

River Corridor Foundation of St. Charles
Dam Alternatives Presentation by Scott Shipley
Arcada Theatre
January 17, 2024

Questions submitted by the audience during the presentation:

- Q1: What is the urgency of doing something to the dam now?
- A1: The U.S. Army Corps of Engineers (USACOE) issued a recommendation to remove nine dams on the Fox River to help improve water quality, fish migration, safety and recreational activities. They have offered an incentive to the municipalities where the dams are located by offering to pay in conjunction with IDNR for the estimated cost of dam removal. To obtain that funding, each city where a dam is located must sign a non-binding letter of intent stating its desire to remove the dam by April 2024 and then start the process of dam removal by May 2025. No USACOE funding would be available to those cities that do not opt for dam removal. The IDNR would also transfer ownership and all ongoing maintenance costs to the municipality.
- Q2: If the St. Charles dam is removed how will that change the river?
- A2: The current dam is roughly 7' tall so removing it without any offsetting construction such as the Active River Project would lower the water level in the river north of the current dam by a significant amount. A hydrological analysis would be required to determine the depth and width reductions in each segment of the river as a result of removing the current dam. This may prevent the paddle wheel boats at Pottawatomie Park from operating and would be very detrimental to any power boats from over most of the stretch of the river from St. Charles to South Elgin. Riverfront homeowners' property lines extend out to the midpoint of the current river. They would retain ownership of the newly exposed property although they may need to extend their docks a considerable length to access the new river channel resulting from the dam removal. This 'new' property would fill with vegetation or could be landscaped. These riparian water rights are often difficult to decipher, so legal challenges should be anticipated.
- Q3: The USACOE states that the dams are a liability that neither they nor the IDNR want. How would that liability change with dam removal?
- A3: The boils at the bottom of the dam are essentially a washing machine action that may keep an object underwater for an extended period. While injuries can occur from any on or near water activities the chances of fatalities are greatly reduced with dam removal.
- Q4: Would the proposed Active River Project have any impact on the current river water level north of the UP-railroad trestle?
- A4: The joint task force of the City of St. Charles, the St. Charles Park District, the Kane County Forest Preserve and the River Corridor Foundation mandated that they would not consider any proposal for the Active River Project that would have any effect on the river water level north of the RR trestle or that could have a negative impact on flooding during high water conditions. All three concept plans for the Active River meet.

Q5: What impact would the proposed Active River Project have on the flood plain and requirement for flood plain insurance?

A5: All three of the Active River Project concept plans would greatly reduce the designated flood plain area adjacent to the project area. As flood plain insurance is expensive this could represent a significant savings to property owners in proximity to the area of the river identified as part of the Active River Project.

Q6: Will the proposed Active River Project concept plans have any impact on the ability of fish and other wildlife to migrate up and down the river?

A6: Scott Shipley and his S20 Design and Engineering (now Calibre) team have constructed numerous projects similar to the Active River Project around the world. They have successfully implemented fish passage structures on many of these projects and measured the results. The current dam has a fish ladder at the east end which has not proven to be of much use for fish migration.

Q7: It has been suggested that the Active River Project would incorporate weir type dam structures that could be controlled to change water levels and flows within the project area. Who would control these structures, and could they be utilized to open and "flush" the river periodically?

A7: While weir type structures were considered in the original Active River Project concepts, the current design criteria calls for a series of naturalized artificial rapids that would be less expensive and provide the same benefit of lowering the water level from its current height under the railroad trestle to the current level at the base of the dam. River flushing has not proven to have any long-term effects on a river.

Q8: Would the Active River Project have any impact on the algae and water lily blooms that currently occur on the river north of St. Charles?

A8: The Active River Project would not have any impact on the vegetation growth outside of the project area. The trade off is that in retaining the current water level for boating and other activities there would not be any impact on water quality north of the railroad trestle where the naturalized rapids envisioned as part of the Active River Project would begin.

Q9: It has been suggested that removal of the current dam or implementation of the Active River Project could facilitate the creation of cycle and pedestrian pathways underneath the Main Street bridge in St. Charles. Would there be enough room for such an underpass?

A9: The preliminary engineering studies would appear to support this idea. The arches on both the north and south sides underneath the Main Street bridge are facades that could be removed and replaced with alternative, decorative facades. Such pathways underneath both ends of the bridge could have an impact on Main Street traffic by reducing the number of pedestrian grade level crossings. These pathways could also greatly simplify cycle traffic through downtown St. Charles as a much-simplified connection of the Fox River Trail running north-south along the east bank of the river.

Q10: Would the removal of the St. Charles dam or the Active River Project have any impact on the river levels downstream in Batavia and Geneva?

- A10: Neither the removal of the St. Charles dam nor the Active River Project would have any impact on the water levels downstream in Geneva or Batavia. It is the same amount of water with or without the dam in place.
- Q11: Will the removal of the St. Charles dam have any impact on the wetland areas adjacent to the current river?
- A11: Yes, the adjacent wetland areas north of the UP railroad trestle could have significantly less water if the St. Charles dam is removed. The Active River Project area has no adjacent wetland areas so there would not be any impact. Removing the dam could create additional wetland areas where the width of the river changes.
- Q12: What is the impetus for the Active River Project?
- A12: Creating a lively waterfront environment in the heart of downtown has proven to be an extremely strong economic development engine for many cities around the world. In addition, the increased opportunities for on and near water recreational activities can be a strong benefit to the overall community wellness and brand. Creating a unique environment as defined in the Active River Project within proximity to the entire Chicagoland area could bring significant tourism dollars to the city. In addition, a combination of circumstances may provide an opportunity for funding the Active River Project that may not exist in future years. In 2023, the Fox River was designated as a National Water Trail which included financial resources to increase recreational activities on and along the river. That combined with the potential availability of unallocated funds from the federal infrastructure legislation and commitment for funding 60% of the cost of removing the dam from the IDNR present an opportunity to minimize the need for local funding.
- Q13: What is the impact of removing the dam or constructing the Active River Project on the current level of sediment in the river?
- A13: Removing the St. Charles dam would require careful testing and processes to remove the current level of sediment. As that sediment may contain industrial waste from many years ago, an analysis of that sediment over the entire stretch of river would be required. Similarly, the sediment within the Active River Project area would need to be tested and removed - but only from the project area.
- Q14: What would a timeline look like for either removal of the dam or construction of the Active River Project?
- A14: There are many unknowns in any construction project and especially those that are subject to a myriad of permitting and regulatory requirements. The USACOE has estimated that dam removal could be achieved in less than four years from the commitment date. This includes substantial effort in testing, design, legal, engineering, etc. The actual construction portion of this is approximately one year. The Active River Project could face a similar timeline.
- Q15: How old is the dam and what is its projected life?
- A15: The current dam was constructed in the very early 1900's to replace a wooden dam structure that created a pool of water necessary to provide waterpower for a sawmill located approximately where city hall is located today. The dam was built with the intent of having a major overhaul every 50years. Such an overhaul has yet to occur.

Q16: Is there an estimate for the total cost of constructing the Active River Project?

A16: The concept plans that have been developed for the Active River Project have not been developed in sufficient detail to accurately estimate the cost. Although each river engineering project is unique, a recent project in Ft. Collins CO on the Poudre River is somewhat similar in scope and had a cost of \$12 million which included the purchase of some adjacent land.

Q17: The USACOE has recommended the removal of nine dams on the Fox River. What have other cities decided about their dams?

A17: None of the other cities other than Carpentersville have announced final plans for their dams as they are studying their unique circumstances, costs and potential revenues. The Carpentersville dam was scheduled for removal prior to the recent USCOE recommendations

Q18: When will the Asian carp arrive?

A18: The IDNR operates an electronic barrier at the Dayton dam just before the Fox joins the Illinois River near Ottawa. To date this has kept the Asian carp out of the Fox to the best of anyone's knowledge. There are no plans nor recommendations to remove the Dayton dam.

Q19: When one of Batavia's dams failed a few years ago was there any impact on the water level up or downstream?

A19: When the southern Batavia dam failed there was an immediate drop in the water level between it and the northern (Challenge) dam roughly equal to the height of the southern dam. After the immediate surge as the southern dam collapsed there was no lasting change to water levels downstream.

Q20: What is the next step?

A20: The IDNR with agreement from the City of St. Charles needs to take the lead as they are the ones that the Corps of Engineers will work with. The city must now decide what it wants as far as the river is concerned. Just removing the dam will eliminate the current impoundment and lower the water level between St. Charles and South Elgin. Keeping the current dam in place will mean that the city will assume ownership of the dam and all ongoing maintenance as well as forgoing the offers for funding to remove the dam. The third alternative is to set a goal to attain some level of the Active River Project.

The IDNR has notified the ACOE of the non-binding decision to remove the dam in St. Charles. This decision was due from the IDNR to the ACOE by April 2024. This decision provides the city a window of time to evaluate the Active River Project as well as the costs of assuming dam ownership as quickly as possible so that a final decision can be made prior to the May 2025 binding deadline set by the Corps. On January 22nd, the City of St. Charles announced the formation of a task force to lead this evaluation. The group will be comprised of 3 Alderpersons, 3 representatives of the St. Charles Park District, 1 member of the River Corridor Foundation and 2 others yet to be named.