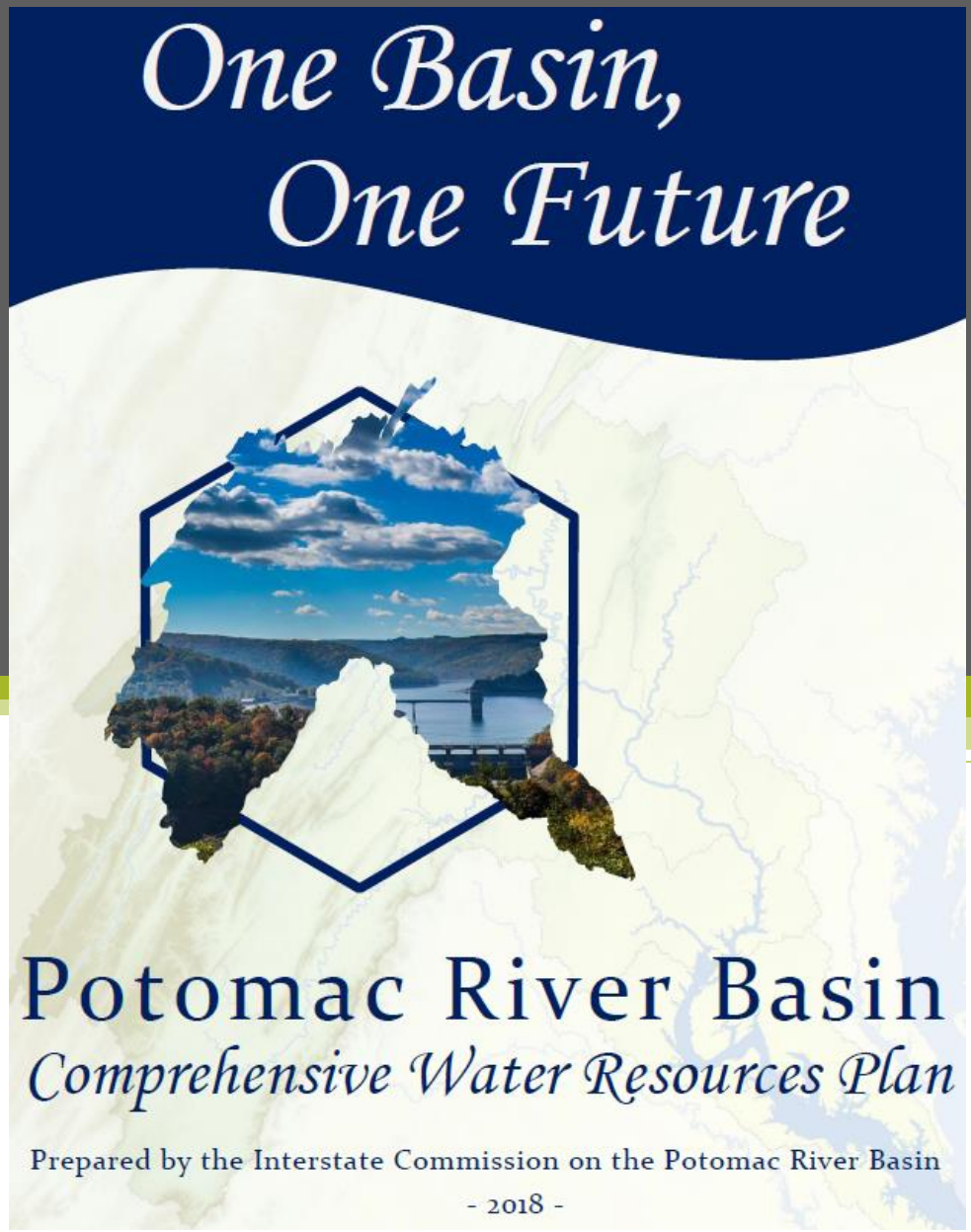
Potomac Basin Comprehensive Water Resources Plan

DWSPP Quarterly Meeting
February 6, 2019

Interstate Commission
on the
Potomac River Basin



Plan cover photo by Robyn Phillips Photography.

Outline

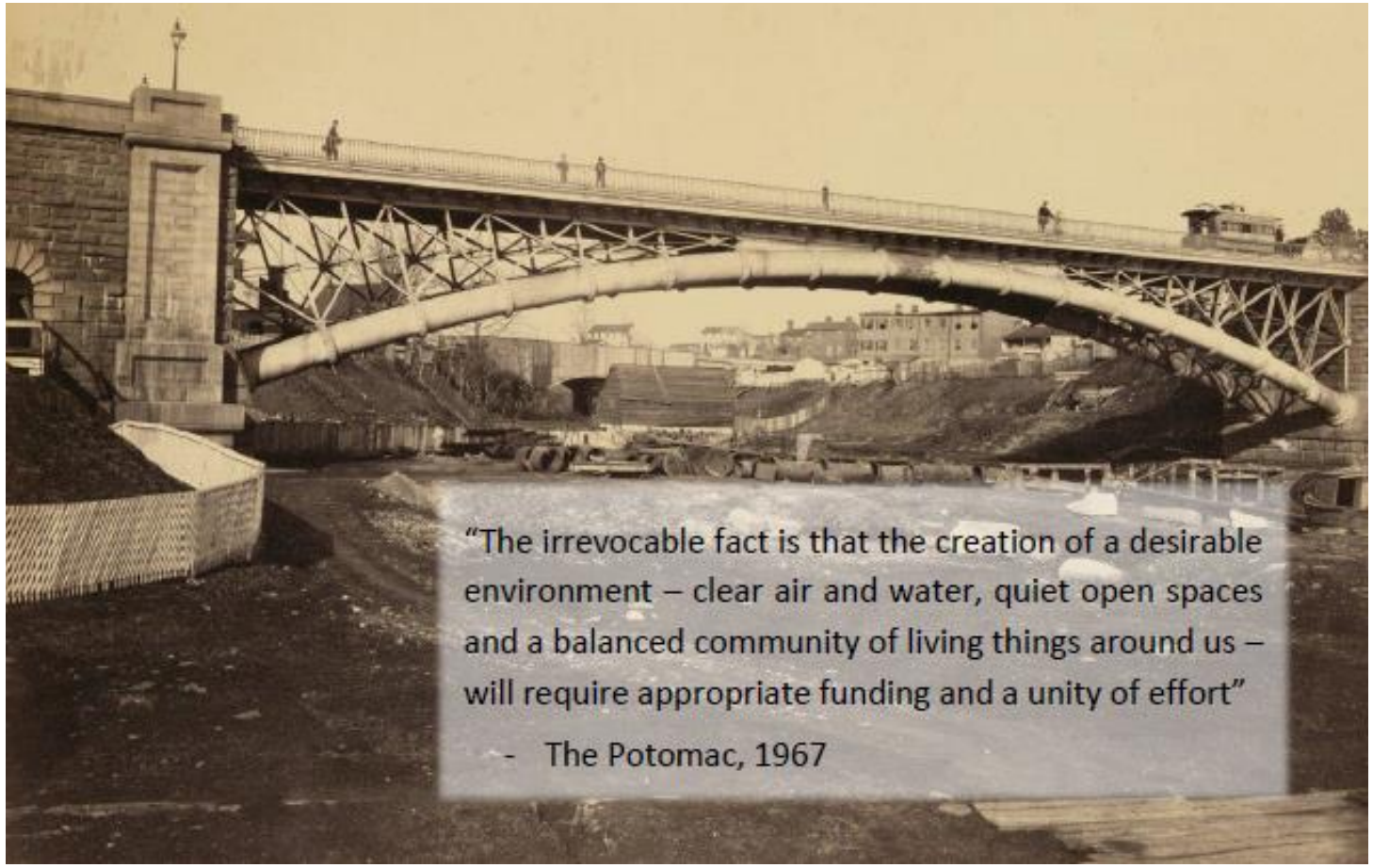
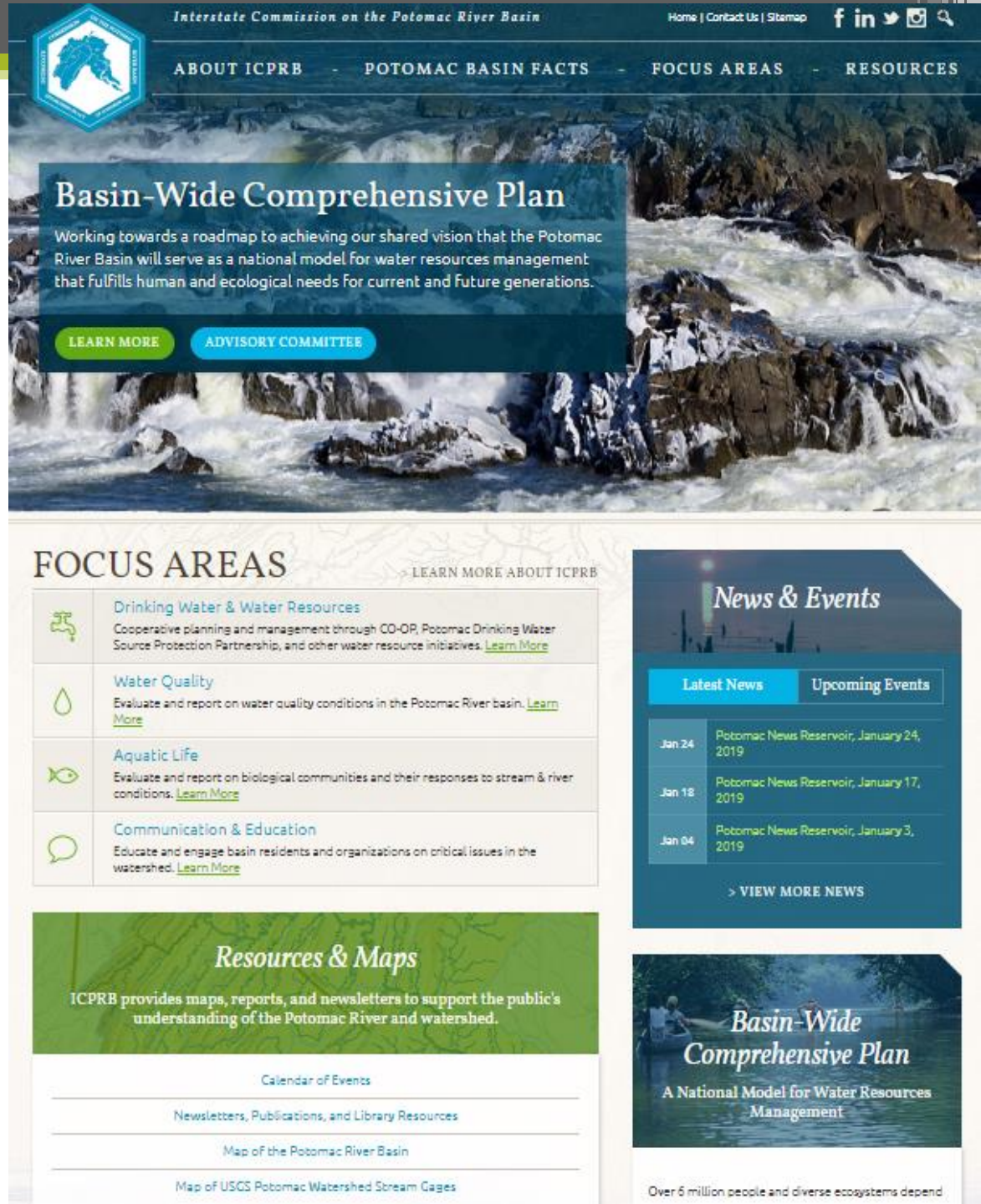


Photo from the Library of Congress.

- Website
- Sections of the Plan
- Timeline
- Example Implementation Activities
- DIME

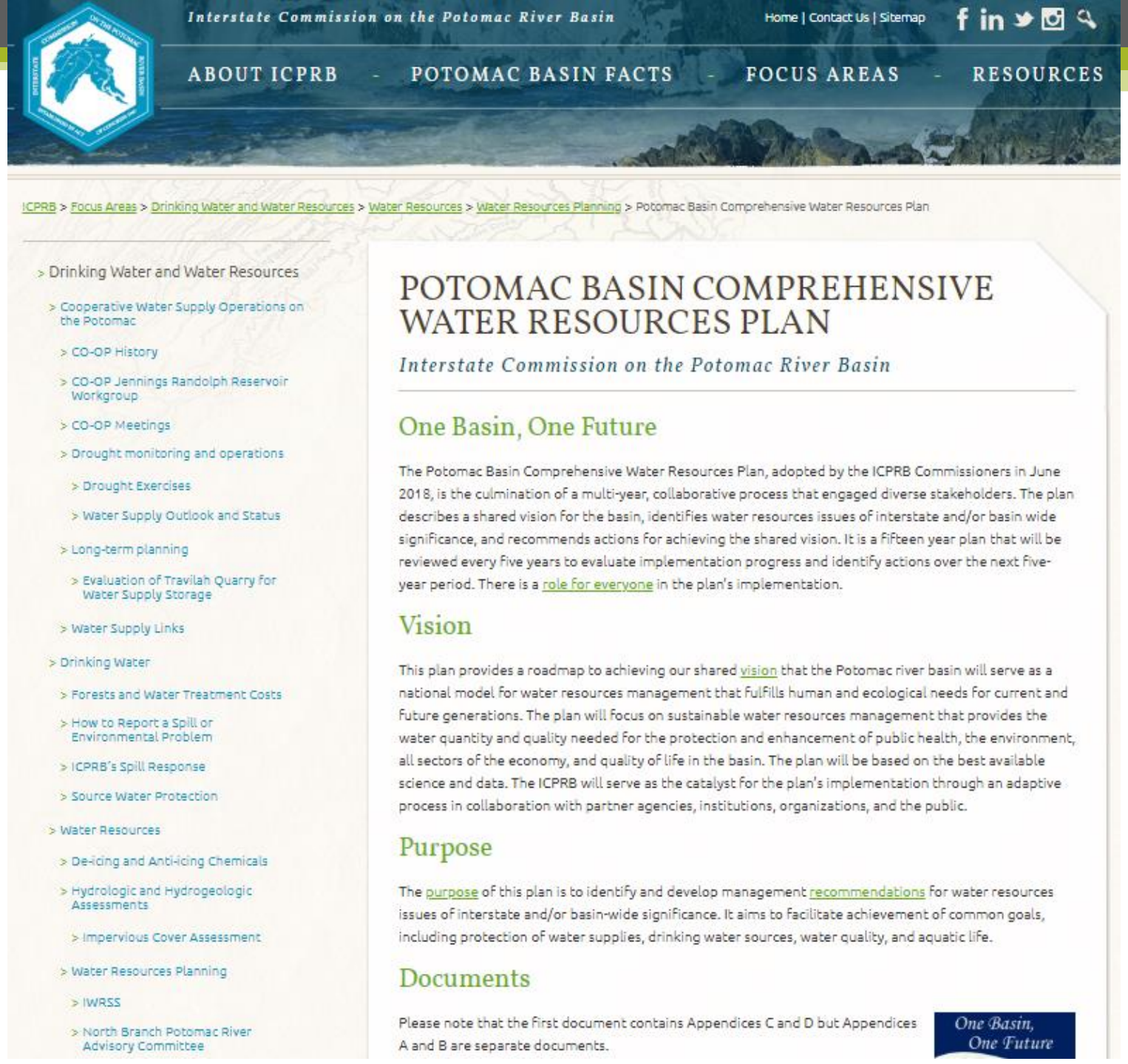
Check Out the Website!

www.potomacriver.org



Comp Plan Website

bit.ly/basin_plan

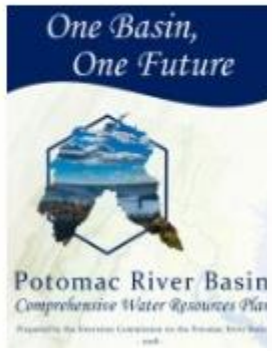


Ready-to-Use Documents

Documents

Please note that the first document contains Appendices C and D but Appendices A and B are separate documents.

1. Potomac River Basin Comprehensive Water Resources Plan (20MB)
2. Appendix A: Final Report of the Advisory Committee (0.5MB)
3. Appendix B: Annotated Bibliography by Challenge Area (0.5MB)



Quick Access

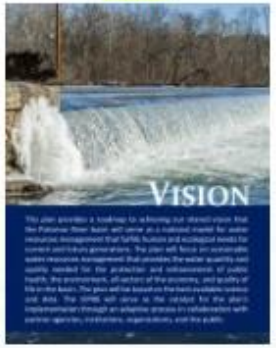
Executive Summary

Map

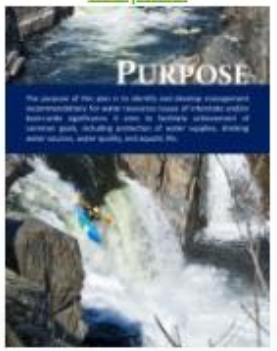
Simple Actions We Can do to Make a Difference

Recommendations by Challenge Areas

Vision



Purpose



Major Sections of Plan Document

- Introductory Materials
- Potomac Basin Description
- Challenges and Recommendations
- Implementation
- Strategy for Adaptive Implementation

Photo by John Wirts.

Vision

This plan provides a roadmap to achieving our shared vision that the Potomac River basin will serve as a national model for water resources management that fulfills human and ecological needs for current and future generations. The plan will focus on sustainable water resources management that provides the water quantity and quality needed for the protection and enhancement of public health, the environment, all sectors of the economy, and quality of life in the basin. The plan will be based on the best available science and data. The ICPRB will serve as the catalyst for the plan's implementation through an adaptive process in collaboration with partner agencies, institutions, organizations, and the public.

Photo by Jim Palmer.

Purpose

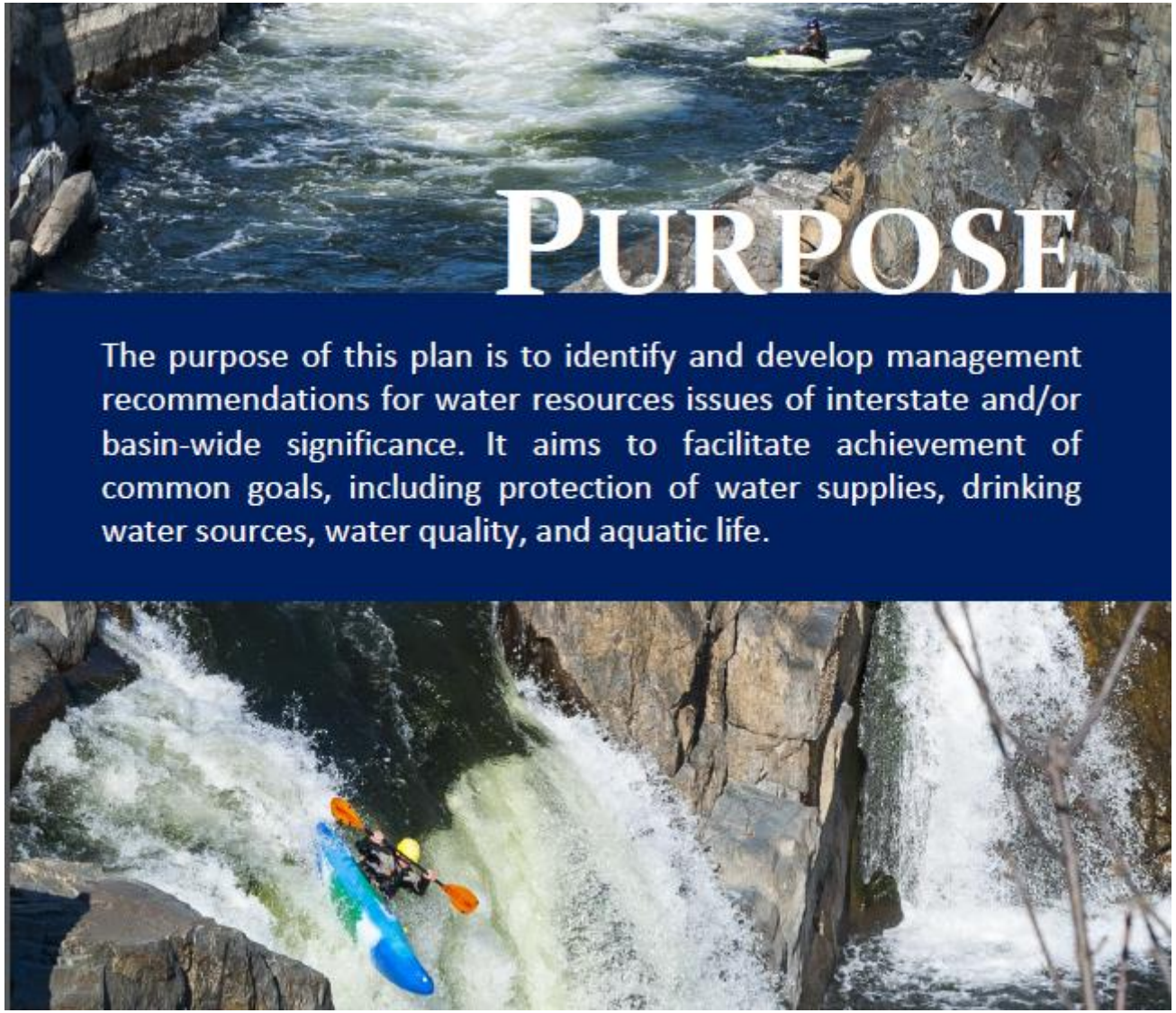
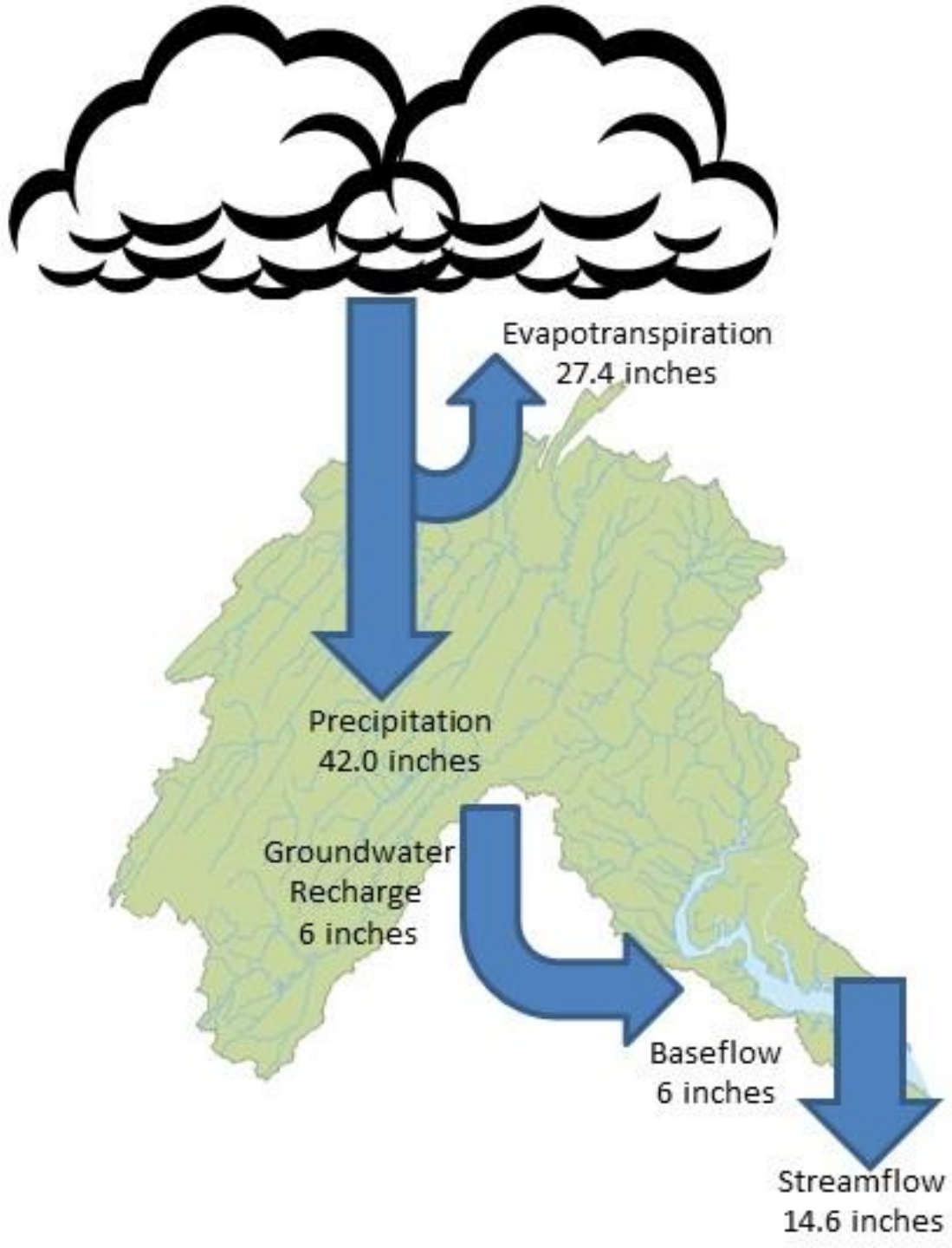


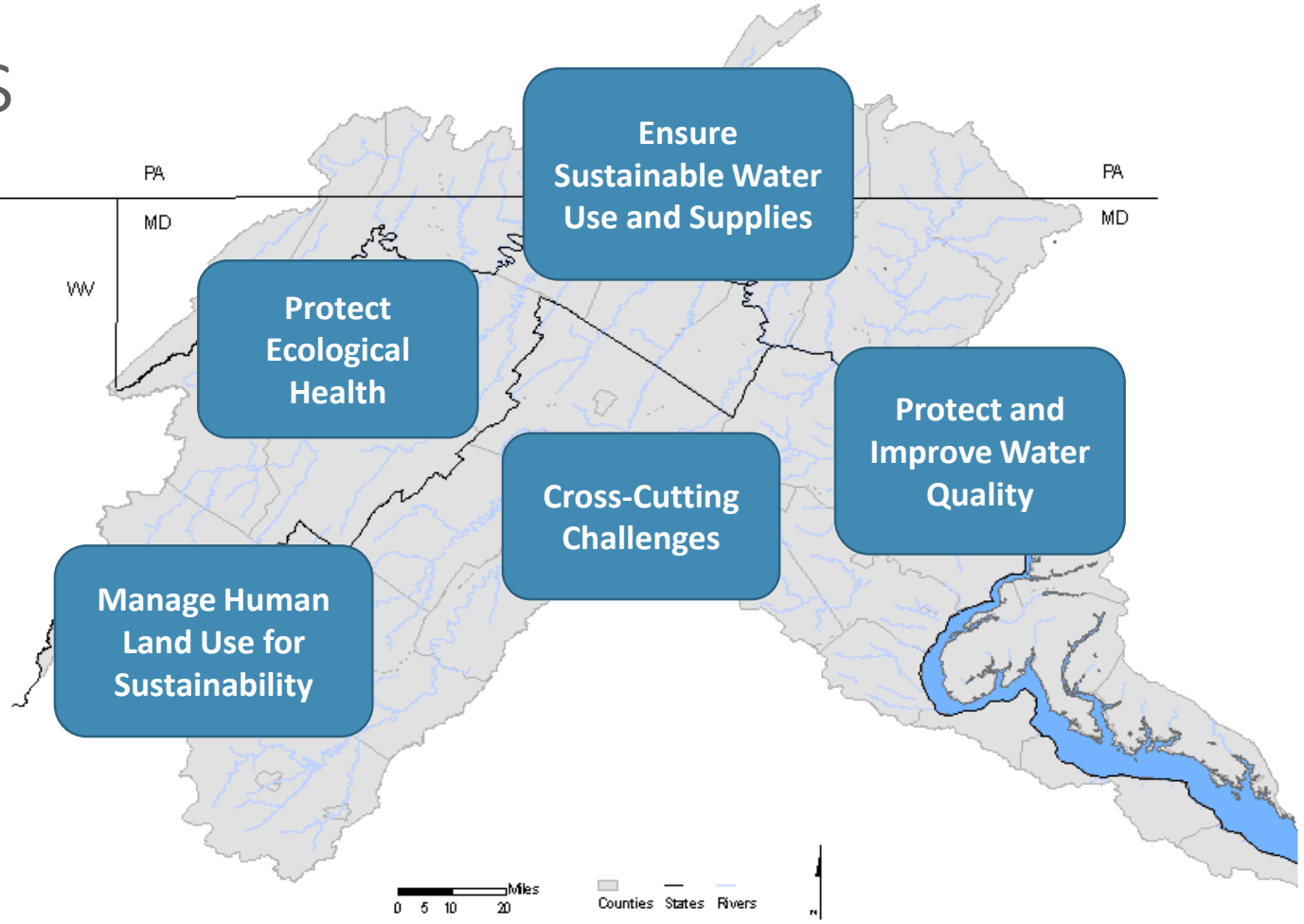
Photo by Jim Palmer.

Basin Description

- Physiography
- Hydrology
- Population
- Land Use
- Water Use
- Water Quality
- Aquatic Life



Challenge Areas



Challenge areas include issues of basin-wide and/or interstate concern.

Cross-Cutting Challenges

Cross-cutting themes that transcend any one particular challenge area

Floods and Droughts

Occoquan Reservoir during 1960s drought.

Climate Change

Water-Energy Nexus

Source Water Protection

Oil spill on the Anacostia River, early 1990s.

Recommendations

Recommendations

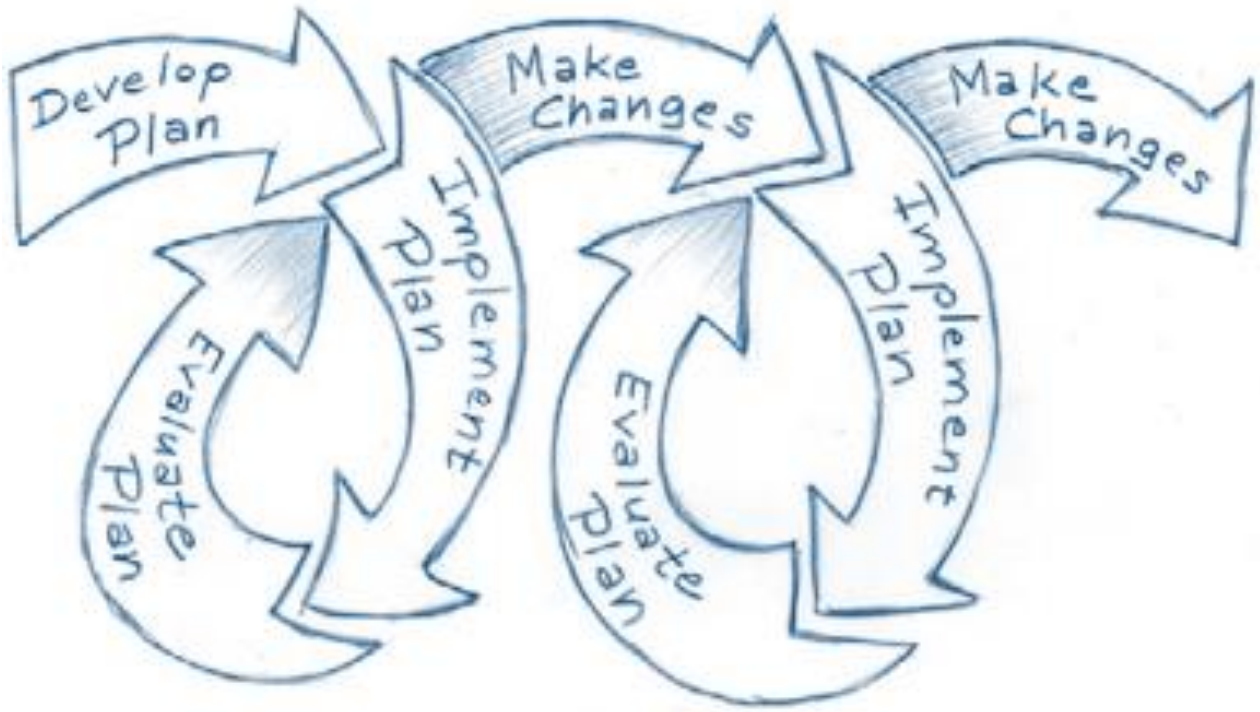
Implementation

- Roles and Responsibilities
- Potential Funding Sources
- Integration with Other Plans

Photo by John Wirts.

Adaptive Implementation

- Milestones
- Measures of Success
- Review Process
- Communications Plan



Source: EPA

Timeline

- Plan adopted by the Commissioners in June 2018
- Stakeholder roll-out underway
  - Website, social media, press release, presentations
- Implementation underway, 2- and 5-year goals
- Review of milestones and measures of success in 2023

Examples of Current Implementation Activities

- Workshop prep
  - Planning for workshop(s) to identify roles and responsibilities and areas of authority of basin organizations related to water quality, water use/supplies, and human land use
  - Your participation in the workshop(s) is encouraged! More information forthcoming!
- Basin-wide water uses, projected demands, and consumptive demands
  - Draft scope of work available
- Unreported water uses
  - Irrigation, livestock, unconventional oil and gas, thermoelectric, self-supplied domestic, aquaculture, and mining
- Potomac Data Inventory, Mapping, and Exploration (DIME)

Potomac Data Inventory, Mapping, and Exploration (DIME)

Portal to diverse Potomac-related data and information

- Quick access through ICPRB website
- Draws from other online databases and ICPRB in-house datasets
- Interactive tools to view and download data

. . . for ICPRB staff and water resource professionals

. . . to promote information & data sharing and more interdisciplinary, integrative analyses of the basin's waters

Water Quality Explorer

Query by:
- Parameter
- Site

HUC 8
All HUCs

Site
USGS-01603000

Parameter
PH

Units: SU
Outliers Removed: 0
Censored Data: 0% (n = 0)
Available Parameters: CA_F, CL_F, FE_W, HARD, HARD_NONCARB, MG_F, MN_W, NA_F, PH, SO4_F, SPCOND, TALK, TDS, TEMP

Site Information

Site: USGS-01603000
Agency: USGS-MD
First Date: 01/04/1968
Last Date: 06/06/1994
State: *Blank*
Latitude: 39.6218056
Longitude: -78.7734167
Depth (m): *Blank*
Replicate: *Blank*
Composite: Absent

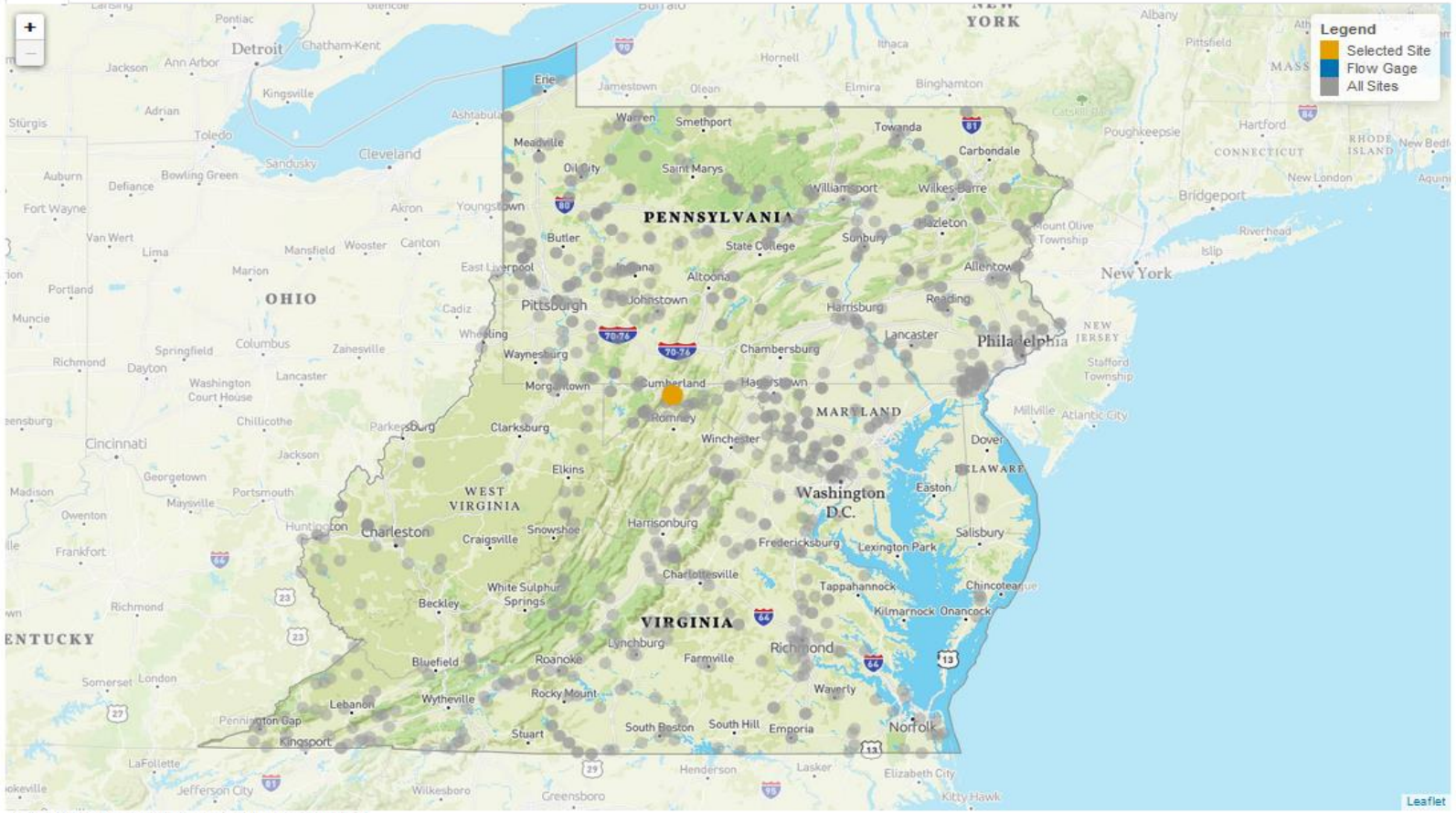
Gage Information

Flow Gage: 1603000
Agency: USGS
Flow Gage Location: NORTH BRANCH POTOMAC RIVER NEAR CUMBERLAND, MD
Latitude: 39.62180556
Longitude: -78.7734167

Download

Download Plots

Map | Figures | Data | Metadata | Relevant Publications

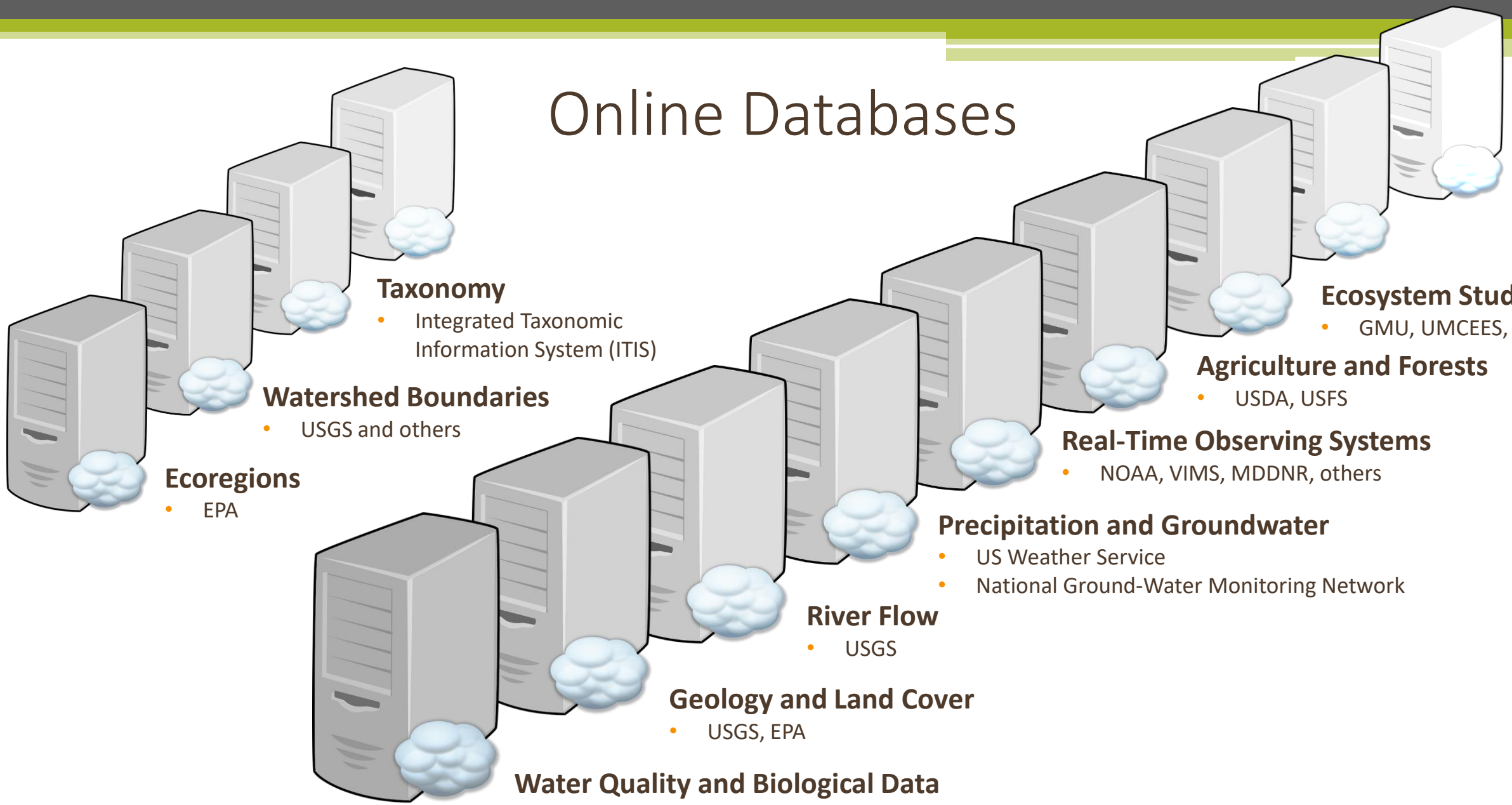


**Hold shift, click, and drag to utilize the box-zoom tool.*

"Water Quality Explorer" built for the EPA3 Trends Project

. . . data downloaded from the nation's STORET and Water Quality Portal systems

Online Databases



Taxonomy
- Integrated Taxonomic Information System (ITIS)

Watershed Boundaries
- USGS and others

Ecoregions
- EPA

Ecosystem Studies
- GMU, UMCEES, others

Agriculture and Forests
- USDA, USFS

Real-Time Observing Systems
- NOAA, VIMS, MDDNR, others

Precipitation and Groundwater
- US Weather Service
- National Ground-Water Monitoring Network

River Flow
- USGS

Geology and Land Cover
- USGS, EPA

Water Quality and Biological Data
- Chesapeake Environmental Data Repository (CEDR)
- National Water Quality Portal (WQP)

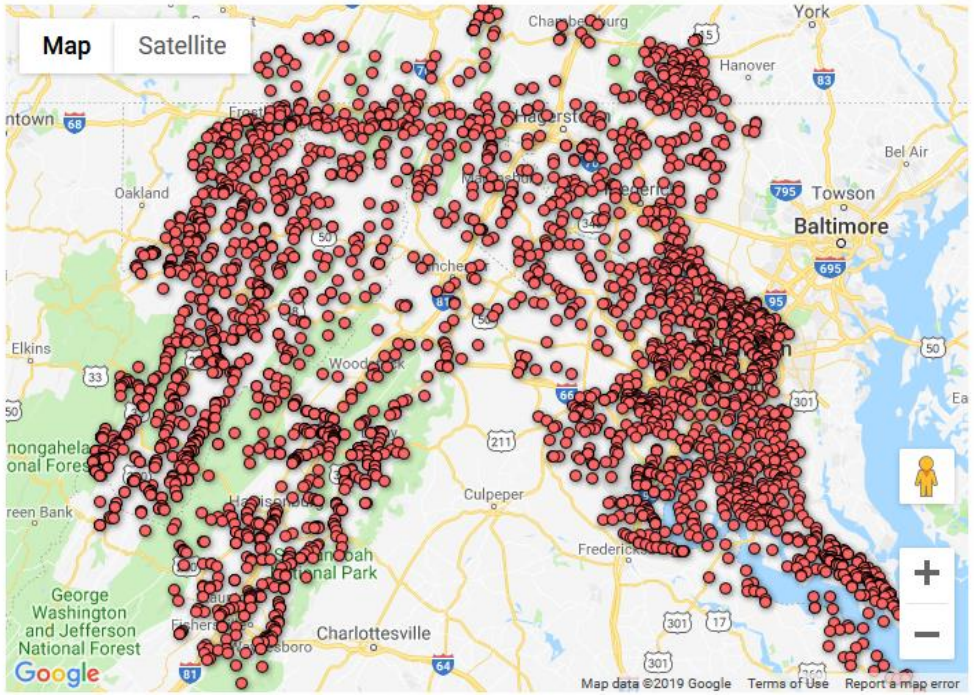
ICPRB Online Products

POTOMAC BASIN WATER QUALITY DATA INVENTORY

Interstate Commission on the Potomac River Basin

This mapping interface is available to assist users in identifying monitoring locations of interest. The map displays water quality data monitoring locations that are currently included in the inventory. A pop-up window appears for each location by clicking on the monitoring point. The pop-up window includes key information about the monitoring effort including either contact information or a web link to access the data. The search feature allows you to search by agency.

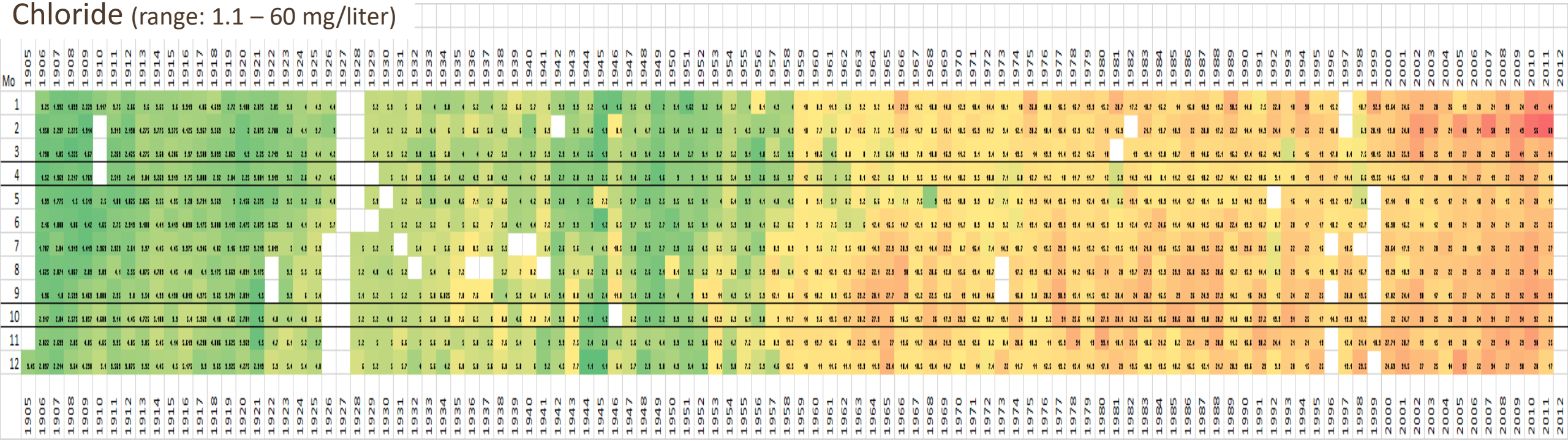
To obtain more information about the data sources or to search specific parameters, users can open the spreadsheet inventory (1.5MB).



High Value, Off-Line Datasets & GIS Layers

Example: Dalecarlia Reservoir Raw Water, Washington Aqueduct

Chloride (range: 1.1 – 60 mg/liter)



1905 – 2011

Design “architecture” of DIME webpage

Build online interactive tools to:

- view map of sample locations
- learn which parameters were collected, by whom, and how often
- create simple time series plots and “heat maps” on the fly
- use point-and-click to identify a location’s upstream catchments
- select and download data, GIS layers, and associated data documentation

Begin connecting to

- online real-time data
- online static datasets

} QA’ed and managed by home agencies

- ICPRB water quality inventory
- high-value, off-line datasets

Would Potomac DIME be useful to DWSPP members?

Would DWSPP members be willing to share raw water datasets?

Questions?

2008 ICPRB River Ramble at Mount Vernon. Photo by ICPRB.

Contacts

Heidi Moltz
Associate Director, Water Resources
hmoltz@icprb.org
301.274.8116

Claire Buchanan
Director, Program Operations
cbuchan@icprb.org
301.274.8112

Interstate Commission on the Potomac River Basin