



The **USDA Natural Resources Conservation Service (NRCS)** work side-by-side with farmers, timber harvesters and other private landowners to conserve the natural resources on their land. Maine rivers and their tributaries have undergone dramatic changes over the last 200 years. Some of these changes influenced by humans include over-widened channels, removal of in-stream structure, and a decrease in stream connectivity due to problem culverts. NRCS is actively engaging in cooperative conservation with partners and most importantly local landowners to get stream restoration and enhancement projects on the landscape.

## Signs of Culvert Problems

Do you have problem culverts on your land? The majority of problem culverts are because they are undersized. Below are some signs of problem stream crossings:

- Annually replacing fill around a culvert
- Regularly having to reset culverts and repair roads after high water events
- Backwater is present above the culvert inlet
- Wedge of stream material above the culvert inlet
- The culvert outlet is perched above natural stream bottom
- A plunge pool is present below the culvert outlet
- Multiple culverts at one crossing
- Culvert entrances need frequent cleaning to remove debris

## Assistance

The NRCS has technical and financial assistance programs to help solve assistance problems on private land. Our programs help solve problems and reduce the cost of sustainable management that benefits the landowner and the resource.

## How do you Benefit

The average shelf life of traditional round culverts is 25 years. Roads in headwater areas of Maine are aging, and many culverts need, or will soon need, to be replaced. Alternatives include: channel spanning culverts and bridges, low water crossings, and removable bridges. There are many economic and ecological benefits:

- Reduced crossing and road maintenance (i.e. no annual fill needed or cleaning)
- Open bottom arch culverts last 50 - 75 years
- Safe road infrastructure
- Crossing able to withstand severe storm events
- Fragmented aquatic habitat is reconnected
- Stream functions are enhanced or restored



Before



Before



After



After



## Problem Culvert Impacts to Fish and Habitat

Traditional undersized or hung round culverts are barriers to fish passage that fragment and degrade streams for native fishes that depend on timely access to different habitat types (i.e. spawning habitat, cold water refuge) and other resources (i.e. food and space). Marshy backwaters often kill trees along the stream, reduce shade, increase water temperature and reduce stream flow which promotes conditions for warm water and invasive fish species.



## Species Focus

NRCS stream restoration benefits a variety of species. Over 50 Maine native fish species will experience increased stream access and positive changes to their stream habitat, particularly native brook trout and sea-run fish species. Non-fish wildlife benefiting from culvert replacement include:

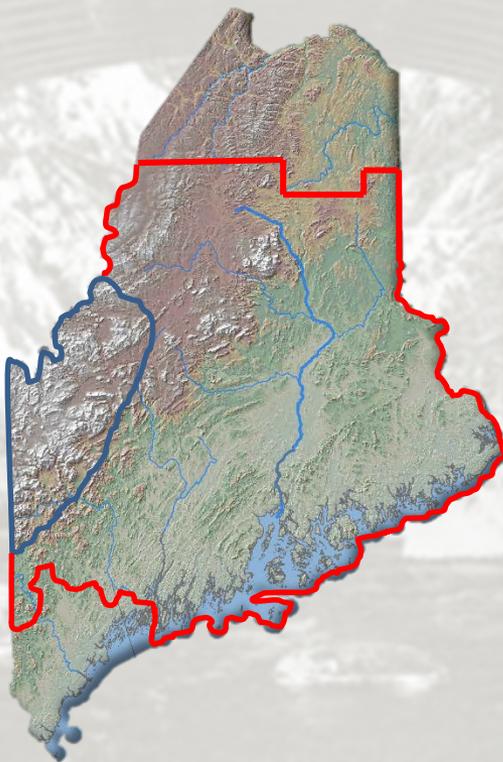
- Freshwater mussels
- Salamanders and frogs
- Aquatic invertebrates
- Turtles

## NRCS Program Eligibility

NRCS programs assist private landowners. Eligibility requirements vary from program to program. Additional information concerning NRCS programs can be found at [www.me.usda.gov](http://www.me.usda.gov)

## Contact Information

We are interested in discussing stream restoration with you. If there is any question concerning fish passage or determination if your culvert might be a barrier to fish and other aquatic life please contact your [local NRCS office](#) or Ben Naumann at 990-9504.



## NRCS Funding Opportunities

NRCS is working with partners on two Regional Conservation Partnership Program (RCPP) projects with a Aquatic Organism Passage (AOP) focus:

- “Maine Aquatic Connectivity Restoration Project”
  - Focus area outlined in **RED**
  - Lead partner The Nature Conservancy
  - Total \$4,000,000 for AOP projects!
  - Project ends in 2022
- "Maine Mountain Collaborative For Fish and Wildlife."
  - Focus area outlined in **BLUE**
  - Lead partner Trust For Public Lands
  - Total \$200,000 for AOP projects.
  - Project ends in 2021.

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