

Bozeman Staff

January 2020

Fish Technology Center

Lacey Hopper, Acting Complex Director

Zach Conley, General Biologist

Cal Fraser, Fish Biologist

Dr. Gibson Gaylord, Physiologist (Lead Researcher-Diet and Nutrition)

Jon Gilleen, Maintenance Mechanic

Jason Ilgen, Biological Science Technician

Kevin Kappenman, Research Fish Biologist (Lead Researcher-Fish Passage)

Sharri Lunde, Administrative Assistant

Dr. Wendy Sealey, Physiologist (Lead Researcher-Diet and Nutrition)

Matt Toner, Fish Biologist (MGMT)

Dr. Molly Webb, Fish Biologist (Lead Researcher-Reproductive Physiology)

Bozeman Fish Technology and Health Complex



January Report – FTC

Highlights:

Battle Ridge Builders finally got started on the new fiberglass flume concrete project this month. Forms and rebar were assembled, equipment was hauled in and digging began. Due to thicker-than-expected concrete (>9.5" with some areas over a foot thick), a sub-contractor was called in to cut away the old raceway floor.



Preparation for the FTC's new experimental fiberglass flume.

Photos: USFWS/J. Ilgen



Fish Health Center

Rick Cordes, Acting Project
Leader/Fish and Wildlife
Biologist

Molly Bensley, Fish Biologist

Amberly Huttinger, Fish
Biologist

Tammy Weiss, Fish Biologist

Renee Yamamoto (Martin),
Fish Biologist

Contact Us

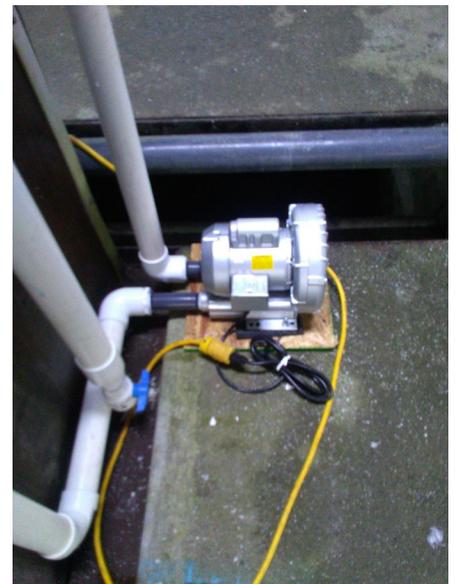
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Fisheries Technician and Innovative Aquaculture Extraordinaire, Mr. Jason Ilgen, installed a negative pressure degassing column prototype at Ennis NFH this month. The new column showed promising results by effectively reducing TGP from 102% down to 99% in the experimental raceway.

Prototype degasser column installed at Ennis NFH to help reduce Total Gas Pressure.

Photos: USFWS/J. Ilgen



Other FTC Happenings

- Dr.'s Gibson Gaylord and Wendy Sealey and Fish Biologists Zach Conley and Matt Toner manufactured Bluehead sucker recovery feeds for UT Division of Wildlife, Bonytail feed for Ouray NFH, manufactured wild Chinook feed, continued evaluating alternative feed ingredients such as soybeans and will investigate poultry by-product meal and aquaculture waste water-grown algae in future studies
- Completed feeding trial portion of the Bonytail diet system-wide study

- Kevin Kappenman continued working on a collaborative project with Montana State University to investigate the ecological mechanisms underlying the occurrence of emaciated adult pallid sturgeon
- Dr. Molly Webb traveled to Canada to present information on a project entitled “Describing the Reproductive Structure of a Hatchery-origin population of White Sturgeon in the Lower Columbia River, Canada”
- Cal Fraser began a month-long detail at the San Marcos Aquatic Resources Center
- New co-authored publication by Wendy Sealey:
Koel, T., Thomas, N., Guy, C., Doepke, P., MacDonald, D., Poole, A., Sealey, W. & Zale, A. (2019). Organic Pellet Decomposition Induces Mortality of Lake Trout Embryos in Yellowstone Lake. Transactions of the American Fisheries Society. 149.

January Report – FHC

Highlights:

Fish Health staff Tammy Weiss and Renee Yamamoto assisted Montana State University and Bozeman FTC with their adult pallid sturgeon health index project. Three study tanks showed signs of disease, so tissue samples were collected from two adults for diagnostic evaluation. A treatment was implemented and the sturgeon’s health improved.



FHC staff Tammy Weiss and Renee Yamamoto sampling adult pallid sturgeon at Bozeman FTC

Photos: USFWS/L. Hopper

Laboratory Services – Health Inspections:

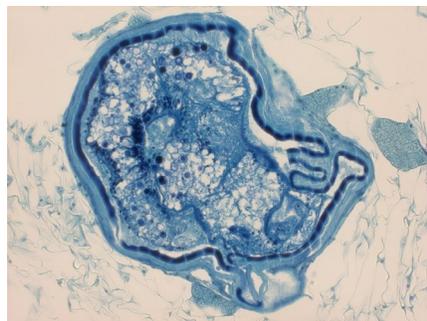
- Three strains of RBT ovarian fluid was submitted for virology testing from Ennis NFH
- Virology testing for the State of Utah; 2 facilities, 3 species. Isolated and confirmed Cutthroat Trout Virus (CTV)
- Montana Fish, Wildlife and Parks- Virology testing and complete lot inspections and certification; 3 facilities/sites, 3 species

Laboratory Services – Diagnostic Cases:

- Received diagnostic cases from 3 facilities. Identified and confirmed three bacterial pathogens via direct culture, molecular testing and histopathology
- Cultured and confirmed bacterial pathogens collected from facility biofilms. Cultured multiple bacterial species from a tub of hatchery disinfectant, hatchery water and raceway biofilm. This further supports the need for enhanced biosecurity measures at facilities.
- Analyzed histological samples for seven different cases for cultured and wild fish from MT, CO, ND and NC
- Virology testing on adult pallid sturgeon at BFTC. Utilized multiple sturgeon cell lines



Left-Agar plate with cultured bacteria from a disinfectant tub in use. Right-Agar plate from a fresh disinfectant tub used once-no bacterial growth. Photo: USFWS/R. Yamamoto



Unidentified parasite in visceral cavity of a white shiner from a North Carolina NFH. Photo: USFWS/A. Huttinger

Laboratory Services – Molecular Biology/Genetics:

- Assisted the Eagle Fish Health Lab in Eagle, ID with molecular confirmation of *T. bryosalmonae* (PKX)

- Utilized conventional and real-time PCR for identification and confirmation of isolated bacterial and viral pathogens
- Completed the first draft report for the Erwin NFH, TN genetics strain testing

Employee Development, Outreach & Upcoming Activities – FTC and FHC

- Wendy Sealey, Gibson Gaylord and Lacey Hopper participated in AADAP's IACUC semiannual review and Animal Welfare and Analgesic training seminar. The seminar was held at the FTC and included AADAP, FTC and FHC staff
- Wendy Sealey and Gibson Gaylord reviewed numerous grant proposals and pending journal articles
- Rick Cordes attended the Rocky Plains Fish Health Consortium annual meeting
- Lacey Hopper served as a volunteer judge for the Ennis School Science Fair
- Gibson Gaylord will serve as co-chair of the Alternative Ingredient Session and schedule presentations for the upcoming World Aquaculture Society Conference in Hawaii
- Staff from MFWCO, BFTC and BFHC met to discuss campus safety at the FTC and to re-establish the FTC campus-wide safety committee

