Red Lake Watershed District
Pine Lake Area Project Work Team
Meeting Notes
July 17, 2015

The meeting was convened by Myron Jesme, Administrator, Red Lake Watershed District (RLWD) at 11:00 a.m. The following Project Team members (or their alternates) were present:

Myron Jesme (RLWD)	Terry Sorenson (Landowner)
Nate Dalager (HDR)	Denise Oaks (MPCA)
Cory Gieseke (HDR)	Mike Stenseng (Clwr Env. Serv)
Chad Severts (BWSR)	Lee Coe (RLWD)
Shelly Gorham (DNR)	Gene Tiedemann (RLWD)
Dan Thul (DNR)	Juane Johnson (Landowner)
Dave Rave (DNR)	Ken Schmalz (Landowner)
Larry Puchalski (Corps)	Mark Larson (Landowner)
Les Torgerson (RLWD)	Dan Sauve (Clearwater Co.)

Dalager reviewed the stated goals and objectives of the project: description/location, proposed project, project need, project goals, and project benefits.

Dan Thul questioned the higher fall lake level, but yet the lake level is to be drawn down in the fall for storage. Discussion was held on fall/spring drawdown and how it affects the D.O. levels.

Thul stated that to him, it seems we have a conflict with Pine Lake, that it is not a good fishery lake. It is aerated to improve fisheries, at the same time it is not a good water fowl lake, it seems we are trying to balance the two and you don't get a very good outcome for either. Thul suggested that we keep this in the back of our mind. Myron Jesme questioned if the structure installed in the early 80's helped with making the lake more conducive to fish or was this more of a flood damage reduction project with a goal to raise lake levels for recreation? Thul stated that there was FDR funding used for the structure. Jesme further stated that this area does have a benefited area and the petition originated by a petition from Clearwater County. The RRWMB cost shared on this and now the landowners pay for the maintenance. Dave Rave stated that there is question about flooding by the landowners on the lake, so he does not see how raising the lake helps them. Dalager indicated that it does not help the flooding by raising the lake and that there is also a recreational issues. Dalager also mentioned flooding problems start at an elevation of 1285. Les Torgerson stated that with the new proposed structure it could be drawn down quicker, it would not make it worse. Gene Tiedemann stated that the other aspect is the proposed storage upstream. Dalager stated that modifying the outlet dam at Pine Lake has limited flood damage reduction valuation, it would be for safety, raise levels for recreation, and we could get an additional 6" for the summer. Shelly Gorham asked if the flooding that the lakeshore owners have is just for spring occurrence or summer occurrence. Dalager stated that it is both. The design of the outlet would help the operation, flooding cannot be increased with respect to the outlet, but then you bring in the upstream retention. It takes away the concern of modifying the outlet, if you can retain upstream, it may help reduce the flooding concern on Pine Lake.

Modification of the outlet structure does not increase flooding if we build and design it with those goals in mind. Thul discussed increased flows downstream and effects they may have. Chad Severts stated that the channel could be limiting factor on how much it can hold. Storage upstream will help with the flooding downstream and control.

The channel does become the choke point downstream. Dalager displayed a graph showing the comparison. Dalager discussed the existing structure and three alternatives.

Dalager discussed the graphs showing the three different alternatives for a 100 year 24 hour rainfall analysis: peak WSE. Upstream retention is what makes the uncertainty of the modification of the outlet. Torgerson stated that upstream retention will also help with funding for this project.

Rave asked if we have a 100 year event in June then what happens. Jesme stated that we will hold water upstream until downstream conditions allow for operation. We let normal low flows pass and operate during flood conditions. Spring and summer operating plans can be different to allow for operation on the retention sites.

Dalager reviewed the retention site matrix. Relative to each other the green site has less concerns whereas the red color have more concerns. Looking at the overall rankings the right side of the table shows the rankings. The criteria of what was a maximized site. Discussion during the tour was, what if they lower the elevations of the sites and not use the maximum elevation. Dalager indicated that at a minimum we would want to store about 2,000 ac.ft. at the smaller sites. HDR staff categorized them by small, medium, large, with site F being an exception.

Dalager stated that some sites are not feasible or realistic due to impacts. Site A is not all that feasible, several homes and roads involved-some being paved and ag land. Under the large category this site is the red site we have and ranked last.

Site B-given the criteria Dalager was using for small, medium, large, you can see where it daylights out onto the landscape pools, it is not a substantially different footprint. Dalager displayed footprint contours. Vertical elevation is different, but the true impacts to landowners are similar. It is steep on the edges but flat on the basin. There are no homes directly impacted, but there is land impacted. One site would need to be provided access to their home. Site B ranked 13

Site C has several options, versions of each other. About a mile south of Sites A and B. Involves several homes.

Site C1, there is big difference-14' vertically. Still involves some road raising does not flood homes and not as much ag land impacted.

Site D not far from site C. This site has no structure impacts. The vertical relief between the alternatives is about 5' to go from 5000 ac.ft. to 7200 ac.ft. Ranked 9 for the large site, small site 4 and the medium ranking 7. There is a vertical change in the depth.

Dalager looked at the ranking and the criteria (drainage area, miles of stream, roads, embankment, etc.). These sites are considered on channel. The topography does not give us the capability to store off channel.

Jesme stated that in looking at our 20% Flood Retention strategies, we realize on-channel storage will be looked at very hard by permitting folks and we know there will be obstacles. Jesme indicated that we would have to design each site and assure minimal impacts.

Gene Tiedemann stated that the existing structure on Pine Lake is on channel. The District has other sites that are also.

Thul discussed on-channel sites, stating on-channels sites prompted the EIS, followed by a moratorium of projects. He further discussed what the individual design impacts associated with impoundments. The EIS said that on-channel projects tend to have higher impacts. Since the EIS the projects tend to move more towards off channel due to less impacts and easier to permit. This does not necessarily mean on-channel project would not be permitted, but to avoid greater impacts they should look off channel.

Site E-fairly steep compared to the other sites, short pool- approx.. 1 ½ miles. Vertical difference is 2-4 feet. Site E is two miles from Site D. Sauve stated that this area has a designated trout stream, but there are no trout in it, he has seen it literally dry. Designation of a trout stream makes it more difficult. Designation is based on water temperature. Nessett Creek has not been managed for many years. The DNR has easements with the landowner and did receive letters this past spring about management. Thul stated that with the lack of trapping for beaver, it has impacted the trout stream management. Site E has an abandoned farmstead that would be impacted and some ag land would be affected.

Site F is the Little Pine WMA. Located south east of Pine Lake. No structures impacted, some private lands impacted. A 2' increase in storage would get an additional 450 ac.ft. of storage with water elevation staying within the wetland environment, it would not flood upland properties. Dalager indicated that there may have been conditions in the past with cattail masses plugging the structure where this basin already reached the two foot bounce in elevation. The outlet structure would need modification but the dam would not need much, it would be relatively inexpensive. This site would be easiest to do but also with the least benefit. It would be gated versus ungated. Rave stated it does not move a lot of water. It was plugged up until last year. Severts asked if at the 2' bounce do you have to mitigate for the wetland impacts? Dalager stated that he felt if we can keep our work within the uplands and change out the structure there would be minimal direct impacts to the wetlands and if they were all temporary and under the operating plan. Thul stated that typical the impacts need to be viewed as beneficial to the public. If it is good, no mitigation, if it is not good then mitigation would need to be done. WMA's are purchased with federal funds and if it is viewed as not benefitting them there is not only the issue of federal funds being used its also contrary to the objectives to why it was built. Rave this was partially used with Federal and Ducks Unlimited funds. We would have to do things that would benefit waterfowl. Putting 2' feet of water on this in June would not benefit waterfowl. Thul it

does not rule out options, but we need to quantify it. Dalager stated that if we could get that spring storage maybe that's all we can get.

Next steps are uncertain. Jesme asked Dalager if he has enough information to determine that some sites should be removed. Dalager stated that he felt we could knock off a few with discussion with the PWT, but felt he could not just do that himself. Some could be removed with consensus.

Tiedemann stated that in viewing the ranking on the matrix shown on the right side of page, does that mean some areas should be removed from that ranking. Some would have so many hurdles and the District is investing money studying and eventually it comes down to crunch and maybe there are some we need to get rid of.

	Rating Multiplier		x 1		x 1		x 1.5		x 1		x 1.5		x 1.5		x 1		x 1		x 1		x 1			
	Site	Drainage Area Sq. Miles	Miles of Stream	RANK	Miles of Roads	RANK	Volume of Embankment (CY)	RANK	Maximum Embankment Height (ft)	RANK	Acres of Wetlands Impacted	RANK	AC-FT Storage	RANK	Inches of Runoff Captured	RANK	Structures Impacted	RANK	Number of Landowners affected	RANK	Flooded Footprint acres	RANK	SUM	RANK
LARGE	A	24.1	5.4	13	2.0	16	235000	12	17	4	194	10	4080	5	3.2	10	6	16	13	15	482	13	117.5	15
	B	23.8	5.2	12	1.5	15	344000	13	22	7	209	14	4900	3	3.9	7	0	1	11	13	500	14	103.0	13
	C	21.4	6.5	15	1.5	14	675000	16	33	14	206	13	7000	1	6.1	2	2	14	11	13	530	15	118.0	16
	C-1	21.2	7.6	16	0.6	11	656000	15	35	16	326	15	7000	1	6.2	1	0	1	16	16	594	16	110.0	14
	D	18.5	5.0	11	0.1	8	213000	11	32	13	93	6	3220	7	3.3	9	0	1	8	5	265	8	80.5	9
	E	9.6	3.1	5	0.0	1	55000	5	35	15	74	3	3030	8	5.9	4	2	14	8	5	204	3	63.0	3
	F	6.0	1.6	2	0.0	1	1900	2	8	2	359	16	2050	12	5.9	3	0	1	8	5	447	12	69.5	5
MEDIUM	B	23.8	4.9	10	1.5	13	148000	9	19	5	194	11	3530	6	2.8	11	0	1	7	3	423	11	84.0	10
	C-1	21.2	5.8	14	0.5	10	409000	14	30	10	151	8	4500	4	4.0	6	0	1	9	12	331	9	91.0	12
	D	18.5	4.4	9	0.1	7	172000	10	30	11	83	5	2720	9	2.8	12	0	1	8	5	234	7	79.0	7
	E	9.6	2.9	4	0.0	1	38000	4	31	12	69	2	2450	10	4.8	5	1	12	8	5	176	2	58.5	1
SMALL	B	23.8	4.1	8	0.8	12	73000	6	15	3	178	9	2010	13	1.6	15	0	1	7	3	340	10	86.5	11
	C-1	21.2	4.0	6	0.4	9	135000	8	21	6	122	7	1920	15	1.7	14	0	1	6	1	219	5	79.5	8
	D	18.5	4.1	7	0.0	6	126000	7	27	8	80	4	2070	11	2.1	13	0	1	6	1	206	4	66.0	4
	E	9.6	2.6	3	0.0	1	31000	3	29	9	62	1	1960	14	3.8	8	1	12	8	5	151	1	61.0	2
	F	6.0	0.0	1	0.0	1	200	1	3	1	202	12	450	16	1.4	16	0	1	8	5	221	6	73.5	6

It was the consensus that Site C should be removed for future discussion. Myron stated that Site A should be removed as it has too many barriers with various homes and paved roads. Mark Larson stated that Sites A and B are the same and he has a big stake in them. No structure impacts on Site B. It was the consensus of the group that Sites A and B be removed for future discussion.

It was the consensus of the group to remove Site C1 from large pool, but leave Site C1 in the small category

Severts stated use 1-8 rankings for all three classes in small medium large. The sites would be worthy of all. But Site D is a 9. It was the consensus that we use rankings 1-9. Rave stated that Site F on the large area should be removed also. Jesme stated to keep Site F on the radar. Both Rave and Thul stated to remove Site F-Large. Site F-Small could remain. Thul stated that Site F-Small would also depend on timing, duration, etc.

Severts asked if there are issues not identified on this spreadsheet that could be an issue. Fish passage could be an issue although some folks don't want fish on Little Pine.

Dalager asked the groups thought's on when are we going to hand out maps. Should we distribute maps? Next step is a landowner meeting with the maps.

Thul would like to see an impact on Pine Lake for Site F existing vs 2' control to see what kind of improvement if any that site would have addressing those concerns on Pine Lake.

Discussion was held on holding landowner meeting at the Gonvick Community Center. Larson stated from a landowner perspective they will want to know what they will be paid. Jesme stated that we would look at comparable land sales and wetlands area that are non-farmable. Sauve stated that ag and recreational land tend to be the same. Severts do we show all acres impacted on each parcel? Dalager stated that he felt we could do that. Terry Sorenson asked if will we invite landowners by letter or do a mass mailing. Jesme stated that every landowner will be invited that will be affected by the project. Larson stated that he spoke with someone further upstream, who asked him if we would look at smaller sites on their property. Larson stated that several years ago, a landowner had approached someone regarding storing water on their property. Larson will get some information to Dalager regarding this. Dalager will concentrate on a landowner meeting in the next month.