EPA Drinking Water Standards on PFAS

Contaminants	Critical Health Impact	MCL (ppt)	MCLG(ppt)
PFOA	Cancer	4.0	Zero
PFOS	Cancer	4.0	Zero
PFHxS	Thyroid Effects	10.0	
PFNA	Developmental Effects	10.0	
HFPO-DA (GenX' chemicals)	Liver Effects	10.0	
Mixture of GenX, PFBS, PFNA PFHxS	Multiple	Hazard Index* of 1	

$$*Hazard\ Index = \left(\frac{[GenX]}{[10\ ppt]} \right) + \left(\frac{[PFBS]}{[2000\ ppt]} \right) + \left(\frac{[PFNA]}{[10\ ppt]} \right) + \left(\frac{[PFHxS]}{[10\ ppt]} \right)$$

EPA also released the compliance timeline with a phased approach, as listed below:

- By 2027, public water systems must complete initial monitoring of the regulated PFAS, followed by ongoing compliance monitoring.
- Beginning in 2027, public water systems must provide the public with information on the PFAS levels in their drinking water.
- By 2029, public water systems must implement solutions to reduce PFAS if monitoring shows that drinking water levels exceed these MCLs.
- Beginning in 2029, public water systems that have PFAS in drinking water above one or more of these Primary MCLs (PMCLs) must take action to reduce levels of PFAS in their drinking water and provide Tier 2 notification (long-term exposure, potential health risk but

no immediate threat) to the public of the violation.

In May 2025, EPA announced the agency will keep the current NPDWR for PFOA and PFOS with an intent to rescind and reconsider the regulatory determinations for PFHxS, PFNA, HFPO-DA (commonly known as GenX), and the Hazard Index mixture of these three plus PFBS, to ensure that the determinations and any resulting drinking water regulation follow the legal process laid out in the Safe Drinking Water Act. On May 14, 2025, EPA announced its intentions to delay SDWA PFAS compliance deadlines for two PFAS chemicals, PFOS and PFOA, by two years, until 2029. On Jan. 21, 2026, the District of Columbia Circuit Court denied EPA's Sept. 11, 2025 request to vacate the other four previous SDWA PFAS rules for PFNA, PFHxS, HFPO-DA, and the Index PFAS.

1.4.2.1 Ground Water Rule

The EPA Ground Water Rule (GWR) was enacted on November 8, 2006, and published in the Federal Register. The Rule was intended to provide increased protection against microbial pathogens in public water systems that use groundwater sources. Because disease-causing pathogens are found in fecal contamination, EPA is concerned about the groundwater systems that are susceptible to fecal contamination. The GWR applies to public water systems that use groundwater and also applies to systems that use both groundwater and surface water sources in their system.

Public groundwater systems that do not conduct compliance monitoring and are notified of a total coliform-positive routine sample collected in compliance with the EPA Total Coliform Rule (40 Code of Federal Regulations 141.21) must conduct triggered source water monitoring and take corrective action if a significant deficiency is identified. To be subject to triggered source water monitoring, a ground water system operator such as the City can notify the state that it provides at least 4-log treatment of viruses using virus inactivation, removal, or a state-approved combination of 4-log virus inactivation and removal before or at the first customer.

The City achieves the required 4-log virus inactivation through chlorine disinfection, according to the Florida Administrative Code (FAC) for the two WTFs.

1.4.3 Secondary Drinking Water Standards

Secondary standards are not enforced by EPA but are strongly recommended and may be enforced at the discretion of individual state primacy agencies. The Secondary Drinking Water Standards with Secondary Maximum Contaminant Levels (SMCLs) for various contaminants are summarized in **Table 1-4**.

Table 1-4. Secondary Drinking Water Standards

Parameter	Standard
Aluminum	0.05 to 0.2 mg/L
Chloride	250 mg/L
Color (True)	15 color units
Copper	1.0 mg/L
Corrosivity	Noncorrosive
Fluoride	2.0 mg/L
Foaming Agents	0.5 mg/L
Zinc	5 mg/L

Parameter	Standard
Iron	0.3 mg/L
Manganese	0.05 mg/L
Odor	3 threshold odor number
pH	6.5 to 8.5
Silver	0.10 mg/L
Sulfate	250 mg/L
Total Dissolved Solids	500 mg/L
Hardness	none

mg/L = milligram(s) per liter

Hardness is a characteristic of water caused primarily by the salts of calcium and magnesium, such as bicarbonate, carbonate, sulfate, chloride, and nitrate. Hard water is not currently known to adversely affect human health in any significant manner. However, hard water consumes more soap/detergent, tends to stain bathroom fixtures, leave scale in water heaters and damage some industrial processes.

Water suppliers classify the hardness of a water as soft (below 60 mg/L as CaCO₃), medium hard (60 to 120 mg/L as CaCO₃), hard (120 to 180 mg/L as CaCO₃), very hard (180 to 350 mg/L as CaCO₃), and brackish (above 350 mg/L as CaCO₃). Based on this classification, source water for the two WTFs is considered to very hard (recent data for hardness in wells: 270-347 mg/L as CaCO₃). Individual well total hardness varies from 200 to 400 mg/L as CaCO₃.

1.4.4 Future Drinking Water Regulations

As part of the master planning process, a review of the status of several potential future regulations was conducted to identify any new treatment processes or operational changes or improvements that would be needed to achieve regulatory compliance, if and when these regulations are finalized. The following discussion highlights the current regulatory situation regarding the most relevant and critical, future drinking water regulatory developments.

1.4.4.1 Disinfection Byproducts

An increasing number of drinking water utilities in the United States have been using or are considering chloramination over chlorination. In comparison with chlorination, chloramination has been shown to minimize the formation of trihalomethanes (THMs) and haloacetic acids (HAAs), thereby offering a cost-effective means to comply with the Stage 2 D/DBPR. However,

chloramines have been implicated in the formation of nitrosamines such as N-nitrosodimethylamine (NDMA).

There are currently no EPA regulations for nitrosamines. Five nitrosamines (NDEA, NDMA, NDPA, NPYR, and N-Nitrosodiphenylamine) were listed on the third and fourth contaminant candidate lists (CCL3 and CCL4), indicating that EPA is considering these contaminants for potential regulatory determination. Nitrosamines (including NDMA) are also under evaluation in the third six-year review of the Microbial and Disinfection Byproduct Rules (EPA, 2016).

1.4.4.2 Fifth Unregulated Contaminant Monitoring Rule

The Safe Drinking Water Act (SDWA) amendments require that once every 5 years, EPA issue a new list of no more than 30 unregulated contaminants to be monitored by public water systems. EPA collects data for contaminants that are suspected to be present in drinking water and do not have health-based standards set under the SDWA, to fill the occurrence data gaps in the CCL.

The fifth Unregulated Contaminant Monitoring Rule (UCMR5) was published on December 27, 2021. The UCMR5 requires monitoring of 30 chemical contaminants between 2023 and 2025 using analytical methods developed by EPA and consensus organizations. This action provides EPA and other interested parties with scientifically valid data on the national occurrence of these contaminants in drinking water. Consistent with EPA's PFAS Strategic Roadmap, UCMR 5 will provide new data that is critically needed to improve EPA's understanding of the frequency that 29 per- and polyfluoroalkyl substances (PFAS) and lithium are found in the nation's drinking water systems.

1.4.5 Treatment Goals

Comparing the source water analysis PFAS results, conducted by CHA and Eurofins (seen in **Table 2-11**) to EPA standards, PFAS in the raw water feeding the two WTFs exceed the PMCLs (4 ppt) with concentrations ranging from 10 to 20 ppt. The current treatment process does not provide adequate removal of PFAS; therefore, additional treatment is required to meet or beyond the drinking water standards.

To provide safe drinking water to the water users and ensure compliance in the future, the MCLGs (zero for PFOA & PFOS, 10 ppt for PFHxS, PFNA, GenX, and HI <1) are set as the treatment goal for this project, and to consider alternatives to go beyond federal standards and remove 90+% of each PFAS component. Also, as the source water for the two WTPs is considered very hard, the City has identified a desire to bring their water's hardness levels to approximately 150 mg/L.

1.4.5.1 Percolation Pond Regulations

Percolation ponds for discharging effluent and/or backwash water are regulated by FDEP, delegated to the Hillsborough County Environmental Protection Commission, under FAC 62-600 and FAC 62-620.910. Discharging backwash water from the filters to the percolation pond would require monitoring the water to determine they meet the facilities' effluent requirements prior to discharging into the pond. However, discharging to a percolation pond may require additional PFAS monitoring due to the presence of known PFAS contamination.

1.4.6 Regulatory Implications for the City

This report assesses compliance with the current regulations, City's internal water quality goals and summarizes and discusses the existing finished water quality data. To meet future regulatory requirements, it may be necessary for the City to do some or all the following:

- Make operational changes at the WTP (e.g., upgrade the lime softening process to meet the City's hardness goals)
- Add new unit processes for treatment (e.g., GAC or Ion Exchange or Nanofiltration/Reverse Osmosis to achieve compliance with PFAS)
- Blending, future water purchase from Hillsborough County or City of Tampa

1.5 PFAS Pilot and Process Evaluation

Details on the PFAS removal pilot and process evaluation efforts are summarized in **Appendix B**.

2.0 EXISTING CONDITIONS

2.1 Geography and Service Area

The City of Temple Terrace (City) is located in northeastern Hillsborough County, Florida, adjacent to the City of Tampa. Positioned within the Tampa–Clearwater–St. Petersburg metropolitan area, the City is situated near the transportation hub of I-4, I-75 and I-275 providing easy access to University of South Florida, downtown Tampa, Orlando, and Gulf Coast beach destinations. Temple Terrace is interspersed with beautiful live oak canopies, earning it the Tree City USA designation.

Temple Terrace encompasses approximately 7.77 square miles, of which 7.47 square miles is land and 0.30 square miles is water. Land use is primarily residential with commercial and industrial along major arterials, community parks and greenspaces throughout and institutional use in the north including Florida College. The City elevation ranges from 7 feet to 98 feet with an average of 59 feet including rolling and namesake terraced terrain. The Hillsborough River forms a defining natural feature along the City's western boundary, providing scenic views and recreation. This riverfront location historically influenced land use and development patterns, including the establishment of parks, trails, and the historic Temple Terrace Golf & Country Club. The City's utility service area map is presented in **Figure 2-2**.

Figure 2-1. City of Temple Terrace Entrance

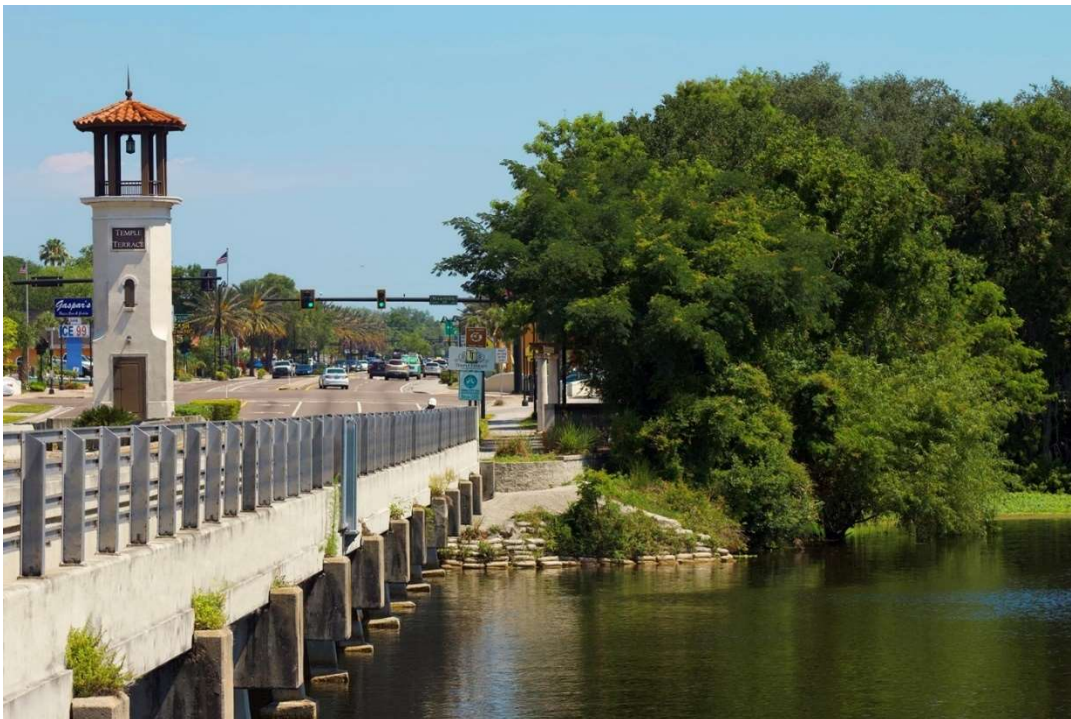
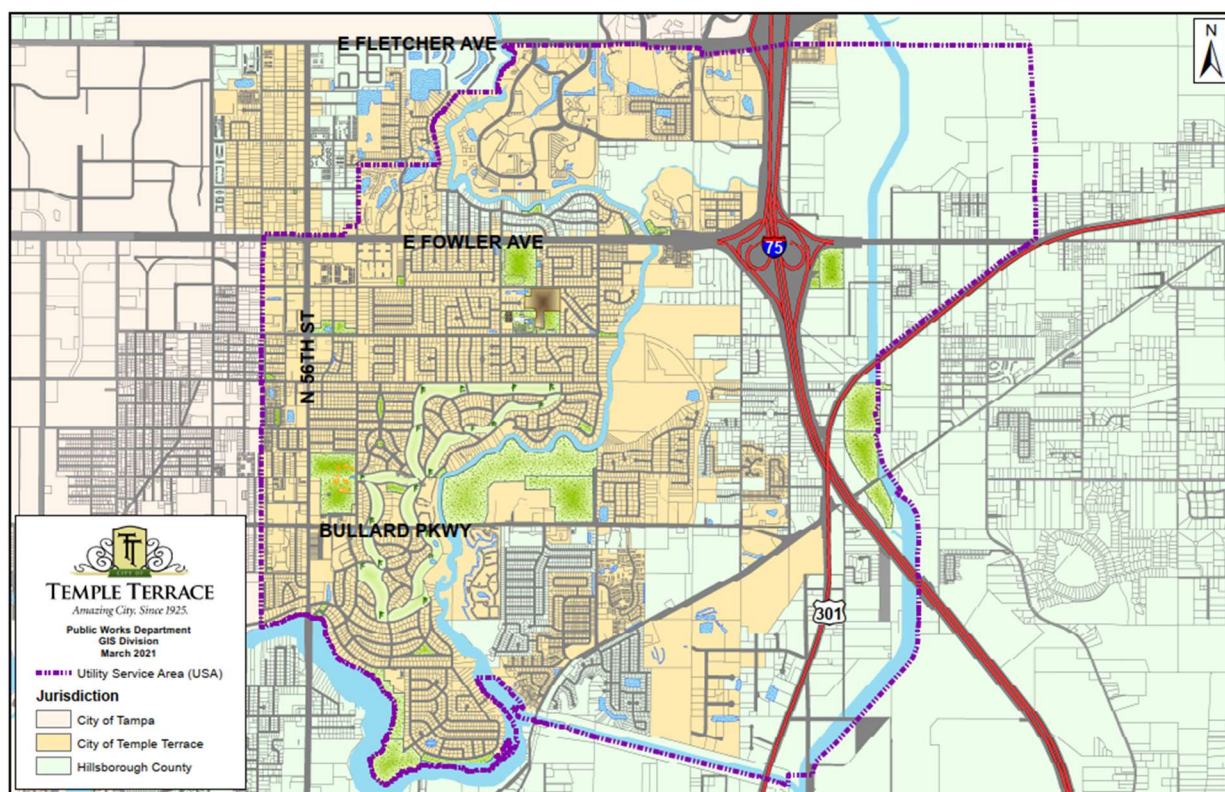


Figure 2-2. Temple Terrace Potable Water Service Area



Source: City of Temple Terrace GIS Department

2.2 Permit Conditions

- Current Permit Limits
 - SWFWMD Water Use
 - Average Permitted Withdrawal covering all of the City wellfields: 5,150,000 gallons per day or 5.150 MGD
 - Peak Permitted Withdrawal: 5,817,400 gallons per day or 5.8174 MGD
 - FDEP/Health Dept WTP Design (Max Day) Capacity
 - Whiteway: 5.04 MGD
 - Sunningdale: 3.96 MGD
 - Total: 9.0 MGD, if both plants are running at peak capacity, which is greater than water use permitted flows

EXISTING CONDITIONS

2.3 Existing Demand Conditions

2.3.1 Historical Demands

Historical flow data was reviewed for the City of Temple Terrace. Expected Flows (Based on Flow Data from 2020-2025 MORs):

- Maximum Day
 - Whiteway Historical Max Day: 3.856 MGD (3/26/2025)
 - Sunningdale Historical Max Day: 3.310 MGD (4/28/2023)
 - Peak day “outlier” events were due to WTP or tank maintenance, pipe break, drought weather event or similar non-standard operating event.
 - CHA would propose a combined max day PFAS treatment in the 6 MGD range, matching the 2045 adjusted SWFWMD maximum day demand projections
 - 90th percentile historical max day flows
 - Whiteway: 3.080 MGD
 - Sunningdale: 1.618 MGD
 - Combined: 4.524 MGD*
 - 95th percentile historical max day flows
 - Whiteway: 3.126 MGD
 - Sunningdale: 1.811 MGD
 - Combined: 4.741 MGD*
- Average Day
 - Whiteway Historical Avg Day: 3.0 MGD
 - Sunningdale Historical Avg Day: 1.0 MGD
 - Combined flows from Whiteway and Sunningdale WTPs: 4.0 MGD
- PFAS Treatment capacity if raw water stays separated at each WTP:
 - Whiteway WTP Max Day: 4 MGD
 - Sunningdale WTP Max Day: 2 MGD
 - Note that PFAS treatment processes could require more raw water than permitted; discussions are ongoing with the SWFWMD by the City to obtain additional permitted water supply quantities

* Maximum Day Flows are based on historical data. “Combined” flows refer to the combined flows of Whiteway and Sunningdale on a given day, and therefore may not align with the historical max flows of Whiteway and Sunningdale individually.

EXISTING CONDITIONS

Figure 2-3. Sunningdale Daily Treated Water

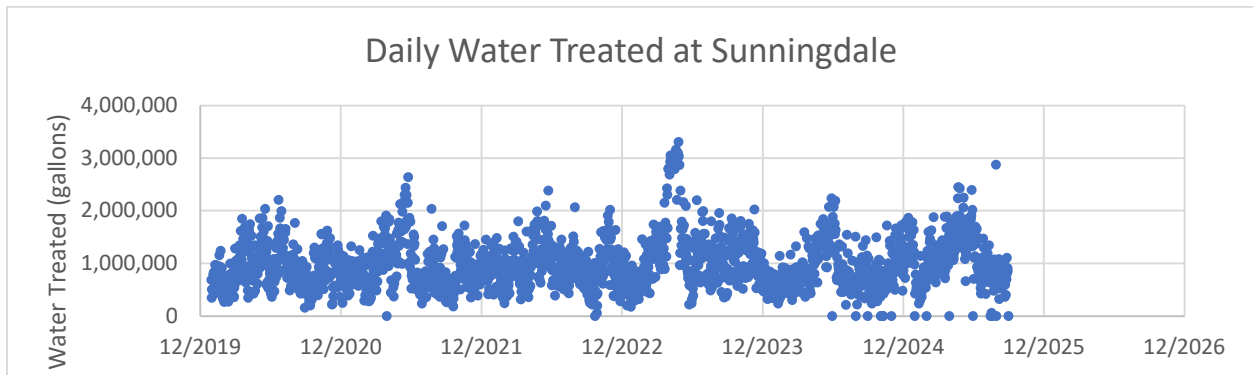


Figure 2-4. Whiteway Daily Treated Water

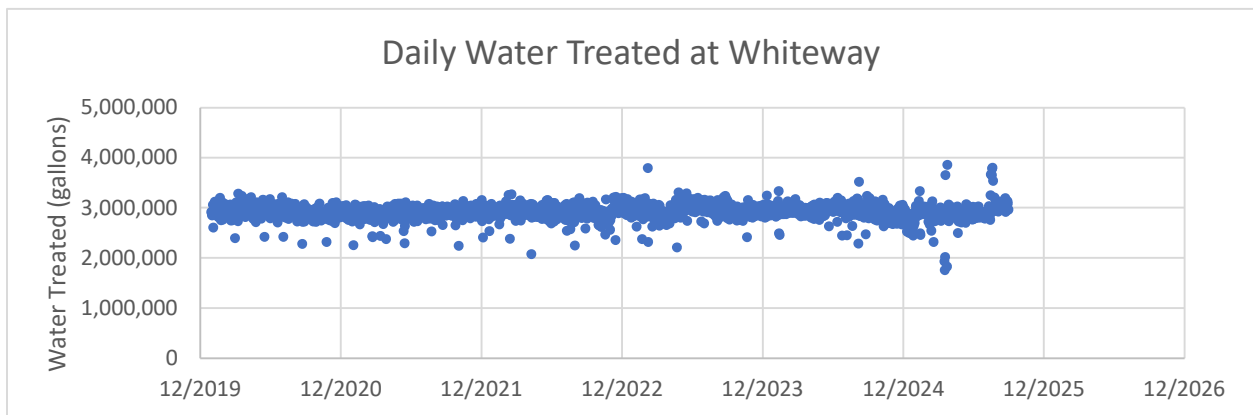
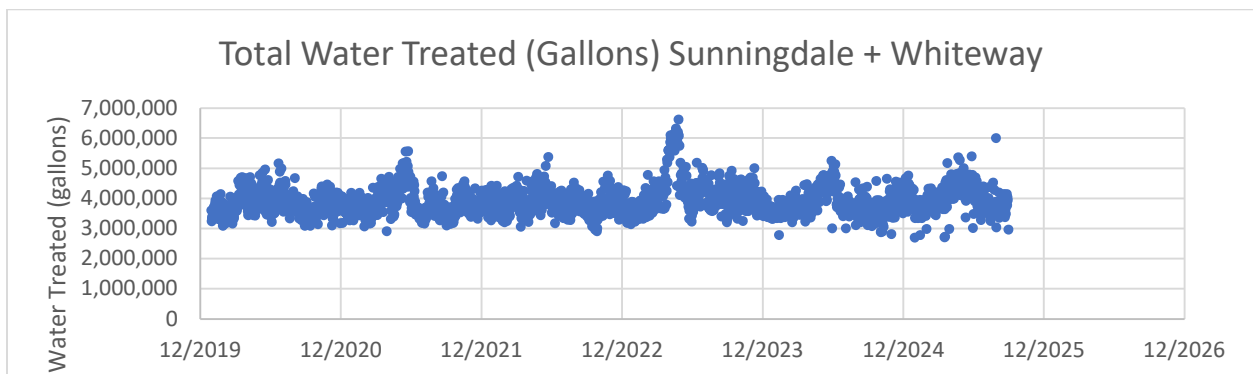


Figure 2-5. Sunningdale and Whiteway Treated Water



2.3.2 Population Projection and Future Demands

Planning for long-term water supply requires a clear understanding of anticipated growth and its impact on potable water demand. The Southwest Florida Water Management District (SWFWMD) provides population and water demand projections through its Regional Water Supply Plan (RWSP), which covers a 20-year planning horizon from 2025 to 2045. SWFWMD projections were developed using a geospatial small-area forecasting model that incorporates U.S. Census data, local development plans, University of Florida's Bureau of Economic and Business Research (BEBR) population projection models and utility service area boundaries to ensure accuracy at the municipal level and were recently updated in 2025.

Temple Terrace is located within the Tampa Bay Planning Region, which includes Hillsborough, Pasco, and Pinellas counties. According to SWFWMD's draft 2025 RWSP, Hillsborough County is expected to experience steady population growth, driving increased demand for public water supply. The RWSP estimates that public supply water demand in the Tampa Bay region will rise significantly over the next two decades, influenced by residential development, economic activity, and conservation trends. These projections account for both base population growth and seasonal fluctuations, ensuring that peak demand scenarios are considered in planning efforts.

The City of Temple Terrace is nearly fully developed, therefore, growth is anticipated to follow regional trends via redevelopment and infill with relatively small incremental increases in total potable water demand projected by the SWFWMD. The City practices water conservation by restricting lawn and plant watering to two specified days of the week – Thursday and Sunday for even numbered addresses and Wednesday and Saturday for odd numbered addresses. Watering is additionally restricted to occur before 8 a.m. or after 6 p.m. in accordance with City Code of Ordinances Sec. 22-161. - Mandatory Water Use Restrictions. There are also suggested water use practices posted on the City website for efficient water use in relation to car washing, pressure washing, etc. Per capita water use (113 gpcd 2016-2020 average) is expected to continue to be moderated by conservation measures and potential adoption of alternative water sources mentioned in the RWSP. That stated, RWSP methodology assumes the City continues reliance on groundwater from the Floridan Aquifer, supplemented by reclaimed water reuse for irrigation.

SWFWMD projected 2025 average water demand was slightly lower than the actual treated water volume observed in the City's MORs for 2025. To amend this, CHA added the difference between the projection and actual observed average daily demand, 0.296 MGD. This modified average demand was then multiplied by a Max Daily Demand scaling factor of 1.33, obtained by dividing the average MOR-observed maximum day flows, roughly 5.3 MGD, by the combined WTPs' average daily flow, 4.0 MGD ($5.0 \text{ MGD} / 4.0 \text{ MGD} = 1.33$). The 1.33 Max Day factor was applied to future average demand projections up to year 2045. A summary of projected demands is

EXISTING CONDITIONS

provided in **Table 2-1** below. Potable water demand projections are compared to the historical flows and the City's current WUP in **Figure 2-6**.

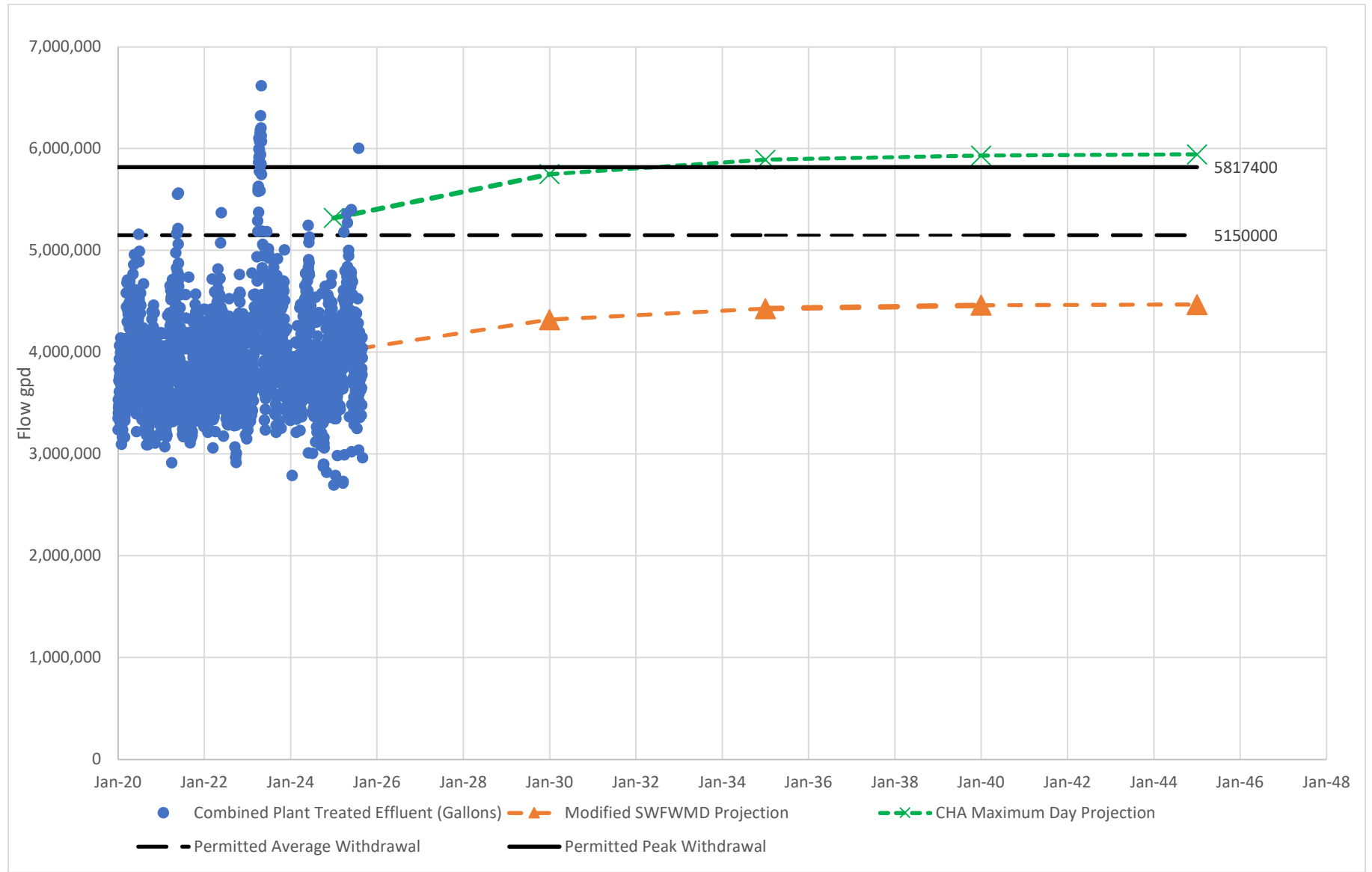
Table 2-1. City of Temple Terrace Projected Water Demands

Projected Characteristic	Year				
	2025	2030	2035	2040	2045
SWFWMD Population Projection	32,841	35,700	36,658	36,930	37,014
SWFWMD Demand Projection (MGD)	3.704	4.026	4.134	4.165	4.174
CHA modified SWFWMD Demand Projection (MGD)	4.000	4.322	4.430	4.461	4.447
CHA Max Daily Demand Projection (MGD)	5.320	5.748	5.892	5.933	5.945

Note: Stated potable water demands and projections cover the portions of the City's utility service area that are served by its WTPs. Small, demand enclaves are served by adjacent utilities and not anticipated to change service in the future.

EXISTING CONDITIONS

Figure 2-6. Projections Compared with Historical Flows



EXISTING CONDITIONS

2.3.3 Demand Summary

Based on the demand analysis, the following was estimated to configure improvements:

- Whiteway WTP
 - ADD = 3.0 MGD
 - MDD = 4.0 MGD
- Sunningdale WTP
 - ADD = 1.0 MGD
 - MDD = 2.0 MGD
- Total: Peak Permitted Withdrawal currently limited to 5,817,400 gallons per day; additional water use permit quantities will be required from the SWFWMD to cover this gap and an additional 10% to 15% to cover proposed treatment recoveries. The difference between permitted limits and required flows are shown in **Table 2-2** below.

Table 2-2. Projected Flows vs. Permitted Withdrawal

	Average Flow	Permit Deficit (Average Flow)	Peak Flow	Permit Deficit (Peak Flow)
SWFWMD Permitted Withdrawal	5.15 MGD		5.817 MGD	
Projected Flows (2045)	4.47 MGD	0.68 MGD	5.95 MGD	- 0.133 MGD
Flows Required for Membrane Treatment at 85% recovery	5.26 MGD	- 0.11 MGD	6.99 MGD	- 1.173 MGD

*A (-) deficit value indicates the projected flows exceed the permitted withdrawal by the written value.

EXISTING CONDITIONS

2.4 Whiteway WTP

2.4.1 Whiteway WTP Layout and Contents

The Whiteway WTP process flow diagram and layout are depicted in **Figure 2-8** and **Figure 2-9**, respectively.

2.4.2 Raw Water Blending/ Aeration Tank

Whiteway wells flow directly to the raw water blending/aeration tank. The 0.2 million gallon (MG) pre-stressed concrete tank is located on the north side of the Whiteway WTP site. The tank has a built-in cascade aerator to strip volatile compounds including hydrogen sulfide. The tank is used to blend raw water from the six production wells feeding the Whiteway WTP and reduce hydrogen sulfide. The tank and aerator were built in the 1980 expansion. fiberglass tray aerator has 4 levels containing 24 total cascade trays.



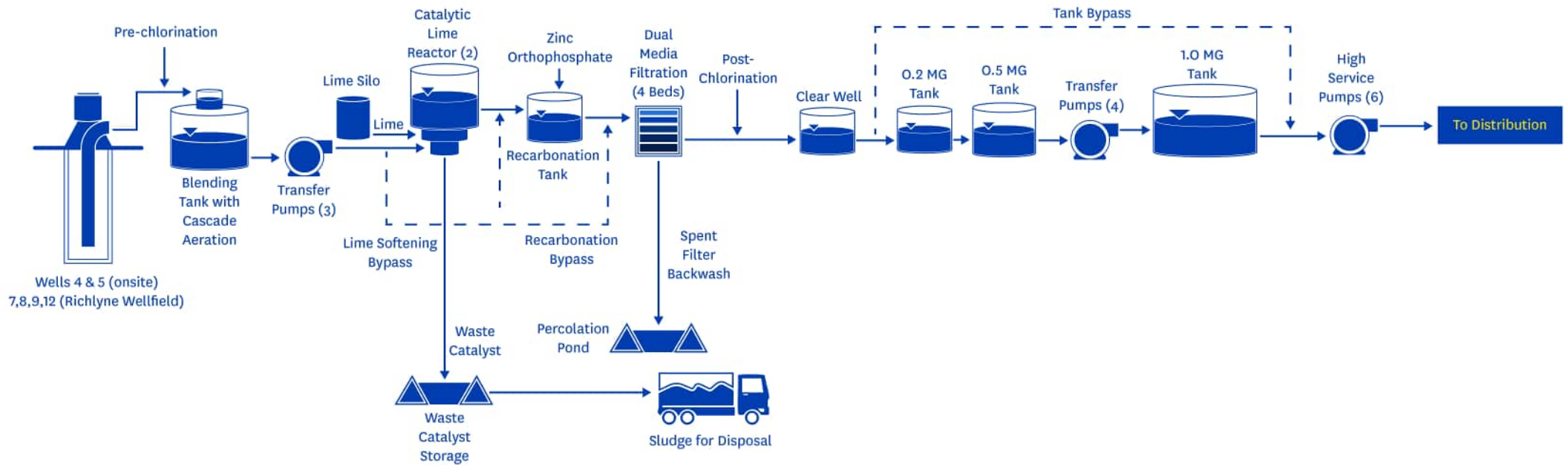
Figure 2-7. Blending/Aeration Tank

2.4.3 Lime Reactor Transfer Pumps

The raw water from the blending tank is transferred to the lime softening units by three constant speed vertical turbine transfer pumps (40 HP each) with a capacity of 1,750 gallons per minute (gpm). The pumps are housed in a concrete building south of the aeration tank and draw flow from a 20-inch header.

EXISTING CONDITIONS

Figure 2-8. Whiteway WTP Process Flow Diagram





Parent Sheet Set: 100335_TempleTerraceWTP_Sites
Saved: 1/30/2026 2:45:45 PM Plotted: 1/30/2026 2:46:07 PM Current User: Vnaita, Violet Last Saved By: 7623
File C:\Users\7623\OneDrive - CHA Consulting, Inc\Desktop\100335_TempleTerraceWTP\100335_WhiteWayWTP_Figures.dwg

Designed	EHT,IG
Drawn	VVV
Reviewed	---
Approved	---
Date	02/2026

1"=1'-0" AT FULL SIZE

CITY OF TEMPLE TERRACE
WTP SITES IMPROVEMENTS

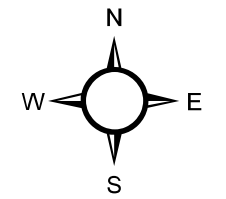
WHITEWAY WATER TREATMENT PLANT
EXISTING SITE PLAN

100335

FIGURE 2-9

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CHA
CHA CONSULTING, INC.
CERTIFICATE OF AUTH. 28386
2502 N ROCKY POINT DR
SUITE 145
TAMPA, FL 33607
(813) 549-0919



0 100 200 Feet

LEGEND

- Well Locations
- ★ Water Treatment Plants



City of Temple Terrace
City of Temple Terrace Water Master Plan
WHITEWAY WTP PRODUCTION WELL LOCATIONS

FIGURE 2-10

2.4.4 Lime Softening Reactors and Recarbonation Tank

There are two Infilco catalytic lime-softening units (Gyratur process, circa 1960) located next to the transfer pump building. Each reactor is rated at 2.52 MGD (1,750 gpm). The “Gyratur/catalytic lime softening” process is a type of cold lime softening that removes calcium and magnesium hardness from water in a fluidized bed reactor. The reactors are designed to introduce raw water and lime-softening chemicals (quick lime, CaO) to the bottom of the reactor. The added lime reacts with the hardness and carbon dioxide in the water to precipitate as calcium carbonate and bind with the catalytic sand.

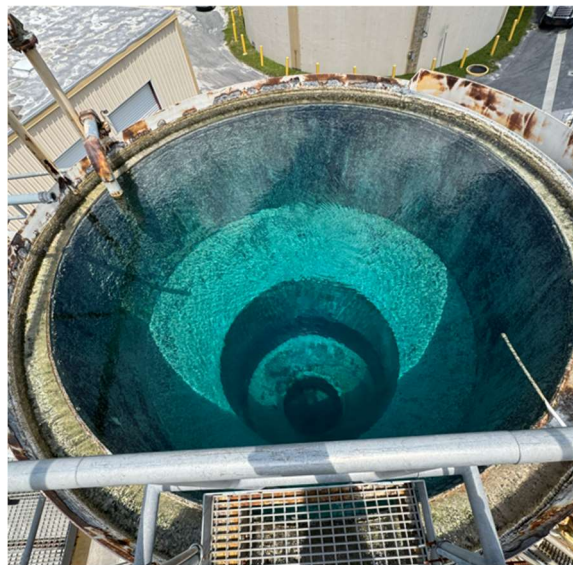


Figure 2-11. Inside Gyratur Reactor

The treated water precipitates calcium carbonate onto the surface of fine sand "seeds," forming dense, easily removable pellets. The accumulated pellets are periodically drained from the bottom of the reactor and then sent to a storage area adjacent to the reactors for disposal. Softened water, with ~30% of the hardness removed, is drawn from the top of the reactor and flows next to the recarbonation step. The recarbonation tank was designed to add carbon dioxide, alum, and chlorine to the softened water.

The reactors are designed to introduce raw water and lime-softening chemicals to the bottom of the vessels, where catalytic sand is settled. The added lime reacts with the hardness and carbon dioxide in the water to precipitate as calcium carbonate and bind with the catalytic sand. The waste catalytic sand is then sent to a storage area adjacent to the reactors. The reactor diameter increases as the water rises, causing the precipitate to clarify out of the water. The clarified water then overflows the top weir to the recarbonation tank, designed to add carbon dioxide, alum, and chlorine to the softened water.



Figure 2-12. Exterior of Gyratur Reactor (Right) and Recarb Tank (Left)

EXISTING CONDITIONS

Historically, the City modified operations to improve recarbonation tank performance by softening a portion of the raw water. One reactor was used for softening while the other operated in bypass, and the two streams were blended in the recarbonation tank. Due to subsequent operational challenges with the lime reactors, including elevated turbidity, the City has paused softening operations.



Figure 2-13. Recarbonation System from City of Boca Raton

2.4.5 Dual Media Filters

Four Infilco Greenleaf Dual Media filters with a design capacity of 5 MGD (3,500 gpm) reduce particulate organics and particulate matter, reducing turbidity generated from the upstream treatment processes. The filter media is composed of anthracite, sand, and gravel layers. The first layer (anthracite) filters out coarse particles from the water and assists in post-softening precipitation of any unreacted lime and alkalinity. The second layer (sand) captures any finer particles that may exist as the water penetrates through the layer. The last layer (gravel) serves to support the first two filter layers and promotes distribution of backwash water. The filtered water flows through the underdrain system, over an effluent weir, and to the clear well adjacent to the south of the filter basin. The filter beds are housed in a square concrete structure measuring approximately 40 feet wide by 40 feet long by 16 feet tall. Each of the four filter units has a surface area of approximately 293 square feet, with a surface loading rate of 2.92 gpm/sqft at a flow rate of 3,500 gpm (5 MGD). Water is distributed to each of the filter beds from a circular distribution trough.

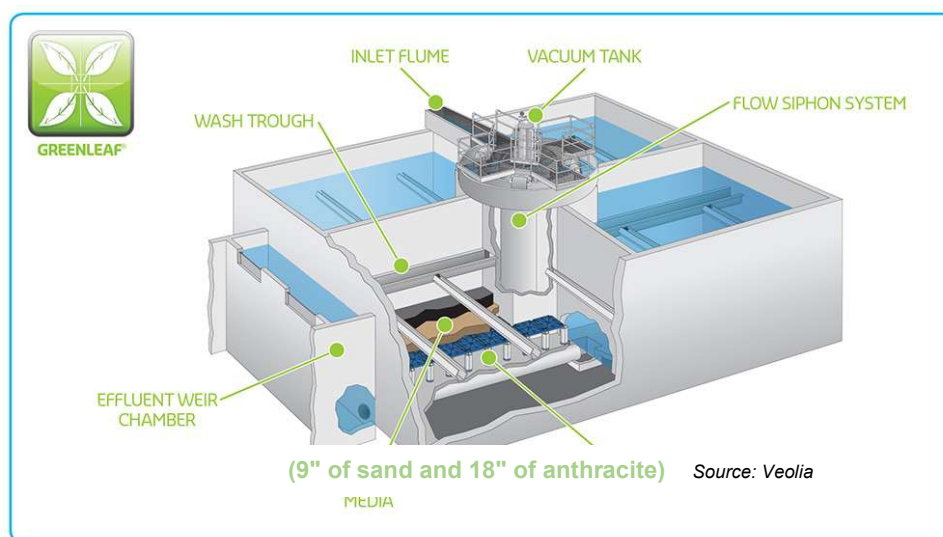


Figure 2-14. Greenleaf Filter Basin Schematic

EXISTING CONDITIONS

When the filters accumulate solids, the pressure differential across the cell rises. The filter cell then requires that it goes through a backwash cycle to remove accumulated solids from the filter media. Prior to the full backwash, a surface wash can be performed to break up heavier solids on the surface of the filter cells. An electronic probe signals when the filter beds require backwash by measuring the depth of water above the filter media. Filter operations are largely time-based, with backwash typically performed once per day, and filters operated on ~96-hour cycles without differential pressure-based control (Operator controlled).

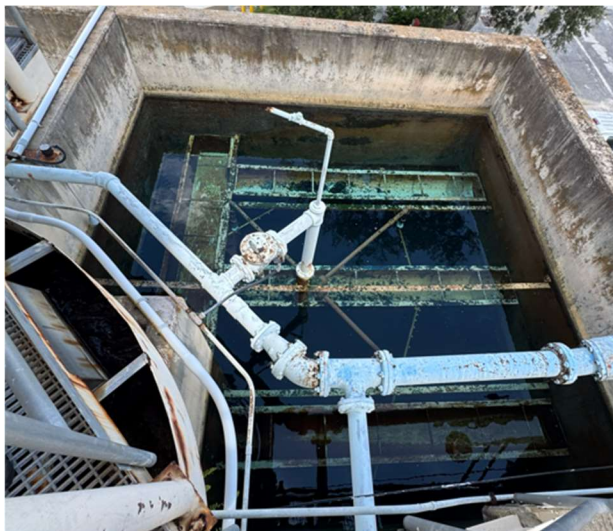


Figure 2-15. One Filter Bed of Greenleaf Filter Basin

Operations staff also monitor filter effluent turbidity for backwashing. The backwash waste is sent to the percolation pond on site. The backwash pump operates at ~5,100 gpm for 10 to 15 minutes generating 90,000 gallons of backwash waste every 96 hours or 23,000 GPD average.

In addition to the backwash pump, the filter basin has two filter control vacuum pumps (3 HP) and one filter surface-wash pump (225 gpm). These pumps are located at or on the filters to feed water to the instrumentation, and to aid in breaking up surface buildup prior to backwashing.

2.4.6 Finished Water Storage

Water flows by gravity from the filter basin, through the clear well, and to the finished water storage tanks. The 0.5 MG tank is the original tank on site, which was then supplemented by a 0.2 MG tank during the 1980s plant expansion. An additional 1.0 MG tank was added close to the WTP entrance during the 1993 expansion. The two smaller tanks, known as the “Back Tanks” function as preliminary holding



Figure 2-16. 0.2 MG (Rear) and 0.5 MG (Front) “Back Tanks”

EXISTING CONDITIONS

vessels which provide chlorine contact time. Finished water is transferred by a second set of four (4) transfer pumps to the 1.0 MG tank before being pumped to distribution. The transfer pumps range from 10-25 HP and operate as required, cycling through each pump.

2.4.7 High Service Pumps

There are six (6) high service pumps which provide flow and pressure to the distribution system, located in a building attached to the SCADA office and plant laboratory, as seen in **Figure 2-9**. The characteristics of each of the high service pumps, in addition to Whiteway's other pump can be seen in **Table 2-3**. Pumps No. 2 and 4 have variable frequency drives (VFD) to meet varied flow and pressure demands. Inside the high service pump room, there is a 600kW CAT 3412 diesel generator for backup power. A 1,000-gallon diesel fuel tank is located above ground outside the high service pump building.

EXISTING CONDITIONS

Table 2-3. Whiteway WTP Pump Summary

Pump Location	Pump ID/Description	Type of Pump	Manufacturer	Model	HP	Capacity (gpm)
Transfer Pump Set 1	Raw 1	Transfer	Mader	82124561	40	1750
	Raw 2	Transfer	Mader	82124562	40	1750
	Raw 3	Transfer	Aurora	82124563	40	1750
Filter Backwash	Backwash Pump	Backwash Pump	US Electrical Motors	Unknown	30	5100
	Surface Wash Pump	Surface Wash Pump	Aurora	364 A	25	225
	Vacuum Pump 1	Vacuum Pump	NES Company	NHP-50	3	6.3
	Vacuum Pump 2	Vacuum Pump	NASH	MHF-50	3	6.7
Transfer Pump Set 2	TR 1	Vertical Turbine	US Motors	14HH	10	1750
	TR 2	Vertical Turbine	US Motors	14HH	10	1750
	TR 3	Vertical Turbine	US Motors	14MF	20	3255
	TR 4	Vertical Turbine	WILO	H12PMF	25	3304
High Service Pumps	1	Horizontal Centrifugal	Worthington	5LR-13	50	1100
	2	Horizontal Centrifugal VFD	Worthington	5LR-13	60	1200
	3	Horizontal Centrifugal	Worthington	5LR-13	60	1500
	4	Vertical Centrifugal VFD	Aurora	365TDS	75	1700
	5	Vertical Centrifugal	Aurora	365TDS	75	2000
	6	Vertical Centrifugal	Aurora	882410	75	2200

EXISTING CONDITIONS

2.5 Sunningdale WTP

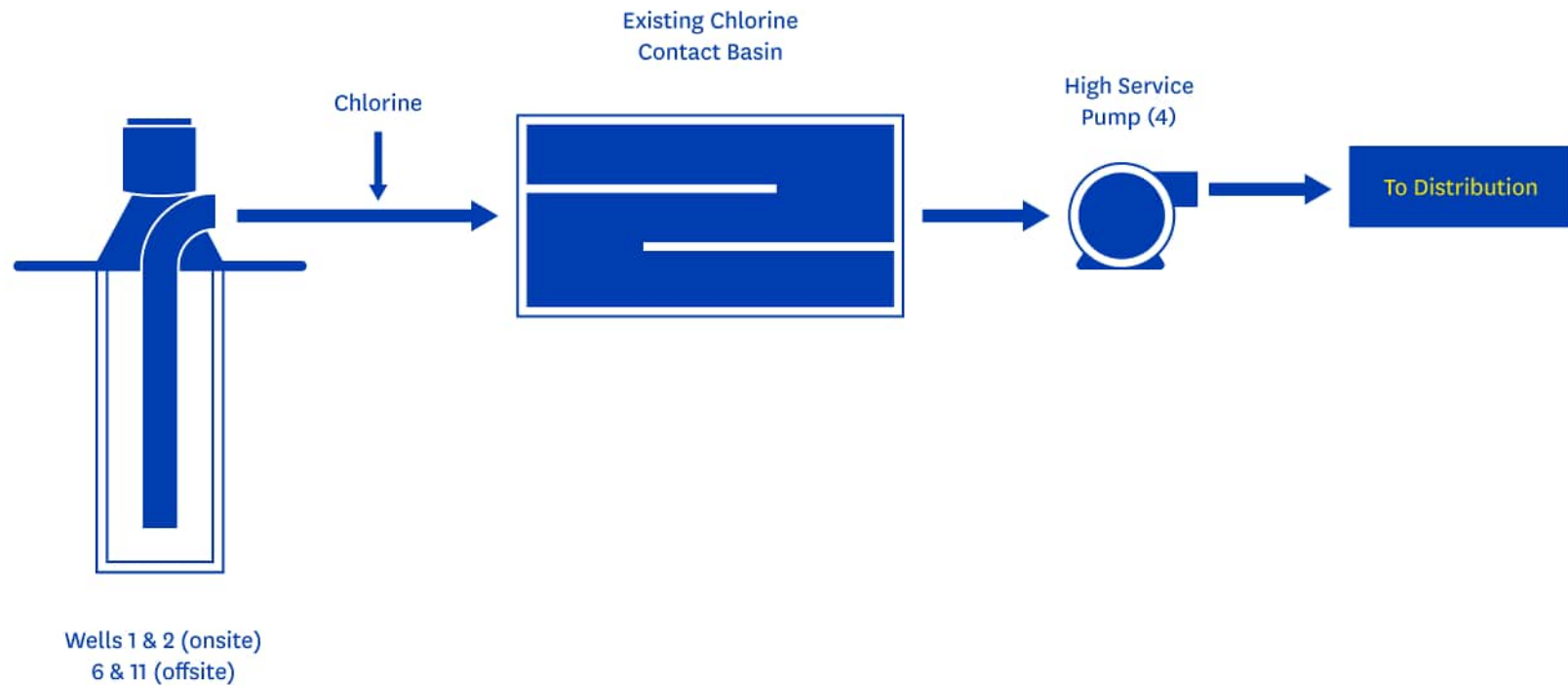
2.5.1 Sunningdale WTP Layout and Contents

The Sunningdale WTP process flow diagram and layout are depicted in **Figure 2-18** and **Figure 2-19**, respectively.

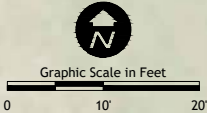


**Figure 2-17. Sunningdale WTP Safety Shower/
Eyewash**

Figure 2-18. Sunningdale WTP Process Flow Diagram

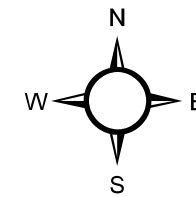


Note: Fluoridation process exists at Sunningdale WTP but is being mothballed in conjunction with Whiteway WTP's fluoridation retirement.



Parent Sheet Set: 100335_TemplateTerraceWTP_Sites
Saved: 11/21/2025 8:02:36 AM. Plotted: 11/21/2025 8:03:31 AM. Current User: Venetta_Violet_LatSweBv7923
File C:\Users\7623OneDrive - CHA Consulting, Inc\Desktop\100335_TemplateTerraceWTP\100335_SunningdaleWTP_Figures.dwg

Designed EHT Drawn VVV Reviewed --- Approved --- Date 11/2025 LINE IS 1" AT FULL SIZE	CITY OF TEMPLE TERRACE WTP SITES IMPROVEMENTS		100335	CHA CONSULTING, INC. CERTIFICATE OF AUTH. 28386 2502 N ROCKY POINT DR SUITE 145 TAMPA, FL 33607 (813) 549-0919
	SUNNINGDALE WATER TREATMENT PLANT EXISTING SITE PLAN		FIGURE 2-19	
			--	



0 100 200 Feet

LEGEND

- Well Locations
- ★ Water Treatment Plants



City of Temple Terrace
City of Temple Terrace Water Master Plan
SUNNINGDALE WTP PRODUCTION WELL LOCATIONS

FIGURE 2-20

EXISTING CONDITIONS

2.5.2 Sunningdale Treatment Process Components

The Sunningdale WTP has a design capacity of approximately 4.0 MGD and the four production wells that feed this plant have a capacity of approximately 4.17 MGD. Sunningdale is a peaking facility that supports Whiteway's base loaded flow during high demand periods.

The water from all four production wells flows into, and is blended in the covered chlorine contact basin, which has a maximum capacity of 0.06 MG. The chlorine is fed by 150-pound gas cylinders in a dual 100 lb/day automatic transfer system located adjacent to the well No. 2 building. The chlorine feed is flow-paced from the common meter in front of the chlorine contact tank. The plant has a chlorine gas containment and scrubbing system, featuring a packed tower with sodium hydroxide to capture fumes that are drawn into the unit.

The contact basin provides required disinfection contact time (CT) for free chlorine at groundwater temperatures for the design capacity of 4 MGD. Water is drawn from the chlorine contact basin by four vertical high service pumps to the distribution system, characterized in **Table 2-4**. The site has an auxiliary generator to provide emergency power. Information was obtained from onsite observations, City staff and previous City planning and design documents.



Figure 2-21. Chlorine Contact Basin



Figure 2-22. Sunningdale High Service Pump Room

EXISTING CONDITIONS

Table 2-4. Sunningdale WTP Pump Summary

Pump Location	Pump ID/Description	Type of Pump	Manufacturer	Model	HP	Capacity (gpm)
High Service Pumps	1	Vertical Centrifugal	Peerless TI56733	12LD2	50	900
	2	Vertical Centrifugal	Peerless TI56733	12LD2	50	900
	3	Vertical Centrifugal	Peerless TI56733	12LD2	50	900
	4	Vertical Centrifugal	Peerless 53733	12LD2	50	900

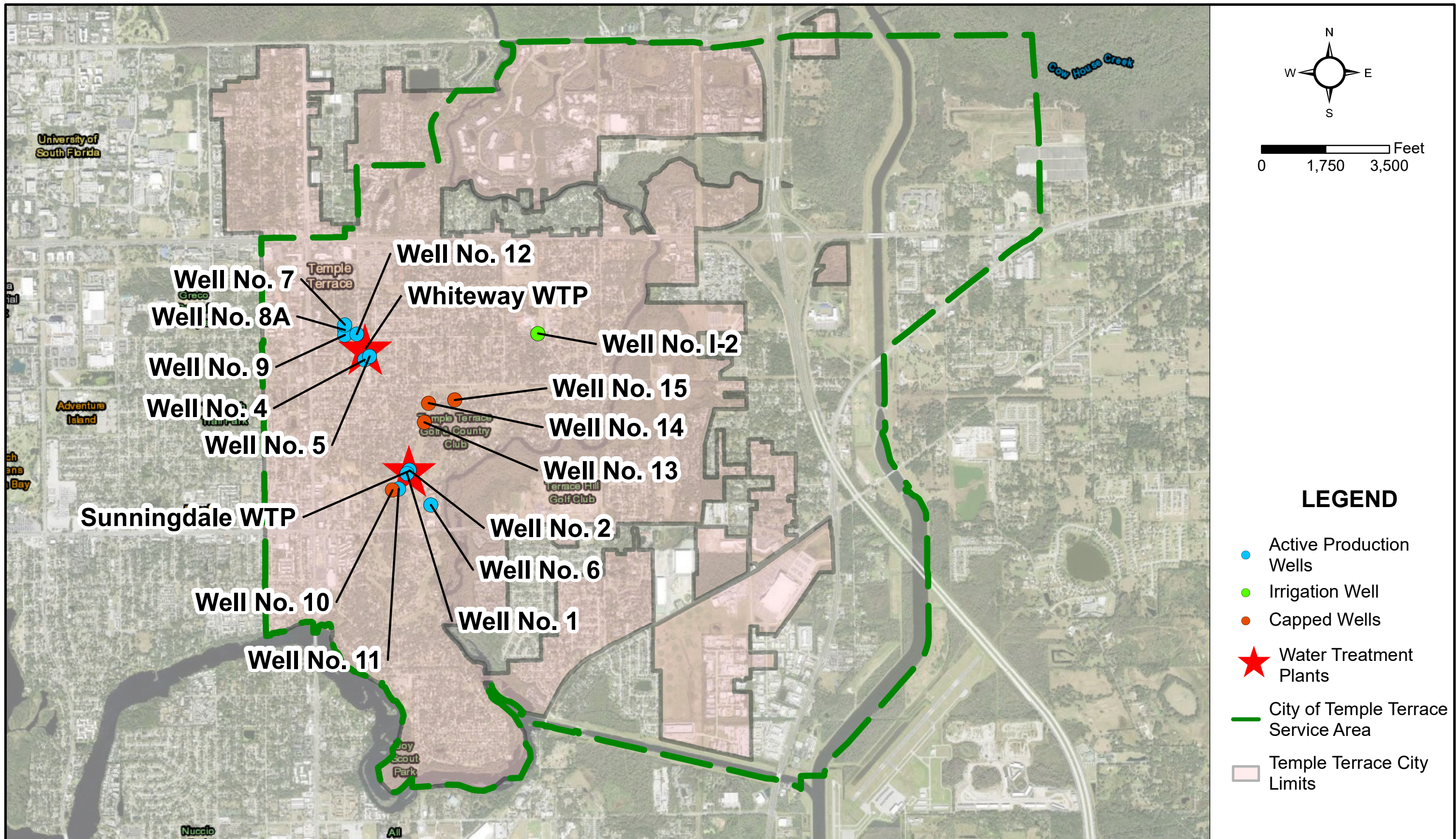
EXISTING CONDITIONS

2.6 Wellfields

The City of Temple Terrace has a total of 15 wells listed in their water use permit; 4 of the wells are capped, 1 is an irrigation well, and 10 are active production wells that supply the WTPs. Whiteway draws water from six (6) production wells; four of the wells are from Richlyne Wellfield (Wells No. 7, 8A, 9, and 12) located across the street from the plant, and two wells are located on-site (Wells No. 4 and 5). The Sunningdale WTP is used as a peaking facility to meet the steady, base loaded flow provided by Whiteway WTP in the distribution system. Sunningdale draws water from four (4) wells; two are at a nearby well field (Wells No. 6 and 11) and two are located on-site (Wells No. 1 and 2). **Figure 2-24** shows the location of the wells. **Table 2-5** summarizes the characteristics of the wells, obtained from the SWFWMD database, last updated in 2019.



Figure 2-23. Production Well No. 2



City of Temple Terrace
City of Temple Terrace Water Master Plan
WATER TREATMENT PLANT AND GROUNDWATER WELL LOCATIONS

FIGURE 2-24

EXISTING CONDITIONS

Table 2-5. Potable Well Field Summary

Well Field	Well Number	Year Drilled	Casing Inner Diameter (in.)	Casing Depth, bls (ft.)	Total Depth (ft.)	Type	Manufacturer	Model	HP	Capacity (GPM)
Whiteway WTP	4	1956	12	119	180	Vertical Turbine	Aurora	Unknown	40	1000
	5	1959 Refurbished	8	126	500	Submersible	Aurora	Unknown	25	420
Richlyne Well Field	7	1963	10	108	155	Vertical Turbine	Flowise	FW9YC	30	875
	8A	2001	14	118	145	Submersible	Goulds	10RJLC030	30	875
	9	1963	6	119	170	Submersible	Centri	6M304	30	700
	12	1982	8	175	370	Submersible	Vertiline	V82-72423	25	500
Sunningdale WTP	1	1920	8	80	480	Vertical Turbine	US Worthington	Unknown	40	500
	2	1954	10	93	480	Vertical Turbine	US Motors	1269976	75	1000
Florida College Campus	6	1926	8	42	384	Vertical Turbine	US Electric	R622904678	40	400
Woodmont Clubhouse	11	1974	12	45	390	Submersible	Peerless	9LA	60	850
Irrigation Well	I-2	1987	10	100	400	Unknown	Unknown	Unknown	Unk	800
Capped Wells	10	N/A	12	58	313	Unknown	Unknown	Unknown	Unk	850
	13	N/A	12	127	460	Unknown	Unknown	Unknown	Unk	700
	14	N/A	12	130	475	Unknown	Unknown	Unknown	Unk	700
	15	N/A	12	134	470	Unknown	Unknown	Unknown	Unk	700

From FDOH-H 2024 Sanitary Survey and SWFWMD WUP Updated 2019

EXISTING CONDITIONS

Table 2-6. Production Well Specs

Well	HP	RPM	Voltage	Type	Pump Size	Stages	Head	Casing Depth	Well Depth	Drilled Date	Rebuild Date	Rating
Richlyne Well Field												
Well No. 7	30	1760	440	Vertical	10" x 8"	4	110'	108'	155'	1963	2000	875 GPM (1.26 MGD)
Well No. 8A	30	3450	440	Submersible	10RJLC	1	110'	*118'	*145'	*2001	2008	875 GPM (1.26 MGD)
Well No. 9	30	3600	440	Submersible	6" 7THSHC	3	105'	*114'	170'	1963	2007	700 GPM (1.008 MGD)
Well No. 12	25	3600	460	Submersible	6" 7TLC	3	103'	*175'	*370'	1982	2007	500 GPM (0.72 MGD)
Whiteway WTP												
Well No. 4	40	1775	440	Vertical	10DHHO	4	112'	119'	*180'	1956	2005	1000 GPM (1.44 MGD)
Well No. 5	40	unk	440	Submersible	8" x 8"	unk	94'	*130'	*500'	*1959	1998	*420 GPM (0.60 MGD)
Sunningdale WTP												
Well No. 1	40	1750	440	Vertical	6" x 6"	3	85'	80'	480'	*1920	2005	500 GPM (0.72 MGD)
Well No. 2	75	1800	440	Vertical	8" x 8"	8	102'	93'	480'	1954	2006	*1000 GPM (1.44 MGD)
Florida College Wellfield												
Well No. 6	40	1750	440	Vertical	6" x 6"	10	90'	42'	384'	1926	2004	400 GPM (0.57 MGD)
Woodmount Wellfield												
Well No. 11	60	3600	440	Submersible	9LA	2	200'	45'	*390'	1974	1999	*850 GPM (1.22 MGD)

From City of Temple Terrace On-Site Well Spec Data Sheet, dated pre-2005

*Updated information from 2024 Sanitary Survey and 2019 WUP

EXISTING CONDITIONS

2.7 Water Storage

The Whiteway WTP currently has 3 ground storage tanks located on site, storing a combined 1.7 MG of finished water. Water is first stored in the smaller 0.2 MG and 0.5 MG ground storage tanks, which provide chlorine contact time post-chlorination, and is then transferred via the 4 transfer pumps to the 1.0 MG storage tank. Chlorine contact time is provided for free chlorine disinfection prior to distribution. The finished water is then pumped to the distribution system via the six high service pumps.

The City has booster stations with two ground storage tanks integrated into the distribution system, which provide extra water during high demand periods and emergency situations, such as fires and power outages. The tanks are filled during low demand periods and then emptied during high demand periods and scheduled maintenance. The first GST, the Chinaberry Storage Facility, is located south of the Whiteway Plant at 7307 Sarvis St. The facility features a 0.5 MG storage tank and a booster pump station with two booster pumps and one recirculation pump. The second GST is at the Telecom Parkway Storage Facility, located on Hollow Stump Rd, next to the fire station at 7772 East Telecom Parkway. This tank is accompanied by a duplex pump station.

Table 2-7. Booster Station Pump Details

Pump Location	Pump ID/Description	Type of Pump	Manufacturer	Model	HP	Capacity (gpm)
Chinaberry Booster Station	1	Horizontal Split Booster	Worthington	5LR-15	50	300
	2	Horizontal Split Booster	Worthington	5LR-15	50	300
Telecom Booster Station	1	Horizontal Split Booster	US Motors	6LF-13A	100	1700
	2	Horizontal Split Booster	US Motors	6LF-13A	100	1700

Table 2-8. City Tank Details

Facility	Diameter (ft)	Nominal Capacity (MG)	Minimum Water Level (ft)	Overflow Level (ft)	Usable Storage Volume (Gallons)
Whiteway WTP	70	0.5	6	17.42	328,760
Whiteway WTP	50	0.2	6	15.58	140,710
Whiteway WTP	80	1.0	8	26.58	698,630
Chinaberry	70	0.5	6	21.83	455,720
Telecom Parkway	70	0.6	6	17.33	326,170
Total	--	2.8	--	--	1,949,990

EXISTING CONDITIONS

2.8 Water Distribution System

The City's water distribution network was originally developed around the Temple Terrace Golf Course between 1922 and 1925. Additional water mains were added from 1925 through the early 1970s, but most major system expansion took place during the 1970s and 1980s as new supply facilities and distribution lines were built.

Today, treated water is delivered from the treatment plants at pressures typically between 55 and 65 psi, serving more than 30,000 residents through roughly 150 miles of pipelines. The Public Works Department manages the operation and upkeep of the system, which primarily uses ductile iron pipe (DIP), cast iron pipe (CIP), and polyvinyl chloride (PVC) pipe. Other materials found in the system include asbestos cement (AC), galvanized steel, and high-density polyethylene (HDPE).

2.9 Historical Raw Water Quality

The City provided the monthly operating reports (MORs) for the previous 5 years of operation (2020-2025). These reports track pH, hardness, turbidity, chlorine concentration (free and total), among other characteristics of the water at three steps in the process at the Whiteway WTP: raw, post-filtration, and finished. At the Sunningdale plant, only chlorine concentration is tracked daily.

After analyzing the results of the MORs, the City appears to have only had one infraction on primary drinking standards, that being on September 15th, 2022 having a free chlorine concentration at the Sunningdale plant of 7.2 mg/L versus the MRDL of 4.0 mg/L free chlorine.

2.9.1 Historical Water Quality Trends

Graphs of the water hardness, turbidity, and chlorine concentrations have been made from the City's MORs, see **Figures 2-25 through 2-32** below. The raw water hardness is comprised of calcium and magnesium hardness, and averages between 250 and 300 mg/L as CaCO₃. Since January 2025, it has trended up towards 350 mg/L total hardness. Hardness does not have a regulated primary, nor a secondary treatment standard; but having too much hardness in the water can cause issues with plumbing and reduce the life of water heaters and other equipment.

The finished water is very sporadic, with the data points oscillating between approximately 300 mg/L to under 200 mg/L frequently. Operators have noted that the lime softening reactors have not operated properly over the past few years with the last attempt approximately 8 months ago and caused issues with high turbidity. This agrees with historical data, suggesting that when the lime reactors were in service, they softened the water to a maximum observed hardness reduction of 30 percent.

Figure 2-25. Whiteway Raw Total Hardness

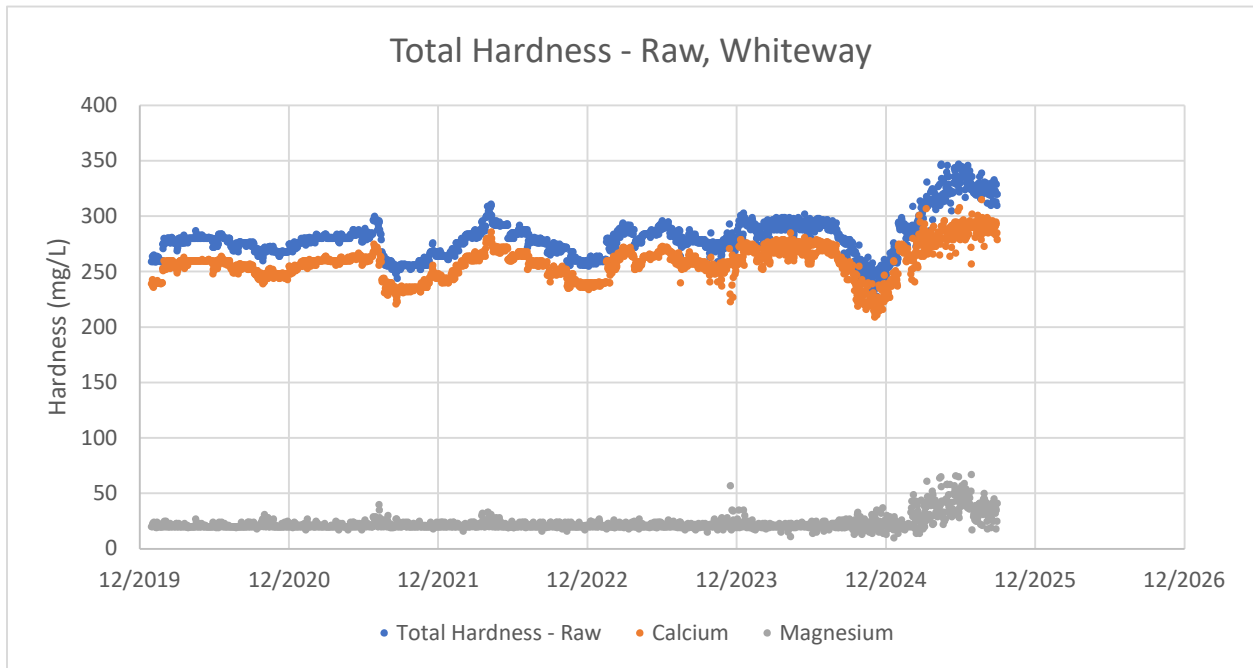


Figure 2-26. Whiteway Finished Total Hardness

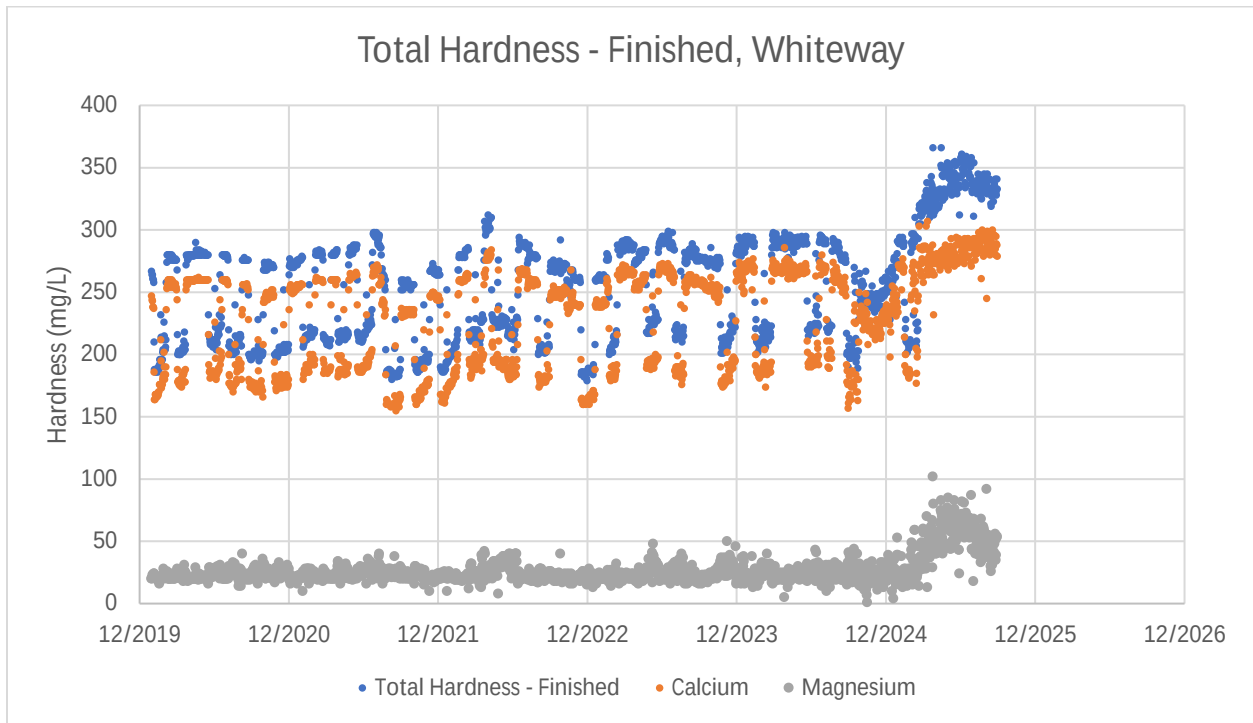
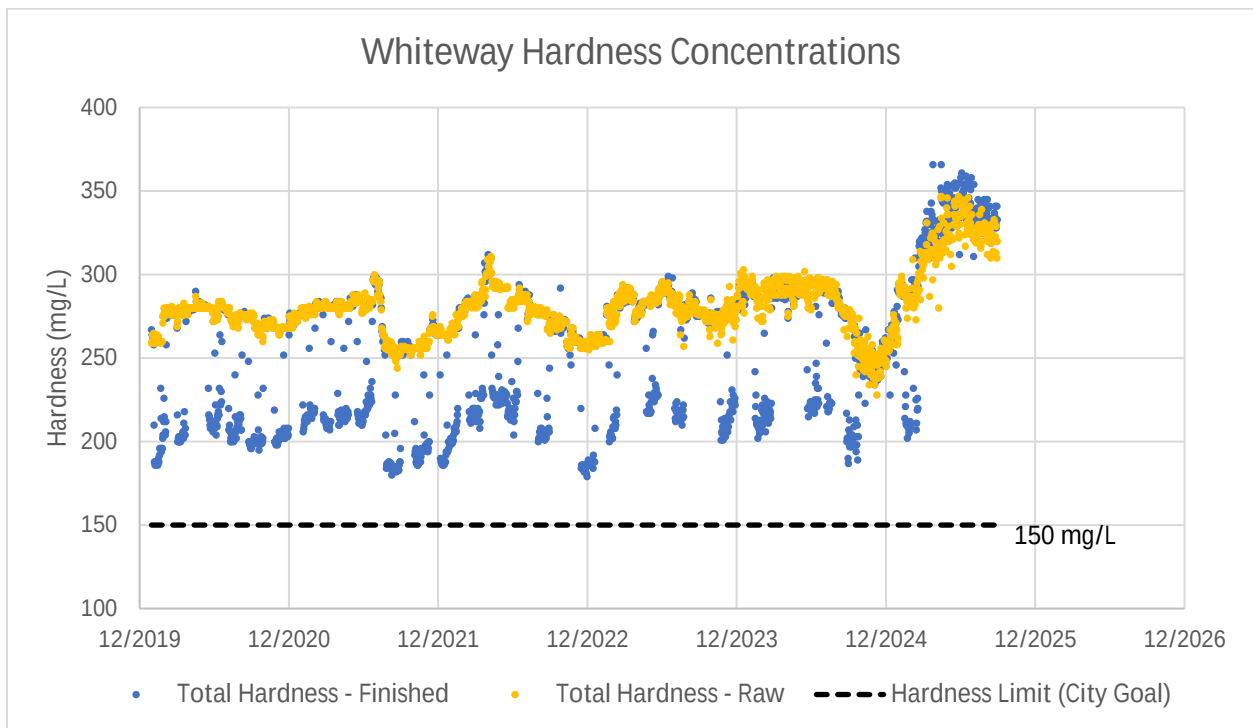


Figure 2-27. Whiteway Total Hardness



EXISTING CONDITIONS

Turbidity, which is a measure of the cloudiness of water and is associated at elevated levels to greater presence of disease causing microbes, is limited to have no samples measuring higher than 1 Nephelometric Turbidity Unit (NTU) and must have 95% of samples in a given month measuring less than 0.3 NTU. At the Whiteway WTP, turbidity in the raw water trends around 0.15 NTU to 0.25 NTU. This is generally reduced to between 0.1 and 0.15 NTU with several data points above this range, but still within the acceptable limit for the primary drinking standard.

Unlike the hardness data, there is no clear distinction between the turbidity readings in the water during periods of lime softening and periods without lime softening. This suggests that even when the lime softening reactors were operational, the filter basins were still able to filter out the increased solids content caused by the lime reactions.

Figure 2-28. Whiteway Raw Turbidity

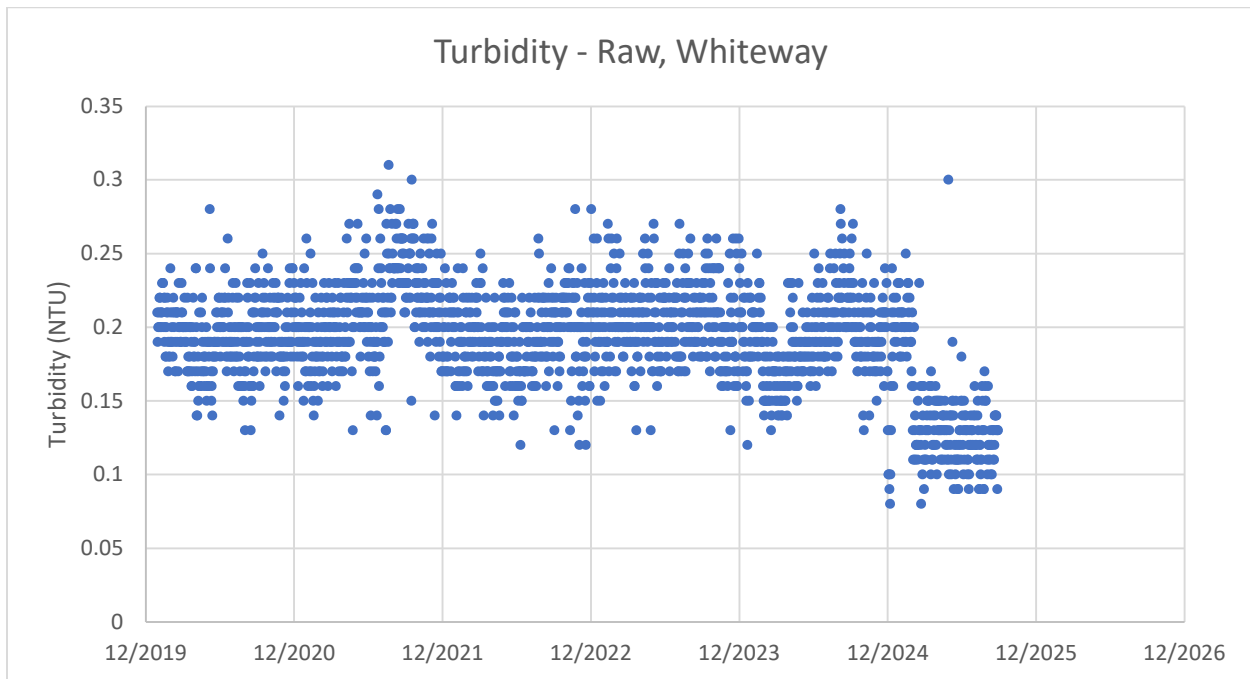


Figure 2-29. Whiteway Finished Turbidity

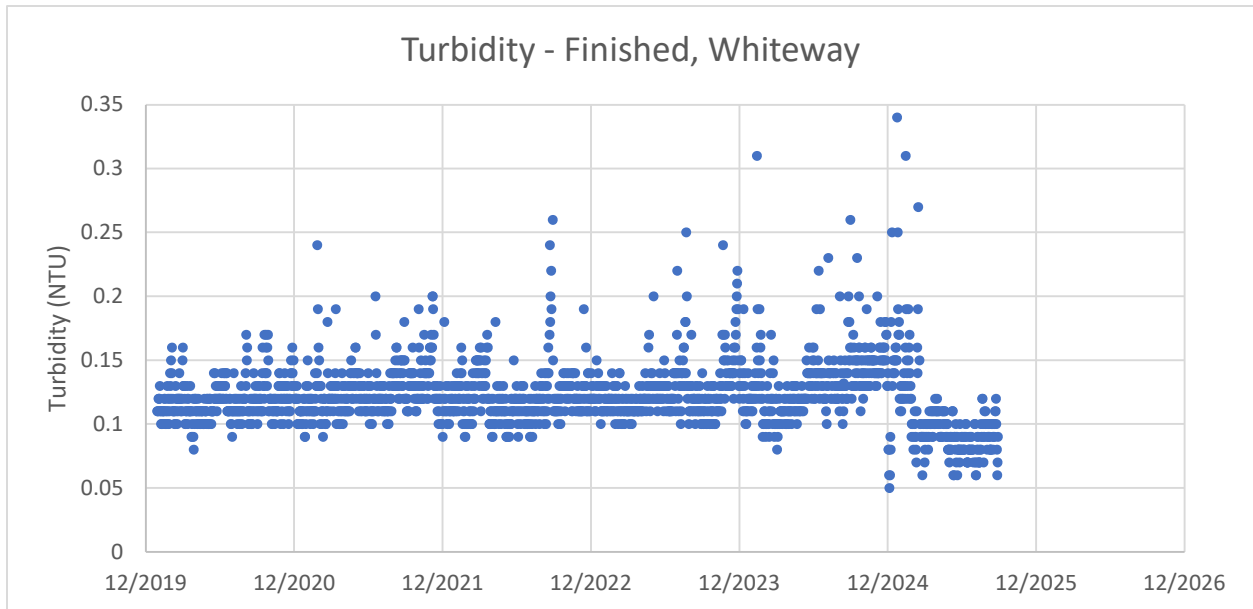
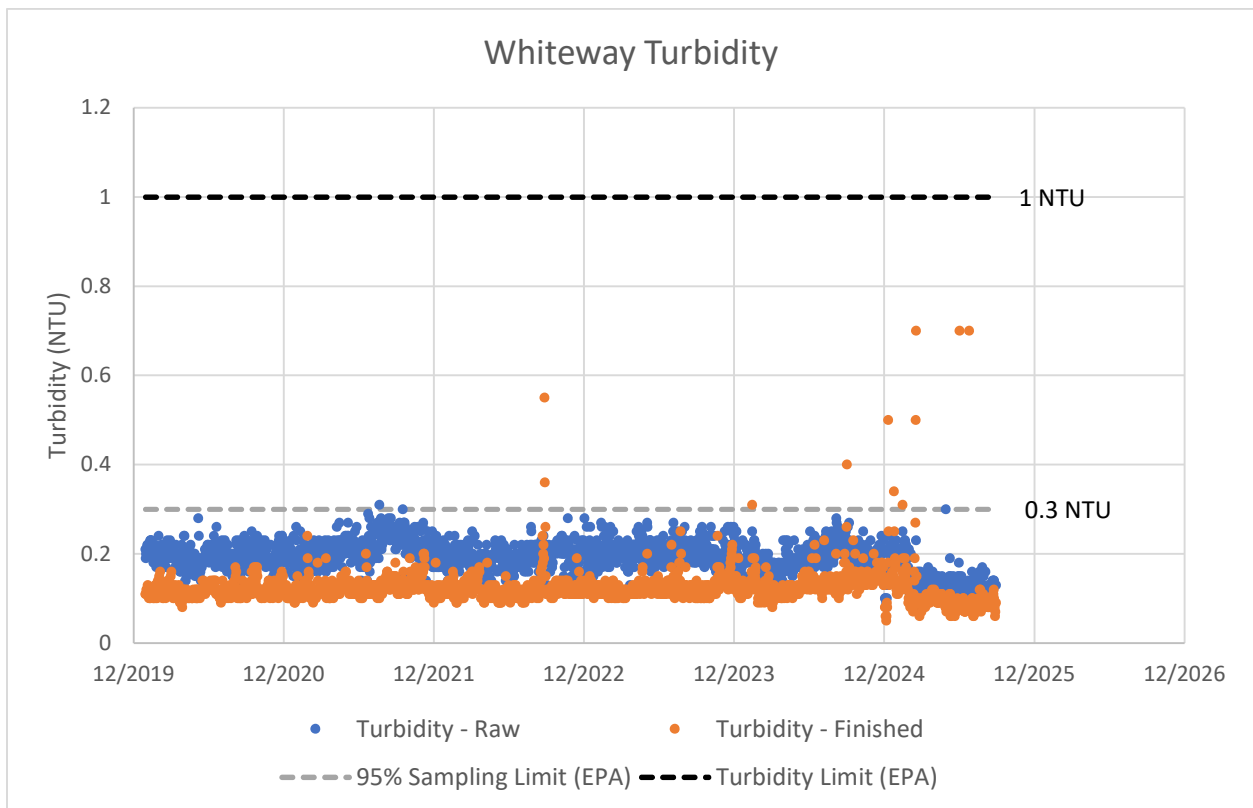


Figure 2-30. Whiteway Turbidity Comparison



EXISTING CONDITIONS

Chlorine, which is commonly used to disinfect potable water prior to distribution, can cause eye irritation and stomach discomfort at high concentrations, and is regulated as a primary drinking standard at a limit of 4 mg/L as Cl₂. The Whiteway WTP injects chlorine after the filter beds. It does not have a proper chlorine contact basin, and instead uses the older 0.2 MG and 0.5 MG ground storage tanks to provide contact time for the chlorine. FDEP requires a minimum contact time of 15 minutes at peak hourly flow. There have been no violations of the standard in the past 5 years at Whiteway.

The Sunningdale plant on the other hand, has a chlorine contact basin on sight, with a packing tower for scrubbing chlorine fumes from the air. The scrubbing system does not have an affect on the concentration in the water however. The chlorine concentration at the Sunningdale plant generally stays between 1.5 and 2 mg/L at the point of discharge, but there was one violation in 2022 where the concentration reached 7.2 mg/L.

Figure 2-31. Whiteway Finished Chlorine

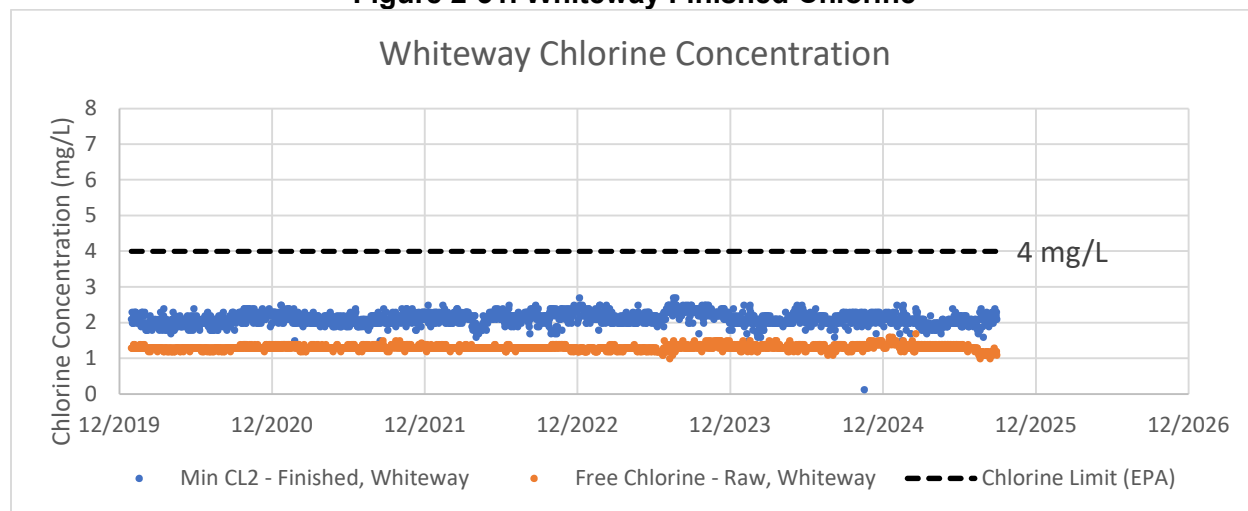
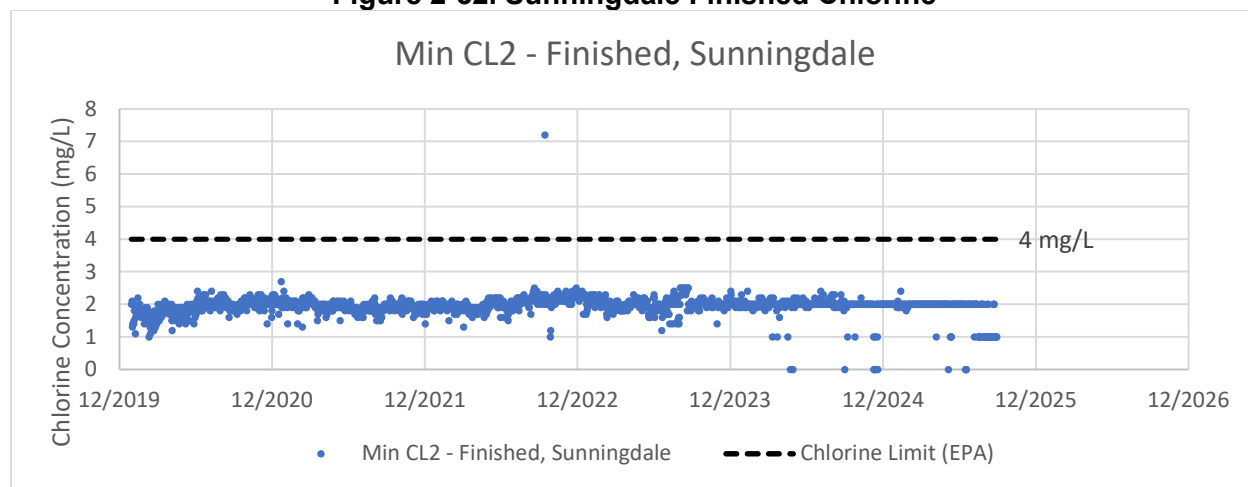


Figure 2-32. Sunningdale Finished Chlorine



EXISTING CONDITIONS

As part of the Master Plan evaluation, CHA Consulting conducted a comprehensive sampling program across all production wells within the City's water supply system. The objective was to analyze raw groundwater for a range of parameters critical to treatment performance and regulatory compliance, including several substances subject to primary drinking water standards, secondary drinking water standards, and ones that are not regulated, but provide greater insight into the overall quality of the water. These substances include for example, but are not limited to, nitrates (primary), arsenic (primary), iron (secondary), chloride (secondary), sodium (unregulated), and total organic carbon (unregulated). Samples were collected in September 2025 following industry-standard protocols and analyzed through a NELAP/NELAC certified laboratory. These results provide a baseline for assessing current water quality conditions and identifying future treatment needs. Tabulated results of the Well Sampling can be seen below in **Figure 2-33**.

There were three instances of a production well exceeding a secondary drinking water standard. There was an exceedance for odor in production well #5, measuring at 20 T.O.N. (Odor: 20 TON>3.0 TON; Threshold Odor Number, the unit for odor, with 3 T.O.N. Additionally, production well #12 exceeded the secondary minimum contaminant level (SMCL) for iron, measuring 0.47 mg/L versus the SMCL of 0.3 mg/L, as well as for Total Dissolved Solids (TDS) measuring 600 mg/L compared to the SMCL of 500 mg/L.

In addition to the aforementioned water sampling of the production wells, three different sampling events were conducted specifically for PFAS contamination of the City's production wells and finished water. Samples were analyzed in March 2025 and May 2025 prior to CHA's involvement, and in July 2025 by CHA. The results of the PFAS sampling events can be seen in **Tables 2-9 through 2-11**. Temple Terrace's water was found to have concentrations exceeding the PMCLs for PFOA and PFOS at all sampled points, and for three of the production wells concentrations exceeded the PMCL for PFHxS in addition. PFAS sampling events were performed by the City to fulfill the quarterly PFAS sampling obligation for FDEP and DOH reporting as well as UCMR5 sampling obligations as required by UCMR5. Results of the UCMR5 sampling will determine the City's compliance status with emerging contaminant limits and guide decisions on PFAS removal needs for the City.

Since November 2024, the City has been monitoring PFAS concentrations in its wells as part of the UCMR5 program. Summary results for the six regulated PFAS compounds are presented in **Table 2-9**. The data show that PFOA, PFOS, and the Hazard Index exceed the EPA's proposed maximum contaminant levels (PMCLs). Notably, PFOS concentrations are of particular concern—the average detected level is twice the PMCL, and the highest detected concentration is about seven times the PMCL.

EXISTING CONDITIONS

Table 2-9. Summary of 2025 PFAS Analysis Results

Contaminants	Minimum (ppt)	Average (ppt)	Maximum (ppt)
PFOA	5.1	7.8	10
PFOS	15	17.3	19.5
PFHxS	6.3	7.8	8.8
PFNA	Not Detected	Not Detected	Not Detected
HFPO-DA ('GenX' chemicals)	Not Detected	Not Detected	Not Detected
PFBS	7.0	10.2	12.2
Mixture of GenX, PFBS, PFNA PFHxS (Hazard Index)	0.75	0.88	1.0

Table 2-10. Summary of 2025 PFAS Analysis Results by WTP

Water Quality Parameter	MCL	MCLG	Whiteway			Sunningdale		
			March 2025	May 2025	July 2025	March 2025	May 2025	July 2025
PFOA	4	0	8.1	8.7	7.2	10	7.7	5.1
PFOS	4	0	19.3	18.8	15	19.5	16.4	15
PFHxS	10	10	8	8.2	6.3	8.8	8.6	6.7
PFNA	10	10	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
HFPO-DA (Gen-X)	10	10	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
PFBS	-	-	12.1	12.2	9.5	11.1	9.2	7.0
Hazard Index	1	1	0.89	0.9	0.79	0.98	1.0	0.75

EXISTING CONDITIONS

Table 2-11. Summary of 2025 PFAS Analysis Results by Production Well

Water Quality Parameter	MCL	MCLG	Sunningdale Plant				Whiteway Plant						Well 16 (Irrigation Well) July 2025
			Well 1	Well 2	Well 6	Well 11	Well 4	Well 5	Well 7	Well 8A	Well 9	Well 12	
			July 2025	July 2025	July 2025	July 2025	July 2025	July 2025	July 2025	July 2025	July 2025	July 2025	
PFOA	4	0	9.1	9.1	6.0	5.0	11	7.1	6.8	6.0	5.1	5.0	5.1
PFOS	4	0	16	17	18	15	18	20	21	13	15	20	11
PFHxS	10	10	6.9	7.0	7.2	6.4	9.4	13	11	4.3	5.5	16	5.7
PFNA	10	10	< 1.7	< 1.7	< 1.7	< 1.7	< 1.8	< 1.7	< 1.7	< 1.7	< 1.7	< 1.6	< 1.7
HFPO-DA (Gen-X)	10	10	< 0.84	< 0.84	< 0.86	< 0.86	< 0.88	< 0.86	< 0.83	< 0.87	< 0.83	< 0.82	< 0.87
PFBS	-	-	8.4	8.9	9.6	6.7	9.1	8.2	11	8.5	10	7.7	6.6
Hazard Index	1	1	0.84	0.85	0.85	0.71	1.15	1.50	1.30	0.55	0.67	1.83	0.71

Figure 2-33. August 2025 Well Water Quality Sampling Results

		Regulations		Lab Detection Limits		Well-4		Well-5		Well-7		Well-8		Well-12		Well-6		Well-11		Well-2		Well-1	
	Unit	MCL	SMCL	PQL	MDL	Results	Qualifier	Results	Qualifier	Results	Qualifier	Results	Qualifier	Results	Qualifier	Results	Qualifier	Results	Qualifier	Results	Qualifier	Results	Qualifier
Atrazine	ug/L	0.003	-	0.097	0.0087	0.0087	U	0.0087	U	0.0087	U	0.0091	U	0.009	U	0.009	U	0.009	U	0.0089	U	0.0088	U
Simazine	ug/L	0.004	-	0.068	0.029	0.029	U	0.029	U	0.029	U	0.03	U	0.03	U	0.03	U	0.03	U	0.03	U	0.029	U
2,4-D	ug/L	0.07	-	0.1	0.022	0.022	U	0.022	U	0.022	U	0.022	U	0.022	U	0.022	U	0.022	U	0.022	U	0.22	U
Bromide	mg/L	-	-	0.2	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Chloride	mg/L	-	250	0.4	0.2	27		25		17		15		16		26		20		26		23	
Nitrate as N	mg/L	10	-	0.2	0.1	1.2		0.1	U	1.6		1.6		0.22		0.71		1.1		1.7		1.7	
Sulfate	mg/L	-	250	5	2.5	100		140		100		110		210		100		120		120		120	
Glyphosate	ug/L	0.7	-	10	6	6	U	6	U	6	U	6	U	6	U	6	U	6	U	6	U	6	U
Calcium	mg/L	-	-	0.56	0.064	110		110		94		95		140		100		96		100		100	
Iron	mg/L	-	0.3	0.22	0.0093	0.067	U	0.067	U	0.067	U	0.067	U	0.47		0.067	U	0.067	U	0.067	U	0.067	U
Manganese	mg/L	-	0.05	0.022	0.011	0.0093	U	0.0093	U	0.0093	U	0.0093	U	0.0093	U	0.0093	U	0.0093	U	0.0093	U	0.0093	U
Silicon	mg/L	-	-	0.022	0.011	5.9		6		5.7		5.7		5.8		6.9		9.3		6.8		8.4	
Sodium	mg/L	-	-	0.56	0.14	14		12		11		12		8.6		12		9.5		13		12	
Arsenic	mg/L	0.01		0.0044	0.00043	0.0015	I	0.0015	I	0.00043	U	0.00043	U	0.0028	I	0.0019	I	0.0025	I	0.0012	I	0.0018	I
Total Hardness as CaCO3	mg/L	-	-	0.2	0.2	310		320		270		270		400		290		290		290		290	
Turbidity	NTU	1	-	0.4	0.2	0.25	I	0.75		0.35	I	0.35	I	3.6		0.2	I	0.5		0.4		0.8	
Color	Color Units	-	15	5	5	5		5		5		5		5		5		5		5		5	
Alkalinity as CaCO3	mg/L	-	-	10	10	160		150		150		150		160		160		130		150		150	
Specific Conductance	umho/cm @ 25C	-	-	2	1	630		670		570		580		760		630		600		650		630	
Resistivity	ohm cm	-	-	0.2	0.1	1600	V	1500	V	1800	V	1700	V	1300	V	1600	V	1700	V	1500	V	1600	V
Temperature	C	-	-	0.1	0.1	20	V	20	V	20	V	20	V	20	V	20	V	20	V	20	V	20	V
Total Dissolved Solids	mg/L	-	500	5	5	460		490		370		390		600		460		450		470		460	
Total Suspended Solids	mg/L	-	-	1	1	1	U	1	U	1	U	1	U	4.1		1	U	1	U	1	U	1	U
Ammonia (as N)	mg/L	-	-	0.02	0.014	0.0046		0.11		0.014	U	0.014	U	0.038		0.014	U	0.014	U	0.014	U	0.014	U
pH	SU	-	6.5-8.5			7.5	Q	7.6	Q	7.4	Q	7.5	Q	7.8	Q	7.6	Q	7.8	Q	7.7	Q	7.6	Q
Temperature	C	-	-			20.6	Q	21	Q	21.1	Q	21.2	Q	21.1	Q	21.1	Q	21.1	Q	21.3	Q	21.3	Q
Total Organic Carbon	mg/L	-	-	2	1	1.2	I	1.4	I	1.2	I	1.2	I	1.5	I	1.1		1.1	I	1.3	I	1.3	I
UV254	1/cm	-	-	0.009	0.009	0.021		0.038		0.023		0.023		0.032		0.023		0.022		0.027		0.022	
UV Transmittance	%	-	-	0.001	0.001	95	V	92	V	95	V	95	V	93	V	95	V	95	V	94	V	95	V
Odor	T.O.N.	-	3	1	1	1	U	20		1	U	1	U	1	U	1	U	1	U	1	U	1	U
Sulfide	mg/L	-	0.3?	2	1	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Disssolved Organic Carbon	mg/L	-	-	2	1	1.5	I	1.6	I	1.3	I	1.7	I	1.6	I	1.6	I	1.6	I	1.7	I	1.9	I
Heterotrophic Plate Count	CFU/mL	500	-	0.5	0.5	0.8		2.8		2.5		82.5		3.8		2.5		26.8		18.8		3.8	
SRBs	CFU/mL	-	-	1	1	ABSENT	U	ABSENT		ABSENT		ABSENT		1-10		ABSENT		1-10		ABSENT		1-10	
Field Temperature	C	-	-			25.3		25.1		25.4		25.7		25.4		24.6		25.2		25.2		25.4	
Oxygen, Dissolved	mg/L	-	-			1.45		1.49		2.53		3.21		2.18		2.6		1.85		1.41		1.23	
Gross Alpha	piC/L	15	-			4		3.4	U	2.3	U	4.3		2.1		3.5		6.5		4.2		2.4	
Radium 226	piC/L	Combined	-			1.8		1		0.9		1.3		0.7		0.9		1.6		1.6		0.8	
Radium 228	piC/L		-			0.8	U	0.9	U	0.9	U	0.9	U	0.7	U	0.7	U	0.7	U	0.8		0.9	U

Qualifier definitions

U: Indicates that the compound was analyzed for but not detected.

V: Indicates that the analyte was detected at or above the method detection limit in both the sample and the associated method blank and the value of 10 times the blank value was equal to or greater than the associated sample value.

I: The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

Q: Sample held beyond the accepted holding time.



EXISTING CONDITIONS

2.10 Treatment Process Performance

A walkthrough of the Whiteway WTP demonstrated that some of the facilities within the plant operate as originally intended, as indicated in **Table 2-12**. The finished water at both WTPs is considered very hard, currently more than 300 mg/L total hardness as CaCO₃ as the lime softening process is currently non-functional. PFAS removal treatment processes would be needed for regulatory compliance as conventional treatment is ineffective for treating PFAS compounds.

Table 2-12. Treatment Process Functionality

Treatment Unit Process	Functional?	Description
Cascade Aeration	Yes	Black deposits present on surface of cascade trays (oxidized sulfur/iron/manganese possibly); normal given age of system
Lime Softening Reactors	No	Out of service: Operators noted difficulty in operating, and presence of higher turbidity when operating
Recarbonation Tank	No	Carbon dioxide and Alum historically added here to accommodate for increased pH from softening; Historically problematic for operators, and not needed due to offline softening
Dual-Media Filters	Yes	Operators noted inability to isolate filter beds, and that backwashing is generally insufficient in one cycle
Chemical Feed	Yes	Chlorine and Zinc Orthophosphate added as normal; Fluoride no longer added due to state legislation

2.11 WTPs Condition Summary

Both the Whiteway and Sunningdale Water Treatment Plants are aging, and several key pieces of equipment are approaching the end of their service life. The City does maintain equipment through its operating and capital budgeting and has kept the WTPs running reliably. Continued reliability will require increased levels of repair and renewal costs.

3.0 TREATMENT PROCESS EVALUATION

The City's Whiteway and Sunningdale WTPs were evaluated for compliance with future demand and delivered water quality needs. The treatment process evaluations include technical, master planning level analyses. The treatment plants' process evaluation results are summarized in this section and organized in subsequent sections the Sunningdale and Whiteway WTPs:



Figure 3-1. Whiteway 3D Model

- Capacity evaluation of individual processes
- Water Quality Goals
- Historical treatment performance
- PFAS treatment technologies
- Total hardness reduction technologies
- Treatment process conclusions

3.1 Treatment Process Overview

The City's upper Floridan aquifer groundwater wellfields supply its Whiteway and Sunningdale WTPs. These plants collectively ensure reliable potable water service for the community. The rated/permitted capacity of the Whiteway WTP is 5 million gallons per day (MGD), while the Sunningdale WTP is rated/permitted for 4 MGD. Under normal operating conditions, historical data focusing on the last three years indicates that Whiteway typically treats an average of approximately 3 MGD, whereas Sunningdale averages about 1 MGD.

The source water is from an Upper Floridan Aquifer (UFA) that is relatively shallow i.e., 300-500'. The Whiteway wellfields can deliver up to 6.0 MGD. The Sunningdale wellfields can deliver up to 4.17 MGD. This raw water availability ensures flexibility in meeting varying demand.

Future demand projections, based on regional growth trends and planning data, estimate an average day demand of 4.38 MGD and a maximum day demand of 5.8 MGD for the City. While the combined permitted capacity of both plants (9 MGD) is sufficient to meet these projected needs (water use permit limitations notwithstanding), the City has asked to also evaluate potential consolidation scenarios capital and operational considerations affect.

3.1.1 Potential WTP Consolidation to Whiteway

If the City were to consolidate treatment operations at the Whiteway facility, Sunningdale would still likely need to operate as a raw water pump station unless a new wellfield was developed. The consolidation would trigger raw water transmission, finished water transmission, pumping improvements and expansion of Whiteway WTP from 5.0 to 6.0 MGD. Connecting the two plants to afford redundancy in case of a shutdown at Sunningdale, the current design capacity of 5 MGD would be insufficient to handle the combined flows of both Whiteway and Sunningdale. Therefore, the plants must either continue operating as separate facilities or undergo significant capacity upgrades at Whiteway to accommodate consolidated treatment. An separate evaluation will need to be completed to determine the impacts and necessary changes at Sunningdale to convert it to a pump station.

3.1.2 Potential New Wellfield

The City currently has available existing well capacity (10.17 MGD) for expanded need but is constrained by the current SWFWMD Water Use Permit (~5 to 6 MGD). The existing well fields are productive and good quality, except for the high hardness and PFAS, which is likely ubiquitous in the area's available fresh groundwater. Going to the deeper, Lower Floridan aquifer would likely require similar and additional treatment for total dissolved solids (TDS), requiring a membrane solution (Nanofiltration or Reverse Osmosis), triggering the need for a deep injection well costing ~\$25M or less to dispose concentrate, if collaborated with the City of Tampa and costs for transmission. The planned treatment system for the existing well supply could be designed to adapt to deeper, higher TDS in the future. The City should pursue an additional well supply evaluation, for an initial, single potable supply well in the Whiteway WTP area, with the possibility of garnering SWFWMD funding as an alternative water supply project to offset the need to increase the City's Water Use Permit levels. Increased permitted water supply, in the 5 to 15% range, may be needed if advanced treatment processes are implemented.

3.1.3 Wholesale Supply from Neighboring Utilities

Consideration for wholesale supply from adjacent City of Tampa and Hillsborough County water systems. Potential issues and cost considerations are included in following sections.

3.2 Treatment Process Component Capacity Analysis

This capacity evaluation assesses the capacities of the existing WTPs for comparison with the projected water demands. Unit treatment processes that are required to treat the maximum daily flow (e.g., aeration, lime softening units, filters, high service pumping units, chemical feed equipment and ancillary equipment) were evaluated. Other factors taken into consideration in the evaluation include regulatory requirements, typical drinking water treatment process loading criteria, operational convenience and hydraulic limitations of the WTPs. The capacity of the unit processes at the plant, the number of units for each stage of the process and the number of units required for meeting the maximum day demand (MDD) (5.9 MGD in Year 2045), rounded up to 6.0 MGD, 2.0 MGD MDD for Sunningdale and 4.0 MGD MDD for Whiteway.

Table 3-1 provides a summary of the Whiteway WTP component capacity evaluation for the MDD condition, comparing needed future capacity with each unit's total and firm capacity. Firm capacity is defined as the largest unit out of service, realizing that firm capacity is not required or recommended for every process, e.g., finished water storage. The Whiteway WTP is currently operating and existing unit processes have shown reliability except for the lime softening and recarbonation systems which have not operated consistently and are currently out of service. The selection of PFAS removal process will impact the treatment requirements moving forward. For example, selection of certain IX PFAS removal systems require advanced softening.

Table 3-1. Whiteway WTP Treatment Process Capacity Evaluation Summary

Component	Equivalent MDD Capacity GPM	Limiting Components GPM	Needed Capacity Increase for 6 MGD (4,167 GPM)
Wells Total	4,403	--	--
Wells Firm	3,522	3,522	+ 645
Aerator	3,500	3,500	+ 667
Raw PS Total	5,250	--	--
Raw PS Firm	3,500	3,500	+ 667
Raw Discharge 10" Header			
Lime	3,500	3,500	+ 667
Recarb*	2,750	2,750	+ 1,417
Filters	3,470	3,470	+ 697
Transfer PS Total	5,200	--	-
Transfer PS Firm	3,600	3,600	+ 567
High Service PS Total MDD Equivalent	4,800	--	--
High Service PS Firm MDD Equivalent	3,800	3,800	+ 367
Finished Storage, MDD Equivalent	4,167	--	--

* Recarb basin limit due to tank hydraulics as identified by City staff, confirmed with master plan hydraulic modeling

From the above table, in order for the Whiteway plant to reach 6 MGD, most components need to have an increase in capacity. The greatest bottleneck for the existing system is with the Recarb tank, which can support a maximum of 3.9 MGD. More details can be found on the conducted hydraulic modeling and testing in the Chapter 5 Condition Assessment.

Table 3-2 provides a summary of the Sunningdale WTP component capacity evaluation for MDD condition, comparing needed future capacity with each unit's total and firm capacity.

Table 3-2. Sunningdale WTP Treatment Process Capacity Evaluation Summary

Component	Equivalent MDD Capacity GPM	Limiting Components GPM	Needed Capacity Increase for 2 MGD (1,388 GPM)
Wells Total	2,750	--	--
Wells Firm	2,063	2,063	--
Chlorination	2,750	--	--
Chlorine Contact Time Storage	2,750	--	--
High Service PS Total MDD Equivalent	2,778	--	--
High Service PS Firm MDD Equivalent	2,083	--	--
Finished Storage, MDD Equivalent	1,278	1,278	+ 110

From the above table, the Sunningdale plant to components are all capable of producing 2 MGD of finished water. The primary bottleneck for Sunningdale is due to the lack of onsite storage, relying on storage via the distribution system and intermediate storage tanks (Chinaberry and Telecom).

3.3 Treatment Process Performance Evaluation

3.3.1 Water Quality Goals

As discussed in **Chapter 2**, the blended source water can be characterized as neutral to slightly alkaline pH, high alkalinity, with low to moderate color, low TOC (1.26 mg/L) and TDS (average 461 mg/L). Raw water color and TOC are direct precursors for the formation of DBPs. Water suppliers classify the hardness of a water as soft (below 60 mg/L as CaCO₃), medium hard (60 to 120 mg/L as CaCO₃), hard (120 to 180 mg/L as CaCO₃), very hard (180 to 350 mg/L as CaCO₃), and brackish (above 350 mg/L as CaCO₃).

Based on this classification, the raw water can also be characterized as very hard water and is primarily composed of calcium hardness. Although higher values of hardness are not dangerous,

public acceptance typically requires a water supply below 150 mg/L as CaCO₃. Hard water also tends to stain bathroom fixtures and leave scale in water heaters. Agencies recommend that suppliers of potable water maintain total hardness levels below 120 mg/L as CaCO₃ when economically feasible. The water quality goals for full-scale treatment include compliance with all primary and secondary water quality standards (see Section 1), as applicable to WTPs. **Table 3-3** below summarizes the finished water quality standards and goals (industry standards) relevant to this project.

The City would like to achieve <150 mg/L, however, neither of its WTPs can achieve this currently. The Whiteway WTP's lime softening Gyrazur process is only capable of 30% hardness removal and given the influent hardness; cannot achieve the City's stated goal of <150 mg/L total hardness.

Table 3-3. Finished Water Quality Goals

Finished Water Quality Goals				
Water Quality Parameter	Significance	Water Quality Goal or Industry Standard	Water Quality Standard	Standard Reference
TOC ¹	• DBP • precursors • Chlorine demand • Stable water quality	(TOC <2.0 mg/L or SUVA <2.0); Higher removals strongly recommended	30% removal	Stage 1 D/DBP Rule
Turbidity	• Filtration effectiveness • Indicator parameter for pathogens	≤1 NTU	≤1 NTU at all times (for surface water plants turbidity ≤0.3 NTU in 95% of samples)	NPDWR/FDEP Treatment Technique
Color	• Aesthetic appearance	<5 color units	<15 color units	NSDWR
pH	• Quantity of chemicals • DBP formation • Concrete erosion, calcification, corrosion potential	7.1-8.5 ²	6.5 – 8.5	NSDWR
Conductivity/TDS	• Lead and Copper • Uptake potential	<500 mg/L as TDS	<500 mg/L as TDS	NSDWR
Iron	• Filter Clogging • Color in finished water	<0.3 mg/L	<0.3 mg/L	NSDWR
Manganese	• Filter Clogging • Color in finished water	<0.05 mg/L	<0.05 mg/L	NSDWR
Hardness	• Distribution System • Scale buildup	<150 mg/L as CaCO ₃ ³	N/A	N/A
Alkalinity	• Surrogate for calcium carbonate/sulfate precipitation potential	120-140 mg/L as CaCO ₃ ³	N/A	N/A
TTHMs	• Disinfection • By-products • Cancer risk	<64 ppb or µg/L ⁴	<80 ppb or µg/L	Stage 1 D/DBP Rule
HAAs	• Disinfection • By-products • Cancer risk	<48 ppb or µg/L ⁴	<60 ppb or µg/L	Stage 1 D/DBP Rule
Sulfate	• Scaling Factor	<200 mg/L	N/A	N/A
Nitrite (measured as Nitrogen)	• Nitrification • Blue-baby syndrome	1.0 mg/L	1.0 mg/L	NPDWR
Nitrate (measured as Nitrogen)	• Nitrification • Blue-baby syndrome	10.0 mg/L	10.0 mg/L	NPDWR

Finished Water Quality Goals				
Water Quality Parameter	Significance	Water Quality Goal or Industry Standard	Water Quality Standard	Standard Reference
Hydrogen Sulfide	• Taste and odor	<0.3 mg/L process feed <0.1 mg/L finished	N/A	N/A
Free Ammonia	• Nitrification	<0.05 mg/L	N/A	N/A
LSI	• Potential for corrosion	>0	N/A	N/A
CCPP	• Potential for corrosion	4-10	N/A	N/A

Notes:

¹ Water quality standard is not applicable to the WTPs as they are considered groundwater plants by FDEP. However, water quality goals (industry standards) are recommended.

² Finished water pH is partly dependent upon source and treatment process; City's goal is pH value at entry and in the distribution system of 7.3.

³ State-designated minimum alkalinity value at entry and in the distribution system is equal to or greater than 111 mg/L as CaCO₃.

⁴ Lower TOC levels in filtered water have additional benefits, such as a lower chlorine demand, less TTHM/HAA formation, more stable chlorine/chloramines residual, and reduced risk of nitrification in the distribution system. Goal is set at 20% below the Standard as an operational target for to provide assurance of 100 percent regulatory compliance.

< = less than

% = percent

µg/L = microgram(s) per liter

CaCO₃ = calcium carbonate

CCPP = Calcium Carbonate Precipitation Potential

DBP = disinfection byproduct

FDEP = Florida Department of Environmental Protection

HAA = haloacetic acid

LSI = Langelier Saturation Index

mg/L = milligram(s) per liter

N/A = not applicable

NPDWR = National Primary Drinking Water Regulations

NSDWR = National Secondary Drinking Water Regulations

NTU = Nephelometric turbidity unit

ppb = part(s) per billion

D/DBP = Disinfection/Disinfection By-product

TTHM = total trihalomethane

3.3.2 Historical Treatment Performance

CHA conducted performance evaluation of the existing processes at the two WTPs including water quality analyses. Water quality evaluations were performed on raw water, finished water quality and compared to City's water quality goals. This water quality assessment was based on an extensive review of the monthly operating reports (MORs), data provided by City, and communications with WTP operators and managers.

The current observations of the treatment processes, based on several site visits and discussions with City operations and engineering staff, are summarized in **Table 3-4** below.

Table 3-4. Observations of Whiteway WTF Operations

Process	Key Findings / Observations
Aeration	Removes 25-40% of influent hydrogen sulfide, raw water sulfide concentrations are low, this removal is sufficient and the remainder of hydrogen sulfide is oxidized with chlorine.
“Gyratur” Catalytic Lime Softening Reactor	Not currently in service, no lime sludge dewatering facilities, process was discontinued, operated sporadically when in service, removed ~30% of hardness when operating not meeting quality goal, lime hauling location 30+ miles away
Recarbonation	Not currently in service. Since the lime softening reactors are offline, recarbonation is not required.
Predisinfection	Ample capacity, minimal disinfection by-product (DBP) production due to low organic carbon in source water.
Filtration	Filters are functional, in need of complete overhaul and full media changeout, backwash system is defective and needs renewal.
Post-filtration Disinfection	Ample performance and capacity, the system is a 150 lb chlorine gas cylinder system meaning frequent cylinder changeouts. Due to operability and safety, City is planning to replace with sodium hypochlorite
Clear Well	Ample capacity
Water Storage Tanks	Ample capacity, high service pumps can pull from the last big tank or pull from the other 2 upstream tanks if needed.
High Service Pumping	High service pumps function sufficiently, run continuously with two pumps including a variable speed with additional pumps coming on as demand dictates.
Lime Sludge Management	The lime sludge is transferred to a holding area for some dewatering though percolation and hauling to a disposal site. The lime sludge management system is inadequate and likely part of the reason the lime system was not operated continuously.

3.3.3 Aeration Tank

The aeration tank at the City’s water treatment facilities is designed to blend incoming feed water and facilitate aeration for the removal of hydrogen sulfide, a common groundwater constituent that can cause taste and odor issues. The process relies on introducing air into the water stream, promoting oxidation and volatilization of H₂S prior to downstream treatment.

A tank-mounted tray aeration system is used for aerating/degasifying the full influent, prior to softening, for removal of volatile compounds such as hydrogen sulfide and carbon dioxide. Recent sampling of raw water from production wells indicates that sulfide concentrations are low; raw water hydrogen sulfide levels <1 and typically <0.3 mg/L as shown in **Table 3-5**.

The aeration process currently provides some benefit in terms of sulfide removal. In combination with the attached tank continues to serve as a blending point for multiple well sources, and a feed reservoir for downstream processes.

Given these findings, the aeration system remains operational and supplies minimal, yet valuable sulfide reduction to minimize chlorine dosing and sulfur oxidation turbidity. Future considerations should be focused on keeping proper maintenance of the tank and tray aerators, which is explored in the condition assessment portion of the master plan.

Table 3-5. Well Sulfide Levels

Item	Unit	Regs.	MDL	Well -4	Well -5	Well -7	Well -8A	Well -12	Well -6	Well -11	Well -2	Well -1
Sulfide	mg/L	<0.3	1	<1	<1	<1	<1	<1	<1	<1	<1	<1

3.3.4 Lime Softening Reactors

The “Gyratur” process is a type of cold lime softening that removes calcium and magnesium hardness from water in a fluidized bed reactor. The treated water precipitates calcium carbonate onto the surface of fine sand “seeds,” forming dense, easily removable pellets. The accumulated pellets are periodically drained from the bottom of the reactor for disposal or reuse. Softened water, with 30% of the hardness removed, is drawn from the top of the reactor and flows next to the filtration step.

The lime softening system has presented the City with issues consistently over the past 5 years. Historical data shows oscillating periods of activity and inactivity in operating the lime reactors, with the most recent attempt at softening occurring in January 2025. Due to extended periods of inactivity, in addition to staff turnover, there is a lack of knowledge and expertise in operating the system which presents challenges in restoring the system.

Operators noted that when the system was previously in service, the water had a high turbidity, exceeding 1 NTU. This could indicate potential issues with carryover of particulates from the reactors. High turbidity is a concern as it could decrease filter performance downstream, and increase the need for backwashing, requiring more water usage.

Historically, the City’s raw water has had a hardness concentration averaging between 250-300mg/L. During periods of active lime softening, the hardness concentration was reduced by as much as 30%, averaging approximately 175-210 mg/L in the finished water, however, intermittent lime system run times increased annual averages well above these levels.

Starting from January 2025, the City has seen a sharp increase in the hardness concentration of the raw water, reaching as high as 350 mg/L. Even if the lime softening reactors were restored, the hardness may only be reduced to approximately 245 mg/L (assuming 30% reduction). A possible cause for this increase in hardness could be due to the combination in which the City draws water from the production wells. In particular, during analyses of the raw water

characteristics, all of the production wells had hardness levels ranging from 270 to 320 mg/L, except for Well #12 which measured 400 mg/L.

Figure 3-2. Whiteway Raw Total Hardness

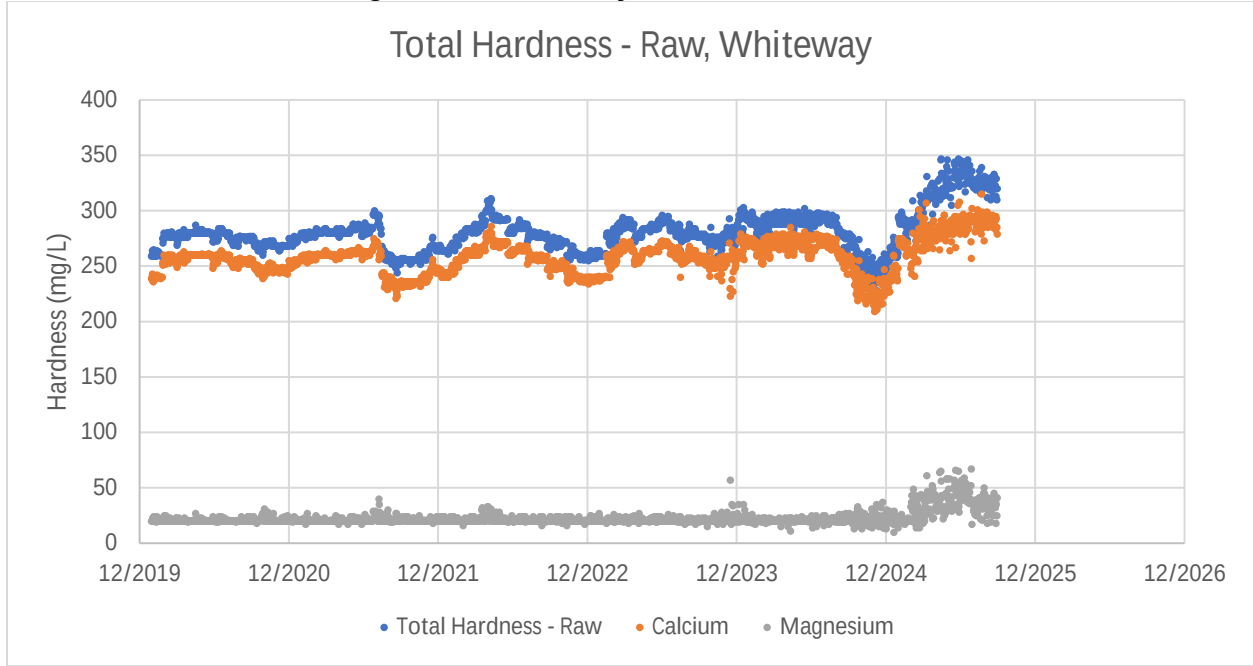


Figure 3-3. Whiteway Finished Total Hardness

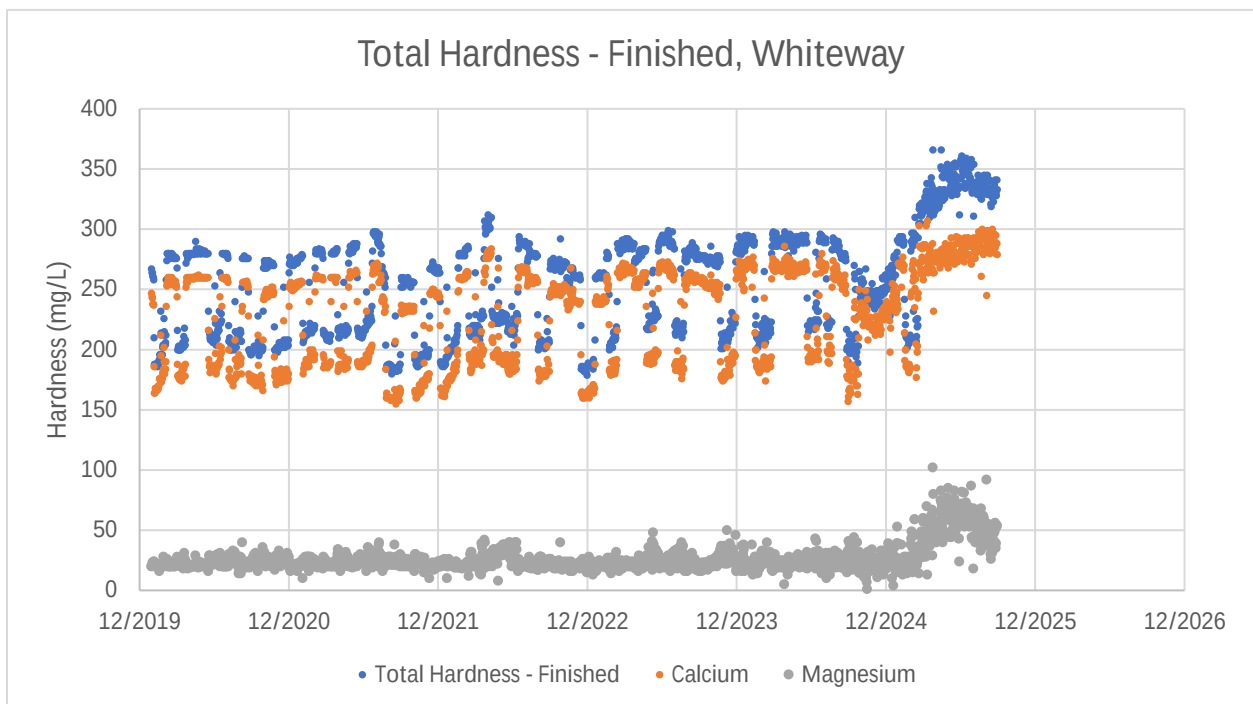
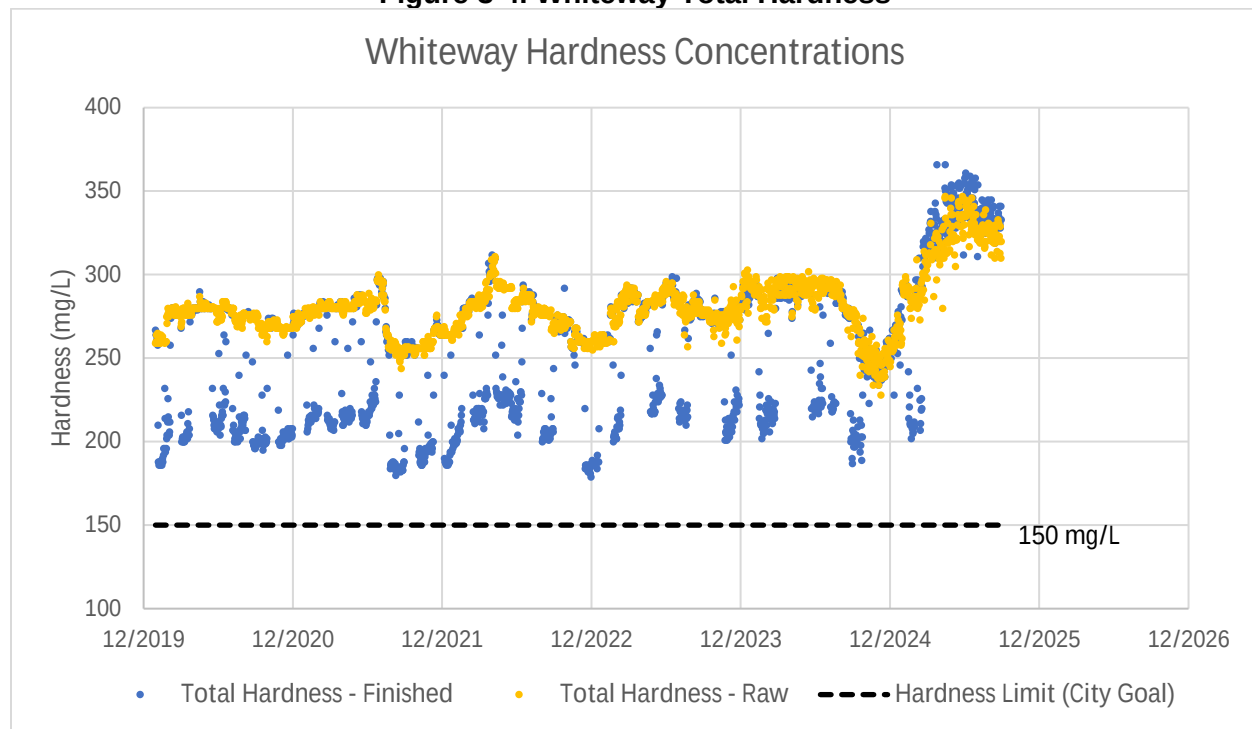


Figure 3-4. Whiteway Total Hardness

3.3.5 Recarbonation Tank

The recarbonation tank, like the lime softening reactors, is not functional. The original intent of the tank was to inject alum and carbon dioxide into the water after lime softening to adjust pH and control turbidity. Historical records as far back as 2005 describe the City as having difficulty operating the recarbonation tank, so it has been non-operational for a long time.

If the City can restore the lime softening process, it may be worth evaluating the recarbonation tank to reduce pH and address the reported turbidity issues.

3.3.6 Dual-Media Filters

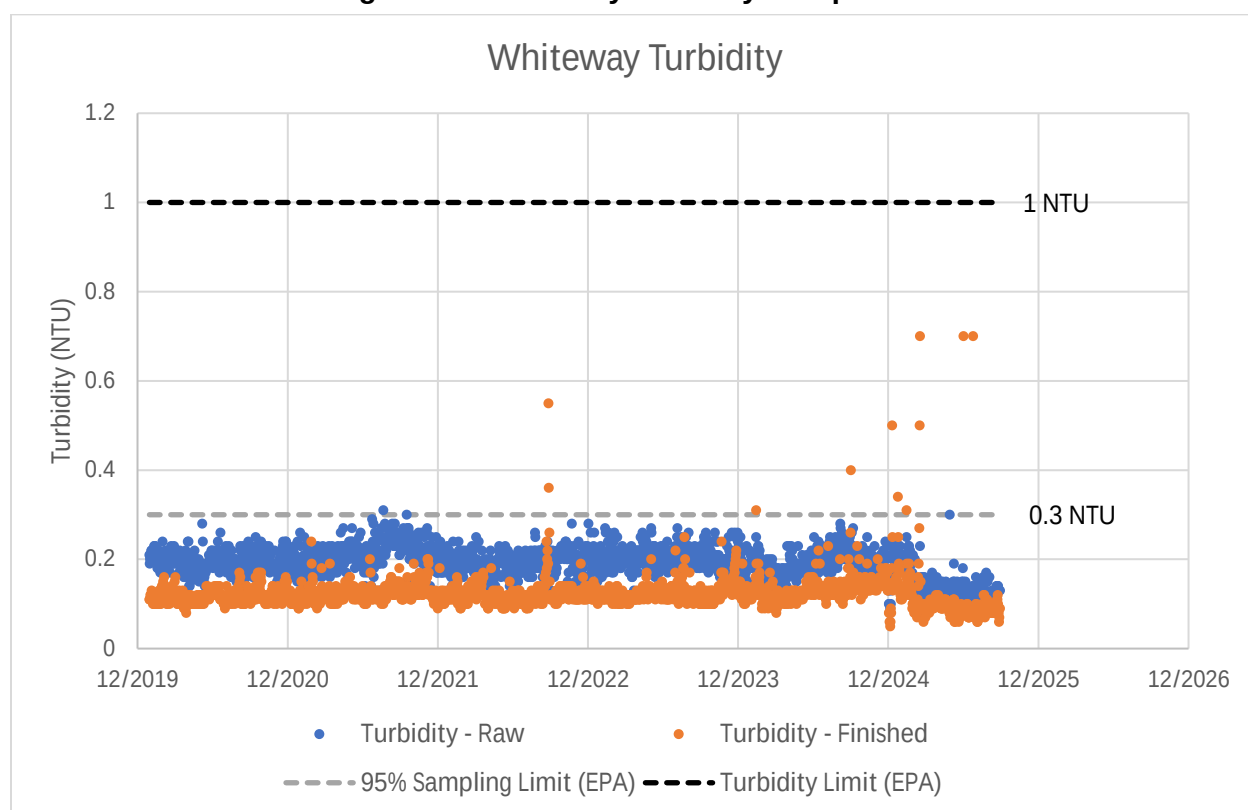
The performance of the filters was assessed based on historical data and operator feedback. The operators reported that they were unable to isolate the individual filter beds. This complicates maintenance and flexibility in operation when problems arise. In addition, the operators reported that the backwash pump is generally not sufficient in backwashing the filters to completion in one cycle. In addition, multiple backwash cycles are typically not performed. This may cause a buildup of sediment within the media, decreasing filter performance and efficiency over time.

Historically, the City has produced water that has a turbidity between 0.1 and 0.2 NTU, with periods where it increases up to 0.25 NTU, and few instances where it reached above 0.3 NTU in the past 5 years. There is no clear indication in the finished water turbidity measurements that

distinguish periods of time with lime softening from periods without lime softening. This suggests that even with the operator's reports of high turbidity during softening, the filters managed to filter solids and maintain a high-quality finished water.

Addressing the issues of the filter backwash pump being insufficient, and the filters being unable to be isolated are both key issues that should be addressed in the future to increase reliability of the treatment process. In its current state the filter basin is a critical single point of failure which can be amended by solving the issue of isolating the filter beds to provide redundancy and ease of maintenance.

Figure 3-5. Whiteway Turbidity Comparison

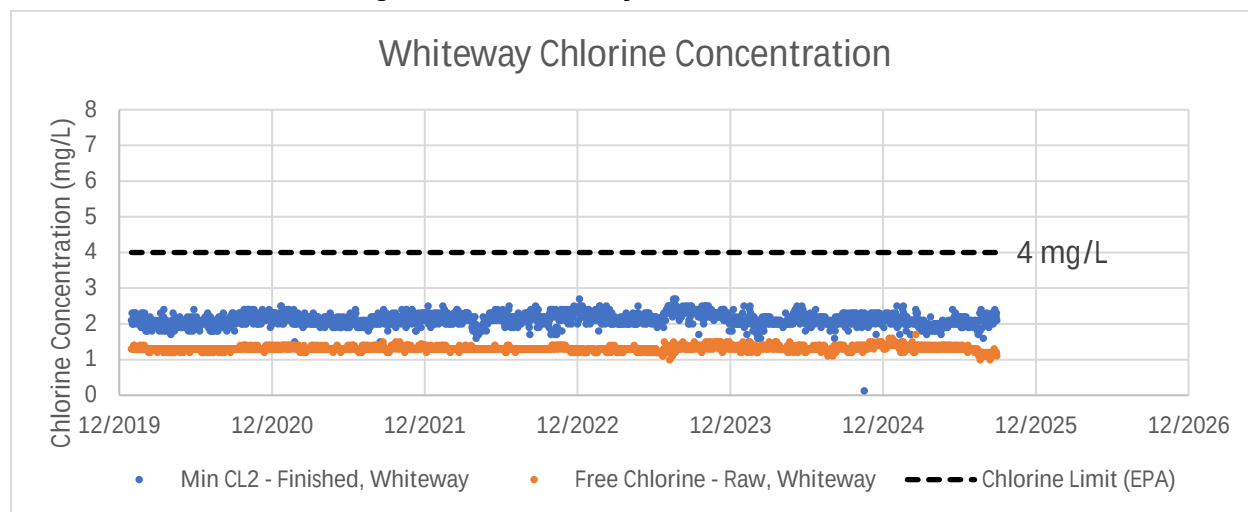


3.3.7 Chemical Feed at Whiteway WTP

At Whiteway, pre-chlorination is applied at the aeration tank to provide initial disinfection and control biological growth early in the treatment process. Post-chlorination occurs at the clearwell following filtration to maintain a stable disinfectant residual throughout the distribution system. Chlorine concentrations at this facility are consistently measured at approximately 2 mg/L, aligning with regulatory requirements for potable water to stay below MRDL of 4 mg/L.

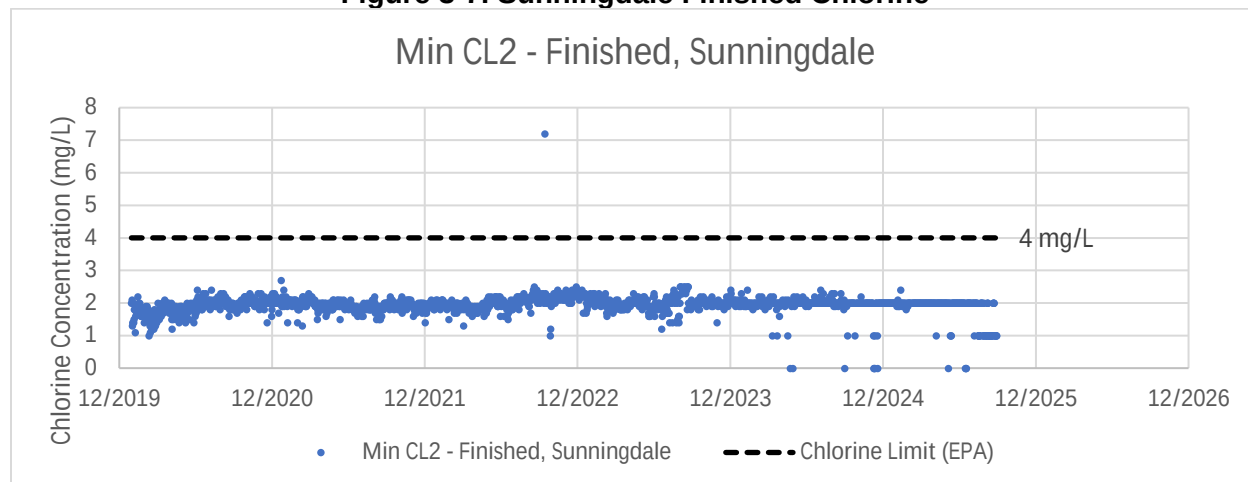
Additionally, zinc orthophosphate is dosed at the recarbonation tank to provide corrosion control within the distribution network, reducing the potential for lead and copper leaching from plumbing systems. Since the 1980's Whiteway upgrade, fluoride was added for dental health benefits, however this practice has been discontinued in compliance with 2025 Florida legislation prohibiting fluoride addition.

Figure 3-6. Whiteway Finished Chlorine



3.3.8 Chemical Feed at Sunningdale WTP

The only treatment process at the Sunningdale facility is disinfection via chlorine gas injection. There is also a dedicated chlorine scrubbing tower to control chlorine fumes coming from the chlorine contact basin. Chlorine residuals at this plant also average around 2 mg/L, ensuring consistent disinfection throughout the system and remaining below the EPA MRDL of 4.0 mg/L. There was one instance in 2022 where chlorine was measured at 7.2 mg/L, which is well above the MRDL and that City operations staff quickly resolved the issue.

Figure 3-7. Sunningdale Finished Chlorine

3.3.9 Measured pH at both WTPs

The pH levels at both plants remain within the EPA secondary drinking water standard range of 6.5–8.5. Whiteway maintains a fairly stable average finished water pH of 7.9. Sunningdale maintains a lower average pH of 7.5. There is a trend in Sunningdale's data of increasing from approximately 7 pH to 8 pH over the course of several months, then dropping back down to 7, seen in **Figure 3-9**.

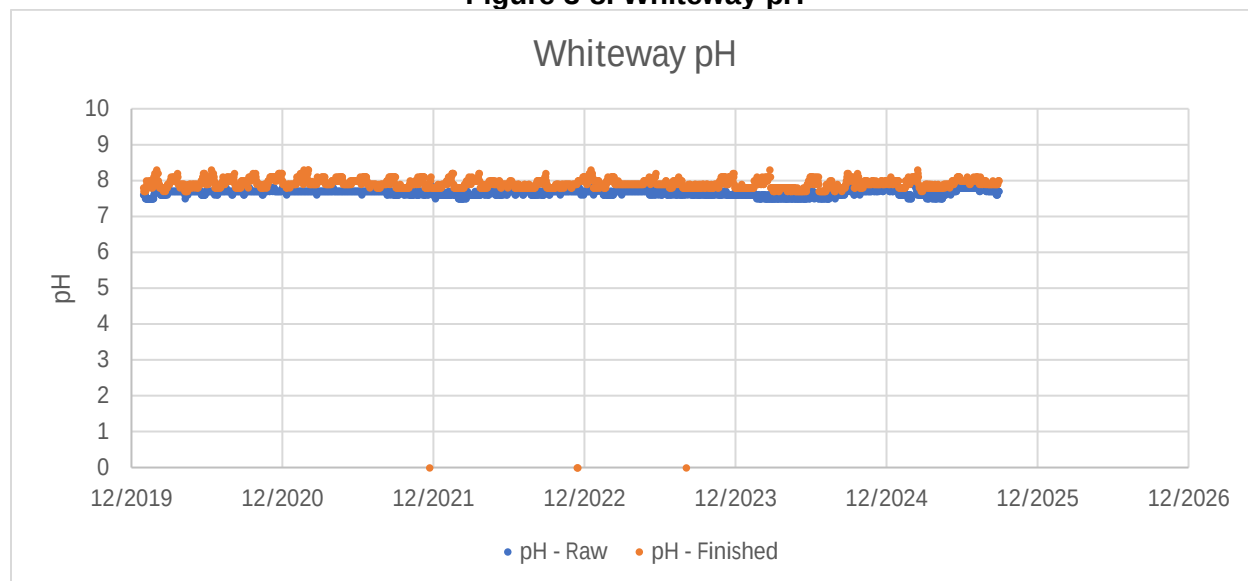
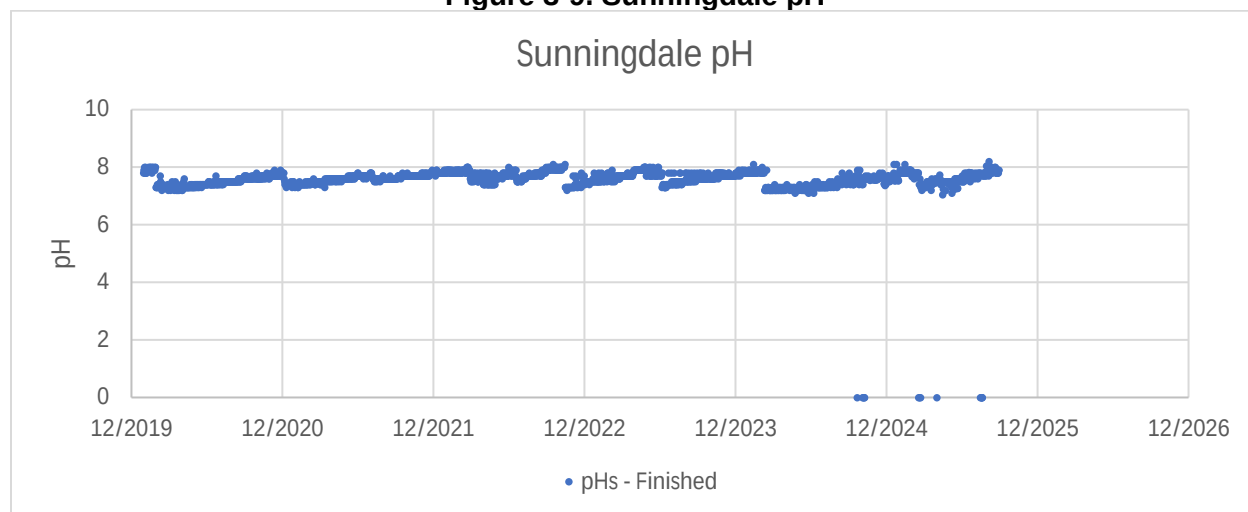
Figure 3-8. Whiteway pH

Figure 3-9. Sunningdale pH

3.3.10 Disinfection

Filtered water flows to the clearwell, where chlorine, and zinc orthophosphate are added, and then flows into several storage tanks (0.2, 0.5, 1.0 Million gallon-capacities). To meet contact time requirements for the 4-log virus inactivation by disinfection, the City uses the contact time provided by its three storage tanks downstream of the filter, while Sunningdale has a dedicated chlorine contact basin; Questions were raised by the City for the capacity of the chlorine contact basin, on whether it was 60,000 gal or 40,000 gal, so both volumes were analyzed. Calculations for the chlorine contact time (CT) of both WTPs can be seen below in **Tables 3-6 and 3-7**.

The CT time required for virus inactivation is a function of both pH and temperature, requiring more contact time as pH increases and as temperature decreases. Values for several temperatures in the typical pH operating range of the WTPs are listed in **Table 3-8**. The City's WTPs have ample contact time to achieve 4-log virus inactivation with free chlorine and Florida groundwater temperatures.

Table 3-6. CT Calculations for Whiteway

Parameter	Quantity	Unit
Combined Tank Volume	0.7	MG
	700000	Gal
Peak Hour Flow	5.04	MGD
	3500	gpm
Baffle Factor	0.1	<i>*very conservative</i>
Contact Time	20	min
Chlorine	2	mg/L
Chlorine Contact (CT)	40	min*mg/L

Table 3-7. CT Calculations for Sunningdale

Parameter	Quantity (0.06 MG)	Quantity (0.04 MG)	Unit
Tank Volume	0.06	0.04	MG
	60000	40000	Gal
Peak Hour Flow	4	4	MGD
	2778	2778	gpm
Baffle Factor	0.7	0.7	
Contact Time	15	10	min
Chlorine	1.5	1.5	mg/L
Chlorine Contact (CT)	23	15	min*mg/L

Table 3-8. CT Requirements (min*mg/L) for virus inactivation by free chlorine (pH 6-9)

Inactivation (Log)	Water Temperature (°C)															
	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
2	3.0	2.8	2.6	2.4	2.2	2.0	1.8	1.6	1.4	1.2	1.0	1.0	1.0	1.0	1.0	1.0
3	4.0	3.8	3.6	3.4	3.2	3.0	2.8	2.6	2.4	2.2	2.0	1.8	1.6	1.4	1.2	1.0
4	6.0	5.6	5.2	4.8	4.4	4.0	3.8	3.6	3.4	3.2	3.0	2.8	2.6	2.4	2.2	2.0

3.3.11 Residuals Handling and Disposal

The lime solids handling and disposal is inadequate for this system; larger lime retention/thickening ponds are needed to operate the process continuously and there is no room on the Whiteway WTP site for expansion. Alternate lime solids handling strategies are likely required that could include additional offsite property or complete retirement of the lime softening system.

3.4 Total Hardness Reduction Technologies

Lime softening, as well as other processes such as ion exchange, electrodialysis, nanofiltration (NF), reverse osmosis (RO), distillation and freezing may be employed to soften water. However, only the most widely used treatment alternatives such as lime softening, ion exchange and NF/RO are described here.

The main purpose of water softening by means of lime-soda ash or lime softening is to reduce the levels of calcium and magnesium in the finished water to a total hardness of 80 mg/l as CaCO₃. There are several alternatives to the softening process. These depend on the type of hardness, degree of softening, operational convenience, degree to which the lime sludge must be produced and desired savings in chemical costs. The alternatives include partial softening as practiced at the Whiteway WTF (hardness removal up to 30%), enhanced lime softening

(hardness removal 30% to 60%); lime-soda ash softening, caustic soda softening and softening with both lime and caustic soda.

Based on the functional groups bonded to the resin backbone, the four general types of ion exchange resins are (1) strong-acid cation (SAC), (2) weak-acid cation (WAC), (3) strong-base anion (SBA), and (4) weak-base anion (WBA). SAC resins are used for removing cations (e.g., calcium hardness) whereas SBA exchangers are increasingly being used to treat waters contaminated with nitrate, arsenic, and perchlorate ions and are usually operated in the chloride cycle, where the resin is regenerated with NaCl. More details on the PFAS selective SBA resins are provided in later sections. The ion exchange units can also be used to deionize water by allowing the water to flow continuously through a cation resin column and then through a strong base anionic resin column. The application of cation exchange to municipal systems for hardness reduction has been limited, with a few plants operational in Florida.

Nanofiltration (NF) is a pressure-driven membrane purification process whose characteristics fall between those of ultrafiltration and reverse osmosis. Unlike reverse osmosis, which accomplishes separation through a solution-diffusion process driven by osmotic pressure, NF accomplishes rejection by controlling diffusion, size exclusion, and electrostatic attraction/repulsion. NF is a proven advanced treatment technology implemented often for softening, removal of inorganic compounds, and synthetic organic compounds. NF is typically used in municipal drinking water applications for groundwater treatment, or in industrial applications to produce high-purity water. The capabilities of NF to remove organics are well documented. Many lime softening plants in Florida have incorporated NF in their treatment processes, primarily for softening and removal of dissolved organic carbon (DOC).

3.5 Treatment Process Conclusions

Whiteway WTP is providing aeration, filtration, and disinfection to their water. The facilities that are operational are doing a good job at treating the water to comply with drinking water regulations. Sunningdale WTP is providing disinfection and corrosion inhibition, with no other treatment.

In their current states, neither WTP is providing treatment that is effective in reducing emerging contaminant concentrations, nor are they reducing hardness, which is not a regulated water quality parameter, but causes quality of life issues for the end user. This makes addressing these two parameters a key focus for developing WTP upgrade alternatives.

4.0 PROCESS ALTERNATIVES

Process alternatives were developed to address key water treatment process concerns including, but are not limited to:

1. Required rehabilitations to the existing facility to maintain the facilities and/or upgrading the capacity of Whiteway to 6 MGD.
2. Comply with existing and future water quality regulations, with an importance on meeting the 2029 EPA PFAS MCL.
3. Incorporating solutions for reducing hardness to below 150 mg/L at both facilities.

As discussed in Chapter 1, EPA has released a compliance deadline for the implementation of solutions for PFAS reduction in public water systems by 2029. The existing processes at Whiteway and Sunningdale do not have a treatment process designed to remove PFAS from the source groundwater. It is important to note that future upgrades to the facilities should consider processes that treat PFAS to comply with the 2029 EPA deadlines. Water treatment process alternatives were analyzed as follows to clarify required rehabilitation options and address non-treatment (PFAS) as well as PFAS treatment alternatives:

- Non-PFAS treatment alternatives are discussed in this Chapter 4.
- PFAS treatment process alternatives are presented in Appendix B, in conjunction with additional compliance discussion and PFAS bench- and pilot-testing results.

4.1 Process Alternatives (Non-PFAS) Overview

Several emerging and established technologies are available for removing hardness. Lime softening, as well as other processes such as ion exchange, electrodialysis, nanofiltration (NF), reverse osmosis (RO), distillation and freezing may be utilized to soften water. Established technologies for softening such as lime softening, ion exchange and NF/RO are the focus for the City of Temple Terrace's municipal potable water treatment.

With NF/RO membranes, the characteristics of brine/concentrates are predictable, and handling and treatment options are well understood. Hardness concentrations in NF/RO are approximately 6 to 12 times the concentration in influent water with some other dissolved solids removed from the treated water. For disposal of membrane concentrate, systems use surface water discharge, discharge to sanitary sewer or deep well injection, as is common in Florida. A small percentage of systems use land application, evaporation ponds, or recycling.

4.2 Baseline Design Assumptions and Criteria

Assumptions and criteria that factored into consideration for each alternative can be seen below in Table 4-1.

Table 4-1. Baseline Design Assumptions and Criteria

Table 1-2: Existing Design Assumptions and Criteria		
Design Criteria	Value	Notes/ Assumptions
Average Influent Hardness	329 mg/L	Based on Feb-Aug 2025 MORs; Average concentration prior to 2025 was approximately 275 mg/L. See Chapters 2 and 3.
Expected Design Flows		
Whiteway	4.0 MGD / 6.0 MGD	4.0 MGD is expected based on historical flows and demand projections; 6.0 MGD alternatives were evaluated for the City in addition. 95 th percentile historical flows were used for projections. See Chapter 2
Sunningdale	2.0 MGD	
Historical Average Daily Flow		
Whiteway	3.0 MGD	MORs report an average of 4.05 MGD of raw water pumped, and 3.91 MGD of treated water produced. 4.0 MGD was used for projections.
Sunningdale	1.0 MGD	
SWFWMD Permitted Withdrawal		
Averaged Daily	5.15 MGD	Based on flow projections, City will need to increase the permitted withdrawal in order to meet future demands.
Peak Monthly	5.817 MGD	
FDEP Rated Capacity		
Whiteway	5.04 MGD	
Sunningdale	3.96 MGD	

4.3 Alternatives Development

Alternatives were developed to meet the City's water quality goals primarily focused on reducing PFAS and hardness. Bench and pilot-studies conducted by CHA focusing on PFAS reduction is discussed in Appendix B. Only the most widely used treatment alternatives such as lime softening, ion exchange and NF/RO are described here.

The main purpose of water softening by means of lime-soda ash or lime softening is to reduce the levels of calcium and magnesium in the finished water to a total hardness of 150 mg/l as CaCO₃. There are several alternatives to the existing lime softening process depending on the type of hardness, degree of softening, operational convenience, solids handling limitations, site constraints and capital and operating costs. The alternatives include partial softening as practiced at the Whiteway WTP (hardness removal up to 30%), enhanced lime softening (hardness removal 30% to 60%); lime-soda ash softening, caustic soda softening and softening with both lime and caustic soda. It is important to note that alternatives that focus on hardness removal with no NF implementation will not be able to treat PFAS.

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Based on the functional groups bonded to the resin backbone, the four general types of exchange resins are (1) strong-acid cation (SAC), (2) weak-acid cation (WAC), (3) strong-base anion (SBA), and (4) weak-base anion (WBA). SAC resins are used for removing cations (e.g., calcium hardness) whereas SBA exchangers are increasingly being used to treat waters contaminated with nitrate, arsenic, and perchlorate ions and are usually operated in the chloride cycle, where the resin is regenerated with NaCl. More details on the PFAS selective SBA resins are provided in Appendix B. The ion exchange units can also be used to deionize water by allowing the water to flow continuously through a cation resin column and then through a strong base anionic resin column. The application of cation exchange to municipal systems for hardness reduction has been limited, with a few plants operational in Florida.

Nanofiltration (NF) and Reverse Osmosis (RO) NF are pressure-driven membrane purification processes whose characteristics fall between those of ultrafiltration and reverse osmosis. Unlike reverse osmosis, which accomplishes separation through a solution-diffusion process driven by osmotic pressure, NF accomplishes rejection by controlling diffusion, size exclusion, and electrostatic attraction/repulsion. NF is a proven advanced treatment technology implemented often for softening, removal of inorganic compounds, and synthetic organic compounds. NF is typically used in municipal drinking water applications for groundwater treatment, or in industrial applications to produce high-purity water. The capabilities of NF to remove organics are well documented. Many lime softening plants in Florida have incorporated NF in their treatment processes, primarily for softening and removal of dissolved organic carbon. To minimize concentrate volumes and minimize supply quantities, NF will focus on high recovery (90+%), e.g., Three-Stage RO, CCRO – Closed Circuit RO and FRRO – Flow Reversal RO.

Given the costs and challenges of managing PFAS in waste streams, it is critical to evaluate both established and emerging technologies in selecting processes for incorporation at the WTP(s). Ongoing RSSCT and pilot studies will help finalize the preferred treatment process and the master plan will be updated once these studies have concluded.

Key water quality parameters of concern in the City's groundwater include hardness and emerging contaminants. Alternatives were developed to meet the City's water quality goals primarily focused on reducing hardness and addressing pending emerging contaminant limits. WTP improvement alternatives were categorized as follows:

- Supply:
 - o Stay with existing wellfield
 - o Move wellfield to deeper groundwater zone, starting with one test well
 - o Potable water interconnection with City of Tampa or Hillsborough County
- Treatment:
 - o Softening treatment processes, hardness removal to goal of <150 mg/L

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- o Disinfection process (converting legacy chlorine gas systems to safer options)
 - o Emerging contaminant treatment processes
 - o Reliability and number of treatment trains
- Operational Efficiency, Asset Renewal Risk Reduction:
 - o WTP pressure coordination and optimize Telecom and Chinaberry optimization

Whiteway WTP

- **Common to All Alternatives**
 - o Rehabilitate non-softening treatment processes (i.e. gravity filters), controls, instruments
 - o Reconfigure into two dedicated treatment trains
 - o Upgrade plant electrical, security, communications and SCADA systems
 - o Convert the chlorine gas disinfection system to a safer sodium hypochlorite
- **Alternative WW-A (Status Quo)**
 - o Abandon Whiteway softening process for 0% total hardness removal
 - o No emerging contaminant removal
- **Alternative WW-B (Rehab Existing Lime Softening)**
 - o Rehabilitate existing lime softening process for 30% hardness removal
 - o No emerging contaminant removal
- **Alternative WW-C (New Pelletized, Ballasted Sand or IX-CO₂ Softening)**
 - o Replace lime softening/filtration process with two dedicated trains of pelletized lime softening or ion exchange softening with CO₂ regeneration to meet hardness goal
 - o No emerging contaminant removal
- **Alternative WW-D (New Hybrid Conventional and NF trains)**
 - o Replace lime softening/filtration process with one dedicated NF train and one train of pelletized or ballasted sand lime softening or IX softening with CO₂ regeneration
 - o Incidental NF emerging contaminant removal, concentrate management
- **Alternative WW-E (New ½ NF Softening, ½ Bypass to Filters)**
 - o Replace lime softening/filtration with two NF trains sized to treat 50% of flow
 - o Incidental NF emerging contaminant removal, concentrate management
- **Alternative WW-F (Full NF for PFAS AND Softening)**
 - o Replace lime softening/filtration with two NF trains to meet hardness goals
 - o Softening to meet city goals Sand , concentrate management
- **Alternative WW-G (Upgrade to 6 MGD Capacity)**

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- o No emerging contaminant removal
- o Rehabilitate existing filters to achieve production
- o Increase Capacity to 6 MGD
- **Alternative WW-H (Full NF for Softening and Upgrade to 6 MGD Capacity)**
 - o Replace lime softening/filtration with two NF trains to meet hardness goals
 - o Hardness contaminant removal, concentrate management
 - o Increase Capacity to 6 MGD

Sunningdale WTP

- **Common to All Alternatives**
 - o Rehabilitate existing treatment processes, controls, instruments
 - o Upgrade plant electrical, security, communications and SCADA systems
 - o Convert the chlorine gas disinfection system to a safer disinfection system, such as liquid sodium hypochlorite.
- **Alternative SD-A** – Continue with no softening process until the new NF plant comes online
- **Alternative SD-B** – Install two 1.0-mgd NF trains with supporting cartridge filtration, antiscalant, cleaning and concentrate treatment

While variations exist, these core alternatives represent solutions for consistent, PFAS compliance and reducing calcium/magnesium hardness. Consolidating the WTPs to the Whiteway WTP site is estimated to add \$10M to \$15M to any alternative capital cost due to expansion in well pumping/piping, distribution piping, pumping, lime softening and filtration processes to go from a max day capacity of 5.0 mgd to 6.0 mgd. Consolidation would fit well with initial nanofiltration skids that could be located at Sunningdale WTP and later moved, when needed to the Whiteway WTP to fully displace Sunningdale. WTP consolidation would reduce operations cost marginally.

Figure 4-1. Whiteway WTP Alternatives Process Flow Diagrams

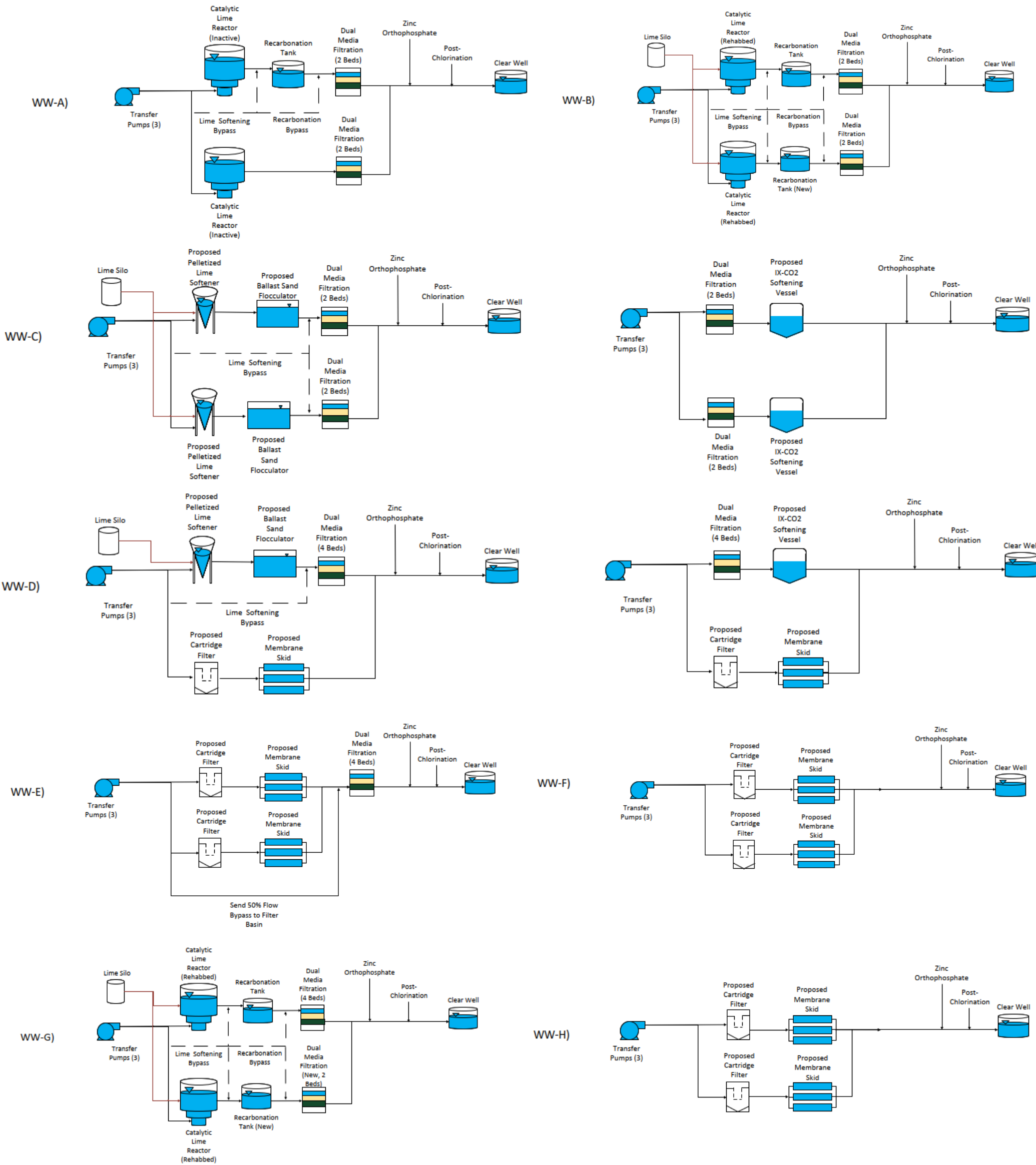
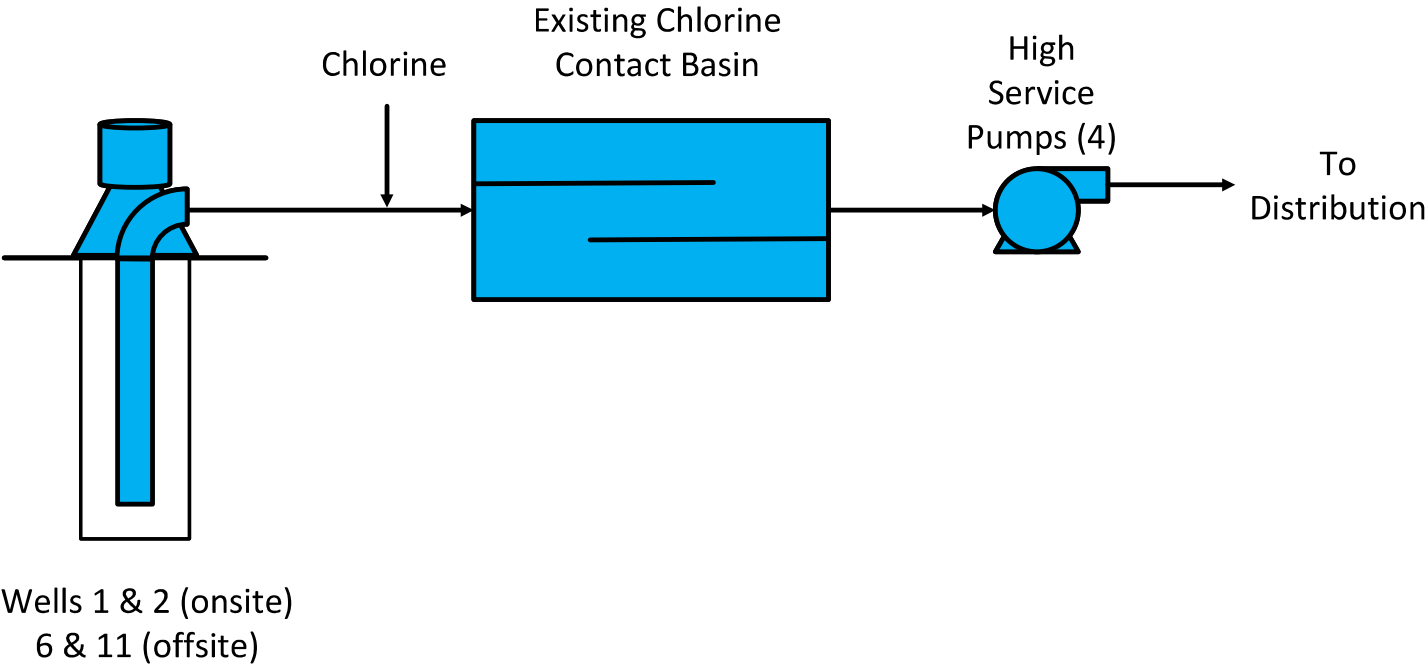
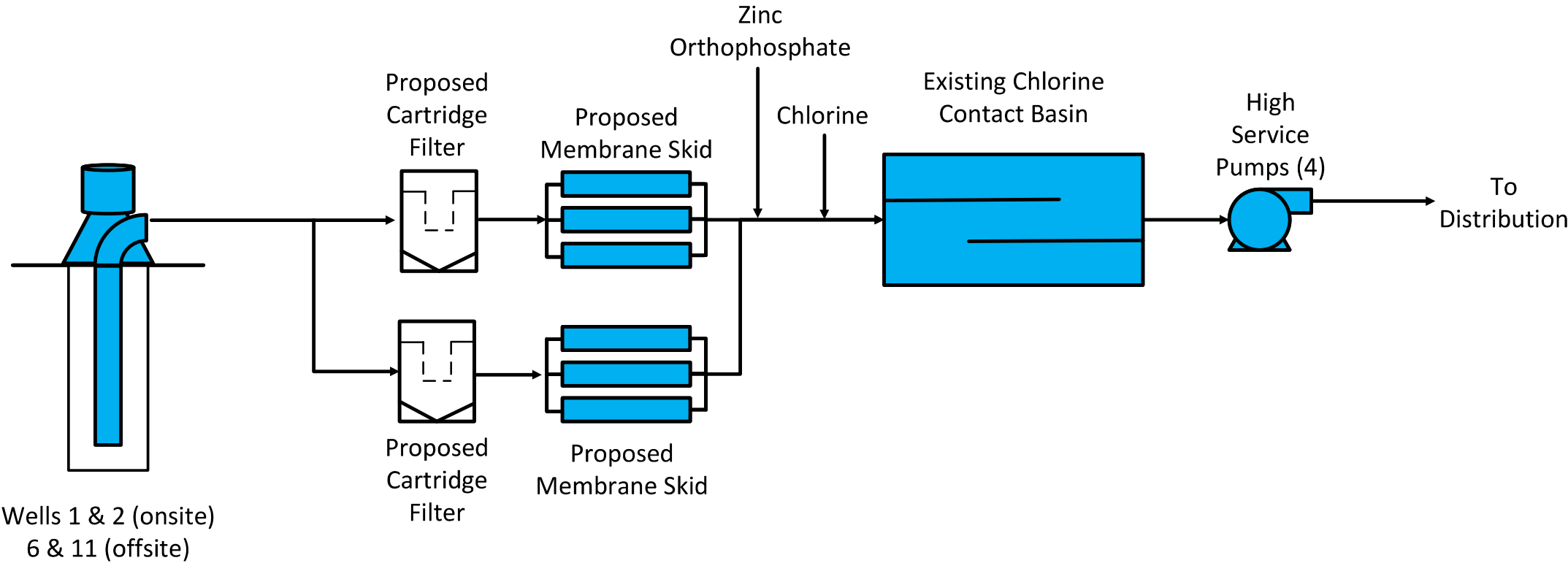


Figure 4-2. Alternative SD Process Flow Diagrams

SD-A)



SD-B)



4.4 Alternatives Evaluation (Non-PFAS)

4.4.1 Capital Cost Evaluation

Capital costs were estimated for each plant with established softening treatment alternatives. Also, note that costs for deep well injection of NF/RO concentrate are not included as PFAS removal is discussed in Appendix B. A deep well for the City of Temple Terrace would have a capital cost in the \$20M to \$25M range to accommodate up to 0.5 MGD of concentrate and \$0.2M/year operating cost.

4.4.2 Life Cycle Cost Evaluation

Capital costs were estimated for each WTP with established treatment alternatives. The alternative evaluation compared alternatives on life cycle costs and non-cost factors. Based on decision support tools, recent project costs and opinion estimates, the following alternatives and costs are provided. The life cycle cost analysis for Whiteway WTP is provided in Table 4-2 and Sunningdale WTP in Table 4-3.

Table 4-2. Whiteway WTP Process (sans PFAS) Alternative Life Cycle Cost Evaluation

Cost Category	WW-A Status Quo	WW-B Rehab Lime	WW-C Other Conv Soften	WW-D Hybrid Conv + NF	WW-E Full NF	WW-F Split NF	WW-G 6MGD Lime	WW-H 6MGD Full NF
MDD Treatment Capacity	5.0 mgd	5.0 mgd	5.0 mgd	5.0 mgd	5.0 mgd	5.0 mgd	6.0 mgd	6.0 mgd
Number of Trains	1	2	2	2	2	2	2	2
Capital Cost	\$4.0M	\$15.5M	\$21.5M	\$23.5M	\$24.0M	\$17.5M	\$36.5M	\$34.5M
Annual Operational Cost	\$0.6M	\$1.4M	\$1.6M	\$1.8M	\$2.0M	\$1.4M	\$1.7M	\$2.4M
Present Value	\$12.2M	\$34.5M	\$43.2M	\$48.0M	\$51.2M	\$36.5M	\$59.3M	\$67.1M
Equivalent Annual Cost (\$/Yr)	\$0.9M/Yr	\$2.5M/Yr	\$3.2M/Yr	\$3.5M/Yr	\$3.8M/Yr	\$2.7M/Yr	\$4.4M/Yr	\$4.9M/Yr
Equivalent Annual Cost (\$/kGal)	\$0.49/kGal	\$1.39/kGal	\$1.74/kGal	\$1.93/kGal	\$2.06/kGal	\$1.47/kGal	\$1.99/kGal	\$2.25/kGal

ASSUMPTIONS:

* NF Concentrate Disposal to DIW assumed for comparative purposes as this analysis does not include emerging contaminant removal (see PFAS appendix)

- Capital costs include furnishing and installing equipment and non-cost factors including 25% contingency
- Present values assume 20-year life with 4% inflation
- ADD = Average Daily Demand
- MDD = Maximum Daily Demand
- Does not include other WTP major R&R to existing equipment which is common to all alternatives

Table 4-3. Sunningdale WTP Process Alternative Life Cycle Cost Evaluation

Cost Category	SD-A Continue Status Quo	SD-B Add Nanofiltration*
MDD Treatment Capacity	3.96 mgd	2.20 mgd
Capital Cost	\$2.5M	\$15.0M
Annual Operational Cost	\$0.4M	\$0.8M
Present Value	\$7.9M	\$25.9M
Equivalent Annual Cost (\$/Yr)	\$0.6M/Yr	\$1.9M/Yr
Equivalent Annual Cost (\$/kGal)	\$0.40/kGal	\$2.37/kGal

ASSUMPTIONS:

**Assumed that concentrate would be discharged to sewer.
 -Capital costs include furnishing and installing equipment
 and non-cost factors including 25% contingency*

4.4.3 Non-Cost Factors

The non-cost factors boil down to providing the City's customers with high-quality potable water that they can feel proud of and safe to drink. Pros and cons of the two alternatives categories are provided in the table below.

- **Alternative WW-A (Status Quo)** provides no hardness reduction or emerging contaminant removal and therefore results in the lowest finished water quality performance, despite its operational simplicity and low capital and O&M costs. This alternative presents a high long-term risk of customer complaints, scaling in the distribution system, and limited flexibility to respond to evolving regulatory requirements.
- **Alternative WW-B (Rehabilitation of Existing Lime Softening)** provides modest hardness reduction of approximately 30%. This approach leverages existing infrastructure and avoids NF concentrate management; however, the level of hardness reduction may be insufficient to achieve long-term water quality objectives. In addition, this alternative does not address emerging contaminants and retains ongoing sludge

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handling and disposal requirements, although capital and O&M costs are lower than those NF alternatives.

- **Alternative WW-C (New Advanced Softening Processes)** achieves substantial hardness reduction without introducing NF concentrate management and represents a balanced solution between performance and cost. Capital and O&M costs are moderate relative to other alternatives; however, the absence of emerging contaminant treatment limits its ability to address potential future regulatory requirements.
- **Alternative WW-D (Hybrid Conventional and NF Trains)** provides strong overall water quality performance and partial mitigation of emerging contaminants but requires higher capital and O&M expenditures due to the dual-process configuration. Increased operational complexity and the need to manage both softening residuals and NF concentrate represent key implementation challenges.
- **Alternative WW-E (Partial NF with Blending)** provides a phased approach to NF implementation, with NF treating approximately 50 percent of plant flow and the remaining flow bypassing softening. This alternative achieves moderate hardness reduction through blending and partial emerging contaminant mitigation but still requires concentrate management and is sensitive to raw water variability and blending ratios.
- **Alternative WW-F (Full NF Softening)** achieves the highest level of hardness reduction and provides the strongest positioning for potential emerging contaminant compliance. This alternative involves the highest capital and O&M costs and requires comprehensive concentrate management strategies; however, it delivers the most robust and consistent long-term finished water quality among the evaluated options.
- **Alternative WW-G (Rehabilitation of Existing Lime Softening)** provides modest hardness reduction of approximately 30%. This approach leverages existing infrastructure and avoids NF concentrate management; however, the level of hardness reduction may be insufficient to achieve long-term water quality objectives. In addition, this alternative does not address emerging contaminants and retains ongoing sludge handling and disposal requirements, O&M costs are lower than those NF alternatives. Capital costs are quite high, associated with expanding the plant to 6 MGD.
- **Alternative WW-H (Full NF for Softening and Upgrade to 6 MGD Capacity)** achieves the highest level of hardness reduction and provides the strongest positioning for potential emerging contaminant compliance. This alternative involves the highest capital and O&M costs and requires comprehensive concentrate management strategies; however, it delivers the most robust and consistent long-term finished water quality among the evaluated options, with plenty of capacity for future growth.
- **Alternative SD-A (Continue with No Softening Process)** represents the lowest capital and operating cost option and maintains operational simplicity. However, this alternative provides no hardness reduction or emerging contaminant removal, resulting in limited improvement in finished water quality. Over the long term, it will face risk of scaling in the distribution system, potential customer complaints, and reduced flexibility to respond to

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evolving regulatory requirements. While financially attractive in the near term, this alternative does not support long-term water quality resiliency goals.

- **Alternative SD-B (Install Two 1.0-mgd NF Trains)** provides substantial reduction of hardness and emerging contaminants, significantly improving finished water quality and positioning the facility for potential future regulatory requirements. This alternative requires higher capital and O&M costs and introduces additional operational complexity, particularly related to NF system operation and concentrate management. This alternative offers the most robust long-term solution from a water quality and regulatory resilience perspective.
-

4.5 Alternatives Evaluation Conclusions

Multiple categories of alternatives are available to improve finished potable water quality and comply with 2029 PFAS regulations. The available alternatives include multiple dimensions of system planning, including facility location, source water development, treatment process enhancements, and residuals management. Conclusions from the evaluation are summarized by alternative component as follows:

Supply Sources

1. Existing wellfields are productive and produce a water conducive to NF/RO treatment with low turbidity, hydrogen sulfide and total organic carbon.
2. Exploring a new well/wellfield may be beneficial as a non-treatment alternative, comes at a capital cost of \$5M per well and may also create need for additional treatment processes including hydrogen sulfide and total organic carbon removal.

Treatment Locations

3. Space is an issue at the Sunningdale WTP site, and the City has indicated that acquiring more land is not a feasible option and Sunningdale does not currently have any facilities for removing hardness.
4. Retiring Sunningdale WTP and consolidating to Whiteway WTP is feasible, but costly with Whiteway requiring permitted capacity expansion from 5.0 to 6.0 MGD as well as wellfield pump and transmission modifications and finished water distribution improvements adding several million dollars to the cost.
5. An alternative way to handle Sunningdale is to locate hardness removal skids that could be relocated to Whiteway WTP when the City is ready and has funds to consolidate.

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Softening Technologies

6. Lime softening is fading from water treatment industry due to its large footprint, high chemical usage, difficult chemical handling and solids disposal issues. Many of the softening treatment plants on the east and west coast of Florida have been replaced by membrane (nanofiltration) softening systems.
7. A secondary concentration process to treat membrane concentrate or high PFAS concentration source waters.

Cost Factors

8. At Whiteway, the lower cost softening option will be to keep the existing lime softening reactors in place. The \$5.5M capital cost estimate to rehabilitate the lime, filtration and recarbonation system makes the existing lime rehab cost relatively equal with the ½ flow NF option.

Non-Cost Factors

9. Nanofiltration accomplishes the City's treatment goals in one single process, eliminating the need for the lime softening process and far outperforming in softening capabilities.

5.0 CONDITION ASSESSMENT

5.1 Methodology

An asset-management framework analogous to those used in transportation infrastructure—such as the rating, deterioration, and renewal principles—can be directly applied to complex water-treatment facilities. The components of a water-treatment plant (pumps, tanks, mixers, blowers, injection systems, and controls) experience predictable deterioration, occasional sudden failures, and gradual obsolescence. For high-reliability systems such as potable water treatment, maintaining effective serviceability requires:

- A standardized condition-rating system
- A method to convert condition into capital risk and estimated renewal cost
- Deterioration curves that can forecast future needs
- A process for identifying critical vulnerabilities and potential hazards
- A means to evaluate capital spending strategies (e.g., like-new reconstruction vs. targeted rehabilitation)

Available drawings, equipment data, and maintenance data were collected from the City and reviewed to gain understanding of the WTPs systems and equipment. A visual inspection of each unit process in the WTPs and interviews with operational staff were performed to assess condition, focusing on the physical condition and remaining lifespan of different components. Remaining life expectancy was estimated by comparing install date with current date versus life expectancy and adjusting based on physical inspection. Inputs were collated and processed to assess the likelihood of failure, which, combined with the criticality of the component to the overall treatment process, calculates a risk score to help determine component needs and priority for replacement.

The condition assessment focuses on four major aspects: Structure and foundation, Process (capacity and condition of process equipment), electrical (compliance, capacity, condition), and instrumentation and control. Due to budget constraints the structural and foundation assessment was cursory; configured to identify obvious needs and areas for future, detailed evaluations.

The CHA team performed a walkthrough of the Whiteway WTP accompanied by operators and several of the City's staff, getting a thorough description of how the plant operates, what parts are working and what parts are not. Photos were taken to document all the observations made during the walkthrough. Sunningdale WTP had a separate walkthrough performed following the same principles.

5.2 Existing Asset Management Program

The City tracks WTP maintenance needs to annually develop a capital improvements plan. The City prioritizes based on safety and operational needs.

5.3 Whiteway WTP Condition Assessment Findings

5.3.1 Wellfields and Raw Water Transmission Infrastructure Condition

According to City records, wellfield pumps were last rebuilt ranging from 1998 to 2008, with an estimated remaining rebuild life of 5-10 years. The motors are much newer, being replaced between 2016-2022. The blending and aeration tank exhibits several signs of deterioration. Paint bubbling and concrete spalling are visible on tank's north side, suggesting a possible leak. The tank sub-base tank shows evident wear, and previous base grouting repairs are crumbling. The overflow pipe junction has severely corroded fittings, and flange housing is warping. The main cut-off valve to the tank is also corroded, with nearly all paint stripped away.

It is recommended that the City schedule rebuilds for the pump motors, given that the average age of the current rebuilds is approximately 20 years. Attention should be given to addressing the erosion observed at the aeration tank sub-base, especially on the north side where previous repair efforts have not been successful. The corroded fittings at the overflow pipe junction and the warped flange housing require inspection and appropriate repairs to restore their integrity. The main cut-off valve to the tank, which is heavily corroded and has lost nearly all of its protective paint, should be replaced or refurbished to prevent further deterioration and ensure reliable operation.



Figure 5-1. Aeration Tank Deficiencies

5.3.2 Plant Hydraulics

The plant hydraulics were reviewed for condition-related items that could affect the capacity of the plant. The existing system was evaluated based on as-built drawings, input from operations staff, and field measurement in Visual Hydraulics. Plant hydraulics were calculated at intervals of 3, 3.5, 3.9, 4, 5, and 6 MGD. It should be noted that 5 and 6 MGD were evaluated as possible future expansion scenarios to determine hydraulic constraints in the system.

The output from the model was used to build the Plant Hydraulics figure in **Figure 5-3**. The hydraulic profile outlines typical flow through the plant at various flows.

Based on analysis of the model results, there are several possible constraints with both the existing flow and potential future flow scenarios as outlined below.

- The existing raw water pumps conveying water from the raw storage tank to the lime tanks have a firm capacity of 5 MGD.
- Additionally, the raw water pumps discharge into 10-inch lines which are designed to handle up to 4 MGD of flow. After 4 MGD, the flows inside the 10-inch pipes can reach velocities greater than 6 ft/s. The existing piping has a 10-inch bypass pipe that conveys water to the 16-inch lime reactor bypass. This bypass can be used to relieve flows from the 10-inch pipe reducing the flows to 5.7 ft/s at full flow through the three ten-inch pipes at 6 MGD. This would require bypassing of the lime reactors, which may increase hardness in the system if the reactors are in operation.
- The existing lime reactors are rated for 2.52 MGD, with a combined rating of approximately 5.04 MGD. Currently, the lime reactors are run without lime softening; after starting the system back up the hydraulics of the system may change depending on the efficiency of the reactors. With the existing configuration, each reactor is able to handle approximately 2.6 MGD before the weirs are overloaded and the tanks are at risk of overflowing.
- The recarbonation (recarb) tank is used for water storage and dosing of orthophosphate while the lime reactors are not in operation. The existing bypass for the recarbonation tank is non-operational due to valve into the bypass being broken. Based on model results and field observations, the tank launders get overloaded at 3.1 – 3.2 MGD. Analysis of model results indicated that the tank overflows the top of the basin at approximately 3.9 MGD. Potential issues causing the flow are listed below.
 - o The launders in the tanks have invert elevations of 108.85-ft, with the top of the tank being approximately 110.0-ft. Based on model analysis, the tank is rated for

flows of 3.4 MGD, additional flows into the basin will overload the launders and potentially overflow the tank.

- o The recarbonation basin's effluent box is a potential constraint on the system, the cross-sectional area of the effluent box is less than the cross-sectional area of a 16-inch pipe resulting in a potential back up of water in the tank.
- o After a field visit for model calibration, it was determined that the flow from the tank is being backed up at the effluent of the tank. A potential cause of this is scaling in the 16-inch effluent pipe resulting in lower discharge from the tank.
- The existing Greenleaf filter is constrained to 5 MGD, additional flow to the basin may result in higher loading rates for the filters and reducing filter efficiency.

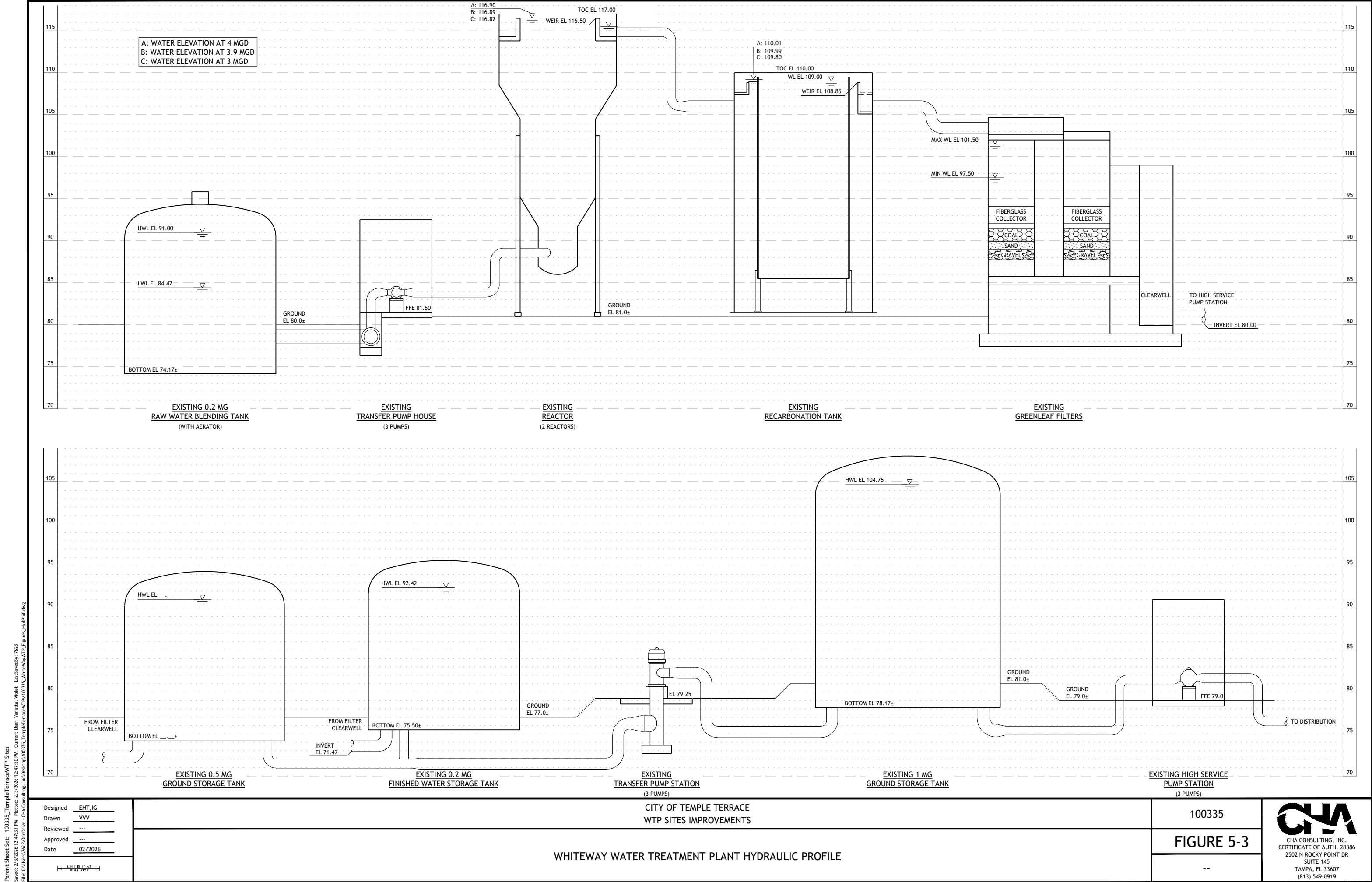
5.3.3 Lime Softening Infrastructure Condition

The lime storage and handling systems show significant corrosion on electrical equipment, control panels, and devices, many of which appear to have exceeded their useful electrical lifespan. PVC conduits inside the warehouse exhibit strapping deficiencies. The lime slakers and mixing equipment are housed in a confined space with no ventilation for dry lime, resulting in heavy lime powder accumulation throughout the room. Numerous support beams are corroded at their bases. The clarifiers and softening basins include two reactors, with sludge removal achieved through sand dredging via a bottom pipe based on pressure or operational timing.

The lime softening system currently requires restoration of functionality, as both reactors are offline, and water is bypassing treatment entirely. Note that even when functional, the lime reactors are unlikely to be able to reduce hardness from the current levels to the City's goal, from 350 mg/L to below 150 mg/L. It is necessary to replace or refurbish the corroded electrical equipment and to ensure that the PVC conduits inside the warehouse are properly strapped to prevent deficiencies. Improving ventilation in the lime slaker room is important to reduce the accumulation of lime powder, which has become heavy due to the confined space and lack of airflow. Additionally, the corroded support beams, particularly at their bases, should be inspected and reinforced as needed to maintain the structural integrity of the system.



Figure 5-2. Lime Slaker & Slurry System



5.3.4 Filtration Infrastructure Condition

The filtration system consists of four dual-media filter beds. Two pillars supporting the walkway above the filter beds are completely rusted and detached, posing a structural hazard and should be replaced or repaired to ensure safety and stability. The turbidity meters associated with the filters are currently non-functional, which prevents monitoring of effluent quality; therefore, replacement of these meters is recommended to maintain effective filtration performance. Additionally, the filtration system lacks the capability to isolate individual filter beds in the event of a failure, and implementing such isolation capability would improve operational flexibility. The filter basin is limited to 5 MGD at full capacity, or 3.75 MGD with one unit out of service. As the filter basin is not modular, extensive construction would be required in order to increase its capacity to 6 MGD.

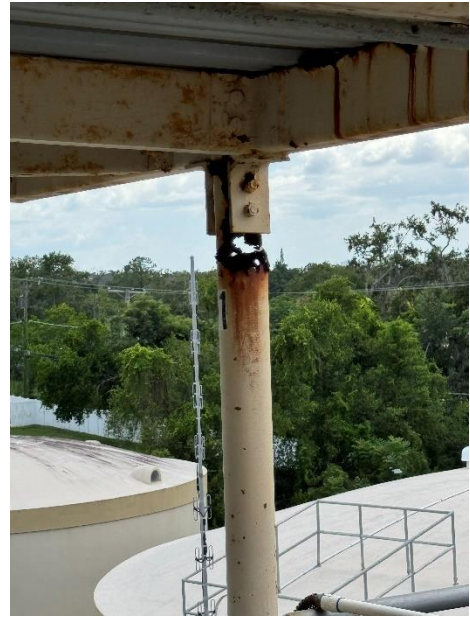


Figure 5-4. Rusted Support on Filter Basin Catwalk

5.3.5 Backwash Pumping and Air Scour Infrastructure Condition

The backwash system includes four pumps: one backwash pump, one surface wash pump, and two filter control vacuum pumps. Current capacity of the backwash pump is insufficient, requiring multiple backwash cycles to achieve the intended effectiveness. However, these additional cycles are typically not performed. Turbidity meters remain non-functional.

Upgrading the backwash pump capacity is recommended, along with developing a protocol to ensure multiple backwash cycles are performed when necessary to maintain filtration effectiveness.

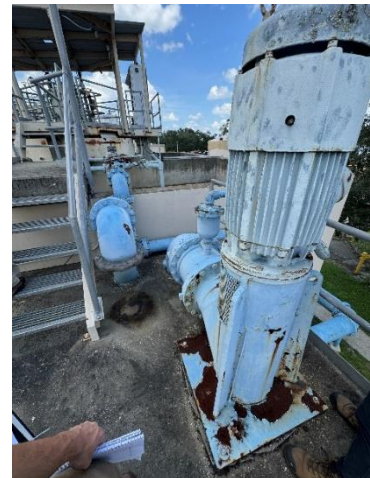


Figure 5-5. Filter Backwash Pump

5.3.6 Finished Water Storage Infrastructure Condition

The filtered water moves over an overflow weir to the clearwell, where post-chlorine injection occurs. The water then is transported to two tanks which provide chlorine contact time: a 0.2 MG tank, and a 0.5 MG tank. Water is pumped to a 1.0 MG tank for storage before being pumped to the distribution system. The finished water storage tanks are in good condition.

5.3.7 High Service Pumping Infrastructure Condition

- High Service Pumps
 - o Number: 6 high service pumps
 - o Age range: Motors serviced between 2019 and 2023
 - o Evidence of wear, cavitation, vibration: Pinhole Leak observed from one of the high service pumps. Some pressure gauges are leaking.
- Transfer Pumps (Finished Water)
 - o Transfer pumps and panelboards are in open air. Pumps and electrical equipment are exposed to hazards such as lightning and wind-borne debris.
- Motor Control Centers
 - o Code compliance: Some panelboards show signs of corrosion; most of the electrical equipment seems to have exceeded their electrical lifespan; 1000A Main Breaker passed two Factory Tests, the second one being dated on 06/15/20 as per a label shown on the Front Door of the cabinet; exterior luminaire cover is missing; there are control and/or security cables which are not properly supported; communication and control cables are installed without proper support and disorganized.

Notes

Leak observed from one high service pump; electrical equipment shows signs of corrosion and exceeded lifespan; cables not properly supported; transfer pumps and high service pump coatings generally in good condition with some minor defects.

Infrastructure Condition

The high service pumps, raw transfer pumps, and finished transfer pumps have firm capacities of 5.47 MGD, 5.04 MGD, and 5.18 MGD, respectively. Upgrading the existing pumps or installing an additional pump at each station would be necessary to accommodate 6 MGD of production.

There are four transfer pumps which transfer water between the smaller and larger ground storage tanks, in addition to the high service pumping system which includes six pumps that send water to the distribution system; motors were last serviced between 2019 and 2023. Signs of cavitation, wear, or vibrations were detected in the high service pumps as a pinhole leak was observed on one pump, and some pressure gauges were leaking. Transfer pumps and panelboards are located outdoors, exposing them to hazards such as lightning and wind-borne debris. Motor control centers show corrosion, and most electrical equipment appears to have exceeded its lifespan. Additional issues include missing luminaire covers and improperly supported control and security cables.

Recommended Actions

1. Repair pinhole leak on the affected high service pump and address leaking pressure gauges.
2. Replace or refurbish corroded electrical equipment and panelboards.
3. Ensure proper support and organization of control and communication cables.
4. Evaluate protective measures for outdoor pumps and electrical equipment to mitigate environmental hazards.

5.3.8 Chemical Storage and Feed Systems

Infrastructure Condition

Chemical storage includes pre-chlorination prior to the aeration tank, post-chlorination after filtration, and zinc orthophosphate dosing in the recarbonation tank. Fluoride is no longer injected; conduits, junction boxes, straps, and luminaires are also corroded, and the cable feeding the Fluoride Transfer Pump lacks proper support. There is no backup containment for chemical tanks, which are generally stored in small CMU buildings with single entrances or roll-down shop doors. Eyewash stations are located outside chemical buildings. No spill response equipment was noted.

- Chemical Storage Tanks
 - o Chemical types: Pre-Chlorination (injected before aeration tank, back corner behind aeration tank); Post-chlorine (injected after filter in clear well); Zinc Orthophosphate corrosion inhibitor (added in Recarb tank). Fluoride no longer injected to clearwell.
 - o Containment integrity: No backup containment for chemical tanks.
 - o Additional observations: Fluoride Room - most of the electrical equipment seems to have exceeded their electrical lifespan; conduits, electrical equipment, junction boxes, straps, and luminaires exhibit signs of corrosion; there is a cable feeding the Fluoride Transfer Pump which is not supported.

Safety Systems

- Ventilation Systems
 - o Chemical tanks stored in CMU buildings small footprints; most have with single exit/entrances or roll-down shop doors.
- Emergency Equipment
 - o Eyewash/shower stations: Eyewash stations located outside of chemical buildings.
 - o Spill response equipment: None noted.

Notes

Fluoride Transfer Pump cable is not supported; electrical equipment in Fluoride Room shows corrosion and has exceeded lifespan. It is understood that the City is retiring the fluoride system at both WTPs.

The City will need to evaluate if the existing chlorine system can feed the required chlorine dosage for 6 MGD of production in the current treatment process. The City has expressed desires to move to liquid sodium hypochlorite or chlorine gas. If the City chooses to implement nanofiltration, this will be a necessary change; the City should size the system for 6 MGD when converting.

Recommended Actions

1. Due to legislation preventing fluoride addition to drinking water, the city is in the process of removing the fluoride equipment, making these issues less urgent.
2. Install secondary containment for chemical tanks to prevent environmental hazards.
3. Provide spill response equipment in chemical storage areas.

5.3.9 Electrical System

The main electrical service throughout the facility shows widespread signs of corrosion on most electrical equipment, with many components appearing to have exceeded their expected electrical lifespan. Several electrical conduits and cabinets are heavily rusted, indicating the need for attention and maintenance. The backup power generation system includes a 600 kW CAT engine generator supported by a 1,000-gallon aboveground diesel fuel tank, which shows signs of aging. The generator is used frequently during hurricane season, and as a result, routine testing is typically not performed.

Regarding the distribution panels, visual inspection reveals code compliance issues such as missing knockout seals on equipment and junction boxes, and some panelboards lack their latches. Additionally, a stepdown transformer feeding a panelboard located in the corridor of the office area exhibits a broken metallic greenfield, which requires repair. From a safety and compliance perspective, the main distribution panel located in the electrical closet at the office corridor exhibits a cut-out ground conductor, posing a risk in the event of a short circuit. Furthermore, the presence of the required electrode grounding conductor in the main disconnect switch on the west wall of the building could not be verified, indicating a potential safety concern that should be addressed.

Notes

1. Main Distribution Panel ground conductor cut out creating short circuit risk; grounding system requires immediate revision; recommendation is revision of all grounding system in Administration Building as soon as possible
2. Widespread corrosion throughout facility
3. Equipment exceeded electrical lifespan
4. Missing knockout seals; missing panelboard latches
5. Several conduits and cabinets very rusted
6. There is a disconnect switch near two Condensing Units by East exterior wall of Administration Building that has a broken flexible conduit with potential conductors laying on the grass
7. PVC conduits with strapping deficiencies; fluorescent luminaires in warehouse without covers and/or lamps need replacement, internal wiring not covered; communication and control cables installed without proper support and disorganized
8. Two conduits from original electrical building service missing required caps (Dungeon Building)
9. Conduits, equipment, junction boxes, straps and luminaires exhibit severe grade of corrosion in Filter Tank (Elevated)
10. Recarb Tank electrical equipment shows signs of corrosion

The Whiteway and Sunningdale WTPs electrical feed systems' capacities will likely need to be upgraded to handle future treatment pumping and potentially higher capacity flows. Electrical feed upgrades will be good opportunity to explore benefits of redundant feeds and potential medium voltage loop to increase efficiency and redundancy.

Figure 5-6. Whiteway Electrical Riser Diagram

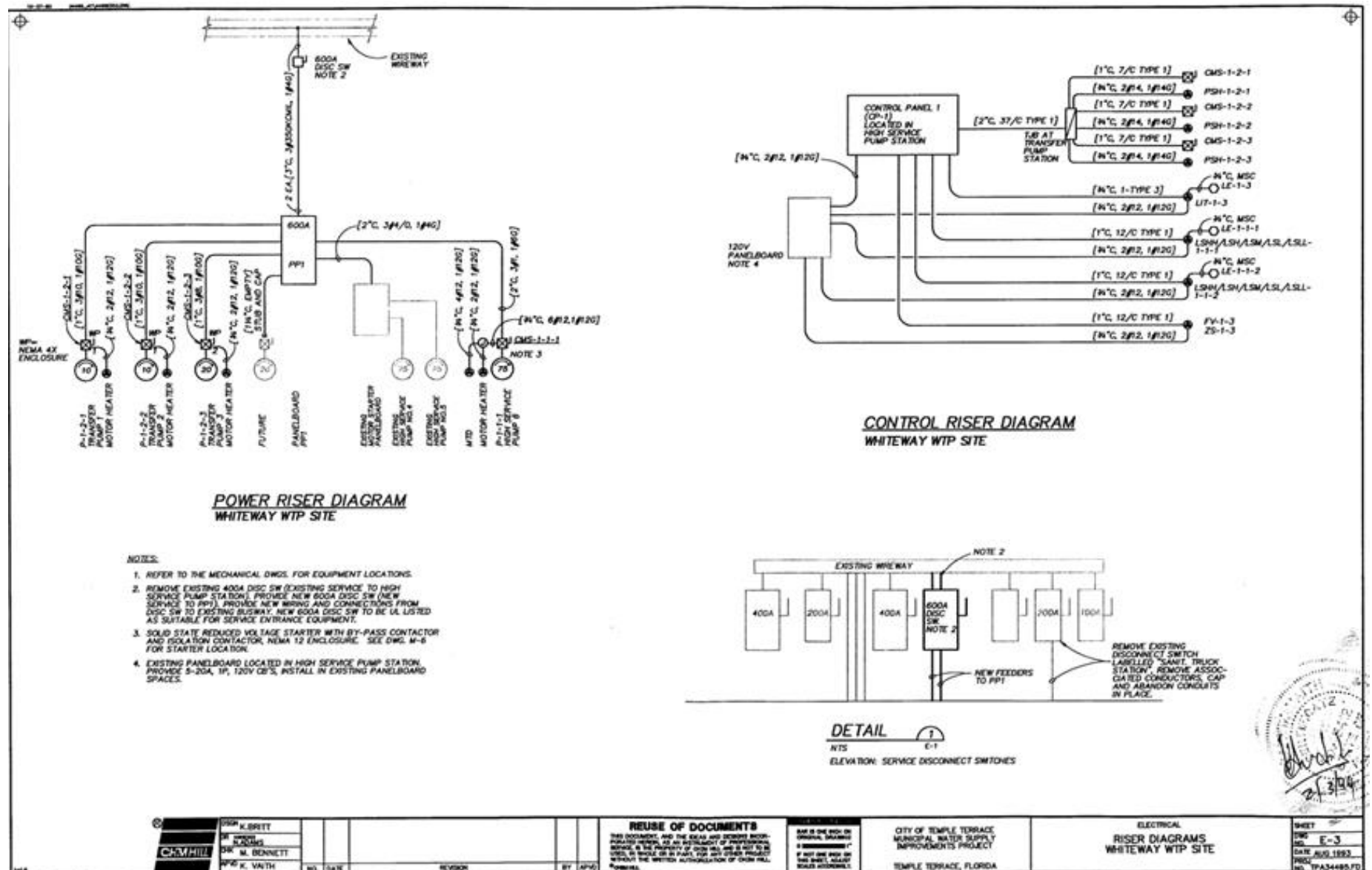
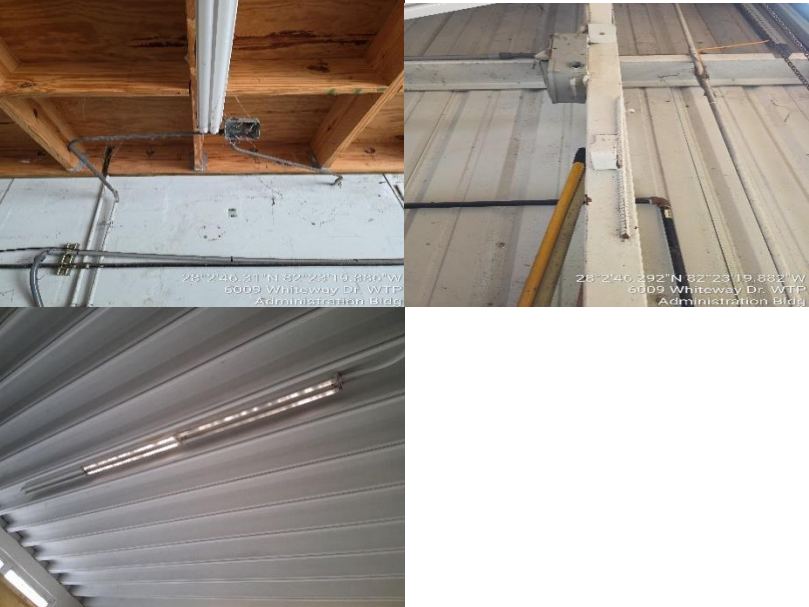


Table 5-1. Urgent Whiteway Electrical Deficiencies

Whiteway Urgent Electrical Action Items	Photos
Fix electrode grounding conductor on main service at administration building	
Disconnect Switch on exterior wall of administration building has broken conduit with a conductor lying in grass -- potential shock hazard	
Multiple electrical equipment such as junction boxes, disconnect switches and lighting fixtures need knockout seals and bulb replacement for proper functioning through the Whiteway WTP facility.	

5.4 Whiteway WTP Condition Evaluation

The uploaded methodology emphasizes that condition ratings are a combination of technical measurement and expert judgement, and that they are essential for forecasting future needs. In the Whiteway WTP context, each major asset was rated on a 1–5 scale, where:

- 5 = Excellent
- 4 = Good
- 3 = Fair
- 2 = Poor
- 1 = Failed or Critical

The asset rating scores reflect mechanical integrity, remaining useful life, functional adequacy, and operational risk, consistent with the rating-descriptive systems discussed in the methodology.

Each asset was given an additional scoring for “consequence of failure” (1-5), based largely on the resilience of the system – i.e., the redundancy of the system and whether the treatment system would be shut down in the event of failure. The condition score and consequence of failure score were then averaged to get an overall risk score for each asset (**Table 5-2**).

The average condition across all inventoried assets at Whiteway WTP is: Average Condition Score = 3 (“Fair”). A “Fair” score indicates:

- Whiteway WTP continues to function as designed.
- Some components show observable deterioration affecting performance or reliability.
- Without intervention, a number of assets will fall into “Poor” condition within the next 5–10 years.
- Operational risks (unplanned downtime, reduced treatment resilience, and costly emergency repairs) begin to increase.

The resulting score is the anchor for the capital-planning scenarios presented in Figure 5-1.

5.4.1 Renewal Cost Curve and Capital Planning Scenarios

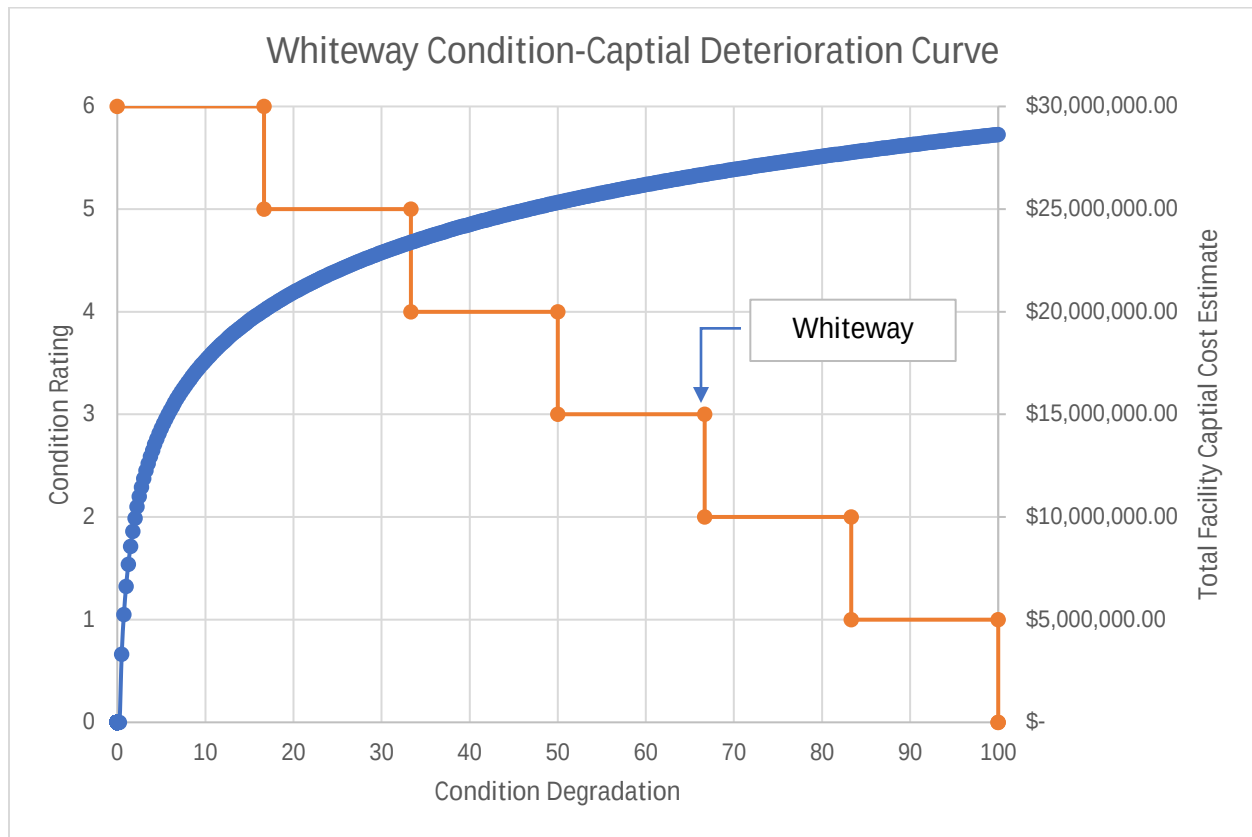
Figure 5-7 represents a convex deterioration-cost relationship. As conditions decline, the marginal cost of restoring the facility to higher performance levels increases rapidly. This is typical for treatment plants:

- Minor wear early in the lifecycle can be corrected with low-cost rehabilitation.
- Mid-life deterioration requires component renewal.
- Late-life deterioration requires full replacement, which is exponentially more expensive.

This convex shape mirrors the physical deterioration curves discussed in the methodology, where

structure (or asset) condition drops slowly at first, then accelerates as age accumulates.

Figure 5-7. Whiteway Condition-Capital Deterioration Curve



Each step corresponds to a renewal action:

- Score 6 → 5: Light rehabilitation
- Score 5 → 4: Mechanical refurbishment
- Score 4 → 3: Subsystem-level renewal
- Score 3 → 2: Major refurbishment
- Score 2 → 1/0: Full replacement

The stepwise renewal action ranking mirrors the defect/action methodology where each condition state triggers a specific response window.

5.4.2 Position of the WTP on the Deterioration Curve

Analysis has identified Whiteway WTP's **current condition state as (Score 3)** on the cost curve. This confirms:

WTP CONDITION ASSESSMENT

- The plant is at a **mid-life turning point**.
- Rehabilitation costs to reach “Good” condition are **≈ \$4.9M**.
- Replacement-level investment (“Like New”) would require **≈ \$14.3M**.

This mirrors structural-asset principles: once a facility reaches the mid-deterioration zone, capital investments become necessary to avoid high-cost terminal deterioration (see “Convex deterioration models” in the methodology).

The step transitions (6→5→4→3→2→1) reflect the “action-oriented” inspection philosophy:

- **Scores 5–6:** Routine maintenance
- **Score 4:** Preventive rehabilitation window
- **Score 3:** Major rehabilitation window
- **Scores 1–2:** Emergency renewal or replacement

Whiteway WTP is already in the major rehabilitation window, meaning capital action is timely and appropriate.

5.4.3 Capital Investment Strategy Implications

The methodology emphasizes comparing strategies such as:

- Steady-State Capital Investment
- Deferred maintenance
- Preventive rehabilitation
- Full replacement

Steady-State Rehabilitation Capital Investment

- \$2.0M investment over the next 10 years
- Does not improve the existing condition of assets, only maintains their current state.
- Lower short-run capital investment strategy that will increase O&M expenditure in response to maintaining lower asset condition scores.

Condition Improvement Rehabilitation Strategy

- \$4.9M investment to raise condition from **Fair** → **Good**
- Lower long-term costs
- Reduced service disruption
- Avoidance of costs associated with equipment failures and reduced need for O&M.

Reconstruction Strategy

- \$14.3M for “Like-New” condition
- Higher upfront cost
- Longer service life extension

- May exceed short-term budget capacity

Do-Minimum Strategy

- Delays capital expenditure
- Pushes plant into “Poor” condition zone within a few years
- Increases likelihood of:
- Forced outages
- Emergency repairs
- Higher lifecycle cost

5.4.4 Whiteway WTP Condition-Based Capital Needs

“Like-New” Reconstruction Cost

From **Figure 5-7**: like-New Reconstruction Cost = \$14,340,000, representing the total expected replacement value (ERV) required to raise the entire facility to a condition rating of 5 (Excellent). It approximates the “full rebuild cost.” The rebuild cost represents equipment cost; installation and non-construction costs would capitalize.

“Good” Condition Rehabilitation Cost

Target Condition Score = 4 (Good) Cost to Achieve Good = \$4,973,333

This target aligns with the asset-management principle that facilities do not need to be rebuilt to new condition, but should be maintained in a high-functioning, low-risk state. As the methodology emphasizes, “Good” or “Excellent” ratings generally provide safe, reliable service with no significant performance limitations.

Comparison to Average Condition (Score 3)

The plant’s average score of 3 (“Fair”) sits precisely at the transition point where:

- Deterioration begins accelerating.
- Maintenance becomes increasingly reactive.
- Costs rise sharply if intervention is deferred.

Whiteway WTP scoring aligns with the concave-to-convex deterioration transition behaviors described in the methodology.

Steady-State Maintenance

Table 5-2 was developed to analyze the risk of Whiteway WTP on a component basis, both quantitatively and qualitatively. The “Financial Risk Score” was determined by comparing the estimated rebuild price compared to the total price of the plant, and doing a linear interpolation based on the remaining useful life of the component. The components with higher “Financial Risk Scores” would see more favorable cost-benefit ratios. This does not necessarily align with the components which are in critical condition and classified as high risk, nor does it align with the recommended actions the City should pursue in rehabilitating and upgrading the plant.

Table 5-3 was developed to estimate the capital investment needs of the Whiteway plant to obtain a steady state condition rating. The rehab cost for each component was assumed to be equal to the capital cost amortized to the lifespan of the component. The rehab frequency of the component was based on the condition score in 2025, with components with a lower condition rating requiring a more frequent investment rate. The 10-year capital needs for this strategy are estimated to be \$2,027,942.

It should be noted that upgrades to lime softening system will not be able to reduce PFAS and, depending on the chosen technology, may be obsolete after construction of new treatment plant.

Table 5-2. Whiteway WTP Risk Assessment

Process	Type	Item	Quantity	Useful Life	Install Date	Rehab Date	Useful Life Remaining	Condition Score	Total Rebuild Cost	Financial Risk Score	Likelihood of Failure	Consequence of Failure	Combined Risk Score
Treatment	Tank	Catalytic Lime Silo	1	20	1981	2015	9	Poor	\$ 1,500,000.00	0.00465	High	High	High
Treatment	Tank	Catalytic Lime Reactors	1	20	1981	2015	9	Poor	\$ 1,500,000.00	0.00465	High	Med	High
Post Treatment	Tank	1.0 MG Ground Storage Tank	1	50	1993	2025	49	Excellent	\$ 6,000,000.00	0.00409	Very Low	Low	Very Low
Treatment	Tank	Filter Basin	1	25	1981	2020	19	Good	\$ 2,250,000.00	0.00329	Low	Very High	High
Post Treatment	Tank	Clearwell	1	35	1981	2025	34	Excellent	\$ 3,000,000.00	0.00292	Very Low	Med	Low
Treatment	Tank	Recarbonation Tank	1	25	1981	2015	14	Fair	\$ 1,500,000.00	0.00273	Med	Med	Med
Raw Water	Pump	Production Well No. 4	1	25	1956	2020	19	Good	\$ 1,800,000.00	0.00263	Low	Very Low	Very Low
Raw Water	Pump	Production Well No. 5	1	25	1983	2020	19	Good	\$ 1,800,000.00	0.00263	Low	Very Low	Very Low
Pretreatment	Tank	Aeration and Blending Tank	1	25	1981	2020	19	Good	\$ 1,500,000.00	0.00219	Low	Med	Med
Post Treatment	Tank	0.5 MG Ground Storage Tank	1	50	1981	2025	49	Excellent	\$ 3,000,000.00	0.00204	Very Low	Low	Very Low
Treatment	Media	Filter Media Core	4	10	1981	2020	4	Poor	\$ 300,000.00	0.00203	High	High	High
Post Treatment	Tank	0.2 MG Ground Storage Tank	1	50	1981	2025	49	Excellent	\$ 2,250,000.00	0.00153	Very Low	Low	Very Low
Post Treatment	Pump	Transfer Pumps to GST (10-25 HP)	4	25	1981	2017	16	Fair	\$ 900,000.00	0.00153	Med	Low	Med
Post Treatment	Pump	High Service Pumps No. 4, 5, 6 (75 HP)	3	25	1981	2019	18	Good	\$ 675,000.00	0.00100	Low	Very Low	Very Low
Post Treatment	Pump	High Service Pumps No. 2, 3 (60 HP)	2	25	1993	2019	18	Good	\$ 450,000.00	0.00067	Low	Very Low	Very Low
Treatment	Meter	Filter Effluent Turbidimeter	2	15	1981	2020	9	Fair	\$ 225,000.00	0.00066	Med	Low	Med
Pretreatment	Pump	Lime Catalyst Transfer Pump (40 HP)	3	15	1981	2015	4	Critical	\$ 45,000.00	0.00038	Very High	Med	High
Treatment	Mixer	Lime Slurry Mechanical Mixers	3	15	1981	2015	4	Critical	\$ 45,000.00	0.00038	Very High	High	Very High
Treatment	Pump	Recarb Chlorine Injector	1	15	1981	2015	4	Critical	\$ 37,500.00	0.00032	Very High	Very High	Very High
Post Treatment	Pump	High Service Pump No. 1 (50 HP)	1	25	1993	2022	21	Excellent	\$ 225,000.00	0.00031	Very Low	Very Low	Very Low
Treatment	Pump	Filter Surface Wash Pump	1	25	1981	2020	19	Good	\$ 150,000.00	0.00022	Low	High	Med
Treatment	Pump	Recarb Tank Air Blower	1	20	1981	2015	9	Poor	\$ 37,500.00	0.00012	High	Med	High
Pretreatment	Pump	Aeration Tank Chlorine Injector	1	15	1981	2020	9	Fair	\$ 37,500.00	0.00011	Med	Low	Med
Treatment	Mixer	Lime Slakers	2	20	1981	2015	9	Poor	\$ 30,000.00	0.00009	High	High	High
Treatment	Pump	Lime Slurry Pumps	2	20	1981	2015	9	Poor	\$ 30,000.00	0.00009	High	High	High
Pretreatment	Tank	Chlorine Tank	1	20	1981	2020	14	Good	\$ 37,500.00	0.00007	Low	Very High	High
Treatment	Splitter	Lime Slurry Flow Splitter	1	20	1981	2015	9	Poor	\$ 15,000.00	0.00005	High	High	High



Table 5-3. Whiteway Steady State Rehab 10-Year Capital Needs Estimation

Component	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	10 Year CIP
Production Well No. 4	\$ -	\$ -	\$ -	\$ -	\$ 60,000.00	\$ 60,000.00	\$ 60,000.00	\$ 60,000.00	\$ -	\$ -	\$ -	\$ 180,000.00
Production Well No. 5	\$ -	\$ -	\$ -	\$ -	\$ 60,000.00	\$ 60,000.00	\$ 60,000.00	\$ 60,000.00	\$ -	\$ -	\$ -	\$ 180,000.00
Aeration and Blending Tank	\$ -	\$ -	\$ -	\$ -	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	\$ -	\$ -	\$ -	\$ 150,000.00
Chlorine Tank	\$ -	\$ -	\$ 1,666.67	\$ 1,666.67	\$ 1,666.67	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,000.00
Aeration Tank Chlorine Injector	\$ 2,500.00	\$ 2,500.00	\$ 2,500.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 7,500.00
Lime Catalyst Transfer Pump	\$ 2,000.00	\$ 2,000.00	\$ 2,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 6,000.00
Catalytic Lime Silo	\$ 100,000.00	\$ 100,000.00	\$ 100,000.00	\$ 100,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 400,000.00
Catalytic Lime Reactors	\$ 100,000.00	\$ 100,000.00	\$ 100,000.00	\$ 100,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 400,000.00
Lime Slakers	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,000.00
Lime Slurry Pumps	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,000.00
Lime Slurry Flow Splitter	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,000.00
Lime Slurry Mechanical Mixers	\$ 2,000.00	\$ 2,000.00	\$ 2,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 6,000.00
Recarbonation Tank	\$ 66,666.67	\$ 66,666.67	\$ 66,666.67	\$ 66,666.67	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 266,666.67
Recarb Tank Air Blower	\$ 2,500.00	\$ 2,500.00	\$ 2,500.00	\$ 2,500.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 10,000.00
Recarb Chlorine Injector	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 15,000.00
Filter Basin	\$ -	\$ -	\$ -	\$ -	\$ 75,000.00	\$ 75,000.00	\$ 75,000.00	\$ 75,000.00	\$ -	\$ -	\$ -	\$ 225,000.00
Filter Media Core	\$ 10,000.00	\$ 10,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 20,000.00
Filter Surface Wash Pump	\$ -	\$ -	\$ -	\$ -	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ -	\$ -	\$ -	\$ 15,000.00
Filter Effluent Turbidimeter	\$ 7,500.00	\$ 7,500.00	\$ 7,500.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 22,500.00
Clearwell	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
0.5 MG Ground Storage Tank	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1.0 MG Ground Storage Tank	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
0.2 MG Ground Storage Tank	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Transfer Pumps to GST (40 HP)	\$ 8,823.53	\$ 8,823.53	\$ 8,823.53	\$ 8,823.53	\$ 8,823.53	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 44,117.65
High Service Pump No. 1 (50 HP)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
High Service Pumps No. 2, 3 (60 HP)	\$ -	\$ -	\$ -	\$ 7,894.74	\$ 7,894.74	\$ 7,894.74	\$ 7,894.74	\$ -	\$ -	\$ -	\$ -	\$ 31,578.95
High Service Pumps No. 4, 5, 6 (75 HP)	\$ -	\$ -	\$ -	\$ 7,894.74	\$ 7,894.74	\$ 7,894.74	\$ 7,894.74	\$ -	\$ -	\$ -	\$ -	\$ 31,578.95
10 Year CIP Estimate:												\$ 2,027,942.21



5.4.5 Whiteway Summary and Recommendations

Asset inventory findings for Whiteway WTP indicate:

- Mix of 1981-vintage assets nearing the end of their useful life.
- A substantial set of components requiring major rehabilitation within the next 5–10 years.
- Total facility value of \$29,340,000, consistent with the **Figure 5-7** right-hand axis.
- A few assets already rated Critical, indicating immediate renewal or replacement needs.

Key Observations

1. Treatment Process Assets (Tanks, Reactors, Basins) Most are 40+ years old, approaching or exceeding typical concrete and mechanical useful lives. Condition scores range from Good down to Critical, with associated capital costs between \$500,000 and \$3 million per asset.
2. Pump Stations and Blowers Many pumps and injectors installed in the early 1980s have had significant rebuilds in the past 5 years, showing Good to Excellent condition and require constant renewal to ensure operational resiliency based on the criticality of these assets.
3. Instrumentation and Meters Shorter useful lives (7–10 years) mean these components have cycled through multiple renewals and represent an ongoing capital requirement.
4. Criticality Weighting Certain assets represent single points of failure (e.g., surface wash pumps, chlorine injectors, air blowers). Their renewal should be prioritized.

Overall Whiteway Condition

- Whiteway WTP is currently rated 3 (“Fair”), indicating significant mid-life deterioration.
- Asset conditions align closely with the stepped deterioration and convex cost models described in the methodology.
- Achieving target condition states will require:
 - o \$4.9M to reach “Good” condition
 - o \$14.3M to achieve “Like-New” condition
 - o \$2.0M to achieve “Steady-State” condition
- Several assets exhibit Critical or Salvage condition ratings and should be prioritized.

Recommendations

- Given that the City must meet EPA PFAS regulations by 2029, as discussed previously in this report, the treatment process should be modified to meet the regulations
- It is not recommended for the City invest large amounts of money into the existing lime softening system beyond maintaining it until a solution for PFAS removal is implemented (such as nanofiltration) by 2029

- **Prioritize assets rated Critical or Poor (Scores 1–2)**, especially treatment processes, high-criticality pumps, mixers, blowers, and injection systems.
- **Implement a structured rehabilitation program** to maintain the facility rating as Fair (3) condition over the next 5-10 years.
- **Plan phased capital projects** aligned with the \$4.9M rehabilitation scenario.
- **Avoid deferred maintenance** to prevent entering the high-cost end of the deterioration curve.
- **Continue annual condition reassessments** using the **Figure 5-8** flowchart logic to guide preventative maintenance strategy.

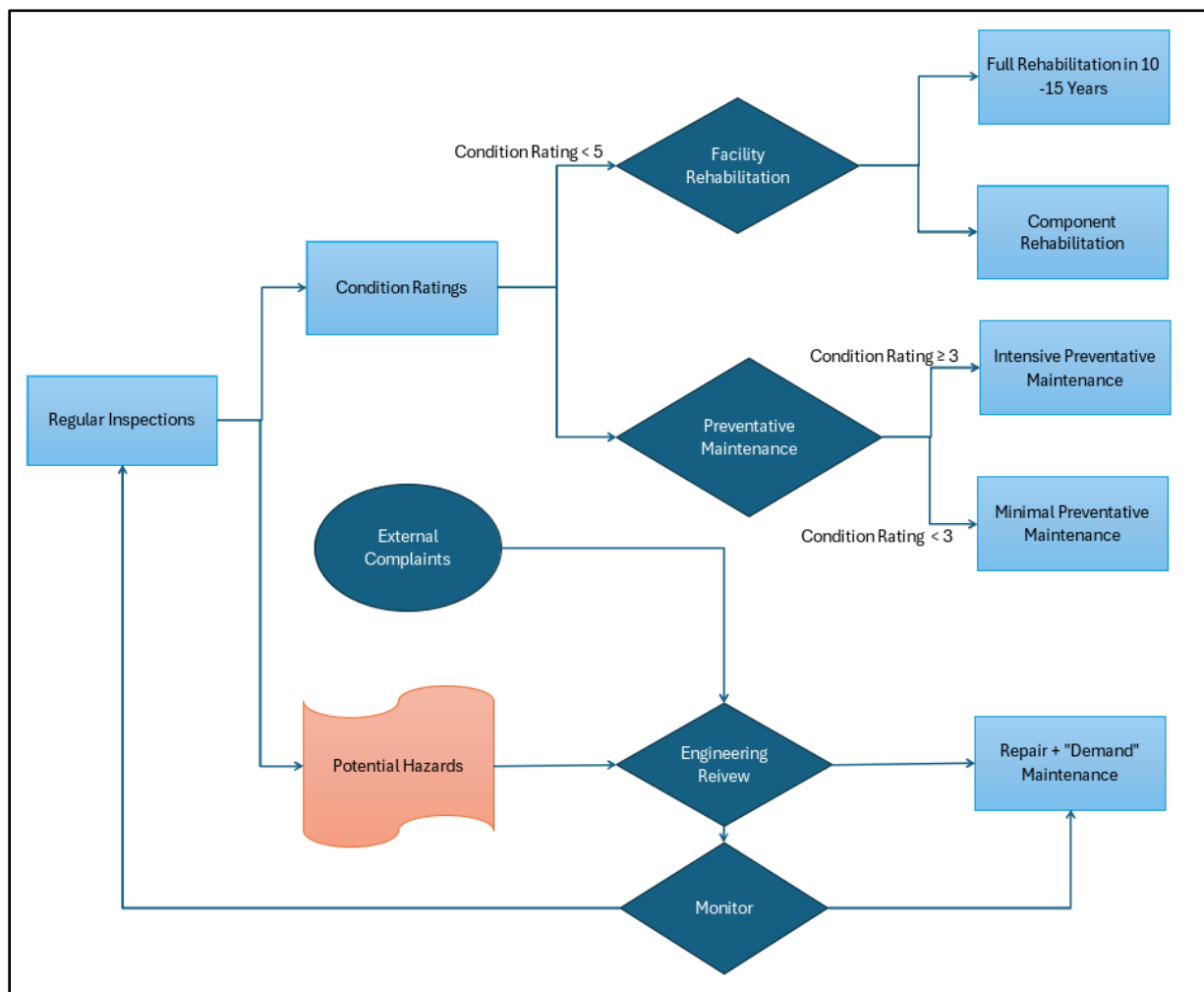


Figure 5-8. Preventative maintenance activities condition equilibrium flowchart

5.5 Sunningdale WTP Condition Assessment Findings

5.5.1 Wellfields and Raw Water Transmission Mains

Infrastructure Condition

- Well Pumps and Motors
 - o Age: 22 Years
 - o Estimated remaining rebuild useful: 5-10 Years

The well pumps and motors have an average age of 22 years, with an estimated remaining useful rebuild life of 5 to 10 years. Given that the wells are contained in pump houses, both well pumps on site show little rusting or wear in the paint.

Notes/Recommended Actions

Pump motor rebuilds required based on reported average age of current rebuilds is 20 years.

5.5.2 Plant Hydraulics

The plant hydraulics were reviewed for condition-related items that could affect plant hydraulics. Hydraulic components are in good condition and require normal level maintenance; no major issues requiring a capital project level investment were observed and Sunningdale WTP is typically operated below its intended design capacity.

5.5.3 High Service Pumping

Infrastructure Condition

- High Service Pumps
 - o Number: 4 vertical high service pumps
 - o Age range: Motors serviced between 2019 and 2023

The high service pumping system includes four vertical high service pumps, with motors that have been serviced between 2016 and 2024

There is a conduit entering in a chart cabinet which exhibits electrical conductors capped with wire nuts which are exposed with no junction box installed (pictured in **Table 5-4**).

Notes/Recommended Actions

Install a junction box for the exposed conductors in the high service pump room

5.5.4 Chemical Storage and Feed Systems

Infrastructure Condition

The chlorine piping and pressure gauges look

Safety Systems

- Ventilation Systems
 - o Chemical tanks stored in CMU buildings with small footprints and their own HVAC systems and shutters on the exterior walls
- Emergency Equipment
 - o Eyewash/shower stations: Eyewash station located outside of the chlorine room

The chlorine tank, piping, and cylinders are stored in a dedicated, separate building and injected into the influent within the chlorine contact chamber. However, the existing chlorine meter located at the contact chamber effluent is currently offline, limiting continuous monitoring at that point in the process. The chlorine contact basin has signs staining and a worn liner.

In addition, the fluoride system is no longer in service, as the fluoride room has been fully decommissioned along with Whiteway's fluoride system.

The influent valve and flowmeter are located in an open pit adjacent to the sidewalk, which poses an accessibility hazard for operating the plant.

Notes/Recommended Actions

1. Repair/Replace chlorine meter at contact basin effluent
2. Encase flowmeter with meter box & concrete
3. Re-line chlorine contact basin



Figure 5-9. Flow meter box



Figure 5-10. Chlorine Contact Basin

5.5.5 Electrical System

Infrastructure Condition

- **Main Electrical Service**
 - o Observations: Most of the electrical equipment seems to have exceeded their electrical lifespan; A few electrical conduits and cabinets are rusted
- **HS Pump Room:**
 - o There is a conduit entering in a chart cabinet which exhibits electrical conductors capped with exposed wire nuts which with no junction box installed.
- **Generator Area:**
 - o There is a potential Clearance Code issue between the East side of the generator door and the existing fence. According to NEC, for 480V voltage, Three Phase, the required clearance is 42 inches. If that door (which we could not open) is to access the electrical components, there is a violation since the distance is 30 inches.
- **Sunningdale Pump Room:**
 - o An Instrumentation cabinet shows signs of corrosion.
 - o There are two luminaires located on the top of two interior doors that are missing covers.
 - o Chlorine Room: No electrical deficiencies were noted.
- **Office:**
 - o A plate of a junction box shows signs of corrosion

From a safety and compliance perspective, the main hazards are the presence of the uncovered conductors in the High Service Pump Room, as well as the potential clearance issue for the on-site generator.

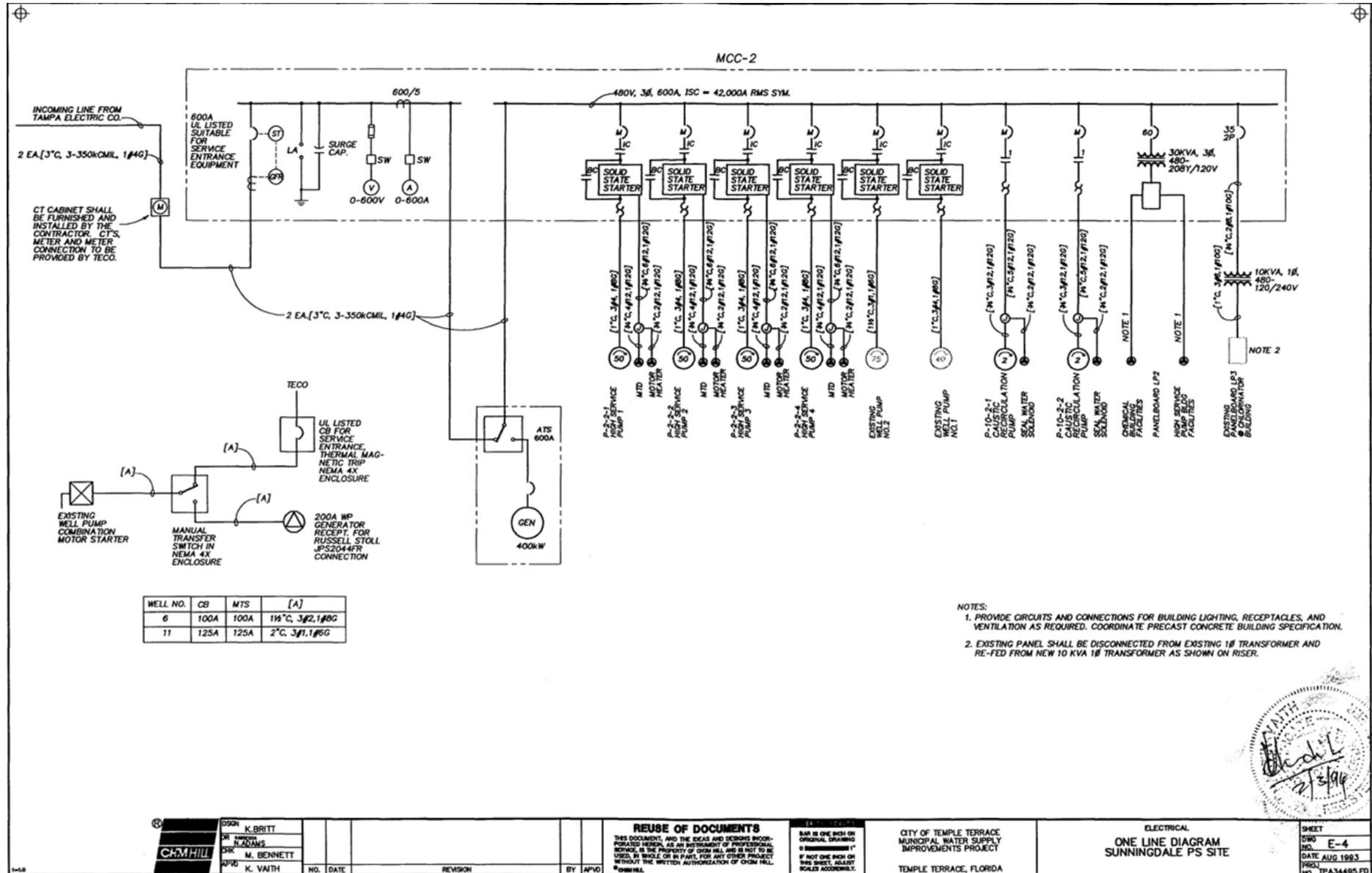
Notes/Recommended Actions

1. Install junction boxes to cover the exposed conductors and wire nuts
2. Investigate the clearance deficiency of the access door to the generator

Table 5-4. Urgent Sunningdale Electrical Deficiencies

Sunningdale Urgent Electrical Action Items	Photos
Remediation is required for exposed conductors in HSP room at Sunningdale facility.	 28°2'13.103"N 82°23'6.82"W 6009 Whiteaway Dr WTP Sunningdale Pump HS Pump Room

Figure 5-11. Sunningdale Electrical One-Line Diagram



5.6 Sunningdale WTP Site Condition Evaluation

The uploaded methodology emphasizes that condition ratings are a combination of technical measurement and expert judgement, and that they are essential for forecasting future needs. In the Sunningdale WTP context, each major asset was rated on a 1–5 scale, where:

- 5 = Excellent
- 4 = Good
- 3 = Fair
- 2 = Poor
- 1 = Failed or Critical

These scores reflect mechanical integrity, remaining useful life, functional adequacy, and operational risk, consistent with the rating-descriptive systems discussed in the methodology.

Each asset was given an additional scoring for “consequence of failure” (1-5), based largely on the resilience of the system – i.e., the redundancy of the system and whether the treatment system would be shut down in the event of failure. The condition score and consequence of failure score were then averaged to get an overall risk score for each asset (**Table 5-5**).

The average condition across all inventoried assets at Sunningdale WTP is: Average Condition Score = 3 (“Fair”)

A “Fair” score—consistent with the bridge-management interpretation—indicates:

- The plant continues to function as designed.
- Some components show observable deterioration but do not affect performance or reliability.
- Without intervention, the chlorine contact chamber may fall into the “Poor” condition within the next 5-10 years.
- Operational risks (unplanned downtime, reduced treatment resilience, and costly emergency repairs) being to increase.

The resulting score is the anchor for the capital-planning scenarios presented below.

5.6.1 Renewal Cost Curve and Capital Planning Scenarios

Figure 5-10 represents a convex deterioration-cost relationship. As conditions decline, the marginal cost of restoring the facility to higher performance levels increases rapidly. This is typical for treatment plants:

- Minor wear early in the lifecycle can be corrected with low-cost rehabilitation.
- Mid-life deterioration requires component renewal.
- Late-life deterioration requires full replacement, which is exponentially more expensive.

This convex shape mirrors the physical deterioration curves discussed in the methodology, where structure (or asset) condition drops slowly at first, then accelerates as age accumulates.

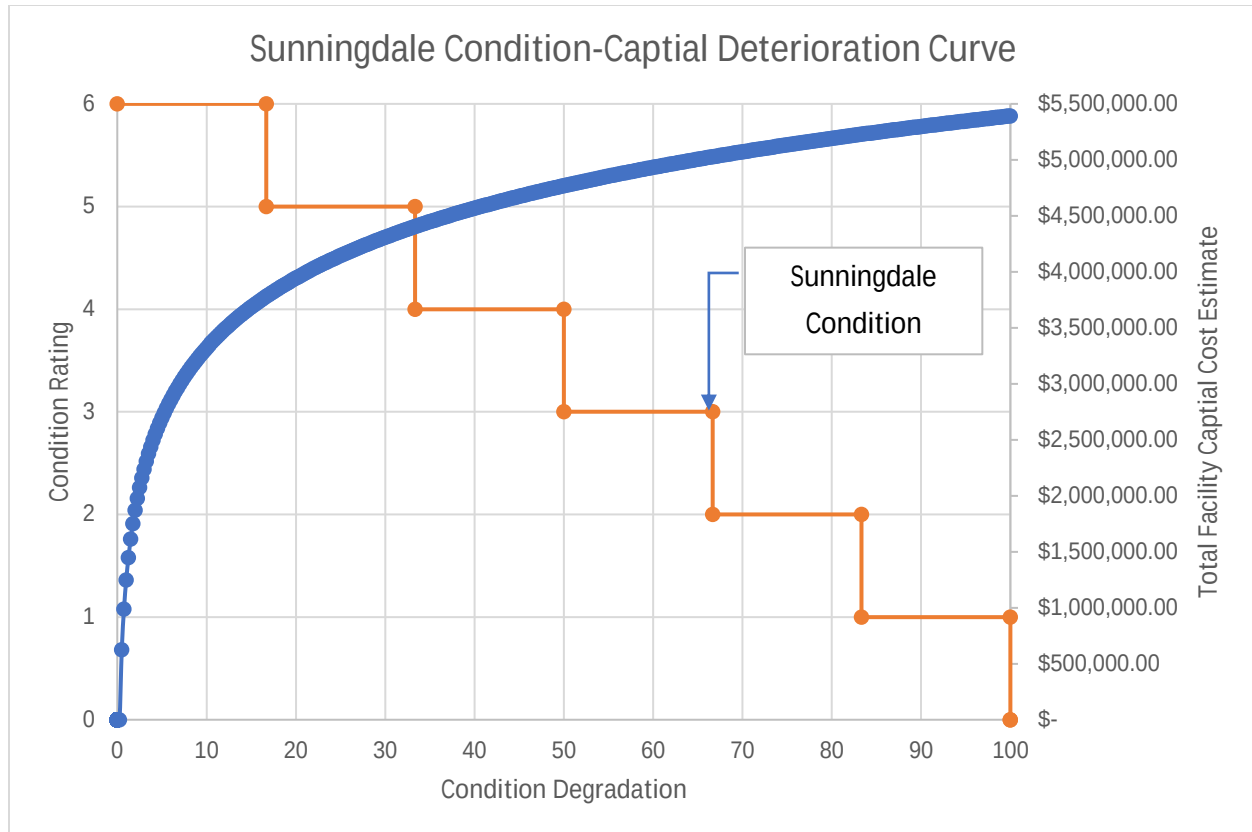


Figure 5-12. Sunningdale Condition-Capital Deterioration Curve

Each step corresponds to a **renewal action**:

- **Score 6 → 5**: Light rehabilitation
- **Score 5 → 4**: Mechanical refurbishment
- **Score 4 → 3**: Subsystem-level renewal
- **Score 3 → 2**: Major refurbishment
- **Score 2 → 1/0**: Full replacement

The stepwise scoring progression mirrors the defect/action methodology where each condition state triggers a specific response window.

5.6.2 Position of the WTP on the Deterioration Curve

Sunningdale WTP has been identified by the plant's **current condition state as (Score 3)** on the cost curve. This confirms:

- The plant is at a **mid-life turning point**.
- Rehabilitation costs to reach "Good" condition are **≈ \$1.4M**.
- Replacement-level investment ("Like New") would require **≈ \$2.4M**.

This mirrors structural-asset principles: once a facility reaches the mid-deterioration zone, capital investments become necessary to avoid high-cost terminal deterioration (see "Convex deterioration models" in the methodology).

The step transitions (6→5→4→3→2→1) reflect the "action-oriented" inspection philosophy:

- **Scores 5–6:** Routine maintenance
- **Score 4:** Preventive rehabilitation window
- **Score 3:** Major rehabilitation window
- **Scores 1–2:** Emergency renewal or replacement

5.6.3 Capital Investment Strategy Implications

The methodology emphasizes comparing strategies such as:

- Steady-State Capital Investment
- Deferred maintenance
- Preventive rehabilitation
- Full replacement

Steady-State Rehabilitation Capital Investment

- \$400,000 investment over the next 10 years
- Does not improve the existing condition of assets, only maintains their current state.
- Lower short-run capital investment strategy that will increase O&M expenditure in response to maintaining lower asset condition scores.

Condition Improvement Rehabilitation Strategy

- \$1.4M investment to raise condition from Fair → Good
- Lower long-term costs
- Reduced service disruption
- Avoidance of costs associated with equipment failures and reduced need for O&M.

Reconstruction Strategy

- \$2.4M for "Like-New" condition
- Higher upfront cost
- Longer service life extension
- May exceed short-term budget capacity

Do-Minimum Strategy

- Delays capital expenditure
- Pushes plant into “Poor” condition zone within a few years
- Increases likelihood of:
 - Forced outages
 - Emergency repairs
 - Higher lifecycle cost

5.6.4 Sunningdale WTP Condition-Based Capital Needs

“Like-New” Reconstruction Cost

From **Figure 5-11**:

Like-New Reconstruction Cost = \$2,392,500.00

This represents the total expected replacement value (ERV) required to raise the entire facility to a condition rating of **5 (Excellent)**. It approximates the “full rebuild cost.”

“Good” Condition Rehabilitation Cost

Target Condition Score = 4 (Good) Cost to Achieve Good = \$1,397,833

This target aligns with the asset-management principle that facilities do not need to be rebuilt to new condition, but should be maintained in a high-functioning, low-risk state. As the methodology emphasizes, “Good” or “Excellent” ratings generally provide safe, reliable service with no significant performance limitations.

Comparison to Average Condition (Score 3)

The plant’s average score of 3 (“Fair”) sits precisely at the transition point where:

- Deterioration begins accelerating.
- Maintenance becomes increasingly reactive.
- Costs rise sharply if intervention is deferred.

This condition scoring aligns with the concave-to-convex deterioration transition behaviors described in the methodology.

Steady State Maintenance

Table 5-5 was developed to analyze the risk of the Sunningdale WTP on a component basis, both quantitatively and qualitatively. The “Financial Risk Score” was determined by comparing the estimated rebuild price compared to the total price of the plant, and doing a linear interpolation based on the remaining useful life of the component. The components with higher “Financial Risk Scores” would see more favorable cost-benefit ratios. This does not necessarily align with the components which are in critical condition and classified as high risk, nor does it align with the recommended actions the City should pursue in rehabilitating and upgrading the plant.

Table 5-6 was developed to estimate the capital investment needs of the Sunningdale WTP to obtain a steady state condition rating. The rehab cost for each component was assumed to be equal to the capital cost amortized to the lifespan of the component. The rehab frequency of the component was based on the condition score in 2025, with components with a lower condition rating requiring a more frequent investment rate. The 10-year capital needs for this strategy are estimated to be \$410,647.

It should be noted that maintenance of the existing system will not be able to reduce PFAS and, depending on the chosen technology, may be obsolete after construction of new treatment plant.

Table 5-5. Sunningdale WTP Risk Assessment

Process	Type	Item	Quantity	Useful Life	Install Date	Rehab Date	Useful Life Remaining	Condition Score	Total Rebuild Cost	Financial Risk Score	Likelihood of Failure	Consequence of Failure	Combined Risk Score
Raw Water	Pump	Production Well No. 2 (75 HP)	1	25	1993	2020	19	Good	\$ 1,800,000.00	0.01430	Low	Very Low	Very Low
Raw Water	Pump	Production Well No. 1 (30 HP)	1	25	1993	2024	23	Excellent	\$ 1,800,000.00	0.01335	Very Low	Very Low	Very Low
Post Treatment	Pump	High Service Pumps No. 1-4 (50 HP)	4	25	1993	2016	15	Fair	\$ 900,000.00	0.00862	Med	Low	Med
Treatment	Pump	Chlorine Scrubber	1	20	2022	2022	16	Good	\$ 750,000.00	0.00735	Low	High	Med
Treatment	Pump	Chlorinator	2	15	1993	2020	9	Fair	\$ 75,000.00	0.00120	Med	Very High	High
Treatment	Pump	Caustic Recirculation Pump	2	15	1993	2020	9	Fair	\$ 30,000.00	0.00048	Med	Very High	High
Pretreatment	Tank	Chlorine Contact Chamber	1	20	1993	2020	14	Good	\$ 37,500.00	0.00042	Med	High	High



Table 5-6. Sunningdale Steady State Rehab 10-Year Capital Needs Estimation

Component	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	SUM
Production Well No. 1 (30 HP)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Production Well No. 2 (75 HP)	\$ -	\$ -	\$ -	\$ -	\$60,000.00	\$60,000.00	\$60,000.00	\$60,000.00	\$ -	\$ -	\$ -	\$240,000.00
Chlorine Contact Chamber	\$ -	\$ -	\$ 1,666.67	\$ 1,666.67	\$ 1,666.67	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,000.00
Chlorine Scrubber	\$ -	\$ -	\$ -	\$ -	\$ -	\$29,411.76	\$29,411.76	\$29,411.76	\$29,411.76	\$ -	\$ -	\$117,647.06
Chlorinator	\$ 2,500.00	\$ 2,500.00	\$ 2,500.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 7,500.00
Caustic Recirculation Pump	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,000.00
High Service Pumps No. 1-4 (50 HP)	\$ 9,375.00	\$ 9,375.00	\$ 9,375.00	\$ 9,375.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 37,500.00
												\$410,647.06



5.6.5 Sunningdale Summary and Recommendations

Asset inventory findings for Whiteway WTP indicate:

- Mix of 1993-vintage assets that have been maintained.
- A few assets are rated as “fair,” indicating immediate renewal or replacement needs.
- Estimated total facility value of \$5,392,500.

Key Observations

1. Treatment Process and Pump assets are in good condition, with motors for the pump station being replaced in 2016-2024 and minor repairs to the wells for concrete cracks and mechanical seals being completed in 2020-2025. Condition Scores range from fair to excellent, with associated capital costs between \$5,000 and \$900,000 per asset.
2. Existing Effluent Pump Station motors have been replaced within the last 10 years. Well 1 and 2 have recently been serviced with updated motors and coatings in 2024.
3. It is noted that the coatings on the inside of the chlorine contact chamber seem to be at the end of the service life and should be repaired. During the site visits, the below ground influent valve and flow meter to the contact chamber were excavated and a potential safety hazard.

Overall Sunningdale Condition

- Sunningdale WTP is currently rated 3 (“Fair”), indicating significant mid-life deterioration.
- Asset conditions align closely with the stepped deterioration and convex cost models described in the methodology.
- Achieving target condition states will require:
 - o \$1.4M to reach “Good” condition
 - o \$2.4M to achieve “Like-New” condition
 - o \$400,000 to achieve “Steady-State” condition
- Most assets are in “fair” condition and should be monitored for replacement.

Recommendations

- Given that the City must meet EPA PFAS regulations by 2029, as discussed previously in this report, the treatment process should be modified to meet the regulations
- It is not recommended for the City to invest large amounts of money, beyond maintaining functionality, into assets that may be removed as a part of removing PFAS (i.e. the chlorine gas system would convert to liquid sodium hypochlorite for nanofiltration)
- **Implement a structured rehabilitation program** to maintain the facility rating as Fair (3) condition over the next 5-10 years.
- **Plan phased capital projects** aligned with the \$1.4M rehabilitation scenario.
- **Avoid deferred maintenance** to prevent entering the high-cost end of the deterioration

curve.

- **Continue annual condition reassessments** using the **Figure 5-8** flowchart logic to guide preventative maintenance strategy.

5.7 Modernization Sequencing

Phased migration reduces operational risk, but it increases the need for clear rules: what will be migrated when, what will be re-platformed versus retired, and what will be frozen. An ISO-native perspective, for example, can illustrate how modernization can turn coexistence into a liability if native processing cannot be fully implemented over time.

Phase 1: Strategic Assessment and Diagnosis

Finalize an inventory and dependency map. Application retirement guidance consistently highlights that decommissioning begins with knowing what exists, how it is used, and to what it is connected. Automated discovery and dependency mapping reduce reliance on operator knowledge and surface “hidden” risks such as undocumented interfaces, embedded credentials, and shadow integrations. Inventory discipline also clarifies which systems are true candidates for retirement and which are effectively part of critical service delivery. Scope regulatory and retention obligations in this initial phase. Retention, privacy, and security constraints determine archive requirements, what can be deleted, and what must remain accessible under defined conditions.

Phase 2: Modernization and Coexistence

Develop a progressive migration strategy with clear coexistence limits. Phased migration reduces operational risk, but it increases the need for clear rules: what will be migrated when, what will be re-platformed versus retired, and what will be frozen. ISO migration guidelines reinforce dependency on the City’s usage patterns, highlighting the need for precise scoping rather than assumptions. Sequencing should modernize risk and monitoring controls in parallel with platform change. Data archiving is an operating capability emphasizing maintaining secure, searchable, auditable access to historical records. Streamlined archiving allows the modernized system to remain lean, performant, and easier to control. Run parallel operations to prove key equivalence.

Phase 3: Engineering and Component Selection

Based on the diagnosis, detailed engineering components will be identified, sized and specified. Standardization of key equipment, such as motor control centers, should be dictated if compliant with City purchasing requirements to ease maintenance, spare parts and equipment replacement and compatibility. Circuits and contactors with improved breaking capacity, modern VFDs with advanced thermal protection, high-precision signaling and monitoring devices and high-efficiency and compatible motors would be specified. Decisions prioritize safety, efficiency, and compatibility

with existing equipment. Security road maps increasingly require institutions to plan for increased security, for sequencing, the implication is practical: systems that cannot be upgraded to modern security standards should be prioritized for retirement or isolation, and new platforms should be designed with agility in mind to avoid repeating historic hard-coded dependencies.

Phase 4: Testing, Installation and Commissioning

Implement Factory Acceptance Testing (FAT) on new electrical panel, paying attention to organized wiring and complete labeling, continuity and insulation testing and simulations to validate communication and response. During testing, protection parameters and response times were adjusted to ensure stable performance. Once validated, the upgraded electrical components are installed at the WTPs. During commissioning, perform functional tests, verifying that each signal and device responded correctly.

The result of modernization sequencing is a more reliable electrical system, with precise monitoring and ready for future expansion. Modernization is about maintaining continuity and reliability in every connection thereby significantly reducing operational risks.

6.0 WATER TREATMENT FACILITIES RENEWAL PLAN

This section presents a plan to renew the City's water treatment facilities and continue reliable operation in compliance with current and future State and Federal regulations. The plan identifies improvements required to address treatment process water quality and facilities' rehabilitation and replacement (R&R) needs including PFAS regulatory compliance. Initial bench- and pilot-scale testing on the City's water, technical/cost evaluations and City staff inputs yielded a prioritized, scheduled list of improvements with planning level (Class 5) cost estimates. The renewal plan includes capital recommendations prioritized by treatment facilities' needs and long-term site layout plans for both City WTPs depicting new facilities and traffic flow for continued access for deliveries and maintenance as well as parking areas.

The City's WTPs have served well for 40+ years and are near the end of their service lives. Near complete renewal or treatment facilities combined with PFAS removal will precipitate large capital costs and significant increase in operating cost. Capital funding support and phasing will help mitigate increases in the cost of water, however, water rates will need to increase. The City's ongoing funding pursuits, coupled with the funding plan additions identified herein, will help minimize capital needs and support a future City rate study to fully define financial constraints. The Water Treatment Facilities Renewal Plan is organized as follows:

- Treatment Process Improvements
- Capacity Improvements
- R&R Improvements
- Funding
- Recommended WTP Renewal Plan

6.1 Treatment Process Improvements

As discussed in detail in previous sections, the U.S. Environmental Protection Agency (EPA) has set further regulations that establish primary maximum contaminant levels (MCLs) and maximum contaminant level goals (MCLGs) for six PFAS substances in drinking water. The EPA deadline for public water systems to implement solutions to reduce PFAS to below the MCLs is 2029-2031. Further details on regulatory framework can be found in **Chapter 1**. Combining EPA's requirement with the high hardness source water, the City's treatment process needs are:

- Reliable and effective total hardness reduction to < 150 mg/L CaCO₃
- PFAS reductions to meet EPA MCLs and eliminate/minimize exposure

Improvement alternatives were evaluated to meet City goals based on City's water supply options, the most effective treatment processes, and operational efficiency. Details for evaluated options

regarding WTP rehab can be seen in **Chapter 4** and options regarding PFAS reduction to meet EPA regulations can be found in **Appendix B**.

Limited pilot testing conducted by CHA focusing on PFAS reduction did not find granular activated carbon (GAC) or ion exchange (IX) as feasible treatment alternatives (**Appendix B**) due to the PFAS breakthrough frequency, limited removal of smaller chain PFAS present and the multi-contaminant (+hardness) removal required. Bench-testing done using nanofiltration (NF) membranes, showed excellent reduction of PFAS compounds below PMCL. As such, CHA recommends nanofiltration as the preferred treatment process to reduce hardness, currently regulated contaminants (e.g. PFAS) and future emerging contaminants.

The modular nature of membranes and small footprint make it suitable for both WTPs and production capacity can be easily expanded in an incremental fashion. The NF concentrate containing PFAS would need to be disposed or further reduced and treated. Several alternatives were explored, including deep well injection, hauling away the liquid waste to an approved disposal facility, and emerging technologies such as aqueous electrostatic concentration (AEC) and foam fractionation followed by photocatalytic destruction. Due to the volume of concentrate that would be produced (between 0.3 and 1 MGD) hauling is not recommended. CHA recommends the City consider deep well injection for concentrate disposal as a placeholder, as it is practiced in Florida, and is approved by FDEP. This will give the City time to fully develop a more cost-effective concentrate concentration and destruction management option.

Further treatment process improvement recommendations include:

1. Due to the high capital cost of consolidating treatment to Whiteway, it is recommended to keep Sunningdale WTP in service. The modular nature of NF membranes allows for the equipment to be reused in the future if consolidation is implemented in the future.
2. Continue compliance implementation for State and Federal drinking water emerging contaminant regulations as outlined in **Chapter 1**.
3. As funds are available, plan to replace the gas chlorination process with a liquid sodium hypochlorite system to improve safety for City staff, operators and neighboring public. This is also something that is needed for the NF upgrade.

6.2 Capacity Improvements

The analysis of existing component capacities for both Whiteway and Sunningdale can be seen in **Chapter 3**. Further investigation of the hydraulic bottlenecks experienced at Whiteway can be seen in **Chapter 5**. In order to facilitate upgrading the Whiteway WTP to 6 MGD while maintaining the existing lime softening treatment system, nearly every component of the plant would need to be upgraded to increase capacity, with the exception of the finished storage.

Upgrading the Whiteway WTP to nanofiltration relieves some of the burden in upgrading the plant to 6 MGD, as the lime softening system would no longer be required. The aeration system and transfer pumps would still need to be upgraded to meet the demand requirements.

At the Sunningdale WTP, the existing process has sufficient capacity to meet projected demands, as Sunningdale acts as a peaking facility in support of the Whiteway WTP rated for 4 MGD by FDEP. Sunningdale's capacity lacks softening and PFAS removal capabilities.

The Whiteway and Sunningdale WTPs are currently operating in compliance with applicable FDOH and FDEP capacity requirements. Based on permitted/rated capacities, the combined treatment capacity of the WTPs is sufficient to meet projected average and peak day demands throughout the planning horizon as shown in **Table 6-1**.

Table 6-1. Existing WTP Flow Characteristics

WTP	FDEP Rated Max Day Capacity MGD	Historical Average Day Flows (2020-2025) MGD	Historical Peak Day Flows (2020-2025) MGD	95th Percentile Max Day Flows (2020-2025) MGD	95th Percentile Max Day/ Max Day WTP Capacity %
Whiteway	5.04	3.0	3.86	3.13	62%
Sunningdale	3.96	1.0	3.31	1.81	46%
Combined	9.00	4.0	6.62	4.74	53%

Note: 95th percentile of historical 6-year data span used to dampen effect of extraordinary events such as pipe breaks, plant maintenance, flushing events, etc.

In their current states, judging with 95th percentile historical 6-year WTP flows, Whiteway operates at 62% of its rated capacity, Sunningdale operates at 46% of its rated capacity, and collectively, both plants operate at 53% of total WTP rated capacity. While treatment capacity is adequate, the governing constraint on future system supply is the permitted groundwater withdrawal set by the SWFWMD. As summarized in **Table 6-2**, demand projections indicate that by approximately 2045, projected peak day withdrawals are expected to exceed the existing SWFWMD permitted allocation, despite adequate treatment plant capacity.

In terms of maintaining compliance, the City will need to explore increasing the permitted withdrawal rate with SWFWMD. The necessary increase to permitted withdrawal rates based on projected flows are listed in **Table 6-2** as "permit deficit". If the treatment process is upgraded to membrane filtration for reducing hardness and other contaminants (e.g., organics, PFAS), the corresponding water supply and deficit will increase as presented in the table. In order to produce 6 MGD of finished water, the City will need to be permitted to withdraw 7.1 MGD from the

production wells, given an 85% recovery rate. While higher NF recovery rates are targeted, 85% is conservative for supply quantification.

Table 6-2. Projected Flows vs. Permitted Withdrawal

Future Condition	WTP ADF MGD	ADF WUP Surplus/Deficit MGD	Peak Month Flow MGD	Peak Month WUP Deficit MGD
SWFWMD Permitted Withdrawal	5.15	--	5.817	--
Projected Flows (2029, PFAS Compliance Deadline)	4.26	+ 0.89	5.66	+ 0.155
Flows Required for Membrane Treatment at 85% recovery (2029)	5.01	+ 0.14	6.66	- 0.84
Projected Flows (2045)	4.47	+ 0.68	5.95	- 0.133
Flows Required for Membrane Treatment at 85% recovery (2045)	5.26	- 0.11	6.99	- 1.173

Based on the observed constraints at Whiteway and Sunningdale WTPs, the following capacity upgrades are recommended:

1. Immediately resolve the recarbonation basin hydraulic bottleneck. Solutions include repairing the recarbonation basin bypass valve or extending a new 16" bypass pipe/valve, and resolving potential valve and piping obstructions between the recarbonation basin and filters.
2. Coordinate with the SWFWMD on:
 - a. Increased Water Use Permit needs due to treatment
 - b. Developing a test/exploratory production well to evaluate alternative aquifer sources to increase supply and improve water quality
 - c. Exploring deep injection well viability in conjunction with FDEP and FDOH
3. Perform flow and total dynamic head calibration on all WTP pumps and identify deficiencies.
4. Work with the FDOH and SWFWMD to protect the City's wellfield from further contamination of emerging contaminants.

6.3 R&R Improvements

The condition, risk assessment and operations review yielded the following recommendations to renew Whiteway and Sunningdale WTPs assets:

1. Replace and repair high risk electrical issues immediately including grounding issues and motor control centers. Implement modernization sequencing to ensure compatibility and focus on processes that will remain at and serve the WTPs in the future. Critical electrical repairs can be found in Chapter 5.
2. Begin a wholesale replacement of key electrical components that will remain in service for the proposed WTPs treatment process upgrades.
3. Investigate with TECO the feasibility of installing a secondary power feed at each WTP from another substation or from another switch gear at the current substations, and the feasibility of having electrical looping around the WTPs to provide power to all components.
4. Add VFDs to Whiteway process pumps to allow better operational controls. If installed prior to NF plant upgrades, VFDs should be sized according to the future pumping requirements in order to allow reuse.
5. Update full WTPs equipment inventory with information provided herein and current asset registries.
6. People, Plant, Process – prioritize safety improvements to protect operations staff, empower operations staff by adding key monitoring locations in SCADA, begin a systematic effort to renew the plant components starting with the most critical and those that will remain as part of an upgraded plant.
7. Add instrumentation, including remote chlorine monitoring to optimize distribution and remote storage/pumping operations.
8. Resolve Telecom storage and pump station operational challenges as follows:
 - a. Step 1: Remove the pipe obstruction between recarbonation and filters and get Whiteway capable of producing 4 mgd again.
 - b. Step 2: Review Telecom flows and pressure data on a 10-minute basis for a historical peak demand month (April).
 - c. Step 3: Review distribution hydraulic model and develop hydraulic alternatives to current fill and draw patterns and possibly move to a continuous fill/draw with some minor distribution improvements.
 - d. Step 4: Perform water quality modeling to determine best operational alternative.
9. For the SCADA system, it is recommended to continue with the current system, upgrading and adding instrumentation and monitoring economically in the short term to empower operations staff with key information both plants and distribution to operate effectively. For the treatment upgrade project evaluate moving to a new SCADA system that fits the proposed treatment process and remaining components.

6.4 Funding

A funding opportunities and strategy review was completed by CHA in partnership with Hale Innovations, LLC to identify realistic pathways to finance PFAS-related treatment improvements and associated water treatment facility upgrades. The funding memorandum notes that grant-style funding for PFAS projects is currently limited, with federal Bipartisan Infrastructure Law and Infrastructure Investment and Jobs Act funding largely expiring in the FY2026 window. As a result, the recommended approach is to pursue Florida Drinking Water State Revolving Fund (DWSRF) financing as the primary funding vehicle, while maintaining project readiness for other opportunities that may emerge.

The funding memorandum (attached in **Appendix B**) recommends structuring the City's capital program as a multi-year implementation plan to align with DWSRF funding capacity, which is noted as approximately \$20M per year. In practical terms, pursuing SRF as the primary funding source requires packaging the recommended improvements into discrete, fundable phases that align with the program's annual capacity. Findings indicate that the City may be eligible for the minimum principal forgiveness level (20%) and emphasize that principal forgiveness applies solely to construction, not facilities planning/design. It also notes that PFAS above the Maximum Contaminant Level (MCL) may support strong SRF scoring under the chronic public health risk criteria, and that adding water conservation elements may provide additional scoring benefit.

To complement the SRF strategy, CHA's recommendation is to treat storm-readiness as an ongoing funding posture: proactively design resiliency projects based on the City's CIP, and meticulously document storm impacts such as pressure drops, boil water notices, outages especially the duration and coverage of these impacts. Doing so can position Master Plan capital improvements, including wells, transfer pumps, and high service pumps, to compete for emergency response or hazard mitigation/hardening funds such as the Florida Commerce's Development Block Grant – Disaster Recovery (CDBG-DR).

Funding recommendations are summarized as follows:

1. Pursue SRF funding by structuring the City's capital program as a multi-year implementation plan to align with DWSRF funding capacity (\$20M/year).
2. Treat storm-readiness as an ongoing funding posture: proactively design resiliency projects based on the City's CIP, and meticulously document storm impacts such as pressure drops, boil water notices and outages, especially the duration and coverage of these impacts. to compete for emergency response or hazard mitigation/hardening funds such as the Florida CDBG – Disaster Recovery (CDBG-DR).
3. Perform/update rate analysis with proposed capital expenditures and operating cost increases to maximize the affordability of the proposed WTP upgrades and renewal.

4. Formulate a comprehensive legislative appropriations strategy (including use of lobbying services) and advancing planning/design to keep priority projects “shovel ready” for appropriations or future grant cycles.

6.5 Recommended WTP Renewal Plan

The recommended City of Temple Terrace Water Treatment Facilities Renewal Plan is summarized as follows:

2026

1. Make Whiteway WTP recarbonation tank bypass repairs
2. Continue coordination with SWFWMD and move to application for increased water use permit and proposed additional well scope, location, depths and objectives
3. Continue funding coordination and actions
4. Initiate Whiteway and Sunningdale Electrical R&R Project preliminary design/design
 - a. Upgrading components to handle future improvements' loads
 - b. Additional SCADA distribution monitoring locations
5. Telecom and Chinaberry remote storage and pump station flow/operating modifications
6. Confirm funding availability and financial constraints (e.g., rate study)

2027

7. Bid/Contract/Construct WTP Electrical R&R Project
 - a. Cost saving measures such as direct equipment purchase to minimize cost
8. Permit/Design New Well Project
9. Initiate Whiteway WTP General Project preliminary design/design
 - a. Two full trains through Whiteway WTP
 - b. High recovery NF system
 - c. WTPs non-electrical equipment renewal and capacity increases as needed
 - d. Expand and refine NF concentrate treatment systems including deep well injection and emerging, cost-effective technologies
 - e. Begin evaluation of consolidating Sunningdale WTP to Whiteway WTP.

2028-2029

10. Bid/Contract/Construct New Well Project
11. Bid/Contract/Construct Whiteway and Sunningdale WTPs General Project
 - a. Finalize NF concentrate management method
12. Start and operate the renewed WTPs
13. Continue budgeting WTPs R&R into the future

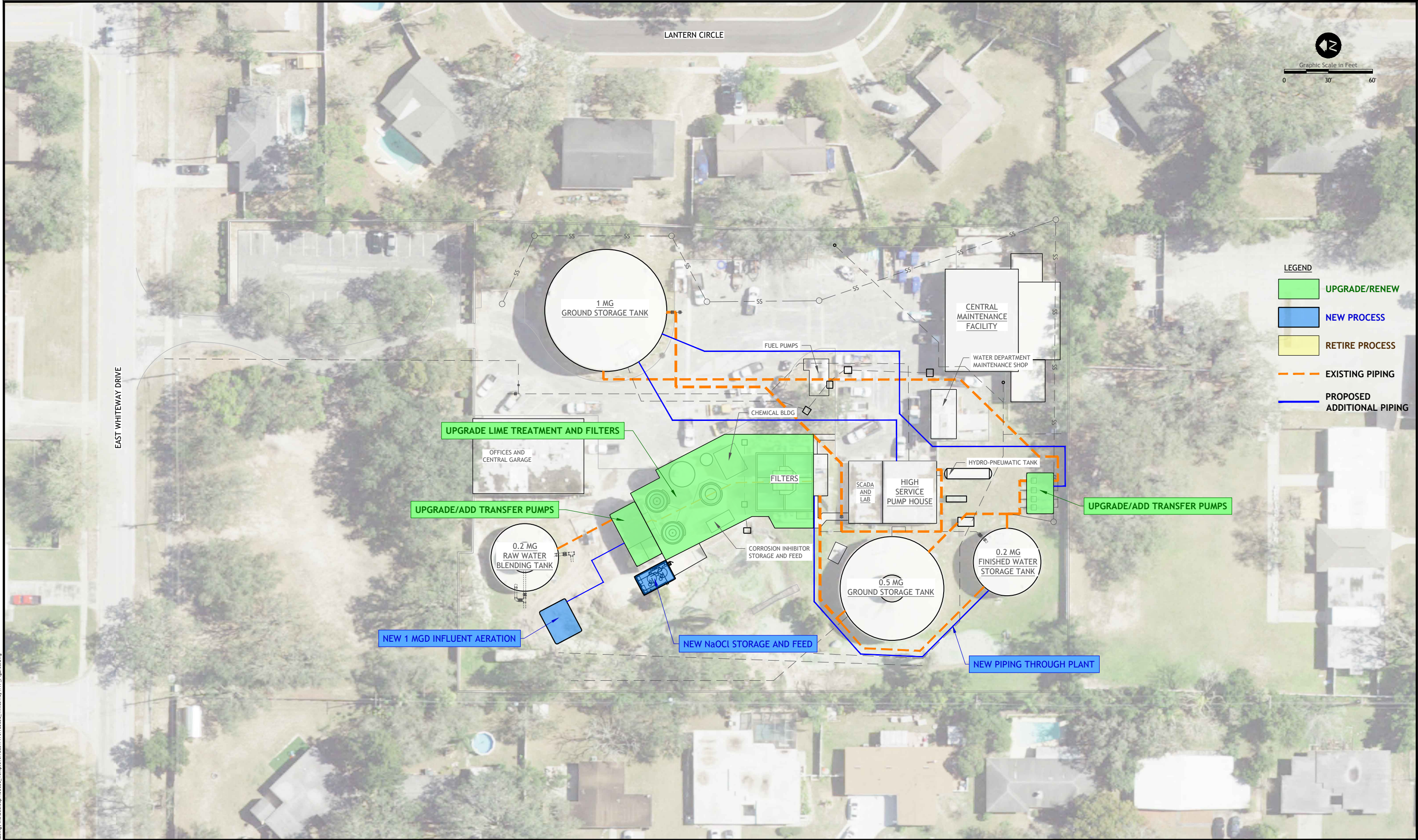
Although it is not recommended to upgrade the Whiteway WTP to 6 MGD while maintaining lime softening as the primary treatment process, the site plan showing what improvements would be needed are shown below in **Figure 6-1**. Note that the system shown in this site plan would not be capable of reducing PFAS, as required by EPA regulations by 2029. The associated cost estimate for upgrading the plant to 6 MGD can be seen in **Table 6-3**.

The suggested Whiteway site plan (**Figure 6-2**) proposes installation of the nanofiltration skids within the existing office building garage, which will be vacated once construction of the new office building is completed. Together, these factors make the Whiteway layout highly constrained, requiring detailed logistics planning and phased construction to remain feasible. This site plan features a conversion of the existing filter basin to a NF concentrate storage tank, which could provide approximately 150,000 gallons of concentrate storage. Further capacity may be required depending on the selected concentrate management process.

The Whiteway layout presents significant traffic-flow and constructability constraints due to its tight configuration and the presence of only one site entrance located at the northeast corner of the property. With all construction access funneled through this single point, careful scheduling and flagging coordination will be required to maintain safe entry and exit of equipment and deliveries. The internal circulation path is narrow and does not allow for looping or turnaround space for heavy machinery, meaning large vehicles will need to back out or rely on controlled, staged movements, which increases both safety risks and construction duration. This also further opposes hauling away NF concentrate as a solution for disposal.

The Sunningdale plant has a similar accessibility issue due to the compact layout and small size of the site, however it does have a single access road located along the north side of the site providing direct entry for equipment and deliveries. No internal roads pass through the plant, which helps limit construction-related interference with ongoing operations but also makes it difficult to navigate construction equipment deeper into the site. **Figure 6-3** details the Alternative 2 proposal nanofiltration installations on the northern side of the site which provides a clear advantage, as it positions major construction activities closest to the point of entry and minimizes the need for heavy machinery to navigate deeper into the plant.

The cost estimate for upgrading Whiteway WTP to nanofiltration, in addition to installing a deep injection well can be seen in **Table 6-4**. It is anticipated that Sunningdale will be evaluated under a different project for conversion to a booster pump station.



EAST WHITEWAY DRIVE

LANTERN CIRCLE



LEGEND

UPGRADE/RENEW

NEW PROCESS

RETIRE PROCESS

EXISTING PIPING

PROPOSED ADDITIONAL PIPING

UPGRADE LIME TREATMENT AND FILTERS

UPGRADE/ADD TRANSFER PUMPS

0.2 MG RAW WATER BLENDING TANK

NEW 1 MGD INFLUENT AERATION

1 MG GROUND STORAGE TANK

FUEL PUMPS

CHEMICAL BLDG

FILTERS

CORROSION INHIBITOR STORAGE AND FEED

NEW NaOCl STORAGE AND FEED

SCADA AND LAB

HIGH SERVICE PUMP HOUSE

0.5 MG GROUND STORAGE TANK

NEW PIPING THROUGH PLANT

HYDRO-PNEUMATIC TANK

UPGRADE/ADD TRANSFER PUMPS

0.2 MG FINISHED WATER STORAGE TANK

WATER DEPARTMENT MAINTENANCE SHOP

CENTRAL MAINTENANCE FACILITY

Designed	EHT,IG
Drawn	VVV
Reviewed	---
Approved	---
Date	02/2026

LINE IS 1" AT FULL SIZE

CITY OF TEMPLE TERRACE
WTP SITES IMPROVEMENTS

WHITEWAY WATER TREATMENT PLANT
WHITEWAY SITE PLAN - LIME

100335

FIGURE 6-1

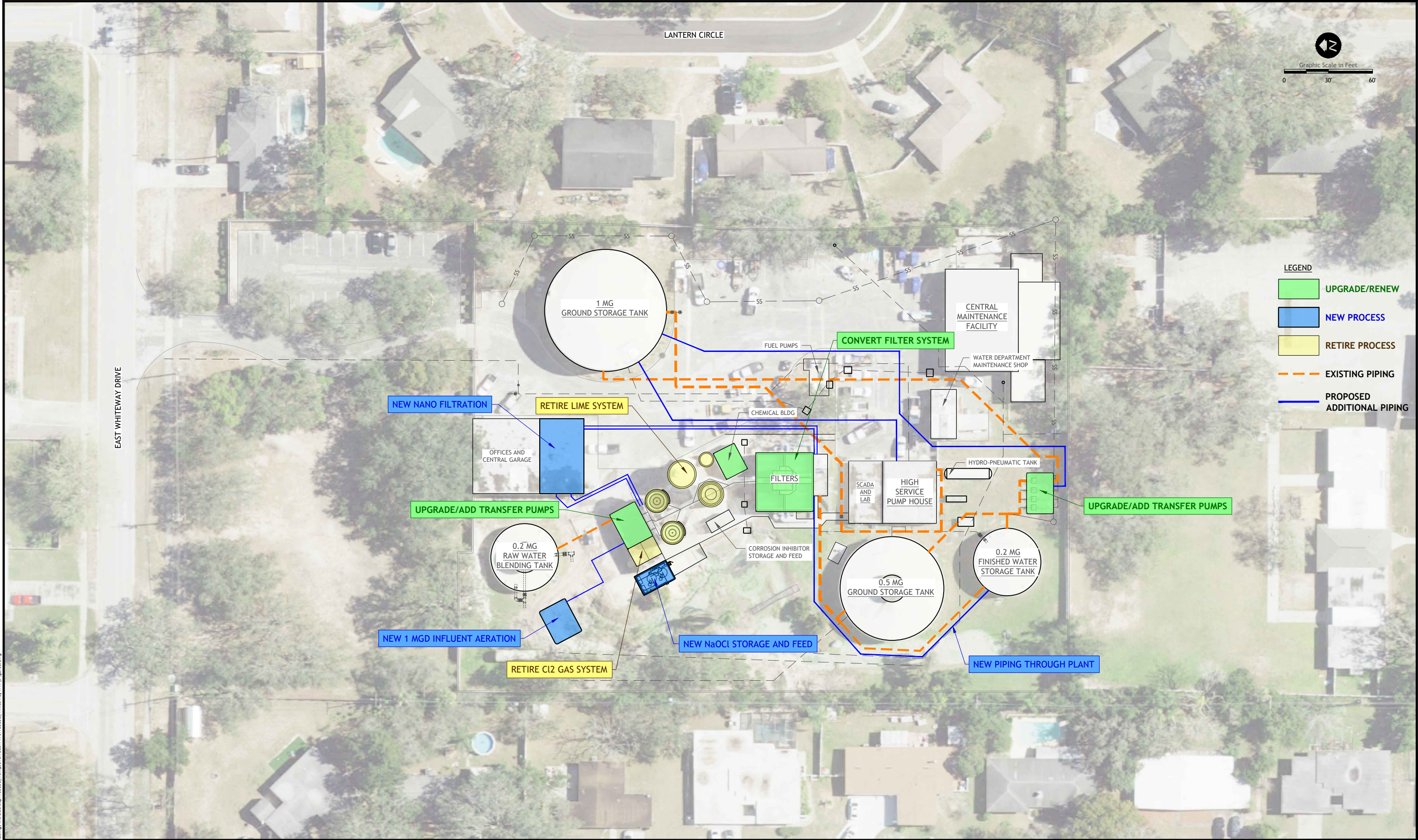
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CHA CONSULTING, INC.
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(813) 549-0919

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Table 6-3. Needs to Reach 6 MGD @ Whiteway

Needs to Reach 6 MGD @ Whiteway			
Feature	Current Capacity (MGD)	Required Improvements	Improvements Cost Estimate
Wells Total	6.34	-	\$0
Wells Firm Capacity	5.07	1 additional production well (1500 gpm / 1 MGD)	\$5,000,000
Aerator	5.04	Install 1 Bypass with Sulfide Treatment technology	\$800,000
Raw PS Total	7.56	-	\$0
Raw PS Firm	5.04	1 additional raw transfer pump (1500 gpm) / New Transfer Pumps	\$750,000
Lime	5.04	N/A - Bypass can be utilized to reduce flow to lime reactors	\$0
Recarb*	3.96	Bypass rehab	\$150,000
Filters	5.00	2 additional filter cells, assuming same size as current greenleaf filters	\$3,250,000
Transfer PS Total	7.49	-	\$0
Transfer PS Firm	5.18	1 additional Transfer Pump (1500gpm)	\$900,000
High Service PS Total MDD Equivalent	6.91	-	\$0
High Service PS Firm MDD Equivalent	5.47	1 additional High Service PS Firm (1000gpm)	\$1,350,000
Finished Storage, MDD Equivalent	6.00	-	\$0
Demolition		Demolition needed to install piping and upgrade equipment	\$500,000
Liquid Chlorine System		Convert disinfection system to liquid sodium hypochlorite	\$1,500,000
16" Parallel Process Piping		Install 16" main parallel to existing process piping for redundancy	\$2,000,000
Electrical Capacity		Rehab and upgrading of existing electrical equipment	\$1,265,000
Permitted Withdrawal (SWFWMD) Average	5.15	Increase permit capacity with SWFWMD to 6 MGD average	\$0
Process/Civil Subtotal			\$17,465,000
Incidental Electrical/Mechanical	% of Process/Civil	15%	\$2,620,000
Construction Subtotal			\$20,085,000
General Conditions	% of const subtotal	10%	\$2,009,000
Contractor Overhead and Profit	% of const subtotal	12%	\$2,411,000
Opinion of Probable Construction Cost (PCC):			\$24,505,000
Contingency	% of PCC	25%	\$6,127,000
Survey and Engineering Fees	% of PCC	8%	\$1,961,000
Opinion of Probable Construction Cost			\$32,593,000



- LEGEND
- UPGRADE/RENEW
 - NEW PROCESS
 - RETIRE PROCESS
 - EXISTING PIPING
 - PROPOSED ADDITIONAL PIPING

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Designed EHT,IG
Drawn VVV
Reviewed ---
Approved ---
Date 02/2026

LINE IS 1"=AT
FULL SIZE

CITY OF TEMPLE TERRACE
WTP SITES IMPROVEMENTS

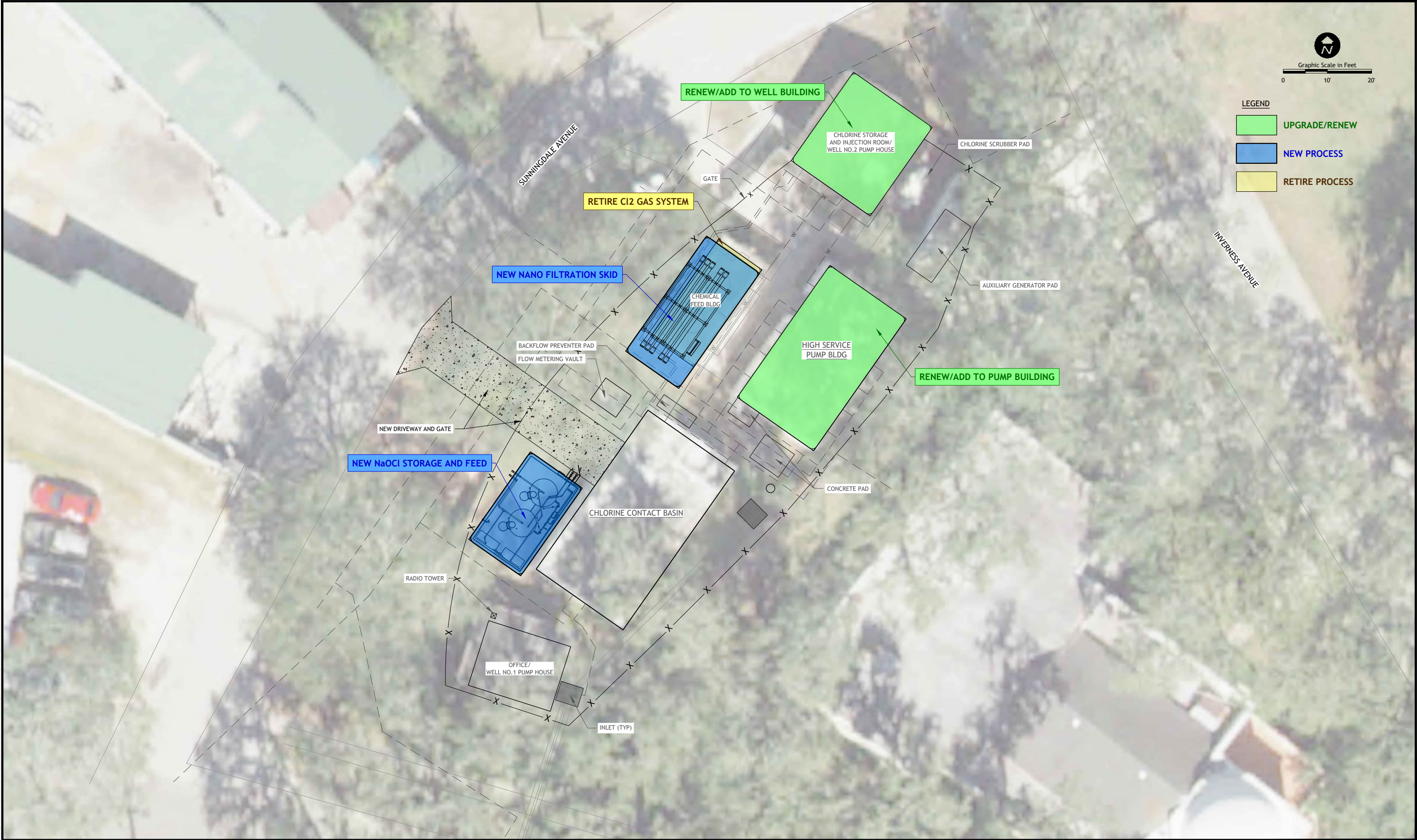
WHITEWAY WATER TREATMENT PLANT
WHITEWAY SITE PLAN - NF

100335

FIGURE 6-2

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Designed EHT Drawn VVV Reviewed --- Approved --- Date 11/2025		CITY OF TEMPLE TERRACE WTP SITES IMPROVEMENTS		100335	 CHA CONSULTING, INC. CERTIFICATE OF AUTH. 28386 2502 N ROCKY POINT DR SUITE 145 TAMPA, FL 33607 (813) 549-0919
LINE IS 1"=AT FULL SIZE		SUNNINGDALE WATER TREATMENT PLANT SUNNINGDALE SITE PLAN		FIGURE 6-3	
				--	

Table 6-4. Needs for Nanofiltration PFAS Removal (Whiteway @ 6 MGD)

Whiteway NF Treatment Full Train						
Capital Construction Costs						
Project/Item	Unit	Quantity	Unit Price	Installation	Total Unit Price	Total Costs
<i>NF Membrane Skid & Appurtenances</i>						
2 MGD Three-Stage NF Skid	EA	3	\$2,000,000	\$200,000	\$2,200,000	\$6,600,000
Cartridge Filtration	LS	1	\$250,000	\$100,000	\$350,000	\$350,000
Acid Cleaning System	LS	1	\$220,000	\$100,000	\$320,000	\$320,000
Transfer Pump Station Head Improvements	LS	1	\$400,000	\$150,000	\$550,000	\$550,000
NF Connection Piping, Valving, Metering	LS	1	\$400,000	\$200,000	\$600,000	\$600,000
NF Area Sitework	EA	10,000	\$12	\$12	\$24	\$240,000
Liquid Chlorine System	EA	1	\$1,200,000	\$300,000	\$1,500,000	\$1,500,000
16" Parallel Process Piping	EA	1	\$1,500,000	\$500,000	\$2,000,000	\$2,000,000
Additional Production Well	EA	1	\$4,000,000	\$1,000,000	\$5,000,000	\$5,000,000
Process/Civil Subtotal						\$17,160,000
Incidental Electrical/Mechanical	% of Process/Civil	10%	\$17,160,000			\$1,716,000
Construction Subtotal						\$18,876,000
General Conditions	% of const subtotal	10%	\$18,876,000			\$1,888,000
Contractor Overhead and Profit	% of const subtotal	12%	\$18,876,000			\$2,266,000
Opinion of Probable Construction Cost (PCC):						\$23,030,000
Contingency	% of PCC	25%	\$23,030,000			\$5,758,000
Survey and Engineering Fees	% of PCC	8%	\$23,030,000			\$1,843,000
Opinion of Probable Construction Cost						\$30,631,000
Deep Injection Well						
Capital Construction Costs						
Project/Item	Unit	Quantity	Unit Price	Installation	Total Unit Price	Total Costs
Deep Injection Well	EA	1	\$10,000,000	\$5,000,000	\$15,000,000	\$15,000,000
Process/Civil Subtotal						\$15,000,000
Incidental Electrical/Mechanical	% of Process/Civil	10%	\$15,000,000			\$1,500,000
Construction Subtotal						\$16,500,000
General Conditions	% of const subtotal	10%	\$16,500,000			\$1,650,000
Contractor Overhead and Profit	% of const subtotal	12%	\$16,500,000			\$1,980,000
Opinion of Probable Construction Cost (PCC):						\$20,130,000
Contingency	% of PCC	25%	\$20,130,000			\$5,033,000
Survey and Engineering Fees	% of PCC	8%	\$20,130,000			\$1,611,000
Opinion of Probable Construction Cost						\$26,774,000
Nanofiltration Installation Subtotal						\$30,631,000
Deep Injection Well Subtotal						\$26,774,000
Total Cost						\$57,405,000

6.6 Phasing, Sequencing, and Overall CIP

Phasing and sequencing were prepared based on Master Plan investigations and is provided in year-by-year recommendations over the next 20 years in the following figure. Components are itemized in the table below and are grouped together in a recommended sequencing of projects. Estimated combined costs of each project can be found in **Table 6-5**.

Recommended phasing is as follows (note that projects can and should be done simultaneously in order to facilitate meeting the EPA 2029 deadline for PFAS removal):

- Inhouse: Recurring maintenance to upkeep the WTPs (i.e. pond maintenance, renewing paintings and coatings, replacing valves regularly, pump rebuilds). These items can be done in-house or subbed out to contractors (**Ongoing**).
- Emergency repairs Make Whiteway WTP recarbonation tank bypass repairs (**2026**)
- Exploratory Well Project (**2026-2029**)
- Electrical WTPs Project (**2026-2028**)
- General WTPs Project (i.e., general water treatment plant contractor) (**2027-2030**)
- Minor engineering/hydrogeological support (**2026-2028**)
 - o SWFWMD WUP capacity increase
 - o Telecom and Chinaberry Alt Operation
 - o NF concentrate PFAS treatment testing

Table 6-5. Estimated 5-Year Projects Costs

Project	Whiteway	Sunningdale	Total
Emergency	\$300,000	--	\$300,000
Exploratory Well	\$7,152,500	--	\$7,152,500
Electrical R&R	\$2,300,000	\$1,621,773	\$3,921,773
General WTP	\$56,868,624	\$4,191,013	\$61,059,637
WTP R&R	\$6,668,624	\$4,191,013	\$10,859,637
NF Softening+PFAS Removal	\$23,400,000	--	\$23,400,000
Concentrate Management	\$26,800,000	--	\$26,800,000
Total	\$66,621,124	\$5,812,786	\$72,433,910

PAGE 6-0
CITY OF TEMPLE TERRACE | MASTER PLAN CHAPTER 6
CHA PROJECT NUMBER 100335.000

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High Service Pump 2 Time Delay	\$ 3,410	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Flow Recorder Panel 1	\$ 24,211	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Flow Recorder Panel 2	\$ 24,211	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CP- 1 Transfer Pump Station	\$ 24,211	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Disconnect Switch	\$ 28,644	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Transfer Room Safety Switch	\$ 15,004	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Offices and Maint. Shop Safety Switch	\$ 8,184	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
HS Room Safety Switch	\$ 15,004	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Disconnect Switch (Service to PP1 Panel)	\$ 28,644	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
T.E.CO Safety Switch	\$ 8,184	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Wells 4-5 Safety Switch	\$ 8,184	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Safety Switch	\$ 3,137	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Electrical Penel	\$ 24,211	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Safety Switch	\$ 3,137	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Well 4 Starter	\$ 6,820	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 6,820	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Well 5 Starter	\$ 6,820	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 6,820	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Well 5 Safety Switch	\$ 5,115	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Dry Type Transformer	\$ 24,552	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
MDP	\$ 18,414	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Dry Type Transformer	\$ 24,552	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Panel P	\$ 24,211	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Battery Charger	\$ 24,211	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Aux. Battery Charger	\$ 24,211	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Optional Lime Rehabilitation																					
Lime Catalyst Transfer Pump	\$ 6,820	\$ 6,820	\$ 6,820	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Catalytic Lime Silo	\$ 341,000	\$ 341,000	\$ 341,000	\$ 341,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Catalytic Lime Reactors	\$ 341,000	\$ 341,000	\$ 341,000	\$ 341,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Lime Slakers	\$ 3,410	\$ 3,410	\$ 3,410	\$ 3,410	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Lime Slurry Pumps	\$ 3,410	\$ 3,410	\$ 3,410	\$ 3,410	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Lime Slurry Flow Splitter	\$ 3,410	\$ 3,410	\$ 3,410	\$ 3,410	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Lime Slurry Mechanical Mixers	\$ 6,820	\$ 6,820	\$ 6,820	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Recarbonation Tank	\$ 227,333	\$ 227,333	\$ 227,333	\$ 227,333	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Recarb Tank Air Blower	\$ 8,525	\$ 8,525	\$ 8,525	\$ 8,525	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Recarb Chlorine Injector	\$ 17,050	\$ 17,050	\$ 17,050	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Lime Slaker System Control Panel	\$ 119,350	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Slaker System Control Panel 1	\$ 102,300	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Exploratory Well																					
New Wellfield Hydrogeo Investigation/Design	\$ -	\$ 852,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
New Well Supply Well #1	\$ -	\$ -	\$ 800,000	\$ 5,500,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Whiteway NF Expansion																					
Liquid Chlorine System	\$ -	\$ 1,500,000	\$ 1,200,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
VFDs for Transfer Pumps and HSPs	\$ -	\$ 700,000	\$ 700,000	\$ 700,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Whiteway WTP Nanofiltration Process (Softening and PFAS Removal)	\$ 800,000	\$ 3,000,000	\$ 6,800,000	\$ 7,300,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
PFAS Disposal Destruction Preliminary Design/Design	\$ 170,500	\$ 511,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Sunningdale Plant																					
Recurring Maintenance																					
Production Well No. 1 (30 HP)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 170,500	\$ 170,500	\$ 170,500	\$ 170,500
Production Well No. 2 (75 HP)	\$ -	\$ -	\$ -	\$ -	\$ 204,600	\$ 204,600	\$ 204,600	\$ 204,600	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Chlorine Contact Chamber	\$ 5,683	\$ 5,683	\$ 5,683	\$ 5,683	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Chlorine Scrubber	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 100,294	\$ 100,294	\$ 100,294	\$ 100,294	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Chlorinator	\$ 8,525	\$ 8,525	\$ 8,525	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 8,525	\$ 8,525	\$ 8,525
Caustic Recirculation Pump	\$ 3,410	\$ 3,410	\$ 3,410	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,410	\$ 3,410	\$ 3,410
High Service Pumps No. 1-4 (50 HP)	\$ 31,969	\$ 31,969	\$ 31,969	\$ 31,969	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Emergency Repairs																					
Safety Switch	\$ 6,479	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
LP-3	\$ 10,230	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Dry Type Transformer	\$ 12,276	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Generator	\$ 1,193,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
ATS	\$ 85,250	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Service Entrance Circuit Breaker	\$ 17,050	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
MCC-2	\$ 136,400	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CP-2	\$ 34,100	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Safety Switch	\$ 8,525	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
RTU	\$ 68,200	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Deep Injection Well (NF Concentrate Disposal for Both WTPs)																					
Deep Injection Well	\$ 1,000,000	\$ 5,000,000	\$ 10,000,000	\$ 10,000,000	\$ 800,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total																					
	\$ 8,071,371	\$ 12,941,749	\$ 20,849,332	\$ 26,726,449	\$ 3,845,009	\$ 1,209,531	\$ 1,209,531	\$ 1,155,689	\$ 371,389	\$ 271,095	\$ 390,445	\$ 271,095	\$ 294,345	\$ 294,345	\$ 294,345	\$ 294,345	\$ 441,595	\$ 462,055	\$ 462,055	\$ 462,055	\$ 462,055



APPENDIX A

PFAS Decision Trees

Temple Terrace WTPs Master Plan

PFAS Decision Tree Requested by the City-Draft

CHA Consulting, Inc.

November 12, 2025

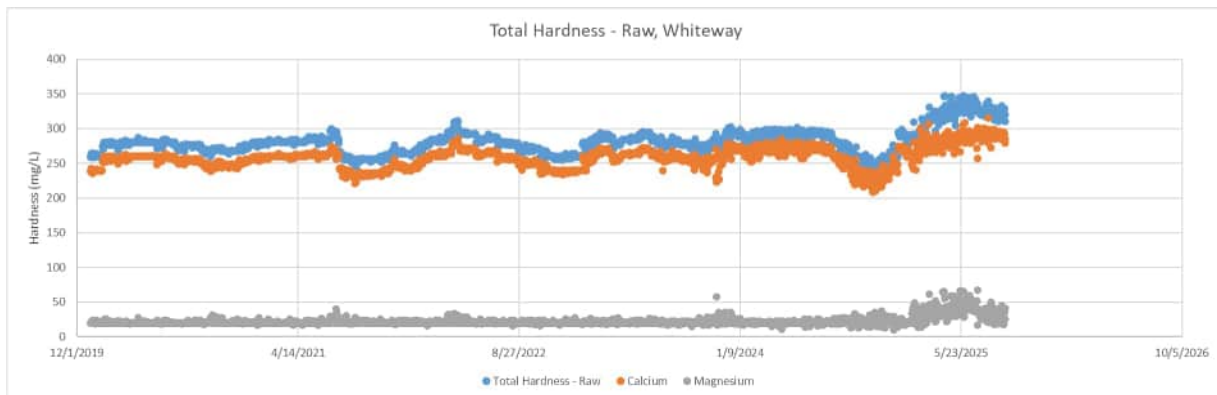
Contents

Based on the City's desire for additional detail, existing PFAS decision trees from the Arizona Department of Environmental Quality (ADEQ) and Department of Defense (DoD) were utilized with highlights and markups used to designate Temple Terrace applicability. References for the ADEQ and DoD decision trees are at the end of this document.

Temple Terrace Decision Tree Assumptions

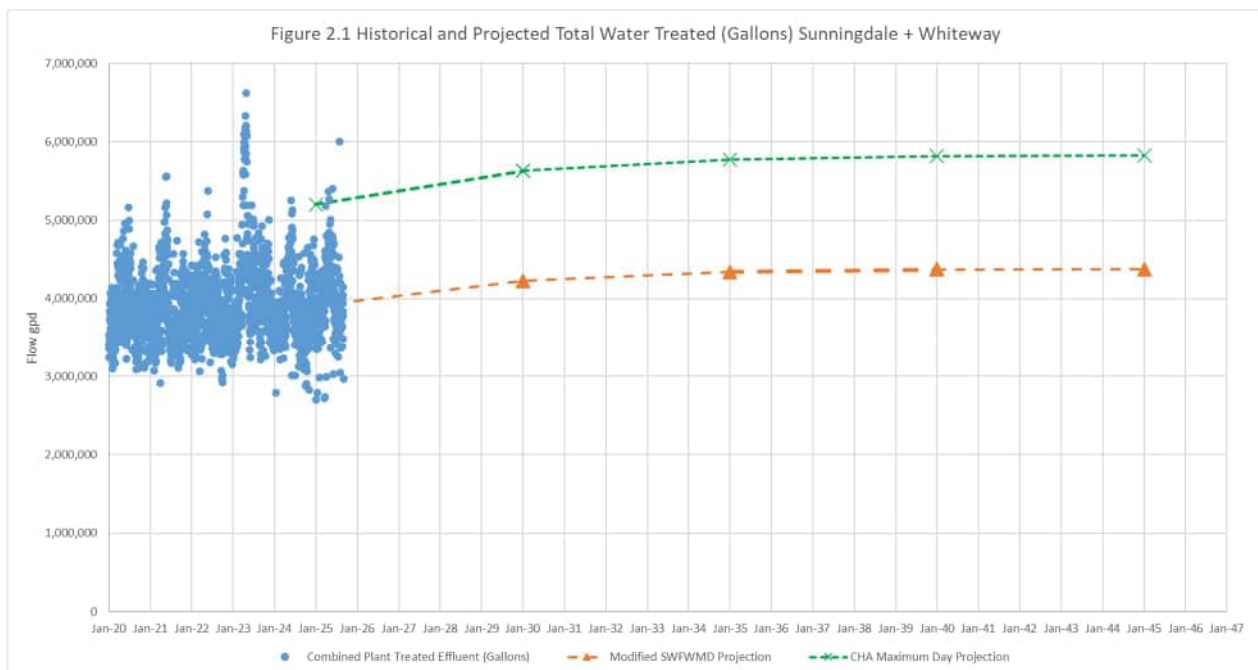
Starting Assumptions/Conditions

- Average Influent Hardness (from Feb 2025-Aug 2025; 329 mg/L)
 - Elevated hardness has occurred over the last 8 months, previous Whiteway average influent hardness was approximately 275 mg/L.
 - Individual well operating protocols should be reviewed by the City.



- Maximum Influent PFAS Concentration:
 - PFOA: 11 ppt
 - PFOS: 21 ppt
 - PFHxS: 16 ppt
 - Treatment goal of 100% removal

- Expected Flows (Based Flow Data from 2020-2025 MORs):
 - o Maximum Day
 - Whiteway Historical Max Day: 3.856 MGD (3/26/2025)
 - Sunningdale Historical Max Day: 3.310 MGD (4/28/2023)
 - These events could have been due to an extreme event, CHA would propose a combined max day PFAS treatment in the 6 MGD range
 - o Average Day
 - Whiteway Historical Avg Day: 3.0 MGD
 - Sunningdale Historical Avg Day: 1.0 MGD
 - There is some disagreement in the MOR data for total flow (3.9 to 4.3 MGD total for both WTPs)
 - o PFAS Treatment capacity if raw water stays separated at each WTP:
 - Whiteway WTP Max Day: 4 MGD
 - Sunningdale WTP Max Day: 2 MGD
 - Flows could bypass PFAS treatment to maintain WTP FDEP capacities
- Current Permit Limits
 - o SWFWMD Water Use
 - Average Permitted Withdrawal: 5,150,000 gallons per day
 - Peak Permitted Withdrawal: 5,817,400 gallons per day
 - o FDEP/Health Dept WTP Design (Max Day) Capacity
 - Whiteway: 5.04 MGD
 - Sunningdale: 3.96 MGD



Pilot Results and Considerations

- The pilot runtime is set at 1 month
 - The pilot protocol is defined in a separate document previously submitted to the City.
- If multiple media show similar effectiveness, interference with existing constituents and capital and O&M would be deciding factors.
- If all the piloted media were to show inconclusive PFAS removal results under both hard water and soft water conditions, additional media/processes would be tested under a Phase 2 pilot effort.
 - Under such circumstances where both GAC and IX are showing ineffectiveness, membrane technology (RO/NF) would become a top contender for PFAS removal and already is for softening water quality goals greater than 30% and due to space constraints.

Additional Notes

1. Current EPA Regulations list compliance thresholds for 6 PFAS species with a deadline of 2029, with plans to extend to 2031. Temple Terrace's finished water exceeds the limit for PFOA and PFOS, with elevated levels of PFHxS in select production wells.
2. New water supply is dependent on SWFWMD water supply plan/policy constraints and the feasibility of drilling new deeper wells that may also have PFAS and higher levels of H₂S and total organic carbon.
3. Current wells are relatively shallow (150-505 feet in depth). The depth needed to produce PFAS free water is unknown at this time. Other characteristics of the new source water would need to be evaluated (i.e. sulfides, organic content, hardness, etc.) to make treatment decisions
4. The City's finished water frequently has over 300 mg/L of hardness. Each technology that removes hardness has a practical amount that it can remove. The City's softening goal will guide hardness removal treatment decisions.
5. 30 percent hardness removal would result in a finished water content in the range of 190 to 250 mg/L based on the City's historical influent hardness concentrations. Lime softening typically has a limit of 30% hardness removal, which is backed by City historical data. Cation Exchange may be impractical above this limit due to increased salt concentration in the brine and disposal options.
6. 60 percent hardness removal would result in a finished water content in the range of 108 to 140 mg/L based on the City's historical influent hardness concentrations. Membranes can effectively remove hardness in this range and greater. Calcium,

2.2 Water Quality Parameters Built into Decision Trees

The quality of the source water drives treatment goals and influences the efficacy of PFAS removal processes. This affects treatment train design, process performance, O&M needs, and the disposal of residuals, that all together determine the viability of a specific treatment approach. Therefore, it is critical for all mitigation strategies to be based on a known quality of water matrix and its variations. The water quality parameters should be monitored multiple times over the course of the year to capture variability in concentrations and temporal or seasonal changes in source water quality. In addition to PFAS monitoring, background water quality parameters should be analyzed. It is recommended to include both PFAS and background water quality parameters during the same sampling events (paired samples). Although sampling focused on EPDS locations serves as indicator of a potential PFAS issue, mitigation strategies should expand the sampling locations to include raw water sources and significant points within the existing treatment trains. Only comprehensive sampling allows accurate use of the decision trees, preparation for evaluation of technology performance through pilot testing, optimization of treatment trains, operational parameters, and cost analysis.

The background water quality parameters that influence PFAS treatment selection and drive the need for pre-treatment or technology combination are as follows:

- **Cations:** Calcium, Magnesium, Sodium, Potassium, Iron, Manganese, Total Hardness, Ammonium
- **Anions:** Sulfate, Nitrate, Arsenic, Fluoride, Perchlorate, Bicarbonate, Uranium, Chloride
- **Other:** TSS, TOC, DOC, TDS, pH, Temperature, Silica, Alkalinity, Oil and Grease, Chlorine and Other Oxidants Residual, Total Coliform, Heterotrophic Plate Count (HPC), Langelier Saturation Index (LSI), silt density index (SDI) for membrane application, and turbidity.

3.0 Navigating Decision Trees

This document provides six decision trees for PFAS mitigation purposes which are intended to be used iteratively.

- **Tree 1:** Non-Treatment Selection
- **Tree 2:** General Treatment Selection
- **Tree 3:** GAC Treatment
- **Tree 4:** IX Treatment
- **Tree 5:** RO/NF Treatment
- **Tree 6:** Simultaneous Compliance for Non-Treatment and Treatment Alternatives
- **-Tree 7:** PFAS Disposal (DoD)

The user should start with Tree 1 to first assess the suitability of non-treatment alternatives, which are often preferred to treatment. If non-treatment is not an option for meeting the utility's goals, the user should proceed to Tree 2 for general selection of the most suitable BATs. Each treatment alternative is

further analyzed individually in Trees 3-5 (GAC, IX and RO). Finally, Tree 6 should be used to evaluate simultaneous compliance and, as such, applies to both non-treatment and all three treatment options.

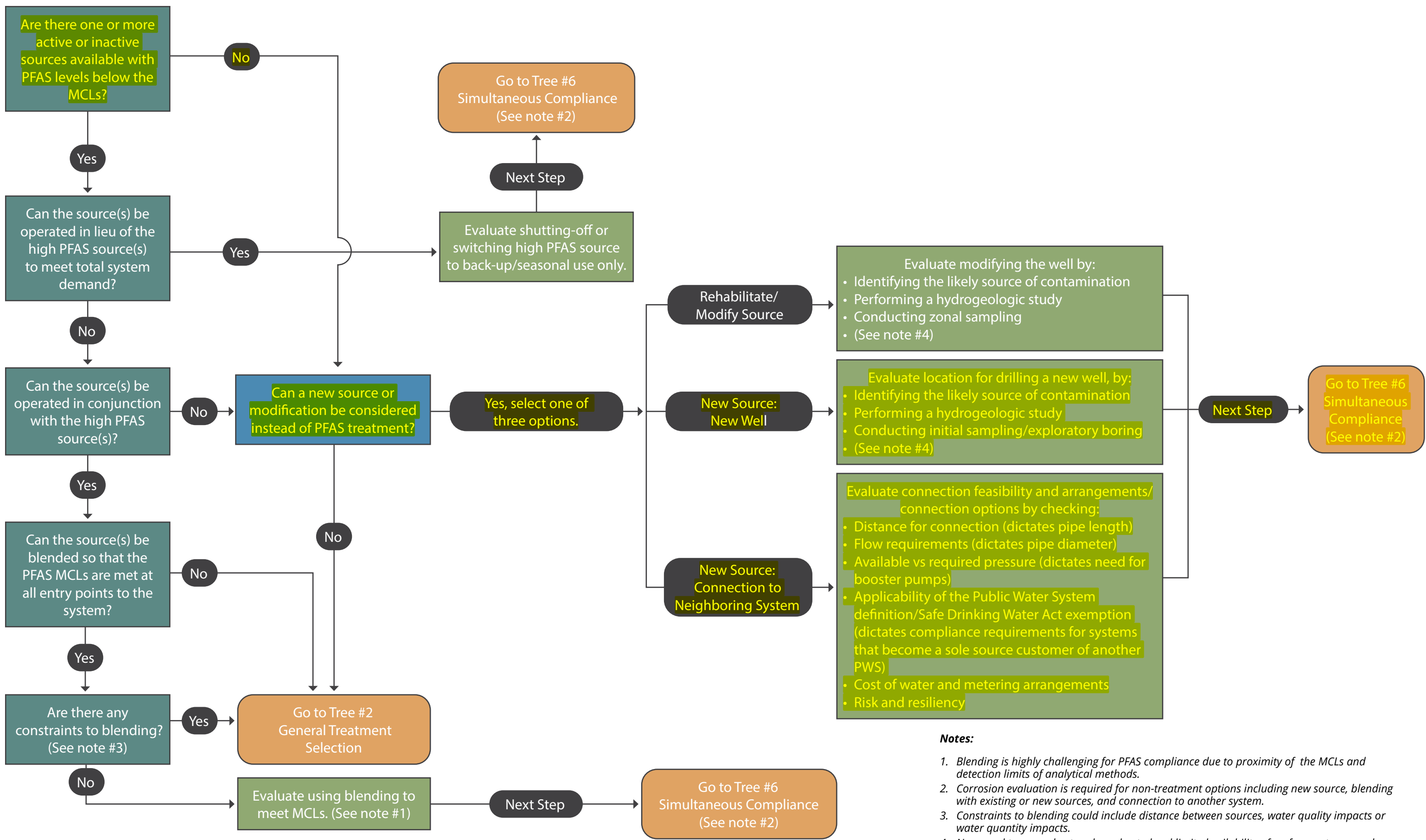
Colors and shapes within the decision trees help the user navigate them. Teal boxes are initial questions and black boxes are switches. Olive green boxes instruct the user to evaluate various factors. Blue boxes pose follow up questions to the user. Orange boxes with rounded corners indicate the user should refer to another tree.

The decision tree process is based upon information or utility preferences and typically relies upon yes or no responses, but at times includes multiple choice responses. Following the most likely flow path will lead to other questions, including information and recommendations to implement for these given scenarios. From this, the utility will reach an action box where the next step will be contingent upon the utility's willingness and ability to impose a particular change in their operating scheme. This will either point the user to another decision tree or make a final recommendation for a PFAS mitigation selection. It should not be forgotten that all final process recommendations lead to Tree 6 to check if additional actions for simultaneous compliance are needed. Ultimately, the decision trees are intended for use as an iterative tool which may not always lead to a single solution but will enable quick exclusion of certain options that are impractical for a particular application.

Additional steps that are recommended to be followed in this order but are outside the scope of this document and decision trees are summarized below:

- 1. Estimate planning-level costs.** This involves capital and O&M costs for the mitigation strategy using cost modeling tools | [View Tool >](#) To satisfy input requirements for treatment cost estimates, the utility should work with manufacturers to get WQPs-based initial media life estimates. The cost estimates should differentiate between capital and O&M costs which, at the very minimum, will include sediment pre-treatment, lead-lag configurations, post-treatment disinfection and PFAS-specific waste handling. If this planning level cost is not within a range that is financially possible, the user should consider using different alternatives in the decision tree process.
- 2. Evaluate treatment mitigation strategies.** Evaluation (preferably long-term (>6 months) pilot testing) is necessary in optimizing treatment variables and avoiding implementing a strategy that will not work for unforeseen reasons. This evaluation is indicated in Trees 3 and 4. Pilot testing protocols are not provided by this document but will be added in the future.
- 3. Develop a detailed construction-level and O&M cost estimates.** Refer to AACE International, Cost Estimate Classification System, 2005 | [View Document >](#)
- 4. Develop the final design and submit for permitting.**

Tree 1: Non-Treatment Selection

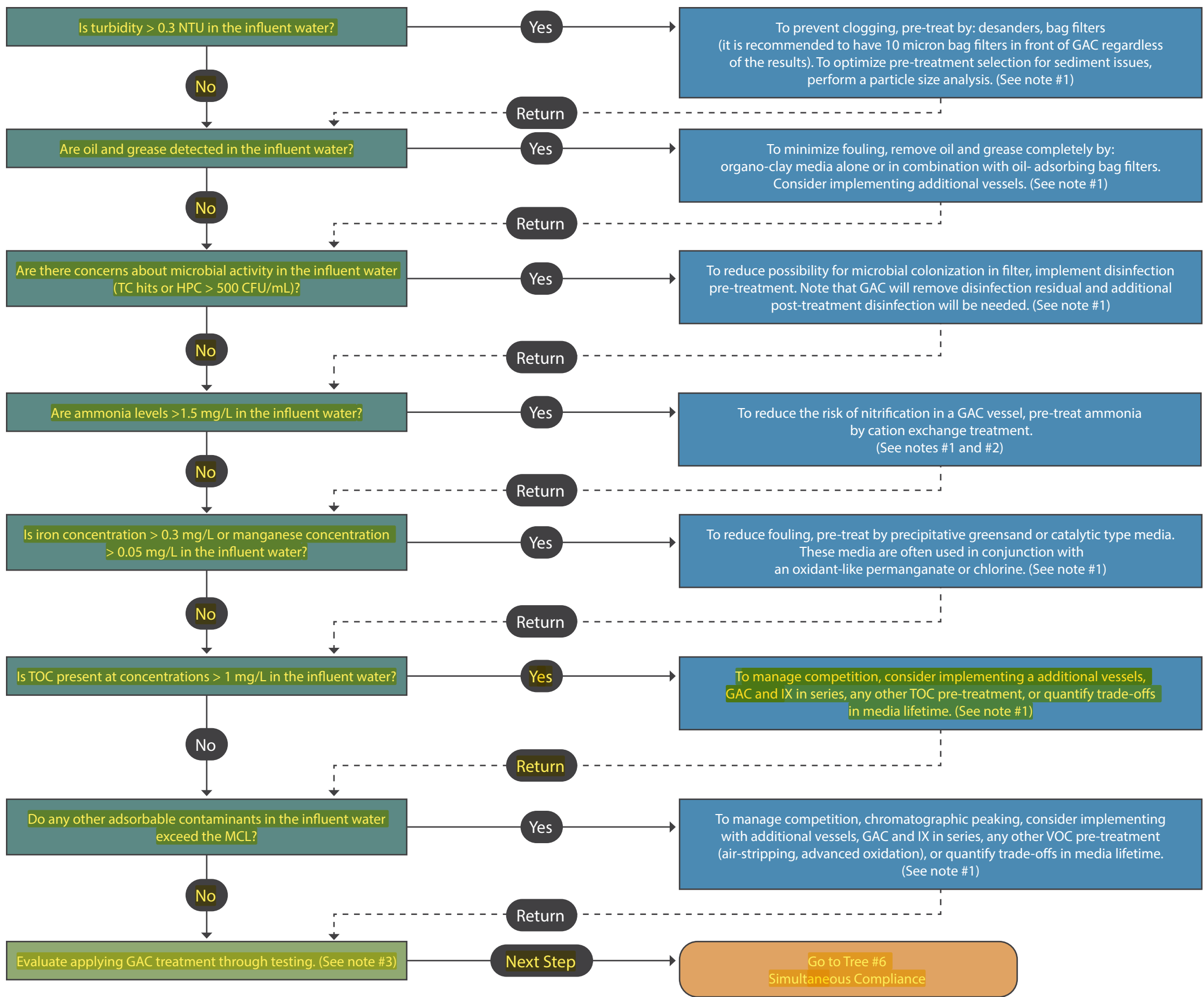


Tree 2: General Treatment Selection



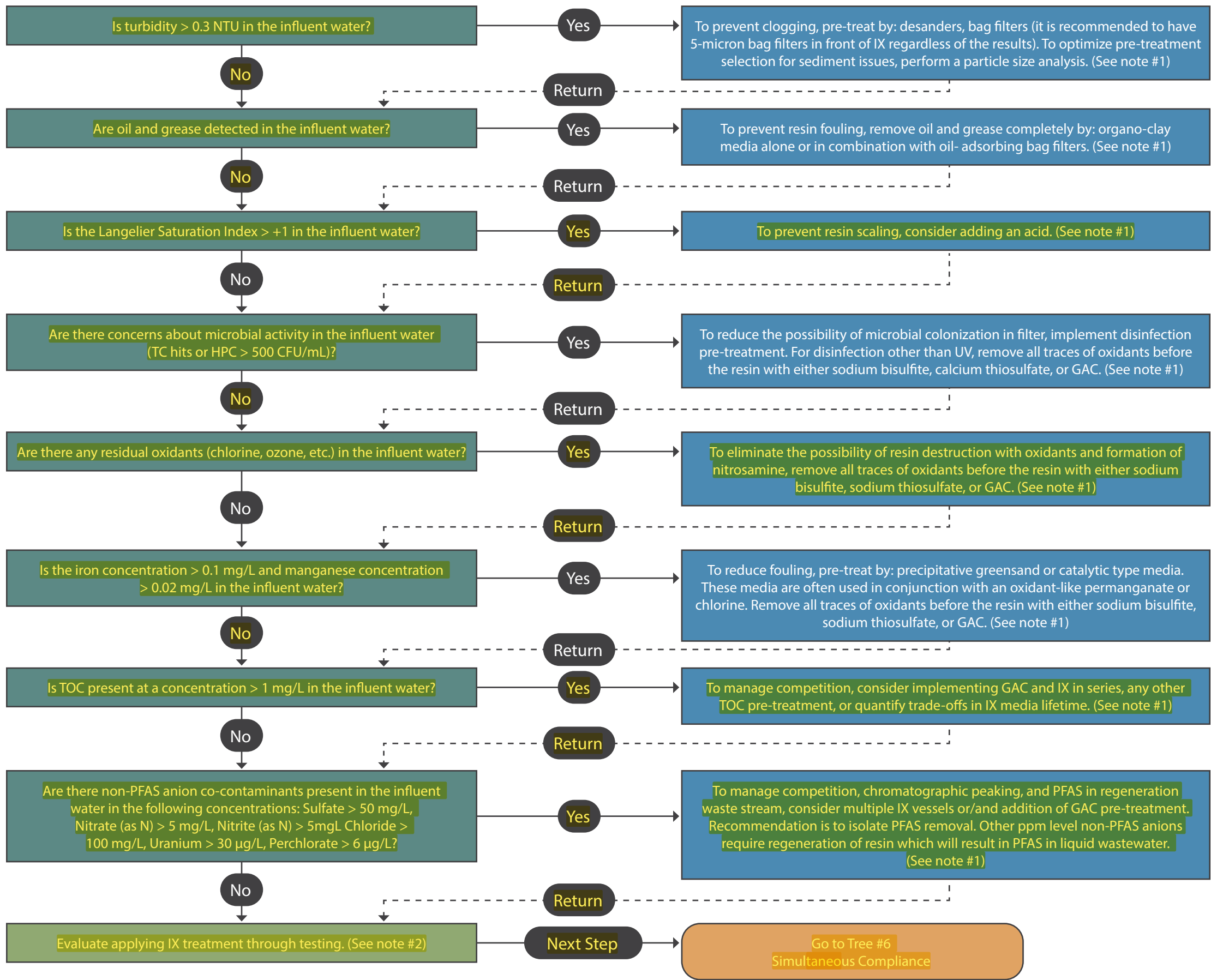
- Notes:**
- 1. Low levels of VOCs generally do not impact PFAS treatment.
 - 2. RO/NF is suitable only if there are no issues with water quantity, there are no pressure concerns, corrosion issues of the finished water can be mitigated, and there is a solution for PFAS-rich reject stream disposal.
 - 3. IX units for PFAS/non-PFAS anion treatment: only if there is a solution for management of waste concentrate that may include PFAS.
 - 4. IX application will produce potentially corrosive water by depressing pH and alkalinity, and elevating the chloride-to-sulfate-mass-transfer-ratio. This effect may potentially be avoided by using buffered IX or if treated water is disposed until stabilization is reached (this could be a short-term effect which must be confirmed through evaluation testing and comparison to previous water quality). For buffered resin, consider supply availability; for water disposal, consider infrastructure limitations.
 - 5. Space consideration should address both height and area limitations in regards to pre-treatment, treatment, post-treatment equipment and start-up. Vessels for IX are typically 3-4 times shorter than vessels for GAC. Pre-treatment in Arizona usually includes desanders and bag filters whose number and size may be larger for IX but GAC will also require a backwashing tank. This tree assumes GAC height requirements to be the dominant space/footprint limitation. Start-up infrastructure will depend on selected media and its conditioning.
 - 6. The operational and maintenance cost of maintaining an IX system is not as economical for treating streams with TDS levels of 500-1000.

Tree 3: GAC Treatment



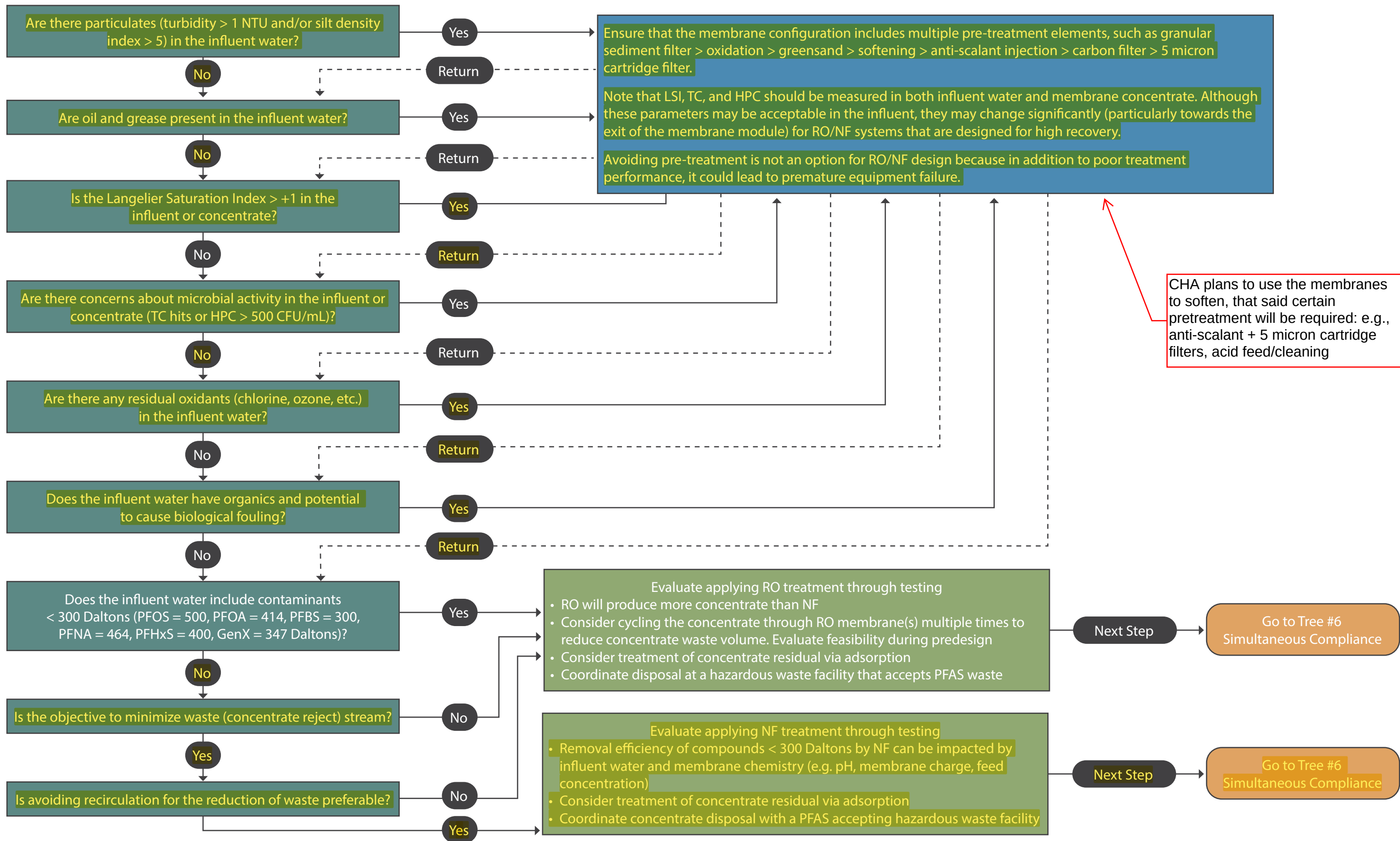
- Notes:**
- 1. It is highly recommended not to avoid pre-treatment, but if this avoidance is absolutely necessary, conduct extensive testing in line with manufacturer recommendations to quantify trade-offs resulting from not adding pre-treatment or choosing alternative GAC design.
 - 2. Addition of chlorine to convert ammonia to chloramine may not be suitable because GAC will just strip the chlorine off of the chloramine in the first few minutes of the bed and ammonia/nitrification potential will still remain in the rest of the bed.
 - 3. Evaluation through testing should mimic full scale as closely as possible and should include all needed pre-treatment steps identified through decision tree process.

Tree 4: IX Treatment

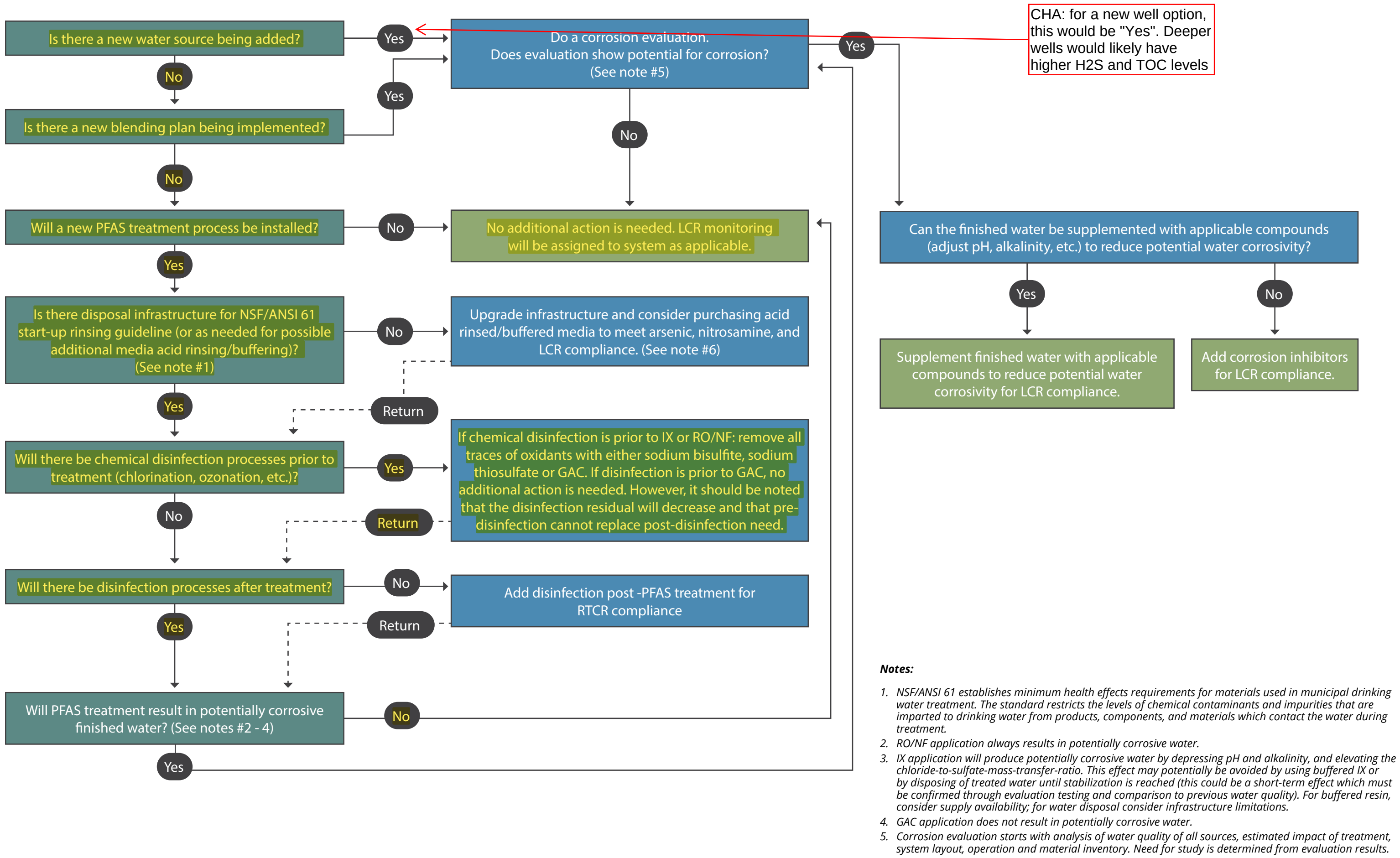


- Notes:
- 1. It is highly recommended not to avoid pre-treatment, but if this avoidance is absolutely necessary, conduct extensive testing in line with manufacturer recommendations to quantify trade-offs resulting from not adding pre-treatment or choosing alternative IX design.
 - 2. Evaluation through testing should mimic full scale as closely as possible and should include all needed pre-treatment steps identified through decision tree process.

Tree 5: RO/NF Treatment

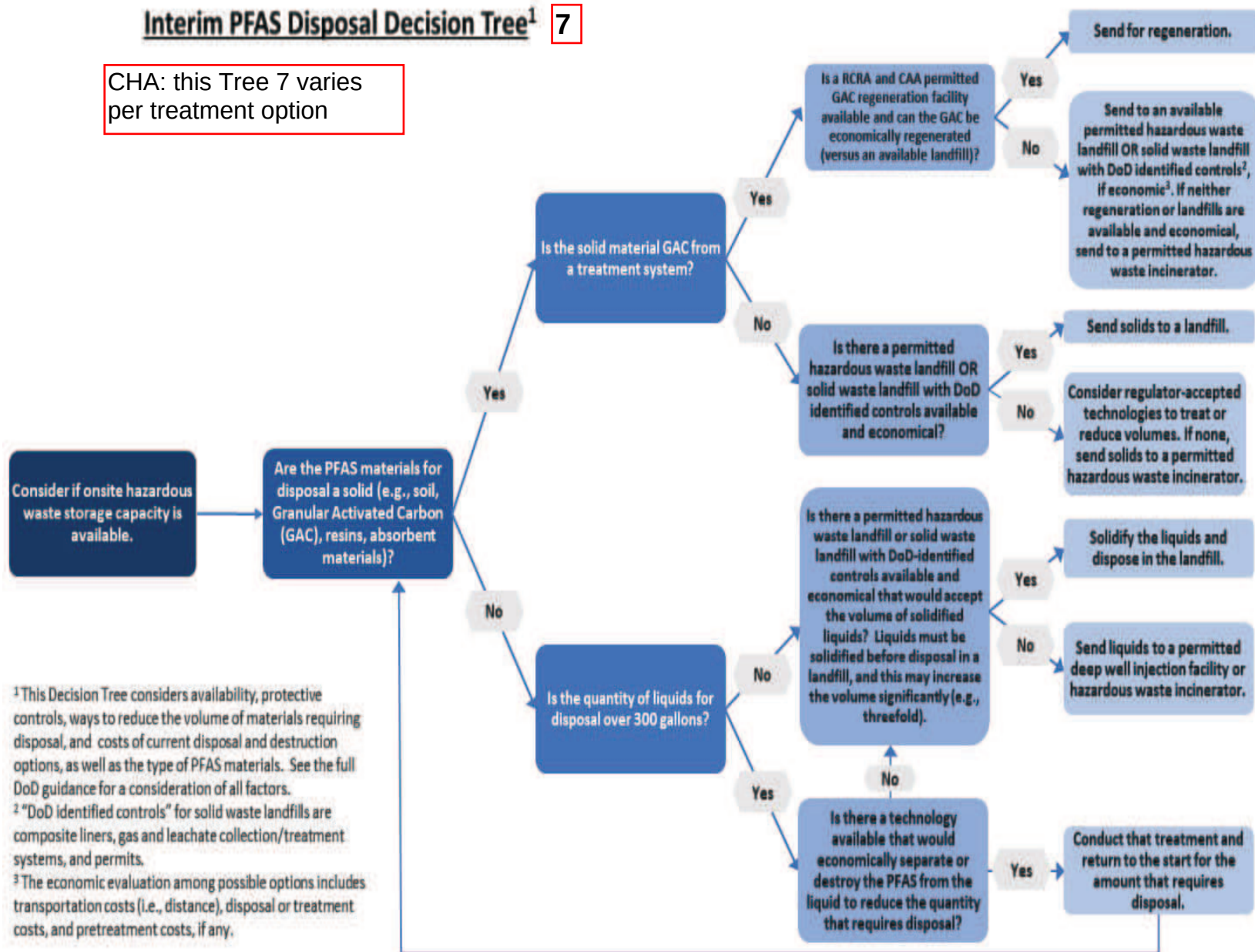


Tree 6: Simultaneous Compliance for Non-Treatment and Treatment Alternatives



Interim PFAS Disposal Decision Tree¹ 7

CHA: this Tree 7 varies per treatment option



Acronyms

ADEQ	Arizona Department of Environmental Quality
BAT	Best Available Technology
CFU	Colony Forming Units
CSMR	Chloride to Sulfate Mass Ratio
DOC	Dissolved Organic Carbon
EBCT	Empty Bed Contact Time
EPA	U.S. Environmental Protection Agency
EPDS	Entry Point to the Distribution System
GAC	Granular Activated Carbon
HPC	Heterotrophic Plate Count
IX	Ion Exchange
LCR	Lead and Copper Rule
LSI	Langelier Saturation index
MCL	Maximum Contaminant Level
µm	Micron or Micrometer
MWCO	Molecular Weight Cut-off
NF	Nanofiltration
NTU	Nephelometric Turbidity Units
O&M	Operations and Maintenance
PFAS	Per- and Polyfluoroalkyl Substances
PFBA	Perfluorobutanoic Acid
PFBS	Perfluorobutane Sulfonate
PFHxS	Perfluorohexane Sulfonate
PFNA	Perfluorononanoic Acid
PFOA	Perfluorooctanoic Acid
PFOS	Perfluorooctane Sulfonic AAcid
ppt	Parts Per Trillion
psi	Pounds Per Square Inch
PWS	Public Water System
RO	Reverse Osmosis
RTCR	Revised Total Coliform Rule
SDI	Silt Density Index
TC	Total Coliform
TDS	Total Dissolved Solids
TOC	Total Organic Carbon
TSS	Total Suspended Solids
VOC	Volatile Organic Compound
WQP	Water Quality Parameter

DECISION TREES FOR

PFAS



**MITIGATION SELECTION
IN DRINKING WATER**

DECISION TREES FOR PFAS MITIGATION SELECTION IN DRINKING WATER

This document was prepared by ADEQ staff and reviewed by regulatory and manufacturer peers. Kimley-Horn assisted ADEQ in the development of this tool. Mention of trade names or commercial products does not constitute an endorsement or recommendation of use.

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1. EPA Office of Water, 2003, (4606M) 816-R-03-014, Arsenic Treatment Technology Evaluation Handbook for Small Systems | [View Source >](#)
2. AWWA, Drinking Water Treatment for PFAS Selection Guide | [View Source >](#)
3. Purolite Design and Operational Guidelines: PFAS-Selective Single Use Ion Exchange Resin for Drinking Water Systems | [View Source >](#)
4. EPA, 2020, Simultaneous Compliance Workbook: Key Questions to Consider When Adding or Changing Treatment — A Simplified Approach | [View Source >](#)
5. 5. Drinking Water Treatment Technology Unit Cost Models | [View Source >](#)
6. 6. AACE International, Cost Estimate Classification System, 2005 | [View Source >](#)



ASSISTANT SECRETARY OF DEFENSE

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WASHINGTON, DC 20301-3400

ENERGY, INSTALLATIONS,
AND ENVIRONMENT

7/11/23

MEMORANDUM FOR ASSISTANT SECRETARY OF THE ARMY (INSTALLATIONS,
ENERGY AND ENVIRONMENT)
ASSISTANT SECRETARY OF THE NAVY (ENERGY,
INSTALLATIONS AND ENVIRONMENT)
ASSISTANT SECRETARY OF THE AIR FORCE
(INSTALLATIONS, ENVIRONMENT AND ENERGY)
DIRECTOR, DEFENSE LOGISTICS AGENCY (LOGISTICS
OPERATIONS)

SUBJECT: Interim Guidance on Destruction or Disposal of Materials Containing Per- and Polyfluoroalkyl Substances in the United States

The DoD Per- and Polyfluoroalkyl Substances (PFAS) Task Force issues this interim guidance to help DoD make informed decisions in the evaluation of existing destruction and disposal options, and to comply with section 343 of the FY 2022 National Defense Authorization Act (NDAA). Section 343 requires DoD to prohibit the incineration of covered DoD PFAS-containing materials¹ until DoD issues guidance implementing the U.S. Environmental Protection Agency (EPA) “Interim Guidance on the Destruction and Disposal of Perfluoroalkyl and Polyfluoroalkyl Substances and Materials Containing Perfluoroalkyl and Polyfluoroalkyl Substances,” December 18, 2020 (hereinafter referred to as the EPA guidance), and section 330 of the FY 2020 NDAA.

Concurrent with its compliance with these requirements on PFAS destruction and disposal, DoD is transitioning to a PFAS-free firefighting agent for land-based applications over the next few years. DoD has determined that this transition, which requires the removal of PFAS-containing firefighting foam (i.e., Aqueous Film Forming Foam (AFFF)) from installation fire protection inventories, will generate large quantities of PFAS-containing concentrate and rinsate for which DoD must find a safe disposal solution. In addition, quantities of PFAS-containing material are generated from DoD’s nationwide cleanup program, and recovery of emergency use discharges or spills of AFFF. Given these combined quantities, DoD’s long-term storage capabilities will be exceeded and thus DoD requires a comprehensive destruction and disposal strategy.

In choosing among disposal options, one of the most significant factors for DoD was the additional oversight and controls provided at disposal and destruction facilities with

¹ PFAS-containing materials covered under this guidance includes all “covered material” under Section 343 of the FY 2022 NDAA, which means “any [Aqueous Film Forming Foam] AFFF formulation containing PFAS, material contaminated by AFFF release, or spent filter or other PFAS-contaminated material resulting from site remediation or water filtration that—

- (A) has been used by the Department of Defense or a military department;
- (B) is being discarded for disposal by the Department of Defense or a military department; or
- (C) is being removed from sites or facilities owned or operated by the Department of Defense.”

magnesium, and other ions may be selectively removed via membrane selection to reach target concentrations.

7. Existing Lime Reactor Restoration dependent on assessment by Veolia (original manufacturers of the reactors). Projected cost is unknown at this time.
8. Foam Fractionation is a newer PFAS concentration technology and would need to be coupled with a liquid PFAS removal/destruction process.
9. GAC regeneration and PFAS incineration would be handled by a specialty contractor. Permitting may be required for handling the PFAS-laden GAC. See the DoD PFAS Disposal Decision Tree (7).
10. Permitting would be required for handling PFAS bearing resin and brine. Permitted treatment, storage, and disposal facility (TSDF) would handle disposing spent IX resin. Brine can also be sent to the TSDF or treated with GAC / Foam Fractionation
11. Spent Fluoro-sorb may be sent to a landfill permitted for PFAS waste. Permitting may be required for City to be handling PFAS-laden Fluoro-sorb.
12. Constructing a new Deep Well is \$20M to \$30M in capital cost. Space available for the City is very limited, so membrane concentrate would potentially need to be piped a significant distance depending on the deep well site, or whether a City of Tampa Deep Well can be used.
13. Permitting for PFAS liquid discharge to a water reclamation facility would be required and possibly infeasible.

APPENDIX B

PFAS Report & Pilot Attachment (Pending)

PFAS COMPLIANCE EVALUATION OF ALTERNATIVES DRAFT REPORT

CITY OF TEMPLE TERRACE WATER TREATMENT FACILITIES

City of Temple Terrace Master Plan
6009 Whiteway Drive
Temple Terrace, FL 33617

CHA Project Number: 100335

March 2026

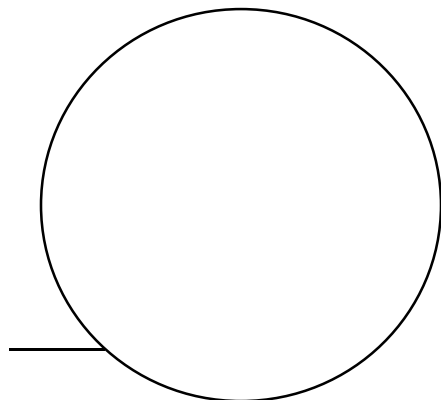
CERTIFICATION [or SIGNATURE PAGE]

I, the undersigned, certify that I am currently a [insert state] registered professional engineer and that this [insert document name] Report was prepared in accordance with all applicable statutes and regulations and [insert project-specific language].

I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, the undersigned, of CHA Consulting, Inc. have been designated by the Site owner to sign this certification for the Site.

For CHA Consulting, Inc.:

(Professional Seal)



Edward Talton, P.E.

Printed Name of Certifying Engineer

Signature of Certifying Engineer

INSERT TITLE HERE

Title

INSERT DATE HERE

Date of Certification

License Number: 47023

FL Professional Engineer Registration Number

Florida

Registration State

INSERT DATE HERE

Registration Expiration Date

CHA Consulting, Inc.

Company

INSERT #####

Company Certificate of Authorization No.

ADDITIONAL INFORMATION

Additional Information Placeholder

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1.0 PFAS TREATMENT PROCESS EXECUTIVE SUMMARY

INTRODUCTION

PFAS have been detected in the City of Temple Terrace's (City's) groundwater supply at concentrations above the EPA's established maximum contaminant levels, and the existing treatment processes are not designed to achieve effective PFAS removal. Given the age of the facilities, non-functioning or constrained processes, and emerging treatment needs, this is an appropriate time to holistically assess both Water Treatment Plants (WTPs) and develop a prioritized capital improvement plan aligned with the City's operational and water quality objectives.

Of the 6 PFAS species regulated by the U.S. Environmental Protection Agency (US EPA), the City has shown through sampling events, detailed in Chapter 2, to have elevated levels of PFOA, PFOS, and PFHxS. The goal for the City is to remove PFAS to below the MCL for each species, and to approach the MCLG of 0 ppt. **Table ES-1** presents the maximum measured PFAS concentrations.

Table ES-1: Maximum Measured Concentrations of PFAS Species of Concern

PFAS Species	Maximum Influent Concentration
PFOA	15 ppt
PFOS	25 ppt
PFHxS	20 ppt

The current WTP systems are not adequate at removing PFAS and would need to be supplemented with additional processes such as Granular Activated Carbon (GAC), Ion Exchange (IX), or Reverse Osmosis (RO) / Nanofiltration (NF) treatment.

IMPROVEMENT ALTERNATIVES FOR WHITEWAY AND SUNNINGDALE WTPS

Key water quality parameters of concern in the City's groundwater include hardness and PFAS. Alternatives were developed to meet the City's water quality goals primarily focused on reducing hardness and addressing pending PFAS limits. WTP improvement alternatives were categorized as follows:

- Non-treatment:
 - Supply sources: existing wellfields, new wells/wellfield, neighboring utility (City of Tampa)
- Treatment
 - PFAS Physical/Chemical Separation Processes: GAC, IX, NF/RO
 - PFAS Concentration: Foam fractionation
 - Managing PFAS Waste Streams: Several alternatives are available: High-temp incineration, plasma excitation, brine concentrator/crystallizer, UV photolytic reduction, sonolysis, electrochemical oxidations or hauling to a certified waste collection location.

Whiteway WTP

- **Alternative WW-1** – Rehabilitate lime softening/filtration process and install four 1 mgd GAC or IX vessels with supporting piping/valving/metering, backwash and regen (for IX only) systems, depending on pilot study results, certain IX may need softening pre-treatment leading to increased potential cost
- **Alternative WW-2** – Retire lime softening, install three 1.5 mgd high-recovery nanofiltration skids with supporting cartridge filtration, antiscalant, cleaning and concentrate treatment

Sunningdale WTP

- **Alternative SD-1** – Continue with no softening process and install two 1 mgd GAC/IX vessels with supporting piping/valving/metering, backwash and regen (for IX only) systems, depending on pilot study results, certain IX may need softening pre-treatment leading to increased potential cost
- **Alternative SD-2** – Install two 1.0 mgd high-recovery nanofiltration skids with supporting cartridge filtration, antiscalant, cleaning and concentrate treatment

ALTERNATIVES EVALUATION

The study has focused on established technologies (GAC, IX, NF). Emerging technologies or solutions are discussed but would need more piloting to confirm. For now, NF concentrate treatment using foam fractionation & destruction was assumed for cost comparison. For the City, testing/piloting will be required to confirm applicability under a separate implementation phase.

The alternative evaluation compared alternatives on life cycle costs and non-cost factors including those that citizens provided in the PFAS public meeting in Aug-2025. Alternatives evaluation is ongoing and will incorporate pilot results to assist with capital and operating costs. Based on knowledge in hand including decision support tools, recent project costs and opinion estimates, the following costs are provided as draft. **Table ES-2** summarizes the life-cycle costs of the proposed alternatives.

Table ES-2. WTP Process Alternative Life Cycle Cost Evaluation

Cost Category	WW-1 Rehab Lime/Filters Add GAC or IX*	WW-2 Retire Lime/Filters Add Nanofiltration**	SD-1 Continue No Softening Add GAC or IX*	SD-2 Add Nanofiltration**
PFAS MDD Treatment Capacity	4.4 mgd	4.5 mgd	2.2 mgd	2.2 mgd
WTP ADD	3.0 mgd	3.0 mgd	1.0 mgd	1.0 mgd
Capital Cost	\$16.7M (GAC) \$13.7M No lime \$12.4M (IX)	\$26.3M	\$7.5M (GAC) \$7.2M (IX)	\$14.1M
Annual Operational Cost	\$1.8M/Yr \$1.2M no lime \$1.7M/Yr (IX)	\$1.0 M/Yr	\$0.5 M/Yr-GAC \$0.5M/Yr-IX	\$0.6 M/Yr
Present Value	\$47.8M (GAC) \$41.8M (IX)	\$43.6M	\$16.1M (GAC) \$15.8M (IX)	\$24.5M
Equivalent Annual Cost (\$/Yr)	\$2.8M/Yr (GAC) \$2.4M/Yr (IX)	\$2.5M/Yr	\$0.9M/Yr (GAC) \$0.9M/Yr (IX)	\$1.4M/Yr
Equivalent Annual Cost (\$/kGal at 4.0 mgd ADD)	\$1.72/kGal (GAC) \$1.24 no lime \$1.50/kGal (IX)	\$1.53/kGal	\$1.16/kGal (GAC) \$1.14/kGal (IX)	\$1.76/ kGal

ASSUMPTIONS:

**IX assumes no softening based on preliminary pilot results. If softening is required, costs will have to be revised using cation IX as pre-treatment to PFAS anion IX.*

*** Assumes Invicta Foam Fractionation/PhotoCatalytic Destruction for treatment of concentrate laden PFAS, Deep well injection costs to be included in the next version of Masterplan*

- Capital costs include furnish and install equipment and non-cost factors including 25% contingency
- Present values assume 30-year life with 4% inflation
- ADD = Average Daily Demand
- MDD = Maximum Daily Demand
- Does not include other WTP major R&R to existing equipment which is common to all alternatives

PFAS Compliance Evaluation of Alternatives

While variations exist, these core alternatives represent a low-cost solution and a more robust one that includes consistent, effective reductions in calcium/magnesium hardness. While considerations were made for consolidating the WTPs to the Whiteway WTP site, this would likely be infeasible for Alternative 1 due to expansion in well pumping/piping, distribution piping, pumping, lime softening and filtration processes to go from a max day capacity of 5.0 mgd to 6.0 mgd. Consolidation would fit better with Alternative 2, where initial nanofiltration skids could be located at Sunningdale WTP and later moved, when needed, to the Whiteway WTP to fully displace Sunningdale. Detailed site layouts are provided in Section 4.

RECOMMENDATIONS

Based on the evaluation of treatment performance, operations and maintenance requirements, capital cost, and other considerations discussed, GAC, IX and NF alternatives are technically feasible options for PFAS treatment at the Lime Softening WTF. All three systems are capable of achieving compliance with the EPA drinking water standards for long-chain PFAS compounds, including PFOA and PFOS. Without further evaluation, a preferred technology cannot be identified, as treatment performance, media life, and overall lifecycle costs are highly site-specific.

Before the final decision is made to proceed to a full-scale design, a pilot study evaluating NF is recommended as the performance is site-specific and cannot be predicted accurately. It is also recommended that the City continue monitoring the PFAS levels in the wells and analyze if there is a trend or increase.

2.0 REGULATORY REQUIREMENTS AND SOURCE WATER QUALITY

2.1 EPA Drinking Water Standards on PFAS

In April 2024, the U.S. Environmental Protection Agency (EPA) announced the final National Primary Drinking Water Regulation (NPDWR) that establishes Primary Maximum Contaminant Levels (MCLs) and Maximum Contaminant Level Goals (MCLGs) for six PFAS substances in drinking water. Individual MCLs are set for Perfluorooctanoic acid (PFOA), Perfluorooctanesulfonic acid (PFOS), Perfluorohexanesulfonic acid (PFHxS), Perfluorononanoic acid (PFNA), Hexafluoropropylene dimer acid (HFPO-DA) and its ammonium salt, and a combined Hazard Index (HI) MCL is set for the mixture of PFHxS, PFNA, HFPO-DA, and Perfluorobutanesulfonic acid (PFBS). Details are summarized in **Table 1-3**.

Table 2.1. EPA Drinking Water Standards on PFAS

Contaminants	Critical Health Impact	MCL (ppt)	MCLG(ppt)
PFOA	Cancer	4.0	Zero
PFOS	Cancer	4.0	Zero
PFHxS	Thyroid Effects	10.0	
PFNA	Developmental Effects	10.0	
HFPO-DA ('GenX' chemicals)	Liver Effects	10.0	
Mixture of GenX, PFBS, PFNA PFHxS	Multiple	Hazard Index* of 1	

$$*Hazard\ Index = \left(\frac{[GenX]}{[10\ ppt]} \right) + \left(\frac{[PFBS]}{[2000\ ppt]} \right) + \left(\frac{[PFNA]}{[10\ ppt]} \right) + \left(\frac{[PFHxS]}{[10\ ppt]} \right)$$

EPA also released the compliance timeline with a phased approach, as listed below:

- By 2027, public water systems must complete initial monitoring of the regulated PFAS, followed by ongoing compliance monitoring.
- Beginning in 2027, public water systems must provide the public with information on the PFAS levels in their drinking water.
- By 2031, public water systems must implement solutions to reduce PFAS if monitoring shows that drinking water levels exceed these MCLs.
- Beginning in 2031, public water systems that have PFAS in drinking water above one or more of these Primary MCLs (PMCLs) must take action to reduce levels of PFAS in their drinking water and provide Tier 2 notification (long-term exposure, potential health risk but no immediate threat) to the public of the violation.

In May 2025, EPA announced the agency will keep the current NPDWR for PFOA and PFOS with an intent to rescind and reconsider the regulatory determinations for PFHxS, PFNA, HFPO-DA (commonly known as GenX), and the Hazard Index mixture of these three plus PFBS, to ensure that the determinations and any resulting drinking water regulation follow the legal process laid out in the Safe Drinking Water Act. On May 14, 2025, EPA announced it will delay SDWA PFAS

compliance deadlines for two PFAS chemicals, PFOS and PFOA, by two years, until 2031. On Jan. 21, 2026, the District of Columbia Circuit Court denied EPA's Sept. 11, 2025 request to vacate the other four previous SDWA PFAS rules for PFNA, PFHxS, HFPO-DA, and the Index PFAS.

2.2 Fifth Unregulated Contaminant Monitoring Rule

The Safe Drinking Water Act (SDWA) amendments require that once every 5 years, EPA issue a new list of no more than 30 unregulated contaminants to be monitored by public water systems. EPA collects data for contaminants that are suspected to be present in drinking water and do not have health-based standards set under the SDWA, to fill the occurrence data gaps in the CCL.

The fifth Unregulated Contaminant Monitoring Rule (UCMR5) was published on December 27, 2021. The UCMR5 requires monitoring of 30 chemical contaminants between 2023 and 2025 using analytical methods developed by EPA and consensus organizations. This action provides EPA and other interested parties with scientifically valid data on the national occurrence of these contaminants in drinking water. Consistent with EPA's PFAS Strategic Roadmap, UCMR 5 will provide new data that is critically needed to improve EPA's understanding of the frequency that 29 per- and polyfluoroalkyl substances (PFAS) and lithium are found in the nation's drinking water systems.

2.3 Source Water Quality

2.3.1 PFAS

The City conducted three rounds of PFAS sampling on finished water in March, May, and July 2025, as well as one round of sampling across the groundwater wells. Results for the six regulated PFAS are summarized in **Table 2.2**. PFOA and PFOS concentrations exceeded EPA standards at all locations, while PFHxS and Hazard Index exceeded EPA standards at certain production wells. More rounds of sampling have been scheduled to meet the EPA monitoring requirement.

Table 2.2 PFAS Analysis Results

Facility	Well No.	PFOA	PFOS	PFHxS	PFNA	Gen-X	PFBS	Hazard Index
Sunningdale	1	9.1	16	6.9	< 1.7	< 0.84	8.4	0.84
	2	9.1	17	7.0	< 1.7	< 0.84	8.9	0.85
	6	6.0	18	7.2	< 1.7	< 0.86	9.6	0.85
	11	5.0	15	6.4	< 1.7	< 0.86	6.7	0.71
	POE*	8.0	17.7	7.5	< 3.7	< 4.7	11.3	0.87
Whiteway	4	11	18	9.4	< 1.8	< 0.88	9.1	1.15
	5	7.1	20	13	< 1.7	< 0.86	8.2	1.50
	7	6.8	21	11	< 1.7	< 0.83	11	1.30

PFAS Compliance Evaluation of Alternatives

Facility	Well No.	PFOA	PFOS	PFHxS	PFNA	Gen-X	PFBS	Hazard Index
	8	6.0	13	4.3	< 1.7	< 0.87	8.5	0.55
	9	5.1	15	5.5	< 1.7	< 0.83	10	0.67
	12	5.0	20	16	< 1.6	< 0.82	7.7	1.83
	POE*	7.6	17.0	8.0	< 4.1	< 5.2	9.1	0.90
Irrigation	16	5.1	11	5.7	< 1.7	< 0.87	6.6	0.71

*Average of three rounds of sampling results.

PFAS treatment can be influenced by the presence of other water quality constituents. This evaluation considered additional water quality parameters beyond PFAS. For instance, the source water exhibits high hardness, exceeding 300 mg/L as CaCO₃.

2.4 Treatment Goal

Comparing the newly released EPA standards and the source water analysis results, PFOA and PFOS in the raw water feeding the WTFs are significantly higher than the MCLs. The current treatment process does not provide adequate removal of PFAS, therefore additional treatment is required to meet or beyond the drinking water standards.

The current MCLs are considering the adverse health impacts of PFAS, but were set based on the instrumentation detection limits. These promulgated MCLs are significantly more stringent than the Health Advisories (HAs) previously established by EPA (70 ppt for PFOA and PFOS). Therefore, even tighter regulations could be on the way with the development of lower detection limit. To provide safe drinking water to the water users and ensure compliance in the future, the MCLGs (zero for PFOA & PFOS, 10 ppt for PFHxS, PFNA, GenX, and HI <1) are set as the treatment goal for this project.

Other regulated drinking water constituents should remain below their respective primary and secondary standards. Additionally, hardness should be reduced to 120- mg/L as CaCO₃ to improve taste and control scaling in the distribution system

3.0 PFAS TREATMENT TECHNOLOGY ALTERNATIVES

3.1 PFAS Treatment Technologies

3.1.1 Potential Treatment Technologies

Numerous treatment technologies have been studied to remove or reduce PFAS from water. PFAS are not effectively removed by conventional water treatment processes (removal below 25%). Based on current knowledge and technology evaluations conducted by EPA and others in the water industry, three processes are proven to be very effective: Granular Activated Carbon (GAC), Ion Exchange (IX), and Reverse Osmosis (RO) / Nanofiltration (NF). Physicochemical breakdown (for example, advance oxidation processes (AOP)) requires substantial energy input and is currently under development. Biodegradation using bacteria produced enzymes has shown some extent of removal but will not meet the drinking water standards and the process is normally slow, also the study is only in laboratory stage.

3.1.2 RO/NF

RO/NF is a filtration process that uses a semi-permeable membrane to remove ions, molecular, and larger particles from water. Pressure is applied on the feed water side to overcome the osmotic pressure and force the water molecular passing through and leave the impurities behind. RO/NF systems can address most known water quality concerns including TDS, hardness, TOC and disinfection byproducts (DBPs) precursors, taste & odor, and a wide range of PFAS. Typically, the cost of membrane treatment for PFAS is higher than other known and effective treatment technologies because of the membrane & skid cost, and the high energy consumption to operate the feed pump. RO/NF concentrate/reject will contain high concentrations of PFAS and will need to be properly discharged or managed. Rejects can be up to 25 percent of the water coming to the treatment process which requires a commensurate larger amount of source water. If RO is used, the plant may need to treat more water to meet the production demand.

RO/NF concentrate is classified as a hazardous waste. RO/NF treatment systems in Florida commonly use deep well injection to dispose of RO/NF concentrates. The presence of PFAS in the concentrate complicates this issue and possible further PFAS concentration, adsorption or destruction can be used for the smaller concentrate flows.

3.1.3 GAC

GAC is the most studied and relatively cost-effective PFAS removal technology. The high porous media is made from coal, wood, coconut shells, etc., and has large contact surface (up to 1,000 ft²/gram) for adsorption. It is very efficient at removing organics, chlorine, taste & odor, and long-chain PFAS, such as PFOS and PFOA, after water has been treated by the conventional coagulation/flocculation/filtration process. However, GAC is not as effective on short-chain PFAS removal, for example PFBS. GAC systems normally cost less than RO, and the spent media can

be easily regenerated or hauled offsite by the GAC vendors/suppliers at a reasonable price. The nearest GAC reactivation facilities are located in Catlettsburg, KY, Big Sandy, TX, Pittsburg, CA (all maintained by Calgon), and Pryor, OK (maintained by Norit). The GAC vendors typically handle transportation and replacement of media through contract.

3.1.4 IX

IX is also commercially available, and the mechanism is similar to GAC which uses adsorption for contaminant removal. IX process has been proven to be effective in treating ions such as calcium, magnesium, chloride, heavy metals, and nitrates with special resins, and is suitable for water softening and demineralization. In PFAS treatment, feed water passes through the positively charged anion exchange resins (AER) and the negatively charged PFAS will be attached to the resins and remain in the vessels. Like GAC, IX is less effective removing short-chain PFAS. IX normally requires significantly shorter empty bed contact time (EBCT, 1.3 to 5 minutes) compared to GAC (10 to 20 minutes), which means less capital cost. However, the resin regeneration process is more complicated than the disposal of the spent GAC media and requires higher operation skills and costs. Specifically, the brine resulting from resin regeneration will likely be considered a hazardous waste with associated disposal requirements. In cases where disposal facilities are not readily available, FDEP recommends on-site interim storage or treating the brine the same as a high-strength liquid PFAS waste, similar to RO concentrate.

In addition to activated carbon and IX resin, alternative adsorbents, such as FLUORO SORB® and Foam Fractionation, are considered as emerging treatment alternatives for PFAS removal. The next Section discusses these emerging treatment alternatives.

3.1.5 Foam Fractionation

Foam fractionation is a relatively new technology that has less application compared to RO, GAC or IX. In this process, air is injected into the water, generating bubbles that PFAS molecules preferentially adsorb due to their hydrophobic fluorinated tails and hydrophilic heads. The PFAS-enriched foam is then collected at the surface and removed, effectively reducing PFAS concentrations in the treated water.

While it has demonstrated good PFAS removal, its performance can be influenced by water chemistry, including hardness, natural organic matter, and the presence of other surfactants. Foam fractionation is generally more efficient for treating waters with higher PFAS concentrations, such as wastewater, landfill leachate, or reverse osmosis concentrate. To date, there are only a few full-scale implementations of foam fractionation for drinking water treatment in the U.S.

3.1.6 Fluoro-Sorb Adsorption

In addition to activated carbon and IX resin, alternative adsorbents, such as CETCO FLUORO-SORB® 200 and Cyclopure DEXSORB+® are considered emerging treatment alternatives for PFAS removal in drinking water. FLUORO-SORB® 200 is a National Science Foundation (NSF) certified, proprietary, surface-modified bentonite clay material. FLUORO-SORB® 200 has shown to have promise in removing both long- and short-chain PFAS from groundwater in pilot-scale treatment studies. These adsorbents are less impacted by chlorine and higher TOC source waters than IX or GAC.

At present, there are only 2-3 drinking water treatment installations of FLUORO-SORB® in the US. Due to limited installations, there is a need for understanding of the design and operation requirements for FLUORO-SORB and its long-term, life-cycle cost for PFAS treatment. While emerging adsorbents have limited records in full-scale drinking water applications, both IX vessels and GAC contactors can be designed to accept alternative adsorbents in the future if they prove to be advantageous as the technology matures.

3.1.7 Emerging PFAS Technology

Several emerging PFAS treatment technologies have been developed as alternatives or complements to conventional GAC, IX, and RO/NF. Electrostatic concentrators use electrically charged fields to attract and concentrate PFAS species onto collection surfaces, potentially reducing chemical usage and waste volumes. Electrochemical oxidation applies direct current across specialized electrodes to generate strong oxidants (e.g., hydroxyl radicals) capable of breaking down PFAS molecules, offering a destructive pathway rather than concentrate or transfer. Supercritical water oxidation (SCWO) operates at elevated temperature and pressure where water becomes a supercritical fluid, enabling rapid and near-complete mineralization of PFAS; however, the process is energy-intensive and requires robust materials to withstand corrosive conditions. Plasma-based technologies create highly reactive species (radicals, electrons, UV photons) within a plasma field at the gas-liquid interface to degrade PFAS, showing promise for concentrate streams though scale-up and energy efficiency remain active research areas.

In practice, these technologies can be integrated as part of hybrid treatment trains, particularly for managing PFAS concentrates generated from RO/NF. A representative hybrid approach combines membrane filtration for bulk separation with foam fractionation and/or electrostatic concentration to further reduce concentrate volumes and increase PFAS strength prior to final destruction. Such integrated systems aim to balance capital and operating costs while minimizing residual waste and improving overall treatment effectiveness.

Although pilot and demonstration projects are expanding, most of these methods remain at the developmental or early-commercial stage, and full-scale implementation typically requires site-specific testing to validate performance, energy demand, by-product formation, and long-term reliability.

To understand the current alignment between PFAS occurrence and installed treatment, the table below shows information from the U.S. EPA UCMR5 (Oct. 2024) on what treatment technologies community water systems have implemented in response to PFAS.

Table 3.1 Community Water System Responses to PFAS Detection

Reported Response to PFAS Detection	Number of CWS with Available Data	Total Population, millions
Not Modified	3614	181
Granular Activated Carbon	139	7
Ion Exchange	52	4
Powdered Activated Carbon	14	0.9
Reverse Osmosis	12	0.5
Biologically Activate Carbon	7	0.3
Total	3691	

3.1.8 PFAS Treatment Technology Comparisons

The most effective PFAS treatment approaches in drinking water are RO/NF, GAC, and IX. These three technologies are widely applied and proven to be effective. **Table 3.2** shows the comparison rankings based upon evaluation of performance, reliability, costs, and operation difficulties (the lower score the better). Based on the ranking, RO/NF and GAC are the two most promising technologies for the WTPs and are further discussed and compared in detail in the next chapter. Anion ion exchange can be incorporated to reduce PFAS if it can withstand high hardness or may need a cation exchange process to soften the water, which will increase capital and O&M costs.

Table 3.2 Evaluation of Suitable PFAS Treatment Technology

Technology Summary	Assurance of PFAS Removal	Capital Cost*	Operating Cost	Operator Involvement	Finished Water Quality
<u>Membrane-RO/NF</u> - Pre-treatment (Acid/polymer) 2-stage ~80% recovery - Post-treatment (caustic/lime) to adjust pH, alkalinity, and calcium concentration - Disposal of concentrate - Deep well injection	1 st	3 rd	3 rd	2 nd	1 st
<u>GAC</u> 2-unit in series (lead-lag) - Offsite regeneration 8.5-min EBCT each unit - Loading 6 gpm/ft²	2 nd	2 nd	2 nd	1 st	2 nd
<u>IX</u> 2-unit in series (lead-lag) - Single use resin (most common) - Regenerable resin - brine required for regeneration. Disposal of waste streams by deep well injection or hauled off-site 4-min EBCT (usually 3 min) - Loading 10 gpm/ft²	3 rd	1 st	1 st	3 rd	3 rd

4.0 PFAS COMPLIANCE ALTERNATIVE EVALUATION

4.1 Process Alternatives Overview

Key water quality parameters of concern in the City's groundwater include hardness and PFAS. Several emerging and established technologies are available for treating hardness and PFAS. Given the costs and challenges of treating PFAS and managing PFAS in waste streams, it is important to evaluate established technologies like GAC, IX and membranes (NF/RO). Several emerging technologies for PFAS are noted here, however, they are not discussed in detail. Lime softening, as well as other processes such as ion exchange, electrodialysis, NF/RO, distillation and freezing may be utilized to soften water. Established technologies for softening such as lime softening, ion exchange and NF/RO are the focus of this Section. PFAS process alternatives include the most widely used for PFAS: GAC, IX, and NF/RO. Each of these treatment alternatives have waste generation and residual management needs which need to be considered when selecting the appropriate alternative for the City's WTPs.

The most likely management option in drinking water applications for spent GAC or IX containing adsorbed PFAS is single-use/replacing spent media with virgin media. Spent GAC can be potentially regenerated, reactivated, and reused at the facility; reactivation is most frequently handled by the GAC media supplier and can be included in the cost of media changeout. While using PFAS-selective resin, the accepted approach is single-use where the spent resin is disposed and replaced with fresh resin. Regeneration of selective resins may be possible using organic solvents or proprietary methods; however, their performance and cost effectiveness needs to be studied at full-scale. Also, spent rinse water may need to be held in holding tanks and would require disposal with vendor assistance or deep well injection.

With NF/RO membranes, the characteristics of brine/concentrates are predictable, and handling and treatment options are well understood. PFAS concentrations in this waste stream would be approximately 6 to 12 times the concentration in influent water with other dissolved solids removed from the treated water. For disposal of membrane concentrate, systems use surface water discharge, discharge to sanitary sewer or deep well injection, as is common in Florida. A small percentage of systems use land application, evaporation ponds, or recycling. In the case of PFAS removal, the high PFAS concentration in the residuals might limit the disposal options or require additional treatment prior to disposal, depending on state and local discharge regulations, leading to an increase in treatment costs. For a detailed description of these alternatives, merits and demerits, reader is referred to the following published paper in AWWA Water Science (Reference "Managing PFAS in Membrane Concentrates" Emily Tow, et.al. with Mysore C.S., AWWA Water Science 2021).

At present, CHA is conducting RSSCT and pilot studies to evaluate the preferred treatment process. Preliminary results from the pilot indicate that GAC lag column is showing good removal (> 92%) of all the PFAS compounds tested including PFBS. IX as lead is exhibiting good removal similar to GAC except for PFBS (~69%) whereas GAC exhibits PFBS > 92%. Pilot testing is anticipated to end in December. These ongoing RSSCT and pilot studies, when complete, will help finalize the preferred treatment process. This “Draft” masterplan will be updated with more accurate level 5 opinion of probable construction costs (OPCC Level 5-AACEI) upon pilot effort completion.

4.2 Baseline Design Assumptions and Criteria

- Average Influent Hardness (from Feb 2025-Aug 2025; 329 mg/L)
 - Elevated hardness has occurred over the last 8 months, previous Whiteway average influent hardness was in the 275 mg/L range
 - see graphs in Sections 2 and 3
 - Individual well operating protocols should be reviewed by the City
- Maximum Influent PFAS Concentration:
 - PFOA: 15 ppt
 - PFOS: 25 ppt
 - PFHxS: 20 ppt
 - PFAS Treatment goal of 90% to 100% removal (Reference-Sections 1 and 2)
- Expected Design Flows (Based Flow Data from 2020-2025 MORs):
 - Maximum Day: 6.0 MGD total flow (4.0 MGD-Whiteway, 2.0 MGD-Sunningdale)
 - 95+ percentile of historical flow records (see Section 2 graphs)
- Average Day
 - Whiteway Historical Avg Day: 3.0 MGD
 - Sunningdale Historical Avg Day: 1.0 MGD
 - There is some disagreement in the MOR data for total flow (3.9 to 4.3 MGD total for both WTPs), 4.0 MGD was assumed for this analysis.
- PFAS Treatment capacity if raw water stays separated at each WTP:
 - Whiteway WTP Max Day: 4.0 MGD
 - Sunningdale WTP Max Day: 2.0 MGD
 - Flows could bypass PFAS treatment to maintain WTP FDEP capacities
- Current Permit Limits
 - SWFWMD Water Use
 - Average Permitted Withdrawal: 5,150,000 gallons per day
 - Peak Permitted Withdrawal: 5,817,400 gallons per day
 - Needs to be increased to match flow projections and treatment needs
 - FDEP/Health Dept WTP Design (Max Day) Capacity
 - Whiteway: 5.04 MGD
 - Sunningdale: 3.96 MGD

4.3 Alternatives Development

Alternatives were developed to meet the City's water quality goals primarily focused on reducing hardness and PFAS. Lime softening, as well as other processes such as ion exchange, electrodialysis, nanofiltration (NF), reverse osmosis (RO), distillation and freezing may be employed to soften water. However, only the most widely used treatment alternatives such as lime softening, ion exchange and NF/RO are described here.

The main purpose of water softening by means of lime-soda ash or lime softening is to reduce the levels of calcium and magnesium in the finished water to a total hardness of 150 mg/l as CaCO₃. There are several alternatives to the existing lime softening process depending on the type of hardness, degree of softening, operational convenience, solids handling limitations, site constraints and capital and operating costs. The alternatives include partial softening as practiced at the Whiteway WTP (hardness removal up to 30%), enhanced lime softening (hardness removal 30% to 60%); lime-soda ash softening, caustic soda softening and softening with both lime and caustic soda.

Based on the functional groups bonded to the resin backbone, the four general types of exchange resins are (1) strong-acid cation (SAC), (2) weak-acid cation (WAC), (3) strong-base anion (SBA), and (4) weak-base anion (WBA). SAC resins are used for removing cations (e.g. calcium hardness), whereas SBA exchangers are increasingly being used to treat waters contaminated with nitrate, arsenic, and perchlorate ions and are usually operated in the chloride cycle, where the resin is regenerated with NaCl. More details on the PFAS selective SBA resins are provided in later sections. The ion exchange units can also be used to deionize water by allowing the water to flow continuously through a cation resin column and then through a strong base anionic resin column. The application of cation exchange to municipal systems for hardness reduction has been limited, with a few plants operational in Florida.

NF and RO are pressure-driven membrane purification processes whose characteristics fall between those of ultrafiltration and reverse osmosis. Unlike reverse osmosis, which accomplishes separation through a solution-diffusion process driven by osmotic pressure, NF accomplishes rejection by controlling diffusion, size exclusion, and electrostatic attraction/repulsion. NF is a proven advanced treatment technology implemented often for softening, removal of inorganic compounds, and synthetic organic compounds. NF is typically used in municipal drinking water applications for groundwater treatment, or in industrial applications for the production of high-purity water. The capabilities of NF to remove organics are well documented. Many lime softening plants in Florida have incorporated NF in their treatment processes, primarily for softening and removal of dissolved organic carbon. To minimize concentrate volumes and minimize supply quantities, NF will focus on high recovery (90+%), e.g., Tree-Stage RO, CCRO – Closed Circuit RO and FRRO – Flow Reversal RO.

PFAS Compliance Evaluation of Alternatives

Physical/chemical processes do not destroy PFAS, but rather produce a residual stream that has PFAS and other dissolved constituents. PFAS-laden liquids including membrane process concentrate and aqueous solutions used for resin regeneration can both be sequestered within confined aquifers by deep well injection. U.S. EPA Class I wells are commonly used for sequestering both hazardous and nonhazardous waste streams. Deep-well injection is commonly used in Florida and the decision to utilize this approach is a function of the proximity of the well, the volume of waste streams produced, the capacity of the well, whether the well can be used for the lifetime of the facility, permitting and redundancy.

Given the costs and challenges of managing PFAS in waste streams, it is critical to evaluate both established and emerging technologies in selecting processes for incorporation at the WTP(s). Ongoing RSSCT and pilot studies will help finalize the preferred treatment process and the master plan will be updated once these studies have concluded.

Multiple categories of PFAS alternatives were considered including:

- Non-treatment:
 - Supply sources: existing wellfields, new wells/wellfield, neighboring utility
 - Treatment locations: keep 2 WTPs, consolidate to Whiteway WTP
- Treatment
 - PFAS Physical/Chemical Separation Processes: Ion exchange (reversible process), nanofiltration/RO
 - PFAS Concentration: foam fractionation
 - Managing PFAS Waste Streams: Several alternatives are available: High-temp incineration, plasma excitation, brine concentrator/crystallizer, UV photolytic reduction, sonolytic and electrochemical oxidations For a detailed description of these alternatives, merits and demerits, reader is referred to the following published paper (Reference-“Managing PFAS in Membrane Concentrates” Emily Tow, et.al. AWWA Water Science 2021).

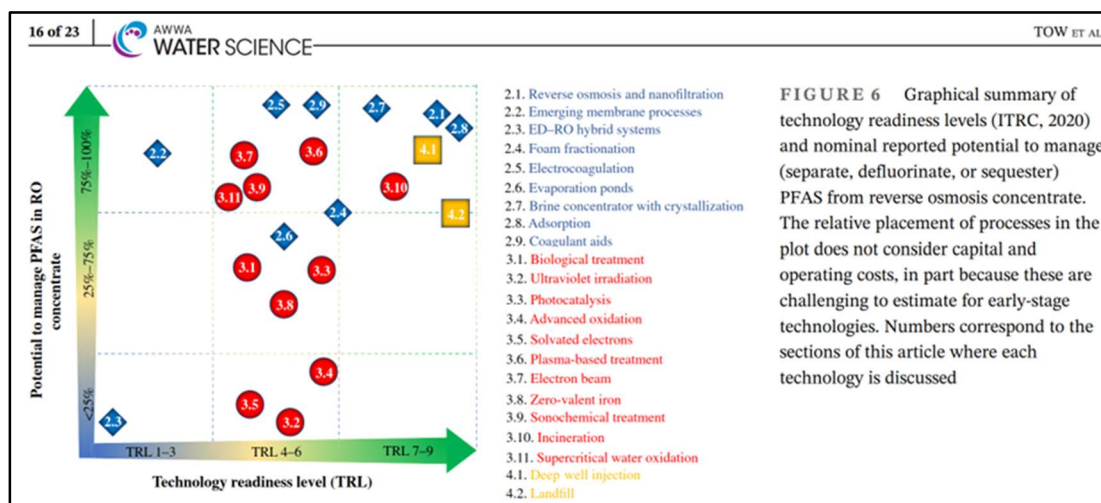


FIGURE 6 Graphical summary of technology readiness levels (ITRC, 2020) and nominal reported potential to manage (separate, defluorinate, or sequester) PFAS from reverse osmosis concentrate. The relative placement of processes in the plot does not consider capital and operating costs, in part because these are challenging to estimate for early-stage technologies. Numbers correspond to the sections of this article where each technology is discussed

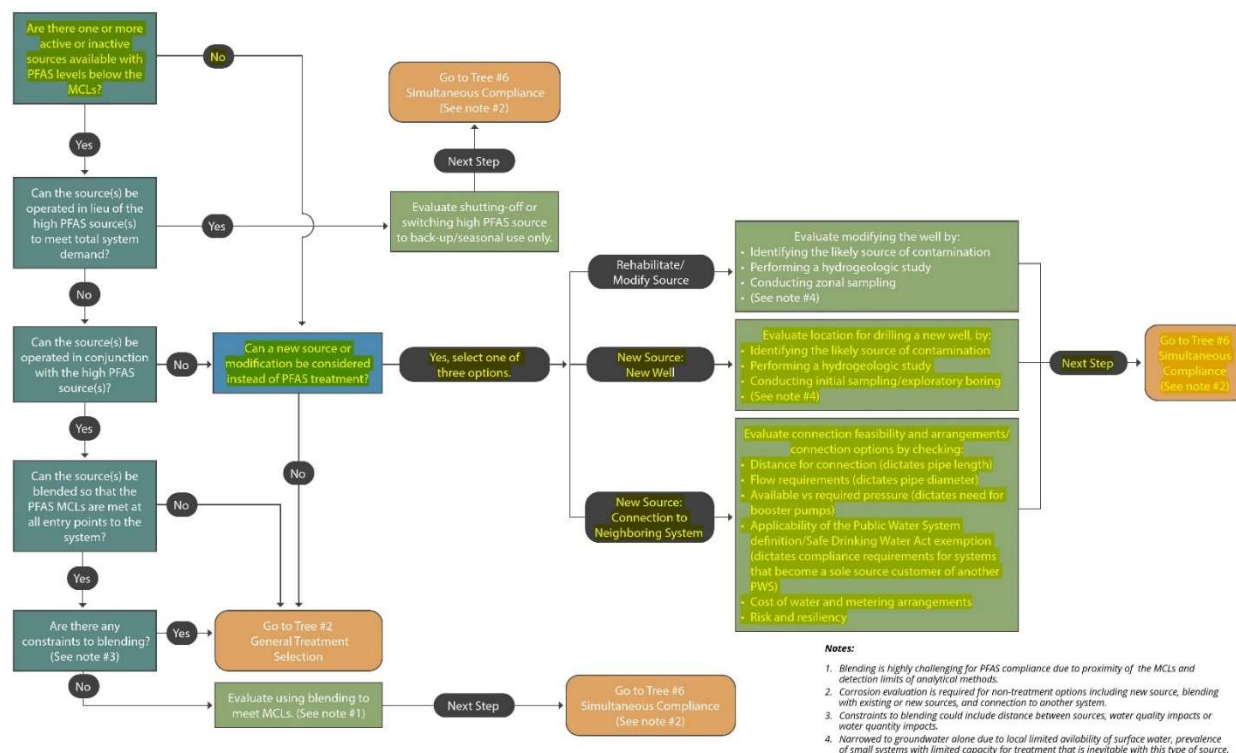
PFAS Compliance Evaluation of Alternatives

Given the daunting number of variables, combination into alternatives was challenging. City staff in a workshop suggested developing a decision tree to assist. Decision trees are useful tools that help focus the decision-making process on specific questions pertaining to the City's water quality and needs and directing the user to the most appropriate solution via a flow diagram. For the City's case, a decision tree exercise was completed and proved highly productive crystallizing the key project questions and simplifying the alternative evaluation. A decision tree published by the Arizona Department of Environmental Quality (ADEQ) was selected due to its preparation by a team of national experts with equally high-level peer input (See Appendix A). The ADEQ decision tree was supplemented with a PFAS disposal/destruction decision tree from the US Department of Defense (DoD), also presented in Appendix A.

One key point from the ADEQ analysis, combined with the City's source water quality and treatment goals supported alternatives development:

*"Although membranes are likely not necessary for the sole purpose of treating PFAS, RO and NF membranes are the most viable treatment alternatives when: (1) PFAS concentrations are high enough to make GAC or IX adsorbent replacement too frequent and cost-prohibitive; (2) PFAS treatment goals are too low to be met by adsorption/exchange technologies; or (3) **treatment goals include removal of non-PFAS anions (arsenic, nitrate, uranium, fluoride), cations (hardness and radium), total dissolved solids, or TOC to below detection levels to minimize disinfection by-products (DBP) formation.**"*

Tree 1: Non-Treatment Selection



PFAS Compliance Evaluation of Alternatives

The decision tree flow paths for the City of Temple were highlighted and supported helped provide clarity for alternatives combination. The key decision boils down to two alternative categories for the City, assuming 90% to 100% PFAS removal:

1. Continue with 0% to 30% total hardness removal
2. Improve hardness removal to 50+% to goal of <150 mg/L

Two alternative paths were created based on the answer to the softening question, narrowing and grouping the PFAS treatment options:

Whiteway WTP

- **Alternative WW-1** – Replace/retrofit lime softening/filtration process with more robust conventional softening process and install four 1 mgd GAC or IX vessels with supporting piping/valving/metering, backwash and regen (for IX only) systems, depending on pilot study results, certain IX may need softening pre-treatment leading to increased potential cost
- **Alternative WW-2** – Retire lime softening, install three 1.5 mgd high-recovery nanofiltration skids with supporting cartridge filtration, antiscalant, cleaning and concentrate treatment

Sunningdale WTP

- **Alternative SD-1** – Continue with no softening process and install two 1 mgd GAC/IX vessels with supporting piping/valving/metering, backwash and regen (for IX only) systems, depending on pilot study results, certain IX may need softening pre-treatment leading to increased potential cost
- **Alternative SD-2** – Retire lime softening, install two 1.0 mgd high-recovery nanofiltration skids with supporting cartridge filtration, antiscalant, cleaning and concentrate treatment

While variations exist, these core alternatives represent a low-cost solution and a more robust one that includes consistent, effective reductions in calcium/magnesium hardness. While consolidating the WTPs to the Whiteway WTP site, this would likely be infeasible for Alternative 1 due to expansion in well pumping/piping, distribution piping, pumping, lime softening and filtration processes to go from a max day capacity of 5.0 mgd to 6.0 mgd. Consolidation would fit better with Alternative 2, where initial nanofiltration skids could be located at Sunningdale WTP and later moved, when needed to the Whiteway WTP to fully displace Sunningdale.

Figure 4-1. Alternative WW-1 Potential Site Layout

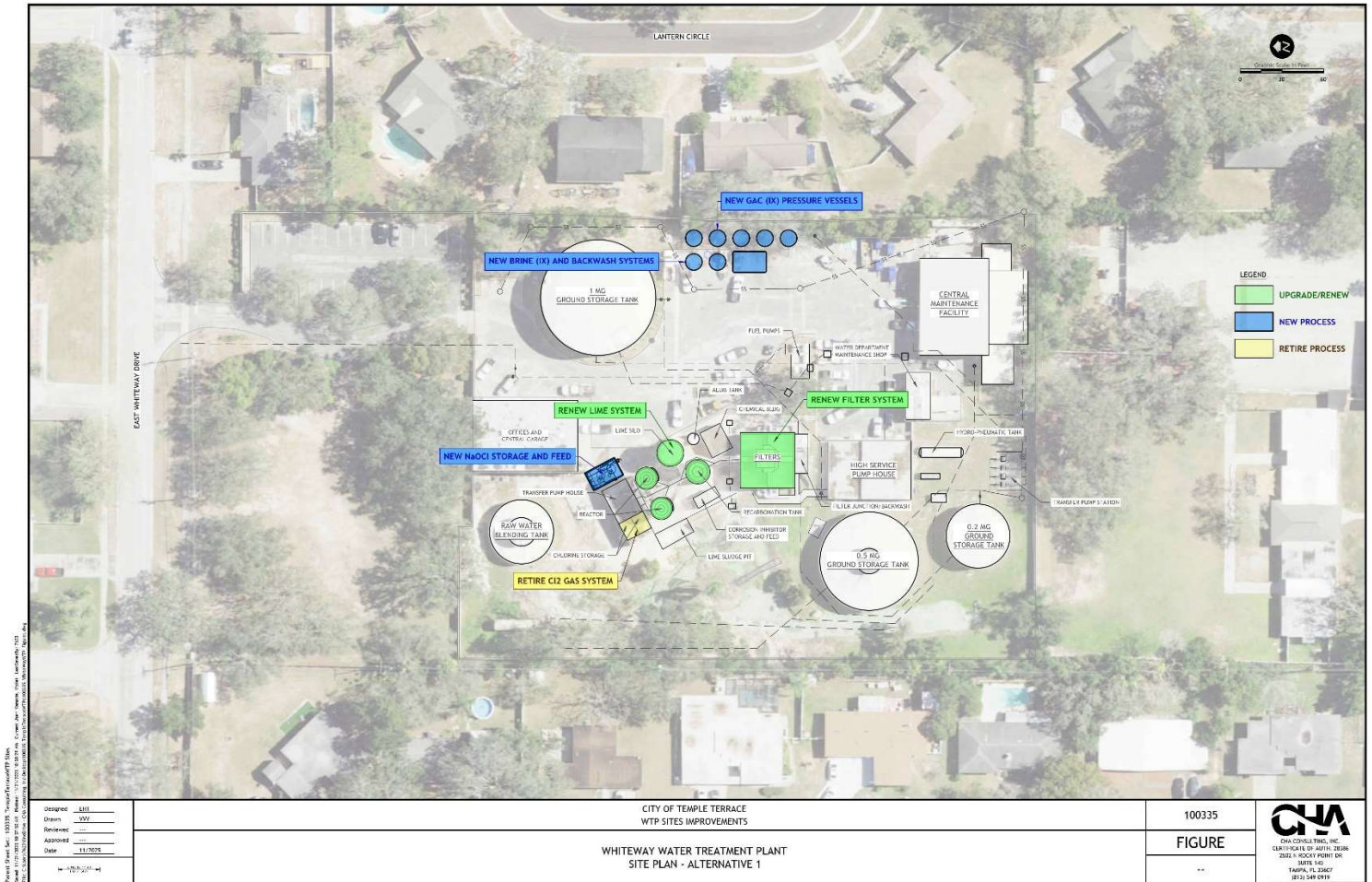


Figure 4-2. Alternative WW-2 Potential Site Layout

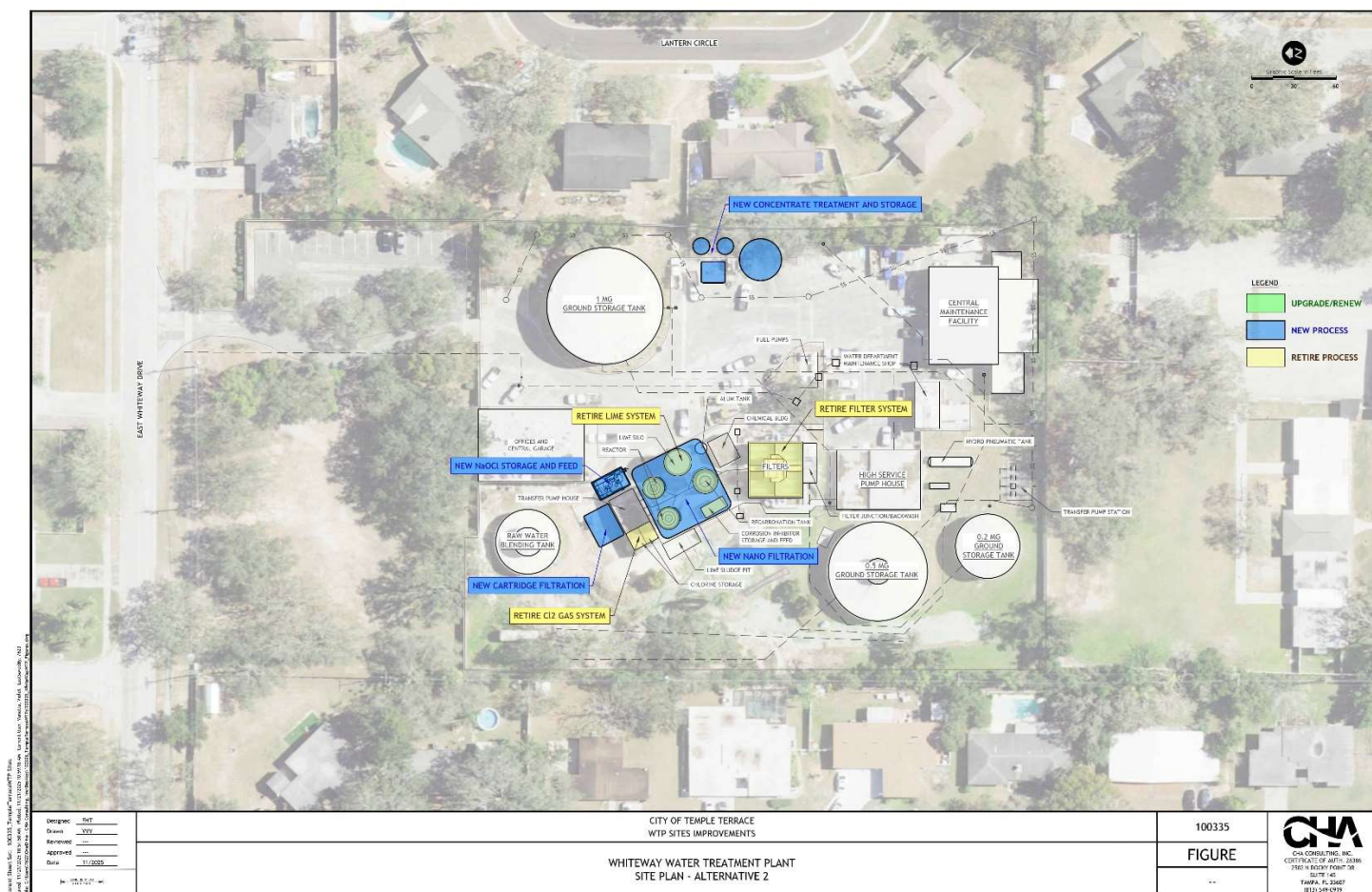


Figure 4-3. Alternative SD-1 Potential Site Layout

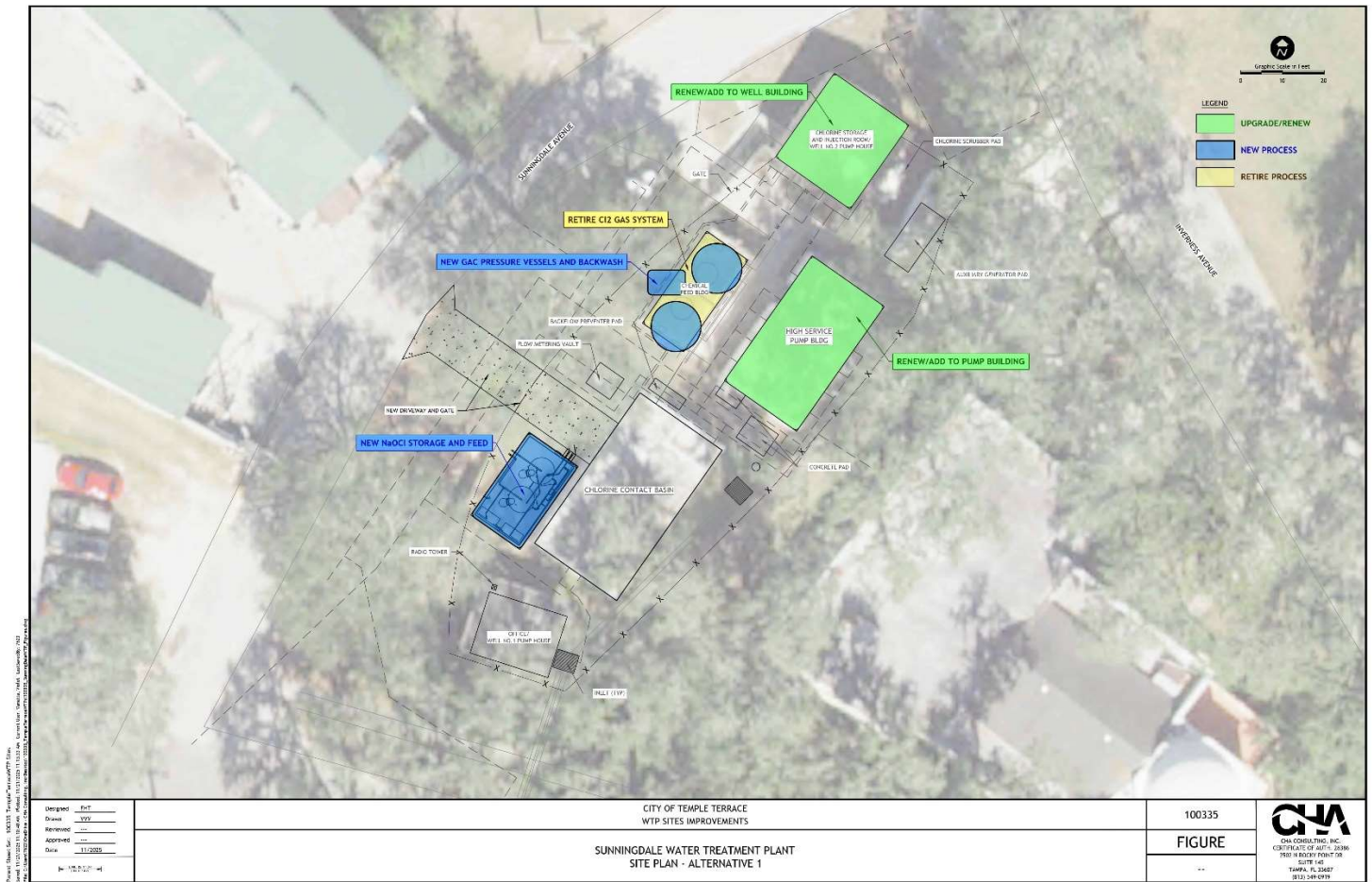


Figure 4-4. Alternative SD-2 Potential Site Layout



4.4 Alternatives Evaluation

4.4.1 Capital Cost Evaluation

Capital costs were estimated for each plant with established treatment alternatives (GAC, IX, NF) as shown in Tables 4-1 and 4-2. Ion exchange costs will be provided in the next draft following pilot conclusions.

Master plan has focused on established technologies (GAC, IX, NF) and presented emerging technologies or solutions that would need more piloting to confirm. For now, NF concentrate GAC treatment was assumed for cost comparison, realizing concentrate management likely will be a more robust process possibly involving PFAS destruction as the concentrate has 6-12 times TOC and PFAS concentrations as the raw water. For the City, testing/piloting will be required to confirm applicability under a separate implementation phase.

Also, note that costs for deep well injection will be developed and presented in the next master plan draft version. Emerging technologies such as foam fractionation and destruction technologies need to be piloted to confirm applicability, develop design criteria, and costs in a future, preliminary design phase.

Table 4-1. Whiteway WTP Alternative Cost Breakdown

1. Whiteway GAC Full Flow Treatment Train						
Capital Construction Costs						
Project/Item	Unit	Quantity	Unit Price	Installation	Total Unit Price	Total Costs
<i>GAC Contactors and Transfer Pump Improvements</i>						
1.1 MGD Capacity Steel Pressure Vessel	EA	4	\$1,400,000	\$150,000	\$1,550,000	\$6,200,000
Backwash System	LS	1	\$400,000	\$100,000	\$500,000	\$500,000
Transfer Pump Station Head Improvements	LS	1	\$400,000	\$140,000	\$540,000	\$540,000
GAC Connection Piping, Valving, Metering	LS	1	\$400,000	\$200,000	\$600,000	\$600,000
GAC Vessel Access Sitework	SF	8,000	\$12	\$12	\$24	\$192,000
Process/Civil Subtotal						\$8,032,000
Incidental Electrical/Mechanical	% of Process/Civil	10%	\$8,032,000			\$804,000
Construction Subtotal						\$8,836,000
General Conditions	% of const subtotal	10%	\$8,836,000			\$884,000
Contractor Overhead and Profit	% of const subtotal	12%	\$8,836,000			\$1,061,000
Opinion of Probable Construction Cost (PCC):						\$10,781,000
Contingency	% of PCC	25%	\$10,781,000			\$2,696,000
Survey and Engineering Fees	% of PCC	8%	\$10,781,000			\$863,000
Opinion of Probable Construction Cost						\$14,340,000

2. Whiteway IX Full Flow Treatment Train						
Capital Construction Costs						
Project/Item	Unit	Quantity	Unit Price	Installation	Total Unit Price	Total Costs
<i>IX Reactors and Transfer Pump Improvements</i>						
1.5 MGD Capacity IX Steel Pressure Vessels	EA	3	\$1,400,000	\$150,000	\$1,550,000	\$4,650,000
Backwash System/Regen Storage/Delivery System	LS	1	\$800,000	\$400,000	\$1,200,000	\$1,200,000
Well Pump Head Improvements	LS	1	\$400,000	\$140,000	\$540,000	\$540,000
Softening Pre-treatment	LS	0	\$8,000,000	\$2,500,000	\$10,500,000	\$0
IX Connection Piping, Valving, Metering	LS	1	\$500,000	\$200,000	\$700,000	\$700,000
IX Vessel Access Sitework	SF	8,000	\$12	\$12	\$24	\$192,000
Process/Civil Subtotal						\$7,282,000
Incidental Electrical/Mechanical	% of Process/Civil	10%	\$7,282,000			\$729,000
Construction Subtotal						\$8,011,000
General Conditions	% of const subtotal	10%	\$8,011,000			\$802,000
Contractor Overhead and Profit	% of const subtotal	12%	\$8,011,000			\$962,000
Opinion of Probable Construction Cost (PCC):						\$9,775,000
Contingency	% of PCC	25%	\$9,775,000			\$2,444,000
Survey and Engineering Fees	% of PCC	8%	\$9,775,000			\$782,000
Opinion of Probable Construction Cost						\$13,001,000

3. Whiteway NF Treatment Full Train						
Capital Construction Costs						
Project/Item	Unit	Quantity	Unit Price	Installation	Total Unit Price	Total Costs
<i>NF Membrane Skid & Appurtenances</i>						
1.5 MGD Three-Stage NF Skid	EA	3	\$1,500,000	\$200,000	\$1,700,000	\$5,100,000
Cartridge Filtration	LS	1	\$250,000	\$100,000	\$350,000	\$350,000
Acid Cleaning System	LS	1	\$220,000	\$100,000	\$320,000	\$320,000
Transfer Pump Station Head Improvements	LS	1	\$400,000	\$150,000	\$550,000	\$550,000
NF Connection Piping, Valving, Metering	LS	1	\$400,000	\$200,000	\$600,000	\$600,000
NF Building	EA	1	\$800,000	\$250,000	\$1,050,000	\$1,050,000
Concentrate PFAS Treatment-1.0 MGD Invicta	EA	1	\$3,500,000	\$3,000,000	\$6,500,000	\$6,500,000
NF Area Sitework	EA	10,000	\$12	\$12	\$24	\$240,000
Process/Civil Subtotal						\$14,710,000
Incidental Electrical/Mechanical	% of Process/Civil	10%	\$14,710,000			\$1,471,000
Construction Subtotal						\$16,181,000
General Conditions	% of const subtotal	10%	\$16,181,000			\$1,619,000
Contractor Overhead and Profit	% of const subtotal	12%	\$16,181,000			\$1,942,000
Opinion of Probable Construction Cost (PCC):						\$19,742,000
Contingency	% of PCC	25%	\$19,742,000			\$4,936,000
Survey and Engineering Fees	% of PCC	8%	\$19,742,000			\$1,580,000
Opinion of Probable Construction Cost						\$26,258,000

Table 4-2. Sunningdale WTP Alternative Cost Breakdown

4. Sunningdale GAC Full Flow Treatment Train						
Capital Construction Costs						
Project/Item	Unit	Quantity	Unit Price	Installation	Total Unit Price	Total Costs
<i>GAC Contactors and Transfer Pump Improvements</i>						
1.1 MGD Capacity GAC Steel Pressure Vessels	EA	2	\$1,400,000	\$150,000	\$1,550,000	\$3,100,000
Backwash System	LS	1	\$220,000	\$100,000	\$320,000	\$320,000
Well Pump Head Improvements	LS	1	\$400,000	\$140,000	\$540,000	\$540,000
GAC Connection Piping, Valving, Metering	LS	1	\$200,000	\$140,000	\$340,000	\$340,000
GAC Vessel Access Sitework	SF	4,000	\$12	\$12	\$24	\$96,000
Process/Civil Subtotal						\$4,396,000
Incidental Electrical/Mechanical	% of Process/Civil	10%	\$4,396,000			\$440,000
Construction Subtotal						\$4,836,000
General Conditions	% of const subtotal	10%	\$4,836,000			\$484,000
Contractor Overhead and Profit	% of const subtotal	12%	\$4,836,000			\$581,000
Opinion of Probable Construction Cost (PCC):						\$5,901,000
Contingency	% of PCC	25%	\$5,901,000			\$1,476,000
Survey and Engineering Fees	% of PCC	8%	\$5,901,000			\$473,000
Opinion of Probable Construction Cost						\$7,850,000

5. Sunningdale IX Full Flow Treatment Train						
Capital Construction Costs						
Project/Item	Unit	Quantity	Unit Price	Installation	Total Unit Price	Total Costs
<i>IX Reactors and Transfer Pump Improvements</i>						
1.1 MGD Capacity IX Steel Pressure Vessels	EA	2	\$1,200,000	\$150,000	\$1,350,000	\$2,700,000
Backwash System/Regen Storage/Delivery System	LS	1	\$400,000	\$100,000	\$500,000	\$500,000
Well Pump Head Improvements	LS	1	\$400,000	\$140,000	\$540,000	\$540,000
Softening Pre-treatment	LS	0	\$4,000,000	\$2,000,000	\$6,000,000	\$0
IX Connection Piping, Valving, Metering	LS	1	\$250,000	\$150,000	\$400,000	\$400,000
IX Vessel Access Sitework	SF	4,000	\$12	\$12	\$24	\$96,000
Process/Civil Subtotal						\$4,236,000
Incidental Electrical/Mechanical	% of Process/Civil	10%	\$4,236,000			\$424,000
Construction Subtotal						\$4,660,000
General Conditions	% of const subtotal	10%	\$4,660,000			\$466,000
Contractor Overhead and Profit	% of const subtotal	12%	\$4,660,000			\$560,000
Opinion of Probable Construction Cost (PCC):						\$5,686,000
Contingency	% of PCC	25%	\$5,686,000			\$1,422,000
Survey and Engineering Fees	% of PCC	8%	\$5,686,000			\$455,000
Opinion of Probable Construction Cost						\$7,563,000

6. Sunningdale NF Treatment Full Train						
Capital Construction Costs						
Project/Item	Unit	Quantity	Unit Price	Installation	Total Unit Price	Total Costs
<i>NF Membrane Skid & Appurtenances</i>						
1.1 MGD High Recovery NF Skid	EA	2	\$1,100,000	\$200,000	\$1,300,000	\$2,600,000
Cartridge Filtration	LS	1	\$200,000	\$80,000	\$280,000	\$280,000
Acid Cleaning System	LS	1	\$100,000	\$100,000	\$200,000	\$200,000
Well Pump Head Improvements	LS	1	\$400,000	\$150,000	\$550,000	\$550,000
NF Connection Piping, Valving, Metering	LS	1	\$180,000	\$140,000	\$320,000	\$320,000
NF Enclosure	EA	1	\$240,000	\$100,000	\$340,000	\$340,000
Concentrate PFAS Treatment-0.3 MGD In-vic-ta	EA	1	\$2,000,000	\$1,500,000	\$3,500,000	\$3,500,000
NF Area Sitework	EA	4,000	\$12	\$12	\$24	\$96,000
Process/Civil Subtotal						\$7,886,000
Incidental Electrical/Mechanical	% of Process/Civil	10%	\$7,886,000			\$788,600
Construction Subtotal						\$8,674,600
General Conditions	% of const subtotal	10%	\$8,674,600			\$868,000
Contractor Overhead and Profit	% of const subtotal	12%	\$8,674,600			\$1,041,000
Opinion of Probable Construction Cost (PCC):						\$10,583,600
Contingency	% of PCC	25%	\$10,583,600			\$2,646,000
Survey and Engineering Fees	% of PCC	8%	\$10,583,600			\$847,000
Opinion of Probable Construction Cost						\$14,076,600

4.4.2 Life Cycle Cost Evaluation

The alternative evaluation compared alternatives on life cycle costs and non-cost factors including those that citizens provided in the PFAS public meeting. Alternatives evaluation is ongoing and will incorporate pilot results to assist with capital and operating costs. Based on knowledge in hand including decision support tools, recent project costs and opinion estimates, the following costs are provided as draft.

Table 4-3. WTP Process Life Cycle Cost Evaluation

Cost Category	WW-1 Rehab Lime/Filters Add GAC or IX*	WW-2 Retire Lime/Filters Add Nanofiltration**	SD-1 Continue No Softening Add GAC or IX*	SD-2 Add Nanofiltration**
PFAS MDD Treatment Capacity	4.4 mgd	4.5 mgd	2.2 mgd	2.2 mgd
WTP ADD	3.0 mgd	3.0 mgd	1.0 mgd	1.0 mgd
Capital Cost	\$16.7M (GAC) \$13.7M No lime \$12.4M (IX)	\$26.3M	\$7.5M (GAC) \$7.2M (IX)	\$14.1M
Annual Operational Cost	\$1.8M/Yr \$1.2M no lime \$1.7M/Yr (IX)	\$1.0 M/Yr	\$0.5 M/Yr-GAC \$0.5M/Yr-IX	\$0.6 M/Yr
Present Value	\$47.8M (GAC) \$41.8M (IX)	\$43.6M	\$16.1M (GAC) \$15.8M (IX)	\$24.5M
Equivalent Annual Cost (\$/Yr)	\$2.8M/Yr (GAC) \$2.4M/Yr (IX)	\$2.5M/Yr	\$0.9M/Yr (GAC) \$0.9M/Yr (IX)	\$1.4M/Yr
Equivalent Annual Cost (\$/kGal at 4.0 mgd ADD)	\$1.72/kGal (GAC) \$1.24 no lime \$1.50/kGal (IX)	\$1.53/kGal	\$1.16/kGal (GAC) \$1.14/kGal (IX)	\$1.76/ kGal

ASSUMPTIONS:

*IX assumes no softening based on preliminary pilot results. If softening is required, costs will have to be revised using cation IX as pre-treatment to PFAS anion IX.

** Assumes Invicta Foam Fractionation/PhotoCatalytic Destruction for treatment of concentrate laden

PFAS Compliance Evaluation of Alternatives

PFAS, Deep well injection costs to be included in the next version of Masterplan

- Capital costs include furnish and install equipment and non-cost factors including 25% contingency
- Present values assume 30-year life with 4% inflation
- Does not include other WTP major R&R to existing equipment which is common to all alternatives

4.4.3 Non-Cost Factors

The non-cost factors boil down to providing the City's customers with high-quality potable water that they can feel proud of and safe to drink. Pros and cons of the two alternatives categories are provided in the table below.

Table 4-4. WTP Process Non-Cost Factors

Cat.	WW-1 Rehab Lime/Filters Add GAC or IX	WW-2 Retire Lime/Filters Add Nanofiltration	SD-1 Continue No Softening Add GAC or IX	SD-2 Add Nanofiltration
Pros	• Lower cost option • 90-100% PFAS removal • No liquid PFAS waste stream • GAC/IX can be re-generated • Finished water would comply with federal regulations including PFAS • Proven in Florida, proving in Temple Terrace pilot	• Cost competitive with Alt. WW-1 • 90-100% PFAS removal • One process concentrates hardness and PFAS • Highly proven in similar FL groundwaters • Compact process • Liquid PFAS waste can be further concentrated and destructed	• Lower cost option • 90-100% PFAS removal • No liquid PFAS waste stream • GAC/IX can be re-generated • Finished water would comply with federal regulations including PFAS • Proven in Florida, proving in Temple Terrace pilot	• Cost competitive with Alt. SD-1 • 90-100% PFAS removal • One process concentrates hardness and PFAS • Highly proven in similar FL groundwaters • Compact process • Liquid PFAS waste can be further concentrated and destructed
Cons	• Lime softening still leaves water in "very hard" ranking • Pouring capital into a lime softening process that has not operated consistently • Lime softening does not meet goals to achieve reasonable hardness • High O&M, lime handling issues • GAC disposal may have RCRA and hazardous waste categorizations	• PFAS/hardness concentrate to treat/dispose of • 90-100% PFAS removal • Higher energy consumption, tho NF is low pressure • Additional treatment components/higher cost to process liquid PFAS waste stream	• Finished water still in "very hard" ranking • 90-100% PFAS removal • GAC disposal may have RCRA and hazardous waste categorizations • Site constraints	• PFAS/hardness concentrate to treat/dispose of • 90-100% PFAS removal • Higher energy consumption, tho NF is low pressure • Additional treatment components/higher cost to process liquid PFAS waste stream • Site constraints

4.5 Alternatives Evaluation Conclusions

Multiple categories of alternatives are available to improve finished potable water quality and comply with 2031-2 PFAS regulations. The available alternatives include multiple dimensions of system planning, including facility location, source water development, treatment process enhancements, and residuals management. Conclusions from the evaluation are summarized by alternative component as follows:

Supply Sources

1. Existing wellfields are productive and produce a water conducive to GAC a nanofiltration treatment with low turbidity, hydrogen sulfide and total organic carbon.
2. Exploring a new well/wellfield may be beneficial and may also create need for additional treatment processes including hydrogen sulfide and total organic carbon removal.

Treatment Locations

3. Space is an issue at the Sunningdale WTP site, and the City has indicated that acquiring more land is not a feasible option and Sunningdale does not currently have any facilities for removing hardness.
4. Retiring Sunningdale WTP and consolidating to Whiteway WTP is feasible, but costly with Whiteway requiring permitted capacity expansion from 5.0 to 6.0 MGD, as well as wellfield pump and transmission modifications and finished water distribution improvements adding several million dollars to the cost.
5. An alternative way to handle Sunningdale is to locate PFAS/hardness removal skids that could be relocated to Whiteway WTP when the City is ready and has funds to consolidate.

Softening Technologies

6. Lime softening is fading from water treatment industry favor due to its large footprint, high chemical usage, difficult chemical handling and solids disposal issues. Many of the softening treatment plants on the east and west coast of Florida have been replaced by membrane (nanofiltration) softening systems.

PFAS Adsorption

7. GAC and Fluorosorb are proven PFAS adsorption processes and are testing in the City's ongoing pilot.

PFAS Concentration

8. Ion exchange, NF/RO, foam fractionation are proven PFAS concentration processes and are being tested and considered by the City. Foam fractionation is typically a secondary concentration process to treat membrane concentrate or high PFAS concentration source waters.

PFAS Compliance Evaluation of Alternatives

PFAS Destruction

9. High-temp incineration, plasma excitation, UV photolytic reduction, sonolytic and electrochemical oxidations have shown promise in PFAS destruction. The Invictus treatment process has a 1 mgd industrial facility operating in Cary, NC, Komline-Harn is offering an integrated PFAS concentration and destruction system, and the City is considering similar processes to handle liquid PFAS/hardness waste streams in the identified alternatives.

Cost Factors

10. At Whiteway, the lower cost softening option will be to keep the existing lime softening reactors in place. The plant can then be retrofitted with GAC or Ion Exchange vessels to treat up to 4 MGD of flow (depending on which media performs better in the pilot study). The \$3M to \$4M cost estimate to rehabilitate the lime, filtration and recarbonation system makes the GAC-Lime rehab cost relatively equal with the nanofiltration option.
11. GAC could be used to treat nanofiltration concentrate; the GAC vessels would be smaller and fewer; however, the annual GAC replacement cost would be similar to full GAC treatment without nanofiltration.

Non-Cost Factors

12. Nanofiltration accomplishes the City's treatment goals in one single process, eliminating the need for the lime softening process and far outperforming in softening capabilities.
13. There are temporary versions of GAC, IX and nanofiltration available to use in the interim until PFAS permanent facilities are constructed and operating and \$1+M/year to rent the equipment and replace media, etc.

5.0 PFAS COMPLIANCE ALTERNATIVE RECOMMENDATIONS

Based on the evaluation of treatment performance, operations and maintenance requirements, capital cost, and other considerations discussed, GAC, IX and NF alternatives are technically feasible options for PFAS treatment. All three systems are capable of achieving compliance with the EPA drinking water standards for long-chain PFAS compounds, including PFOA and PFOS. Based on the existing applications and initial bench and pilot-scale testing results, NF is the preferred technology due to the multi-contaminant removal required (PFAS + hardness), GAC and IX limitations on regeneration frequencies and GAC and IX limitations on removal of the short chain PFAS.

Before the final decision is made to proceed to a full-scale design, additional engineering evaluating NF maximum recovery rates and concentrate management is recommended. It is also recommended that the City continue monitoring the PFAS levels in the wells and analyze if there is a trend or increase.

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APPENDIX C

Funding Strategy



To: City of Temple Terrace, c/o CHA Consulting, Inc.
From: Lawrence “Lee” Hale, Assoc. DBIA, PE
Date: February 1, 2026
Topic: Water Treatment Facility Funding Opportunities/Strategies DRAFT

Project Background

The City of Temple Terrace is undertaking a comprehensive program to upgrade its drinking water treatment facilities to address per- and polyfluoroalkyl substances (PFAS) and to maintain compliance with newly finalized U.S. Environmental Protection Agency (EPA) drinking water standards. PFAS have been detected in the City’s groundwater supply at concentrations exceeding EPA Maximum Contaminant Levels, requiring treatment improvements at the Whiteway and Sunningdale Water Treatment Plants. The City is advancing completion of its Water Treatment Facilities Master Plan and has facilitated pilot testing, led by CHA, of granular activated carbon (GAC) and ion exchange (IX) technologies to identify the most effective and sustainable PFAS treatment solution. These improvements are necessary to protect public health, ensure long-term regulatory compliance, and maintain reliable potable water service for approximately 33,000 residents.

The total estimated cost for PFAS treatment improvements, associated process upgrades, and supporting infrastructure is approximately \$125 million, including roughly \$88 million at the Whiteway WTP and \$37 million at the Sunningdale WTP over the first 5-years, with additional costs for pilot testing, design, and residuals management. Due to the magnitude of these capital investments and the City’s limited rate-based financial capacity, external funding assistance is essential to implement the required improvements without placing an undue burden on customers. As a result, Hale Innovation services were provided to research appropriate funding opportunities.

The information reviewed was drawn from the November 2025 draft of the Water Treatment Facilities Master Plan Report compiled by CHA Consulting, Inc. Additional information reviewed includes the PFAS Treatment Pilot Plan provided by CHA as well. The FY 2023-24 Capital Requests Summary was also reviewed.

Executive Summary

Funding for PFAS related treatment projects is severely limited with the BIL and IIJA Funding mostly expiring for FY2026. Therefore, the primary objectives considered for the City are outlined below. Three programmatic approaches are outlined. Utilizing these approaches will position the City to best capitalize on funding currently available:

1. Extend the project to 7-years and utilize DWSRF funds.
2. Create a comprehensive lobbying approach for Legislative Appropriations.
3. Consider a CMAR delivery method and continue to fund design out of pocket to ensure shovel ready project elements and to have accurate costs estimates from the contract.
4. There may be potential for minor funding through emergency or hazard mitigation grants. Consider that with the production of plans and document storm impacts meticulously.

Strategic Funding Roadmap

The Bipartisan Infrastructure Law (BIL) and the Infrastructure Investment and Jobs Act (IIJA) passed funding in 2021 for over \$50B for the State Revolving Fund at the federal level. The primary issue with this funding is that it expired during the 2025 pursuit schedule, which provides funding for the FY2026. While not formal, through communication with FDEP and other SRF contacts, the “last year of IIJA Emerging Contaminants is not known.” State Revolving Fund Emerging Contaminants funding (SRF EC) provided 100% loan forgiveness and represents the best opportunity for non-match required funding. Pursuing regular FDEP SRF funding is the best way to be prepared to pursue this funding. Additionally, the regular SRF funding has an opportunity to obtain principal forgiveness from the state.



Using the DW Master Project Cost Worksheet, the City should be able to get 20% principal forgiveness for DWSRF. Verify that the Median Household Income for Temple Terrace is \$65,756 and the State of Florida Median Household Income is \$71,711. The formula for DWSRF Principal Forgiveness (PF) is as follows:

- $$PF\% = 1760/9 - 160x(MHI/SMHI) - Px(7/4500) = 195.56 - 146.71 - 51.02 = -2.17$$

Since that number is not above 20%, the City would be applying for the minimum 20% forgiveness. The City would only get 20% priority scoring after all disadvantaged communities have received their allotment of forgiveness. While not guaranteed, this is realistically the only forgivable/grant money available outside of appropriations.

PFAS above the MCL should count as a weighted score of 600. PFAS is not considered an Acute Public Health Risk or Potential Acute Public Health Risk, which are the 800- and 700-point scoring criteria. Therefore, the Chronic Public Health Risk is the highest available scoring criteria. An additional 100 points may be awarded if water conservation is included in the project.

Based on the first 5 years of the CIP from CHA, the total value pursued should be \$125M. That total may be broken down through FDEP with annual requests for funding based on the actual CIP amounts. A 20% forgiveness loan would break down to \$25M in principal forgiveness with the rest of the money borrowed at a low interest rate, which is typically far lower than interest rates available in the private market. It is important to note that principal forgiveness is only available for construction. The Facilities Plan and design would not be eligible for principal forgiveness.

There are several reasons to rely on DWSRF funding. First, numerous state grant programs have minor scoring criteria that state if the state has spent money on the project, the scoring for the grant ranking is increased. If a future grant program is made available, then having minor financing through DWSRF would better position the City for funding. Additionally, having planning and design documents ready would make this project eligible for funding through legislative appropriations. For legislative appropriations, it is recommended that the City utilize lobbying services to pursue appropriations. A multi-year approach, complete with a rate study comparison of rates making the argument that upgrades make water bills unaffordable is another route towards helping appropriations and DWSRF scoring.

DWSRF has a funding cap of approximately \$20M per year. It is recommended to transition the project into a 6- to 7-year program instead of loading the improvements over 5 years. One possibility would be to deliver the project as a CMAR delivery method. This would allow for rapid construction and shovel ready construction phases. Having a contractor working simultaneously with the design team would also allow for more accurate cost estimates to go along with funding requests.

Another loan option could be using the EPA Water Infrastructure Finance and Innovation Act (WIFIA) funding. However, at \$125M over 5 years, WIFIA has two major pitfalls. First, WIFIA funding may only cover up to 49% of the project, leaving the City to self-fund \$62.5M. Secondly, the fees to pursue WIFIA typically run \$300,000-\$500,000 just to apply because of application fees and required plans. For a third point, WIFIA interest rates are typically considerably higher than SRF. Therefore, WIFIA is not considered a preferred approach.

Using an SRF funding strategy also positions the City for emergency response money. However, to obtain emergency response money such as FDEM HMGP funding, DWSRF SAHM funding, or Florida Commerce CDBG-DR funding, storm impacts, water outages, and other items must be well documented. Drops in water pressure and boil water notices should be documented for duration and should outline the causes in great detail to be considered for such funding. During the DWSRF SAHM funding for hurricanes Milton and Helene. Potential items that could serve as emergency response items at a water include the CIP items from CHA's master plan such as water supply wells, transfer pumps to ground storage tanks, and high service pumps, provided the plan for these items would decrease



the likelihood of failure during a storm event. These items are not a great fit, could provide the potential for several hundred thousand dollars in offset costs should a natural disaster occur.

Programs Researched

The following grant programs were considered but are not considered aligned with this project. A short description of the reason for not considering the program is attached. This should facilitate an opportunity to consider modifications or alternatives that would make the program eligible. For example, if new wells are needed and brackish water is utilized as the source, Alternative Water Supply grants may now be an option.

1. **FDEP Clean Water State Revolving Fund (CWSRF)**
Not applicable because this project addresses drinking water treatment, not wastewater, stormwater, or surface water quality improvements.
2. **FDEP Water Quality Improvement Grants (WQIG)**
Primarily focused on nutrient (nitrogen/phosphorus) reduction; PFAS drinking water treatment is outside program intent.
3. **FDEP Nonpoint Source Management (Section 319) Grants**
Targets nonpoint source pollution in surface waters, not groundwater-based potable water treatment.
4. **FDEP Springs Restoration Grants**
Limited to projects that reduce nutrient impacts to Outstanding Florida Springs; PFAS treatment at municipal WTPs is not eligible.
5. **FDEP Alternative Water Supply (AWS) Grants**
Intended for new water supply development (reuse, desalination, brackish water), not treatment of existing potable groundwater sources.
6. **FDEP Water Protection and Sustainability Program (WPSP) Grants**
Focused on watershed protection and conservation initiatives rather than regulatory drinking water treatment compliance.
7. **USEPA Clean Water SRF Emerging Contaminants (CWSRF-EC)**
Limited to wastewater and stormwater PFAS; cannot be used for drinking water treatment plants.
8. **USEPA Brownfields Grants**
Restricted to site cleanup and redevelopment; drinking water infrastructure is explicitly excluded.
9. **USEPA Superfund / CERCLA Programs**
Applicable only to contaminated site remediation, not municipal drinking water treatment system upgrades.
10. **USEPA Nonpoint Source (Section 319) Grants**
Surface water focused; does not fund drinking water treatment facilities.
11. **USEPA Lead Reduction in Drinking Water Grants (Schools/Childcare)**
Program scope limited to premise plumbing and fixtures, not centralized WTP treatment.
12. **USEPA Tribal Drinking Water Infrastructure Grants**
Eligibility restricted to federally recognized tribes.
13. **USEPA Drinking Water Resilience / Emergency Preparedness Grants**
Focused on climate resilience, natural disasters, and system hardening, not contaminant-specific treatment compliance.
14. **USEPA Technical Assistance Programs (WaterTA, TEC)**
Provide planning and advisory support only; no construction or capital funding.
15. **Florida Commerce CDBG Programs**
Temple Terrace has a low-to-moderate income base of 46%. This does not meet the funding criteria for primary eligibility of CDBG. Secondary eligibility would be centered around an urgent need criteria. The only pot of CDBG funding that would be of value for this project would be CDBG-DR. Water quality is not a primary scoring factor, so minor items such as emergency generators and other water resilience options are potentially available.



16. FDEM Hazard Mitigation Grant Programs

This program includes minor items, such as emergency generators, which are not included in the proposed CIP.

Alternative Options

USEPA has launched the PFAS OUT initiative. While not a direct line to funding, programs like this collect data and start to create and communicate funding shortfalls nationally to legislative bodies. This memo recommends communicating this memo and the master plan created by CHA to PFAS OUT representatives for potential funding alternatives that don't currently exist. Additionally in September of 2025, USEPA discussed additional liability and passive receiver issues. Participating in these conversations may result in legal rewards from the pollution agreements at the state and federal levels.

For fully fundable projects, due to the lack of grant programs currently available, State of Florida Legislative Appropriations are potentially the largest pot of available money. The largest legislatively approved appropriation was \$46M for the Indiantown Reverse Osmosis Water Treatment Plant., although that funding was later amended to approximately \$9.3M for the plant. A comprehensive lobbying pursuit of funding is the most likely. Highlighting documents, like this funding plan, to demonstrate lack of funding options for the City, is critical to a successful appropriations process.

Summary

In summary, the City of Temple Terrace faces a significant and unavoidable need to invest in drinking water treatment improvements to address PFAS contamination and comply with newly established EPA regulations. With an estimated capital cost exceeding \$125 million over the initial five-year implementation period, these improvements represent a substantial financial challenge that cannot reasonably be addressed through rate-based funding alone without imposing undue burden on customers. The analysis performed confirms that Florida Drinking Water State Revolving Fund (DWSRF) financing—particularly Emerging Contaminants funding and base SRF loans with limited principal forgiveness—represents the most viable and defensible funding strategy currently available to the City.

Accordingly, it is recommended that the City pursue a phased DWSRF funding approach aligned with the adopted Capital Improvement Program, while advancing planning and design activities to maintain project readiness for future funding opportunities. Maintaining eligibility and participation in SRF financing will also position the City favorably for potential legislative appropriations or future grant programs should additional federal or state funding become available. This proactive, multi-year funding strategy provides the best opportunity to advance critical PFAS treatment improvements while protecting public health and preserving long-term financial sustainability for the City's water utility.

APPENDIX D

Electrical Asset Inventory

Asset Inventory - Whiteway WTP

This worksheet provides a template for the user to record attribute information collected during the inventory and condition assessment process. This template can be used as the inventory or a tool to help load information into an asset management software system.

Select level 4 (process), level 5 (group) and Asset Classification from drop-downs. Service life will automatically populate based on classification chosen. If you enter a new classification, enter service life in column J. The user may not have every attribute listed in the template or some attributes may not apply. The purpose is to populate as much relevant information as possible for each asset and estimate values for attributes that are required to complete future tasks. Name plate data on mechanical equipment will often provide many of the important attributes, such as manufacturer, size, serial number, model number, horsepower, voltage, etc. User may add attributes if necessary.

Asset ID	Asset Description	Physical Location	Elevation (feet)	Level 4 (Process)	Level 5 (Group)	Installation Year	Replacement Cost (Current year)	Status (operating, decommissioned)	Asset Classification	Service Life	Condition Assessment Classification	Quantity	Notes	Manufacturer	Model	Vendor	Type	Horsepower	Rating	Speed (RPM)	Voltage	Size
1	Main Distribution Panel	CMU Building, DPW Offices & Shop (Electrical Closet)	5,400.00	Electrical Distribution	Electrical Equipment	1981	\$10,400	OPERATING	Panel	20	Electrical Switchboard	1		Citler Hammer			3 PH		200 A		480/277V	
2	Dry Type Transformer	CMU Building, DPW Offices & Shop (Electrical Closet)	9,000.00	Electrical Distribution	Electrical Equipment	1981		OPERATING	Transformer	20	Electrical / Instrumentation Eq	1		Square D			3 PH		75KVA		480-120/208V	
3	Panel C	CMU Building, DPW Offices & Shop (Electrical Closet)	4,400.00	Electrical Distribution	Electrical Equipment	1981		OPERATING	Panel	20	Electrical Switchboard	1		Gould			3 PH		100A		480/277V	
4	Panel A1	CMU Building, DPW Offices & Shop (Electrical Closet)	7,100.00	Electrical Distribution	Electrical Equipment	1981		OPERATING	Panel	20	Electrical Switchboard	1							225A		120/208V	
5	Panel A2	CMU Building, DPW Offices & Shop (Electrical Closet)	7,100.00	Electrical Distribution	Electrical Equipment	1981		OPERATING	Panel	20	Electrical Switchboard	1							225A		120/208	
6	Panel Board	CMU Building, DPW Offices & Shop (Waiting Area)		Electrical Distribution	Electrical Equipment	1981		OPERATING	Panel	20	Electrical Switchboard	1	20 Spaces. Located at waiting area	Westignouse					125A			
7	Safety Switch (By Ice Maker)	CMU Building, DPW Offices & Shop (Waiting Area)	800.00	Electrical Distribution	Electrical Equipment	1981		OPERATING	Switch	20	Electrical / Instrumentation Eq	1		Gould					60A		120/240	
8	Local Control Station	CMU Building, DPW Offices & Shop (Waiting Area)		Electrical Distribution	Electrical Equipment	1981		OPERATING	Switch	20	Electrical / Instrumentation Eq	1		Square D								
9	Safety Switch (By compressor units area)	CMU Building, DPW Offices & Shop (Outdoor Area)	400.00	Electrical Distribution	Electrical Equipment	1981		OPERATING	Switch	20	Electrical / Instrumentation Eq	1		Square D			1 PH		30A		240	
10	Safety Switch (By compressor units area)	CMU Building, DPW Offices & Shop (Outdoor Area)	800.00	Electrical Distribution	Electrical Equipment	1981		OPERATING	Switch	20	Electrical / Instrumentation Eq	1		Square D			1 PH		60A		240	
11	Meter Can	CMU Building, DPW Offices & Shop (Outdoor Area)		Electrical Distribution	Electrical Equipment	1981		OPERATING	General Meter	10	Electrical / Instrumentation Eq	1	Located outdoor									
12	Disconnect Switch	CMU Building, DPW Offices & Shop (Outdoor Area)		Electrical Distribution	Electrical Equipment	1981		OPERATING	Switch	20	Electrical / Instrumentation Eq	1	Located outdoor									
13	Load Center (Filter BLDG, Chemical BLDG Lime Silo and Transfer Pumps)	Transfer Pump House		Electrical Distribution	Electrical Equipment	1981		OPERATING	Panel	20	Electrical Switchboard	1					3 PH				480/277	
14	L/V Panel Board	Transfer Pump House	3,500.00	Electrical Distribution	Electrical Equipment	1981		OPERATING	Panel	20	Electrical Switchboard	1		General Electric			1 PH		225A		120/240	
15	Dry Type Transformer	Transfer Pump House	7,500.00	Electrical Distribution	Electrical Equipment	1981		OPERATING	Transformer	20	Electrical / Instrumentation Eq	1					1 PH		25 KVA		480/240-120	
16	Pump Motor	Transfer Pump House		Electrical Distribution	Electrical Equipment	1981		OPERATING				3					3 PH	40			480	
17	Safety Switch (For 7.5HP Pump Motor)	Fluoridation Building	500.00	Electrical Distribution	Electrical Equipment	1981		OPERATING	Switch	20	Electrical / Instrumentation Eq	1									480	
18	Safety Switch (For 0.25HP Pump Motor)	Fluoridation Building		Electrical Distribution	Electrical Equipment	1981		OPERATING	Switch	20	Electrical / Instrumentation Eq	1										
19	Local Control Station (For 0.25HP Pump Motor)	Fluoridation Building		Electrical Distribution	Electrical Equipment	1981		OPERATING	Controller	10	Electrical / Instrumentation Eq	1										
20	Safety Switch	Recarbonation Tank Area	500.00	Electrical Distribution	Electrical Equipment	1981		OPERATING	Switch	20	Electrical / Instrumentation Eq	1					3 PH	20			600	

21	Safaty Switch (For 5 HP Motor)	Lime Silo Tank Area (Top)		Electrical Distribution	Electrical Equipment	1981		OPERATING	Switch	20	Electrical / Instrumentation Eq	1										
22	Safaty Switch	Lime Silo Tank Area (Top)	920.00	Electrical Distribution	Electrical Equipment	1981		OPERATING	Switch	20	Electrical / Instrumentation Eq	1		Square D					60A		600	
23	Local Control Station 1 (For 3HP motor)	Lime Silo Tank Area		Electrical Distribution	Electrical Equipment	1981		OPERATING	Switch	20	Electrical / Instrumentation Eq	1										
24	Local Control Station 2 (For 3HP motor)	Lime Silo Tank Area		Electrical Distribution	Electrical Equipment	1981		OPERATING	Switch	20	Electrical / Instrumentation Eq	1										
25	Pump Motor Control Panel	Lime Silo Tank Area (Outdoor area)	TBD	Electrical Distribution	Electrical Equipment	1981		OPERATING	Panel	20	Electrical Switchboard	1										
26	Low Voltage Panel #29	Lime Silo Tank Area		Electrical Distribution	Electrical Equipment	1981		OPERATING	Panel	20	Electrical Switchboard	1		Syntron								
27	Low Voltage Panel #30	Lime Silo Tank Area		Electrical Distribution	Electrical Equipment	1981		OPERATING	Panel	20	Electrical Switchboard	1		Syntron								
28	Lime Slaker System Control Panel	Lime Silo Tank Area		Electrical Distribution	Electrical Equipment	1981		OPERATING	Panel	20	Electrical Switchboard	1										
29	Slaker System Control Panel 1	Lime Silo Tank Area		Electrical Distribution	Electrical Equipment	1981		OPERATING	Panel	20	Electrical Switchboard	1										
30	Freestanding Control Panel	Filter Tank (Top)	TBD	Electrical Distribution	Electrical Equipment	1981		OPERATING	Panel	20	Electrical Switchboard	1										
31	Vacuum Pump No.1 safety Disconnect Switch	Filter Tank (Top)	500.00	Electrical Distribution	Electrical Equipment	1981		OPERATING	Switch	20	Electrical / Instrumentation Eq	1							30A		600	
32	Vacuum Pump No.2 safety Disconnect Switch	Filter Tank (Top)	500.00	Electrical Distribution	Electrical Equipment	1981		OPERATING	Switch	20	Electrical / Instrumentation Eq	1							30A		600	
33	Cat. Generator and Day Tank	High Service Pump Room	280,000.00	Electrical Equipment	Electrical Equipment	1981		STAND-BY	Electric Generator	25	Generators	1							600KW			
34	ATS	High Service Pump Room	23,000.00	Electrical Equipment	Electrical Equipment	1981		OPERATING	Panel	20	Electrical Switchboard	1		Kohler					600A		480	
35	Panel PP1	High Service Pump Room	9,000.00	Electrical Equipment	Electrical Equipment	1981		OPERATING	Panel	20	Electrical Switchboard	1							600A		480/277	
36	Pump Starters (Pump 4,5 and 6)	High Service Pump Room		Electrical Equipment	Electrical Equipment	1981		OPERATING	Motor Starter	10	Electrical / Instrumentation Eq	1										
37	HOA	High Service Pump Room		Electrical Equipment	Electrical Equipment	1981		OPERATING	Switch	20	Electrical / Instrumentation Eq	1										
38	Equalization Valve Safety Disconnect Switch	High Service Pump Room		Electrical Equipment	Electrical Equipment	1981		OPERATING	Switch	20	Electrical / Instrumentation Eq	1										
39	Panel Board (Pump Motor Starter Center)	High Service Pump Room	12,000.00	Electrical Equipment	Electrical Equipment	1981		OPERATING	Motor Starter	10	Electrical / Instrumentation Eq	1							600A			
40	Pump Controller	High Service Pump Room		Electrical Equipment	Electrical Equipment	1981		OPERATING	Electrical Other	10	Electrical / Instrumentation Eq	1										
41	Safety Disconnect Switch	High Service Pump Room	900.00	Electrical Equipment	Electrical Equipment	1981		OPERATING	Switch	20	Electrical / Instrumentation Eq	1							60A		480	
42	Lighting Panel	High Service Pump Room		Electrical Equipment	Electrical Equipment	1981		OPERATING	Panel	20	Electrical Switchboard	1									120/240	
43	Generator Panel	High Service Pump Room		Electrical Equipment	Electrical Equipment	1981		OPERATING	Panel	20	Electrical Switchboard	1							70A			
44	Lighting Transformer	High Service Pump Room	7,600.00	Electrical Equipment	Electrical Equipment	1981		OPERATING	Transformer	20	Electrical / Instrumentation Eq	1		Acme					25KVA		480/240-120	

45	High Service Pump 1 Time Delay	High Service Pump Room		Electrical Equipment	Electrical Equipment	1981		OPERATING	Switch	20	Electrical / Instrumentation Eq	1										
46	High Service Pump 2 Time Delay	High Service Pump Room		Electrical Equipment	Electrical Equipment	1981		OPERATING	Switch	20	Electrical / Instrumentation Eq	1										
47	Flow Recorder Panel 1	High Service Pump Room		Electrical Equipment	Electrical Equipment	1981		OPERATING	Panel	20	Electrical Switchboard	1										
48	Flow Recorder Panel 2	High Service Pump Room		Electrical Equipment	Electrical Equipment	1981		OPERATING	Panel	20	Electrical Switchboard	1										
49	CP- 1 Transfer Pump Station	High Service Pump Room		Electrical Equipment	Electrical Equipment	1981		OPERATING	Panel	20	Electrical Switchboard	1										
50	Disconnect Switch	Dungeon Building (Outdoor)	8,400.00	Electrical Equipment	Electrical Equipment	1981		OPERATING	Switch	20	Electrical / Instrumentation Eq	1		Square D					600A		480/277	
51	Transfer Room Safety Switch	Dungeon Building (Outdoor)	4,400.00	Electrical Equipment	Electrical Equipment	1981		OPERATING	Switch	20	Electrical / Instrumentation Eq	1							400A		480/277	
52	Offices and Maint. Shop Safety Switch	Dungeon Building (Outdoor)	2,400.00	Electrical Equipment	Electrical Equipment	1981		OPERATING	Switch	20	Electrical / Instrumentation Eq	1		Square D					200A		480/277	
53	HS Room Safaty Switch	Dungeon Building (Outdoor)	4,400.00	Electrical Equipment	Electrical Equipment	1981		OPERATING	Switch	20	Electrical / Instrumentation Eq	1		Square D					400A		480/277	
54	Disconnect Switch (Service to PP1 Panel)	Dungeon Building (Outdoor)	8,400.00	Electrical Equipment	Electrical Equipment	1981		OPERATING	Switch	20	Electrical / Instrumentation Eq	1	Does not have nameplate						600A		480/277	
55	T.E.CO Safety Switch	Dungeon Building (Outdoor)	2,400.00	Electrical Equipment	Electrical Equipment	1981		OPERATING	Switch	20	Electrical / Instrumentation Eq	1							200A		480/277	
56	Wells 4-5 Safety Switch	Dungeon Building (Outdoor)	2,400.00	Electrical Equipment	Electrical Equipment	1981		OPERATING	Switch	20	Electrical / Instrumentation Eq	1							200A		480/277	
57	Safaety Switch	Dungeon Building (Outdoor)		Electrical Equipment	Electrical Equipment	1981		OPERATING	Switch	20	Electrical / Instrumentation Eq	1	Does not have nameplate	Square D								
58	Electrical Panel	Sewer Shop Building		Electrical Equipment	Electrical Equipment	1981		OPERATING	Panel	20	Electrical Switchboard	1	12 Space	Square D								
59	Safaety Switch	Sewer Shop Building		Electrical Equipment	Electrical Equipment	1981		OPERATING	Switch	20	Electrical / Instrumentation Eq	1		Square D					100A			
60	Well 4 Starter	Sewer Shop Building		Electrical Equipment	Electrical Equipment	1981		OPERATING	Motor Starter	10	Electrical / Instrumentation Eq	1		Square D								
61	Well 5 Starter	Sewer Shop Building		Electrical Equipment	Electrical Equipment	1981		OPERATING	Motor Starter	10	Electrical / Instrumentation Eq	1		Square D								
62	Well 5 Safety Switch	Sewer Shop Building	1,500.00	Electrical Equipment	Electrical Equipment	1981		OPERATING	Switch	20	Electrical / Instrumentation Eq	1		Square D					100A		600	
63	Dry Type Transformer	Sewer Shop Building		Electrical Equipment	Electrical Equipment	1981		OPERATING	Transformer	20	Electrical / Instrumentation Eq	3		Square D					1.5KVA			
64	MDP	Sewer Shop Building	5,400.00	Electrical Equipment	Electrical Equipment	1981		OPERATING	Panel	20	Electrical Switchboard	1		Square D					225A			
65	Dry Type Transformer	Sewer Shop Building	7,200.00	Electrical Equipment	Electrical Equipment	1981		OPERATING	Transformer	20	Electrical / Instrumentation Eq	1		Square D			3 PH		45KVA		480/208-120	
66	Panel P	Sewer Shop Building		Electrical Equipment	Electrical Equipment	1981		OPERATING	Panel	20	Electrical Switchboard	1		Square D								
67	Battery Charger	Sewer Shop Building		Electrical Equipment	Electrical Equipment	1981		OPERATING	Panel	20	Electrical Switchboard	1		La Marche	A46-20-24V-A1	La Marche			10A		120	
68	Aux. Battery Charger	Sewer Shop Building		Electrical Equipment	Electrical Equipment	1981		OPERATING	Panel	20	Electrical Switchboard	1		La Marche		Lester Equipment MFG. CO., INC			10A		115	

Asset Inventory - Sunningdale WTP

This worksheet provides a template for the user to record attribute information collected during the inventory and condition assessment process. This template can be used as the inventory or a tool to help load information into an asset management software system.

Select level 4 (process), level 5 (group) and Asset Classification from drop-downs. Service life will automatically populate based on classification chosen. If you enter a new classification, enter service life in column J. The user may not have every attribute listed in the template or some attributes may not apply. The purpose is to populate as much relevant information as possible for each asset and estimate values for attributes that are required to complete future tasks. Name plate data on mechanical equipment will often provide many of the important attributes, such as manufacturer, size, serial number, model number, horsepower, voltage, etc. User may add attributes if necessary.

Asset ID	Asset Description	Physical Location	Elevation (feet)	Level 4 (Process)	Level 5 (Group)	Installation Year	Replacement Cost (Current year)	Status (operating, decommissioned)	Asset Classification	Service Life	Condition Assessment Classification	Quantity	Notes	Manufacturer	Model	Vendor	Type	Horsepower	Rating	Speed (RPM)	Voltage	Size
1	Safety Switch	Chlorinator Building	70.42	Electrical Distribution	Electrical Equipment	1983	\$1,900	OPERATING	Switch	20	Electrical / Instrumentation Eq	1		Square D					200 A		600	
2	LP-3	Chlorinator Building	70.42	Electrical Distribution	Electrical Equipment	1983	\$3,000	OPERATING	Panel	20	Electrical Switchboard	1	12 Space	Square D							120/240	
3	Dry Type Transformer	Chlorinator Building	70.42	Electrical Distribution	Electrical Equipment	1983	\$3,600	OPERATING	Transformer	20	Electrical / Instrumentation Eq	1		Square D					10KVA		480/240-120	
4	Generator	Sunnigdale Site		Electrical Distribution	Electrical Equipment	1983	\$200,000	OPERATING	Electric Generator	25	Generators	1							400KW		480	
5	ATS	Sunnigdale Site		Electrical Distribution	Electrical Equipment	1983	\$25,000	OPERATING	Panel	20	Electrical Switchboard	1							600A		480	
6	Service Cntrance Circuit Breaker	High Service Pump Building	69.00	Electrical Distribution	Electrical Equipment	1983	\$5,000	OPERATING	Circuit Breaker	30	Electrical / Instrumentation Eq	1							600A		480	
7	MCC-2	High Service Pump Building	69.00	Electrical Distribution	Electrical Equipment	1983	TBD	OPERATING	Motor Control Center	35	Electrical / Instrumentation Eq	1	Include starter, 30KVA, 3PH, 480/208-120 V DDT and electrial panel LP2	Square D					600A		480	
8	CP-2	High Service Pump Building	69.00	Electrical Distribution	Electrical Equipment	1983	TBD	OPERATING	Panel	20	Electrical Switchboard	1										
9	Safety Switch	Well No.1 Pump House	62.00	Electrical Distribution	Electrical Equipment	1983	\$2,500	OPERATING	Switch	20	Electrical / Instrumentation Eq	1		Square D								
10	RTU	Well No.1 Pump House	62.00	Electrical Distribution	Electrical Equipment	1983	TBD	OPERATING	Panel	20	Electrical Switchboard	1										

Process	Type	Item	Quantity	Useful Life	Install Date	Rehab Date	Useful Life Remaining	Condition Score	Condition Rating	Likelihood of Failure	Consequence of Failure	Combined Risk Score	Capital Cost	Construction Cost	Total Rebuild Cost	Rehab Cost		2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	SUM
Electrical Distribution	Switch	Safety Switch	1	20	1983	1983	0	Salvage	0	Very High	Very High	Very High	\$ 1,900.00	\$ 950.00	\$ 2,850.00	\$ 95.00		\$ 1,900.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,900.00
Electrical Distribution	Panel	LP-3	1	20	1983	1983	0	Salvage	0	Very High	Med	High	\$ 3,000.00	\$ 1,500.00	\$ 4,500.00	\$ 150.00		\$ 3,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,000.00
Electrical Distribution	Transformer	Dry Type Transformer	1	20	1983	1983	0	Salvage	0	Very High	Med	High	\$ 3,600.00	\$ 1,800.00	\$ 5,400.00	\$ 180.00		\$ 3,600.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,600.00
Electrical Distribution	Electric Generator	Generator	1	25	1983	1983	0	Salvage	0	Very High	Very High	Very High	\$ 350,000.00	\$ 175,000.00	\$ 525,000.00	\$ 14,000.00		\$ 350,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 350,000.00
Electrical Distribution	Panel	ATS	1	20	1983	1983	0	Salvage	0	Very High	Very High	Very High	\$ 25,000.00	\$ 12,500.00	\$ 37,500.00	\$ 1,250.00		\$ 25,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 25,000.00
Electrical Distribution	Circuit Breaker	Service Cntrance Circuit Breaker	1	30	1983	1983	0	Salvage	0	Very High	Med	High	\$ 5,000.00	\$ 2,500.00	\$ 7,500.00	\$ 166.67		\$ 5,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,000.00
Electrical Distribution	Motor Control Center	MCC-2	1	35	1983	1983	0	Salvage	0	Very High	Very High	Very High	\$ 40,000.00	\$ 20,000.00	\$ 60,000.00	\$ 1,142.86		\$ 40,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 40,000.00
Electrical Distribution	Panel	CP-2	1	20	1983	1983	0	Salvage	0	Very High	Med	High	\$ 10,000.00	\$ 5,000.00	\$ 15,000.00	TBD		\$ 10,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 10,000.00
Electrical Distribution	Switch	Safety Switch	1	20	1983	1983	0	Salvage	0	Very High	Very High	Very High	\$ 2,500.00	\$ 1,250.00	\$ 3,750.00	\$ 125.00		\$ 2,500.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,500.00
Electrical Distribution	Panel	RTU	1	20	1983	1983	0	Salvage	0	Very High	Med	High	\$ 20,000.00	\$ 10,000.00	\$ 30,000.00	TBD		\$ 20,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 20,000.00
			Avg											Total	\$ 691,500.00														\$ 461,000.00

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Item Cover Page

City Council Item Report

Date: September 15, 2026

From: Jeannie Barlow, Senior Executive Assistant

Item Type: Resolution

Subject: Resolution Directing the City Manager to Implement Water Treatment Plant Upgrades Including a Nanofiltration System

Presenter: Carlos Baia, City Manager

Recommendation:

It is recommended that Council adopt a resolution directing the City Manager to implement Water Treatment Plant Upgrades including a Nanofiltration System.

Discussion:

City staff seeks City Council approval to initiate upgrading the City of Temple Terrace's water treatment system in response to stricter federal requirements for PFAS in drinking water, as well as the age and condition of the City's existing water treatment infrastructure. While the City's current PFAS levels remain within applicable regulatory limits, the Environmental Protection Agency (EPA) has established more stringent drinking water standards and compliance parameters for certain PFAS compounds. The City's more than 40-year-old treatment facilities are also nearing the end of their operational life and require significant upgrades and modernization to ensure the continued reliability, safety, and regulatory compliance of the City's water supply.

The Water Treatment Facilities Master Plan, prepared by CHA Consulting, Inc. and presented to City Council on May 19, 2026, recommends rebuilding the City's standalone water treatment systems using advanced nanofiltration technology and a deep injection well. The proposed system would provide treatment capabilities to address PFAS and reduce water hardness while replacing aging infrastructure with modern treatment technology.

Following the August 11, 2026 budget workshop, City Council expressed consensus to move forward with rebuilding the City's standalone system using nanofiltration. Given the project's significant technical complexity, anticipated multi-million-dollar investment, the need to modernize aging infrastructure, and the timeline for compliance with evolving federal drinking water standards, City staff requests authorization to initiate the project and select a qualified external project manager to oversee the project's planning, engineering, permitting, procurement, and construction through completion.

Resolution/Ordinance Information:

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF TEMPLE TERRACE, FLORIDA, DIRECTING THE CITY MANAGER TO COMMENCE WATER TREATMENT PLANT UPGRADES AS RECOMMENDED BY CHA CONSULTING, INC.'S 2026 WATER TREATMENT FACILITIES MASTER PLAN INCLUDING THE IMPLEMENTATION OF A NANOFILTRATION SYSTEM TO SOFTEN THE UTILITY'S WATER AND REDUCE PFAS; PROVIDING AN EFFECTIVE DATE.

Appropriation Code:

Requirements:

Resolution

Cost:

Attachments:

1. Resolution Final

RESOLUTION

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF TEMPLE TERRACE, FLORIDA, DIRECTING THE CITY MANAGER TO COMMENCE WATER TREATMENT PLANT UPGRADES AS RECOMMENDED BY CHA CONSULTING, INC.'S 2026 WATER TREATMENT FACILITIES MASTER PLAN INCLUDING THE IMPLEMENTATION OF A NANOFILTRATION SYSTEM TO SOFTEN THE UTILITY'S WATER AND REDUCE PFAS; PROVIDING AN EFFECTIVE DATE.

Whereas, the City of Temple Terrace operates a municipal water supply, treatment and distribution system dedicated to delivering clean and regulatorily compliant drinking water to its utility customers; and

Whereas, the City's water treatment facilities (Whiteway and Sunningdale) have approximately 40 year old operating components nearing end of service life; and

Whereas, from 2023-2025, the federal Environmental Protection Agency (EPA) promulgated its Fifth Unregulated Contaminant Monitoring Rule (UCMR 5) testing program, which required monitoring for emerging and unregulated contaminants, including per- and polyfluoroalkyl substances (PFAS); and

Whereas, analytical data obtained from the City's UCMR 5 testing, confirmed the presence of per- and polyfluoroalkyl substances (PFAS) within the municipal source water supply, with concentrations that, while currently compliant with applicable regulatory limits, would not meet future regulatory compliance parameters under proposed federal Environmental Protection Agency (EPA) drinking water mandates set to take effect in 2029; and

Whereas, the City Council on May 6, 2025 commissioned a Water Treatment Facilities Master Plan with CHA Consulting, Inc. to develop a roadmap for upgrading the City's treatment facilities to meet current and future demands; and

Whereas, on August 5, 2025 City Council approved a change order with CHA Consulting, Inc. to conduct additional PFAS sampling and analysis, a treatment pilot study and explore funding support for a PFAS mitigation solution to meet the proposed 2029 EPA regulatory compliance parameters; and

Whereas, a cross-departmental task force of City staff was commissioned in July 2025, under the direction of the City Manager, to prioritize and expedite work on the matter of PFAS mitigation and water treatment facilities upgrades; and

Whereas, in July 2025 the City created a dedicated webpage on the City website entitled “Water Questions” where it has since regularly archived a vast array of information for the public concerning the City’s water supply and PFAS; and

Whereas, on May 19, 2026, CHA Consulting Inc. and Stantec presented the findings of the Water Treatment Facilities Master Plan, PFAS treatment solutions, and potential water rate impacts to the City Council in a public meeting; and

Whereas, on August 11, 2025 and May 26, 2026 the City held Town Halls to share information with the general public on the matter of the water treatment facilities upgrades and PFAS mitigation efforts; and

Whereas, elements of the PFAS Task Force explored alternatives with the City of Tampa and Hillsborough County to address PFAS mitigation such as possible cross-connections to their respective water systems and the purchase of bulk water by the City of Temple Terrace; and

Whereas, the City of Tampa advised that it did not have the capacity to meet Temple Terrace’s needs and the County’s solution would have necessitated an approximately 21,500 linear foot installation of 24” water main across wetlands, under I-75, over the Cow House Creek and Hillsborough River and under State Road 582 (Fowler Road) and multiple other city roadways and was estimated to have a much more significant upfront and long term financial impact on the City’s water users than a proposed standalone nanofiltration solution recommended by CHA Consulting, Inc.; and

Whereas, the Water Treatment Facilities Master Plan formally recommended rebuilding the City's standalone system by deploying a nanofiltration water treatment system and deep injection well at the Whiteway facility, which serves as a single-step technology capable of simultaneously reducing water hardness and eliminating PFAS compounds; and

Whereas, during the City Council’s Water and Sewer Fund budget workshop on August 11, 2026, the consensus of the City Council was to permanently rebuild the City's standalone infrastructure using nanofiltration as well as to solicit competitive pricing and explore the feasibility for a potential temporary, interim treatment solution to mitigate for PFAS prior to, and possibly concurrent with, the implementation of the permanent nanofiltration solution; and

Whereas, due to the technical scope, multi-million dollar capital cost, and tight regulatory timelines associated with this Treatment Facilities upgrade, the project will require the solicitation of a qualified engineering firm, at the outset, to provide design, engineering, and permitting services as well as to serve as a project/construction manager.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Temple Terrace, Florida, as follows:

Section 1. The City Manager is directed to move forward with the plan to upgrade the City's Water Treatment Facilities, as outlined in the CHA Consulting, Inc.'s Water Treatment Facilities Master Plan, including, but not limited to, plant electrical and piping upgrades, the installation of a nanofiltration water treatment system and deep injection well and the solicitation of an engineering firm to provide design, engineering, permitting and project/construction management services.

Section 2. This Resolution shall take effect immediately.

Passed and adopted by the City Council of the City of Temple Terrace, Florida this 15th day of September 2026.

(Corporate Seal)



X

Andrew Ross, Mayor
Chair of the City Council

Attest:

X

Lynda Sader
City Clerk

