

## Boughton Park Information meeting Outline

### **History**

Both dams were built nearly 90 years ago to create water reservoirs for the Village of Fairport.

West Dam was built in 1925 using a concrete curtain wall construction with earthen embankments and a concrete spillway.

East Dam was built in 1932 using a concrete curtain wall construction with earthen embankments and a concrete spillway.

Time passes. The Village grows, needs more water, and the stop logs are added in the year 1960 to both dams raising the reservoir water levels by 18 inches.

About 28 more years pass. The Village of Fairport needs to add additional sources of water and then signs on to the Monroe County Water Authority. The Village subsequently puts the reservoir property up for sale.

The Towns of East Bloomfield, Victor and West Bloomfield vote to purchase the property in 1991 for \$1,500,000. Boughton Park is born.

**The NYS DEC issues new regulations in August 2009** for dams and requires the following:

- Inspection and Maintenance Plans
- Emergency Action Plans
- Inundation Maps
- Engineering Assessments

Boughton Park's **initial Compliance Work included:**

- The **addition of bottom drains and a two valve system** for both dams to give them the ability to lower the pond level over a set period of time.
- **Repair of the spillways and the regrading** of both dams to remove trees, woody vegetation, and old stumps.
- **Embankment reseeding** with specified grass.
- **Preparation of:** Inspection and Maintenance Plans, Emergency Action Plans, and Inundation Maps.

**Next the DEC regulations** called for an *Engineering Assessment* of both dams.

- This is a very detailed stability assessment of a dam's structure and its ability to withstand extreme rain events and its downstream impact in case of a dam failure.
- In addition, dam break analysis, hazard classifications, emergency action plans, inundation maps, inspection and maintenance plans, and spillway capacities are verified.
- Boughton Park spent several months seeking and then reviewing 9 proposals from engineering firms those specialize in dam engineering. Out of the 9 proposals Gomez and Sullivan was selected to do the required assessment.

**What we have learned so far:**

- The crest of the west dam has settled over time and is 2 feet below specification in some places while the east dam is down 6 inches.
- The combination of low crest levels and additional water held back by the stop logs reduces the dams overall ability to handle 150% of a 100 year rain event. Currently both dams cannot meet this requirement.
- Likely Spillway/Containment Capacity Remediation:
  - Raise the crest level back to original design and initial construction height.
  - Remove the stop logs.
- No record could be found in Fairport or Albany that records the types of soils or the compaction method used to form the earthen embankments. Without this data the engineers cannot make an assessment of the dams overall stability.
- Remediation:
  - Bore into embankments for soil samples and to ascertain water levels.
  - Perform final stability analysis, and then if further remediation is needed:
    - One possibility is to add additional soils to extend the embankment further downstream to reinforce the existing earthen works.
    - Another possibility is to add more drains in the embankments.