



HEARTLANDS
CONSERVANCY

Prairie du Pont / Judy's Branch Watershed Plan

Overview

08.01.2023 - John O'Donnell - Water Program Manager - HLC



A regional not-for-profit organization

Founded in 1989 as Southwestern Illinois RC&D with technical assistance from USDA-NRCS.

Our mission:

To conserve, connect, and restore the diverse natural and cultural resources that sustain the people and communities of southwestern Illinois.

What we do:

Heartlands Conservancy works for clean water, access to the outdoors, healthy ecosystems, and resilient communities in southwestern Illinois.





Land

We conserve important ecological, agricultural, recreational, and cultural places. We also “create” places for community enjoyment, such as parks, gardens, and trails.



Water

We work in partnership with public agencies and residents to protect and manage water in southwestern Illinois through green infrastructure, flood and climate adaptation strategies, and healthy watershed initiatives.



Communities

We work with and assist communities on projects and initiatives focused on parks, trails, planning, mapping, climate adaptation, green infrastructure, community engagement, and many other needs.



Watersheds with Plans Completed or Underway



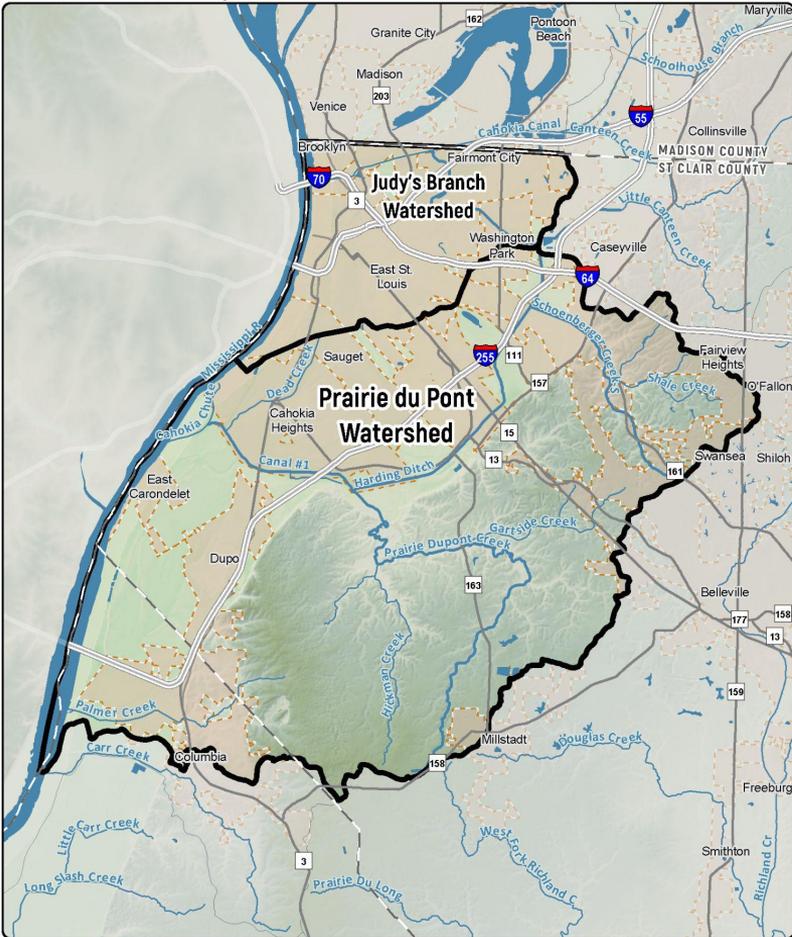
HLC has years of experience with watershed planning

Plans completed: 8

Current plans: 3

- Portage des Sioux
- Prairie du Pont-Judy's Branch
- East Fork Silver Creek

<https://heartlandsconservancy.org/water/healthy-watersheds/>



“PDP”

- Judy’s Branch
 - HUC10: 0714010104
 - St. Clair County portion only
 - Madison County portion already has a plan: *American Bottom Watershed Plan (2020)*
 - 14,365 Acres

- Prairie du Pont
 - HUC10: 0714010105
 - Illinois portion only
 - 81,598 Acres

Total: 95,963 Acres
150 Square Miles

Overview

Project Background

- Funding and oversight
- Extent
- How is this project unique?

Committees

- Watershed Planning
- Best Management Practice (BMP)
Demonstration Projects
- Technical Advisory

Project Schedule



Project Background

Funding and oversight

- Illinois EPA (IEPA) is providing grant funds to cover the cost of developing a watershed-based plan through section 319 of the Clean Water Act
- Additional State Funding will cover design and construction of some projects to demonstrate Best Management Practices (BMPs)
- HeartLands Conservancy applied for the grant following a Notice of Funding Availability from IEPA and was awarded the grant.
- IEPA is providing close oversight, including required approval of strategies HLC will implement, which has impacted the project schedule.



Project Team

- HeartLands Conservancy
 - Project Management
 - Resident and Stakeholder Engagement
 - Water Resources Inventory and Plan Document
- Added Dimension, LLC
 - Public Engagement and Meeting Facilitation
- Andreas Consulting Services
 - Stream Inventory for Water Quality Modeling
- Heneghan & Associates/ Heneghan Construction Services
 - Designing BMP Demonstration Projects
- National Great Rivers Research and Education Center
 - Water Quality Modeling: Pollutants and Sediment
- SIU-Edwardsville, Civil Engineering
 - Water Flow Modeling: Volume and Flooding



Nine Elements of a Watershed Plan

1. Identify causes and sources of pollution
2. Estimate load reductions expected
3. Describe management measures and targeted critical areas
4. Estimate technical and financial assistance needed
5. Develop an information and education component
6. Develop a project schedule
7. Describe interim, measurable milestones
8. Identify indicators to measure progress
9. Develop a monitoring component

Unique considerations

Focus on Acute Impacts to Residents

- Chronic flooding of low areas
- Sewage leaks

Minor Sewer System Improvements

- Water flow relies on constant maintenance of canals, pipes and pumps
- Infrastructure was built during peak population and industrial era

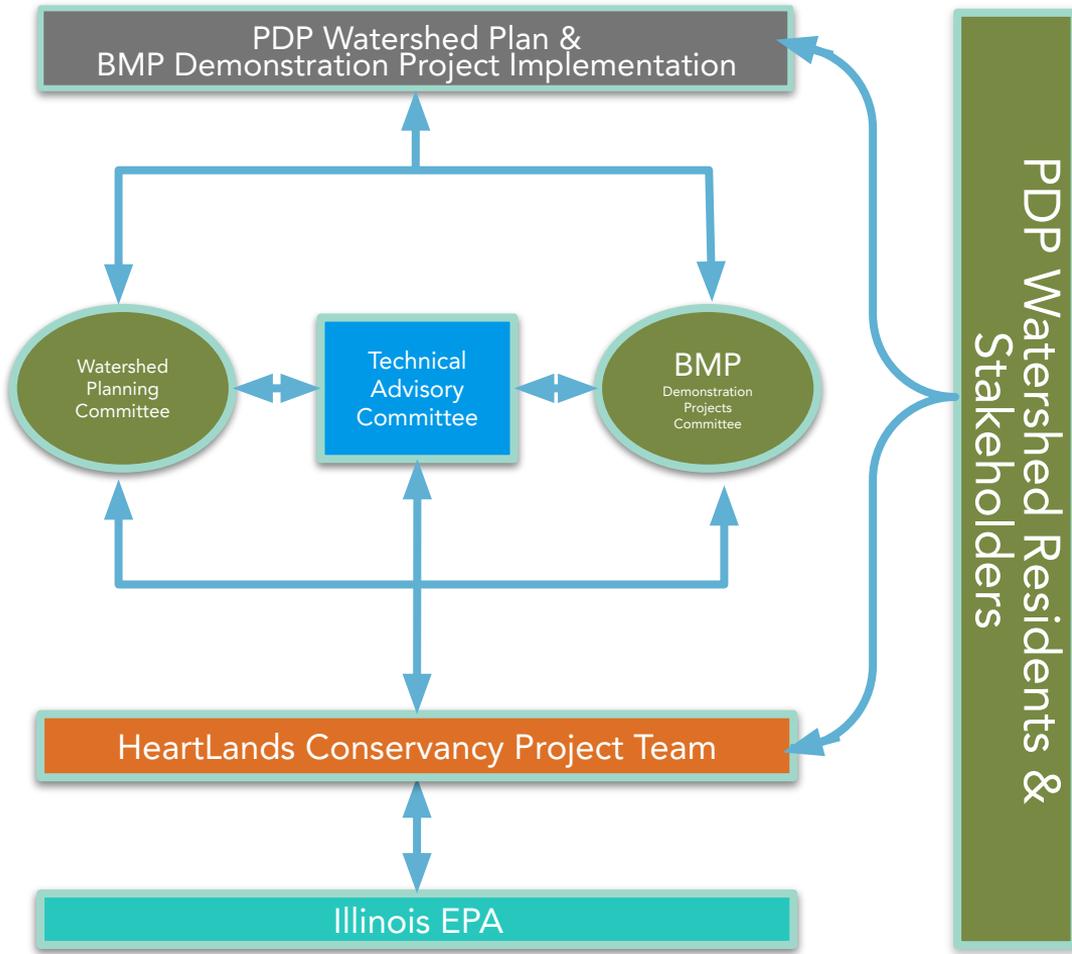
Funding to build BMP Demonstration Projects *as soon as possible*

IEPA Funding for Demonstration Projects

- \$325,000 for Traditional Stormwater Runoff BMPs
- \$375,000 for Minor Sewer System Infrastructure

State and Tribal Assistance Grants (STAG "earmarks")

- Pending - \$1.5 million secured by Senator Durbin from USEPA to add to IEPA funding
- Waiting for information from USEPA



Project Roles

BMP Demonstration Projects Committee*: Select BMP Demonstration Projects for immediate implementation

Technical Advisory Committee*: Share knowledge and professional expertise; build relationships for future collaboration

Watershed Planning Committee*: Guide the development of recommendations to be included in the plan document; promote community engagement events to residents

Residents & Stakeholders: Share knowledge and experiences through interviews, open houses, pop-up events, & flood survey; learn about the watershed

HLC Project Team: Coordinate project; conduct mapping, research/modeling, & community engagement; write plan document based on committee and community input

Illinois EPA: Provide funding; approve recommended BMP Demonstration Projects for immediate implementation

BMP Demonstration Project Selection Guidance from IEPA

- Focus on demonstrative practices that reduce flooding in the former north Centreville area.
 - The suite of practices proposed should have a positive impact in reducing the frequency and duration of flooding as well as reducing the amount of nonpoint source pollution reaching Prairie du Pont Creek, and ultimately the Mississippi River.
- Let it be clear, the BMPs implemented under this grant will not solve the current flood or sewer issues.
 - These pilot BMPs will be used for educational purposes for the stakeholders including what the BMPs look like, how they function, and to demonstrate the effectiveness of each type of practice and to act as a guide for installing future similar projects and their long-term operation maintenance.
- Practice implementation is voluntary.



What types of BMP Demonstration Projects can we do with this funding?

Traditional Stormwater Runoff

- Reconnecting streams to floodplain
- Bioretention
- Detention practices
- Wetland restoration
- Stream channel restoration
- Stream channel stabilization
- Streambank stabilization
- Bioswales
- Porous pavement
- Rain gardens and rain barrels
- Urban filter strips

Minor Sewer System Infrastructure

- Lift station
- Infiltration/inflow correction
- Sealing/elevating manholes
- Sewer main point repair
- Clean out caps
- Smoke testing & television of sewer mains
- Surface drainage ditch repair/retrofit/cleanout
- Culvert replacement

BMP Demonstration Project Selection

BMP Committee develops guidelines for projects

Stakeholders submit projects for consideration

BMP Committee reviews proposed projects

Engineers review projects for feasibility

BMP Committee ranks projects

What are the goals you want to achieve with these projects?

Residents, committee members, municipalities and local governments share their ideas for projects by filling out a simple form

What are the minimum requirements for a project to be considered?

What makes a proposed project a good one to spend the \$\$\$ on?

Committee members consider which proposed projects meet their goals and guidelines

Project Team Engineers answer questions about BMPs as needed

Project Team Engineers review proposed projects and meet with landowners

Technical Advisory Committee members assist as needed

Project Team Engineers report back to BMP Committee

A ranked list of projects will be submitted to Illinois EPA for approval.

Construction begins after IEPA approval is received.

Where is the water causing trouble?

The project team has been asking folks to tell us for the last 12 months, and we will keep asking throughout the project

Here's how we gather information:

- Stakeholder and resident meetings
- Flood Survey
- Open Houses/Workshops

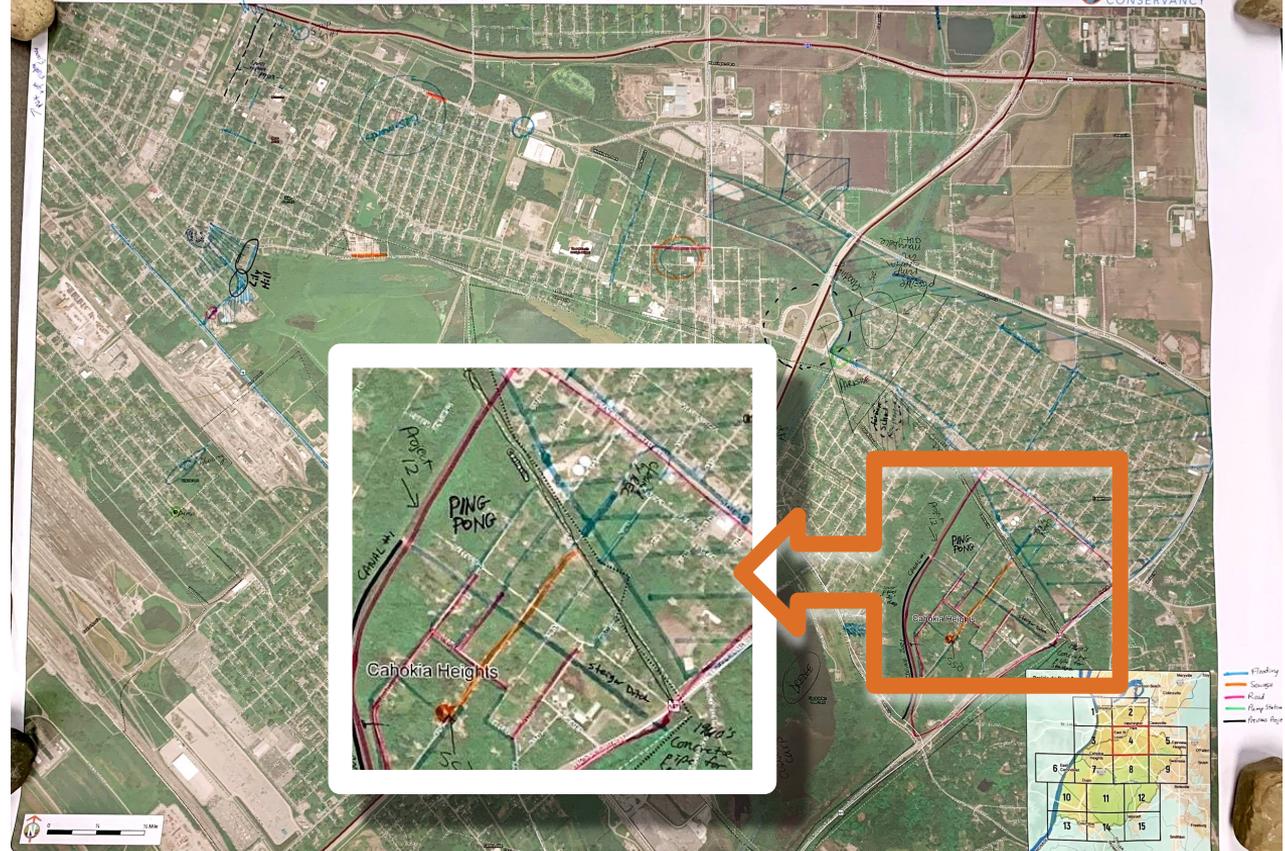




One-on-one and small group meetings included residents, municipalities and community leaders and will continue throughout the project



Residents and stakeholders share information through “marker maps”



“Marker maps” capture stakeholders’ concerns and observations

Start Survey

1. Please provide your current address: (Note: Addresses will be kept confidential. Giving your address allows the planning team to identify locations of flooding. Follow-up information will only be sent if requested below.)
 Address: _____ City: _____ Zip: _____
 Check here if you would like to be put on our mailing list to receive updates and more information.
 Provide your name, phone, and e-mail below:
 Name: _____ Phone: _____
 E-mail: _____

2. What type of property is at this address? It will be referred to for the rest of the survey as "this property."
 House Farm Land
 Apartment, Duplex, Multi-Family Home Industrial
 Business/Commercial Civic / Institutional / Non-profit
 Other (please explain): _____

3. Has this property been flooded in the last 10 years? Yes No (If NO, skip to Question #9)

Extent/Type of Flood Damage	1-5 times in 10 years	5-10 times in 10 years	1-5 times per year	5-10 times per year
Yard/Open green space was flooded, with little/no damage				
Yard/Green space was flooded, with damage to lawn, trees, and shrubs				
Crops were damaged				
Fences, auxiliary buildings (sheds, etc.), or other structures were damaged				
Primary home/business was damaged				

1:22 PM

Zoom in and move the map around until the marker is on your place or use the target button on the left side of the map to use your phone's GPS location.

Find address or place

East St Louis
Fairview Heights
Beverly

Earthstar Geographics | Esri, HERE, Garmin
Lat: 38.58566 Lon: -90.08534

What type of property is at this address?

House
 Apartment, Duplex, Multi-Family
 Business/Commercial
 Farm Land
 Industrial

19. ¿Se ha realizado alguna mejora en sus líneas de alcantarillado?
 Sí (por favor explique) No

20. ¿Tiene un preventor de flujo posterior de alcantarillado o una bomba se sumidero instalada?
 Sí, los dos Solo bomba de sumidero No se
 Justo el flujo de vuelta preventor Ninguno

21. ¿Cuál de los siguientes estaría interesado en aprender más sobre cómo abordar los problemas de inundaciones y alcantarillado en su dirección actual?
 Líneas de agua y alcantarillado separadas Comprar mi propiedad
 Reemplazar y reparar el alcantarillado Agregue zanja/alcantarilla/drenaje a la propiedad
 Limpiar zanjas y alcantarillas Limpieza de arroyos y canales
 Preventores de reflujo de alcantarillado Eliminar logjams/escombros
 Bombas de sumidero Jardines de la lluvia
 Inspección de tuberías Cuenca de drenaje (area de almacenamiento de agua)
 Árboles El humedal
 Levantar/primer piso de casa/negocio Llene el sotan
 Lago o estanque Limo de dragado de lagos y canales
 Control de agua sedimentos en los campos de cultivo Cultivos de cobertura
 Estabilizar las orillas de los arroyos Otra _____

1:26 PM

¿Tiene esta propiedad se ha inundado en los últimos 10 años?*

Sí
 No

¿Alguno de sus vecinos ha experimentado inundaciones en su hogar, negocio o propiedad en los últimos 10 años?*

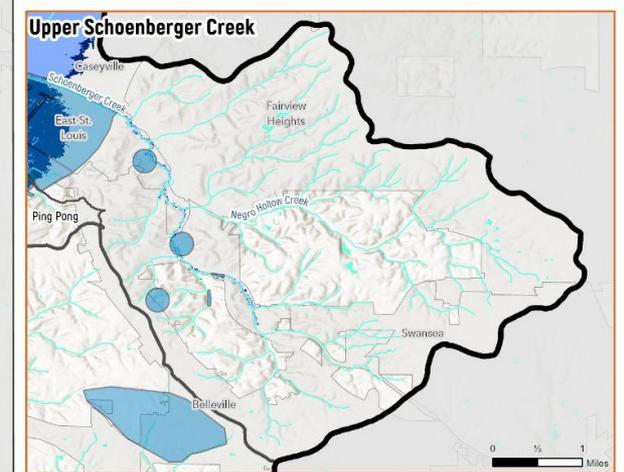
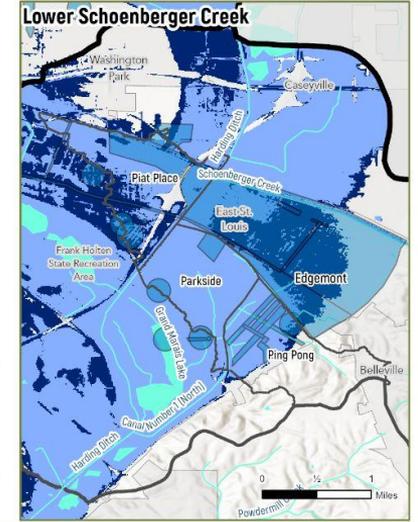
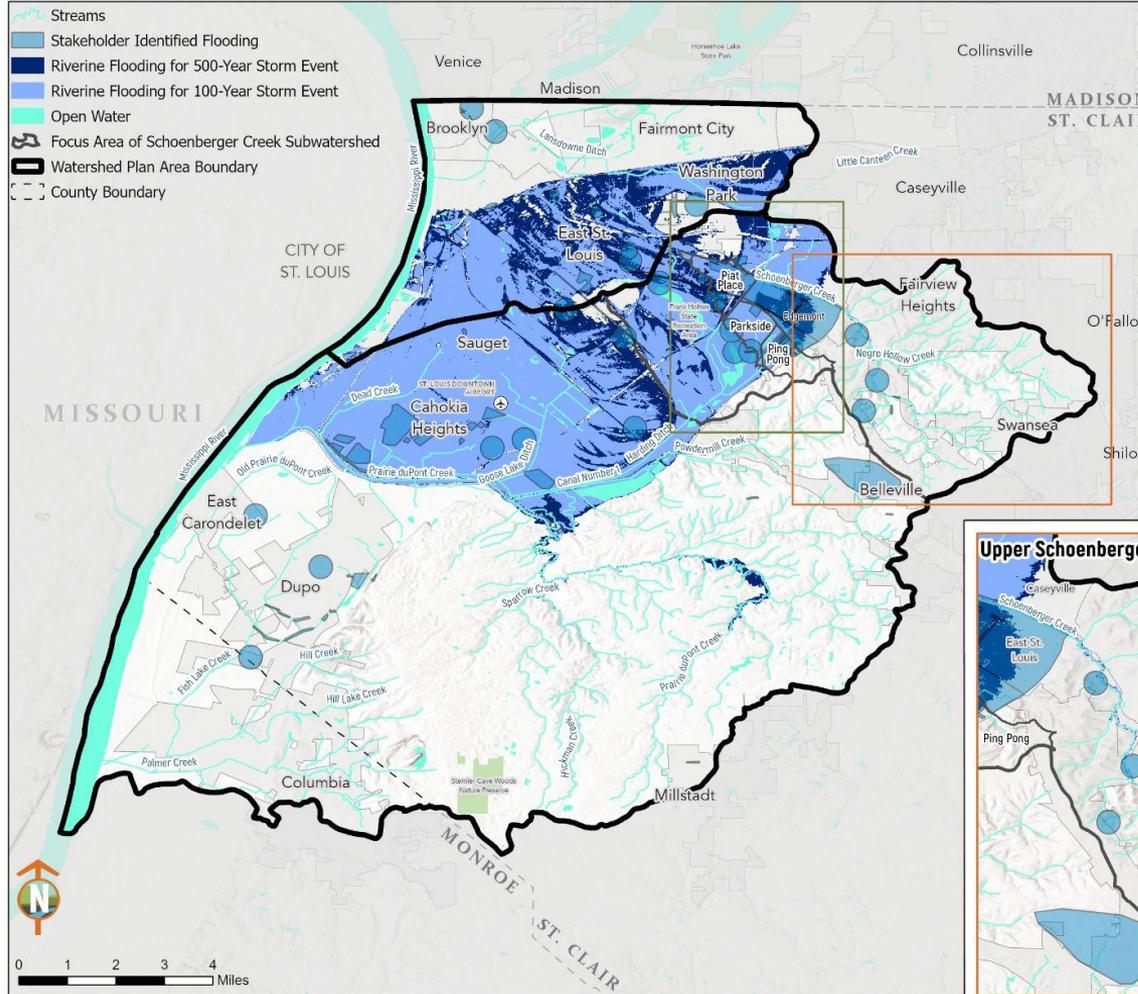
NOTA: Si tiene vecinos que experimentaron inundaciones, hágales saber sobre esta encuesta y pídalos que visiten www.heartlandconservancy.org/PDP

Sí. Una o dos propiedades vecinas
 Sí. De tres a cinco propiedades vecinas
 Sí. Seis o más propiedades vecinas
 NO. Conozco a ningún vecino que han experimentado inundaciones en su hogar o propiedad.

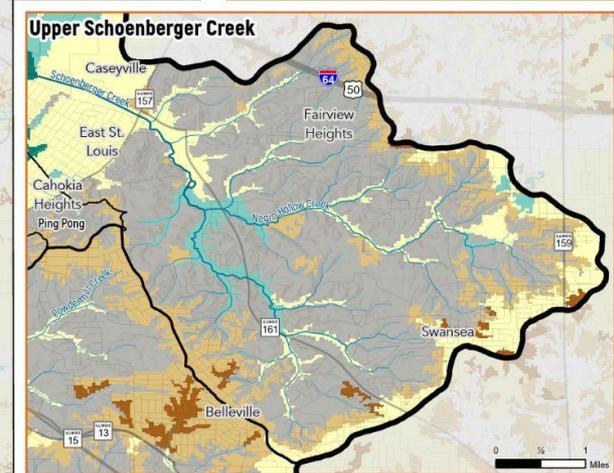
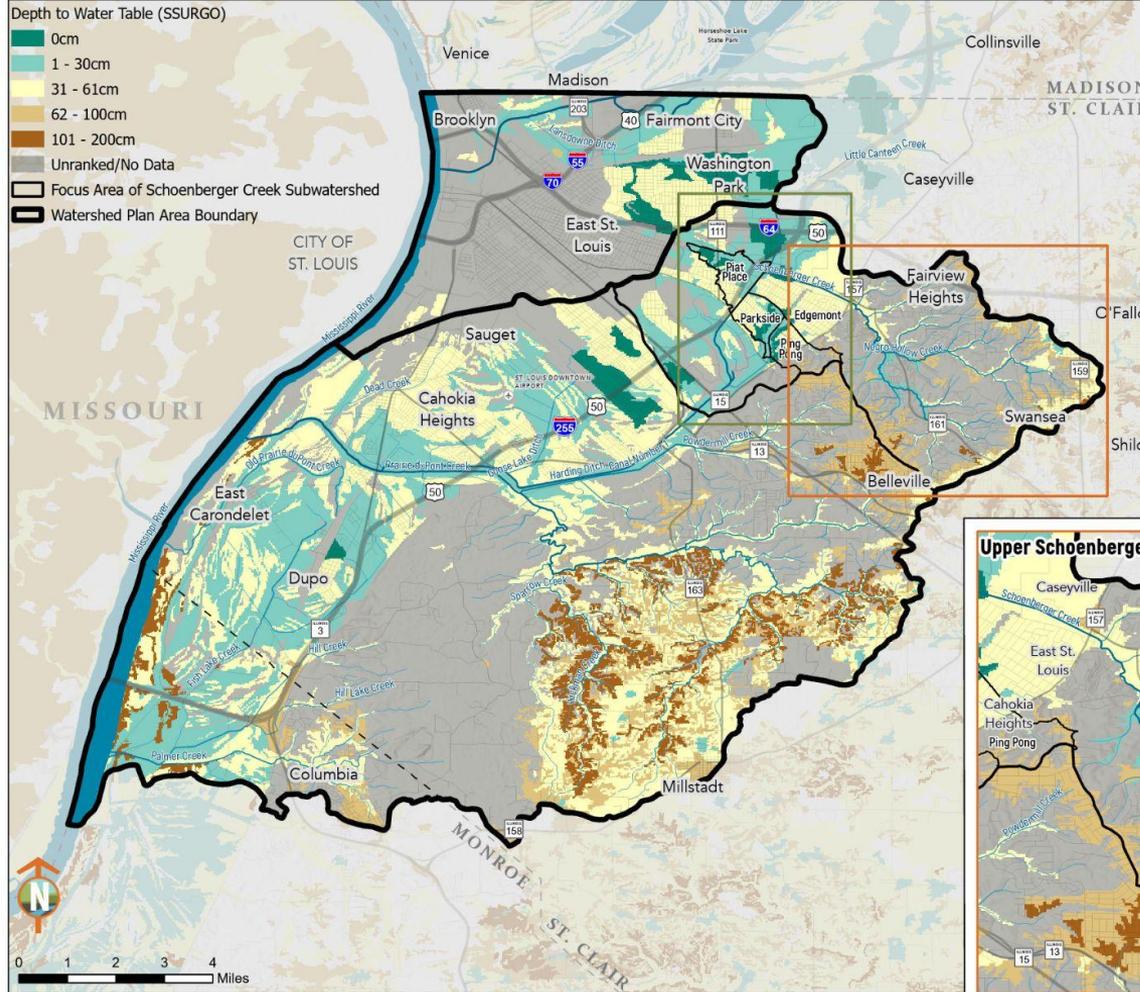
¿Su propiedad está ubicada en el área especial de peligro de inundación de FEMA? (SFHA)?*

A flood survey was conducted through June 19, 2022

Critical Flooding in the Watershed



Depth to Water Table



A Plan in two parts

- There are normally many appendices to a watershed plan featuring maps and data sources
- There are many more in this plan
- Larger beefier Part 2 (Watershed Resources Inventory) with all appendices and other important data
- Slimmer useful Part 1 - Diagrams, Readability

Where are we now?

- Goals and Recommendations from the WPC
- Projects Selected and Scoped from BMP
- Continued Coordination with TAC
- Working on Landowner Agreements and final details for implementation of Demonstration Projects
- Part 2 - Watershed Resources Inventory - COMPLETE
- Part 1 - In Progress



Thank you!

Please Join us for our Open House
September 19th
Kappa House
5101 Lake Dr, East St Louis, IL 62203, USA

