

# Tools for Source Water Protection



**Tuesday, March 21, 2023, 2:00pm – 3:00pm Eastern**

**Speakers:**

- **Terrell Tiendrebeogo**, Environmental Engineer, U.S. EPA Office of Ground Water and Drinking Water

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# Watershed Academy Webcast

- The slides for today's presentations are posted on the Watershed Academy webpage.
- A recording of the webcast will be posted within the next month.

[www.epa.gov/watershedacademy](http://www.epa.gov/watershedacademy)

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## Webcast Logistics

- **To Ask a Question** – Type your question into the “Questions” tool box on the right side of your screen and click “Send.”
- **To Report any Technical Issues** (such as audio problems) – Type your issue in the “Questions” tool box on the right side of your screen and click “Send” and we will respond by posting an answer in the “Questions” box.

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## Audience Polling

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Questions?

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## Tools for Source Water Protection





Source Water Protection Program, U.S Environmental Protection Agency



## Source Water Protection 101



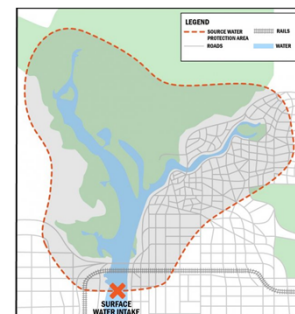
**Source Water Protection** – integrating environmental programs to safeguard, maintain, and/or improve the quality/quantity of drinking water sources such as rivers, streams, lakes reservoirs, springs and groundwater and their contributing areas.

-  Part of a multi-barrier approach to clean drinking water
-  Voluntary Actions
-  Coordination across environmental programs
-  Watershed investment program

## Common Terms



- **Source Water Protection Area** – the land area that contributes water to the drinking water supply and where pollution from human activities or natural sources poses the greatest threat to source water quality.
- **Source Water Assessment** – studies or reports that generate information about potential contaminant sources and the potential for systems to be impacted by these sources.
- **Source Water Collaborative Program** - a partnership organization united to protect America's drinking water at its source



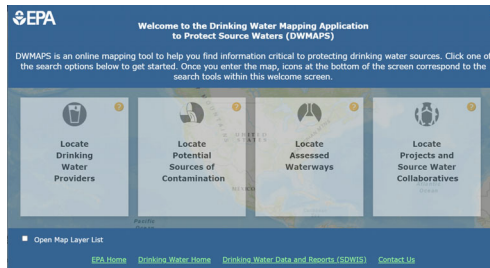
Example of source water protection area delineation

## Tools



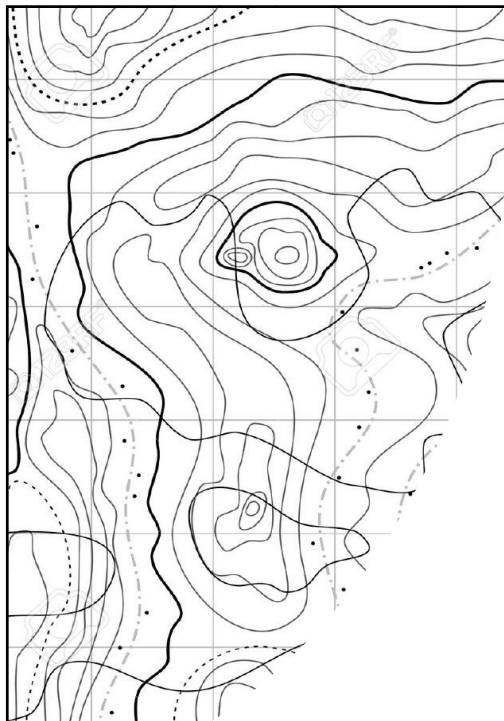
### The Drinking Water Mapping Application to Protect Source Waters (DWMAPS)

DWMAPS is an online mapping tool that helps state and utility drinking water professionals in concert with other state and local mapping tools to update their source water assessments and protection plans.



### Funding Integration Tool for Source Water (FITS)

FITS is a one-stop-shop tool that explains how users can integrate various federal funding sources to support activities that protect sources of drinking water.



## THE DRINKING WATER MAPPING APPLICATION TO PROTECT SOURCE WATERS (DWMAPS)

## WHAT IS DWMAPS?

- An online mapping tool focused on drinking water data for source water protection
- Planning and assessment tool
- Emergency response tool

## DWMAPS GOAL

To provide a nationwide online mapping tool for data critical to drinking water source protection

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## HOW CAN YOU USE DWMAPS?

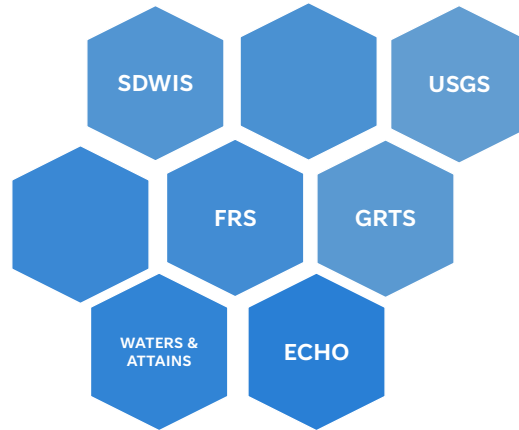
- Identify watershed areas significant to source water protection
- Learn which public water systems serve your community
  - Identify & characterize potential contaminant sources (point & non-point) to support vulnerability assessments, protection planning, & emergency planning
  - Prioritize protection strategies
- Promote program integration (CWA-SDWA)
- Build strong partnerships and support program implementation



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## KEY DATA SOURCES

Public information (no intake facility locations)



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## DWMAPS HOME SCREEN

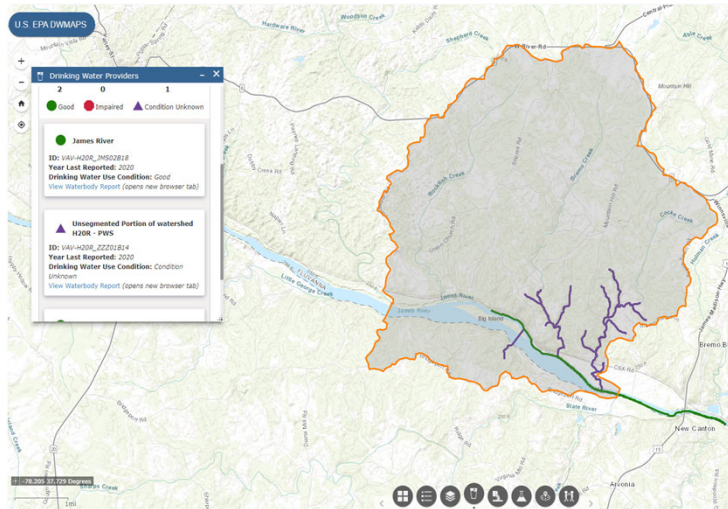
The screenshot shows the DWMAPS home screen. At the top left is the EPA logo. The main header reads "Welcome to the Drinking Water Mapping Application to Protect Source Waters (DWMAPS)". Below this is a paragraph: "DWMAPS is an online mapping tool to help you find information critical to protecting drinking water sources. Click one of the search options below to get started. Once you enter the map, icons at the bottom of the screen correspond to the search tools within this welcome screen." Below the text are four large buttons with icons and text: "Locate Drinking Water Providers", "Locate Potential Sources of Contamination", "Locate Assessed Waterways", and "Locate Projects and Source Water Collaboratives". At the bottom left is a link "Open Map Layer List". At the bottom right are four links: "EPA Home", "Drinking Water Home", "Drinking Water Data and Reports (SDWIS)", and "Contact Us".

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## DRINKING WATER PROVIDERS WIDGET

This widget answers 3 key questions:

- Who provides my drinking water?
- What watershed does my drinking water come from?
- Have nearby waterbodies been assessed for drinking water use?

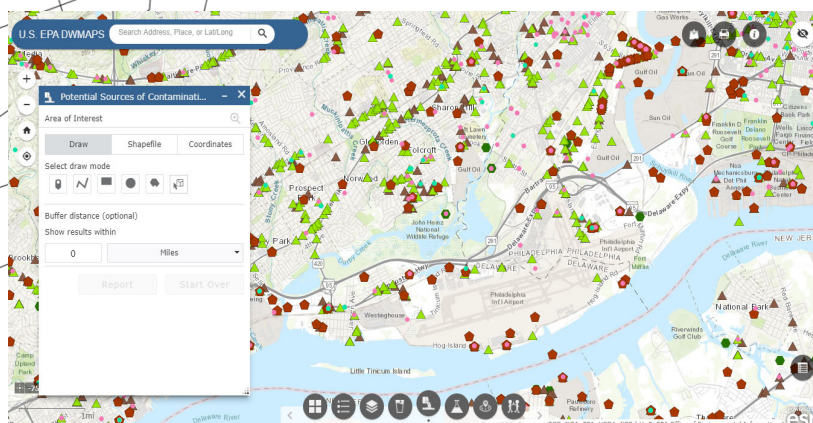


Assessment Information from 2016	
What is this water used for?	Expand All
Agriculture and Wildlife	Good
Public Water Supply	Good
Warm Water Fishery	Impaired
Water Contact Recreation	Good
Water Supply Industrial, Water Transport, Cooling and Power	Good
Probable sources contributing to impairment from 2016: No probable sources of impairment identified for this waterbody.	

HMW Waterbody Report

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## POTENTIAL SOURCES OF CONTAMINATION WIDGET



Point-source contaminant data:

- NPDES, RCRA, TRI, Oil & Gas, TSCA/FIFRA, Superfund, Brownfields, Hazard material routes, railroads, and more.

Area of Interest

- Point, polyline, extent, circle, polygon, coordinates and shapefile

Reporting

- List of PSOC, facility information, download csv and print summary

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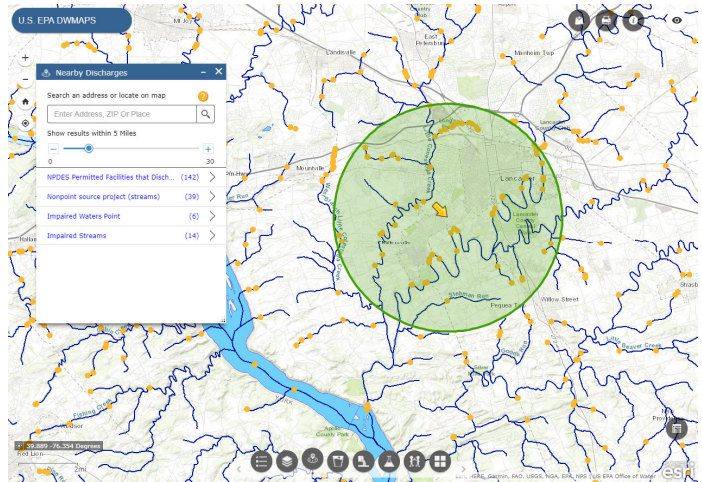


## NEARBY DISCHARGERS WIDGET

What waters are being discharged into?



ECHO Database



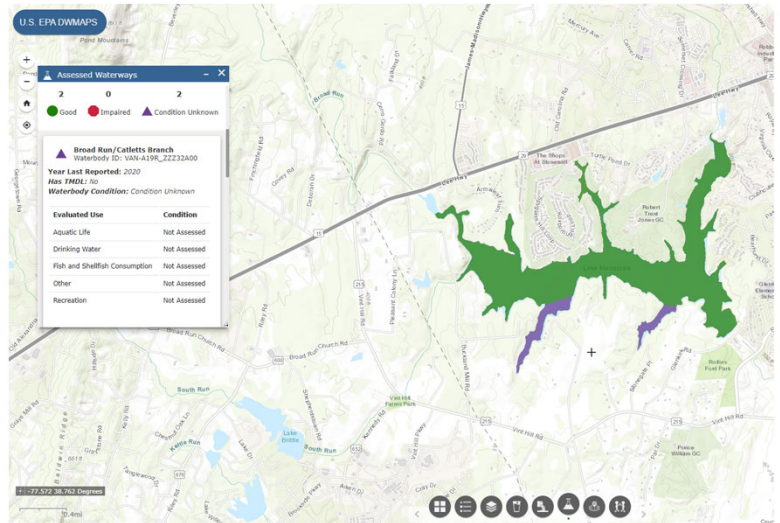
Potential Contaminant Sources (NPDES) within 5-mile radius

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## LOCATE ASSESSED WATERWAYS

Are source waters prioritized for TMDL development?

- View impaired waters information, Waterbody Quality Assessment Reports, and TMDL Reports.



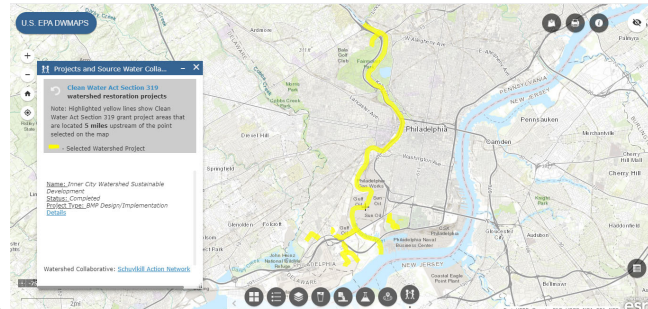
Assessed Waterway Widget

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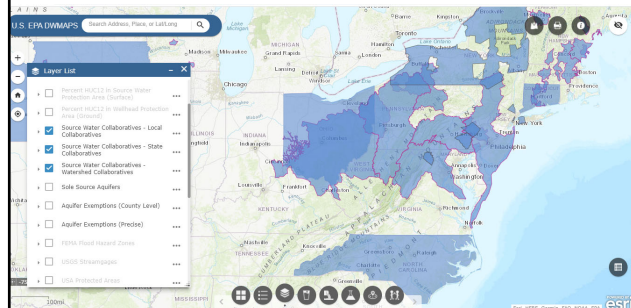
## LOCATE PROJECTS & SOURCE WATER COLLABORATIVES

View 319 project locations and grant reports (GRTS)

Projects and Source Water Collaboratives Widget



Locate local collaboratives to collaborate with



Source Water Collaborative Layers

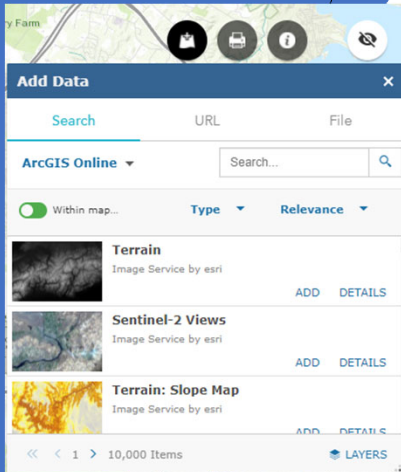
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## OTHER USEFUL LAYERS

- Drinking Water Intakes per HUC12
- Drinking Water Wells per HUC12
- Percent HUC12 in Source Water Protection Area (Surface)
- Percent HUC12 in Wellhead Protection Area (Ground)
- Sole Source Aquifers
- Aquifer Exemptions
- Land Use
- Underground Storage Tanks
- Estimated Private Wells
- NRCS National Water Quality Initiative
- Demographic Indicators
- Environmental Indicators
- Climate Change Indicators
- And More!

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## ADD YOUR OWN DATA



- Customize your analysis
- Search over 10,000 items in ArcGIS Online Catalog
- Upload from URL
- Upload from file
- Data will not save once you exit application


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## FUNDING INTEGRATION TOOL FOR SOURCE WATER (FITS)





## Background: Help Navigating the Funding Landscape



 Request from the States, ASDWA, other groups

 Some pioneers in the States have already used multiple funds for source water protection

 Wanted to have an easy way to convey this interconnected information

 Spirit of One Water




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## Many Opportunities to Plan and Fund SWP



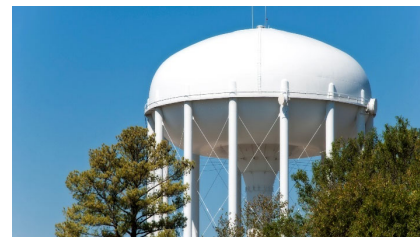
 One Stop Shop for major Federal Funding Sources

 Cross-program planning considerations

 Tips long-term planning

 Rooted in real-world examples

 Interactive Captivate Module on EPA's website



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## Source Water Protection Funding Sources



Click on program title for more information

### EPA Funds

### Other Federal Funds

Drinking Water State Revolving Fund (DWSRF)

Nonpoint Source Management Grants Program (Clean Water Act Section 319 Program)

USDA Natural Resources Conservation Service (NRCS) Conservation Program

Clean Water State Revolving Fund (CWSRF)

Water Pollution Control Grants Program (Clean Water Act Section 106 Program)

FEMA Hazard Mitigation Assistance Program

Water Infrastructure Finance and Innovation Act (WIFIA) Program

Indian Environmental General Assistance Program (GAP)

USFS Landscape Scale Restoration Program

Leaking Underground Storage Tank (LUST) Trust Fund

Wetland Program Development Grants Program (WPDG)



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## Drinking Water State Revolving Fund (DWSRF)



Click on the tabs on the left to view more information.

Overview

Overview – What is the Drinking Water State Revolving Fund?

Uses

*DWSRF Set-Asides*

Eligibility

- States have the option of taking a percentage of their grant funds for non-infrastructure programs and activities.
- The programs and activities supported by these set-asides may include:
  - DWSRF administration
  - Water system capacity development
  - Operator certification
  - Source water protection
  - Small systems technical assistance
  - The Public Water System Supervision program
- Each state determines the appropriate balance between water infrastructure projects and set-asides for their unique circumstances.

Annual Funding Information

Funding Structure

Limitations of Funding

Additional Program Information



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# Components of a Source Water Protection Program



Click on a step on the right to view planning and funding considerations for each component of a source water protection program.



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- ▶ Funding Sources
- ▶ Planning and Funding Coordination
- ▶ Examples
- ▶ Glossary

## Step 5. Develop an action plan



Step Overview

Funds to Consider

Planning Considerations to Access Future Funds

Examples

The following sources are options to help fund activities in this step, within the eligibilities of the program. Find specifics for each fund in the Funding Sources section. Click on a funding source below for more information on that source.

**DWSRF:** The Drinking Water State Revolving Fund is a federal-state partnership that provides financial support to water systems and state drinking water programs.

**GAP:** The Indian Environmental General Assistance Program provides grants to Tribes for planning, developing, and establishing environmental protection programs.

**106:** The Clean Water Act Section 106 Program Water Pollution Control Grants provide funding to build and sustain effective water quality programs for water pollution prevention and control programs and activities.

**WIFIA:** The WIFIA program accelerates investment in our nation's water infrastructure by providing long-term, low-cost supplemental loans for regionally and nationally significant projects.



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## Step 5. Develop an action plan

Step Overview

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Funds to Consider

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Planning Considerations to Access Future Funds

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Examples

Consider these recommendations for how you can coordinate with other programs and plan for funding future phases of your source water protection program.

NPS
CWSRF
106
GAP
LUST
WPDG
NRCS
FEMA

**Nonpoint Source Management Grants - Clean Water Act Section 319 Program**

EPA has focused 319 resources on watershed-based environmental restoration and protection, in which local stakeholders join forces to develop and implement watershed based plans (WBP) to address nonpoint source pollution based on the particular conditions in their communities. A traditional WBP includes nine elements. To address groundwater contamination or protection, approval of an alternate WBP may be possible. More information on how to prepare a WBP can be found [here](#).

OFFICE OF GROUND WATER AND DRINKING WATER

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## Examples

Examples by Funding Source

Examples by Program Component

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
## Examples

### Pick a Funding Source

DWSRF	Section 319
CWSRF	Section 106
WIFIA	GAP
WPDG	Multiple Programs
USDA NRCS	FEMA Hazard Mitigation Assistance
USFS Landscape Scale Restoration	

### Choose an Example

- Nebraska - Drinking Water Management Plans
- Nevada - Building Bridges Truckee River
- Delaware - Source Water Assessments
- Maine - Portland Water District's Watershed Land Conservation Program
- Washington - Skagit Public Utility District

## Examples

### Pick a Funding Source

DWSRF	Section 319
CWSRF	Section 106
WIFIA	GAP
WPDG	Multiple Programs
USDA NRCS	FEMA Hazard Mitigation Assistance
USFS Landscape Scale Restoration	

### Choose an Example

- New Hampshire - Pennichuck Water Works' Source Watershed
- Nebraska - Drinking Water Management Plans
- Washington - Skagit Public Utility District
- Delaware - Source Water Assessments
- Delaware - Groundwater Monitoring
- Kickapoo Tribe - Streambank Stabilization
- Arkansas - West Fork White River Initiative RCPP
- Oregon - NWQI Partnership Experience





 


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## Ashland Hazard Mitigation Plan

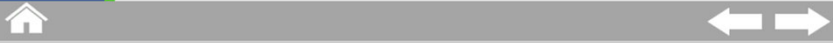
**Project Details**

- **Goal:**
  - Reduce hazards from flooding and protect surface water system for the city of Ashland, Oregon, which faces natural yearly hazards from flooding.
- **Project Description:**
  - Ashland Creek is the City's municipal water supply and is the main source of flooding in Ashland. To combat flooding and protect the city's surface water system, The University of Oregon's Community Service Center developed a proposed natural hazard mitigation plan with 10 action items.
  - The action items use green infrastructure (GI) and low impact development (LID) best management practices (BMPs) to mitigate flood risks and treat urban stormwater onsite to improve water quality and manage runoff.
  - This example highlights several source water protection and community benefits, including the minimization of impervious area, the limiting of disturbance of undeveloped land, the prevention of runoff from landscape and hardscape areas, and the protection of land and ecosystems.



Example

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## Examples


### Pick a Program Component

- Delineate the SWPA
- Inventory known and potential sources of contamination
- Determine susceptibility of PWS to contaminant sources
- Engage the public about threats identified in the assessment
- Develop an action plan
- Protect sources of drinking water by implementing protective actions
- Evaluate and update action plan periodically


Assessment  
  
Protection

### Choose an Example

- Nebraska - Drinking Water Management Plans
- Maine - Portland Water District's Watershed Land Conservation Program
- Washington - Skagit Public Utility District
- Arkansas - West Fork White River Initiative RCPP
- Vermont - Conservation Strategy
- Southern U.S. - Forest and Water Partnerships
- Puerto Rico - Salinas Aquifer Storage and Recovery
- Hawaii - Kohala Watershed Partnership



Examples



Thank you!

**RESOURCES**

- **EPA Source Water Protection page:**  
<https://www.epa.gov/sourcewaterprotection>

**DWMAPS:** <https://www.epa.gov/sourcewaterprotection/drinking-water-mapping-application-protect-source-waters-dwmaps>

**EPA Funding Integration Tool for Source Water (FITS):**  
<https://www.epa.gov/sourcewaterprotection/fits>

**SWP CONTACTS (EPA HQ)**

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**QUESTIONS & DISCUSSION**

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## Participation Certificate

- If you would like to obtain a participation certificate you can access the PDF in the **Handouts** section of your control panel.

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## Watershed Academy Webcasts

More webcasts coming soon!

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## Contact Information

- **DWMAPS**
  - [dwmaps@epa.gov](mailto:dwmaps@epa.gov)
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Office of Ground Water and Drinking Water
  - [Tiendrebeogo.Terrell@epa.gov](mailto:Tiendrebeogo.Terrell@epa.gov)

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Thank You!

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