# Potomac Basin Comprehensive Water Resources Plan

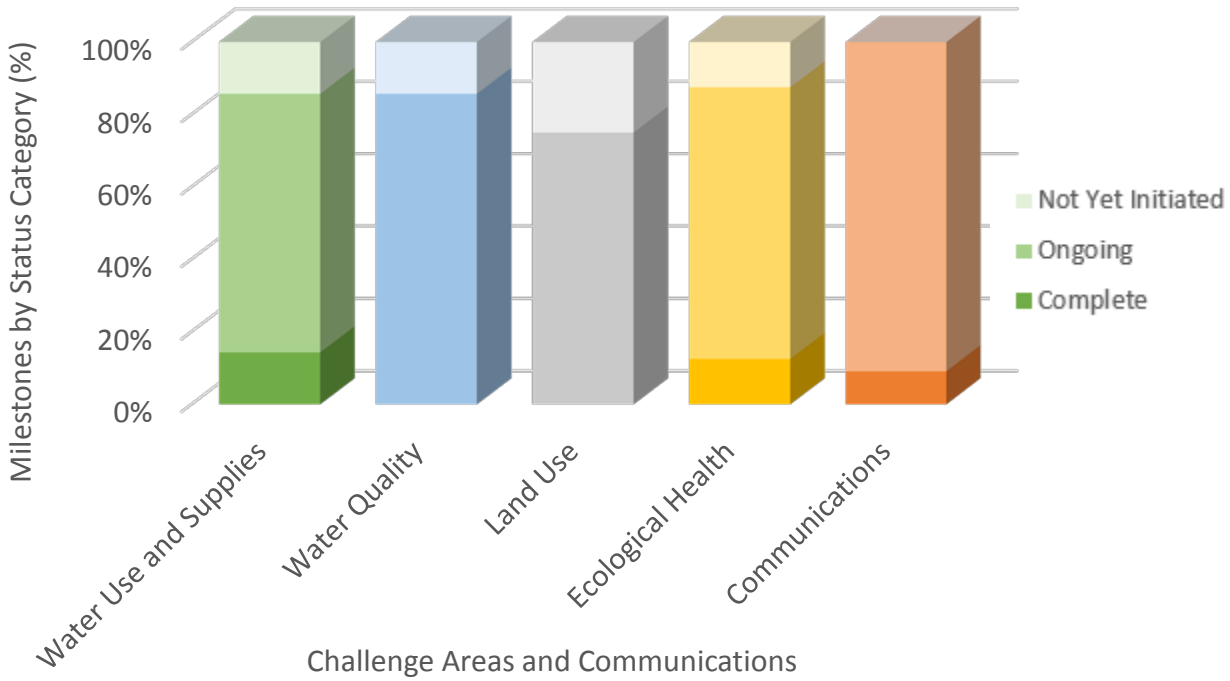
## Year One Implementation Progress

The first year of implementation of the Potomac Basin Comprehensive Water Resources Plan resulted in the successful completion of eight percent of the planning milestones and initiation of another eighty percent of the planning milestones. This document lists some of the highlights from the past year, provides a general overview of the plan's implementation status (Figure 1), describes select ongoing activities, and gives a more detailed picture of implementation status by individual milestone (Figure 2).

### Year One Highlights

- ✓ The ICPRB signed on to the 2019 Interstate Council on Water Policy streamgage letter.
- ✓ The LFAA review was completed in February 2018.
- ✓ An online precipitation map was developed to assist basin stakeholders in sharing information during droughts.
- ✓ An R-program was developed to calculate the Chesapeake Basin-wide Index of Biotic Integrity for stream macroinvertebrates (Chessie BIBI). The index measures biological status and responses to restoration efforts.
- ✓ The 2008 baseline for the Chesapeake watershed to measure change in stream macroinvertebrate health was completed.
- ✓ The manuscript titled *Streamflow Alteration from Impervious Cover: Are All Watersheds Created Equal?* was published in the Journal of the American Water Resources Association in December 2018.
- ✓ The scope of work is complete for a study on basin-wide water uses, demands, and consumptive demands.
- ✓ Focused communications activities included press releases, frequent social media posts, and targeted presentations.

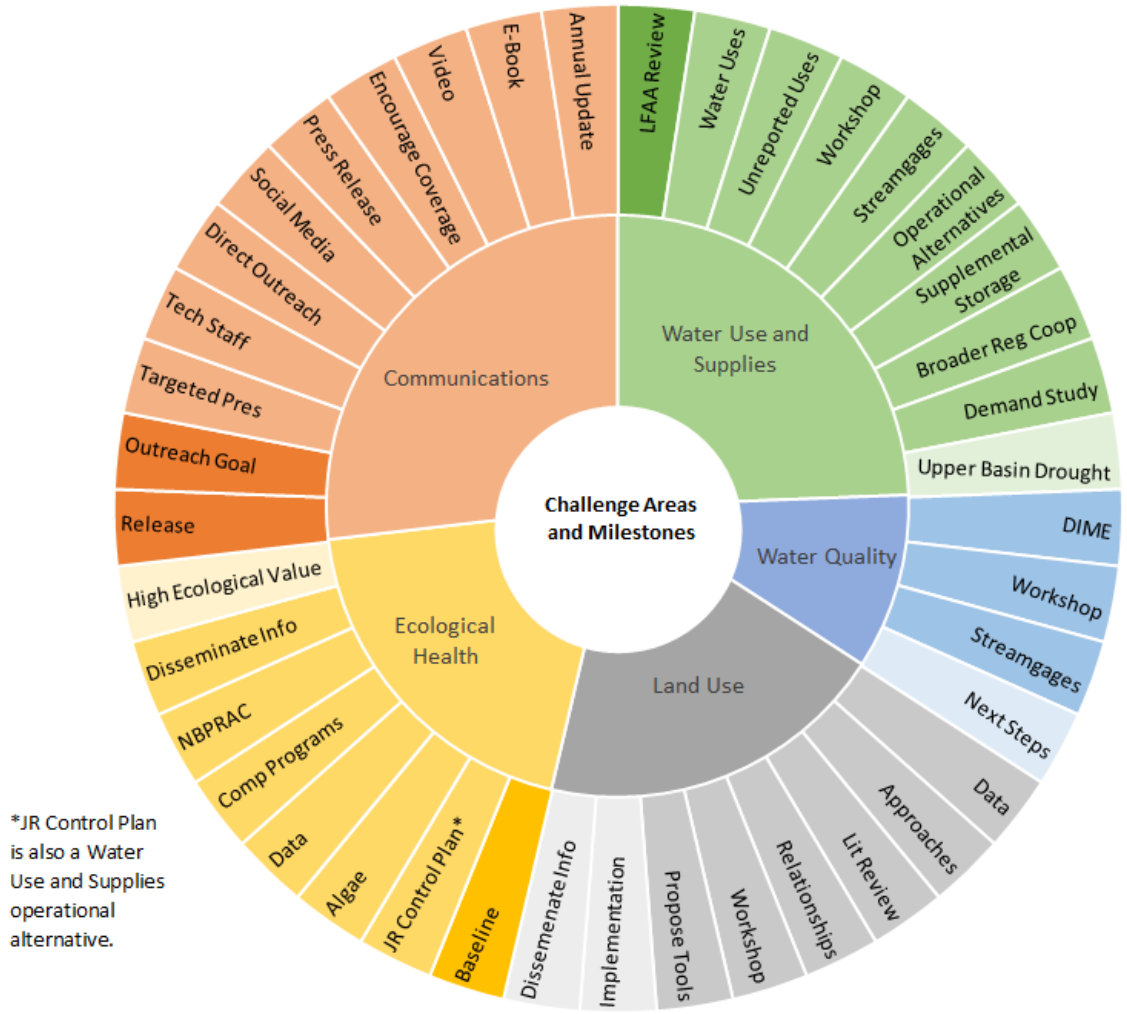
Figure 1. Year one implementation progress for short- and long-term milestones, 2019-2023. This figure does not illustrate percent complete by funding or staff time, only by the number of milestones in each status category. Challenge areas are distinguished by color. Status is designated using three shades of that color. The figure legend was developed using Water Use and Supplies as an example. Colors used in Figure 1 correspond to those used in Figure 2. While communications is not a challenge area, per se, it is a key component of implementation and is included here for reference.



## Select Ongoing Activities

- Data collection and analysis are underway to estimate unreported water uses by county and watershed. Tabular results are expected in September 2019.
- Workshop planning is underway to cover the water quality, water use and supplies, and human land use challenge areas. Workshops are planned for fiscal year 2020.
- Phase 2 of the Jennings Randolph Lake Water Control Plan Scoping Study is underway.
- The Cacapon River filamentous algae study is ongoing with expected completion at the end of fiscal year 2020.
- Work has been initiated for the CO-OP 2020 demand study.
- The Potomac Data Inventory and Mapping Exploration (DIME) initiative is in full swing to make Potomac data sets readily accessed, related, and explored.
- Extensive literature reviews have been conducted to document existing regulatory and programmatic approaches to managing human land use in the basin as well as looking for creative, effective uses of land use management tools. A written report is expected at the end of fiscal year 2019.
- The Revised Water Supply Coordination Agreement Workgroup, consisting of members from each of the three CO-OP utilities, has preliminarily agreed to a simple agreement to bring Loudoun Water into the CO-OP system.

Figure 2. Implementation status by milestone and challenge area. Detailed descriptions of each milestone can be found in the comprehensive plan description, reprinted below for convenience. While communications is not a challenge area, per se, it is a key component of implementation and is included here for reference. Colors used in this figure correspond to colors used in Figure 1. The darker the shade, the closer a milestone is to being complete.




*JR Control Plan is also a Water Use and Supplies operational alternative.

## Milestone Descriptions[1]

Short- and long-range milestones for each challenge area are described. Milestones for implementation of the overarching recommendation are also described by challenge area. Short-term milestones are activities that will be accomplished within two years of adopting this plan. Within three to five years, the long-term milestones will be achieved. All milestones are expected to be achieved over the five-year period (2019-2023). Upon successful implementation of these milestones, the planning process should be re-initiated to identify the most appropriate follow-up actions. An asterisk (*) at the beginning of the milestone indicates that once initiated, the activity will continue for the duration of implementation.

### Ensure Sustainable Water Use and Supplies

Short-Term (Years 1 and 2) Milestones, 2019-2020

- ☐ WATER USES: Working with the federal government (e.g. USGS), state agencies responsible for water use reporting, and drinking water utilities, ICPRB will develop a scope of work for a report on basin-wide water uses, projected demands, and consumptive demands. The scope of work will include a detailed timeline to ensure timely completion of the report in accordance with this plan. The time period of the water use analysis will depend on the time periods for which consistent data is available throughout the basin. (Recommendation 3.3.2 A)
- ☐ UNREPORTED USES: ICPRB will collect readily available data sets (e.g. land use, census urban areas, water utility service areas, etc.) to estimate basin-wide unreported water uses. (Recommendation 3.3.2 B)
- ☐ WORKSHOP: ICPRB will convene a workshop of basin stakeholders with responsibilities related to water use and supplies to develop a spreadsheet inventory of roles, responsibilities, and areas of authority. (Recommendation 3.2.1 A)
- ☐ STREAMGAGES: *ICPRB will collaborate with basin stakeholders and partners such as the Interstate Council on Water Policy to promote continued operation and maintenance of long-term USGS gages and other essential monitoring efforts. (Recommendation 3.3.2 C)
- ☐ LFAA REVIEW: The signatories to the Potomac River Low Flow Allocation Agreement will review the agreement and consider changes to bring it up to date. (Recommendation 3.3.2 C)
- ☐ OPERATIONAL ALTERNATIVES: The CO-OP Section of ICPRB, working with the CO-OP utilities, will begin implementation of operational alternatives five through eight of the water supply alternatives study (Schultz et al. 2017). (Recommendation 3.3.2 C)
- ☐ SUPPLEMENTAL STORAGE: *ICPRB, working through its Task Force on Water Supply Alternatives and jointly with the WMA utilities, will move forward the planning and implementation of supplemental raw water storage that could be used5 to supplement supplies in case of severe drought or in case of a spill event in the Potomac River. (Recommendation 3.3.2 C)
- ☐ BROADER REGIONAL COOP: *The CO-OP Section of ICPRB, working with the CO-OP utilities, will seek to broaden the regional cooper7a1tive system which provides for cooperative drought planning and operations and shared funding of water supply storage. (Recommendation 3.3.2 C)
- ☐ UPPER BASIN DROUGHT: ICPRB will assist basin stakeholders in information sharing during drought events in the upper portion of the basin to supplement and enhance drought management activities for the WMA. (Recommendation 3.3.2 C)

Long-Term (Years 3 through 5) Milestones, 2021-2023

- ☐ DEMAND STUDY: The CO-OP Section of ICPRB will conduct the demand study for the Washington Metropolitan Area in 2020 and every five years thereafter as required by the Water Supply Coordination Agreement. (Recommendation 3.3.2 A)

[1] This section is reprinted from the Potomac Basin Comprehensive Water Resources Plan. Short names were added to each milestone in all capital letters that correspond to the labels in Figure 2.

- ☐ WATER USES: Basin jurisdictions will provide historic and current reported water use data to ICPRB staff for assessment as part of developing a report on basin-wide water uses, projected demands, and consumptive demands. (Recommendation 3.3.2 A)
- ☐ WATER USES: Following the scope of work developed in partnership with the federal government, state agencies, and drinking water utilities, ICPRB staff will develop a report on basin-wide water uses, projected demands, and consumptive demands. The report will be distributed to basin jurisdictions and other stakeholders for review and comment. (Recommendation 3.3.2 A)
- ☐ UNREPORTED USES: ICPRB will estimate and prepare a report on basin-wide unreported water uses. The report will be distributed to basin jurisdictions and other stakeholders for review and comment. (Recommendation 3.3.2 B)
- ☐ OPERATIONAL ALTERNATIVES: The CO-OP Section of ICPRB, working with the CO-OP utilities, will continue implementation of operational alternatives five through eight of the water supply alternatives study (Schultz et al. 2017) as deemed appropriate during short-term implementation. (Recommendation 3.3.2 C)

### Protect and Improve Water Quality

Short-Term (Years 1 and 2) Milestones, 2019-2020

- ☐ DIME: ICPRB will develop a plan to merge the water quality data inventory and the long-term trends data for viewing and dissemination. (Recommendation 3.4.2 A)
- ☐ WORKSHOP: A workshop will be convened by ICPRB to share data, assess completeness, and identify gaps. (Recommendation 3.4.2 B)
- ☐ WORKSHOP: ICPRB will convene a workshop of basin stakeholders with responsibilities related to water quality (either in conjunction with or independent from previously described workshop of water quality experts) to develop a spreadsheet inventory of roles, responsibilities, areas of authority. (Recommendation 3.2.1 A)
- ☐ DIME: *ICPRB will develop and maintain a series of web pages, in close partnership with stakeholders, to serve as a resource for water quality decision-makers and the general public. (Recommendation 3.4.2 B)
- ☐ STREAMGAGES: *ICPRB will collaborate with basin stakeholders and partners such as the Interstate Council on Water Quality to promote continued operation and maintenance of long-term USGS gages and other essential monitoring efforts. (Recommendation 3.4.2 C)

Long-Term (Years 3 through 5) Milestones, 2021-2023

- ☐ DIME: ICPRB will execute the plan to merge the water quality data inventory and the long-term trends data. (Recommendation 3.4.2 A)
- ☐ NEXT STEPS: ICPRB will evaluate and implement, along with identified partners, additional next steps as deemed appropriate based on the results of the workshops described in the short-term milestones. (Recommendations 3.4.2 B and Recommendation 3.2.1 A)

### Manage Human Land Use for Sustainability

Short-Term (Years 1 and 2) Milestones, 2019-2020

- ☐ DATA: ICPRB will develop a method for compiling data and information associated with human land use. (Recommendation 3.5.2 A)
- ☐ APPROACHES: ICPRB will document local regulatory and programmatic approaches to managing human land use currently underway in the basin. (Recommendation 3.5.2 A)
- ☐ LIT REVIEW: ICPRB will conduct a literature review of creative, effective uses of land use management tools (regulatory, programmatic, and financial) to achieve goals. (Recommendation 3.5.2 A)

- ☐ RELATIONSHIPS: ICPRB will develop relationships with organizations to effectively disseminate land use related information to stakeholders. (Recommendation 3.5.2 B)
- ☐ WORKSHOP: ICPRB will convene a workshop of basin stakeholders with responsibilities related to land use to develop a spreadsheet inventory of roles, responsibilities, and areas of authority. (Recommendation 3.2.1 A)

Long-Term (Years 3 through 5) Milestones, 2021-2023

- ☐ IMPLEMENTATION: ICPRB will implement the method developed in the short-term for compiling data and information, described above. (Recommendation 3.5.2 A)
- ☐ PROPOSE TOOLS: ICPRB will utilize the documented existing approaches to managing human land use and the results of the literature review in order to propose potential creative, effective uses of local, regulatory, programmatic, and financial tools to achieve goals in the Potomac basin. (Recommendation 3.5.2 A)
- ☐ DISSEMENATE INFO: As it becomes available, ICPRB will disseminate land use related information to stakeholders in a timely manner. (Recommendation 3.5.2 B)

## Protect Ecological Health

Short-Term (Years 1 and 2) Milestones, 2019-2020

- ☐ JR CONTROL PLAN: ICPRB will work with diverse stakeholders to perform Phase II of the Jennings Randolph Lake Water Control Plan Scoping Study, which seeks to develop protections for downstream ecological value and recreational fisheries through better, model-based coordination of the various human uses of the North Branch Potomac River. (Recommendation 3.6.2 C)
- ☐ ALGAE: ICPRB will work with state agency staff to identify water chemistry conditions that increase the likelihood streams will form nuisance filamentous algal blooms, and will complete a study of the negative impacts of filamentous algae blooms on aquatic life in the Potomac's Cacapon River. (Recommendation 3.6.2 D)
- ☐ BASELINE: A "2008 baseline" with which to measure change in stream macroinvertebrate health in the Chesapeake watershed, including the Potomac, will be developed with stakeholders and implemented at the CBP. (Recommendation 3.6.2 B)

Long-Term (Years 3 through 5) Milestones, 2021-2023

- ☐ DATA: ICPRB staff will continue to work with agency and volunteer monitoring programs and the Chesapeake Bay Program Data Center to compile biological monitoring data in basin-wide databases. (Recommendation 3.6.2 A)
- ☐ COMP PROGRAMS: ICPRB staff will continue to work with stakeholders to develop computer programs to evaluate habitat, water quality, and biological data in consistent ways, and will encourage data and information exchanges. (Recommendation 3.6.2 A, B)
- ☐ HIGH ECOLOGICAL VALUE: ICPRB will continue to seek consensus on what is high ecological value, identify habitats and waters in the basin with high ecological value (references), and use reference-based approaches to develop metrics and tools for evaluating ecological health. (Recommendation 3.6.2 B)
- ☐ NBPRAC: ICPRB will continue to coordinate the North Branch Potomac River Advisory Committee meetings. (Recommendation 3.6.2 C)
- ☐ DISSEMINATE INFO: As it becomes available, ICPRB will disseminate ecological health related information to stakeholders in a timely manner. (Recommendation 3.6.2 A)

## Communication Plan

This section describes efforts to reach people with the information contained in this plan and efforts to promote ongoing support for these efforts as the plan evolves. The strategies to successfully reach and engage people are:

- RELEASE: Public release of the plan in June 2018: Posting this report on ICPRB website and promoting the plan through existing ICPRB web-based publications and social media. This process will be continued as milestones in the effort are reached or as additional opportunities are presented.
- TARGETED PRES: Comprehensive plan advisory committee and ICPRB staff will provide input to determine where presentations should be given. Includes MWCOG committees, state and federal planning groups, and universities. ICPRB staff should identify federal and state agencies with resources planning responsibilities and set up meetings or presentations. This can help those agencies spread the word with county and local planning agencies with which they share responsibilities.
- TECH STAFF: Submit articles about the plan to professional and/or academic journals.
- DIRECT OUTREACH: Reach out directly to AWRA, Chesapeake Bay Program, water suppliers, Potomac Conservancy, DWSPP, etc., to enlist their support and participation in the plan.
- SOCIAL MEDIA: Use national social media campaigns to promote the plan, such as the AWWA Drinking Water Week.
- PRESS RELEASE: Send press release to area papers, radio, and television.
- ENCOURAGE COVERAGE: Reach out personally to journalists, bloggers, and podcasters with which we have relationships to encourage coverage.
- VIDEO: Create video(s) based on plan action items for use on the web and social media.
- OUTREACH GOAL: Meet outreach goal of at least four presentations during the first six months of outreach.
- E-BOOK: Explore creation of an e-book for easier reading on Kindles, tablets, and smart phones. The e-book would be available on the ICPRB website and possibly on popular online stores such as Amazon.
- ANNUAL UPDATE: Provide an annual update on the plan to other agencies and the public through methods described above.