



**EAST-WEST GATEWAY
Council of Governments**

Creating Solutions Across Jurisdictional Boundaries

**AGENDA
WATER RESOURCES ADVISORY COMMITTEE
Tuesday, August 20, 2024
10:30 AM – 12:00 PM
Virtual on GoToMeeting**

You are welcome to attend this meeting in person at the East-West Gateway office or virtually on the GoToMeeting platform.

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

Computer - <https://meet.goto.com/492902557>

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1. **CALL TO ORDER** - Carol Lawrence, Chair, East-West Gateway Council of Governments
2. **DISCUSSION ITEMS**
 - A. St. Charles Watershed Alliance**
 - Jay Bergeron, St. Charles Watershed Alliance
 - B. St. Charles County Local Voluntary Buyout Program**
 - Pinar Turker, St. Charles County
 - C. October 2024 BMP Watershed Summit**
 - East-West Gateway Council of Governments
 - D. St. Louis Region (Missouri) Hazard Mitigation Plan Activities**
 - East-West Gateway Council of Governments
3. **OTHER BUSINESS/ANNOUNCEMENTS**
4. **ADJOURNMENT**

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Minutes

Regional Water Resources Advisory Committee
Tuesday, February 27, 2024
10:30 am – 12:00 pm
East-West Gateway Board Room and Virtual

Attendees:

Carol Lawrence – East-West Gateway Council of Governments
Bonnie Harper – Open Space STL
Jay Bergeron – St. Charles Watershed Alliance
Stacy Arnold – Deer Creek Watershed Alliance
Matt Jones – U.S. Army Corps of Engineers
Scott Billings – SCI Engineering
Robert Stout – Midwest Waters
Jo Schaper – Meramec River Recreation Association
Sarah Wright – Missouri Department of Natural Resources
John Schumacher – U.S. Geological Survey
Josh Ward – Missouri Department of Conservation
Rick Brown – City of Wildwood
Tom Schweiss – Great Rivers Greenway
Gary Moore – Washington University
Laura Madden – Phoenix Consulting
John Johnson – Missouri Department of Natural Resources
Lori Goerlich – Open Space STL
Kaleena Menke – Menke Consulting
Danelle Haake – National Great Rivers Research and Education Center

If you attended this meeting, please let us know, and we will update the minutes.

Staff:

Mary Grace Lewandowski, Jennifer Vuitel, Aaron Young, Anna Chott, Maureen McCarthy

1. CALL TO ORDER

The in-person 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 introduced themselves.

2. DISCUSSION ITEMS

A. Lower Meramec BMP Summit

- Jennifer Vuitel, East-West Gateway

East-West Gateway is getting ready to hold our Nature-Based BMP Summit, which will be occurring most likely in October of 2024 with a workshop to follow in spring of 2025. The Summit will cover a range of stormwater best management practices (BMP) solutions for local

governments. The idea is to provide a range of solutions to the various municipalities around our region, but more specifically in the Lower Meramec Watershed, that can help address problems while improving water quality.

B. Open Space STL Land Protection Manager Activities

- Bonnie Harper, Open Space STL
- Lori Goerlich, Open Space STL

Founded in 1965, Open Space STL works independently and collaboratively to conserve and sustain land, water, and other natural resources for the health and well-being of communities throughout the St. Louis region. Open Space STL defines the region as a 100-mile radius from the City of St. Louis that includes Franklin, Jefferson, St. Louis, and St. Charles Counties, as well as the entire Meramec Watershed. The organization is probably known best for running Operation Clean Stream since 1967 where thousands of volunteers have come together every year to do a massive clean-up in the Meramec Watershed.

Due to an increase in urban sprawl in the 1960s, the Open Space STL founders were highly focused on helping St. Louis County establish its parks system and creating a greenway plan for the region. As a result of that work, the Land Trust Program was created to identify areas that can be acquired and set aside for public use to discourage improper land use and detrimental development. The Trust will purchase land themselves or provide funding to other organizations to purchase land. The program's goal is to show people there are alternatives to development and that open space is valued within our region. Open Space STL also holds conservation easements and works with private landowners. Conservation easements are perpetual and are tied to the land no matter who owns it. The land may not be in the public domain, but it still ends up being protected, which helps improve water quality and biodiversity outcomes. While Open Space STL will do this type of work throughout the region, historically, most land acquisition projects have been done within the Meramec Watershed. The most notable projects include Castlewood State Park, the Forest 44 Conservation Area, and the Myron and Sunny Glassberg Conservation Area.

The Meramec Watershed remains very important, and Open Space STL wanted to do more to protect the watershed, given the growing development pressures. The Meramec River is a very important resources for St. Louis because it is a free flowing river that supports high levels of recreation and tourism and promotes biodiversity. Open Space STL took the opportunity to expand their Land Trust Program and put more resources into the Meramec Land Protection Program. Open Space hired a Land Protection Program manager, Lori Goerlich, to promote the growth of the program. In order to increase the protection of the watershed the program's goals include collaborating and integrating with local municipalities and partnering with other organizations on outside-agency projects within the watershed. Open Space STL can assist other organizations with their projects by providing funding, taking the lead on landowner relations, hold land until a public land manager is ready to accept a land donation, fulfil funding conditions, and contribute to ongoing management of new public open spaces.

In order to decide what projects to take on and which areas should be a priority, Open Space STL is utilizing several regional watershed plans and floodplain tools. Open Space also utilizes their network of volunteers and landowners with conservation easements to take on projects that may

be presented through that network. Another resource for potential projects will come from updating the 319 Lower Meramec Watershed Plan.

C. Fenton Missouri Flood Risk Management Study

- Matt Jones, U.S. Army Corps of Engineers

The most notable flooding that the City of Fenton experienced was in the winter of 2015 – 2016 and spring of 2017. These floods triggered several studies, including this one. This study is being funded by the U.S. Army Corps of Engineers Continuing Authorities Program (CAP), which is a suite of nine authorities under which the Corps can plan, design, and implement certain types of water resources projects without additional project-specific congressional authorization. CAP is for flood risk management projects that are relatively small in size, scope, and complexity with limitations on costs and scope.

The U.S. Army Corps of Engineers (USACE) general study process includes the following steps: generally identify the flooding problems and determine objectives for flood risk reduction; Identify the existing conditions in detail and estimate future conditions; Develop several alternatives to reduce flood risk; Evaluate the effectiveness and impacts of each alternative; Compare the alternatives to each other; and then select the best plan. Stakeholder involvement and evidence gathering take place throughout the process. There are several prior studies that are related to this current study. In 2018 USACE and local communities developed a Lower Meramec Multi-Jurisdictional Floodplain Management Plan with mitigation techniques.

The Yarnell Creek PAS Flood Risk Evaluation for the City of Fenton began in November 2022 with the project initiation and alternative development. From February to September 2023 there were public and agency scoping meetings and an evaluation of the alternatives. In January 2024 the tentatively selected plan was identified and the public and technical reviews began.

For the current study the existing conditions were outlined to determine the risk to the population and structures. It was found that for the 100-year flood levels there are approximately 87 flood prone structures which include 58 commercial buildings, 12 residential buildings, one public building, and 16 industrial structures. The average depth of flooding on these structures for the 100-year flood event varies from 1.1 to 3.6 feet.

After determining the current conditions in Fenton, the USACE outlined possible flood risk reduction measures. Structural measures include building detention structures, diversion structures, channel modifications, and constructing levees or flood walls. Non-structural options include floodproofing buildings, elevating structures in place, buyouts or permanent relocations, flood forecasting, risk communication, and instituting ordinances and regulations. Nature-based solutions include floodplain restoration and watershed restoration and conservation. As the plan formulation continued there were alternatives developed and a final array of risk reduction measures laid out. First was the no-action alternative, looking at what would happen if no action was taken. The second alternative was levees, the third was nonstructural, and the fourth alternative was a combination of levees and nonstructural measures.

The third alternative option, nonstructural risk reduction methods, became the USACE recommended plan.. It was broken down into eight initial reaches or stream segments, which are elements with one or more inflow and only one outflow. The reaches to address were decided by what would make the most hydraulic or economic sense. Five reaches were retained for further analysis.

Criteria and costs were examined as part of evaluating the final array of risk management recommendations. The primary evaluation criteria looked at whether the action met the planning objectives and what its economic costs and benefits were. Looking at the selection of alternatives, the no-action alternative would have a cost of \$0, the levee alternative would have an unknown initial cost, and the non-structural alternative would initially cost \$3,349,000. The cost breakdown of the non-structural plan can be seen in the table below.

Nonstructural Plan	
Nonstructural Action	
Floodproofing	13 Commercial, 0 Residential
Acquisition	0 Commercial, 0 Residential
Elevation	1 Residential
Costs	
Total Project Cost	\$3,349,000
Annual O&M Costs	\$0
Annualized Costs	\$127,000
Economic Benefits	
Annual Damages Reduced (Benefits)	\$332,000
Net Benefits	\$205,000
Benefit to Cost Ratio	2.6
Environmental Impacts	None
Cultural Impacts	TBD
Real Estate	14 properties - \$348,000
Residual Risk	
Life Safety	Unchanged - minimal
Economic Damages	\$2,082,000
Critical Infrastructure	Unchanged - minimal

The agency endorsement of the recommended plan is estimated to happen in June 2024 with the approval of the final report taking place in December 2024. Between now, February 2024, and the final approval of the report USACE will be documenting and considering all public, agency, and Tribal comments on the draft. They will also refine the tentatively selected plan, complete a detailed cost estimate, finish the environmental compliance tasks, and complete the district and agency technical, policy, and legal reviews.

Comments and questions can be submitted to Matthew Jones at Matthew.A.Jones@usace.army.mil or by mail to U.S. Army Corps of Engineers, St. Louis District, C/O Mr. Matthew Jones, 1222 Spruce Street, St. Louis, MO 63103

D. Deer Creek Watershed Alliance 2023 Brining Workshop

- Stacy Arnold, Missouri Botanical Garden

In 2023 EPA accepted the 2023 Deer Creek Watershed Management Plan that included chloride as one of the pollutants of concern. A study done by Dr. Danelle Haake was a catalyst for including chloride in this plan. Dr. Haake conducted a study from 2016 to 2018 that looked at six cities in the St. Louis region: three that were brined and three that were not. The study found that the cities that brined had a 45% reduction in the amount of chloride in the runoff. This study helped to justify brining as a management measure. The workshop last November in Webster Groves was a first step in reaching the milestones set in the Deer Creek Watershed Plan for meeting the goals set for reducing chloride levels in the watershed.

The presenters at the workshop included Dr. Danelle Haake of the National Great Rivers Research and Education Center, Roland Biehl from the Metropolitan St. Louis Sewer District, Todd Rehg from the City of Webster Groves, and Stacy Arnold of the Deer Creek Watershed Alliance. The target audience was municipalities. The topics presented included: chloride reduction planning and implementation efforts to improve water quality in the Deer Creek Watershed; reducing chloride in urban stormwater runoff; municipal winter deicing best management practices in the St. Louis area; financial benefits of brining in Webster Groves; and tour and demonstration of Webster Groves' brining equipment. Roland Biehl spoke on how brining helped the sewer district meet MS4 requirements and that MSD is working with co-permittee municipalities on reducing the amount of road salt that they use and improving winter road management practices.

Information was provided on how to carry out brining on a municipal level, but there isn't a go-to method for smaller areas like sidewalks and parking lots. There is a possibility to work with groups such as landscaping companies to identify methods of utilizing brining or other options to reduce the impact of sidewalks and parking lots have on chloride levels in the waterways. A great addition to current work by the Deer Creek Watershed Alliance would be not only educating municipalities but also introducing a rebate through the rainscaping cost share program to assist municipalities in converting existing equipment or purchase new equipment to be able to utilize brining as an option. The City of Webster Groves has applied for a 319 grant part of which would be utilized to develop a brining training guide for municipalities so they can also implement brining as a chloride reduction management measure.

An important note is that brining is just one tool in the tool box for better winter road treatment, and is not always the best choice depending on the weather. It is a method that is best for dry winter storms because it will not be effective in the rain. Brining has the benefit of being able to be applied in advance of a winter storm which increases the safety for transportation workers. Other tools to reduce chloride in runoff include controlling the amount of salt being applied to the roads by better calibrating the salt spreading machines. Future collaboration between municipalities, local companies, and organizations can lead to increased capacity to utilize brining and continued progress in reducing chloride levels in our waterways. The workshop was a first step in bringing people together to educate one another and share resources. There is hope of hosting other brining workshops in the future.

3. OTHER BUSINESS/ ANNOUNCEMENTS

There is a OneSTL Sustainability Lab today, February 27, at 3:45 pm at T-Rex in Downtown St. Louis and on Zoom. More information can be found at <https://www.onestl.org/>

The next Mississippi River Recreation Association meeting is on March 7 at 3:00 p.m. at the Kirkwood Community Center.

The East-West Gateway Draft Title VI Plan is out for public comment through March 8, 2024. More information on the plan can be found at <https://www.ewgateway.org/about-us/what-we-do/title-vi/>

The Metropolitan St. Louis Sewer District's (MSD) Proposition W and Proposition S are on the April 2, 2024 ballot in the City of St. Louis and St. Louis County. MSD will be hosting a series of town halls in March 2024.

The Upper Mississippi River Basin Association released the "How Clean is the River?" Report. More information can be found at <https://umrba.org/howcleanriver>

4. ADJOURNMENT

There being no other business, the meeting was adjourned. The next meeting of the Water Resources Advisory Committee will be on Tuesday, August 20, 2024.