From: Will Wawrzyn
To: DNR ESTABROOK
Cc: Betzold, Kristina A - DNR
Subject: Comments on Estabrook Dam EIS
Date: Wednesday, April 06, 2016 4:18:32 PM

Hi Kristina,

For your review and consideration, below are my comments on the Estabrook Dam draft EIS.

I understand that the purpose of the draft EIS is not related to any action governing the County's decision to repair or remove the dam. For the record, it is my opinion as a tax paying resident of Milwaukee County and user of the Milwaukee River, the County should change its current policy on the Estabrook Dam from repair with the addition of fish passage to dam removal. Based on the weight of evidence presented in the Environmental Impact Report dated October 15, 2015 prepared by the County's consultant AECOM, removal of the dam is the least expensive alternative and affords the greatest socio-economic and environmental benefits for taxpaying County residents, the Milwaukee River and its users. As of 2008, an independent study concluded that the deferred maintenance of just the Milwaukee County Park infrastructure was over $250 million dollars. The County's own consultant concluded that the life of the dam following the proposed repairs is 20-years after which the entire structure will have to be replaced dwarfing the $6.2 million dollars that will be spent up to that time. The socio-economic and environmental impacts for repairing the dam do not add up.

With regards to the current draft Environmental Impact Statement intended to address the County's preferred Operational Order (OO) for establishing operation of the dam and the impoundment water levels, and the Inspection, Operation, and Maintenance (IOM) plan, Milwaukee County has a long record of failing to adequately fund, operate and maintain the Estabrook Dam for the protection of human health and the environment. The inability to operate water levels in a timely and effective manner has resulted in documented water quality impacts by flushing of polluted sediment, fish kills, failed year classes of important game fish, desiccation of mussel populations, fish and aquatic life habitat, de-watering of wetlands, river bank instability, increased damages from river overbank flooding and surcharging of storm sewers to name a few.

Contrary to decades long arguments by dam repair proponents that the dam protects residents from flooding, only removal of the dam reduces flood liability. The inability to properly operate water levels during even minor flood events has the potential to greatly impact private property and infrastructure and the County's liability. Consider the finding of the SEWRPC flood study.

- With all 10 flood gates open, the 100-year flood event elevations increase between 0.5 and 1.5-feet between the Dam and Bender Road;
- If the County is unable to raise all 10 gates of the dam during the 100-year flood event because of obstacles such as unsafe access to the dam, staff availability, the loss of power during the storm, mechanical gate failure, or the accumulation of ice and debris at the gates, **the flood water elevations would be as much as 1.5 feet higher than the 100-year flood elevation near the dam with the gates open**, **and continue to exceed the 100-year flood elevation at Bender Road. This would result in flood damages to more than the current 292 residences in the current 100-year floodplain.**
- If the County is unable to raise all 10 gates during more frequent and less extreme flood events beginning at the 15-year flood event**, the flood levels and resulting damages would be similar to those experienced during the 100-year flood with all 10 gates raised.**

If the County cannot raise all 10 gates of the dam during the 100-year flood, flood elevations increase up to 10-inches with most of the properties increasing flood elevations by about 5-inches. This is not an insignificant amount when considering how flat the topography is in the Sunny Point neighborhood (between Silver Spring Drive and Bender Road), the potential for additional flood water damages, or the consequences of flood water entering floor drains that contribute to sanitary sewer backups and overflows. Alternatively, under the dam removal option, the 100-year floodplain decreases by up to 6-inches with most properties seeing water levels decreasing by 3-inches. If you own a flood prone residence, every inch decrease in flooding has a real value.

There are approximately 292 residential properties in the 100-year floodplain (all but four are located between Silver Spring Drive and Bender Road in the City of Glendale's Sunny Point neighborhood), 163 properties have water frontage and 129 are located inland from the river and do not have waterfront property and access to the river. In the event that the County is unable to raise all of the dam gates in a timely manner, even for floods much less extreme than the 100-year event, the number of waterfront properties experiencing flood damage will remain the same. However the number of overall properties without waterfront property experiencing flood damage would increase. If all the dam gates cannot be opened in a timely manner and flood damages occur, it would increase the County's exposure to flood damage liability.

Residents with mortgages located in the 100-year floodplain already carry flood insurance and future flood insurance premiums will be increasing. The 129 residences located in the 100-year floodplain and without waterfront access do not have the added property value that waterfront property owners have. As such, they may have the most to gain from being removed from the floodplain boundary by eliminating payment for flood insurance, and absent that stigma, could receive a higher selling price.

Removal of natural and man-made debris from the dam spillways and "dragons teeth", and in particular the fixed crest spillway. The planned addition of the fishway will require additional staffing to remove debris to insure effective fish passage. The debris limits the flood flow capacity and resulting upstream flood elevations of the spillways, and threaten the structural integrity of the spillway and dragons teeth.

To date, the County has appropriated only $51,000 per year of the estimated $160,000 annual operation and maintenance cost required for the dam and proposed fishway. Some in the County and outside the County have stated that the balance for the dam's operation and maintenance from this funding source will be $300,000 by 2017. That balance may not add up. County staff has said that there is not a designated account collecting these rental fees, and they could have already been spent on other projects. The funding from only started in 2014 or 2015 and the account would have been used for no less than three debris removals in 2015, and debris removal must still be completed for 2016. Past debris removals have cost as much as $40,000 per year and 300 cubic yards of debris are still awaiting removal from the Estabrook Park floodplain next to the dam's gated section. The County has never removed the worst of the debris fields located along the fixed crest spillway where access is difficult and privately owned. The fixed crest spillway is much wider and irregular making removal especially difficult and certainly more costly. Any additional shortfalls in funding for the dam and fishway O&M will have to be funded through the annual budget process. Since there is no designated fund for the balance of dam and fishway O&M, the County must allocate the balance by way of the same annual budgeting process that competes for all County projects. Given the existing and additional risks to flooded properties for the range of flood events between the 15-year and 100-year recurring interval should the remaining dam gates not be opened in a timely manner, the IOM plan for the County's Estabrook Dam should:

1. Require sufficient details for the inspection and decision criteria for the removal of debris from the fixed crest and gated spillways, and "dragons teeth".
2. Training of personnel for the inspection of debris fields.

3. Require details on the means and methods for the removal by County staff and equipment or private contractors.
4. Require proof of encumbered funding sources on an annual basis for all IOM tasks estimated at $160,000 per year.

The EIS should clearly state the flood and drainage impacts associated with the Dam's operation for a full range of flood events ranging from the 15-year to 100-year recurring intervals assuming the fishway is constructed and with all remaining gates are opened **and** for the condition whereby all the remaining gates are closed.

Also, it should state that under the gates closed scenario while the number of additional landowners impacted by the full range of flood events could be significant, the specific impacted landowners have not been identified due to the lack of detailed parcel elevation surveys, in particular the area bounded by Silver Spring Drive and Bender Road in the City of Glendale.

SEWRPC as part of their previous flood studies has estimated the financial impacts of the 100-year flood event assuming the gates of the dam are open. The costs should be revised to include the number of impacted residents for the full range of flood events described above under the fishway and remaining gates closed scenario.

This information is needed and consistent with the required Operational Order since the County will be required to staff and operate the remaining dam gates and impoundment water levels to avoid these flood and storm sewer drainage impacts. This information should be developed before finalizing the EIS, and included in the Operational Order and the Inspection, Operation and Maintenance plan so that the County and impacted landowners are abundantly aware of the County's potential liability absent adequate staffing and funding for the Dam's operation.

The timeline for the public review and comment period should be extended until such time more completed fishway plans are available and the impacts to upstream flooding are analyzed. From a structural and regulatory perspective, the planned fishway will be part of the Estabrook Dam. The fishway plans presented in the draft EIS were very brief and far from 90% complete. The effects of the fishway, the remaining gates and the operation of the gates and fishway on flood elevations are not presented.

The EIS, Operational Order and Inspection, Operation and Maintenance plan should specify how and at what extent (e.g., height and volumes) natural and man-made debris, at what extent shall be removed, the frequency, and how it would be removed so as not to impact the structural integrity and the flow capacity of both spillways and dragon's teeth.

The costs for the debris removal along the fixed crest, gated spillway and Dragon's teeth should be differentiated and itemized. The EIS should state that the County does not have a direct and annual funding mechanism for the inspection, operation and maintenance plan for the dam, including debris removal and staffing for operating the water levels and fishway that is estimated at $160,000 per year.

Based on a 2010 aerial photographs, the extent of even partial drawdowns would be significant. Partial drawdowns would expose almost 16-acres of littoral habitat for just the "center cut" and "east oxbow". There would be additional impacts to wildlife populations in isolated and stagnant backwater areas, and additional impacts from freezing and predation. The impacts attendant to "complete" drawdowns would be even more significant.

Finally and most extensively, the following is an article of mine that was published via the Urban Milwaukee.com publication. They include relevant information that could be used to enhance the EIS from a historical and current perspective. The entire article can be accessed by way of the following link:
https://static1.squarespace.com/static/55157271e4b0179c6ec8b662/t/56e342154c2f8502d979d2aa/1457734177488/EstabrookDam_ver_FINAL+03112016.pdf

Respectfully,

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