

MANAGING FOR FISH AND FISHER

STUDENT READING

We Washingtonians live in a special place - a place that allows us to share beautiful lakes, rivers, streams, and a vast ocean. We also inherit an obligation to pass on the quality of life and range of opportunities we enjoy to the next generation of people. But when it comes to fish and fisheries, we are beginning to see that we have not paid enough attention to making sure fish and the places they live will be here in the future.

For more than a century, people have cut off fish passage to spawning grounds, degraded water quality and quantity, and harvested too many fish from some populations. We built and operated fish hatcheries to make up for some of these actions. But we found that some of the ways we operated the hatcheries and used the fish they produced didn't solve the fish problem. Today we know that developing a hatchery "superstock" fish or increasing hatchery fish releases many times over is not the answer.

The answer is where it has always been-in Washington's streams and rivers. It is here that

steelhead, salmon and trout have continued to live and reproduce in the natural environment, despite large odds against them. These survivors are our ticket to the fish future, because they carry in their genes the traits of fish that have survived. These wild fish are a precious resource, too valuable to lose.

Today, fisheries scientists are refining their management programs. Wild fish, streams and rivers, and fish hatcheries are partners in the fish and fishing future.

WHAT'S WILD?

To be considered wild, a fish population must meet two tests:

1. It must be a species of salmon, trout, whitefish, or sturgeon native to Washington (Some native, non-game fish listed as "sensitive" species are also included under this definition).
2. It must be naturally spawned and directly descended from a

population that was present in the same geographical area prior to the year 1800.

These fish are clearly the best fish for their native stream or river. If increased fish production is going to happen in these particular streams and rivers, it is the wild fish from that place that will make it happen!

Are there any wild fish populations left in Washington? Yes! Efforts are underway to identify and nurture these wild populations. And even though some earlier fish stocking changed the genetic makeup of some fish populations, the fish are surviving in their natural environments.

WILD AND NATURAL

Remember, wild fish are those that show an unbroken lineage of reproduction in their environment dating back to 1800. Natural production is a little different. It is a broader term that simply means reproduction that takes place in rivers and streams, whether the fish have been reproducing since 1800 or not.

FISHERIES MANAGEMENT AND HATCHERIES

So, where do hatcheries fit in all of this? The Washington Department of Fish and Wildlife's goal is to establish an overall fishery management program that is good for fish and fishermen, and all Washingtonians. This means that everything that affects fish must be considered. These include:

- wild fish conservation
- habitat protection and enhancement
- harvest management
- hatchery operations & stocking

Here's a short look at how these parts fit together.

Wild Fish Conservation:

The goal is to conserve the valuable genetic resources of certain populations. Doing this may mean making some changes in the hatchery practices and stocking methods. For example, a fishery for hatchery-produced salmon in a coastal bay and watershed may be concentrated on the lower portion

of the river system, while the upper portion of the river system is managed for wild populations.

Habitat Protection and Enhancement:

As information about habitat needs and availability is gathered, biologists, land and water managers, and even volunteers can expand the natural production capability of many lakes and streams, resulting in more fish.

Harvest Management:

Managing how many fish are caught by sport and commercial fishermen is something the Department of Fish and Wildlife has been doing for many years. But today, there's a new twist: catch and release fishing. Simply put, anglers release any wild fish they catch, while keeping the hatchery fish.

Using the example of the coastal bay and watershed: fishing regulations in the lower part of the river system would be more liberal, since the fishery concentrates on hatchery fish that are produced for people to catch. Anglers would release any wild fish, which are

unmarked. The upper part of the river system would be more restrictive, since the idea is to protect the wild fish there. Differences in the timing of runs of both wild and hatchery fish could also be used to reduce harvest on wild fish, while increasing harvest on hatchery fish.

Hatchery Operations and Stocking:

A few people have concluded that being in favor of wild fish means being against hatcheries. And while some past hatchery practices have not helped natural production, hatcheries have provided lots of fishing opportunities in our lakes, rivers, streams and seas. Hatcheries today have a changing role in fisheries management, and continue to be a vital part of the overall fish future.

Examples of the changing role of hatcheries include:

- Increased emphasis on producing fish stocks that are genetically similar to the fish populations already present in the watersheds where the hatchery fish will be released. This gives both wild and naturally-producing fish

populations a chance to thrive.

- Often, more fish return to the hatchery than are needed for egg-taking and reproduction. When there are no or very few unique, naturally reproducing or native fish above the hatchery, many of the hatchery fish are allowed to pass above and spawn naturally in the hope of gaining some added natural production. To avoid “swamping” the existing fish, if there are significant numbers of naturally reproducing or native fish above the hatchery, the excess hatchery fish are either taken to other streams to spawn or sold for fish fertilizer or other products.

- Building ponds in the lower reaches of watersheds in which hatchery smolts can become “acclimated” to the lower river before they are released. This encourages returning adults to concentrate low in the system, leaving waters above open for natural production of locally adapted fish stocks.

GO SLOW AND GET THERE QUICKER

These changes can not be made overnight, and it may be a decade before all of them are complete. Well-thought-out approaches to hatchery operations, and careful study of the changes that are made will pay off in the long run. This should not require major reductions in hatchery releases or in contributions to hatchery fish to ocean and inland fisheries. And in the end, we will all benefit from a combination of hatchery-produced and naturally spawning fish.