



**Inventory of Resident Fish Data Collected by Projects
Funded by the Northwest Power Planning Council's
Fish and Wildlife Program**

Interim Progress Report

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Based on a request by the Northwest Power Planning Council for StreamNet to improve the availability of resident fish data generated from projects funded by BPA through the Council's Fish and Wildlife Program, we initiated an effort to inventory projects involving resident fish to identify the kinds, amounts and status of resident fish data collected. I began by researching projects through the CBFWA website and working with the BPA to develop a list of proposed projects associated with resident fish information. By researching the project summaries, I was able to identify descriptions and gather contact information for each project (Table 1).

On January 31, 2002, a letter was sent to the contacts listed on the project proposals informing them of the objectives of this effort and outlining the information we were interested in obtaining through the initial inventory process.

Initially, we needed to understand what data and other information are collected by each project and whether they are already being distributed publicly. The information we intended to obtain from each project includes:

- The types of data and other information collected by the project
- How and when the data/information were collected
- Where the data/information are currently located and whether they are already publicly available
- What form the data/information are in (e.g., field forms, spreadsheets, databases, reports, etc.)
- Whether the data are ready for public release

Letters were sent to project contacts throughout Oregon, Washington, Idaho, and western Montana. While discussing project procedures at a StreamNet Steering Committee meeting, consensus was that the state projects were the appropriate entities to contact the resident fish projects. The Oregon, Idaho, and Montana state StreamNet projects decided to make the contacts for gathering information from the projects within their respective states, while Washington decided to have the StreamNet data technician follow up on projects within Washington after they notified the project leads about this effort. This process began in the middle of February, 2002.

On behalf of the WDFW StreamNet project, I contacted resident fish projects contracted through the Washington Department of Fish and Wildlife, Kalispel Tribe of Indians, Spokane Tribe of Indians, Confederated Tribes of the Colville Indian Reservation, Washington Trout, the Pacific Northwest National Laboratory, and B.C. Environment. I worked with contacts in these entities to identify the types and availability of data/information collected, the format they are in, and where they are currently located. I received a positive response to inquiries and gathered information pertaining to 12 projects throughout Washington.

The Oregon, Idaho, and Montana state StreamNet projects gathered and submitted information relevant to projects within their states. A total of 54 projects provided information on their resident fish data, and all of the basic inventory information was entered into a matrix containing the results from this initial survey phase (Table 2).

The first phase of this project is now complete. Work remaining in this effort entails identifying the specific variables collected by each project and determining whether they are of a data type that fits the StreamNet Data Exchange Format (DEF). Where the data fit the DEF, they will need to be incorporated into the StreamNet database through the normal process by the state StreamNet projects. Through this effort I found that much of the data of this type are already being incorporated into the StreamNet database. For other data, we need to work with project sponsors to ensure the data are made widely available. Available options for data dissemination include posting the data/information on the StreamNet web site as 'independent data sets' in the format currently used by the project, or by providing a hyper link to the information if it is already available on the Internet. This will require working closely with personnel involved with each project to meet the overall objectives of the resident fish project and the regional desire to have all data collected under Fish and Wildlife Program funding available for region wide use.

Completion of this project was impacted by funding for the data technician position being expended. Future work will be dependent on new funding or a shift in priorities from existing efforts. If this occurs, the state StreamNet projects will work to complete the inventory and coordinate data acquisition and posting interspersed with their other existing work responsibilities. StreamNet staff at PSMFC will be able to post data or data links as they are provided.

Table 1. Projects funded under the Fish and Wildlife Program, Northwest Power Planning Council, that may involve data about resident fish species.

Project #	Project Title	Contacts	Sponsor	Information/Data
9056	Evaluate Status of White Sturgeon in the Hells Canyon Reach Snake River, ID	Tim Cochnauer	Idaho Department of Fish and Game	Inactive
9079	Inventory Resident Fish Populations in Bonneville, Dalles, John Day Reservoirs	James H. Petersen	U.S. Geological Survey, Biological Resources Division	Inventory resident fish populations in the Bonneville, The Dalles, and John Day Reservoirs of the Columbia River
20156	Identification of Redband and Rainbow Trout in the North Fork Clearwater Basin	Dana Weigel	Nez Perce Tribe	Identify native wild redband and rainbow trout presence
23032	Return Spawning/Rearing Habitat to Anadromous/Resident Fish within the Fishing Cr. (aka Squaw Cr.) and Legendary Bear Cr. (aka Papoose Cr.) Analysis Area Watersheds	Emmit E. Taylor Jr.	Nez Perce Tribal Fisheries/Watershed Program	Fish abundance, stream and riparian habitat type, ratios, substrate composition, sediment load, water quality/chemistry
26027	Lake Roosevelt/Colville Tribes Emergency Fish Restoration	Richard LeCaire	Confederated Tribes of the Colville Indian Reservation	Replace rainbow trout entrained/lost as a result of emergency power generation at Grand Coulee Dam
28002	Fluvial Bull Trout Migration and Life History Investigations in the upper Salmon River Subbasin	Jeffry L. Anderson		Inactive
28022	Evaluate Bull Trout Life History In Dworshak Reservoir, N.F. Clearwater River Drainage, ID	Tim Cochnauer		Inactive
28023	Evaluate and Control Brook Trout Populations – Addressing Competition and Hybridization Threats in the Clearwater River Drainage, Idaho	Tim Cochnauer		Inactive
28030	Salmon River Native Resident Fish Assessment	Kimberly A. Apperson		Inactive
36816	Lake Pend Oreille Predation Project	Melo A. Maiolie		Estimates for predator abundance, population and kokanee population
2000079	Assess resident fish genetics on DVIR	Guy Dodson Sr.		Genetic samples
198605000	White Sturgeon Mitigation And Restoration In The Columbia And Snake Rivers	David Ward	Oregon Dept of Fish and Wildlife	Restore and mitigate for hydrosystem-caused loss of white sturgeon productivity
198740700	Dworshak Impacts/M&E and Biological/Integrated Rule Curves	David P. Statler	Nez Perce Tribe	Zooplankton analysis, measure primary productivity, survey benthic invertebrates, water quality, dissolved oxygen, water temperature, photometric data
198806400	Kootenai River White Sturgeon Studies and Conservation Aquaculture	Susan Ireland	Kootenai Tribe of Idaho	Rebuild healthy age class structure of white sturgeon
198806500	Kootenai River Fisheries Recovery Investigations	Vaughn Paragamian	Idaho Dept of Fish and Game	Recovery and restoration for Kootenai River white sturgeon, burbot, bull and rainbow trout, and whitefish stocks
198815600	DVIR Resident Fish Stocking Program	Guy Dodson Sr.	Shoshone-Paiute Tribes of the Duck Valley Indian Reservation	Where, when, species and number of fish stocked
199004400	Implement Fisheries Enhancement Opportunities on Coeur d'Alene Reservation	Ron Peters	Coeur d'Alene Tribe	Enhance critical watershed habitat
199004401	Lake Creek Land Acquisition and Enhancement	Robert Matt	Coeur d'Alene Tribe	Protect, enhance, and maintain wetland and riparian habitat
199004402	Coeur d'Alene Tribe Trout Production Facility	Ron Peters	Coeur d'Alene Tribe	Genetic samples, will have fish stocking (species, age, numbers, health, etc.)
199101901	Hungry Horse Fisheries Mitigation - Flathead Lake	Barry Hansen	Confederated Salish and Kootenai Tribes	Habitat restoration and protection activities
199101903	Hungry Horse Mitigation	Brian Marotz	Montana Fish, Wildlife, and Parks	Habitat restoration and fish recovery activities
199101904	Stocking of offsite waters for Hungry Horse Mitigation - Creston National Fish Hatchery	Donald A. Edsall	U.S. Fish and Wildlife Service	Produce hatchery fish for offsite stocking to mitigate losses to Flathead Lake caused by construction and operation of Hungry Horse Dam.
199104600	Spokane Tribal Hatchery (Galbraith Springs) Operation and Maintenance	Tim Peone	Spokane Tribe of Indians	Fisheries restoration and enhancement - hatchery O&M
199104700	Sherman Creek Hatchery Operations and Maintenance	Mike Lewis	Washington Dept of Fish and Wildlife	Fisheries restoration and enhancement

199201000	Habitat Restoration/Enhancement Fort Hall Reservation	David C. Moser	Shoshone-Bannock Tribes	Habitat restoration, enhancement, protection activities
199401002	Flathead River Native Species Project (MFWP Sub-proposal combined with Hungry Horse Mitigation #199101093)	Brian Marotz	Montana Department of Fish, Wildlife and Parks	Protect and enhance native fish by managing the effects of regulated flow and temperature below Hungry Horse Dam on species interactions in the Flathead River. Evaluate effects of thermal control using selective withdrawal. Model macro- and micro-habitat.
199401200	Kootenai River Fisheries Investigation M&E	Vaughn Paragamian	Idaho Department of Fish and Game and Kootenai Tribe of Idaho	Monitor and evaluate sturgeon migration and spawning
199404700	Lake Pend Oreille Fishery Recovery Project	Melo A. Maiolie	Idaho Dept of Fish and Game	Habitat restoration to enhances resident fish populations
199404900	Improve the Kootenai River Ecosystem	Charlie Holderman	Kootenai Tribe of Idaho	Inhance aquatic biota in the Kootenai River Ecosystem
199405300	Bull Trout Assessment - Willamette/Mckenzie	Jeffrey S. Ziller	Oregon Dept of Fish and Wildlife	Bull Trout Assessment
199405400	Characterize the Migratory Patterns, Population Structure, Food Habits, Abundance of Bull Trout from Subbasins in the Blue Mountain Province	Timothy A. Whitesel	Oregon Dept of Fish and Wildlife	Bull trout spawning surveys, weir counts, telemtry results, diet compositions, and bull trout/brook trout interactions. Abundance counts.
199405401	Bull Trout Abundance Monitoring in the Lower Deschutes River formerly "Bull Trout Genetics, Habitat Needs, L.H. Etc. In Central And N.E. Oregon"	Chris Brun		Bull trout abundance. Water temperature monitoring.
199500400	Mitigation For The Construction And Operation Of Libby Dam	Brian Marotz		Habitat enhancement and fish recovery actions
199500600	Shoshone-Bannock/Shoshone Paiute Joint Culture Facility	David C. Moser	Shoshone-Bannock Tribes	Re-introduction of native trout stocks through hatchery facilities
199501100	Chief Joseph Kokanee Enhancement Project	Richard W. LeCaire	Confederated Tribes of the Colville Indian Reservation	Determine natural production kokanee status
199501101	Hydroacoustic and Sonic Tracking and ADCP Velocity Mapping at Grand Coulee	Geoffrey McMichael	Pacific Northwest National Laboratory	Behavior, distribution of kokanee (KOK) and rainbow trout
199501300	Nez Perce Tribe Resident Fish Substitution Program	Tod Sween	Nez Perce Tribe	Increase fish harvest opportunities
199501506	Lake Billy Shaw Operations and Maintenance	Guy Dodson Sr.	Shoshone-Paiute Tribes of the Duck Valley Indian Reservation	Habitat restoration to benefit native fish populations
199501600	Genetic Inventory of Westslope Cutthroat Trout in the N F Clearwater Basin	Dana Weigel	Nez Perce Tribe	Document hybridization among native westslope cutthroats and rainbow trout
199502500	Flathead River Instream Flow Project (MFWP Umbrella Subproposal)	Brian Marotz	Montana Fish, Wildlife, and Parks	Determine effects of flow fluctuations and temperature control on habitat, bed load, predator-prey interactions and migrations.
199502800	Restore Moses Lake Recreational Fishery	Jeff Korth	Washington Dept of Fish and Wildlife	Restore/enhance recreational fishery for resident species
199608701	Focus Watershed Coordination-Flathead River Watershed	Lynn Ducharme	Confederated Salish and Kootenai Tribes	Habitat restoration, offset impacts to fishery resources in the Flathead watershed.
199608720	Focus Watershed Coordination in the Kootenai River Watershed	Brian Marotz	Montana Fish, Wildlife, and Parks	Habitat restoration to offset deleterious effects to the Kootenai River watershed fisheries.
199700400	Resident Fish Stock Status Above Chief Joseph and Grand Coulee Dams	Jim Lemieux	Kalispel Tribe of Indians	Assess the stocks and status of 36 resident fish species
199700900	Evaluate Rebuilding the White Sturgeon Population in the Lower Snake Basin	Michael A. Tuell	Nez Perce Tribe	Population, life trends, habitat studies
199701100	Habitat Enhancement and Protection on the DVIR	Guy Dodson Sr.	Shoshone-Paiute Tribes of the Duck Valley Indian Reservation	Increases critical riparian areas of Owyhee River and tribs
199701900	Evaluation of the Life History of Native Salmonids in the Malheur Basin	Lawrence Schwabe	Burns Paiute Tribe	Redband and bull trout history and distribution
199701901	Evaluation of the Life History of Native Salmonids in the Malheur Basin (2)	Lawrence Schwabe	Burns Paiute Tribe	Redband and bull trout history and distribution
199709900	Dworshak Dam Impacts Assesment and Fisheries Investigation	Melo A. Maiolie	Idaho Dept of Fish and Game	Estimates for entrainment losses, population estimates, kokanee spawner counts
199800200	Snake River Native Salmonid Assessment	Kevin Meyer	Idaho Dept of Fish and Game	Population status and trends, life histories, and habitat needs of native salmonids

199802600	Document Native Trout Populations	Nick Gayeski	Washington Trout	Document native trout populations in Columbia Basin, WA
199902200	Assessing Genetic Variation Among Columbia Basin White Sturgeon Populations	Madison Powell		Nuclear and mitochondrial DNA samples, weight, length, and fin ray ageing data
199902400	Bull trout population assessment in the Columbia River Gorge, WA.	Jim Byrne	Washington Dept of Fish and Wildlife	Determining status of bull trout populations
200000400	Monitor and Protect Bull Trout for Koochanusa Reservoir	Bill Westover	BC Environment	Monitor bull trout populations
200001800	Lake Roosevelt Kokanee Net Pens	Mike Lewis	Washington Dept of Fish and Wildlife	Purchase of 20 new net pens for Sherman Creek Hatchery

Table 2. Inventory of resident fish data collected by projects funded through the Fish and Wildlife Program of the Northwest Power Planning Council.

WASHINGTON				
ProjectID	Title	Data/Info Types	Data Format	Data/Info Location and Availability
199902400	Bull trout population assessment in the Columbia River Gorge, WA.	Presence (current and historic) of primarily bull trout, with documentation of other resident species as found during sampling	Quattro Pro and Excel formats	WDFW annual reports - BPA website for project synopsis - Data located and currently available at WDFW with Jim Byrne and Steve Thiesfeld
199501100	Chief Joseph Kokanee Enhancement Project	Genetics research of Kokanee pop's. Water velocity studies	Access database and CD. Project synopsis in PDF	Annual report and data from past studies available through Richard LeCaire. More data being generated from ongoing projects. Data also available from BioSonics, PNNL, and USGS on CD, available through Richard LeCaire.
199802600	Document Native Trout Populations	Presence of remaining westslope cutthroat and redband trout	PDF includes photos and data - Individual fish data available in excel tables	1998 and 1999 data currently available on BPA website 2001 data available late spring, early summer 2002
199501101	Hydroacoustic and Sonic Tracking and ADCP Velocity Mapping at Grand Coulee Dam	Behavior, distribution of kokanee and rainbow trout	Excel files	http://www.pnl.gov/ecology/ (publications) - Contact author (Geoffrey A. McMichael) for complete data sets
9079	Inventory Resident Fish Populations in Bonneville, Dalles, John Day	Project never funded		
200001800	Lake Roosevelt Kokanee Net Pens	Purchase of 20 new net pens for Sherman Creek Hatchery	PDF for project synopsis	WDFW annual reports - BPA website for project synopsis
26027	Lake Roosevelt/Colville Tribes Emergency Fish Restoration	Stocking program, numbers and species available	Word processing document	Current data available through Richard LeCaire
200000400	Monitor and Protect Bull Trout for Koochanusa Reservoir	Bull trout populations and densities. Bull trout redd counts. Water temperatures studies.	PDF for project synopsis and tables/graphs	Project data available through BPA website and through Bill Westover at BC Environment.
199700400	Resident Fish Stock Status Above Chief Joseph and Grand Coulee Dams	Resident fish species, abundance, and size. Habitat data covers a myriad of parameters. Water quality parameters are mainly the basics for streams and lakes (DO, pH, temp).	WDFW data in Excel - Tribal data in either Access or SQL Server	WDFW data elements available from Dick O'Conner. Tribal data resides in Spokane and is currently available through Jim Lemieux.
199502800	Restore Moses Lake Recreational Fishery	Currently stalled due to lack of funding. Developing a new proposal to get back on track.		
199104700	Sherman Creek Hatchery Operations and Maintenance	Numbers of fish captured and released	PDF format / project synopsis	WDFW annual reports - BPA website for project synopsis
199104600	Spokane Tribal Hatchery (Galbraith Springs) Operation and Maintenance	Standard fish hatchery production and distribution data		Data available through Tim Peone at Spokane Tribe of Indians
OREGON				
199405400* *listed as 199405402 in ISRP Report	Characterize the Migratory Patterns, Population Structure, Food Habits, Abundance of Bull Trout from Subbasins in the Blue Mountain Province	Bull trout spawning surveys, weir counts, telemetry results, diet compositions, and bull trout/brook trout interactions. Abundance counts from snorkeling and electroshocking samples.	1997 and 1998 are in Acrobat 4.0, and 1999 is a PDF file. Older reports are published and housed at the ODFW library. 1995, 2000, and 2001 can be found at the EPA site in a PDF format.	Available on ODFW FTP site for years 1997, 1998, and 1999. 1995, 1997, 1998, 1999, 2000, and 2001 are published on the BPA site.
199405401	Bull Trout Abundance Monitoring in the Lower Deschutes River formerly "Bull Trout Genetics, Habitat Needs, L.H. Etc. In Central And N.E. Oregon"	Work conducted on Warm Springs River and Shitike Creek. Mostly juvenile snorkeling counts and weir counts. Also contains adult spawning and vertical fence weir counts. Includes water temperature monitoring.	PDF File Sent by e-mail.	Available upon request.
198605000	White Sturgeon Mitigation And Restoration In The Columbia And Snake Rivers	Report contained mark/recapture estimates, abundance counts by fork-length, and catch-per-effort data for juveniles. Report additionally contains harvest rates, findings for a telemetry study, and bottom trawling data for juveniles.	PDF format for reports that span 1986 - 2000.	All data resides on computers of project cooperators, including ODFW, WDFW, USGS, USFWS, and CRITFC. Available on BPA's web site by project number.
199701900	Evaluation of the Life History of Native Salmonids in the Malheur Basin	Annual report contains distribution study using radio-telemetry, migration data based on passage through a rotary screw trap, length-weight relationships, and spawning survey information.	1999 Annual Report in Acrobat Reader, 2001 quarterly report available as well.	Available on BPA's web site by project number.
199701901	Evaluation of the Life History of Native Salmonids in the Malheur Basin (2)		No published data available.	Hard data provided upon specific requests. Data may be contained in annual report for sister project.
199405300	Bull Trout Assessment - Willamette/Mckenzie			Annual Reports 1994-99. Bull Trout (Salvelinus confluentus) Population and Habitat Surveys in the McKenzie and Middle Fork Willamette Basins. ODFW Springfield District Office. 2000 Annual report published. 2001 annual report in draft form, sent by request.

IDAHO				
199404900	Improve the Kootenai River Ecosystem	Water quality; nutrient load, heavy metal concentration, primary productivity (total chlorophyll), macroinvertebrate density and ratios (10 sites), fish community analysis (4 sites).	MS Excel worksheets, MS Word documents	Data and annual reports in office, and annual reports to BPA in near future
199501600	Genetic Inventory of Westslope Cutthroat Trout in the N F Clearwater Basin	Fish surveys: species, length, population density, basic habitat parameters, stocking information	Lotus data base, hard copies of genetic analysis, reports in Word Perfect and MS Word	Annual reports at BPA, data and reports in NPT office, hard copies of genetic analysis in NPT office, backup copies at U.M. (Missoula, MT), two articles in peer reviewed journals
199201000	Habitat Restoration/Enhancement Fort Hall Reservation	Monitor fish abundance and biomass, invertebrate abundance and ratios, riparian habitat, stream morphology, water chemistry and quality	MS Excel worksheets, MS Word documents	Digital and hard copies in SBT fisheries office, annual reports at BPA, some digital copies on BPA website.
198740700	Dworshak Impacts/M&E and Biological/Integrated Rule Curves	Zooplankton analysis, measure primary productivity, survey benthic invertebrates, water quality, dissolved oxygen, water temperature, photometric data	Data in Lotus worksheets, dBASE database, reports in Word Perfect and MS Word	Annual reports at BPA, data and reports in NPT office
23032	Return Spawning/Rearing Habitat to Anadromous/Resident Fish within the Fishing Cr. (aka Squaw Cr.) and Legendary Bear Cr. (aka Papoose Cr.) Analysis Area Watersheds	Fish abundance, stream and riparian habitat type, ratios, substrate composition, sediment load, water quality/chemistry	Annual reports in MS Word documents, data in unknown format	Digital and hard copies in NPT fisheries office, annual reports at BPA, some digital copies on BPA website.
199800200	Snake River Native Salmonid Assessment	Monitor game and nongame fish abundance and biomass, amphibian and reptile presence, riparian habitat, stream morphology, water chemistry and quality	MS Word annual reports, MS Access data base, MS Excel worksheets	Digital and hard copies in IDFG fisheries research office, annual reports at BPA
199700900	Evaluate Rebuilding the White Sturgeon Population in the Lower Snake Basin	Population estimate, growth, age at length, spawning locations, movement, substrate composition, pool depth, temperature, flows	Data in Lotus and Excel worksheets, reports in Word Perfect and MS Word	Hard copies of annual reports are at BPA library, data and reports are at NPT fisheries Research office
198806400	Kootenai River White Sturgeon Studies and Conservation Aquaculture	Gill netting and angling surveys for adults and juveniles, stream flows and temperatures	MS Access data base, MS Word documents	Hard copies of annual reports are at BPA library, data and reports are at Kootenai Tribe fisheries Research office
199501300	Nez Perce Tribe Resident Fish Substitution Program	Fish harvest, angler use, water quality by month (temperature, dissolved oxygen, pH, conductivity, turbidity, water chemistry).	MS Excel worksheets, MS Word documents	Annual reports to BPA, data and reports in NPT offices
198815600	DVIR Resident Fish Stocking Program	Where, when, species, age of fish, and number of fish stocked, health, water temperature, DO, pH, turbidity, creel surveys, plankton species composition	Excel data, word and Adobe PDF reports	Digital and hard copies in SPT fisheries office, annual reports at BPA, some digital copies on BPA website.
2000079	Assess resident fish genetics on DVIR	Genetic samples	Excel data, word and Adobe PDF reports	Digital and hard copies in SPT fisheries office, annual reports at BPA, some digital copies on BPA website.
199501506	Lake Billy Shaw Operations and Maintenance	Water temperature, conductivity, salinity, DO, depth, pH, zoo- and phytoplankton composition, abundance	Excel data, word and Adobe PDF reports	Digital and hard copies in SPT fisheries office, annual reports at BPA, some digital copies on BPA website.
199701100	Habitat Enhancement and Protection on the DVIR	Spawner and redd counts, snorkel surveys for egg to parr survival, electrofish for parr standing population estimate, water temperature, conductivity, DO, pH	Excel data, word and Adobe PDF reports	Digital and hard copies in SPT fisheries office, annual reports at BPA, some digital copies on BPA website.
199902200	Assessing Genetic Variation Among Columbia Basin White Sturgeon Populations	Nuclear and mitochondrial DNA samples, weight, length, and fin ray ageing data	Data in MS Excel workbook, analyses in GDA (genetic data analysis), GenPop, Arlequin, Reap (restriction enzyme analysis program), PAUP (phylogenetic analysis using parsimony), Phylip (phylogenetic analysis).	Annual reports, quarterly reports at BPA, Final report to be submitted to BPA soon, Doctoral dissertation at University of Idaho, peer reviewed article in Journal of Applied Ichthyology, data and reports at Hagerman Fish Culture Experiment Station, Hagerman, ID
199709900	Dworshak Dam Impacts Assessment and Fisheries Investigation	Hydroacoustic estimates for entrainment losses, population estimates, and kokanee salmon spawner counts in trib's to Dworshack Reservoir	Excel data, word and Adobe PDF reports	Annual reports to BPA, data and reports on site
199404700	Lake Pend Oreille Fishery Recovery Project	Kokanee spawner counts in tribs, hydroacoustic sampling, trawling, and fry netting for pop. est., measure quality of spawn beds on shoreline by core sampling, netting for shrimp pop. est., netting in Pend Oreille River for warm water fish pop. est., monthly limnological sampling, water quality (temperature, DO, turbidity, nutrients), depth of kokanee spawning on shoreline, est kokanee egg survival on shoreline spawn beds	Excel data, word and Adobe PDF reports	Annual reports to BPA, data and reports on site

36816	Lake Pend Oreille Predation Project	Hydroacoustic est. for predator abundance, sonic telemetry for pop. Est. of predators, trawl to est. kokanee population	Excel data, word and Adobe PDF reports	Annual reports to BPA, data and reports on site
199004401	Lake Creek Land Acquisition and Enhancement	Fish population estimates, distribution, and abundance, water quality (temp, DO, pH, nutrient load), macroinvertebrate	MS Access, MS Excel, and MS Word	Hard copies of annual reports are at BPA library, data and reports are at CDAT fisheries Research office
199004400	Implement Fisheries Enhancement Opportunities on the Coeur d'Alene Reservation	Fish population estimates, distribution, and abundance, water quality (temp, DO, pH, nutrient load), macroinvertebrate sampling	MS Access, MS Excel, and MS Word	Hard copies of annual reports are at BPA library, data and reports are at CDAT fisheries Research office
199004402	Coeur d'Alene Tribe Trout Production Facility	Genetic samples, will have fish stocking (species, age, numbers, health, etc.)	MS Access, MS Excel, and MS Word	Will submit hard copies of annual reports are at BPA library, data and reports are at CDAT fisheries Research office
198806500	Kootenai River Fisheries Recovery Investigations	Monitor and evaluate white sturgeon, burbot, bull trout, and rainbow trout spawning and rearing, river flows, temperatures, life histories, and limiting factors. Assess the fish community: species composition, biomass, distribution and recruitment of bull and rainbow trout. Evaluate spawning channels and potential mitigation. Evaluate hatchery and wild white sturgeon survival. Monitor migration via telemetry for all four species. In a joint project with USGS, assess the effects of Kootenai Lake elevation changes and sediment levels on white sturgeon spawning location.	MS Access data base, MS Word documents, MS Excel workbooks and charts. The Access database is a warehouse of data for all the cooperating agencies. It is managed by Diane Wakkinen in Bonners Ferry.	Annual reports to BPA, data and reports in IDFG and Kootenai Tribal Fisheries offices
199401200	Kootenai River Fisheries Investigation M&E	Monitor and evaluate white sturgeon, burbot, bull trout, and rainbow trout spawning and rearing, river flows, temperatures, life histories, and limiting factors. Assess the fish community: species composition, biomass, distribution and recruitment of bull and rainbow trout. Evaluate spawning channels and potential mitigation. Evaluate hatchery and wild white sturgeon survival. Monitor migration via telemetry for all four species. In a joint project with USGS, assess the effects of Kootenai Lake elevation changes and sediment levels on white sturgeon spawning location.	MS Access data base, MS Word documents, MS Excel workbooks and charts. The Access database is a warehouse of data for all the cooperating agencies. It is managed by Diane Wakkinen in Bonners Ferry.	Annual reports to BPA, data and reports in IDFG and Kootenai Tribal Fisheries offices
20156	Identification of Redband and Rainbow Trout in the North Fork Clearwater	Project never funded		
199500600	Shoshone-Bannock/Shoshone Paiute Joint Culture Facility	Project never funded		
28002	Fluvial Bull Trout Migration and Life History Investigations in the upper Salmon River Subbasin	Project never funded		
28030	Salmon River Native Resident Fish Assessment	Project never funded		
9056	Evaluate Status of White Sturgeon in the Hells Canyon Reach Snake River,	Project never funded		
28022	Evaluate Bull Trout Life History In Dworshak Reservoir, N.F. Clearwater River Drainage, ID	Project never funded		
28023	Evaluate and Control Brook Trout Populations – Addressing Competition and Hybridization Threats in the Clearwater River Drainage, Idaho	Project never funded		
MONTANA				
199101901	Hungry Horse Fisheries Mitigation - Flathead Lake	Implement and monitor fisheries improvement activities within the Flathead Indian Reservation portion of the Flathead Lake basin. Research factors limiting successful application of mitigation measures within Flathead Lake.	Summarized in MFISH for StreamNet; Raw data in Excel	Data resides primarily in published BPA reports, Open File Reports, or Project summaries, all of which are available at the offices of the Division of F,W, R & C of the Confederated Salish and Kootenai Tribes
199608701	Focus Watershed Coordination- Flathead River Watershed	Public involvement, interagency cooperation and cooperative cost-sharing for habitat restoration to offset impacts to fishery resources in the Flathead watershed.		CSKT databases & reports, MFWP databases & reports, Flathead Basin Commission Reports, Yellow Bay Biological Station reports and databases

199401002	Flathead River Native Species Project (MFWP Sub-proposal combined with Hungry Horse Mitigation #199101093)	Protect and enhance native fish by managing the effects of regulated flow and temperature below Hungry Horse Dam on species interactions in the Flathead River. Evaluate effects of thermal control using selective withdrawal. Model macro- and micro-habitat.	Summarized in MFISH for StreamNet; Raw data in Excel and ArcView	Montana Fish, Wildlife and Parks-Region 1 Office; 490 N. Meridian Rd, Kalispell, Montana 59901; all survey and distribution data also centralized and entered into MFISH (Montana Fisheries Information System) and distribution data provided to StreamNet
199101903	Hungry Horse Mitigation	Implementation of watershed based habitat restoration and fish recovery actions to mitigate the losses caused by hydropower in the Flathead Subbasin.	Summarized in MFISH for StreamNet; Raw data in Excel with limited conversion to Access97	Montana Fish, Wildlife and Parks-Region 1 Office; 490 N. Meridian Rd, Kalispell, Montana 59901; all survey and distribution data also centralized and entered into MFISH (Montana Fisheries Information System) and distribution data provided to StreamNet
199500400	Mitigation For The Construction And Operation Of Libby Dam	Implementation of watershed based habitat enhancement and fish recovery actions to mitigate the losses caused by hydropower in the Kootenai Subbasin.	Summarized in MFISH for StreamNet; Raw data in Excel	Montana Fish, Wildlife and Parks' Libby Area Office, 475 Fish Hatchery Road, Libby, MT 59923 all survey and distribution data also centralized and entered into MFISH (Montana Fisheries Information System) and distribution data provided to StreamNet
199502500	Flathead River Instream Flow Project (MFWP Umbrella Subproposal)	Conduct IFIM study on Flathead River from South Fork confluence to Flathead Lake. Determine effects of flow fluctuations and temperature control on habitat, bed load, predator-prey interactions and migrations. Link river model to reservoir model (HRMOD)	Summarized in MFISH for StreamNet; Raw data in Excel and ArcView	Montana Fish, Wildlife and Parks-Region 1 Office; 490 N. Meridian Rd, Kalispell, Montana 59901; all survey and distribution data also centralized and entered into MFISH (Montana Fisheries Information System) and distribution data provided to StreamNet
199608720	Focus Watershed Coordination in the Kootenai River Watershed	Fosters "grass-roots" public involvement and interagency cooperation for habitat restoration to offset deleterious effects to the Kootenai River watershed fisheries. Establishes cost-share arrangements with government agencies and private groups.	Raw data in Excel	Montana Fish, Wildlife and Parks' Libby Area Office, 475 Fish Hatchery Road, Libby, MT 59923;all survey and distribution data also centralized and entered into MFISH (Montana Fisheries Information System) and distribution data provided to StreamNet
199101904	Stocking of offsite waters for Hungry Horse Mitigation - Creston National Fish Hatchery	Produce hatchery fish for offsite stocking to mitigate losses to Flathead Lake caused by construction and operation of Hungry Horse Dam.		CSKT data is kept at the tribal fisheries office at Pablo, MT. MFWP data is available by contacting the Region 1 fisheries manager in Kalispell, MT. Bull trout culture info is available by contacting the Creston Fish and Wildlife Center.