Grass Lake Area/Crestview Addition

- Stop logs in tunnel are in!
- Backdoor route work is complete.
- Berm work north of Gramsie Road is complete.
Grass Lake Area/Crestview Addition

- Overflow swale is reinforced
- Grass Lake overflow is at a trickle
- No water moving from Grass Lake to tunnel
- No water moving from Grass Lake to Wetland “A”
Grass Lake Area/Crestview Addition

- Restoration & Punch list” items remain
  - Repair wash outs
  - Repair path
  - Grading near ponds
  - Mitigation repair
  - Sediment removal
Grass Lake Area/Crestview Addition

Staff is working with City on an “operations plan” for stop logs in tunnel

*Question for board –*

After restoration/punch list is complete --- does the board concur their role in implementing improvements to this area or pumping from this area is complete?
West Vadnais Lake Area/Overflows

• West Vadnais Lake level (07/03/2019) – Elevation 884.15
• Working toward a lower outlet from the lake.
• Draft EAW to district in July, VLAWMO in August, then comment period of 60 days...
• Assuming no EIS, then construction of lower outlet can occur this winter.
• A lower outlet provides more flood storage in West Vadnais and Grass Lake, when water levels return to the outlet elevation.
The berm from WVL to 5-Star Estates is approximately Elevation 884.2
West Vadnais Lake Area/Overflows

• A low point in the “berm” led to the overflow
• The overflow eroded approximately 8”-12” in a section of that berm
The overflows lead to Five Star Estates (5/28/19)
West Vadnais Lake Area/Overflows

- On 07/01/2019 sand bags were installed to block the flow through the eroded section.
- The blocked eroded section has reduced the flow significantly.
- Once area dries up, the berm will be restored to its intended height.
Twin Lake Pumping

- District helped draft permit applications for city pumping.
  - MnDOT
  - MnDNR
- To expedite permit approval process... the 100-year elevation of 873.5 was used
- Permits were approved soon after submittal.
Twin Lake

Pump turned on June 11, 2019
Twin Lake July 3, 2019
Elevation 873.4
Twin Lake - Next Steps

- July 1 meeting
  - MnDOT
  - MnDNR
  - Little Canada
  - Vadnais Hts.
  - VLAWMO
  - RWMWD
Twin Lake Next Steps

• Meeting takeaways
  − MnDOT was generally supportive of continued pumping of Twin Lake to a lower elevation
  − MnDNR also expressed support

• Short-term actions
  − RWMWD/Barr prepare permit amendment applications for the City to use... drafts are complete
  − RWMWD/Barr will provide technical assistance on revised lake elevation for pumping.
  − The city staff will bring this to the council next week...
Twin Lake Next Steps (short term)

City Council will likely be asked (by their staff) to consider a number of pumping scenarios which may include...

• Maintain at or near the 100-year elevation - 873.5
• Pump to the elevation of the pipe at the RR – approx. elevation 872
• Pump to the elevation of the lowest sanitary manhole – approx. elevation 871
• Pump to an elevation 870 or lower

*Any pumping is subject to the same concerns and operating plan described last month.*
Twin Lake Next Steps (short term)

The city staff will be looking to the District staff/Barr for assistance and technical guidance including...

1. Preparing the necessary draft permit amendment requests for the city’s use
2. Providing information and data regarding groundwater levels and expected flood levels to consider when selecting a target elevation
3. Providing information and technical guidance on when pumping needs to stop or be delayed due to increased flood risks downstream
4. Increased monitoring of water levels in Owasso Basin and Gervais/Spoon Lake during pumping
Twin Lake Next Steps (short term)

District staff/Barr also will pursue a diversion of the overflow from West Vadnais Lake around Twin Lake (illustration next slide)

1. Restore eroded sections of berm
2. Prepare the necessary permit applications
3. Install a sump to collect and draw the water from
4. Hire a pumping contractor to furnish and install a pump and pipe system from upstream of the 24-inch pipe, south across Twin Lake Boulevard and east along the noise wall to Stymie Pond
5. Facilitate road closure for pipe crossing
6. Operate under similar risks and constraints as current pumping by City.
7. Mn/DOT not excited about this but will consider.
Possible short-term RWMWD actions
What do the managers need to decide tonight?

- **Continue to provide information to Little Canada in support of continued pumping of Twin Lake?**
  
  **Consequences:**
  
  City will need to amend Mn/DNR and Mn/DOT permits to allow a lower elevation in Twin Lake.
  
  City will still have to stop pumping at 12 to 24 hours before a storm event greater than 2-inches and wait until the storm passes through Mn/DOT’s system and Owasso Basin before restarting pumping.
  
  District staff will need to provide a higher level of support during pumping activities.
  
  Pumping action could take a long time to get Twin Lake to lower elevations.
  
  District would assist the City in determining appropriate drawdown limits.
  
  Legal perspective...

- **Direct staff to prepare Mn/DOT permit application for temporary connection to Stymie Pond to divert overflow from West Vadnais Lake from Twin Lake if water levels in West Vadnais Lake overtop the restored berm?**

  **Consequences:**
  
  Pumping would only occur if West Vadnais overtops the restored berm.
  
  RWMWD will have to stop pumping at 12 to 24 hours before a significant storm event and wait until the storm passes through MnDOT’s system and Owasso Basin before restarting pumping.
  
  Mn/DOT may require improvements or restoration to the drainage ditch along I-694
  
  There may be times when overflow from West Vadnais Lake will reach Twin Lake regardless of pumping.
  
  District would be the permit applicant and responsible for those pumping activities.
  
  Legal perspective...
Twin Lake Next Steps (long term)

RWMWD may expand the scope of the Beltline resiliency study to consider

- Off-season drawn down of West Vadnais Lake to help reset the lake and reduce the risk of overflows from West Vadnais to Twin Lake
  - MnDOT voiced concerns and suggested an additional pipe through I-694

The city of Little Canada will likely pursue a permanent high water outlet.

- MnDOT voiced concerns about a new pipe into their system
- The city would likely look to RWMWD for technical assistance in pursuit of this.
- Any high water outlet would likely require a gate valve and operating plan and would be subject to similar concerns and risks discussed last month

Is there board support for these efforts by RWMWD staff/Barr?