School Section Lake Technical Advisory Team Meeting
Thursday, June 28, 2018
1:00 - 3:00 PM
Room 255/259 Waukesha County Administration Center

Meeting Agenda

1) Call to order
2) Agenda repair, if needed
3) Recap on 2/27/2018 meeting /review action items
4) Review progress to date:
   a) Public information plan/County web site (www.waukeshacounty.gov/schoolsectionlake)
   b) Soil investigations & site survey
   c) Concrete spillway inspection results
   d) County Board ordinance & budget
   e) Meeting with School Section Lake representatives
   f) Dam failure analysis, O&M plan & Emergency Action Plan
   g) DNR grant application & cost estimates
   h) Review preliminary design for dam repairs
5) Next steps
   a) DNR grant & final construction plans
   b) Project bidding
   c) Construction scheduling (boat ramp, spillway, berm)
6) Review action items
7) Set next meeting date
8) Any other business
9) Adjourn

Committee Chair:
Perry Lindquist, Land Resources Manager
Waukesha County Department of Parks & Land Use
(262) 548-7867
plindquist@waukeshacounty.gov

(Committee members: Please let Perry know if you cannot make it to the meeting.)

School Section Lake Technical Advisory Team

Meeting #2

Thursday, June 28, 2018

Attendees: Frank Arndorfer, Kevin Yanny, Tom Slawski, Perry Lindquist, Mark Steinfest, Andrea Stern, Jim Rose, Leif Hauge, Chris Fandre, Lisa Kreegen

I. Call to Order 1:05 pm
II. Agenda repair, if needed
    a. The committee determined this was not necessary
III. Recap on 2/27/2018 meeting/review action items
    a. Approved by consensus
IV. Review progress to date:
    a. Public information plan/County web site (www.waukeshacounty.gov/schoolsectionlake)
        i. Brief tutorial of website was provided
    b. Soil Investigations & site survey
        i. The soil investigations map was in bid document, showing where the county needed borings
            1. Most borings went down about ~20 feet to ensure that they were low enough for 12-foot long sheet pilings.
            2. There is a 2 foot layer of organic 'muck' lying below berm at original grade, indicating the top soil was not stripped before the berm was constructed.
            3. Site survey was completed by NRCS for design work. NRCS will send a copy of the survey to the County.
    c. Concrete spillway inspection results
        i. Kevin Yanny provided Perry Lindquist a report
            1. Spillway was inspected by Leif Hauge and Kevin Yanny about 3 years ago and again recently to inspect parts that they were not viewable while water levels were at regulatory elevations. The current drawdown allowed a more detailed inspection of the upstream concrete face of the spillway.
            2. Some concrete deterioration, Kevin Yanny recommends repairs and marked the areas.
            3. Boat launch also includes concrete work, so the two projects could be bid/completed together in fall.
                a. County has submitted an application for a state grant for the boat launch, which could provide 50% of funding. Will be provided status of grant in August.
            4. There was no concrete concerns in the area of the stop log channels.
            5. Kevin will help develop bid specifications for concrete work if grant is approved.
    d. County board ordinance & budget
        i. CB authorized $200,000 total expenditures for the project, on condition that we enter in agreement for lake district to reduce future financial liability to the County. Preliminary cost breakdown (used in grant application and CB ordinance):
            1. $5,000 for soil investigations
            2. $5,000 for dam failure analysis
            3. $0 for engineering services (NRCS is providing)
            4. $59,400 sheet piling material ($108/lineal foot)
            5. $118,800 sheet pile installation ($216/lineal foot)
            6. $11,800 for stop log replacement
        ii. Hoping to realize less costs for sheet piling to free up funds for concrete repair work
    e. Meeting with School Section Lake representatives

i. Dale Shaver and Perry Lindquist met with Frank Arndorfer and other SSL representatives
ii. Lake District is not interested in owning the dam
iii. As an alternative, Perry Lindquist drafted an agreement essentially stating that County will not assess property owners for dam repairs and the Lake District will not assess County land for lake management/dredging efforts.

f. Dam failure analysis, O&M plan & Emergency Action Plan
    i. Finished O&M plan, emergency action plan was contingent on doing dam failure analysis
    ii. Leif Hauge took lead on dam failure analysis, working with RA Smith as needed
    iii. Met with consultant, talked to DNR dam reviewer.
    iv. Added cross sections within lake, to allow flow expansion to breach/dam.
    v. In model, created a dam breach, close to where actual breach happened.
    vi. What kept this year's breach from getting larger was likely frozen soil.
    vii. 10-day, 100-year storm event was used in the breach flows.
        1. In the 100-year event, 232 cfs coming into lake, 188 cfs coming out of dam (intact)
        2. In breach scenario, almost 800 cfs came out of the lake
    viii. Displayed and explained the tentative flood shadow map, to intersection with Bark River floodplain.
    ix. Also explained the water surface profile
        1. Large jump just below dam, caused by private crossing on stream (foot bridge)
        2. All houses near HWY Z stay dry in the breach flow.
        3. One house is near to hydraulic shadow line, in an area with backwater of stream, between cross sections. Eliminating ineffective flow areas for the foot bridge may reduce the water surface elevation immediately below dam.
    x. A preliminary draft of the dam failure analysis was sent in with grant application, and is now being finalized with DNR consultation.
    xi. Chris Fandre to provide photos of walking bridge.
    xii. Lisa Kreegen suggested if the state grant falls through, there may be federal grants.
    xiii. O&M draft is mostly complete with a few pieces that are not completed.
    xiv. EAP draft is compete, dam failure analysis will be incorporated into it.
    xv. Working through process with local agencies affected by EAP (district, town, sheriff's department, communication center, etc.)
        1. Getting drafts out to stakeholders and what their responses can be in the event of a catastrophic flood. Not much to it since no houses really impacted.
    xvi. When submitting documentation for grant reimbursement, the County will need to submit finalized O&M, EAP. Internally will need to formulate schedule for EAP

g. DNR grant application & cost estimates
    i. Grant ranking will be released by DNR the end of next week.
    ii. Last year, all dam grant applications were funded with some leftover money.
    iii. Budget was discussed above.

h. Review preliminary design for dam repairs
    i. Mark Steinfest (NRCS) reviewed the draft plan with the committee
    ii. Didn't do much with stop logs except provided some recommendations
    iii. Waukesha County has the opportunity and ability to locate proper fill that meet specs
    iv. Discussed how vinyl sheet piling holds up in frozen conditions. Trenches are dug 2' deep, drive down. Would be better in non-frozen soils, but then trucks may damage earthen berm. There is balancing act of having frozen soils to protect the berm from truck damage vs. trying to install sheet piling in deep frost. Shallow frost is best scenario.
    v. Riprap work will be difficult to do in frozen ground due to soil preparation needs.
        1. It is recommended to reduce muskrat damage and prevent shore erosion.

2. If over budget, riprap could be eliminated.
3. OHWM is incorrect on page 8 of SSL Dam Repair Construction Plans & Specifications
4. Riprap is really expensive in SE WI now due to Foxconn construction.
5. Biologs could be considered instead of rock, but may be less effective.

vi. Benchmarks will be added to drawings and discussed at pre construction meeting.
vii. Page 9 (breach repair) may be removed if County can complete this work. Otherwise, discussed improving horizontal scale to better show repair.
viii. Any further questions or comments should be sent to Perry by COB July 6. Perry will compile and send to Mark.
ix. Waukesha County will bid the project.
x. Mark Steinfest to provide list of contractors to Perry.
xi. To be determined: a system to lift stop logs
    1. DNR: stop logs are no longer common as they are extremely difficult to remove. New dam designs do not have permits for stop logs by DNR. Because this is a dam repair, it will be permitted.
    2. DNR will send a detailed stop log design standard that is acceptable.

V. Next Steps
a. If DNR dam grant is approved, final construction plans will be completed and submitted to DNR for approval.
b. Dam repair permit will need to be applied for (DNR)
c. Chapter 30 permit if we pursue rip rap
    i. DNR would just require grass, and that it is kept mowed.
d. Will wetland delineation be needed?
    i. Likely not, because it would be part of the dam permit
e. DNR recommended closing fishery for winter to prevent fishing out the lake (concentrated in deep holes).
    i. Wardens would close it
    ii. Frank Arndorfer & Heidi Bunk need to request it
f. Per Frank Arndorfer, will also need extension on weed harvesting permit.
g. Project bidding would occur after DNR approves of dam construction plans.
h. Construction scheduling (boat ramp, spillway, berm)
    i. When feedback is received on grant application status, will move forward with construction scheduling.
    ii. Potentially combine spillway repair with boat launch repair in bid documents.
    iii. Schedule also depends on the successful bidder(s).

VI. Review Action Items
a. Grants, final plans, bids and permits (see below).

VII. Set next meeting date
a. Next meeting on October 16, 2018 from 1-3pm
b. Perry Lindquist to present with Frank Arndorfer at the School Section Lake Management District meeting that follows in late October

VIII. Any other business
a. Committee had no other business to discuss

IX. Adjourn 3:05 pm

Action Items:

Action Item	Entity
Send copy of site survey to Waukesha County	NRCS
Help develop bid specifications for concrete repair work on spillway if state grant is approved	Waukesha County – Public Works
Finish intergovernmental agreement between Waukesha County and School Section Lake District	Waukesha County - Land Resources
Finalize EAP, O&M Plan, and dam failure analysis	Waukesha County – Parks and Land Resources
Provide images of walking bridge	Waukesha County - Parks
Provide list of contractors to Perry	NRCS and Waukesha County - Parks
Provide stop log information (ihooks & winch)	NRCS and WDNR
Provide contact information of dam repair permit coordinator to Waukesha County	WDNR
Provide comments/questions about School Section Lake dam repair construction plans to Waukesha County	ALL (July 6 deadline)
Request closing winter fishing	Lake District & WDNR
Update and finalize construction plans based on comments and send to County	NRCS
Provide group with update on grant application	Waukesha County - Land Resources
Coordinate permit applications and the preparation of bid documents if grant is approved	Waukesha County - Land Resources