

Lower Meramec River Source Water Protection Project



“ If we are to live upon the Earth we must respect the land as all things are connected. The Lower Meramec River is an expression of the character and beauty of our region’s land and water.”

— *Chuck Banks, County Executive, Jefferson County*

This initiative was made possible with support from: The United States Forest Service, The Trust for Public Land, The Open Space Council for the St. Louis Region, Boeing Company Charitable Trust, National Fish and Wildlife Foundation, The Norman J. Stupp Foundation, East-West Gateway Council of Governments, The City of Wildwood, Great River Greenway, Missouri American Water and other private and public partners.

“People all over the country have a love of rivers, it’s quite remarkable. I think that is one of the exciting things about rivers is that they have these unique personalities and they help define our communities.”

—*Andrew Fablund, American Rivers*

Source Water Protection Project

The Trust for Public Land (TPL) and the United States Forest Service (USFS), in partnership with the Open Space Council for the St. Louis Region (OSC) and the East-West Gateway Council of Governments, selected the Lower Meramec River Watershed as a demonstration site to show how land/forest protection and management strategies can be used to protect and improve drinking water quality.

Studies suggest saving forests and natural lands is the single most important action that can be taken to protect drinking water supplies.

The region does not have adequate protections in place to safeguard its drinking water sources. Because the Meramec River is one of the primary sources of drinking water for south St. Louis County and northern Jefferson County, there is a definite sense of urgency to protect this source of clean, high quality drinking water that serves more than 200,000 people in three Missouri counties: St. Louis, Franklin and Jefferson.

The Source Water Protection Project provides an opportunity for area citizens, landowners and officials to reach a mutually agreed upon approach to ensure that plentiful, high quality and affordable supplies of safe drinking water continue to be available now and in the future for the metropolitan St. Louis area.

St. Louis does not have adequate protections in place to safeguard its primary drinking water sources.

“I don’t know that we have the right not to preserve the quality of the lower Meramec River for the use of our children’s children.”

— Charles Becker, Jefferson County, Associate Judge, 1967



Water is not an
expendable resource.
The Meramec River is
the primary source of
drinking water for more
than 200,000 people.

How You Can Help

Individuals

Since water from storm drains goes directly into streams and rivers without being treated, everyone can have an impact simply by keeping trash, litter, pet waste and yard waste out of the street and away from storm drains. Additional considerations include:

- Minimizing the use of chemicals such as pesticides and fertilizers.
- Reducing water use.
- Properly disposing of paint, cleaning products, antifreeze and other household hazardous wastes (HHWs).
- Planting rain gardens to encourage infiltration of rain water.

Landowners

The land will provide for you – but only if you take care of it. Some ways landowners can help take care of their property include:

- Reducing the amount of pesticides used on the land and buffering sinkholes.
- Increasing pervious surfaces – like native plants and trees – where possible.
- Maintaining vegetation along streams and steep slopes; planting a stream-side tree buffer to prohibit large animal grazing in and along banks.
- Properly maintaining septic systems by inspecting and emptying your tank on a regular basis.
- Developing a long-term stewardship plan for your property, outlining your objectives for the land both today and into the future.

You can also help by telling us about land that should and could be protected, by sharing this publication with your friends and neighbors, and by supporting our work.

Communities

Because there is strength in numbers, communities can be a powerful force when they come together for the good of the whole. Some measures that can have a marked impact include:

- Incorporating responsible water resource management practices in local planning efforts.
- Raising dollars and acquiring important forests and other natural lands from willing landowners.
- Organizing stream cleanups like Operation Clean Stream and Stream Team, and HHW pickup days. www.openspacestl.org/operation-clean-stream/ www.mostreamteam.org/
- Establishing stream buffers, which prohibit any structures closer than 100 feet from a stream.
- Promoting tree planting and the long-term care of trees in your community by becoming a Tree City USA. Go to arborday.org to find out the requirements.

Counties

The federal Clean Water Act mandates that local governments do their part in protecting our waterways. A few regulatory requirements include:

- Providing public education about the importance of water protection.
- Eliminating illegal and polluting discharges into streams.
- Preventing pollution from municipal operations.

The Meramec River Watershed

The Meramec River flows 228 miles from its source in the Ozarks to the Mississippi River. The Lower Meramec River flows 108 miles from Sullivan, Missouri through the southern part of the St. Louis metropolitan area and enters the Mississippi River near the city of Arnold. Covering 486 square miles, the [Lower Meramec] watershed contains 33 sub-watersheds draining directly into the main stem of the Meramec River. Twenty cities are located within the Meramec River Watershed, and approximately 2.5 million people live within a half hour drive of the river.



“The Meramec River is really the lifeblood of the South County area as well as a good portion of Jefferson County. Protecting this source is so vitally important to the well being of the residents that live in this community.”

—Bradley Brown, *Missouri-American Water*

The natural functions and benefits of a watershed become significantly degraded when humans remove trees and pave the surface of the land, unless proactive efforts are made to protect the watershed. Evidence of increased erosion, decreased biodiversity, changing flow dynamics and other adverse effects on the Meramec River are clear.

20 Cities are located within the Meramec River Watershed; About 2.5 million people live within a half hour drive of the Meramec River.



wa-ter-shed (waw-ter-shed') n. region draining into river or ocean; the land area that drains into a particular lake, river or ocean.

Study Areas

The Meramec River Tributary Alliance (MRTA) – which includes more than 30 agencies and organizations with an interest in the Meramec River Basin – worked with The Trust for Public Land, the U.S. Forest Service and the Open Space Council for the St. Louis Region to identify areas within the watershed most likely to benefit from conservation, restoration, storm water and waste water Best Management Practices (BMPs).



Brush Creek Watershed

Located west of St. Louis along the I-44 corridor, running through Franklin and St. Louis County near the city of Pacific, includes 37 square miles and three tributaries to the Meramec River.



Hamilton Creek Watershed

Located in western St. Louis County north of I-44 and the northern edge of Jefferson County, includes 55 square miles and three tributaries.



Fox Creek Watershed

Located in southwestern St. Louis County and spanning west into Franklin County and south into Jefferson County, includes 44 square miles and seven tributaries including LaBarque Creek.



LaBarque Creek Watershed

The LaBarque Creek Watershed is a model for local watershed involvement in the St. Louis region. The level of stream diversity and biodiversity found here is rare for such a highly urbanized region.



Threats and Challenges Facing the Watersheds

Throughout the past 200 years, almost all of the watersheds surrounding the St. Louis area have been impacted by various activities including everything from farming, logging, mining, illegal dumping and road building to urban development. These impacts have put considerable strains on ensuring good water quality in the Meramec River Watershed.

Urban Development – St. Louis County and eastern Franklin and Jefferson Counties already have disconnected forest habitats, contributing to a large loss of stream-side vegetation and placing constraints on once free flowing creeks. It is projected that future growth and development will negatively impact all of the region's available water.

Pollution – Numerous pollutants such as sediment, bacteria (human, pet, farm animals and wildlife sources), mercury from coal burning, road salt and emerging contaminants from pharmaceutical drugs have worked their way into the watershed.

Harmful Landowner/Development Practices – Common issues throughout the watershed include large animal grazing, illegal waste disposal, stream straightening and improper use of motorized vehicles in streams as well as poorly designed low water structures.

Increasing Flooding – Development is a major factor causing increased flood frequencies and intensities as it decreases the absorption of rain water into the soil and increases surface runoff.

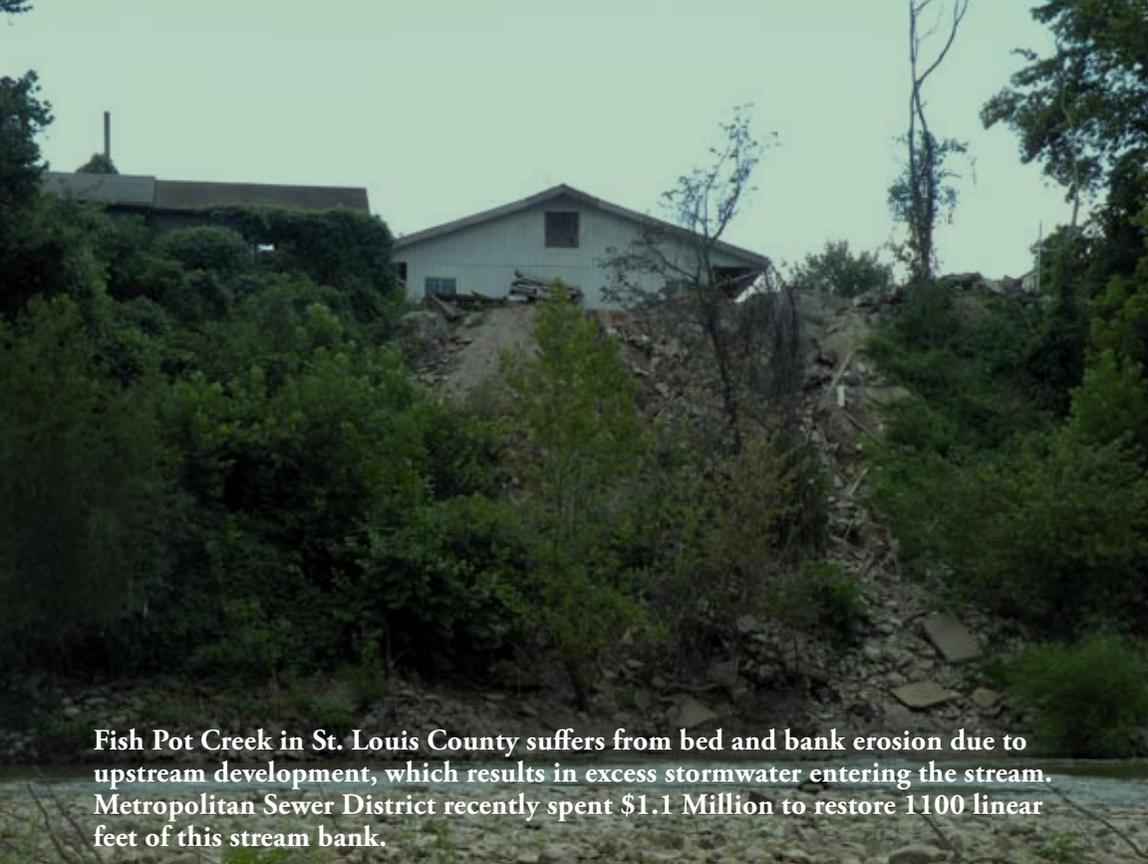
Underperforming Sewage Treatment Facilities – Underperforming sewage treatment facilities and failing septic systems are common throughout the watershed, which results in seepage of sewage leading to higher bacteria and nutrient levels in our streams.

Dealing with regulations in three counties and several municipalities complicates development and implementation of uniform policy in the watersheds.



The City of Wildwood, in the Hamilton Creek Watershed, has 3,233 septic systems. Of those, none are subject to annual inspection.





Fish Pot Creek in St. Louis County suffers from bed and bank erosion due to upstream development, which results in excess stormwater entering the stream. Metropolitan Sewer District recently spent \$1.1 Million to restore 1100 linear feet of this stream bank.



Increased urbanization brings more waterproof ground cover –or impervious surfaces – while vegetative ground cover that can absorb water decreases. Intense flooding is the result.

WARREN
COUNTY

ST. CHARLES
COUNTY

Missouri River

MDC MATSON PROPERTY

Augusta

Washington

47

66

Fox Creek

Brush Creek

MOORE-SHAW
NATURE RESERVE

Pacific
PACIFIC
CONSERVATION

50

Union

FRANKLIN
COUNTY

44

Calvey Creek

Lake Park

Johnson Branch

St. Louis

Hartsville

Rye Creek

Hoosier Creek

Little Meramec River

MERAMEC
CAVERNS

Shrout Grove Park

Elm Spring Branch

MERAMEC STATE PARK

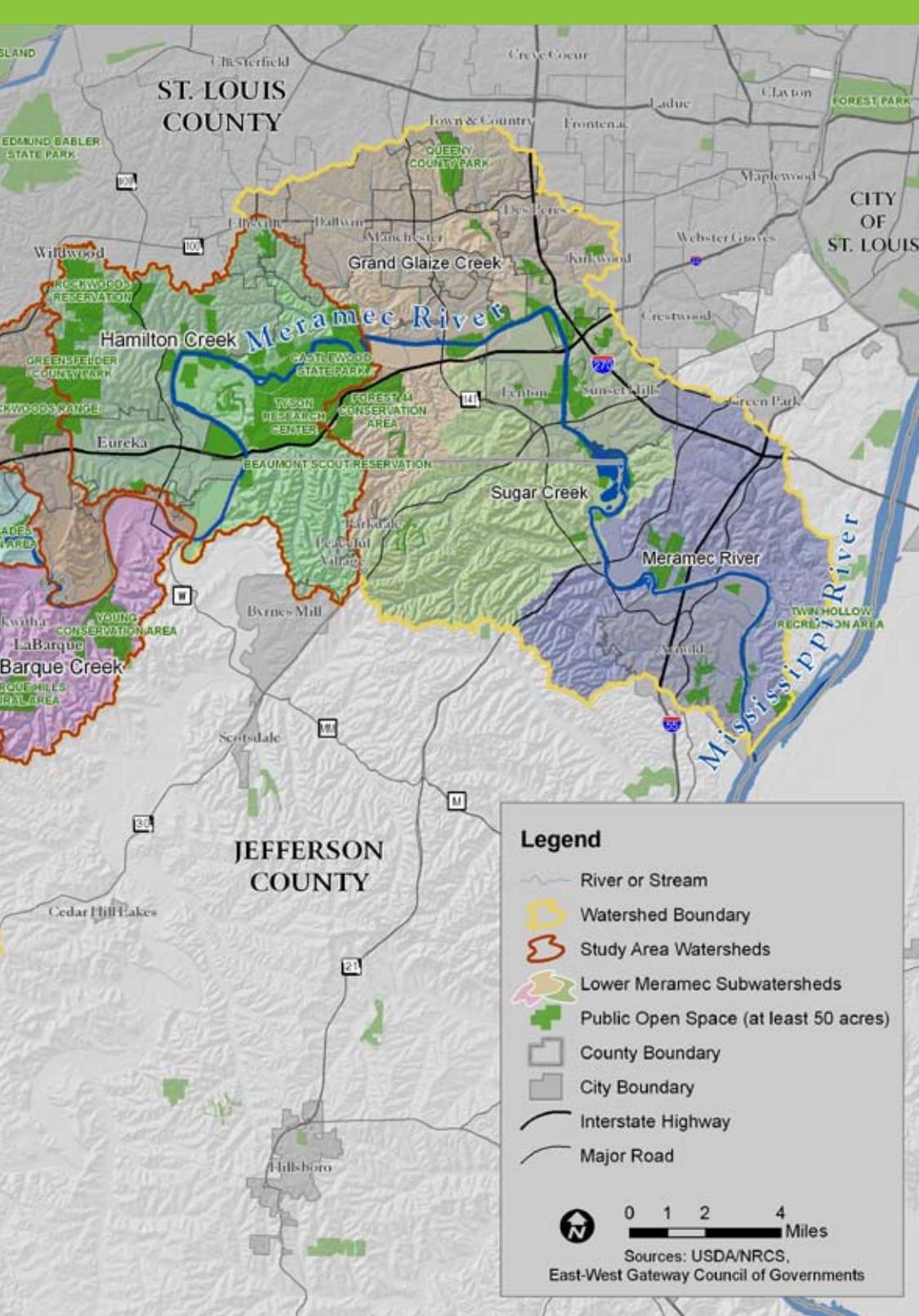
Lower
Indian Creek

LITTLE INDIAN CREEK
STATE FOREST

Little Indian Creek

CRAWFORD
COUNTY

WASHINGTON COUNTY



“The future security of water supplies will not be ensured by water treatment alone. Protecting and managing forests in source watersheds is an essential part of future strategies for providing clean, safe, and affordable drinking water.”

—“*Forest, Water, and People*,” *USFS State and Private Forestry*, June 2009



Open Space Council
for the St. Louis Region

The Open Space Council is a 501(c)(3) tax-exempt nonprofit organization dedicated to conserving public and private open space lands in the St. Louis region. It identifies areas that can be acquired and set aside for public use, and attempts to discourage improper land use and detrimental development. The organization encourages biodiversity through land and water conservation, preservation and restoration.



The Trust for Public Land (TPL) is a national, nonprofit, land conservation organization that conserves land for people to enjoy as parks, community gardens, historic sites, rural lands, and other natural places, ensuring livable communities for generations to come. TPL's Land and Water initiative is helping to lead the way in the use of land conservation to protect water quality.



The USDA Forest Service State and Private Forestry is a Federal natural resource agency that cooperates with the States and other organizations, to help landowners and communities apply sustainable management practices to their forest land. Together they protect and restore important forest lands and watersheds, and increase the knowledge, awareness, and appreciation of forests and natural resources.



EAST-WEST GATEWAY
Council of Governments

East-West Gateway Council of Governments is designated by state and federal agencies as the metropolitan planning organization for the Missouri-Illinois bi-state area. The agency works with a variety of local government partners to facilitate and assist coordinated community-driven planning processes to ensure that development enhances the quality of life for present and future generations without compromising the region's natural resource base.

www.openspacestl.org

www.tpl.org/lowermeramecdemo