



Central Wastewater Treatment Plant Expansion

Project Status Update

November 30, 2021



Agenda and Introductions

Agenda

- I. Project Status Update
 - a. Background/Timeline
 - b. Phase I Update
- II. TCEQ Action Plan Review
- III. Proposed Council Actions
 - I. Change Order No. 5
 - II. PSE PSSA 02

Project Team Roles

Construction Manager

PSE | +6

Design Engineer



Construction Contractor





Project Status Update

PSE | +6



Central Wastewater Treatment Plant Expansion

1980s – Central WWTP constructed at 3.0 MGD Capacity

2005 – Central WWTP expanded to 4.4 MGD Capacity

2016 – Capacity assessment completed to move to 5.3 MGD

2018 – Interim improvements to help get manage through the current expansion

2019 – Construction start on Phase 1 expansion
Phase I flow = 7.25 MGD (Current Project)
Phase II flow = 8.5 MGD
Phase III flow = 10 MGD





Central Wastewater Treatment Plant Expansion

- Timeline of Expansion Project
 - 2016 initial planning and selection of Freese & Nichols
 - 2017 FNI begins study and design of interim improvements
 - 2018 FNI begins design of expansion and Plus Six Engineering selected as Owner's Representative
 - 2019 Design Complete
 - 2019 BAR Constructors selected as General Contractor
 - November 19, 2019 - Construction NTP
 - May 2021 Design begins for Phase II





Central Wastewater Treatment Plant Expansion

- Phase I Construction Status





Central Wastewater Treatment Plant Expansion

- Phase I Construction Status





Central Wastewater Treatment Plant Expansion

- Phase I Construction Status





Central Wastewater Treatment Plant Expansion

- Phase I Construction Status





Central Wastewater Treatment Plant Expansion





Central Wastewater Treatment Plant Expansion

- Phase I Construction Completion Percentages (10/31/21)
 - 84 % Complete by Cost
 - 86 % Complete by Time





Central Wastewater Treatment Plant Expansion

- Phase I Construction Status

| CWWTP Contract Summary | | | |
|---|------------------|---|----------|
| COST | | TIME | |
| Original Contract Amount | \$ 41,863,737.95 | Notice to Proceed Date | 11/19/19 |
| Approved Contract Modifications (CO 01 – CO 04) | \$ 510,577.29 | Original Substantial Completion Date | 10/12/21 |
| Current Contract Price | \$ 42,374,315.24 | Approved Time Extension (CO 01 – CO 04) | 77 |
| | | Current Date of Substantial Completion | 12/28/21 |
| CO 01 – CO 04 = 1.2% of contract (5%-8% is typical) | | | |



Central Wastewater Treatment Plant Expansion

- Phase I Construction Status – Previously Approved Change Orders

| Item No. | Description | Change in Cost | Change in Time |
|----------|---|----------------------|----------------|
| CO 1 | Added SOW items - Including Temporary LS for Project Charm | \$288,607.76 | 34 days |
| CO 2 | Added SOW items | \$ 48,967.25 | 22 days |
| CO 3 | Added SOW items - Including Bio Solids Emergency Power Feed | \$130,813.37 | 14 days |
| CO 4 | Added SOW items | \$ 42,188.91 | 7 days |
| | | | |
| | Total | \$ 510,577.29 | 77 days |



Central Wastewater Treatment Plant Expansion

- Phase I Construction Status – Construction Challenges
 - Notifications by Contractor (Material, Cost, Manhours)
 - Summary of Materials Impacts
 - PVC Pipe shortages early in project
 - DI Pipe at BNR No. 3 and 4
 - DI Pipe at Influent Lift Station and Headworks
 - DI Pipe at RAS/WAS PS No. 2
 - Roofing Material at Electrical Building No. 1 – Delayed dry in and install electrical equipment
 - Powers BNR Basins No. 3 & 4 and RAS/WAS PS No. 2
 - Roofing Material at Electrical Building No. 2
 - Powers Influent Lift Station and Headworks



Central Wastewater Treatment Plant Expansion

- Phase I Construction Status – Construction Challenges
 - Summary of Cost Impacts (absorbed by BAR)
 - Miscellaneous Metals
 - Ductile Iron Pipe
 - Roofing Materials
 - COVID-19 Reported Manhours Lost to Date (COVID-19 is ongoing threat)
 - Notices by Contractor for monthly impacts
 - Additional impacts to production rate due to working precautions (space, disinfection)
 - Labor Force Impacts
 - National Labor shortages
 - High pace of regional growth cause additional pressures



Central Wastewater Treatment Plant Expansion

- Phase I Construction Status
- Questions about Construction Status Update



TCEQ Action Plan

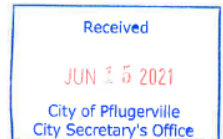




Central Wastewater Treatment Plant Expansion

- TCEQ Enforcement Notice
 - AO dated June 10, 2021
 - AO cites violations of permit limits January – September 2020
 - Ammonia Nitrogen (Daily Avg)
 - E. coli (Daily Avg)
 - Total Suspended Solids (Daily Avg)
 - **Annual Average Flow**

Jon Niermann, *Chairman*
Emily Lindley, *Commissioner*
Bobby Janecka, *Commissioner*
Toby Baker, *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
Protecting Texas by Reducing and Preventing Pollution

June 10, 2021

The Honorable Victor Gonzales
Mayor of Pflugerville
P.O. Box 589
Pflugerville, Texas 78691

Re: Proposed Agreed Order
City of Pflugerville; RN101611440; TPDES Permit No. WQ0011845002
Docket No. 2021-0376-MWD-E; Enforcement Case No. 60479
FOR SETTLEMENT PURPOSES ONLY

Annual Average Flow violations will continue



Central Wastewater Treatment Plant Expansion

TCEQ Action Plan

- Developed by FNI to be provided to TCEQ Enforcement Division
- Goals
 - ✓ Address existing enforcement
 - ✓ Preempt future enforcement
 - ✓ Mitigate TCEQ fines



DELIVERED BY EMAIL

November 12, 2021

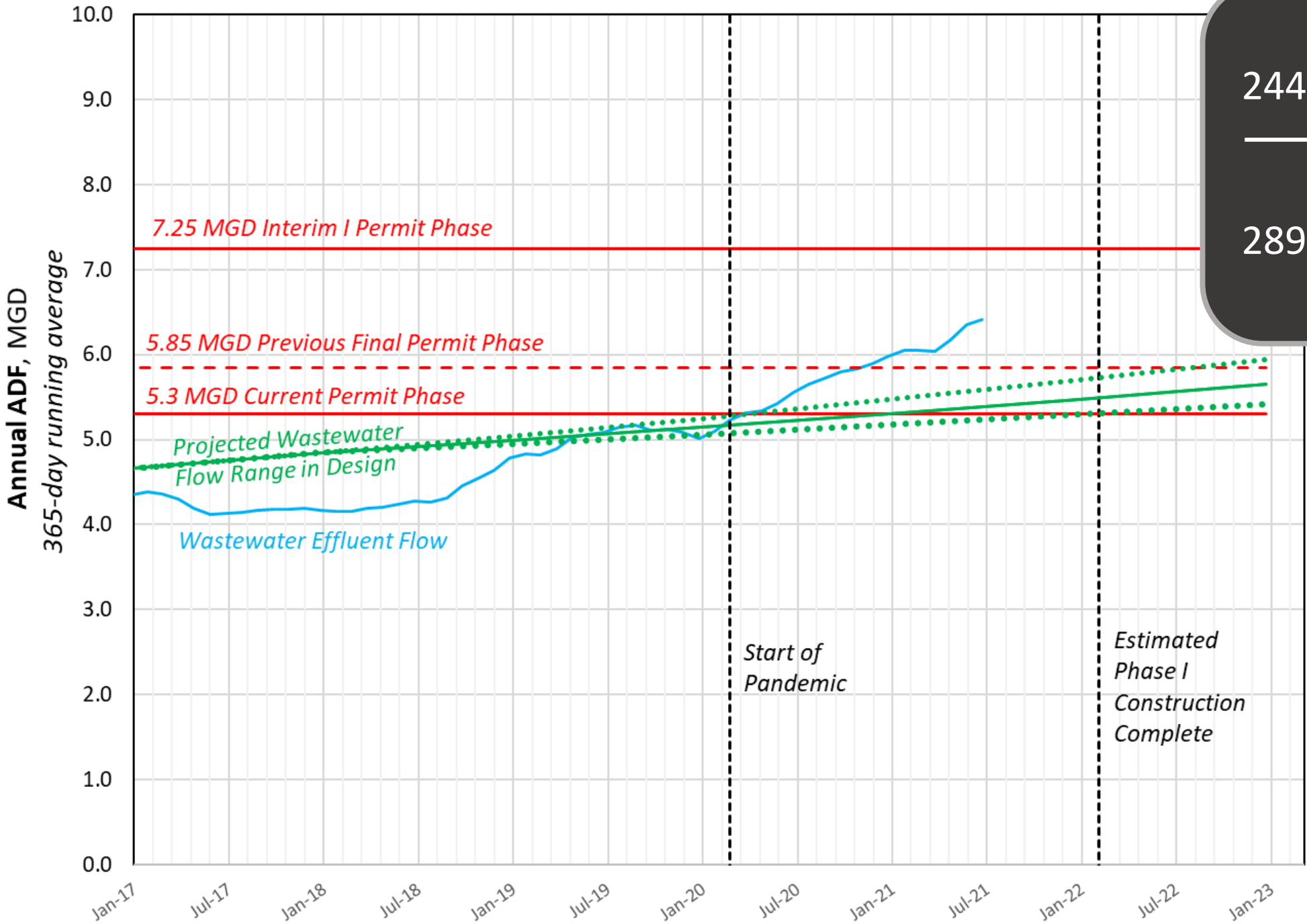
Water Section, Enforcement Division
Texas Commission on Environmental Quality
Docket No. 2021-0376-MWD-E; Enforcement Case No. 60479

Attn: Kristy Deaver, Manager, Enforcement Division, TCEQ

Re: City of Pflugerville Upper Gilleland Creek WWTP Permit Compliance Action Plan

Outline

1. Documents contributing circumstances to violation
2. Documents actions already taken by City
3. Details proposed actions by City moving forward



Pre-Covid
 244 gpd per connection

Post-Covid
 289 gpd per connection



Central Wastewater Treatment Plant Expansion

2. Actions Already Taken by City

- ✓ Interim CWWTP Improvements - 2018
- ✓ Filter Media Replacement - 2020
- ✓ Mechanical Aerator Replacement - 2021
- ✓ Backup Power Improvements to Biosolids – 2021 (CO-03)





Central Wastewater Treatment Plant Expansion

Proposed Actions By City Moving Forward

1. Resume Stream Monitoring for TDS, Chlorides, and Sulfates
2. Schedule recovery efforts by BAR: extended work hours, labor recruiting, etc.
3. Focus construction on increasing plant capacity immediately
 - Construct BNR Basins and associated improvements first
 - Ready Temporary Pumping from Existing Headworks to new BNR
 - Cost for pumping would be charged to the Phase I Construction



Proposed Council Actions

PSE | +6



Central Wastewater Treatment Plant Expansion

- Two Council Meeting Agenda Items
 - BAR Constructors – Construction Change Order 05
 - Plus Six Engineering, LLC – Services Extension



Central Wastewater Treatment Plant Expansion

- CWWTP Construction Change Order 05
- The purpose of Change Order 05 is to add cost and time for added Scope of Work and Delays outside of Contractor Control. The Change also provides contingency budgets to operate prior to completion and re-allocates budget from unused contract allowances.

| Category Description | Cost | Time |
|------------------------------|---------------------|-----------------|
| Added Scope of Work | \$132,491.43 | 30 Days |
| COVID-19 Related Impacts | \$25,974.22 | 53 Days |
| Other Delays | 0 | 30 Days |
| Bypass Pumping Contingencies | \$128,143.60 | 0 |
| Credits | (\$161,600.00) | |
| Total | \$125,009.25 | 113 Days |



Central Wastewater Treatment Plant Expansion

- CWWTP Change Order 5

| Summary of Change Order Items | | | |
|-------------------------------|---|---------------------|----------------|
| Item No. | Item Description | Change in Cost | Change in Time |
| 1 | CP0031 – UV Finger Trough Concrete Modification | \$3,751.65 | 1 days |
| 2 | CP0034 – Piping for Influent Pump Station Piping Pump 6 | \$111,644.08 | 19 days |
| 3 | CP0035 – HVAC unit for Turbidity Building | \$3,362.56 | 2 days |
| 4 | CP0037 – Electrical Building Ladder Anchors | \$9,286.04 | 5 days |
| 5 | CP0040 – Conductivity Probe change at UV | \$3,437.68 | 3 days |
| 6 | CP043 – 2”NPW unforeseen utility line break | \$1,009.42 | 0 |
| | <i>Subtotal – Added Scope of Work</i> | <i>\$132,491.43</i> | <i>30 days</i> |



Central Wastewater Treatment Plant Expansion

- CWWTP Change Order 5

| Summary of Change Order Items (Continued) | | | |
|---|---|--------------------|----------------|
| Item No. | Item Description | Change in Cost | Change in Time |
| 7 | CP0039 – Clarifier 1 and 2 Bypass Pumping | \$25,974.22 | 7 days |
| 8 | CP048 – COVID-19 Impacts June 2020 – July 2021 | 0 | 37 days |
| 9 | CP042 – COVID-19 Impacts August 2021 and Sept. 2021 | 0 | 9 days |
| | <i>Subtotal – COVID-19 Related Impacts</i> | <i>\$25,974.22</i> | <i>53 days</i> |
| 10 | CP045 – Oncor Electric Delays | 0 | 30 days |
| | <i>Subtotal – Other Delays</i> | <i>0</i> | <i>30 days</i> |



Central Wastewater Treatment Plant Expansion

- CWWTP Change Order 5

| Summary of Change Order Items (Continued) | | | |
|---|--|-----------------------|-----------------|
| Item No. | Item Description | Change in Cost | Change in Time |
| 11 | CP046 – Bypass Pumping for TCEQ Action Plan | \$62,026.99 | 0 |
| 12 | CP047 – Bypass Pumping for SH130 Interceptor Flows | \$66,116.61 | 0 |
| | <i>Subtotal – Bypass Pumping Contingencies</i> | <i>\$128,143.60</i> | <i>0</i> |
| 13 | CP049 Oncor Allowance Credit | (\$150,000.00) | 0 |
| 14 | CP050 Extra Work Item – Drilled Pier Credit | (\$11,600.00) | 0 |
| | <i>Subtotal - Credits</i> | <i>(\$161,600.00)</i> | <i>0</i> |
| | CO 5 Total | \$125,009.25 | 113 days |



Central Wastewater Treatment Plant Expansion

- CWWTP Change Order 5

| CWWTP Contract Summary (Including CO 05) | | | |
|---|------------------|--|------------|
| COST | | TIME | |
| Original Contract Amount | \$ 41,863,737.95 | Original Substantial Completion Date | 10/12/2021 |
| Approved Contract Modifications (CO 01 – CO 04) | \$ 510,577.29 | Approved Time Extension (CO 01 – CO 04) | 77 |
| CO 05 Contract Modifications | \$ 125,009.25 | CO 05 Contract Modifications | 113 |
| Revised Contract Price | \$ 42,499,324.49 | Revised Contract Substantial Completion Date | 4/20/2022 |
| CO 01 – CO 05 = 1.5% of contract price (5%-8% is typical) | | | |



Central Wastewater Treatment Plant Expansion

- Professional Services, Time Extension
- Phase 1 Improvements
 - Project Duration has extended to current planned Substantial Completion of April 20, 2022 and Final Completion of June 19, 2022
 - Time extension required due to various scope additions and COVID-19 Impacts
- **Time impact on project to date**
 - **Original Project Duration – 702 days**
 - **Current Project Duration – 883 day (25% increase)**
- Authorization for Professional Services
 - Continuity of Current Team on Phase 1
 - Consistency in Cost, Time and Quality Management



Central Wastewater Treatment Plant Expansion

- Professional Services, Time Extension

Plus Six Engineering, LLC

- Owner's Representative Services
- Original Contract Amount - \$2,954,744.00
- Supplemental Agreement #1 – \$88,527.19
- Proposed Supplemental Agreement #2 - \$434,560.00
- Total Revised Contract Amount - \$3,477,831.19
- SA#2 Represents a 15% cost increase for a 25% time increase

PSE | +6

Scope of Services

- Task 110 – Program Construction Manager Services
- Task 120 – Project Construction Manager Services
- Task 130 – Resident Project Representative Services
- Task 140 – Commissioning and Start-up Services
- Task 150 – Construction Manager Support Services



Central Wastewater Treatment Plant Expansion

- Preparing for the near future – What other impacts may be seen?
 - COVID-19 is ongoing – still possible staffing shortages
 - Cost Escalations (due to COVID-19 and Global Shipping Crisis)
 - Have received notices and contract does not allow payment
 - Potential for delay if suppliers do not accept contractual language
 - City Legal has been contacted
 - Ongoing Construction – there are still unknowns



Questions?





Central Wastewater Treatment Plant Expansion

- The project team would like to invite any interested members of Council or city staff to come tour the project site and see progress firsthand