

Guiding Principles for Incorporating Fish Habitat

WIP Implementation Principles

1. Consider Existing Stressors:

- Continuous habitat is more favorable for supporting fish and shellfish populations than fragmented habitat.
- Conserving high quality habitat for maintaining ecosystem services and healthy habitats is cheaper than restoration.
- Fish are more responsive to restoration efforts in less developed areas.
- Tree canopy cover lowers stream temperature by providing shade. However, some BMPs impound water, raising the temperature from heat absorbed from the sun. This adversely impacts sensitive aquatic species, such as brook trout.
- Nutrient reductions help reduce algae which improves oxygen resources to fish and shellfish. These reductions improve light conditions that support healthy aquatic vegetation structure and function that support fish diversity.
- Slowing and treating runoff benefits native fish communities while reducing impacts of nutrient and sediment loading.
- Reducing toxic contaminants supports improved survival, growth and reproduction of fish and shellfish, lower water treatment costs, the potable state of the water, and lowers human health risks with reduced contaminant exposures through fish and shellfish consumption.
- Natural shorelines provide suitable habitat health for fish and important watershed resources.

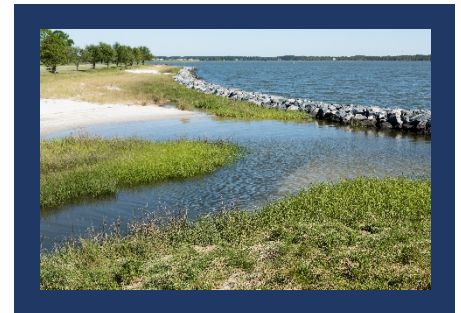
2. Capitalize on Co-benefits: Select BMPs that enhance fish habitat or offer other ecosystem benefits. There is often a positive impact on fish habitat when you plan a project with ecosystem benefits such as maintaining stream health, enhancing wetland function, or conserving submerged aquatic vegetation.

3. Engage Partners: Use the fish habitat contacts provided below to help you plan a project that also protects or restores fish habitat and help you determine if you have temperature sensitive species in your area.

Tools and Resources

A wide variety of fish habitat tools and datasets can help you capitalize on multiple ecosystem benefits when selecting and designing water quality improvement projects. Find a full listing of fish habitat mapping tools and spatial datasets [here](#).

- Link to detailed [BMP table](#)
- Link to [maps and datasets](#) with multiple ecosystem benefits
- Virginia [Living shorelines](#), Maryland [Living shorelines](#)



Contacts for More Information

For more assistance on how to build fish habitat benefits into your water quality improvement projects, please reach out to your jurisdictional contact below or contact the Chesapeake Bay Program's Fish Habitat Action Team Chair, Gina Hunt at gina.hunt@maryland.gov.

Jurisdiction	Lead	Phone	Email
Delaware	Edna Stetzar	(302) 735-8654	Edna.Stetzar@state.de.us
D.C.	Bryan King	(202) 997-9607	bryan.king@dc.gov
Maryland	Jim Uphoff Margaret McGinty	(443) 258-6087 (410) 260-8297	Jim.Uphoff@maryland.gov Margaret.McGinty@maryland.gov
New York	Josh Thiel	(518) 402-8976	Josh.thiel@dec.ny.gov
Pennsylvania	Geoffrey Smith	(717) 265-7837	geofsmith@pa.gov
Virginia	Rachael Peabody (tidal) David Whitehurst (nontidal)	(757) 247-8027 (804) 367-4335	Rachael.peabody@mr.c.virginia.gov David.Whitehurst@dgif.virginia.gov
West Virginia	David Thorne Brandon Keplinger	(304) 637-0245 (304) 822-3551	David.W.Thorne@wv.gov Brandon.J.Keplinger@wv.gov