

Source Water Protection

Tools and Resources



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Watershed Management: Mitigation and Prevention

Control and Removal

Physical

- *Mechanical mixing*
- *Aeration*

Biological

- *Floating treatments*
- *Shade*

Chemical

- *Algaecides*
- *Flocculation*



Prevention

Drivers:

- Nutrient pollution
- Hydrologic alteration
- Temperature pollution

Sources:

- Agricultural and Urban runoff
- Atmospheric Deposition
- Point sources

Solutions & Practices

- Conservation measures
- Land management
- Stream and wetland restoration
- Forest Management
- Land preservation



Partnership Building Tools

**COLLABORATION TOOLKIT:
HOW TO BUILD AND MAINTAIN EFFECTIVE PARTNERSHIPS TO PROTECT SOURCES OF DRINKING WATER**

The Source Water Collaborative has developed this extensive "How to Collaborate" Toolkit to help others initiate or enhance partnerships to protect drinking water sources. This Toolkit is part of the SWC's ongoing efforts to help foster local, state and regional/watershed source water collaboratives.

Effectively addressing drinking water contamination often requires working with key partners across organizational and jurisdictional boundaries. Designed to meet a broad array of needs, this Toolkit provides helpful tips, sample materials, and thoughtful resources organized by each stage of collaboration, from those just getting started to mature partnerships seeking new inspiration.

Click on the map below to see state, regional, and local examples or click on the stage of your collaborative.

BENEFITS OF USING A COLLABORATIVE APPROACH:

- Increases recognition of need for protecting drinking water sources.
- Offers cost-effective approach rather than "going it alone."
- Aligns diverse efforts for mutual benefit (watershed protection, conservation, regulation, planning, and/or economic development).
- Brings together those with authority and influence to solve problems.
- Uses a voluntary approach while leveraging current state and federal programs.

GET STARTED:

Select Your Stage of Collaboration or Skip to Specific Resources

Considering a Collaborative Effort

Forming a New Collaborative

Advancing a Developing Collaborative

Maintaining a Collaborative

SEARCH A MAP OF COLLABORATIVE EFFORTS

[Click Here](#)

RESOURCES

- Funding
- Partners
- Communication
- Collaborative Structure
- Sample Materials
- Collaborative Approach
- Action Planning
- Measuring Impact

Protecting Drinking Water At The Source:

Financing Natural Infrastructure

Todd Gartner
World Resources Institute

Source Water Collaborative November 2, 2016

SWC How to Collaborate Toolkit

WRI: Protecting Drinking Water at the Source



WRI: Lessons from U.S. Watershed Investment Programs

PHASE OF PROGRAM DEVELOPMENT	DESCRIPTION	LESSONS
Building momentum	Identifying a clear need and purpose for a watershed investment program; securing commitment from key stakeholders	<ol style="list-style-type: none">1. Identify risks (wildfire, drought, etc.) and seize opportunities to rally support2. Build partnerships to fill essential roles and responsibilities3. Articulate a clear vision of success4. Cultivate champions and advocates to build support (from water utilities, local government, NGOs, landowners, etc.)
Designing the program	Assessing the scientific and economic underpinnings of the program; creating a strategy to achieve program goals	<ol style="list-style-type: none">5. Develop a scientifically informed watershed plan6. Evaluate the business case for investment7. Identify investors (water utilities, companies, foundations, etc.) and financing mechanisms for initial and long-term funding
Implementing the action plan	Actively and adaptively managing the program to make investments; tracking the results of those investments	<ol style="list-style-type: none">8. Engage landowners and public managers to conserve, restore, and sustainably manage natural infrastructure9. Define roles and plans for program administration10. Monitor and evaluate performance (acres of forestland protected, acres treated for fire risk reduction, pounds of sediment avoided from filling waterways, etc.)

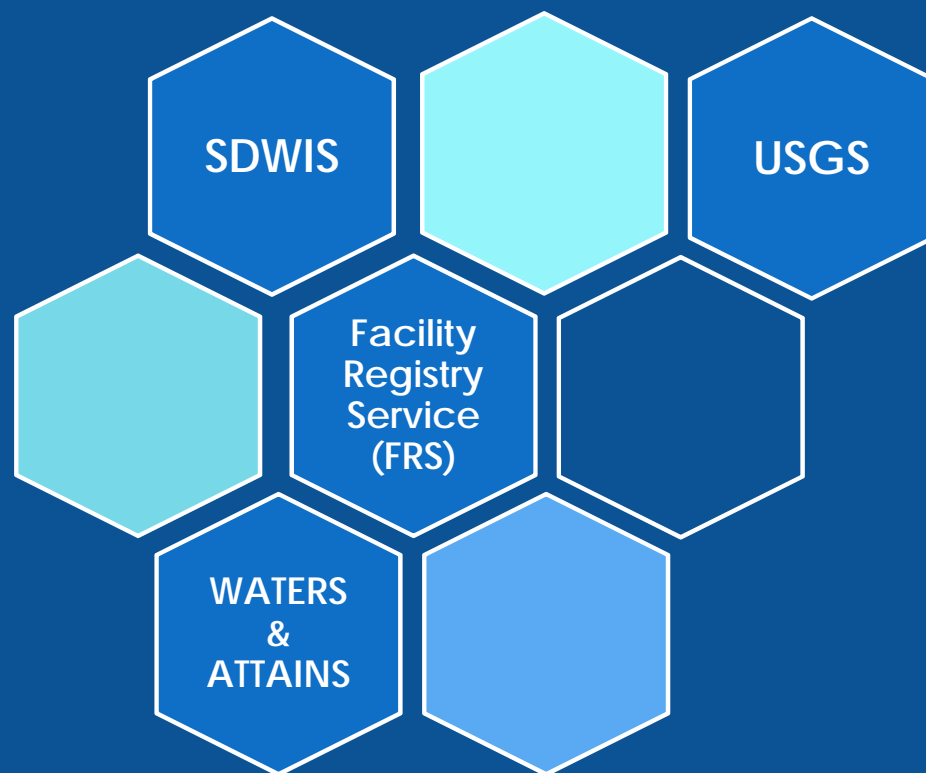


Mapping Tools: DWMAPS

Project Goal: Provide a nationwide online mapping tool for data critical to drinking water source protection.

Esri ArcGIS Online
Public information (no secure)
Data viewing and access

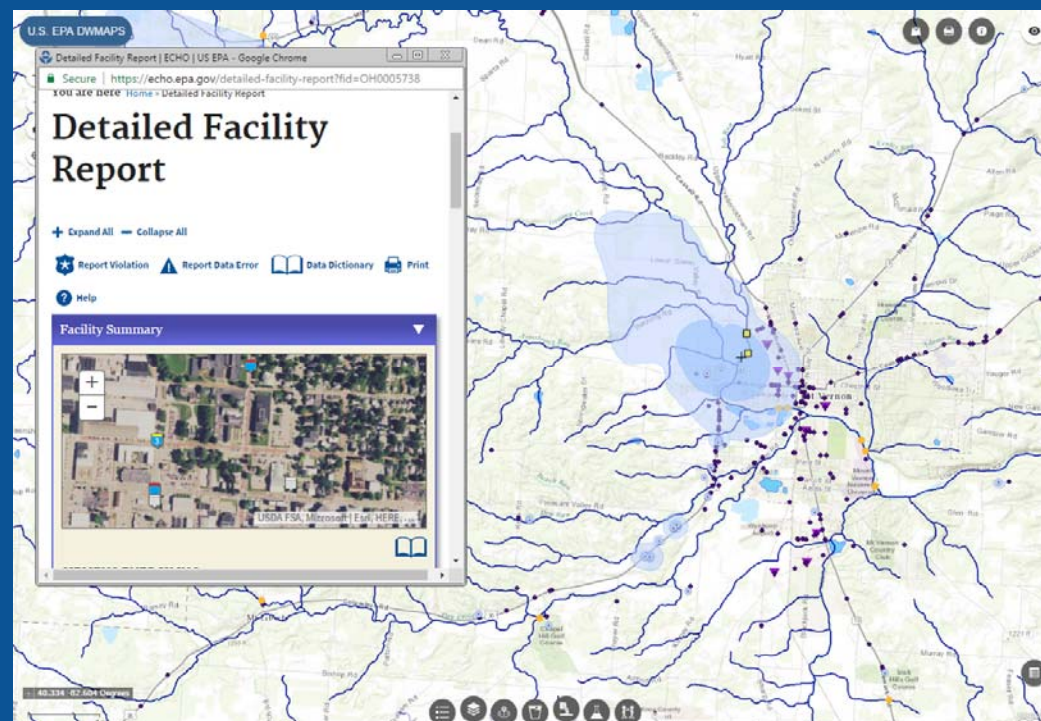
Key Data Sources





DWMAPS Uses

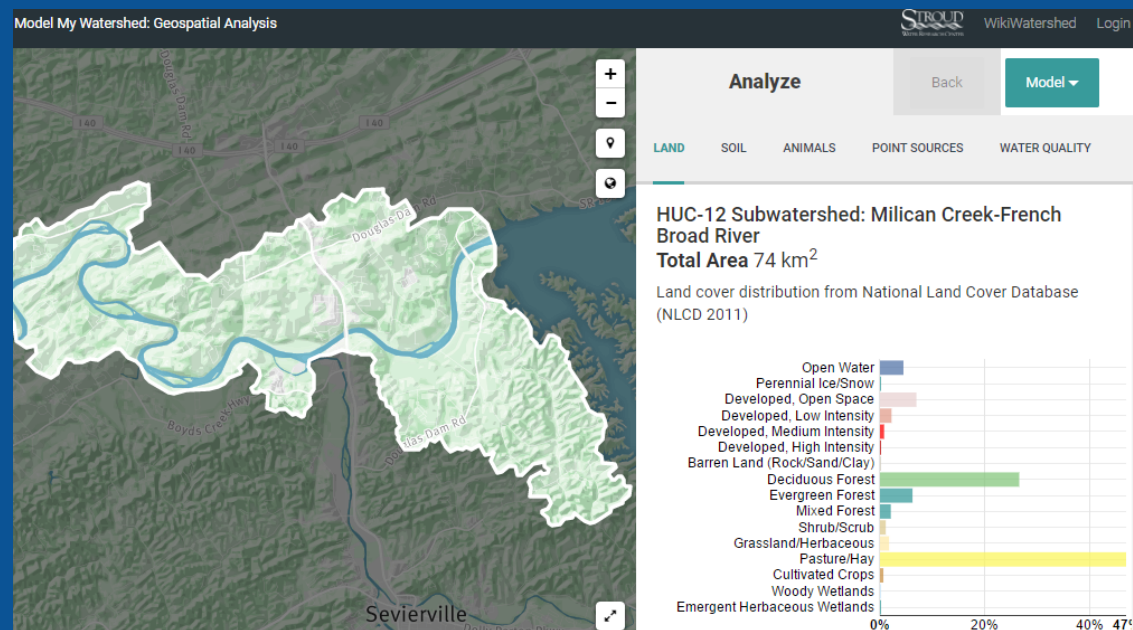
- ✓ View drinking water and watershed data to support source vulnerability assessments
- ✓ Identify HAB risk factors, including point and non-point pollution
- ✓ Prioritize protection strategies
 - ✓ Promote program integration (CWA-SDWA)





Mapping Tools: Wiki Watershed

- ✓ View N & P sources by watershed scales
- ✓ View water quality data
- ✓ Model N& P runoff and water quality impacts with professional models
- ✓ Compare conservation and management scenarios



Project of

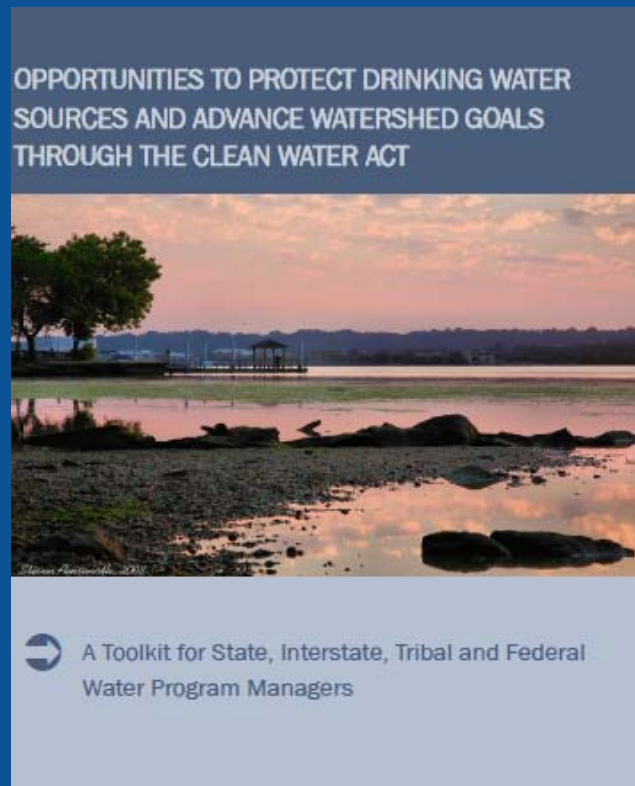




CWA-SDWA Integration

CWA-SDWA Toolkit:

- Water Quality Standards
 - Designated Uses
 - Water Quality Criteria
- Monitoring and Assessments
- TMDL priority setting
- 319 program



CWA-SDWA
Integration Toolkit



Source to Tap
Infographic 8

Thank you!



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Links

- DWMAPS: <https://geopub.epa.gov/DWWidgetApp/>
- Esri ArcGIS online: <http://www.arcgis.com/home/index.html>
- EPA Source Water Protection:
<https://www.epa.gov/sourcewaterprotection>
- How to Collaborate Toolkit: <http://sourcewatercollaborative.org/how-to-collaborate-toolkit/>
- WikiWatershed: <https://wikiwatershed.org/>
- SWC Source to Tap: <http://sourcewatercollaborative.org/infographic/>
- SDWA-CWA Coordination Toolkit: <http://www.gwpc.org/cwa-sdwa-coordination-toolkit>