

PROPOSED DUNLAP LAKE MAINTENANCE PROJECT

Problems:

1. **WATER QUALITY:** Easily recognizable are indicators of excessive cloudiness (turbidity), algae blooms, and aquatic plant growth. "Hidden" issues include excessive, sometimes dangerous chemical buildups. Turbidity/cloudiness is caused by the unchecked inflow of silt/material from creeks and runoff and disturbance of shallow areas of our lake (Cove A: between East Lake, Lotus and West Lake; Cove B: between East Lake and Lotus; Cove C: between East Lake and Hollyhock; and Cove D: between West Lake and Barnett).
2. **SPILLWAY:** Constructed in 1962, the spillway on the dam does not meet current Illinois Department of Natural Resources (IDNR) standards. Several emergency repairs have been made in recent years. IDNR now requires us to submit a long-term plan and begin implementation prior to the spillway becoming a crisis.
3. **DRAINAGE SILO:** The failsafe on the drainage silo to prevent accidental draining of the lake has outlived its usable life and is in need of redesign/replacement. Failure of this mechanism could lead to a sudden, uncontrolled release downstream, creating liability for all Association property owners.

Solutions:

1. **WATER QUALITY:** Reduce the amount of silt entering our lake, removing material already deposited (focus on the shallowest areas).
2. **SPILLWAY:** Expand the spillway.
3. **DRAINAGE SILO:** Repair/replace the drainage silo.

Project

Phase 1, Long-Term Infrastructure & Initial Removal:

- Create dewatering facility on the property owned by the association at 840 East Lake along with all necessary engineering, piping, permitting, screening, fencing, etc. This basin would be used to deposit silt removed from the lake now and in the future.
- Excavation of East Lake-Gerber silt trap basin using most cost-effective method: dredge or mechanical removal.
- Begin to remove silt from the lake starting with Cove A.

Phase 2, Silt Reduction & Continued Removal:

- Continue to address flow of silt into lake by improving or creating silt capturing/retention interventions at major watershed entries and continuing to remove material from shallow areas of the lake.

Phase 3, Spillway, Drainage Silo & Ongoing Maintenance:

- Expand the spillway as required by the IDNR. This is a long term project.
- Move up the gate on the drainage silo to prevent accidental drainage of the lake.
- East Lake-Gerber silt trap basin maintenance (ongoing).
- Common area maintenance and improvements (ongoing).

Financing:

Phase 1 has a projected cost of \$2 million. Money to fund this phase would be borrowed on a 15 year note. This loan would be repaid with proceeds of a special assessment on all properties in the Association. The special assessment would be an amount not to exceed .0085 per dollar of assessed valuation of the homeowner's property as determined annually by the Madison County Assessor (that would be \$850 per year on a home assessed at \$100,000). The special assessment would end after 15 years when the loan is repaid.

Phase 2: This would be conducted on a pay-as-you-go basis from the proceeds of an increase of \$500 in annual dues to a total of \$1,000. This additional \$500 would be placed in a reserve fund and dedicated to cover on-going silt removal, dam and common area maintenance, and associated improvements and expenses.

Phase 3: Future work would be done on a pay-as-you-go basis from the proceeds of this increase of \$500 in annual dues.

Payments:

- Special assessments would be billed on an annual basis. Property owners will have the option of paying a lump sum up front rather than being billed annually. The payment will be determined based on assessed value.
- Property owners will have the option of being billed on a monthly basis for annual assessments (association dues).
- Special assessment and annual assessment increase would take effect in FY2019.

If you would like to know more:

- The October Board of Directors meeting will be held in the community room of the Edwardsville Public Safety Building at 333 S. Main Street, on Monday, October 29, at 7:00 p.m. All residents are invited to attend.
- For further information:
 - Engineering report on Dunlap Lake www.dunlaplake.org/wordpress/lake-maintenance/
 - Nutrients impact on water quality - <https://www.pca.state.mn.us/sites/default/files/wq-iw3-22.pdf>
 - Suspended solids and water clarity information - <https://www.fondriest.com/environmental-measurements/parameters/water-quality/turbidity-total-suspended-solids-water-clarity/>