

**Red Lake Watershed District
Pine Lake Area Project Work Team
Meeting Notes
March 11, 2016**

The meeting was convened by Myron Jesme, Administrator, Red Lake Watershed District (RLWD) at 9:30 a.m. The following Project Team members (or their alternates) were present:

Myron Jesme (RLWD)	Terry Sorenson (RLWD/Landowner)
Nate Dalager (HDR)	Dave Dalager (Landowner)
Nick Phillips (SWCD)	Larry Peterson (Pine Lake Twp/Sportsman's Club)
Chad Severts (BWSR)	Mark Larson (Landowner)
Tammy Baden (DNR)	Terry Vonasek (Landowner)
Bill Baer (Corps)	Mike Stenseng (Clw Env.Serv)
Amy Westmark (DNR)	Denise Oakes (MPCA)
Dan Thul (DNR)	Dan Sauve (Clearwater Co.)
Cari Roepke (NRCS)	Juane Johnson (Landowner)

Myron Jesme and Nate Dalager gave brief introduction and recap of the last Project Team meeting and landowner meetings. Dalager discussed the history of the 45 sq.mi. drainage area, stating that the area has had flooding concerns 13 of the last 33 years, with low lake levels in late summer, fall and winter which result in water quality issues. Dalager discussed how the letter received from POOPLA (Property Owners of Pine Lake Association) regarding high and low lake level issues would fit in with the District's 20% Flood Reduction initiative, which also identified the Pine Lake Area as a potential FDR opportunity. Dalager gave a brief history of the 20% Flood Reduction initiative and basin wide plan.

Larry Peterson discussed the aeration efforts of the Sportsman's Club, stating that the fish fared well this winter.

Dalager discussed the following project background:

- Goals (Local and Regional)
 - Flood damage reduction
 - Water quality enhancement
 - Slightly higher/stable summer lake levels
 - Reduce or eliminate fish kills
 - Improve habitat for fish and wildlife.

- Project Goals and Focus ~ goals – local benefits
 - Modify outlet to assist with preferred summer and winter lake levels, manage agreeable lake levels, and improve water quality.
 - Provide upstream storage to reduce persistent flooding conditions, manage lake levels, and improve water quality in lake and downstream.

Conceptual lake outlet:

- Top of weir at 1284.0 feet, the approximate ordinary high water level elevation, by removing the 1284.5 feet weir portion and raising the 1283.5 feet weir portions
- Provide gates to manage lake for water level management, spring runoff and provide Lost River out flows.

Hydraulic mode: preliminary results:

- Outlet structure has minimal effect on peak WSEs and discharges for 100 year runoff events. It is actually the downstream Lost River channel that has the greatest effect on limiting high Pine Lake outflows.

Benefits of New Outlet:

- Operational flexibility/access/response time
- Higher summer/fall lake level
- Discharges lower DO water through gate

Dalager discussed various retention sites and downstream impacts. Peterson asked how long it takes for water from Pine Lake to get to Crookston. Dalager stated that he felt it was approximately 10 days to Crookston (this was confirmed).

Referencing the chart presented in the meeting, Dan Thul stated that with the higher summer/fall levels according to the chart, it does not show the fall draw down to the extent of what is occurring now. Dalager stated that the chart did not have a fall drawdown. Thul stated that the RRWMB cost shared on the original structure for FDR. Dalager stated that the concept shown in the chart does not have operational components in it yet, but it will eventually have a prescribed plan for storage volume drawdown in the fall.

Retention sites were evaluated using ten criteria:

- Miles of stream impacted
- Miles of road impacted
- Volume of embankment required
- Maximum embankment height
- Acres of wetland impacted
- Acre-feet of storage
- Inches of runoff captured
- Homes or structures impacted
- Number of landowners impacted
- Flooded footprint acres

Dalager discussed inflows coming into Pine Lake.

Local Benefits:

- Modify Outlet

- More desirable (higher) levels in the summer and fall
- Water quality benefits
- Longer duration base flows downstream
- Upstream storage
 - Significant downstream FDR
 - More desirable (higher) levels in Summer and Fall
 - Water quality benefits
 - Longer duration base flows downstream

Dalager discussed the screening process used for the retention sites.

Dalager discussed the landowner meeting held in August. Mark Larson discussed conversations he has had with landowners in the area.

Thul discussed on-channel dams and the state wide Environmental Impact Study (EIS) completed in the late 90's. Thul discussed the impacts with on-channel type stream dams. The Flood Damage Reduction Work Group was formed with numerous agencies to help develop FDR projects. Permitting for on-stream channel projects will be a challenge.

Bill Baer discussed the concurrence point's process and that 404 permitting requires identification of the Purpose and Need Statement. From there the Corps would evaluate alternatives to help minimize impacts. Baer questioned if there was a Purpose and Need formalized in a document. Dalager stated that there was a Feasibility Study that could be used towards the Purpose and Need process. Dalager discussed the planning process through the NRCS. Baer discussed his concerns that the District has already pinpointed sites. Dalager replied that we have to have something to talk about or we have nothing. The NRCS plan will be relevant to all of this. Baer stated that the Corps is on board with the long term flooding solutions and the 20% Flood Reduction. Thul stated that it is the same criteria that you have to meet under the PL-566 planning process, which the Corps also needs for their permitting process. Thul stated that it will be better defined in the near future, that is how we will coordinate the 404 process with the PL-566 Federal process. Dalager stated that the project will go thru this process and alternatives analysis, and that just because we are going over alternatives and sites, we still realize the process that must be gone through.

Terry Sorenson asked if it would be beneficial to know the size and other components of Site F. Thul stated that this site is a Wildlife Management Area (WMA) that was purchased using federal funds which comes with strict criteria. They do look at the ability to store some water, bounce and timing of flooding and impacts on vegetation for wildlife management and the duration the longer the flows are stored what the impact would be to vegetation. Amy Westmark stated that they would need to know how much water would be coming in, how long, and during what period. Dalager stated that this is the easiest site to store water due to the dam that is currently in place. The structure and embankment would need to be slightly modified. Discussion needs to take place on the bounce issue and funding of the original dam. The only alternative for this was a 2' FDR wedge. Dan Sauve stated that this is the easiest site to implement and it would be nice if the DNR would give us some kind of idea of what could be

done. Thul stated that they need to understand what level of flood storage is already built into the project, what is existing? The current site is not managed for flood retention but it could have flood management capabilities if it were managed differently. Peterson discussed his concerns with the drawdown of this site through Little Pine Lake and the smell of old swamp water and how this could affect dissolved oxygen (DO) levels on Pine Lake. Dalager stated that water goes through a real low area, and we would need to address that issue. Discussion was held on the opportunity to riprap the area to help improve the DO. It was the consensus of the group that Site F has some action items that are identified and that options need to be explored. Westmark asked Dalager is he is looking at a 2' increase? Dalager replied that approximately 2' would be looked at for spring storage and a slightly different level for summer storage.

Dalager said if we store water upstream, we could affect flooding on Pine Lake. Surface area of Pine Lake 1200 acres. FDR concept is about incremental flood storage.

Site D would have a deep valley, includes wetlands and would have impacts to hay and pasture. This site would not flood homes, but we would need to address access issues.

Site E involves the Lost Lake. Sauve stated that this site has a designated trout stream, with no trout in it.

Dalager discussed the planning process to look further into these sites and that we will need to revisit the goals of the project and determine if the Project Team is comfortable with these goals.

Dalager gave an overview of the water quality issues/concerns. Pine Lake is classified as impaired for mercury and standards for certain pollutions of phosphorus, ecoli and DO. There is little evidence of a turbidity problem. Generally speaking Pine Lake has good water quality. Discussion was held on dissolved oxygen levels and conditions required for aeration. Peterson stated that the Sportsman's Club does keep aeration records. Peterson discussed the numbers and factors of snow, clear ice, flooded ice, etc. When dissolved oxygen reaches 3 they begin aeration. Denise Oakes stated that the MPCA will be doing an assessment of the Clearwater River Watershed this summer. Intensive water monitoring has been completed. Oakes stated that she will bring the data through the Project Work Team process. A TMDL will be developed for the watershed once they know what is impaired as part of the WRAP study. The EPA will do a preliminary review while the WRAP is being written. Oaks stated that there are some impairments from past years.

Dalager gave an overview of the NRCS planning process and the 11 step process for the watershed plan. The project is currently in the Steps 1-4. The process does require an Environmental Assessment. There are six review points that we have to go through for NRCS approval. Dalager estimates this to be at least an 18 month process.

11 Step Process:

1. Pre-planning Activities
2. Purpose and Need for Action
3. Scope of the EA/EIS

4. Affected Environment
5. Development of Alternatives
6. Environmental Consequences
7. Determination of the Preferred Alternative
8. Consultation, Coordination, and Public Participation
9. Prepare Appendices
10. Assemble Full Watershed Plan
11. Complete Watershed Plan

Dalager discussed the NRCS requires findings of no significant impact. Baer asked if there is federal funding, who do we identify as the lead, who has more control of the project? If some other agency has a bigger role, do we identify them as the lead? Bauer stated that other federal agencies may have a conclusion that fails the Corps 404 process. Dalager stated that the NRCS has the lead on the PL 566, but they still need to meet the Corps concerns. Jesme stated that we will invite Keith Weston, NRCS Coordinate for the Red River Basin to some of the meetings to get better coordination.

Dalager listed the following items as things he needs to focus on:

- Site F feasibility- coordination with RLWD/DNR
- Further evaluate water quality with recent MPCA assessment
- Initiate PL 566 watershed planning process
- Further landowner meeting-target by site
- Start project communication effort on RLWD website.

Sorenson asked if 2-3 sites is too many sites to be looking at. Thul stated that we have to have sites to look at alternatives. Thul re-stated his concern with on-channel sites.

Discussion was held on the next steps for the Project Team and scheduling landowner meetings for Sites D and E. Mark Larson stated that there are too many landowners and he can only give them a limited amount of information. A meeting should be held to keep them informed.

Sorenson discussed evaluating the value of property. Discussion was held on flowage easements and hiring of appraisers to view the land for value.

Terry Vonasek discussed the last Pine Lake Association meeting that was held, stating that cabin owners would like to see an additional 6" of water. Vonasek questioned whether the 2009 data was accurate as it appears a lot of cabins would have been flooded by the information that was provided. David Dalager stated that in 2009 he was able to drive his boat 20' from his cabin. Last year he could not get his boat to his 48' dock. Vonasek stated it would be encouraging for cabin owners to see some type of progress toward the project. Sorenson asked if the Pine Lake outlet portion of the project is that far out? Jesme stated that the District would need to see some FDR goals in order for us to proceed. The structure would need to be designed under the criteria they are proposing to comply with dam safety purposes. Thul stated he would like to identify a purpose of need to have a better handle on how many cabins are being flooded and what

alternatives could be done to help alleviate the flooding, and also look at the possible installation of dikes and ice ridge.

Dalager stated that we have data on what cabins get flooded at certain elevations. Bauer asked if any of these cabins have moved as a result of the flooding. Mike Stenseng stated that some of the cabin owners have tried to get flood insurance. There is also soil types to consider. Many cabins have septic systems that only work for a portion of the year. Stenseng stated that his office has adopted a policy that allows cabin owners to raise their cabin. Shore land ordinance is required to have 3' above the highest elevation of the lake water. These are small lots, with many becoming year round residents. Stenseng stated that looking back at the history of Pine Lake the entire area that is developed on the east side was wooded wetland. Early permits show that fill was hauled in. Riparian lots should have 100', but some of the cabins only have 50-60' of setback. Sauve stated that the original plat shows the shoreline has moved. Sauve stated that if we do not get upstream storage we won't be able to manage the lake level.

Discussion was held on having a presentation on shallow lakes management. Tammy Baldwin stated that she could do a presentation, fisheries is not good in a shallow lake scenario.

Thul stated that by lowering the lake level we would reduce the flooding potential, reduce shoreline erosion and reduce septic system failure.

Vonasek stated that the Pine Lake Association has been stocking the lake with fish when the lake levels are high enough and circumstances are right. The association also gives funding to the Sportsman's Club for aeration.

Dalager stated that the DNR needs to come up with reasonable goals towards fisheries habitat. Thul stated that the DNR-Fisheries is trying to accommodate the need with aeration. DNR-Fisheries also looks to improve wildlife habitat with a lower lake level, but they understand the landowners are not receptive to that. Pine Lake is a marginal fisheries lake and takes a lot of effort. Vonasek stated that the last 2-3 years the association has not been able to stock the lake with fish due to the lake levels.

Dalager stated that a link can be added to the District's website for individuals to access information for the project.