

**Red Lake Watershed District
Four Legged Lake/JD 5 Project Team
Meeting Notes
August 21, 2015**

The meeting was convened by Myron Jesme, Administrator, Red Lake Watershed District (RLWD) at 9:00 a.m. The following Project Team members (or their alternates) were present:

Myron Jesme (RLWD)	Dan Thul (MnDNR)
Nate Dalager (HDR)	Chad Severts, (BWSR)
Dillion Nelson (HDR)	Dan Sauve (Clearwater County)
Les Torgerson (RLWD)	Patty Olson (Landowner)
Gene Tiedemann (RLWD)	Nathan Nordlund (Clearwater SWCD)
Lee Coe (RLWD)	Shelley Gorham (MnDNR)

Myron Jesme stated that the hearing for the Abandonment of JD 5, RLWD Proj. No. 102 (Four Legged Lake) was held. Jesme discussed the statutory requirements of a ditch abandonment proceeding. If there is any objection to the abandonment, the District is required to investigate the objection. Clearwater County did object to the abandonment for reasons that are well documented in their narrative presented at the hearing. Clearwater County acknowledges that we are proceeding with Flood Damage Reduction process and the County is in favor of working with the Project Team to help protect the County roads and landowners. Dan Sauve stated that the JD 5 system needs to be maintained to keep the water at a certain elevation and contingent on the District taking control of the entire project to protect the local roads and landowners. Jesme stated that the District Board tabled the abandonment to see how the FDR process proceeds.

Patty Olson stated that the pipe on East Four Legged Lake should go back to the 1999 elevations. Dan Sauve stated that the water elevation is close to that now due to beaver dams on the ditch between the lakes and the RR grade trail culvert and that the culvert was placed at the same elevation as it was in 1999. Nate Dalager stated that the inlet is 1426.3, but due to beaver dams the lake is exceptionally high. If the beaver dams were taken out the elevation would be back to ~1426. Dan Sauve stated that the RR grade trail culvert that was removed by Earl Ehlers in early 2000's was put back at the same elevation prior to it being removed and that it closely matches the CSAH 23 road survey as well as the elevation of the RR grade trail culvert. It was noted during the reinstallation of that culvert that a wood structure was abandoned below the elevation of the culvert. So it is apparent that the ditch was lower many years ago, but the existing culvert elevation has been at that elevation for many years. It is unknown when the RR Grade Trail culvert was raised, it was done sometime prior to 1980 when we surveyed CSAH 23. The culvert remains at the same elevation today. Jesme stated that Olson's concern is the high water and fears this process will take a while. If the water is not managed for the upcoming spring and there is a big spring event it will continue to damage her property. Sauve stated that the outlet at the west end is backing water up all the way thru the systems, plus the beavers are causing damage. Shelly Gorham stated that removing the dam only solves the problem for a day, we need to have a nuisance trapper in there to target the beaver. Once the beaver are removed then we can remove the dams to get it to a reasonable elevation. Need to keep trappers in there all winter long. Jesme stated that the District will have trappers out there prior to dam removal and

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that this is an ongoing process. Gorham stated that you can get a nuisance trapping license from the local conservation officer.

Dalager reviewed the July 17, 2015 meeting notes and the following elevations.

Western Basins of Four Legged Lake

DNR Fall Pool Drawdown 1425

DNR Normal Pool 1426

DNR Preferred Max Pool 1428

CCHD Normal Pool below 1427 the lower the better (1423.8 drawdown capability)

CCHD Preferred Max Pool below 1429 for 100 yr and 1429.5 (for extreme back to back flood events) the lower the better

RLWD? Maximize FDR benefit

Landowners? Minimum? Preferred Maximum 1429?

Other?

**Need to define by basin.

Olson stated that she does not have a problem with the elevations presented, but would agree more with the DNR's elevation of 1425.

Les Torgerson asked if the maximum pool would just be for emergency conditions. Dalager replied that, yes it would be short term, not the plan generally.

Dan Thul asked if the preferred max would be a flood pool or management pool. Dalager stated it would be flood pool. The term normal pool would be consistent year to year elevation if possible. It would be steady elevation. The maximum would be something beyond our control due to nature. Olson stated that she has not seen the 1426 elevation in years. Thul stated that this elevation would be at least 1 foot lower than what it is now. Olson replied that this is a personal choice for her land, maybe not the DNR's elevation. Sauve stated he also prefers the DNR elevation. Sauve stated that the elevation of 1423.8 is what the culvert was at the outlet before it got changed in 1998-1999. Sauve would also be happy with that. Jesme stated that from a FDR perspective we would like that and let it build back up for FDR. Olson asked why the DNR only wants it drawn down to the 1425. Gorham stated that it would be for vegetation management, the DNR is concerned as they don't want to start cattail vegetation. If we get much lower we could create more cattail. The numbers here are the western most basin is what she is referring to. That being said, each of the other basins need to be looked at individually. Jesme stated the only problem with set elevations is if you want future drawdown we couldn't achieve that without some operable gate. For management it is necessary to have an operable gate. Dalager stated that we did previously agree that we wanted control on all the basins. Olson stated that in one of the first discussions, the DNR had talked about being able to drop the pool down for management. Les Torgerson expressed his concern about individuals tampering with adjustable stoplogs.

Dalager stated that the District's elevation numbers are not included in here. For FDR effort we would need a 2' drawdown that can be dedicated to gated storage. The DNR preferable numbers only allows a 1' wedge. Olson asked what the highs and lows that the District is looking for?

Dalager asked the Project Work Team if everyone was comfortable with the numbers posted up here and in the minutes. No response was given.

Dalager discussed several diagrams/tables for a series of existing vs. proposed comparisons for the west basin. Under the existing conditions the lakes are in the vicinity of 1427 with the influence of beavers. We have drawdown options of 1424 and 1425, a 2' drawdown. Dalager displayed a graph for a 100 year 10 day runoff event (9" of precip). Assumption was to discharge after the event with the gate 10% open, then over time we open the gate further to get back to normal pool. 100 year event the elevations get to what they get to then we manage the systems by opening gates. As it relates to the goals, those high water goals that (the preferred maximums) he can't give the agencies those (1428 range) and still get FDR benefits. That's the reality of modest structures with flexibility in these basins. Dalager stated that as long as we are not overtopping roads we may have to propose to live with some higher elevations for a period of time. This is for a catastrophic event. Thul asked if these are the elevations that we would be paying easements on. Jesme and Dalager both stated yes, easements would be paid at the highest elevation. Jesme stated that the difference is the drawdown capabilities in the fall. Sauve asked if the fall draw down can affect the growth of cattails. Gorham stated yes it can. Discussion was held on including a fall draw down for cattail management in the operating plan. Jesme compared this concept to how the District currently manages the Moose River Impoundment. Discussion was held on how the drawdown could affect the muskrats if it gets too low. Gorham stated that muskrats do have their benefits.

Chad Severts asked if we operate these in the fall, when do you start the drawdown. Jesme stated that each one is different, dependent on the impacts. Jesme discussed several projects of the District's and their drawdown elevations and impacts to the projects.

Discussion was held on beaver trapping and bounty. Gorham stated that Tim Gray is the Local Conservation Officer.

Dalager discussed three types of structures for the Project Work Team to consider:

Option 1- Box with stoplogs and a slide gate (look at the SW basin)

Option 2-Stoplog in front with slide gate on back

Option 3-Combine Option 1 and 2

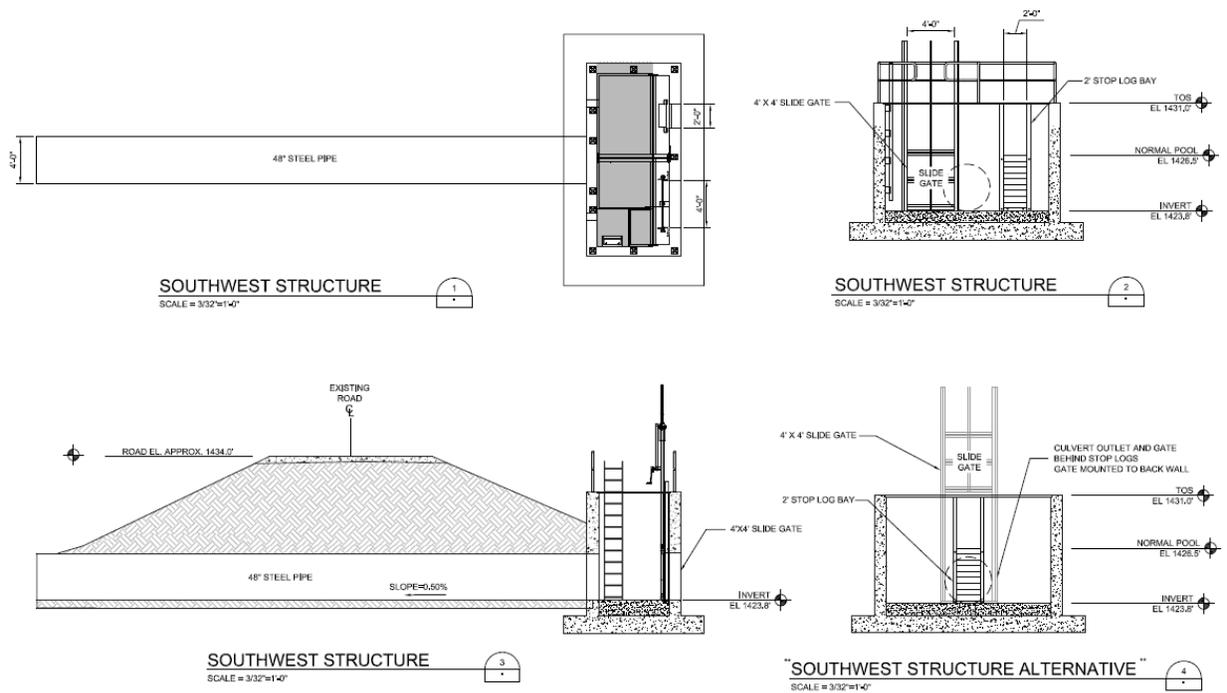
Dalager stated that with Option 1 for a Fall drawdown, you open the gate and close it and you're done. With Option 2, we would need to remove 6-8 stoplogs, and replace the logs once you reach the set elevation. For more flexibility and drawdown we could combine them, open the structure and a second gate at the back. Jesme felt this option was not something the District would have an interest in constructing.

The District would operate the gates, under the agreed upon operating agreements, managed for optimum elevations and consistent with the goals of the Project Work Team.

Gorham stated that for a summer pool we do not want to see it at one fixed elevation, year after, year, as its not healthy for a natural situation. For management purposes this could be built into the plan.

Gorham also stated that when we are at the critical stages for wildrice, etc we would want to be able to get rid of the water so we can prevent bounce. Dalager commented that is where the gate option is nice. Dalager stated that if we have a fully operable structure at the west outlet and then another operable structure on the east basin, it would allow for more flexibility. Torgerson questioned why we want to limit operation? Jesme stated that we would like it more automated than that. Gorham stated that the SE basin is much shallower and cattail growth has increased. Torgerson stated that one landowner is using the lake for irrigation and would like to see the water higher. Dalager stated that could keep the southeast basin and northeast basin at what they are but a discussion should be held with the landowners that are using irrigation for their crops.

Dalager asked if the Project Work Team if they were comfortable with two structures and possibly three. Jesme stated the he would be in favor of two for sure. Sauve stated that he would like to see some type of retrofit so we don't have to tear up the County road. Dalager stated that if we end up with two structures and maybe two pipes, are we ok with Option 1 with a 2' weir that would flow over and into the box. Sauve would like to see the top of the box culvert established to an elevation of 1428.5 or 1429.0, preferably 1428.5. Dalager stated that he thought we could look into that, as the water did not go over the top when they modeled it. Dalager asked the Project Work Team if they are satisfied with this structure option, or do we want a second gate. Thul stated that it is important to maintain some level of flow. It was the consensus of the group that they liked Option 1.



Dalager stated that he looked at more common events, looking at outflow. An example of a 25 year event at the SW basin, this has a 4% chance of happening at a 4.6" rain event. Dalager demonstrated what would happen to the lake levels over the summer and the ability to get FDR benefits, and then return to normal elevations as soon as conditions allow. They have not

established the influence groundwater may have. Torgerson stated that we history proves that in 1921 the bottom of the basin was hayed.

Severts discussed the DNR preferred level of 1425, asking if it is as simple of adding a foot of water since the Dalager's graph started at 1424. Dalager discussed the scenario of water and gate operations and that we have to get any amount of acre feet of gate storage that we can.

Tiedemann stated that when it comes down to moving forward with this project, it will come down to what the District can obtain from this project.

Gorham stated that a 4% chance of it happening in any given year, given that how many times in the last 10 years have we had a rain event to that degree. Dalager asked how often the District has operated their impoundments for extreme events. Jesme stated that impoundments were operated in 2010. Jesme further stated that we have the luxury of the weather forecast with the potential of a large event proposed we can close them. Gorham asked if we have to operate this for the potential of summer FDR. Jesme stated yes, we would operate for FDR whether its spring or summer. Gorham expressed her concern of losing wild rice or nesting due to increased water levels. Jesme stated that this is a small basin we can draw it down fairly quickly.

Dalager stated that once we set the structures we are not operating them for summer floods the structure is doing that automatically. The lake will bounce like it does now for Summer events, the only influence we have now maybe a week after the flood we can open the gate as long as we are not damaging anyone downstream. We are not operating for summer floods other than how the structure is designed. Sauve stated in the summer it will operate similar to the existing situations. It will go up and down dependent on where it starts. Sauve feels it will mostly be operated for spring flood/snow melt. Thul stated that if he reads the chart he sees 25 year storm bouncing about .7 feet. Sauve that's bouncing without us operating it all, but you get that today. 10 year event is 3.69", 25 is 4.67" Dalager stated that currently we don't have the control to draw down the water quicker. Gorham stated that we would want something in place to pull logs in the result of a large event, some parameters in place so we wouldn't harm downstream. Jesme we would have summer operation level and use trigger points. Dalager stated that we would maybe want to operate the gate instead of removing a log because the log would have to be replaced. We would have more control to get rid of it faster if we needed to. Triggers points would need to be in the plan, but could be mutually agreed upon to adjust. Catastrophic events can't be controlled. Out of our control.

Thul stated the scenarios we have discussed, are with four structures and not two structures. Dalager stated if we go to the two structures can everyone live with the west drawdown of 1424, a normal pool of 1426.5 and east normal pool of 1427.5 with a drawdown of 1426. Keep in mind these elevations and operating plans can be revisited.

Torgerson reminded the group that there is an aesthetic factor that people won't want to see it too low. Gorham stated that it is nice to be able to draw it down if needed, it may never be needed. Jesme stated that the trend is changing, we find that agencies want to be able to drawdown more frequently for sediment. Gorham stated it's nice to have options, we have a lot of diversity in this area and with the FDR we could potentially loose the diversity.

Next steps: Jesme stated we are close to getting some kind of design that we can get into a design set. That would trigger permit review. We need to get something on paper that we can start that process. A public hearing will have to be held. We will look at PL566 funding through the NRCS. Thul stated that NRCS staff will be meeting with watershed districts on September 3rd, to discuss PL566 funding. They will help draft the specifics of the cooperative agreement. Once the cooperative agreement is signed, we can start charging your time. The NRCS has money to help pay 70% of the engineering costs and the District would pay the remaining 30%. If we don't qualify for PL566 funding in the end, we would proceed with FDR funding.

Dalager asked Thul is an EAW would be required. Thul stated that he thought an EAW would be required. We would be impacting more than an acre of public water. Thul thought that at a minimum an EA would be required, but the planning process would at least get you thru that effort. Dalager stated that he would like to know what the Corps jurisdiction is. Jesme stated that we won't know until we give them a plan. We can hope for just a general permit if one is required.

Dalager stated that we probably won't be holding a project team meeting for many months. Does not see any wetland viewing, etc in the near future.

Jesme from a landowner perspective we need to keep on top of the beaver dams. Sauve the other concern is the beaver dam at the outlet. Do we want to build some type of structure to be able to get out to the beaver dam and take care of that issue? We need some kind of mechanism to keep them out of there.

Discussion was held if we would need to lower the culvert on County Road 23. Dalager stated that he thought we had it lower so we can draw down the upstream basins. They would bore the culvert at that location.

Discussion was held on communications with the landowners that are using the basin for irrigation. Discussion was held on water appropriations permits.

Dalager stated that we would possibly hold a Project Team meeting mid-winter.

Jesme suggested that the DNR and County staff have discussion amongst their colleagues and then come back to the District with their numbers.

Torgerson stated that he would like a drawing to show the landowners that are currently irrigating their crops. Jesme responded that once we get the elevation from the agencies we can do that.

Torgerson asked when the District Board will act on the ditch abandonment petition. Jesme stated that the petition will be tabled until the FDR process is complete.