

## **USFWS Update - Infectious Salmon Anemia Virus (ISAV): January 11, 2012**

**Fish health professionals with the U.S. Fish and Wildlife Service, Washington Department of Fish and Wildlife, and Washington Tribes are coordinating closely with other U.S. and Canadian officials following preliminary reports that ISAV has been detected in British Columbia.**

In October 2011 biologists at Simon Fraser University in Vancouver, British Columbia (BC) reported on results of a research study on juvenile sockeye that detected a segment of genetic material suggesting the fish may be infected with the *Infectious Salmon Anemia Virus* (ISAV). Further testing of the same fish by other laboratories could not confirm the presence of the virus using internationally-accepted standard methods of identification. Since then, reports have been released from other research projects indicating similar segments of genetic material have been present in tissues of Pacific salmon species dating back to the mid-1980s. ISAV does not infect humans.

There are several genotypes or strains of ISA virus, some that cause severe disease in Atlantic salmon and some that appear to cause no disease in Atlantic or Pacific salmon. From 2003-2010 the British Columbia Ministry of Agriculture tested 4,726 dead fish from B.C. salmon farms for ISAV. These fish were negative for ISAV by cell culture and polymerase chain reaction (PCR) methods scientifically accepted to detect the disease-causing genotypes of this virus.

Scientists at the Canadian Food Inspection Agency are developing a plan to test all species of Pacific salmon along the coast of BC using a systematic sampling design to determine if any known genotypes of ISAV are present in fish in those waters, as well as test the same fish for two other viruses known to occur in Pacific salmon species. Because the PCR method used to detect ISAV is an extremely complicated test that is highly sensitive to sample degradation and contamination and requires very stringent quality control procedures, all tissue collection, transport, and laboratory testing will follow strict scientifically-accepted methods required by international reporting standards.

The U.S. Fish and Wildlife Service (USFWS), the Washington Department of Fish and Wildlife (WDFW), and the Northwest Indian Fisheries Commission (NWIFC) in western Washington, have collaboratively instituted several measures to reduce disease risks of ISAV and other pathogens. Many of these measures have been in place for years. Pathogen testing is routinely performed on cultured fish populations in federal, state, and tribal hatcheries, and has been conducted on several wild fish populations in Washington, Oregon, and Idaho for

several years through the National Wild Fish Health Survey. To date, ISAV has not been found.

Activities currently underway include:

- 1) Verification that current surveillance methods will detect known pathogenic genotypes of ISAV;
- 2) Development of a collaborative *ISAV Surveillance Plan* for fish in Alaska and Washington that will integrate with surveillance efforts in BC;
- 3) Formation of a multi-agency committee of scientists to develop a "*Research Plan*" to include testing for the presence of additional pathogens during this surveillance effort; and,
- 4) Planning for a technical workshop on ISAV detection methods for fish health professionals to be held in early spring 2012.

An active surveillance project is being launched through the National Aquatic Animal Health plans in the US and Canada to test fish in fresh and marine waters from Alaska to the Washington-Oregon border and up the Columbia River. If ISAV is detected, appropriate preventive measures will be taken to safeguard fishery resources.