2025 Project Planning

Recommended General Project Approach

- We are on the home stretch of our in-lake water quality goals.
- We achieved the 80% of water quality results with the very best 20% of projects.
- As we work toward the last 20% of water quality results, we start to dip into the 80% of projects available, which may have a lower cost-benefit and may be more difficult/complicated to implement (all the low hanging fruit has been picked). Flood mitigation and greenway corridor projects are among many other possibilities within this "80%" pool even though their main benefit might be storage, they will also provide water quality benefits similar to our past projects.
- The following pages provide a brief, high level summary of the project implementation and water resource protection plan for 2025 and beyond.
- Most District programs are not detailed or quantified here, but continued implementation of a wide variety of programs will serve to protect the water quality improvements that have been made.
- As we get closer to closing the chapter on TMDL Reductions, we are looking ahead to the next chapter of Climate Change Resiliency, Flood Mitigation, and Projects with Multiple Benefits
- This next chapter will look different from the last chapter. The last chapter was defined by diagnostic studies and a highly targeted nutrient reduction approach. This next chapter will be best served by weighing multiple benefits (e.g., phosphorus and sediment reductions are one factor, and flood mitigation will be an increasing factor for cost-benefit evaluation). We are still targeting our work, but the targeting approach is different.

Recommended Approach to Grants

- Grants have always been key to the District's ability to implement projects, and they will continue to be critical moving forward.
- The District has been highly successful in grant seeking over the last decade, winning \$9.3 million from 2010-2023, being the largest winner of Clean Water Fund Projects & Practices grant awards state-wide from 2014-2024, as well as tapping into a wide array of grant programs (successful with 20 different programs to date, and have applied to an additional 12 programs unsuccessfully or still pending).
- Despite the District's successful track record, grants are not guaranteed revenue.
- Recommended approach: approve a balanced budget with the high probability revenues we know of (levy, interest, awarded grants, recurring consistent small grant programs). Budget for anticipated match expenditures.
- If/when we win grants, amend the budget to incorporate those revenues and associated expenses. The District will seek overlapping grants in order to minimize its local match. Note that many grant programs include a requirement that grant funds not supplant available local funding.

Little Comfort Lake

Phosphorus Reduction Goal: 839 lbs Progress Toward Goal: 60%

Little Comfort Lake Headline

Multiple projects still needed to achieve WQ goal. Several are in progress/planned. We have run into barriers with some projects from diagnostic study, and we are adapting. Projects result in multiple benefits (e.g., sediment). Shoreline buffers needed to maintain WQ improvements.

| Phosphorus Load Reduction Goal and Progress Made (multiple other herefits have been achieved and are being tracked as well such as sediment (nitregen) | | | | | |
|---|--------------------------------------|--|---------|-----------|--|
| (multiple other benefits have been achieved and are being tracked as well such as sediment/nitrogen) Completed Total 503 lb/yr | | | | | |
| <u>.</u> | In Progress Total | | | | |
| Planned Total | | | | 211 lb/yr | |
| Total Load Re | duction to Meet Goal | | | 839 lb/yr | |
| Completed | Upstream Improvements | Upstream improvements have resulted in significant water quality improvements compared to baseline | Past | 503 lb/yr | |
| In Progress | July Ave Feedlot | Grant awarded. Will have larger improvement for School Lake (~65 lb/yr) | 2025 | ~45 lb/yr | |
| In Progress | Heath Ave IESF | TBD pending landowner purchase agreement and FY25 CWF grant | 2025 | 80 lb/yr | |
| Planned/ Ongoing | Shoreline Program | Comprehensive program will result in multiple benefits | Ongoing | TBD | |
| Planned | July Ave Degraded Wetlands | Restore wetlands downstream of feedlot after feedlot project is complete | TBD | TBD | |
| Planned | Ag BMPs/Livestock Mgmt | Various locations upstream in Little Comfort LMD; landowner outreach in progress | TBD | TBD | |
| Planned | School Lake Inlet/Outlet Channels | Investigating further through monitoring program | TBD | TBD | |
| Planned | Little Comfort Alum Treatment | Re-evaluate internal load after making more progress on external load | TBD | TBD | |

Resources

Implementation Plan

The Comfort and Little Comfort's Implementation Plan has three major objectives:

- 1. **Little Comfort Lake TP Reduction:** Improve the in-lake water quality of Little Comfort Lake through implementation of TP reduction practices in the Heath Avenue inlet drainage area, the Itasca Avenue inlet downstream of School Lake, and to reduce internal loads.
- 2. **Comfort Lake TP Reduction:** Improve the in-lake water quality of Comfort Lake through improvement of Little Comfort Lake water quality and implementation of TP reduction practices in the Sunrise River inlet drainage area.
- 3. **Stormwater Treatment:** Reduce sediment loading by increasing water storage in the Comfort LMD through regional stormwater treatment projects and enhancement of wetlands along the Sunrise River corridor.

| | | Scenario 1: Scenario 2: Little Comfort at 30 µg TP/L TP/L TP/L | | ort at 33 µg | Scenario 3: Little Comfort at 40 µg TP/L | | |
|-----------------|---------------------------------------|--|--------------------------------|------------------------------|--|------------------------------|--------------------------------|
| Lake | Total Phosphorus (TP) Source | TP Reduction (Ib./yr.) | % Total Reduction Needed | TP Reduction (Ib./yr.) | % Total Reduction Needed | TP Reduction (lb./yr.) | % Total Reduction Needed |
| | Direct drainage | 1 | 0.3% | 1 | 0.3% | 0 | |
| Little | Itasca Avenue inlet | 205 | 56% | 159 | 50% | 50 | 27% |
| Comfort | Heath Avenue inlet | 102 | 28% | 102 | 32% | 75 | 41% |
| Lake | Internal load | 59 | 16% | 59 | 18% | 59 | 32% |
| | TOTAL | 366 | | 320 | | 183 | |
| | Direct drainage | 26 | 14% | 27 | 14% | 26 | 13% |
| Comfort Lake | Sunrise River inlet at W. Comfort Dr. | 31 | 16% | 52 | 27% | 104 | 54% |
| | Little Comfort Lake | 136 | 70% | 114 | 59% | 64 | 33% |
| | TOTAL | 193 | | 193 | | 193 | |

Table 2-33. Comparison of the Little Comfort and Comfort Lakes TP Reduction Scenarios

- <u>https://www.clflwd.org/wp-content/uploads/2022/11/Comf_Diag_Update_5-19-</u> 2021_FINAL.pdf#page=14
- <u>https://www.clflwd.org/wp-content/uploads/2022/11/Comf_Diag_Update_5-19-2021_FINAL.pdf#page=94</u>
- <u>https://www.clflwd.org/wp-content/uploads/2023/07/2022-03-24</u> Presentation TSS-Loading-Analysis.pdf

Comfort Lake



Phosphorus Reduction Goal: 825 <u>lbs</u> Progress Toward Goal: 85%

Comfort Lake Headline

Several projects completed, in progress, and planned. Water quality is good, and sediment loading levels are within range for a lake like this. Monitoring is ongoing to keep track of threats to Big Comfort and Little Comfort. Shoreline buffers needed to maintain WQ improvements.

| (multiple | | sphorus Load Reduction Goal and Progress Made been achieved and are being tracked as well suc | | ment/nitrogen) |
|-------------------------|---|--|-------------------------|-------------------------------|
| Completed | | | | 697 lb/yr |
| In Progress | Total | | 64-136 lb/yr | |
| Planned Total | | | | 64+ lb/yr |
| Total Load I | Reduction to Meet G | Goal | | 825 lb/yr |
| Completed Stormwater Pe | | Permitting program has resulted in water quality improvements b/c of required stormwater BMPs | Past | 28 lb/yr |
| Completed | Broadway IESF | Iron enhanced sand filter | Past | 15 lb/yr 683 lb/yr TSS |
| Completed | Enhanced Street Sweeping | City of FL partner program | Past | 37 lb/yr 683,407 lb/yr TSS |
| Completed | Bixby Park | Wetland enhancement | Past | 93 lb/yr 5,546 lb/yr TSS |
| Completed | Target Retrofits | IESF, tree trenches | Past | 5 lb/yr |
| Completed | Hwy 61/Sunrise River/Tax Forfeit | Wetland enhancement | Past | 65 lb/yr 18,630 lb/yr TSS |
| Completed | Upstream Improvements | In addition to projects in this LMD, upstream improvements have resulted in significant water quality improvements compared to baseline | Past | 460 lb/yr |
| In Progress | Little Comfort Lake Improvements | Diagnostic study provided scenarios ID'ing Little Comfort Lake as a high priority means to improving Comfort Lake. Varying load reductions based on varying improvements to Little Comfort | 2025+ | 64-136 lb/yr |
| Planned/ Ongoing | Shoreline Program | Comprehensive program will result in multiple benefits | Ongoing | TBD |
| Planned | City of FL Regional Treatment Facility | Led by City of FL, supported by CLFLWD | TBD | TBD |
| Planned | Volume Control Facility, Flood Mitigation, Greenway Corridor | Targeting in progress through Floodplain Vulnerability Assessment. Comfort LMD is a likely implementation area, pending prioritization discussions. | TBD | TBD |
| Planned | Shallow Pond Impoundment | Addressing other upstream improvements in the watershed first. This project would impact many landowners, require multiple easements/ landowner agreements, and require 10+ years of landowner outreach. Add to 2025 staff work plan – further landowner engagement w/ staff. | TBD (Long- range) | TBD |

Resources

(See also Little Comfort resources above)

| | | Scenario 1: Little Comfort at 30 μg TP/L | | Scenario 2: Little Comfort at 33 μg TP/L | | Scenario 3: Little Comfort at 40 μg TP/L | |
|-----------------|---------------------------------------|--|--------------------------------|--|--------------------------------|--|--------------------------------|
| Lake | Total Phosphorus (TP) Source | TP Reduction (Ib./yr.) | % Total Reduction Needed | TP Reduction (Ib./yr.) | % Total Reduction Needed | TP Reduction (Ib./yr.) | % Total Reduction Needed |
| | Direct drainage | 1 | 0.3% | 1 | 0.3% | 0 | |
| Little | Itasca Avenue inlet | 205 | 56% | 159 | 50% | 50 | 27% |
| Comfort | Heath Avenue inlet | 102 | 28% | 102 | 32% | 75 | 41% |
| Lake | Internal load | 59 | 16% | 59 | 18% | 59 | 32% |
| | TOTAL | 366 | | 320 | | 183 | |
| | Direct drainage | 26 | 14% | 27 | 14% | 26 | 13% |
| Comfort Lake | Sunrise River inlet at W. Comfort Dr. | 31 | 16% | 52 | 27% | 104 | 54% |
| | Little Comfort Lake | 136 | 70% | 114 | 59% | 64 | 33% |
| | TOTAL | 193 | | 193 | | 193 | |

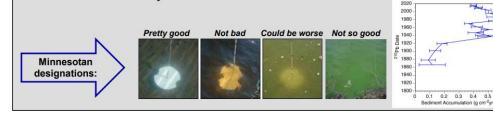
Table 2-33. Comparison of the Little Comfort and Comfort Lakes TP Reduction Scenarios

2022 Comfort Lake Sediment



Conclusions

- The input loads and accumulation rates of NVSS in Comfort Lake do not appear to be large.
 - Monitored values are larger than the reference value, but overall near or better than current water-quality standards.
- The accumulation rate from the sediment Pb-210 study appears to be anomalously large.
 - However, the trends in the lake-sediment core samples are self-consistent and thus reliable.
- Reductions in TSS may be possible for Little Comfort Lake inlet
 - Additional monitoring between School Lake and Little Comfort Lake
 - Preliminary stream condition walk through during Little Comfort Lake model survey



Forest Lake



Phosphorus Reduction Goal: 1,450 lbs Progress Toward Goal: 56% before alum, 93% after alum

Forest Lake Headline

Forest Lake is very close to its goals, and the completion of the alum treatment will all but cross the finish line toward the goals. Shoreline buffers and flood mitigation strategies in the watershed will serve to protect the WQ improvements the District has achieved.

| (multiple | | sphorus Load Reduction Goal and Progress Made | | ont/nitrogon) |
|---------------------|--|--|-------------|----------------------------------|
| Completed 1 | | been achieved and are being tracked as well su | ch as sedim | 823 lb/yr |
| In Progress 1 | | | 527 lb/yr | |
| Planned Tota | al | | | 100 lb/yr |
| Total Load R | eduction to Meet G | ioal | | 1,450 lb/yr |
| Completed | Shields Lake Improvements | Carp barrier, aerator, stormwater reuse, alum treatment | Past | 531 lb/yr |
| Completed | Smaller BMPs | Cumulative of multiple BMPs from permits, partners, and cost-share incentives | Past | 35 lb/yr |
| Completed | Hilo Lane | Iron enhanced sand filter | Past | 12 lb/yr |
| Completed | 3 rd Lake Pond | Wetland restoration | Past | 56 lb/yr 1,696 lb/yr TSS |
| Completed | Enhanced Street Sweeping | City of FL partner program | Past | 72 lb/yr 190,824 lb/yr TSS |
| Completed | CR50 IESF | Iron enhanced sand filter | Past | 97 lb/yr 3,000 lb/yr TSS |
| Completed | WJD-6 Wetland | To be completed in 2024 | Past | 20 lb/yr |
| In Progress | City Regional Treatment Facilities | North Shore Trail stormwater treatment basins in progress. | 2024 | TBD |
| In Progress | Forest Lake Alum Treatment | First dose in 2023, monitoring in 2024, second dose in 2025 | 2025 | 527 lb/yr |
| Planned | Volume Control Facility, Flood Mitigation, Greenway | Likely to benefit Forest Lake as well as Comfort Lake, pending prioritization discussions | TBD | TBD |
| Planned/ Ongoing | Shoreline Program | Comprehensive program will result in multiple benefits. Forest Lake water quality is good and very close to goal – achieving additional 100 lb/yr (7%) will further ensure WQ is protected. Standard margin of error for TMDL load reductions is 10% (after the alum treatment, we will be within the 10% range) | Ongoing | TBD |

Bone Lake



Phosphorus Reduction Goal: 786 <u>lbs</u> Progress Toward Goal & State Standards: 100%

Bone Lake Headline

Improvements made and has been de-listed for nutrient impairment as of April 2024! Ongoing programs and future efforts will serve to protect the water quality investments the District and local citizens have made. Shoreline buffers needed to maintain WQ improvements.

| (multiple o | | Load Reduction Goal and Progress Made chieved and are being tracked as well such | as sedimer | nt/nitrogen) |
|---------------------|--|---|------------------|-----------------------------------|
| Completed To | | 821 lb/yr | | |
| In Progress To | | 0 lb/yr | | |
| Planned Total | | | | TBD lb/yr |
| Total Load Re | duction to Meet Goal | | | 786 lb/yr |
| Completed | Upstream and Other Watershed Improvements | Upstream/watershed improvements over the years have resulted in significant water quality improvements compared to baseline. Moody Lake improvements, carp removal, carp barriers. | Past | 651 lb/yr |
| Completed | Agricultural Best Management Practices | Cumulative of multiple BMPs from ag BMP incentives | Past/ Ongoing | 117 lb/yr 204,893 lb/yr TSS |
| Completed | Melanie Trail BMPs | Partnership project w/ City of Scandia | Past | 2 lb/yr |
| Completed | Southeast Drained Wetland Restorations | Wetland restorations ("DCB" properties) | Past | 35 lb/yr 324,640 lb/yr TSS |
| Completed | Northeast Legacy Wetland Restoration | Wetland restoration (estimated 15-20 lb/yr reduction) | Past | 15 lb/yr |
| Planned | Volume Control Facility, Flood Mitigation, Greenway Corridor | Pending prioritization discussions. One ongoing greenway effort is the Bone Lake South Acquisition and potential future Wetland Restoration which will provide multiple benefits, further protecting Bone Lake's WQ improvements. | TBD | TBD |
| Planned/ Ongoing | Shoreline Program | Comprehensive program will result in multiple benefits. | Ongoing | TBD |