MEETING SUMMARY
Utah Fish Health Policy Board (FHPB)
January 7, 2014

The Utah Fish Health Policy Board (FHPB) met at 10:00 a.m. at the Utah Department of Natural Resources building in Salt Lake City, Utah on January 7, 2014.

The following Board members were present: Bruce L. King, DVM (State Veterinarian / Animal Industry Director), Michael Canning (DWR – Assistant Director), Dr. Chris Wilson (DWR – Fish Pathologist), Dr. R. Paul Evans (BYU - Microbiology & Molecular Biology), Neal Barker (Aquaculture Representative), Paul Dremann (Sport Fish Representative), Robert Judd (Aquaculture Representative).

Other attendees: Roger Wilson (DWR – Aquatics Section Chief), Bill Durler (UDAF), Robert Dibblee (Trout Unlimited), Mark Martin (UDAF Retired), Warren J. Hess, DVM (UDAF - Assistant State Veterinarian), Brian Anderson (Trout Unlimited), Martin B. Bushman (Assistant Attorney General for the State of Utah), Mike Ravenberg (Mountain View Trout Farm), Wade Cavender (DWR), Ron Goede (DWR Retired), Paul Oplinger (DWR).

Call to order, welcome and introductions

Approval of the minutes / summary from September 24, 2013

Dr. King motioned that the minutes from the previous meeting on September 24, 2013 be approved. The vote was unanimous in favor of approving the minutes.

AIS Working Group – Roger Wilson

The Aquatic Invasive Species (AIS) Working Group committee had its first meeting in early December 2013.

Some of the tasks ahead for this Committee:

- New Zealand mud snails (NZMS). Currently the mud snails are not part of the formal Aquatic Invasive Species Rule but they are listed as restricted for possession and transportation within the DWR's CIP (Collection, Importation, and Possession) rule. They are still regarded by DWR as an invasive species. Other items about NZMS:
    - You cannot legally move mud snails.
    - NZMS have a potential impact on some of Utah's native pyrg's - spring snails.
    - DWR does not want the NZMS listed. A NZMS listing could create some operating problems for everyone.
    - NZMS are in DWR's Loa facility. The NZMS have also been located on the periphery of the Fisheries Experiment Station. This was discovered in October of 2013.
    - Mr. Wilson mentioned that as a first task the DWR AIS Committee was being charged with helping DWR move forward on the issue of mud snails. For example,
        - How do we protect our native species?
        - How do we protect the business of raising fish?

- The formal AIS Committee members are Jordan Nielson, Drew Cushing, Randy Oplinger, Neil Barker, Chrissy Wilson and Mark Martin. Dr. King stated that Dr. Warren Hess will be taking Mark Martin's place on this committee since Mark Martin has retired.
- Mr. Wilson said that the original draft charter of the DWR AIS Committee is still being adjusted and modified. Dr. King mentioned he would like to see a copy of the charter. Dr. King said he would read through it and respond with any comments.
- Roger Wilson also stated that the AIS committee is much broader than just the NZMS issue. There are a number of issues to for the committee to address going forward, such as inspection procedures at private and public hatcheries.

UDAF AIS Inspection Protocol

Mark Martin presented the proposed draft of the UDAF Aquatic Invasive Species inspection protocol. Some of the highpoints of the protocol:

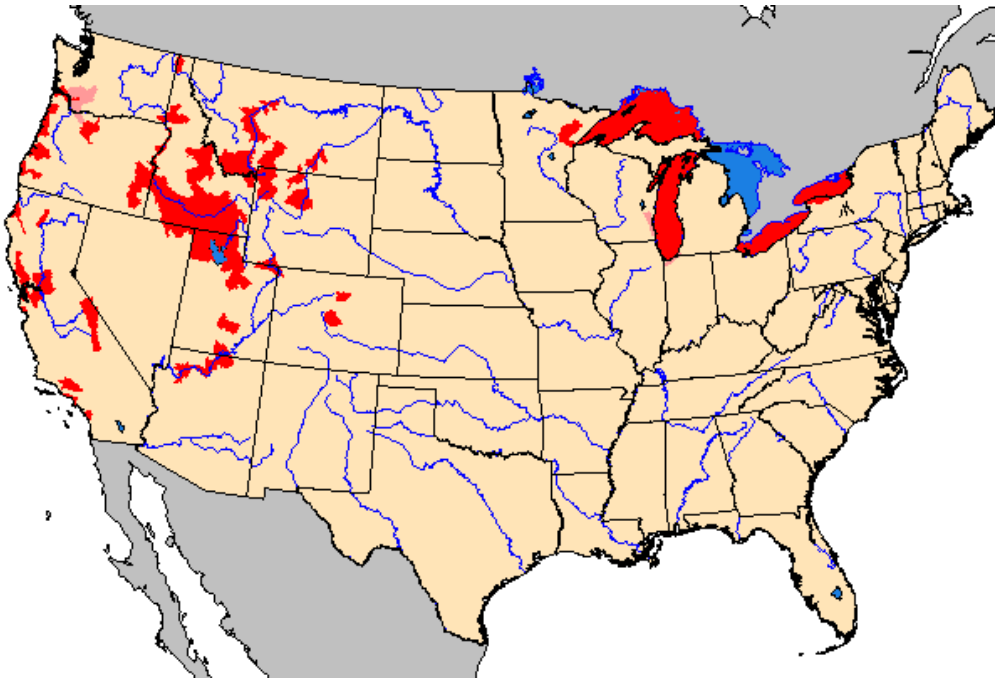
- Inspect each hatchery annually for AIS.
- Contact the owner/operator of the hatchery and arrange a time for the AIS inspection.
- In the presence of the owner/operator check the inlets and outlets and screens of each raceway for AIS.
- Check waters above and below the hatchery for AIS.
- Scrape the raceway walls with an ice scraper with a large strainer at the base to catch any possible AIS from the walls.
- Inspect each raceway wall on each hatchery for AIS.
- Use a long pair of rubber gloves on my hands that extend up to my elbow when I put my arms in the water.

- Clean and disinfect the strainer, scraper and rubber gloves between uses with at least 20 percent bleach and let sit for at least 10 minutes prior to using, preventing the spread of disease within the facility.
- Check under structures in the raceways (e.g. screens, wooden planks etc.) where AIS would most likely be found.
- Check any plant material for AIS in the raceways.
- Place potential AIS specimens in a properly labeled container with 70 percent ethanol alcohol.
- Disinfect equipment with at least 20 percent bleach before leaving the premises to prevent the spread of disease outside the facility.
- Submit the suspect AIS to an approved lab. If the sample is positive submit additional specimens from the same lot to another approved lab for a second verification.
- Maintain constant contact with Dr. King.
- If positive for AIS complete a plan with the owner/operator to remediate the problem.
- Work with the owner/operator of the hatchery to help him find sources or means to sell their fish if an AIS is found.

New Zealand Mud Snail Overview – Randy Oplinger

Randy Oplinger from UDWR gave an excellent presentation titled "New Zealand Mud Snails: Distribution, Ecology, Control, and Hatchery Implications."

Some of the highlights from this presentation:



Present distribution of New Zealand mud snails

- An interactive GIS map on NZMS history / distribution is also located at http://bit.ly/1518hon

- How are NZMS spread?
  - Most likely by anglers
    - Evidence: Occurrence throughout Wasatch front, less prevalent in other portions of state
  - Other possible vectors
    - Wildlife: Occurrence in west desert?
    - Aquaculture-not proven
- Effects on fish:
  - Fish left with little choice in systems dominated by NZMS
  - Not nutrient dense
  - Models project ~0.5% loss in weight/day when rainbow trout fed NZMS exclusively
  - Trout in Green River that feed on NZMS are in poorer condition than those that don't
- NZMS Control Strategies
  - Copper
    - Reduces movement rate by 86-94%
    - Sheeting, mesh, and marine anti-fouling paint all effective
  - Salt
    - ≥750 mg/L
  - General comments:
    - Little testing done on neonates
    - Operculum increases tolerance to chemicals
    - Can burrow a few millimeters below the substrate
    - Extensive out of water movement not documented
- NZMS and Fish Hatcheries
  - Found in many fish hatcheries in west
  - Most states "ignore" this issue
  - Stocking of fish can lead to spread
    - 4.5% of NZMS survive digestion
    - In stomach of ~1 in 160 hatchery fish
    - Thus project 1 live NZMS excreted per 3,650 fish stocked
  - Loa State Fish Hatchery
    - Discovered November 2007
    - Source of NZMS not known
    - Winter 2009:
      - Eradication attempt
      - Significantly reduced NZMS numbers, rebounded within a few months
    - Spring 2011:
      - Placed hatchery springs underground

Trout in the Classroom follow-up presentation – Bob Dibblee

Mr. Bob Dibblee gave a status update on the Trout in the Classroom program.

- Bob handed out the 'Trout in the Classroom Manual' which contains the Lesson Plans, Equipment Setup, timelines and trout care to be used in the classroom. Many of the lesson plans and information contained in the manual can be found at this web site: http://www.troutintheclassroom.org/

- As part of his presentation, Mr. Dibblee showed photos taken of a participant classroom at Fremont Elementary in Taylorsville. There were forty children involved. The eggs were picked up at the DNR building and taken to this classroom. Over 85% of the fish hatched at Fremont. By May 2014, when the fish are to be placed in local ponds, the expectation is the fish will be 4-5 inches in length.

UDAF Annual Report – Mark Martin

Newly retired UDAF Fish Health Specialist Mark Martin went over the 2012 – 2013 ANNUAL REPORT of the UDAF Fish Health program. Some highpoints:

PERMIT TYPE	2012	2013
FISH	1,271,867	1,547,601
EGGS	5,039,495	5,494,070
FISH & EGGS	6,311,362	7,041,671
ENTRY PERMITS	76	150

ENTRY PERMITS

Arctic Grayling	Lake Trout
Bluegill	Largemouth Bass
Brown Trout	Rainbow Trout
Channel Catfish	Tiger Muskie
Cutthroat Trout	Triploid Grass Carp
Humpback Chub	Wipers
Kokanee	Woundfin Minnows
Yellow Perch	

FISH SPECIES IMPORTED, 2012 – 2013

FISH TYPE	2012	2013
Brook Trout	120	60
Brown Trout	180	120
Fathead Minnows	60	60
Rainbow Trout	640	900
Redside Shiner	60	60
Tiger Trout	60	60
Utah Chub	60	60
Sterility Tests	240	180
TOTAL	**1620**	**1320**

TOTAL OF ALL FISH INSPECTED DURING 2012 & 2013: **2940**

PATHOGENS TESTED

UDWR Fisheries Annual Report – Wade Cavender

Mr. Cavender gave an overview of the primary responsibilities of UDWR Fisheries. He covered the positive interactions UDWR has had with the recently retired UDAF Fish Health Specialist Mark Martin.

An UDWR Fisheries employee was covered. Of special note was the reclassification of lab positions. This new description falls more in line with what the biologists actually do on a daily basis. UDWR Fisheries has full laboratory capabilities – especially with breadth and knowledge and experience pf the personnel. Among the many things the Fisheries Lab does:

- General necropsies – looking at fish internally and externally. Watching for abnormalities that may be associated with pathogens.
- Biochemical assays and fluorescent antibody testing for identifying bacterial pathogens.
- Antibiotic Sensitivity Testing – to try to identify which antibiotic to use best treat bacterial infections.
- Spore Extractions – Primarily looking for the parasite that causes Whirling Disease.
- Histology – Is used for watching for the abnormalities to see if there is some change that can be associated with a pathogen.
- Virology – Full capabilities – we can do our own subculture and virus isolation.

The Fisheries lab also follows the standard procedures and protocols that are outlined in the Blue Book. In addition to these protocols, the staff maintains a number of professional certifications.

Mr. Cavender went over the inspections done on the State Fisheries since 2012. There were no pathogen findings and each hatchery was able to be certified. In addition to hatcheries, DWR Fisheries also spent a lot of time with wild fish, primarily looking at Colorado River and Bonneville cutthroat trout populations. There was one new Whirling Disease (WD) finding in Salina Creek. It is a tributary of the east fork of the Sevier River – which has been positive for WD for quite a while.

In addition to cutthroat trout, DWR Fisheries also works with the following species: largemouth bass, bluegill, kokanee salmon, yellow perch, striped bass, wiper, white bass and northern pike. None of these species exhibited any new findings.

Future Topics/Meeting Locations

- Possible June meeting at Fountain Green.
- Quality Assurance for Fish Health Labs across the country. (Chris Wilson, Wade Cavender)

Next Meeting

Next Fish Health Policy Board (FHPB) will be held on March 27, 2014 at 10:00 AM at the Utah Department of Agriculture and Food in the second floor main conference room.

Adjourned