**2021 NEWMAN LAKE EQUIPMENT AND LAKE LEVEL OPERATIONAL PARAMETERS**

**LAKE LEVEL MANAGEMENT**

Follow the Policy and Procedures Manual, “Newman Lake Level – Goal Elevations” chart, for lake level adjustments:

* Minimize lake level changes when ice is on the lake to avoid dock damage;
* Start to bring the lake level up when Snotel snowpack depth measurements, in correlation with the HSPF Runoff Forecast Model Tables (in the Policy and Procedures Manual, Appendix E-3), indicate that the necessary snowpack depth remains in the watershed to adequately fill the lake;
* In the absence of on-the-ground snowpack depth measurements, utilize National Weather Forecast Predictions, again, in correlation with the HSPF Runoff Forecast Model Tables (in the Policy and Procedures Manual), to determine when to begin bringing the lake elevation up; and,
* Start to bring the lake level up earlier than the Goal Elevation chart when it appears that snowmelt runoff and/or forecasted precipitation indicates that it may be difficult to reach peak lake level (per Goal Elevation chart) by June 1.

**ONE-TIME ALUM PARTIAL LAKE TREATMENT**

* Alum will be applied to Newman Lake in the region eight (8) meters deep and below, approximately 120-140 acres, at a 250 gallons/acre ratio.
* Treatment will be completed before May 26th, 2021.
* Boat activity is permitted on the lake during the treatment period but should yield to the application barge.
* Treatment will occur over 2-3 days, weather permitting.

**OXYGEN SYSTEM OPERATION**

* Dissolved Oxygen (DO) at mid-station lake bottom (average of 1 and 2 meters from bottom) is below 7 ppm.
* System remains in operation until these conditions cease to exist.
* Prior to the start of one-time alum treatments, the oxygenation system will be turned off.
* Approximately one week after the alum treatment has been completed, the oxygenation system can be turned back on and resume operation.

**DITCH/CHANNEL\*\* OPERATION**

* The ditch/channel should hold water as much as summer weather permits, taking into consideration, 1) the desire to keep dike (peat) material wet, 2) irrigation needs are considered, and, 3) timing of release through the roll/channel considers the potential for mosquitoes; understanding, however, that the area west of the maintained east and west sumps is specifically delineated for flood control of the lake.

\*If volunteer community members can take data samples, as noted below, then the data readings may be incorporated into the decision-making process for equipment management. Data samples shall be taken, at a minimum, at the mid-lake station, one meter below the surface and one and two meters above the bottom (over a lake depth of approximately 10 meters), for temperature and DO.

\*\*Ditch/channel area, that water is contained / controlled within, is defined as the area between the outlet gate at the southeast end of the lake, and roll gate, which is east of Starr Rd and roughly in line with West Newman Lake Drive (extended to the east).

Typical expected operational dates:

**ONE-TIME ALUM TREATMENT**

2-3 days between May 18 – May 26.

**OXYGEN**

ON mid- to end of May

OFF mid- to end of August