

# *StreamNet Quarterly Progress Report*

(January - March 1999)



Submitted to:  
Bonneville Power Administration

Submitted by:  
Pacific States Marine Fisheries Commission

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# I. Columbia River Inter-Tribal Fish Commission

## PERIOD HIGHLIGHTS

### Cataloging

Limited numbers of documents were cataloged this quarter due to the lack of Reference staff. We were able to catalog 182 pieces, including our periodical titles.

### Services

Continued to provide reference, online search, and interlibrary loan services.

### Reference requests

Approximately 55; Requesters included:

CRITFC  
NMFS  
Several independent writers  
Members of the public  
USFWS  
Bureau of Indian Affairs  
CRiSP  
Michael Black, Consulting (CA)  
PSU graduate students  
Stratus Consulting (CO)  
Doctoral student from India, via the Internet.

### Interlibrary loan requests

25 items borrowed, 15 items lent (Several to federal agencies, including National Agriculture Library and Environmental Protection Agency). We also provided interlibrary loan services to libraries in Mexico and Iceland.

### Circulation

Approximately 90 books and technical reports.

### Photocopier usage

2137 copies made by CRITFC, NMFS, CTUIR, Clark College students, Oregon Trout, WSU-Pullman students, Natural Resources Solutions (Consultant), and PSMFC.

### Meetings

OCLC training in Portland, OR, February 1999.

Online NW '99 in Portland, OR, February 1999.  
Cyamus/IAMSLIC meeting in Newport, OR, March 1999.

### Administration and Miscellaneous

Wrote quarterly report for StreamNet project.

Several informational bulletins about materials and services in the StreamNet Library were sent out to a mailing list via e-mail. David Liberty usually sends these out with a couple generated by Lenora Oftedahl.

Traveled to Oregon State University to make photocopies for researchers. One research request/ILL request was to fill out the citations for the Oregon White Sturgeon management plan.

Began lending via OCLC to other libraries nationwide. This has been beneficial as we have been the sole owner of a couple of the documents requested. Most of these requests have been fulfilled with copies rather than the actual documents.

Provided input for Library Technician and Librarian job descriptions.

Interviewed candidates for Librarian position. Promoted Lenora Oftedahl to acting Librarian pending successful completion of conditions.

Rewrote job descriptions for Library Technician, Assistant Librarian and Librarian to comply with new CRITFC model.

Began reorganizing Library materials for better control of and easier access to the periodical collection.

Received property stamp for Northwest Power Planning Council collection.

Edited several library web pages.

Agreed to be consultant for environmental web pages of CascadeLink through the Multnomah County Library.

## **II. Idaho Department of Fish and Game**

### **PERIOD HIGHLIGHTS**

Further development of 1:100,000 scale hydrography by adding parent LLIDs and parent names to routes and minor corrections to routes.

Ongoing development of interface for entering stream and lake survey data. System will be used to compile Department data for StreamNet.

Migrated general parr monitoring data into new fish information system.

Completed migration of fish distribution events to new version of hydrography.

Developed anadromous fish population/stocks, termed cells by IDFG, into fish information system.

Worked with USFS Intermountain Research Station to digitize locations of general parr monitoring sites and migrated them into our fish information system.

Finished error checking historic (1913-1967) stocking database and incorporated into IDFG stocking database.

Completed 1998 StreamNet updates and submitted to PSMFC.

Worked on 1998 Spawning Ground Report.

Continued development of AML program to programmatically route unrouted, unnamed streams in hydrography.

Continued entry of collecting permit data into Reference and Collecting Permit interface of the fish information system.

Formalized arrangement with the Idaho Conservation Data Center to provide information for Section 7 and other data requests for fish information. (CDC no longer tracks rare and sensitive fish species. StreamNet is now entirely in charge of this task and also fulfills data requests from USFWS and others. These data requests number in the hundreds annually.)

Obtained and prototype-compiled water temperature data from IDFG fish researchers.

Developed survey form for mitigation project information.

### **PLANS FOR NEXT QUARTER**

Continue development of stream and lake survey interface.

Implement Fish Information System in IDFG offices.

Submit additional changes to hydrography to regional GIS Manager.

Integrate lakes GIS layer with streams in our fish information system.

Begin entering stream and lake survey data into Fish Information System.

Build cross-reference between LLID and IDFG catalog numbers.

Attach IDFG fish stocking database to Fisheries Information System.

Attend StreamNet Steering Committee Meeting

Continue development of hatcheries, dams, and barriers databases.

## **DATA REQUESTS**

We formalized our arrangement with the Idaho Conservation Data Center to provide rare and sensitive fish species data for all data requests. During this quarter we have filled dozens of fish data requests for the CDC. Most of the requests were from the USFWS for information related to proposed development projects and ESA Section 7 consultations. We have not yet compiled a complete list of these requests. The table below does not include these requests.

<b>END_DATE</b>	<b>USER_ORG</b>	<b>USER_REP</b>	<b>SUPPLIER</b>	<b>DATA_TYPE</b>
1/20/99	IDFG	Will Reid	Butterfield	Bull Trout maps
1/30/99	IDFG	Fred Partridge	Scarlett	graphic maps of bull tr
2/15/99	IDFG	Jerome Hansen	Butterfield	all GIS data for Region
3/4/99	Idaho Power	Mike Radko	Butterfield	bull tr, redband GIS
3/18/99	Clearwater NF	Sue White	Butterfield	100K hydro
3/22/99	Northwest Watch	Erika Swahn	S Brown	Chinook/sockeye returns
3/29/99	IDFG	Tim Cochnauer	Butterfield	GIS data and fish dist
3/30/99	Maxim Tech.	Sally Staley	Butterfield	IRIS reach evaluations

### **III. Montana Department of Fish, Wildlife & Parks**

#### **PERIOD HIGHLIGHTS**

##### Data Development

Continued to review the FWP Stream Fisheries Ratings scheduled to be released in 1999. Sent final sport fisheries questions to FWP Regional Fish Managers and will meet with them in April at their Manager's meeting in Helena. The Ratings Program has allowed for a considerable amount of new fisheries distribution and population information to be entered into the system. System is scheduled for completion next quarter.

No more new data will be added into MRIS until conversion to the LLID is completed.

Received 1997 FWP Fishing Pressure data from Bob McFarland; will incorporate into new MRIS.

Created a GIS coverage of Montana private and public hatchery data. Received outplant data from FWP Hatcheries and sent to StreamNet regional data managers in data exchange format.

ESA: Updated Bull Trout Nodal Areas due to several errors in original coverage.

ESA: Converted brook trout private ponds from TRS data in FWP Private Pond Database to a GIS coverage. Provided to FWP fish managers Bull Trout Distribution/Core Area Base Map and mylar overlays of brook trout distribution, private ponds stocked with brook trout, and a blank mylar to create management areas for the Private Pond Brook Trout Stocking Policy within Bull Trout habitat.

Received all Bull Trout edit maps back from biologists. Will input into system when new MRIS edit/entry program by LLID is completed.

Created ACCESS program to convert Public Land Survey System (PLSS) data (Township, Range, Section, and partial sections) to the half or quarter section into Latitude-Longitude format. Used to convert historic fisheries data into MRIS.

Worked on Resident Fish Data Exchange Distribution and attended meeting in Portland in February to discuss with steering committee members

Automated process for generating westslope cutthroat genetic distribution maps by hydrounit. All maps contain a table by sample with date, genetic purity by species, number of fish in sample, and collector. Sent to all FWP/federal biologists along with information from the Wild Trout and Salmon Genetics Lab in Missoula.

Continued to make progress in LLID conversion between USFS in Montana and regional StreamNet GIS staff. Continued on necessary clean-up work of coverage to prepare for LLID assignment. Sent Montana's cleaned hydrography, which is now compatible with regional coverage, to Duane Anderson which will be included in NHD.

Restoration Project Database – Completed all necessary changes to the edit/entry program and Fisheries Division staff in Helena entered restoration project data from the FWP Future Fisheries

Program into the database. Sent data exchange format from Montana to Doug Burch.

### Data Management and Delivery

Continued to work with Duane Anderson, NRIS Water Coordinator, on internet access to MRIS; prework included converting data from short\_rrn to a stream-based interim LLID; cleaning up records with no relation in other databases and designing initial reports and query system.

Created ArcView project for Stream Ratings review.

Updated FWP Biologist responsibility Area GIS coverage.

Provided various products to the efforts of the FWP Native Fish Species Management Plan Committee. Calculated number of native fish species and species of special concern by fourth and fifth code hydrounits, created wall-sized maps of each of the Fisheries Biologist Responsibility Areas, and produced the first draft of base maps and mylar overlays to identify native species management areas.

Responded to 80 requests for GIS data products (request log on file).

### Library/Reference Services

Continue to have documents from the Fisheries Division Library inputted into a library cataloging system. Work is being done by a temporary employee which will end in June.

### Project Management and Coordination

Coordinator took a 3 day ArcView training class in order to be better able to review data as it comes in.

Jeff Hutten will present a talk on using Access and Arc/Info at the Montana/Idaho/Wyoming User's Conference in April.

Attended StreamNet meeting in Corvallis.

### **NRIS Report**

Wrote and ran algorithm that converts MRIS database data tables from reach based to stream based tables. Designed prototype web layout for MRIS application. Began programming of application.

Other MRIS related requests served by NRIS during the period:

Date Received	Date Sent	NARRATIVE	Company /Organization	Sector Name
1/5/99	1/6/98	E-mailed wondering whether we had sent him a map that he was having trouble downloading. Requested info and map of Good Creek 9 miles west of Whitefish.		Private Individual
1/28/99	2/1/99	MRIS reports for East Fk. Bitterroot River between Conner and Sula.	Montana Department of Transportation	State
2/3/99	2/3/99	Water quality and MRIS report for Nesselhuf Property.	Montana Land Reliance	Private Non Profit
1/26/99	1/28/99	Several MRIS reports.	Department of Environmental Quality	State
1/26/99	1/26/99	Called and asked about MRIS reports. Will call later to request some.	Department of Environmental Quality	State
1/11/99	1/11/99	Wants entire database (MRIS).	Department of Natural Resources and Conservation	State
2/23/99	2/25/99	Info on the place names: Boles Point and Boles Creek (south of Placid Lake).		Private Individual
2/15/99	3/1/99	Sent 6 Word documents requesting full stream reports from MRIS for nearly 900 reaches.	Department of Environmental Quality	State
3/9/99	3/11/99	Full stream report for Alderson Creek in the Rosebud drainage	Montana Department of Transportation	State
2/25/99	2/25/99	Need species of special concern for crushing permit in Lakje Creek , Lincoln Cnty - especially for Bull Trout	Department of Environmental Quality	State
2/25/99	2/25/99	MRIS Data for Five Stream Segments in HUC 10030101: Clancy Creek; Battle Creek; Wilson Creek; Crow Creek; Ten Mile Creek.	State of Montana	County/Local
2/17/99	2/26/99	Working on Stream Status of Sauger population - needs current info on distribution of species and other related data for Marias, Musselshell, middle Missouri, lower Missouri, Milk Middle Yellowstaone, lower Yelloiw stone, little Missouri.	University of Montana	Academic
3/2/99	3/2/99	Requested a shapefile with the missing stream gages on it ( as a separate file).	Natural Resource Conservation Service	State
3/10/99	3/11/99	Full stream and fisheries reports for 6 reaches of the Flathead River adjacent to the propped MDAT highway reconstruction project in Sanders County. Would like in spreadsheet format.		Private Consulting Firm
1/5/99		MRIS report for the Upper Ten Mile.	URS Operating Services	Unknown
2/10/99	2/10/99	Soils, water, ownership, and resource info for Pattee and Deer Creeks in Missoula area.	University of Montana	Academic
2/8/99	2/8/99	MRIS report for Confederate Gulch and	Department of	State



		White Gulch.	Environmental Quality	
2/1/99	2/10/99	MRIS reports for several (this is an understatement) streams.	Department of Environmental Quality	State
1/29/99	2/5/99	MRIS reports for SEVERAL streams.	Department of Environmental Quality	State
2/4/99	2/5/99	Several MRIS reports. (Request was from Rosie Sada de Suplee, but she used his e-mail, etc.)	Department of Environmental Quality	State
2/4/99	2/5/99	MRIS report for 3 river reaches in huc 10030101		State
2/2/99	2/4/99	Streamflow info. Needs period of record monthly totals (mean, max, min) in tabular format (cfs or acre-feet).	Department of Natural Resources and Conservation	State
2/11/99	2/17/99	MRIS info for Upper Clark Fork, Mill-Willow Bypass.	Department of Environmental Quality	State
1/19/99	1/28/99	Map of Silver Creek Watershed.		Unknown
2/10/99	2/10/99	MRIS reports for Bramlet Creek and Plum Creek by Cabinet Mountain Wilderness area in Lincoln County. T26R30and31, sections 5 and 6		Private Individual
1/27/99	2/1/99	MRIS reports for several streams occurring on Kenelty Mountain quad in Lincoln County. HUC 17010102		Private Consulting Firm
1/21/99	2/1/99	MRIS reports for several streams in Bitterroot watershed.	Department of Environmental Quality	State
1/19/99	1/21/99	Full stream report for Boulder River 10 miles up hwy 69 to Boulder.	Montana Land Reliance	Private Non Profit
1/14/99	1/20/99	Fishery, wetland, or wildlife info for Sweetgrass Creek.	Trout Headwaters, Inc.	Private Consulting Firm
1/15/99	1/20/99	MRIS reports for several streams in the Upper Clark Fork HUC (17010201).	Department of Environmental Quality	State
1/19/99	1/20/99	MRIS reports for Willow Creek and Little Blackfoot River in Upper Clark Fork HUC.	Department of Environmental Quality	State
1/12/99	1/20/99	MRIS reports for several streams in HUC 10030101.	State of Montana	County/Local
3/12/99	3/12/99	Needs stream dbf for MRIS program.	Department of Environmental Quality	State
3/22/99	3/29/99	Is building automated interface for Water Body system to MRIS data. Requested full MRIS database with WBS cross reference built in.	Department of Environmental Quality	State

## **IV. Oregon Department of Fish and Wildlife**

### **StreamNet, Corvallis:**

#### **PERIOD HIGHLIGHTS**

Added verifiable data documentation records in the Rogue Basin and posted the new information on our FTP site. (Bowers, Brodeur, Sounhein; Task 1.1a).

Submitted updated adult abundance estimates and indices for anadromous species with available 1997 and 1998 data. (Sounhein; Task 1.1a and 1.2a).

Began verifying barrier location and physical information with Oregon field biologists. To date, there are 1,203 barrier records to be verified by field staff. These data will be converted into the new Barrier Exchange format when the format is finalized. (Bowers, Brodeur, Cooney, Sounhein, Task 1.1a and 1.2a).

Created a MapCat table for our barrier records by locating public domain photographs of dams and hatcheries on the Internet and by scanning ODFW slides and photos. (Brodeur, Task 1.1a and 1.2a).

Plotted DRG based fish distribution maps for the Tualatin basin to test a new approach for updating our distribution data to an "enhanced" 1:100,000 scale (Bowers, Task 1.1a and 1.2a)

Acquired Redband Trout distribution data for Abert, Catlow, Goose, Malhuer, Silver and Warner basins (Bowers, Task 1.2).

Submitted modifications to the StreamNet Mitigation and Hatchery exchange formats, and a provided comments on a number of other exchange formats. (Brodeur, Cooney, Sounhein; Task 2.3).

Completed reviewing and updating the Hatchery Facilities and Hatchery Production data tables. This will be submitted to StreamNet when the exchange format is finalized. (Forsberg; Tasks 1.1e, 1.2d, and 1.4b).

Continued updating & rectifying discrepancies in the stream route coding system in the Oregon portion of the PNW 100K Hydrography. (Bowers, Forsberg; Task 2.6).

Drafted metadata for Anadromous fish distribution datasets. (Bowers, Task 2.6).

A total of 99 data, document, map/GIS related, and other requests were answered during this quarter. (All staff; Task 2.7).

One or more staff members participated in 12 essential project coordination meetings. Bowers, Brodeur, Cooney, Forsberg, Hill, Sounhein; Task 5.1).

Compiled and submitted Oct.- Dec. 1998 Quarterly Report information for Oregon. (Cooney; Task 5.1).

Drafted Mid - FY99 StreamNet GIS Dataset Status Report, which includes data specific 6 month plans and target deliverables for the fiscal year. (Bowers, Task 5.1).

Drafted a work statement for EPA contract involving habitat restoration data (Cooney, Task 5.1)

Secured additional funding to pilot updating fish distribution at an "enhanced" 1:100,000 scale in the Lower Deschutes, Lower John Day, and Umpqua River drainages. (Cooney, Task 5.1)

Initiated the development of a Mitigation/Restoration Project Database. Acquired data from the Governor's Watershed Enhancement Board and began rectifying this data with the StreamNet exchange format. (Brodeur, Cooney, Task 8.2)

## PLANS FOR NEXT QUARTER

Continue updating the anadromous species distribution throughout Oregon using the 1:100K Hydrography and provide data documentation for distribution in the Willamette basin. (Bowers, Brodeur, Cooney, Forsberg, Sounhein).

Enhance our Barriers Database with new information and link this database with our anadromous species distribution information. (Bowers, Brodeur, Sounhein).

Provide updated adult abundance estimates and indices for anadromous species with available 1997 and 1998 data. (Sounhein).

Complete the initial Mitigation Project Database development and provide the data to PSMFC.

Continue to answer information requests as received. (All).

## STREAMNET GIS DATA DOWNLOADS OFF THE ODFW FTP SERVER

(Tabulated by Jon Bowers 4/12/99)

GIS Coverages	Number of Files Downloaded	Number of Different Users Downloading Files
Bull Trout	20	8
Fall Chinook	79	10
Spring Chinook	52	10
Chum	15	5
Coho	67	14
Core Areas	43	8
DRG	17	2
ORIS	23	8
River Routes	151	14

**ODFW, Columbia River Management, Clackamas**  
(covers the period of October 1998 through March 1999)

**PERIOD HIGHLIGHTS**

Acquired and compiled daily and cumulative dam fish passage counts by species for five Columbia River and two Snake River dams into Columbia River Management (CRM) dataset; acquired and compiled daily hydrological data for Bonneville Dam including temperature, turbidity, flow, and spill (Case, Task 1.1b).

Worked with USACE personnel and Fish and Wildlife managers of other agencies to streamline acquisition of fish counts mentioned above and hydrological data to be used in anadromous stock status monitoring and run size forecasting. Attended USACE Fish Passage Operations meetings, 10/8/98, 11/12/98, 12/10/98, 1/22/99, 2/18/99 (Case, Task 2.2).

Acquired, compiled, and maintained inseason updates of harvest estimates by species in Columbia River commercial fisheries (Melcher, Task 1.1d).

Formatted and posted inseason fishery management information (dam counts, hydrological data, and harvest estimates) on CRM/ODFW web page for 11 Columbia River Compact Hearings (October 1, 1998-March 29, 1999). Reset CRM/ODFW web page for the 1999 fisheries cycle (Tinus, Tasks 1.1b,d, e, f, and g).

Formatted and posted daily inseason fishery management information (dam counts, hydrological data, and harvest estimates) on CRM/ODFW web page for Willamette spring chinook fishery and falls conditions. Reset CRM/ODFW web page for the 1999 Willamette spring chinook fishery (Beamesderfer, Tasks 1.1b,d and 2.6).

Compiled age data for Deschutes River fall chinook salmon (1998), northeast Oregon spring chinook index populations (1996-98), and John Day spring chinook index populations (1995-98; Tinus, Task 1.1g).

Compiled data collected for wild McKenzie River spring chinook run reconstruction to be used in PATH analyses and ODFW Willamette Plan; *note: data appear to be missing for too many intermittent years to be able to develop trends* (Tinus, Tasks 1.1b,d,e,f, and g).

Finished inventory of electronic files comprising the *Status Report, Columbia River Fish Runs and Fisheries, 1938-97* and submit to Cedric Cooney to provide direct internet access to an electronic version of the report (Tinus, Tasks 1.1a,b,d,e,f, and 2.6).

Collected estimates of sport harvest for Oregon fisheries based on punch card returns (1995-1996 for salmon stocks and 1994-1995 for steelhead stocks) and begin compiling into StreamNet data exchange format (Tinus, 1.1d).

Assisted Fish and Wildlife managers and CBFWA staff to organize FY2000 BPA proposals and FY2000 draft Annual Implementation Work Plan subbasin summary templates into computerized working directories by Oregon subbasin (Tinus, Tasks 2.6 and 4.5d).

Responded to requests for information (All, Task 2.6).

## **PLANS FOR NEXT QUARTER**

Acquire and compile daily and cumulative fish counts by species for five Columbia River and two Snake River dams into CRM dataset; acquire and compile daily hydrological data for Bonneville Dam including temperature, turbidity, flow, and spill. Monitor ability to effectively acquire USACE fish passage data from upgraded information delivery system and provide feedback to USACE personnel (Case, Tasks 1.1b and 2.2).

Acquire, compile, and maintain inseason updates of commercial harvest estimates by species in Columbia River commercial fisheries (Melcher, Task 1.1d).

Compile age data for Oregon spring chinook and Deschutes River fall chinook index populations in StreamNet data exchange format and submit to PSMFC (Tinus, Task 1.1g).

Learn what is required to convert *Status Report* into electronic version available through the internet (Tinus, Task 2.2).

Finish sport harvest updates (1995-96 for salmon stocks and 1994-95 for steelhead stocks); collect and compile punch card estimates of harvest of salmon (1997) and steelhead (1996) into StreamNet data exchange format (Tinus, Task 1.1d).

Develop table formats to post inseason harvest updates and season guidelines for sport and commercial harvest of white sturgeon on the internet (Tinus, Tasks 1.1d and 2.6).

Format and post daily inseason fishery management information (dam counts, hydrological data, and harvest estimates) on CRM/ODFW web page for Willamette spring chinook fishery and falls conditions (Beamesderfer/Tinus, Tasks 1.1b,d and 2.6).

Compile run reconstruction data for Oregon spring chinook index populations including redd counts, harvest, dam conversion rates, and hatchery fractions (Tinus, Task 1.1b,d, and f).

Respond to requests for information (All, Task 2.6).

## DATA REQUEST/RESPONSE LOG

DATE	REQUESTER	ORGANIZATION	REQUEST	Who Responded	Request Type *
10/22/98	Lamprey Working Group	Tribes and Agencies	Commercial lamprey landings at Willamette Falls	Tinus	D
12/3/98	Fagan	CTWSRO	Deschutes River fall chinook age and length data, 1978-1997	Tinus	D
1/5/99	Close	CRITFC	Commercial lamprey landings at Willamette Falls	Tinus	D
1/28/99	Fagan	CTWSRO	Deschutes River fall chinook age data, 1998	Tinus	D
3/4/99	Budy/Schaller	USFWS/ODFW	Columbia mainstem fall chinook turnoffs to hatcheries, harvest, and dam counts	Tinus	O
3/10/99	Budy/Schaller	USFWS/ODFW	North ladder sample numbers of steelhead and chinook salmon	Tinus	D
3/11/99	Tracy	ODFW	Salmon and steelhead life histories	Tinus	O
3/12/99	Budy/Schaller	USFWS/ODFW	Minam spring chinook spawner escapement and hatchery fraction	Tinus	D

\* Request type: D = data (tabular or GIS generated), P = document, M = map/coverage, O = other (Task 2.6)

## **V. Pacific States Marine Fisheries Commission**

### **PERIOD HIGHLIGHTS**

#### Data Development

Reviewed the status of all data development tasks with project participants.

Prepared a test version of the FY 2000 Fish and Wildlife Program Annual Implementation Work Plan.

Prepared 6<sup>th</sup> field hydrologic coverage including routing.

Secured habitat data from the Interior Columbia Basin Environmental Management Plan (ICBEMP).

Created a link between ICBEMP and 6<sup>th</sup> field HUCs.

Initiated efforts to create a hatchery facility database.

Assembled state resident fish hatchery release and stocking records. Analyzed these for accuracy and consistency.

#### Data Management

Incorporated updates to anadromous fish trends received from IDFG, ODFW, WDFW.

Prepared version 99.1 of the StreamNet data exchange format document. This constituted a major revision of the existing 98.x version.

Revised the StreamNet data holdings document.

Prepared a draft version of a resident fish data exchange format.

Prepared a draft version of a temperature data exchange format.

Prepared a revised draft version of a project tracking data exchange format.

Prepared a prototype geographic-based data entry system.

Maintained contact with regional river reach system users including the USFS, BLM, and states, in order to ensure compatibility of efforts.

Maintained contact with the national NHD team.

Maintained and revised the StreamNet 100K web site feature.

#### Library/Reference System

Consulted with CRITFC librarian staff regarding journal acquisition priorities, staffing, and work priorities.

## Data Delivery

Prepared a revised 100K river reach system web product, including new data, narratives, and graphics.

Introduced the updated version of the StreamNet online query system, including mapping and tabular reporting capabilities. Incorporated an online data holdings feature.

Maintained and enhanced test versions of the data query and reference system.

Enhanced the education portion of the StreamNet home page by adding links to environmental education sites.

Maintained and revised the project management section to the home page, principally by posting new project documents as these were produced.

Monitored use of the StreamNet web site.

Responded to all web site "feedback" comments within 24 hours of receipt.

Revised a list of StreamNet home page enhancement ideas and identified priorities for future home page improvements.

## Project Management

Prepared a revised project "quick" plan that summarized the more detailed work statement.

Prepared a revised project implementation and data development plan.

Attended Multi-species Framework work sessions.

Prepared a list of available habitat datasets for potential use by the Framework's ecological workgroup's analysis.

Prepared a list of available habitat datasets for potential use by the NMFS "4H" process.

Prepared a chart identifying and comparing data needs for a variety of emerging regional analysis initiatives. Presented this information at a Framework/NMFS coordination meeting.

Arranged and facilitated a meeting for the Artificial Production Review's Science Review Team regarding the availability and adequacy of existing hatchery production data.

Held coordination meetings with NWPPC and CBFWA staff.

Scheduled and facilitated the January Steering Committee meeting.

Maintained contact with project coordinators via telephone and email on at least a weekly basis.

Reviewed sub-contractor invoices and prepared BPA invoices.



## **PLANS FOR NEXT QUARTER**

### Data Development

Continue to coordinate data development by participating agencies.

Prepare a public version of the online FY2000 Annual Implementation Work Plan.

### Data Management

Incorporate new data as received from participating agencies. Significant additions are anticipated from ODFW, IDFG, and WDFW.

Complete version 99.2 of the data exchange format document.

Prepare a final version of an electronic geographic-based data entry system.

Create systems for consolidation and automated update of web data contents features.

### Library

Provide direction to library staff regarding library use policies and other appropriate issues.

Cooperate with library staff in updating source references.

### Data Delivery

Continue to enhance the online data query system as per the existing enhancement plan.

Enhance the utility of the StreamNet Internet query system home page by revising navigation to queries, download features, etc.

Respond to requests for data and data services as needed.

### Project Management

Hold coordination meetings with CRITFC, IDFG, ODFW, and WDFW. Contact other participants via telephone.

Prepare for and conduct an April steering committee meeting.

Continue to monitor project progress, including overseeing work of subcontractors.

Continue to monitor Fish and Wildlife Program-related activities and reports in order to identify links with these activities.

Prepare staff work priority lists for the project's GIS manager.

Prepare a 1<sup>st</sup> draft of a FY 2000 budget and work statement.

## **VI. Shoshone-Bannock Tribes**

### **PERIOD HIGHLIGHTS**

Attended quarterly Steering Committee meeting.

Reviewed project web products.

### **PLANS FOR NEXT QUARTER**

Attend quarterly Steering Committee meeting.

Review project products.

Monitor applications/issues for StreamNet in the Fish and Wildlife Program as identified in the CBFWA project evaluation process.

## **VII. U.S. Fish and Wildlife Service**

### **PERIOD HIGHLIGHTS**

Attended the Steering Committee meeting.

### **PLANS FOR NEXT QUARTER**

Continue translating return information to the exchange format.

Review hatchery facility data exchange format.

Compile Federal hatchery facility data.

# VIII. Washington Department of Fish and Wildlife

## PERIOD HIGHLIGHTS

### General

WDFW participated in the StreamNet Steering Committee meeting in Corvallis to finalize some delayed work plan and budget issues, and to deal with specific new data format issues involving hatchery facilities and habitat restoration/mitigation project information. Matt Freid from PSMFC visited Olympia for a GIS Amini-summit@ to review progress on spatial data products. Staff participated in an informational meeting with members of the Artificial Production Review Committee and provided comments and guidance during the development of data exchange formats Version 99.1.

### Database Development

#### Tabular

Key tasks begun this quarter include 1997 hatchery returns updates, an initial review of pre-1984 NMFS-sourced hatchery returns data, compilation of 1998 fall chinook escapement data and documentation, and entry/validation of 1996-97 steelhead sport catch data. Staff provided SLFD stream temperature data to Erik Hanson, PSMFC, provided files to Doug Burch, PSMFC to support the 250K river reach code conversion effort by consultant Duane Anderson, and have been collecting resident fish release data and documentation. In the process, staff discovered and reported to WDFW manager errors in historical steelhead catch estimates and are in the process of comparing regional resident fish release records with the data present in headquarters.

#### Spatial

Staff participated in a (Portland) meeting to hammer out definitions and details related to fish distribution and use data, one of the most productive interagency data sessions we've ever had. Migration, rearing and spawning updates for anadromous fish were completed in January, along with some eastern Washington westslope cutthroat presence updates. Bull trout data will be transferred to the 100K event tables and all updated tables will be converted and exchanged when some minor format issues are resolved, likely next quarter. A merged, statewide hatchery facilities layer and table were created and distributed to WDFW staff for review and correction. Error-checking of the spatial lakes layer and linked attributes table was suspended, as the base GIS layer from Department of Natural Resources is the only remaining source of error, and it isn't scheduled for review and correction until after July 1.

### Systems Development

#### Tabular

The SaSI98 stock status and reporting system development was completed for Windows 95/98. We plan to use this system to populate stock status tables for pilot StreamNet exchange next quarter. A steelhead sport catch data entry system was put into place to help the sport catch biologist enter and review data more quickly. A tracking system is being built to identify PSC location code assignments and subsequent decisions about LLID code assignments so that we have a documented system of links between our parallel location coding systems.

### Spatial

A system of programs was built to automate locating and correcting lakes layer coding errors as well as errors in the hatchery facilities layer. Work began on a project to build both ASuper-shed@ and statewide routed hydro and data layers from the state reach files. ASuper-sheds@ are groups of HUCs which fully contain all streams that exist within their borders (except for the mainstem Columbia River). This intermediate level between HUC and the entire state will be very useful in speeding up system response to data requests and analysis.

## DATA REQUEST/RESPONSE LOG

WDFW StreamNet staff record both spatial data and tabular data requests in a similar format. The cooperation of Habitat Management Program staff was instrumental to both compilation and standardization of information concerning general spatial data requests, or "data releases". More specific requests for StreamNet data products and services are handled directly by the StreamNet staff listed at the beginning of this report.

The table on the following pages (Appendix A) summarizes the people who made these more specific requests, the type of information they needed, and the date the information was delivered by StreamNet staff during this project reporting period.

Requestor	Organization	Data Requested
Shane Hawkins	WDFW	Lewis River Steelhead and Coho Trap Counts
Stacie Kelsey	WDFW, Region 5	Fishshpp.db and Sizeunit.db tables for interpretation of Historical Hatcheries Database
Glen Mendel	WDFW	WRIA 32-General map
Rich McConnell	Quinault Ranger Station	Quinault watershed map
Steve Meyer	Washington State Conservation	stream miles by county and SaSI stock/status
Dave Seiler	WDFW	Map showing existing, proposed basins for wild stock evaluation work (traps)
Bill Sharp	Yakama Nation	2 WRIA maps, general anad and hydro layers
Donna Simmons	Hood Canal Coordinating Council	Chum in Mason, Jefferson, Kitsap counties.
Chad Jackson	WDFW	3 Lakes maps
Mark Clark	Washington State Conservation	SaSI map of Whatcom County fall chinook
Tim Quinn	WDFW	Anad distribution in Thurston County
Michele Tirhi	WDFW	Pierce County maps
Karen Kloempken	WDFW	Script for parsing date field out in hatchery returns data base
Lilin Li	Seattle Consultant	Sport harvest of salmon in the Cowlitz River
Cindy LeFleur	WDFW	Harvest Distribution of Lewis River Wild Fall Chinook
Steve Mallas	WSDOT	2 chinook maps, King, Skagit Counties
Dave Johnson	WDFW	2 statewide 11x5
Erik Hanson	PSMFC	Copies of SLFD tables points, sites, etc.