



**EAST-WEST GATEWAY
Council of Governments**

Creating Solutions Across Jurisdictional Boundaries

**AGENDA
WATER RESOURCES ADVISORY COMMITTEE
Tuesday, July 26, 2022
10:30 AM – 12:00 PM
East-West Gateway Board Room and Virtual**

The East-West Gateway Offices are now open to the public. You are welcome to attend this meeting in person or virtually on the GoToMeeting platform.

You can listen, talk, and/or view the meeting via:

Computer - <https://meet.goto.com/120714149>

Access code for meeting through computer: **120-714-149**

Or Phone - [+1 \(646\) 749-3122](tel:+16467493122)

1. CALL TO ORDER - Carol Lawrence, Chair, East-West Gateway Council of Governments
2. DISCUSSION ITEMS
 - A. **Connected 2050 Long Range Transportation Plan Update**
 - James Fister, East-West Gateway Council of Governments
 - B. **St. Louis Trash Free Project**
 - Rachel Bartels, Missouri Confluence Waterkeeper
 - Josh Wilson, Blue2Blue Conservation
3. OTHER BUSINESS/ANNOUNCEMENTS
4. ADJOURNMENT

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County Executive, Jefferson County

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Regional Citizens

Barbara Geisman
C. William Grogan

John A. Laker
Ron Williams

Non-voting Members

Holly Bieneman
Illinois Department of Transportation

Vacant

Illinois Department of Commerce
and Economic Opportunity

Patrick McKenna
Missouri Department of Transportation

Taulby Roach
Bi-State Development

Aaron Willard
Missouri Office of Administration

Executive Director

James M. Wild

Gateway Tower
One Memorial Drive, Suite 1600
St. Louis, MO 63102-2451

314-421-4220
618-274-2750
Fax 314-231-6120

webmaster@ewgateway.org
www.ewgateway.org

Minutes

Regional Water Resources Advisory Committee

Friday, February 25, 2022

10:30 am – 12:00 pm

Virtual Meeting - East-West Gateway Council of Governments

Attendees:

Carol Lawrence – East-West Gateway Council of Governments
Paul Rydlund – US Geological Survey
Josh Ward – Missouri Department of Conservation
Jay Hoskins – Metropolitan St. Louis Sewer District
Mike Hartoin – SCI Engineering, Inc
Shawn Sullivan – US Army Corps of Engineers
Libby Reuter – Watershed Cairns
Christine Favilla – Sierra Club
Barbara Charry – The Nature Conservancy
Steven Brendel – Madison County, IL
Danelle Haake – National Great Rivers Research and Education Center
Camille Buckley – US Geological Survey
John Schumacher – US Geological Survey
Gary Moore – Washington University
Traci Lichtenberg – Missouri American Water
Chris Sanders - LJC
Robert Stout – MITICO/ Land Learning Foundation
Bill Reininger – Tower Grove Park
Tom Schweiss – Great Rivers Greenway
Steven Brendel – Madison County, IL
William Rein – Tower Grove Park
Todd Miller – Missouri Department of Transportation
Brian Markert – U.S. Corps of Engineers
Katherine Wiesehan – Land Learning Foundation
Rick Brown – City of Wildwood
Allison Joyce – Missouri Botanical Garden
Curt Skouby – City of St. Louis Water Division
Shawn Sullivan – U.S. Army Corps of Engineers
Rob Kennedy – Missouri Botanical Garden
Rachel Rimmerman – St. Louis University
Stephanie Grathwohl
Chris Sanders – Lamar Johnson Collaborative

If you attended this meeting and aren't listed, please let us know and we will update the minutes.

Staff:

Mary Grace Lewandowski Jennifer Vuitel Aaron Young Maureen McCarthy

1. CALL TO ORDER

The virtual meeting of the Regional Water Resources Advisory Committee (WRC) was called to order by Chair Carol Lawrence, East-West Gateway Council of Governments (EWG). Those attending introduces themselves.

2. DISCUSSION ITEMS

A. **Tower Grove Park East Stream Project**

- Bill Reininger, Tower Grove Park

Tower Grove Park was established by Henry Shaw in 1872. This year is the 150th anniversary of the park. It is 289 acres in total and one of only a few parks in the country that has been named a National Historic Landmark.

The funding for the East Stream Restoration Project comes from the Crawford Taylor Foundation and the Metropolitan Sewer District (MSD). A few of the key goals for this project include daylighting a stream which had been buried underground and capturing and treating the stormwater for the eastern half of the park. The stream will be brought to its original alignment. Tower Grove Park is a fairly unique setting for a project like this due to the fact that it is a classic Victorian park and is listed on the historic registry.

There will also be educational and play aspects to this project. It will serve as a kind of platform for curated walks within the park as well as free passive learning for visitors. Different design iterations were went through and found that a passive write your own story type of play is want seemed to fit best within the context of the site. There will be 15 acres of native habitat created along with the stream.

The final key aspect to this project is the integration of the Osage Nation and their story into it. Tower Grove Park sits on historic Osage Nation land. Tower Grove Park is working closely with the tribe and their representatives to tell their story in the best way possible.

When designing the project, documents from the archives were referenced to understand the historic layout and context of the park to pinpoint the original stream alignment and to look at the historic vegetation. Head walls from the original stream alignment in the below-ground infrastructure are still in place and functioning today. At the very beginning, written narratives and hand drawn graphics were examined that provided additional context for the project. Building on that exploration the site was modeled in 3D and used drones to understand the scope of graphic conditions and how that might influence the hydrology of the space.

There were a number of stakeholders involved and there were several design meetings with the National Park Service, Missouri Department of Conservation, and the Osage Nation. Tower Grove Park wanted to get feedback from the key stakeholders in order to take this stream daylighting and stormwater management project and turn it into something special.

The project has been broken down into three key sections: the headwaters; the middle reach; and the terminus of the basin. Starting at the headwaters there will be a sidewalk which is an

accessible route that would allow the visitors to be totally exposed to the stream corridor right from the beginning. One of the key features of the headwaters, which is an artificial area, is that the water is potable from the beginning to the first stream crossing to help facilitate the adventure and play aspect. After the headwaters is where the existing stream is brought to the surface and from there on is a stormwater collection system and infrastructural improvements that treats 40 acres of the drainage area. Stormwater is also being collected from two inlets on Arsenal St. from the surrounding neighborhoods. The corridor will be able to treat the quantity of water produced by a 1.14 inch rain event. Any remaining water that cannot be treated will go back down into the sewer system.

A series of the traditional MSD details are utilized but are done in a slightly different way in order to make this project an amenity for the park that goes beyond traditional stormwater basins. We worked closely with MSD to make subtle modifications to the details of their rain garden plans. For example, at the basin where there is a large wet meadow the park can turn that gate valve off and flood that area to create a wetland. The plants selected throughout the project are regionally adapted and can self-adjust as the water levels regulate to create a robust plant matrix within the whole project corridor.

Where the headwaters section begins there is rip rap to help dissipate the flow but in between the rip rap sections there will be native soil that reflects a prairie stream condition which is regionally important because that is what would have been in this area back when it was largely oak savannah. The middle reach area is set to be an important focal point of the project. It has groves of mature sweet gum trees and the stream itself will wrap around these groves. There will be a formal border by the stream that will define the space between the ornamental side and native side of the park and help everything fit into the Victorian design of Tower Grove Park. The basin section will have an area with stone seating to create a platform for an outdoor classroom space. There will be a child activated feature in the headwaters section where they can press a button and charge the system with a flow of water and also provides a moment to tell a story from an Osage perspective of their creation. There will be play structures that fit in to the Victorian structure of the park.

The planting strategy is a critical component of this project. It begins with a woodland habitat and as you move downstream there will be ornamental borders. There will be wet basins, wet and dry savannahs, and buffer areas which are a part of the BMP treatment that are offset from the stream corridor. Seasonal interest has been integrated so that every time a person visits the park they will be seeing something different and interacting with the corridor in a different way.

Anthropology was an important part of studying and integrating the Osage Nation into the project. There is not currently an existing expression of a village so this was an opportunity, from an education perspective, to integrate a scaled Osage Village into the project. The different parts of the village are represented in the ground plane and are not vertical structures. Some of the traditional symbology of the tribe will be placed throughout the stream floor in their traditional habitat. The ethnobotany aspect of the Osage Tribe was also thought of and how the plant materials were important to them and integrate them throughout the corridor.

This project will do stormwater mitigation but it also has many layers of opportunities from cultural learning to experiential education. The donors for this project not only provided funds to build it but also funded an endowment to help maintain it. The Tower Grove Park team and the use of contractors to maintain the landscape.

B. Piasa Island Habitat Restoration and Enhancement Project

- Brian Markert, U.S. Army Corps of Engineers

The Piasa and Eagle's Nest Islands project is located just upstream of St. Louis, above the Melvin Price Locks and Dam. It is an island complex in the Alton pool roughly half way between Alton and Grafton. Ecosystem restoration is an authority granted to the U.S. Army Corps of Engineers (USACE) us by Congress. The Upper Mississippi River Restoration Program that has the goal of creating a healthier and more resilient ecosystem that sustains the river's multiple uses. This program has been around since 1986 and is a partnership between five different agencies, the five states that make up the Upper Mississippi River, many NGO's, and other local stakeholder groups. There are a number of completed projects up and down the river. The Upper Mississippi River Restoration Program does on the ground restoration as well as science in support of knowledge and restoration through the state and federal partners.

Before this project started there was a lot of community concern that the side channel in this island complex was changing rapidly in the context of a river's life. In this spot there has been observed change in the depth of this side channel and concern that it would get closed off completely. The main problems identified in this area include a loss of depth and flow in the Piasa Chute, loss of backwater habitat, and loss of a diverse island mosaic. Project area covers 1,381 acres. The goals were to: increase aquatic side channel habitat; increase connected backwater habitat; and restore diverse island mosaic habitat.

USACE is working with the Illinois Department of Natural Resources (IDNR) and the Fish and Wildlife Service (FWS) on this project. All of the projects that the Corps builds get turned over to another agency for the long term operation and maintenance. The first cost of the project was 100% federal, the land is owned by the federal government. Since this project is located close to many communities, there are a lot of interested parties. These groups were helpful and shared their knowledge and insight of the area and provided feedback and support throughout the project.

The USACE historical data is a good starting point when trying to get to a point where some level of this system can be restored to what it was before. There is a 1927 aerial picture of the Mississippi River that shows topographic diversity including a lot of sand bars and more islands than seen today. The team had these things to consider when moving into the restoration planning.

Funding was received to go into the feasibility planning process which is typically about a three year process. As part of that process a tabletop model was created in the lab to get a better idea of how some of the potential project features are going to act in the river system. The model provided a lot of good information but there were still some concerns about what could happen at higher velocity stages. A computer program was utilized to perform adaptive hydraulic modeling

which helped paint a better picture of what will happen during higher flow events and the effects on the side channel. After the modeling the group was able to help formulate the alternatives that were ultimately selected. In the design and engineering phase the packages were developed that will move on to construction.

There is a muscle bed in the project area so trying to do no harm there. Pre-project monitoring was performed and will continue post-project monitoring to evaluate that situation. Currently, the first stage of construction is underway where the base of several new islands are being made. The second stage will be hydraulic dredging of the side channel that will remove about five or six feet (over a million cubic yards) of material. Excavation will be done to restore some access into the historic backwater part of Piasa Island. In the vicinity of where what is known as the original Sunflower Island was another island will be constructed. At the furthest point downstream for this project a rock ring will be constructed which will be just a couple of feet above the normal water surface elevation in that area. The methodology is to first construct the rings and then place the material from the dredging into the entities to fill out the islands. Once the islands are constructed the plan is for them to be naturally vegetated. There was interest in possibly notching some of the rock rings so there is a combination of protection from the rocks and areas that can naturally erode and vegetate.

C. Upcoming Infrastructure Projects

- Shawn Sullivan, U.S. Army Corps of Engineers

The Bipartisan Infrastructure Law, now known as the Infrastructure Investment and Jobs Act, was signed by the president in November last year. The total amount appropriated was just shy of one trillion dollars and allows for \$550 billion in new spending. It includes specifically \$17.1 billion for the civil works program. That is a significant amount of that infrastructure investment for water resources projects.

The environmental infrastructure assistance projects funded specifically within the St. Louis area total \$744 million in construction funding and includes four different projects. The Infrastructure Investment and Jobs Act has provided some historic investments as it relates to water resources and the St. Louis area will see dividends from that. The Corps will be delivering these projects over the next several fiscal years. The first project is on the Mississippi River waterway system and is a complete redesign and construction of Lock and Dam 25 at Winfield, MO. This project has been allocated \$732 million. There will be a new 1,200 foot lock chamber to increase the efficiency, reliability, and safety of the lock and dam system. This project will alter the future for the Upper Mississippi River system as a vital transportation and ecosystem corridor. The unprecedented aspect of this project is that it is being constructed 100% with federal funds. When the project is completed there will be about 1.5 hours of reduced blockage time to pass freight through that facility.

Lock and Dam 22 received \$97.1 million in funds to construct a fish passage structure. This lock and dam is located just south of Hannibal, MO. The project is being led by the Rock Island Corps of Engineers District. This project will ultimately increase the size and distribution of native migratory fish populations so they can better compete with invasive populations that seem to flourish upstream of this particular lock. Another project being completed with \$12 million of

this funding is being done in partnership with the Metropolitan Sewer District (MSD) to address combined sewer overflows in the City of St. Louis and adjacent St. Louis County. The goal is to eliminate and control combined sewer overflows that affects public health and safety in MSD's service area. MSD is about ten years into a twenty-three year multi-billion dollar program to address overflows in the area sewer systems. The partnership between the Corps of Engineers and MSD will help to maintain the human health and safety component as well as minimize the cost MSD customers pay for all the required improvements associated with address combined sewer overflows.

The third project being addressed with this funding is in Madison and St. Clair Counties in Illinois. Of the total allocated funds, this project has been given \$25,000. The goal of the project is to initiate and complete Letter Report for environmental infrastructure design and construction assistance for sanitary sewer and drinking water systems in Cahokia Heights and surrounding communities within St. Clair County, IL. The Infrastructure Investment and Jobs Act contained \$45 million for us to support local and state governments with floodplain management services at full federal cost. The USACE has been asked by Cahokia Heights to provide engineering assistance for analysis of the area, to evaluate some specific problems as it relates to flooding and sewer problems within the area and to recommend solutions.

The final project is along the Meramec River in Fenton, MO. There will be a two year feasibility study under the Corps' Continuing Authorities Program to evaluate a small flood control project. This project received \$200,000 which gives the Corps the ability to evaluate alternatives in the community to minimize future flood risk from both main stem flooding and flash flooding. One thing that helped secure funds for this project was the April 2022 floodplain management plan. It provided a good resource to help justify the needs within those communities as well as budget packages as the USACE moves forward and continue to assist the Meramec region.

3. OTHERBUSINESS/ ANNOUNCEMENTS

On March 22nd and 23rd St. Louis University WATER Institute will be hosting their 2022 virtual Summit for Water.

On March 3rd the USACE and the National Flood Risk Management Program are hosting a one hour webinar about environmental justice through participatory flood risk management.

The Greenway Network is going to hold their River Soundings event on September 9th and 10th in Augusta, MO.

4. ADJOURNMENT

There being no other business, the meeting was adjourned. The next meeting of the Water Resources Advisory Committee will be on Tuesday, July 26, 2022.