



Mark Miller, B. S., President

Fisheries Biologist, Boise Office

Mr. Mark Miller, a fisheries biologist, has studied many aspects of salmonid ecology in the Pacific Northwest. He has a strong background in fish population census methods and habitat survey methodology. He has used techniques such as snorkeling, electrofishing, aerial surveys, and GPS to document diversity, abundance, habitat use, location, and movement of fish. His work includes invertebrate sampling, salmonid microhabitat selection, stream and riparian habitat assessments, and biotelemetry. He has about 13 years of experience with radiotelemetry involving juvenile and adult salmonids and 20+ years of experience with habitat assessments and population surveys.

Experience and Expertise

- ◆ Fisheries Sampling Methodology
- ◆ Habitat Ecology
- ◆ Microhabitat Measurements
- ◆ Fish Identification
- ◆ Stream Habitat Survey Methodology
- ◆ Underwater Observation
- ◆ Radiotelemetry
- ◆ Radio Tag Surgical/Gastric Implantation
- ◆ Mapping and GPS Techniques
- ◆ Invertebrate Sampling

Professional Affiliations

- ◆ American Fisheries Society

Education

- ◆ B.S., 1992, Fisheries Science, Oregon State University
- ◆ A.S., 1987, Grays Harbor Community College
- ◆ A.A.S., 1987, Fisheries and Wildlife Management, Grays Harbor Community College

Additional Qualifications

- ◆ PADI certified open water diver and research diver specialty rating.
- ◆ Attended NEPA workshop for EA and EIS writing.
- ◆ Taught snorkel observations and methodology to USFWS.

Professional Experience with BioAnalysts, Inc.

Fisheries Research Biologist, 1986 - Present

Bonneville Power Administration

Fisheries Biologist, Biological Assessment Development: 2019

Assisted the Action Agencies in development of a biological assessment for operations of the FCRPS.

Fisheries Biologist, FCRPS BiOp 4H's: 2009-Present

As a fisheries biologist, he has been assisting the action agencies (BPA and USBR) in collecting and summarizing habitat improvement actions from different regions of the Columbia River Basin. The benefits of the habitat action that address specific limiting factors are used to assess changes in habitat function and resulting changes in survival of ESA-listed Chinook and steelhead. Currently assisting the action agencies with developing expert panel resources on research, monitoring & evaluation (RM&E) information.

Fisheries Biologist, John Day Stream Habitat Protocol Comparison Evaluation: 2005

He was one of the lead field team members from the Upper Columbia Monitoring Strategy Team involved in the protocol testing in the John Day. As a part of the team, we measured habitat variables in twelve streams within the John Day River system using the Upper Columbia Monitoring Strategy (Hillman et al. 2004). The purpose of the comparison was to assess the performance and compatibility of protocols used by seven monitoring groups to measure stream habitat in the Pacific Northwest (Roper et al. 2010).

Fisheries Biologist, Action Effective Monitoring (AEM) Research: 2016

He helped to assemble and develop an annotated bibliography on habitat restoration action effectiveness monitoring for BPA restoration and monitoring projects.

Chelan County Public Utility District

Field Biologist, Wenatchee River Ecology: 1986-1989

As a fisheries biologist, he was involved in the three years of investigation into the seasonal and diel use of microhabitat by salmonids in the Wenatchee River, WA. We measured microhabitat variables such as focal point and adjacent velocities, substrate composition and fish cover to assess habitat use of juvenile Chinook salmon and steelhead. The study also assessed the interaction of introduced Coho salmon on an existing Chinook salmon and steelhead community. As part of the research, we studied the effects of planted steelhead smolts and catchable-sized rainbow trout on wild steelhead. Other aspects of the study included evaluating stream residence, downstream drift, and growth of juvenile Chinook salmon and steelhead.

Fisheries Biologist, Biotelemetry, Passage and Survival Studies: 2001-2003

He assisted in several evaluations conducted for the District to assess the survival and approach behavior of spring and summer migrants as they passed through their projects. The

studies used radio-tagged steelhead, Chinook, and Sockeye smolts to assess project, pool and dam survival at Rock Island and Rocky Reach dams. As part of the study, aerial and underwater antenna arrays were strategically deployed to monitor passage of radio tagged smolts through the powerhouse, turbine units, spillway, and surface flow bypass outlets. The study involved surgically implanting radio tags into downstream migrants as test groups released into the forebay of each project. As a fisheries biologist, he also assisted with studying the movements and behavior of adult bull trout at the District's projects using radiotelemetry techniques.

Fisheries Biologist, Chelan River Basin Relicensing Studies: 2000- 2003, 2016

As part of the relicensing process for Chelan Falls Project, he was involved in estimating potential production of introduced anadromous salmonids in the Chelan Basin and assisted in the description of spawning habitat requirements of late-run Chinook salmon to the Chelan River. He assisted in a two year study to assess the effects of temporary powerhouse shutdown on incubation success of summer/fall Chinook salmon redds in Chelan River tailrace. Recently, he has been performing monthly snorkel surveys in a newly re-watered section of the Chelan River as well as the powerhouse and habitat channels.

Fisheries Biologist, Rocky Reach Project Relicensing: 2000

Co-authored a status report on Pacific lamprey in the mid-Columbia region and helped describe sediment dynamics and effects of pool fluctuation on natural resources in the Rocky Reach Project Area. As part of relicensing, he also provided a report on sportsman access along the Wenatchee River, WA.

Fisheries Biologist, Chelan Hatchery Evaluation Program: 1992-present

From 1992 to 1997 and 2006 to present, he was the project biologist responsible for assessing the abundance and distribution of redds, and time of spawning for summer/fall Chinook salmon in the Okanogan and Methow basins, Washington. As a field biologist, he also participated in a long-term study (1991-2015) to assess the abundance and distribution of salmonids in the Chiwawa River, WA. The study provided estimates of parr production in the basin as part of an evaluation of the spring Chinook hatchery program. Currently involved in a 5-year hatchery evaluation and monitoring program for the District's steelhead, Chinook, and sockeye hatchery programs. As part of the 5-year evaluation, he began to document the distribution and timing of summer/fall Chinook spawning in the Chelan River and constructed habitat channel. As a research biologist, he has helped to develop and compile an annual report on important life history characteristics (size at maturity, stray rates, migration time, etc.) and survival metrics (SAR's, HRR's, NOR's) necessary to evaluate the District's hatchery programs.

Fisheries Biologist, Chelan County PUD: 2012, 2016 update

He provided a literature review on smallmouth bass predation on subyearling Chinook and the implications of dock management in Rocky Reach Reservoir. He also reviewed information on resident reservoir species collected in near-shore habitats close to over-water structures in the Rocky Reach Reservoir.

Chelan County Planning Department

Lead Investigator, Chelan County Fish Barrier Inventory: 2000

As the Project biologist, he worked with Harza Engineering to assess barriers to fish migration in Chelan County, Washington. We assessed road-stream culvert crossings according to the State of Washington's barrier assessment manual to determine barriers to salmonid migration. We used surveying, GPS equipment, and photographs to document the location and condition of each potential barrier.

Douglas County Public Utility District

Field Biologist, Sockeye Salmon PIT-tagging: 1996

Assisted in the collection and marking of juvenile sockeye salmon with PIT tags to evaluate downstream survival and migration rates to Rocky Reach Dam.

Lead Investigator, Wells Dam Hydroelectric Project: 2006

As lead biologist, He provided baseline inventory information on aquatic macroinvertebrates and mollusks living in the Wells Project Area. Samples were collected with Ekman grab sampler, deployed growth media and used an underwater suction dredge sampler to collect aquatic macroinvertebrates and mollusks. He compiled the laboratory findings into a report for part of the baseline studies that describe resources in the Project area as part of the District's relicensing process.

Grant County Public Utility District

Lead Investigator, Juvenile Steelhead Passage Survival: 1999

As lead biologist, he was responsible for conducting a pilot study to investigate the feasibility of estimating juvenile steelhead survival at Wanapum and Priest Rapids Projects using radiotelemetry analysis. Fish passage studies were conducted for Grant County at Priest Rapids and Wanapum dams to evaluate upstream passage of adult Chinook salmon and downstream survival of juvenile steelhead. Radiotelemetry systems were set up to monitor the movement and survival of fish past District projects.

Fisheries Biologist, Hatchery Monitoring & Evaluation: 2014-Present

He is the project biologist responsible for assessing the abundance and distribution of redds, and time of spawning for summer/fall Chinook salmon in the Methow basins, Washington. Currently involved in a 5-year hatchery evaluation and monitoring program for the District's spring and summer Chinook hatchery programs. As a research biologist, he has helped to develop and compile annual reports on important life history characteristics (size at maturity, stray rates, migration time, etc.) and survival metrics (SAR's, HRR's, NOR's) necessary to evaluate the District's hatchery programs. Currently assisting the District in developing annual hatchery evaluation reports for steelhead in the Okanogan River basin.

Hydrometrics

Fisheries Biologist, Idaho Cobalt EIS: 2001-2007

Baseline information was collected to describe fisheries and aquatic resources in the Panther Creek drainage for development of an Environmental Impact Statement. Electrofishing and snorkeling were used to describe the abundance and distribution of fish within the project area.

Habitat information was collected within the project area to describe baseline conditions to indices of NMFS (1996) indicators of “properly functioning condition. Habitat information included: pool frequency, pool quality, habitat type, streambank condition, LWD abundance, width-depth ratios, and substrate composition. Assisted in the writing of an environmental impact statement on the possible effects of the proposed Idaho Cobalt Project (underground cobalt-copper-gold mine) on fish and aquatic habitat in the Panther Creek drainage, a Salmon River tributary.

Idaho Department of Environmental Quality

Fisheries Biologist, Salmonid Distribution and Thermal Tolerance: 1999, 2002 & 2012

In 1999 he assisted in research evaluating the thermal tolerance, resistance, and preference of cold and cool-water fishes of Idaho. In 2002 he helped DEQ determine the potential distribution of salmonid guilds in a case study of the Chiwawa River using mapping rules for GIS application. In 2012 he assisted DEQ in developing information on the spawning and rearing distribution and timing of anadromous and resident salmonids in the state of Idaho.

Idaho Power Company

Fisheries Biologist, Hells Canyon Relicensing: 2003

He helped describe habitat conditions in streams upstream of Hells Canyon Complex to assess the potential reintroduction and production of anadromous salmonids. Helped define database variables to store information and develop GIS layers. As part of process, he compiled important information on habitat, fish, physical barriers, and water quality through an interactive stream mapping program of the study area. Information was organized into broad database categories for habitat, fish distributions, water quality, and points such as barriers, gage stations, irrigation diversions, and dams.

Homer Electric Association: Kenia Hydro

Fisheries Biologist, Grant Creek Hydro-licensing baselines studies: 2013

He provided baseline information to help describe aquatic resources in Grant Creek that could be affected by hydroelectric development. Baseline information collection included: minnow trapping, incline plane trap monitoring, radiotelemetry, redd surveys, and underwater observations. This information was reported to the stakeholders to inform them of the current salmonid resources occurring in Grant Creek.

Land and Water Fund & Idaho Watersheds Project

Fisheries Biologist, Irrigation Diversion Entrainment: 2001

Participated in a field investigation to document possible entrainment of ESA listed species into selected irrigation diversions in tributaries of the Salmon River drainage.

L. B. Industries

Field Biologist, Hydro Project Development: 1992

Participated in a field study to document channel substrate composition and in the sturgeon creel census in the mid-Snake River, Idaho.

Los Angeles Water and Power

Field Biologist, Fish Population Assessment: 1996

Conducted nighttime observations to assess effects of habitat restoration on brown trout in Rush and Lee Vining creeks, CA.

Field Biologist, Assessment of Fish Population in re-watered section of Owens Gorge: 1997

As a field Biologist, he used underwater observations to describe fish populations in a re-watered section of Owens Gorge.

Maxim Technologies

Fisheries Biologist, Atlanta Gold EIS Baseline Studies: 2003-2004

As a fisheries Biologist, he collected baseline information in 45 sites to describe fisheries and aquatic resources in the Middle and North Fork Boise River.

Meridian Gold

Fisheries Biologist, Baseline Inventory and Biological Assessment: 2002

As a fisheries Biologist, he helped evaluate the habitat composition and distribution and abundance of fish above, below, and within Napias Falls on Napias Creek, Idaho. He also investigated the spawning distribution of bull trout within the Napias Creek watershed. Assisted in Section 7 consultation and prepared a Biological Assessment and Biological Evaluation on Chinook, steelhead, sockeye, and bull trout.

Fisheries Biologist, Baseline Inventory and Biological Assessment: 2007

He has assisted in collection of invertebrate (kick net) and fish (electrofishing) tissue samples for metals contamination testing of an NPDES permitted discharge point on Napias Creek.

Midas Gold Idaho, Inc.

Fisheries Biologist, Midas Gold Project: 2018- Present

As a fisheries Biologist, he has been providing technical assistance in the development and analysis of baseline data collected in the upper East Fork South Fork Salmon River for a biological assessment.

NOAA Fisheries

Fisheries Biologist, Steelhead Recovery Plan Development: 2010

As a fisheries Biologist, he helped write sections of the steelhead recovery plan to document habitat-related limiting factors for 17 populations of steelhead in the Snake River Basin DPS within the state of Idaho.

PacifiCorp

Fisheries Biologist, Lewis River Project Relicensing: 2001-2002

Described migration behavior and survival of juvenile Chinook and coho salmon in Swift Reservoir (Lewis River) and near Swift No. 1 Dam using radiotelemetry and acoustic technologies. He estimated migration rate, travel time, arrival distribution and minimum reservoir survival with radiotelemetry through Swift Reservoir. The investigation also included

assessment of the behavior of salmonid smolts in the forebay of Swift Dam under spill and non-spill conditions using acoustic technology.

Fisheries Biologist, Klamath River Project Relicensing: 2003-2004

Mr. Miller documented the movement of adult redband trout with radiotelemetry in the Klamath River downstream from J.C. Boyle Dam. The purpose was to monitor the movements of rainbow trout in the tailrace and fishway at J.C. Boyle Dam to assess project effects on migration of redband trout. Evaluated salmonid reintroduction potential in the Klamath River by providing estimates of the migration rate, travel time, arrival distribution and migration success for Chinook and coho salmon through Copco and Irongate reservoirs using radiotelemetry.

Pend Oreille County Public Utility District

Fisheries Biologist, Status Review of Kokanee in Lake Pend Oreille, Idaho: 2001-2002

He helped compile information to evaluate Lake Pend Oreille fisheries and status of kokanee salmon.

Fisheries Biologist, Box Canyon Dam Bull Trout: 2004

He assisted in compiling comments on the USFWS designation of critical habitat in Northeast Washington River Basins (Unit 22). He also provided comments on USFWS Biological Opinion on bull trout for the Box Canyon Dam Hydroelectric project.

Phelps Dodge Mining Company

Fisheries Biologist, EIS Baseline Studies Upper Blackfoot River: 1996-1997

As a fisheries biologist, I helped to collect information on baseline aquatic and fisheries resources for development of an EIS. The information documented the abundance, species richness, and distribution of fish, distribution and numbers of bull trout redds, and stream habitat conditions in the upper Blackfoot River Basin, MT. Habitat conditions were assessed to document baseline conditions. Several methods to describe habitat were used (Burns 1984; Hawkins et al. 1993; Platts et al. 1983; Platts et al. 1987). Habitat variables included habitat length, wetted width, maximum depth, embeddedness, sediment depth, percent surface fines, dominant riparian vegetation, and percent cover (woody debris, boulder cover, streambank undercut vegetation overhang, canopy cover). Snorkeling and electrofishing were used to describe the abundance and distribution of fish.

Revett Minerals

Fisheries Biologist, Draft Supplemental EIS and Baseline Studies Evaluations: 2016

He provided comments to evaluate a draft supplemental EIS and baseline studies specific to bull trout and their habitat in Rock Creek, Montana.

State of Idaho/RCG Hagler

Field Biologist, Natural Resource Damage Assessment: 1994

We assisted RCG Hagler in collecting fish population estimates in control and reference sites to assess the effects from mining on fish in Panther Creek, ID.

State of Montana

Field Biologist, Natural Resource Damage Assessment: 1992-1997

As a field biologist, I helped collect data on fisheries resource in order to evaluate the effects of heavy metals on fish in the Clark Fork River, MT. Field data collection included snorkeling and electrofishing to estimate abundance of rainbow trout, brown trout, cutthroat trout and bull trout in reference and control sites for the NRD assessment. I also assisted in collecting IFIM and habitat data.

United States Fish and Wildlife Service

Field Sampling Instruction, Underwater Observation Techniques: 1999

He instructed USFWS biologists in the use of underwater observation techniques for assessing distribution, abundance, and habitat use by salmonids.

Lead Investigator, Crab Creek Habitat Assessment: 2005

As lead investigator, he provided a report to the USFWS on current instream and riparian habitat conditions of lower Crab Creek to evaluate potential restoration activities beneficial to native fish fauna. He described instream and riparian habitat conditions following the methods outlined in the U.S. Forest Service (USFS) Stream Inventory Handbook (USFS 2005). Habitat description included: channel unit type and form; streambed composition; wetted, bankfull, and flood prone widths; bankfull, maximum, and pool crest depths; stream bank stability; inner and outer riparian zone cover and class; LWD abundance; stream temperature and discharge; and fish passage conditions according to WDFW (2000) fish passage barrier assessment and prioritization manual.

Other Professional Experience

Summer 1990: Biological Aide 1, Oregon Dept. of Fish and Wildlife, Corvallis, OR.

Conducted stream habitat surveys and electrofished to assess fish populations in coastal Oregon streams. Recorded habitat units, percent canopy cover, valley width indices, land use, substrate, and bank condition.

Summer 1989: Fisheries Biologist, Hardin-Davis Consultants, Albany, OR.

Helped assess microhabitat use by juvenile rainbow trout and Chinook salmon, adult rainbow trout, and steelhead in diverted and undiverted sections of the McKenzie River, Oregon.

Seasonal 1983-1986: Fisheries & Wildlife Technician, Chelan County Public Utility District, Wenatchee, WA.

Assisted in fisheries and wildlife research and mitigation in the mid-Columbia River. Conducted deer browse, mountain goat and angler creel surveys along Lake Chelan, WA, and monitored Canada geese and wood ducks nests on Rock Island and Rocky Reach reservoirs.

Publications and Reports

Hillman, T., M. Miller, C. Willard, S. Hopkins, M. Johnson, C. Moran, J. Williams, M. Tonseth, B. Ishida, C. Kamphaus, T. Pearson and P. Graf. 2016. Monitoring and evaluation of the Chelan and Grant County PUDs hatchery programs: 2015 annual report. BioAnalysts, Inc. Report to the HCP Hatchery Committee and the PRCC Hatchery Sub-Committee, Wenatchee, WA.

Miller, M. and N. Murphy 2016. Literature Review on Smallmouth Bass predation on subyearling Chinook: Implications of docks on shoreline management. Report to Chelan County PUD, Wenatchee, WA. Report prepared by BioAnalysts, Inc., Boise, ID.

Snyder, D. K. Watson and M. Miller. 2016. Summary report on summer Chinook spawning ground surveys in the Methow Basin and Chelan River, 2015. Appendix N in: Monitoring and evaluation of the Chelan and Grant County PUDs hatchery programs: 2015 annual report. BioAnalysts, Inc. Report to the HCP Hatchery Committee and the PRCC Hatchery Sub-Committee, Wenatchee, WA.

Miller M. and J. Stevenson. 2014. Aquatic resource study - Grant Creek, Alaska fisheries assessment report. Report prepared for Kenai Hydro, LLC, Kenai, AK. Report prepared by BioAnalysts, Inc. Boise, ID.

Hillman, T., M. Miller, L Keller, C. Willard, M. Tonseth, M. Hughes, A. Murdoch, B. Ishida, C. Kamphaus, T. Pearson and P. Graf. 2014. Monitoring and evaluation of the Chelan and Grant County PUDs hatchery programs: 2013 annual report. BioAnalysts, Inc. Report to the HCP Hatchery Committee and the PRCC Hatchery Sub-Committee, Wenatchee, WA.

Hillman, T., M. Miller, L Keller, J. Murauskas, T. Miller, M. Tonseth, M. Hughes and A. Murdoch. 2013. Monitoring and evaluation of the Chelan County PUD hatchery programs: 2012 annual report. BioAnalysts, Inc. Report to the HCP Hatchery Committee, Wenatchee, WA.

Miller, M. 2012. Literature Review on Smallmouth Bass predation on subyearling Chinook: Implications of docks on shoreline management. Report to Chelan County PUD, Wenatchee, WA. Report prepared by BioAnalysts, Inc., Boise, ID.

Hillman, T., M. Miller, J. Murauskas, L Keller, T. Miller, M. Tonseth, M. Hughes and A. Murdoch. 2012. Monitoring and evaluation of the Chelan County PUD hatchery programs: 2011 annual report. BioAnalysts, Inc. Report to the HCP Hatchery Committee, Wenatchee, WA.

Miller, M., T. Hillman, and A. Murdoch. Methods for estimating Natural Origin Recruits (NORs) and Natural Replacement Rates (NRRs) for Chiwawa Spring Chinook 2011. Appendix A In: Hillman, T., M. Miller, J. Murauskas, S. Hays, J. Miller, A. Murdoch and T. Miller. 2012. Monitoring and evaluation of the Chelan County PUD hatchery programs: Five Year (2006-2010) Report. BioAnalysts, Inc. Report to the HCP Hatchery Committee, Wenatchee, WA.

Miller, M., T. Hillman, and A. Murdoch. Methods for estimating Natural Origin Recruits (NORs) and Natural Replacement Rates (NRRs) for Wenatchee, Methow and Okanogan Summer Chinook 2011. Appendix B In: Hillman, T., M. Miller, J. Murauskas, S. Hays, J. Miller, A. Murdoch and T. Miller.

2012. Monitoring and evaluation of the Chelan County PUD hatchery programs: Five Year (2006-2010) Report. BioAnalysts, Inc. Report to the HCP Hatchery Committee, Wenatchee, WA.

Hillman, T., A. Murdoch, T. Pearson, M. Miller, and G. Mackey. Methods for Identifying Reference Populations and Testing Differences in Abundance and Productivity between Reference Populations and Supplemented Populations: Chiwawa Spring Chinook Case Study 2011. Appendix C In: Hillman, T., M. Miller, J. Murauskas, S. Hays, J. Miller, A. Murdoch and T. Miller. 2012. Monitoring and evaluation of the Chelan County PUD hatchery programs: Five Year (2006-2010) Report. BioAnalysts, Inc. Report to the HCP Hatchery Committee, Wenatchee, WA.

Miller, M. and T. Hillman. Methods for estimating Hatchery Replacement Rates (NRRs) and Natural Replacement Rates (NRRs) 2011. Appendix D In: Hillman, T., M. Miller, J. Murauskas, S. Hays, J. Miller, A. Murdoch and T. Miller. 2012. Monitoring and evaluation of the Chelan County PUD hatchery programs: Five Year (2006-2010) Report. BioAnalysts, Inc. Report to the HCP Hatchery Committee, Wenatchee, WA.

Miller, M. and T. Hillman. Methods for estimating Stray Rates 2011. Appendix E In: Hillman, T., M. Miller, J. Murauskas, S. Hays, J. Miller, A. Murdoch and T. Miller. 2012. Monitoring and evaluation of the Chelan County PUD hatchery programs: Five Year (2006-2010) Report. BioAnalysts, Inc. Report to the HCP Hatchery Committee, Wenatchee, WA.

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Hillman, T., M. Miller, J. Miller, B. Keessee, M. Tonseth, T. Miller, and A. Murdoch. 2011. Monitoring and evaluation of the Chelan County PUD hatchery programs: 2010 annual report. BioAnalysts, Inc. Report to the HCP Hatchery Committee, Wenatchee, WA.

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United States Forest Service (USFS). 2008. Contributing author to EIS Fisheries Resource sections. Idaho Cobalt Environmental Impact Statement, Salmon-Challis Ranger District, Salmon-Challis National Forset, Salmon, ID.

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- Hillman, T., M. Miller, C. Peven, M. Tonseth, T. Miller, K. Truscott, and A. Murdoch. 2007. Monitoring and evaluation of the Chelan County PUD hatchery programs: 2006 annual report. BioAnalysts, Inc. Report to the HCP Hatchery Committee, Wenatchee, WA.
- Miller, M. and T. Hillman. 2007. Methods for estimating stray rates. BioAnalysts, Inc. Report to the HCP Hatchery Evaluation Technical Team, Wenatchee, WA.
- Miller, M. and T. Hillman. 2006. Crab Creek instream and riparian habitat assessment and restoration plan. BioAnalysts, Inc. Report to the U.S. Fish and Wildlife Service, Mid-Columbia River Fishery Resource Office, Leavenworth, WA.
- Miller, M., and M. Falter. 2006. Aquatic Macroinvertebrate Inventory and RTE Assessment Wells Hydroelectric Project FERC No. 2149. Report prepared by BioAnalysts, Inc., Boise, ID. Report prepared for Public Utility District No. 1 of Douglas County, East Wenatchee, Washington.
- Miller, M., and M. Falter, 2005. Review of FWS Biological Opinion on the effects of the Proposed Rock Creek Mine on bull trout. Prepared by BioAnalysts, Inc., Boise, ID. Review prepared for Revett Minerals, Inc., Spokane Valley, Washington.
- Miller, M., A. Giorgi, and M. Falter. 2005. Comments on the USFWS Biological Opinion for Box Canyon Dam Hydroelectric Project. Report prepared for Pend Oreille Public Utility District, Newport, WA. Prepared by BioAnalysts, Inc. Eagle, ID.
- Miller, M., T. Hillman, W. Vering, C. Sandow. 2005. Baseline technical report on fisheries and aquatic resources in the upper Boise River Basin, Idaho. BioAnalysts, Inc. and Maxim Technologies. Report to U.S. Forest Service, Boise National Forest, Boise, ID.
- Miller, M., T. Hillman, and E. Hillis. 2004. Literature review of juvenile and subadult bull trout and Pacific lamprey movement studies. Report to Chelan County PUD No. 1, Wenatchee, WA.
- Miller, M., A. Giorgi, D. Snyder, N. Mikkelsen, and B. Nishitani. 2004. Description of Migratory Behavior of Juvenile Salmon Smolts through California Reservoirs Using Radio-Telemetry Techniques in the Klamath Basin. BioAnalysts, Inc. Report to PacifiCorp, Portland, OR.
- Miller, M. and T. Hillman. 2004. Interim recovery criteria for bull trout within the Upper Columbia Recovery Unit. BioAnalysts, Inc. Report to Chelan County Public Utility District, U.S. Forest Service, and the U.S. Fish and Wildlife Service, Wenatchee, WA.
- Miller, Mark D, A.E. Giorgi, B. Nishitani, M. Timko, J. Stevenson. 2003. Behavior of salmonid smolts at Swift Dam using 3-Dimensional tracking with acoustic tags, 2002. Licensee's 2001 technical study status reports for the Lewis River hydroelectric projects (FERC Nos. 935, 2071, 2111, 2213). Pacificorp, Portland, OR and Public Utility District No. 1 of Cowlitz County, Longview, WA.
- Miller, Mark D, J.R. Stevenson, A.E. Giorgi. 2003. Migratory behavior of radio-tagged juvenile Chinook salmon through Swift Reservoir, 2002. Licensee's 2001 technical study status reports for the Lewis River hydroelectric projects (FERC Nos. 935, 2071, 2111, 2213). Pacificorp, Portland, OR and Public Utility District No. 1 of Cowlitz County, Longview, WA.

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- Hillman, T., J. Stevenson, M. Miller, and D. Snyder. 2003. Effects of powerhouse operations on intragravel flows and water quality within Chinook redds. BioAnalysts, Inc. Report to Chelan County Public Utility District, Wenatchee, WA.
- Miller, M., A. Giorgi, and N. Mikkelsen. 2003. Adult rainbow trout movement study, Klamath River, 2003. BioAnalyst, Inc. Report to PacifiCorp, Portland, OR.
- Stevenson, J., T. Hillman, M. Miller, and D. Snyder. 2003. Movement of radio-tagged bull trout within Priest Rapids and Wanapum reservoirs, 2001-2002. BioAnalysts, Inc. Report to Grant County Public Utility District, Ephrata, WA.
- Stevenson, J., T. Hillman, M. Miller, and D. Snyder. 2003. Movement of bull trout within the mid-Columbia River and tributaries, 2002-2003. BioAnalysts, Inc. Report to Chelan County Public Utility District, Wenatchee, WA.
- Hillman, T. and M. Miller. 2002. Abundance and total numbers of Chinook salmon and trout in the Chiwawa River basin, Washington, 2002. BioAnalysts, Inc. Report to Chelan County Public Utility District, Wenatchee, WA.
- Hillman, T., M. Miller, J. Stevenson, and D. Snyder. 2002. Effects of a powerhouse shutdown on summer/fall Chinook salmon incubation success. BioAnalysts, Inc. Report to Chelan County Public Utility District, Wenatchee, WA.
- Hillman, T. and M. Miller. 2002. Abundance and total numbers of Chinook salmon and trout in the Chiwawa River basin, Washington, 2001. BioAnalysts, Inc. Report to Chelan County Public Utility District, Wenatchee, WA.
- Miller, Mark D, J.R. Stevenson, B.A. Torrell, A.E. Giorgi. 2002. Migratory behavior of radio-tagged juvenile Coho salmon through Swift Reservoir 2001. Licensee's 2001 technical study status reports for the Lewis River hydroelectric projects (FERC Nos. 935, 2071, 2111, 2213). PacifiCorp, Portland, OR and Public Utility District No. 1 of Cowlitz County, Longview, WA.
- Miller, M., J. Stevenson, T. Hillman, and D. Snyder. 2002. Summary of bull trout suspected to have perished in fall, 2002. BioAnalysts, Inc. Report to Chelan, Douglas, and Grant County Public Utility Districts, Wenatchee, WA.
- Miller, M., T. Hillman, S. Jensen, T. Dean, and B. Nishitani. 2002. Potential salmonid distributions in the Chiwawa River basin. BioAnalysts, Inc. Report to Western Watershed Analysts, Lewiston, ID, for Idaho Department of Environmental Quality, Boise, ID.
- Miller, M. and T. Hillman. 2002. Biological assessment and biological evaluation of the effects of a diffuser in Napias Creek on federally-listed and regionally sensitive species. BioAnalysts, Inc. Report to Beartrack Mine Company, Salmon, ID.
- Stevenson, J., T. Hillman, M. Miller, and D. Snyder. 2002. Movement of bull trout within the mid-Columbia River and tributaries, 2001-2002. BioAnalysts, Inc. Report to Chelan, Douglas, and Grant County Public Utility Districts, Wenatchee, WA.
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