StreamNet Project

BPA Project No. 198810804

Fiscal Year 2003
Third Quarter Progress Report

April 1, 2003 through June 30, 2003

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September, 2003

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Introduction

StreamNet is a cooperative, multi-agency data compilation and data management project authorized by the Northwest Power Planning Council's Fish and Wildlife Program (FWP). The project is funded primarily by Bonneville Power Administration and is administered by the Pacific States Marine Fisheries Commission (PSMFC). Three fourths of the project consists of sub-projects within the state fish and wildlife agencies, Columbia River Intertribal Fish Commission and the US Fish and Wildlife Service to develop databases within the respective agencies, standardize data between agencies, georeference data, facilitate data transfer regionally, and maintain the regional StreamNet Library. The 'regional' fourth of the project, located at PSMFC, manages and maintains the regional database, operates the Geographic Information System (GIS) and Internet mapper applications, and disseminates data through the on-line data query system.

The StreamNet Project compiles, manages and distributes information related to fish resources in the Columbia River basin, with additional information available for the rest of the Pacific Northwest. The state, tribal and federal fish and wildlife agencies collect and utilize data related to the region's fish and wildlife resources to meet their own mandates. A subset of these data, primarily the annually collected types of information that are routinely used to monitor trends within fisheries and populations and provide management information, are compiled by StreamNet into regionally standardized formats and publicly distributed. In this manner, data common to fisheries management but collected and stored in multiple formats by the individual agencies are standardized and made uniformly available basin wide. StreamNet also ties all data to the regional 1:100,000 scale routed hydrography (GIS stream network) so that different kinds of data can be compared on a geographic basis and mapped. The project utilizes the Internet as its primary means of data distribution, but also provides custom data services to FWP participants. The StreamNet web site provides access to information in a queriable database and also provides maps, individual data sets not contained in the queriable database, and library references. All data in the StreamNet database are referenced to source documents that are housed in the StreamNet Library.

Work priorities for FY 2003 include updating existing long term data sets, managing the data and infrastructure necessary to maintain and deliver data, maintaining the StreamNet Library, providing data services to regional entities associated with the Fish and Wildlife Program, and project administration. This year the distinction between anadromous and resident fish data in the data development objectives was dropped, and the 2003 Statement of Work (available at http://www.streamnet.org/about-sn/project_management.html) was reorganized to reflect that change in approach. This year, the agencies indicate in each individual job whether the work is directed toward anadromous or resident species for each particular data type. This change is a change in organization, not project direction. The majority of work remains focused on anadromous species due to the sport and economic value of these species and because of associated Endangered Species Act aspects. However, efforts are also underway to develop increased information on resident species distribution, and increased effort is directed toward identifying resident species information that may be developed by other projects funded through the FWP and obtaining those data for archiving so that they are more widely available.

This report documents accomplishments made by the project and its cooperators during the third quarter of Fiscal Year (FY) 2003. Since the cooperating agencies work on different jobs throughout the year, and not all agencies address the same jobs in their respective portions of the Statement of Work, the work accomplished in this quarter varies by cooperator. Tasks and jobs that did not have any work addressed during the quarter are not included in this report.

Summary of Third Quarter activities

Activities in the third quarter of FY 2003 included routine development, maintenance and posting of various data sets, as well as routine administrative activities to continue project function. A large amount of effort had to be focused on participating in the ongoing Mainstem/ Systemwide project review process to support project funding beyond FY-02 Key highlights of activities by each of the project participants during the third quarter are summarized below. More detailed information is provided in the body of the report.

CRITFC:

The Library began and completed its expansion and remodeling project.   The effect is more space for the collection and seating is available for clients to use the collection. Materials are also easier to find with more spacing on the shelves. The Library is also now better able to organize the document delivery/duplicate exchange materials.

Development of the subbasin planning data system proceeded at a slow pace. It will be tested next quarter in the Deschutes and Imnaha subbasins and further refined for the final product.

USFWS

Fish and Wildlife service activities on the StreamNet project were routine during the third quarter, with no data deliveries planned.

IDFG

The Idaho StreamNet project is up-to-date through the 2002 field season on anadromous fish distribution, redd counts, hatchery returns, age composition, and hatchery facilities. We also completed coding the IDFG General Parr Monitoring database to LLIDs and measures.

We deployed a "proof-of-concept" Intranet portal that will eventually serve as the gateway to IDFG fisheries data. IDFG biologists will be provided with web-enabled applications to manage their data and the data will be in StreamNet compatible formats, easily converted to StreamNet data exchange formats. We also initiated the purchase (with non-StreamNet funds) of a dedicated Internet server to allow access by partner agencies to our databases, increasing the data flow to StreamNet.

We continued to have success working with IDFG fishery biologists to develop best practices data management skills and to implement StreamNet compatible data formats. We made site visits to IDFG regional offices including the Clearwater, Salmon, McCall, Southwest, and Nampa Fish Research.

MFWP

Database maintenance was continued in the third quarter with more 2002 data entered into the system. Updates to the hatchery database has arrived from Helena MFWP Headquarters, the internal database and spatial coverage have been updated and the data will be exchanged in the fourth quarter. Restoration project data has been converted to SQL Server and the data will be exchanged in the fourth quarter. The barriers edits have been received from the Westslope Cutthroat Trout Assessment, but needs to be reviewed by the department biologists before being incorporated into our dataset. This will likely not occur until after the fourth quarter, so the current dataset with the few additions will be exchanged in the fourth quarter. The genetic data was provided to Regional StreamNet staff as an independent data set; the data was posted in June. LLID's and measures were generated for the whirling disease database. We are still discussing the possibility of adding a web report for the data. The DEF process was completed and adopted in the 3rd quarter. It was distributed via email to all participating StreamNet staff. Staff provided data and/or maps for 20 GIS related requests; 4 of these were fisheries related. Staff assisted with data compilation, reviewed the "Qualitative Habitat Assessment Tool" created by a contractor and the "Multi-scale Resource Integration Tool" created by the Forest Service for the feasibility of using for analysis in the subbasin planning process, assisted in planning the Subbasin Planning Assessment three-day retreat, and acted as GIS and data technician for the Kootenai basin sub group at the assessment. Provide planning documents on the FWP website for the Flathead and Kootenai subbasin plans http://fwp.state.mt.us/flatheadsubbasinplan/ and http://fwp.state.mt.us/kootenai_Mtsubbasinplan

ODFW:

Oregon StreamNet met most Statement of Work requirements during this quarter. Hatchery release and return submissions have been delayed but will be submitted during the next quarter. Data delivered or made available to StreamNet included updated anadromous and resident fish distribution, fish screening data, reference information, barrier, hatchery facility, updated stream routes, and restoration data.

We accomplished normal project activities, including completion of weekly and quarterly reports, attendance and participation in the StreamNet Steering Committee meeting, and responding to direct requests for information. Using funding provided by the Governor's Natural Resources Office and Oregon Watershed Enhancement Board, we focused on QA/QC on 24K distribution data related to status and present production coding compatibility and life-stage timing data, and drafting the project completion report. Version 11 of the 100K dataset and version 6 of the 24K datasets were cut and posted. Web links that provide access to these data were updated, and an announcement was sent to the Distribution update list. These efforts continue to improve the quality and amount of Oregon information available to and usable by StreamNet.

Tabular and spatial database systems were effectively and appropriately managed and enhanced as needed, and the details of these efforts are included in this report. Of particular note is the continued progress that was made toward developing a comprehensive information system for Oregon's trend and barrier data sets.

Staff successfully coordinated with regional staff to assure smooth integration of Oregon data into the regional StreamNet database.

Staff continued participation in Oregon Subbasin Planning related meetings, gathered needed datasets to address EDT attribute ratings, and provided feedback on data related topics as needed. This effort has been funded through a special contract with the Council through the Oregon Coordination Group.

WDFW

After losing our StreamNet Tabular/GIS Compiler (Gil Lensegrav) on the brink of a hiring freeze, we acted quickly and hired Ron Egan as a temporary compiler and adjusted the work plan according to Egan's skills.

We maintained good data flow with harvest location updates/corrections, natural spawner data updates and cleaned up rejected records, etc.

Extensive additional fish distribution and use data for salmon, steelhead, and bull trout were captured in three map reviews held in Eastern Washington sections of the Columbia Basin. These data will greatly enhance the existing datasets and provide much-needed updates for Sub-basin Planning efforts currently underway in the Wenatchee, Entiat and Methow watersheds. Moving these 24K hydro-based data into the (100K hydro-based) offerings available from the StreamNet online database will be our next challenge.

WDFW StreamNet staff were able to take advantage of a short-notice opportunity to request additional data management funds from a Council source that should help us complete formal, consistent metadata for our key spatial datasets as well as generate some standard geo-referenced points for established survey reaches in Washington's lower Columbia River tributaries.

Region / PSMFC

Regional efforts in the third quarter centered around administrative responsibilities, updating data records with information received from the project cooperators, and maintenance and management of the data delivery systems.

Administratively, the need to continue supporting the FY-03 project proposal during the Mainstem / Systemwide review process took a lot of time. The process is so late that the decisions are now going to be applied to the 2004 fiscal year in stead of 2003. Other routine administrative tasks, including budget management and supervision continued routinely. A second edition of the electronic StreamNet Newsletter was sent to over 900 subscribers describing new data, features and events at the StreamNet project.

Data additions in the third quarter included 4,000 new Escapement Count Data records and 11 new data References. Eighty-six fewer time series Trends resulted from consolidation of previously discontinuous Trends. The new GeneralizedFishDistribution table was populated with approximately 30% more records than the previous DistUse table contained. This new table is based on the new regionally consistent definitions of current fish presence that were developed last fiscal year.

The most significant system accomplishment was installation of a new server to separate the web server software from the map server software. This will significantly speed system function, including the GIS applications. Many hours of debugging were done in search of network issues that resulted in hanging up the web based query system, which was also moved to the new web server, in addition to Apache web server software, in an attempt to speed up the online experience for our users. After further testing of the test query system (where new data and applications are tested before going public), we implemented the changes referred to in the second quarter by moving them to the primary web query system. A new set of enhancements, including an updated Barriers data category, was also implemented in the web query system. The User's Guide for the web query system was updated to keep it current with the improvements made over the past year or two.

Objective 1 Data acquisition and development

Support the need for region wide fisheries data for research, monitoring, modeling, and management through acquisition and regional standardization of new information and updates to previous information for priority fishery data types. Data types may be addressed by all data providing agencies, or for specific data types by a single cooperating agency on behalf of the entire project. This Objective addresses both anadromous and resident fish species, although priorities may differ. The tasks under this objective are identified as high or low priority under the constraints imposed under base level funding. Work on the low priority types will largely be limited to preliminary development or scoping unless new funding is approved.

Objective 1 Data acquisition and development

Task 1 Anadromous distribution and life history (habitat use)

Document the occurrence, distribution and life history characteristics of anadromous fish species. Project participants have placed a high priority on updating these data during the fiscal year, utilizing a newly adopted Data Exchange Format (DEF). The new DEF represents a significant new workload, but will lead to more regionally consistent distribution information. This is priority 1 under base funding.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2003
IDFG	1	Convert Idaho's existing anadromous fish distribution into the new generalized fish distribution data exchange format.	PSMFC staff converted the existing Idaho anadromous distribution data to the new data exchange format, completing this job.
ODFW	1	Update (to a minimal extent), maintain, correct and exchange anadromous fish distribution and documentation information. Also, evaluate the Oregon Museum collections database for potential utility in enhancing our historic distribution information.	Completed Q/A work on the 100k distribution data related to status and present production coding compatibility. Cut version 11 of the 100k datasets and posted them to the FTP server, updated the web links that provide access to the data and sent an announcement to our Distribution update list.

Initiated event creation for historic distribution of steelhead and chinook in Eastern Oregon based on the Interior Columbia Basin Ecosystem Management Project data. This data appears to be well supported with published documentation.

We acquired Rapid Bioassessment data for the Nestucca basin. These data constitute extensive snorkel surveys that meet our criteria for direct observation. No processing of the data was completed during the quarter. |

WDFW	1	Continue updating data as received and actively solicit data as warranted. Convert tabular and spatial data to the current revised StreamNet DEF and submit to PSMFC.	The WDFW StreamNet Project Manager and Data Manager analyzed the issue of fish distribution event overlap in Southeast Washington/Northeast Oregon by examining specific cases. A summary of the most important areas of focus was prepared and submitted to StreamNet Regional Data staff.
			The WDFW StreamNet Project Manager led the Washington state generalized fish distribution review back into the Columbia Basin this quarter, conducting high-resolution (1:24,000 scale) reviews of streams, migration barriers, and fish distribution and use for salmon, steelhead, and bull trout in the Pend Oreille, Okanogan, Methow, Wenatchee, Entiat, and Yakima watersheds (as well as minor basins east of the Columbia mainstem in central Washington). Hundreds of data corrections and updates were contributed through three cross-agency fish map review meetings; these data are being verified and posted to the statewide dataset. The next challenge is to work through the Steering Committee to generate a way to blend these 24K hydro-based data with the existing StreamNet 100K hydro- based fish distribution data.

Objective 1 Data acquisition and development

Task 2 Resident fish distribution and life history (habitat use)

Document the occurrence, distribution and life history characteristics of resident fish species. Existing resident fish distribution will be maintained, but development of new data or data for new species will be limited due to the funding level. This is priority 1 for Montana, but low priority under base funding in the other states.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2003
IDFG	1	Participate in the Westslope Cutthroat Trout Conservation Assessment. In response to a decision by the 9th District court to require a new status review for westslope cutthroat trout, the states of Idaho, Montana, Washington, and Oregon, along with the Fish and Wildlife Service and the Forest Service, have agreed to work together to prepare the new status review. IDFG/StreamNet will send staff to several workshops to facilitate the capture of data that will include distribution. The data will be prepared for inclusion into StreamNet.	The final Westslope Cutthroat Trout Assessment database for Idaho was obtained from the US Forest Service. Work to incorporate the data into StreamNet has been postponed until the next fiscal year because of a new commitment to convert anadromous hatchery returns and age composition data to new data exchange formats.
IDFG	2	As a result of our participation in job 1 of this task, we will obtain the data from a similar effort for Yellowstone Cutthroat Trout. The data will be prepared for inclusion into StreamNet.	We are still waiting for the final Yellowstone Cutthroat Trout Assessment database. Further work has been postponed until the next fiscal year because of a new commitment to convert anadromous hatchery returns and age composition data to new data exchange formats.

IDFG	3	Update the StreamNet distribution database using other sources, including collection permit reports, historical survey records, and information from published reports.	Further work on resident fish distribution has been postponed until the next fiscal year because of a new commitment to convert anadromous hatchery returns and age composition data to new data exchange formats.
MFWP	1	Complete Distribution and Use Types data set from data collected from biologists, documents and reports during 2000-2001 using LLID stream routes. Exchange the data to the StreamNet database in the approved DEF format.	Database maintenance was continued in the third quarter with more 2002 data entered into the system
MFWP	2	Visit MFWP biologists in 2003 to collect 2001-2002 fish distribution and supporting survey data and references. Obtain data from federal biologists using our developed interface. Input all this information into the MRIS tables. Develop some QA/QC on data before distribution.	Planning continued in the third quarter.
ODFW	1	Maintain existing resident distribution information.	Westslope cutthroat data was processed and quality assurance checks were performed. Digital maps of the data were created and provided to Tim Unterwegner for his feedback. The GIS Analyst incorporated Lahontan and Westslope Cutthroat data into the distribution database.

Objective 1 Data acquisition and development

Task 3 Adult abundance in the wild

Develop and maintain information on adult abundance for native fish species, resident and anadromous, including escapement, redd counts, peak spawner counts, trap counts, dam and weir counts, and resident fish populations (where calculated). Also included in this data category are data gathered during spawning ground surveys regarding straying of hatchery fish onto spawning areas, i.e., marked/unmarked ratio. Priority is given to updating these data through 2001. This is priority 1 under base funding.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2003
CRITFC	1	Update mainstem Columbia and Snake River dam counts through 2002 and provide updated data to the StreamNet database.	Effort that normally would have gone to this task was diverted to critical subbasin planning data tasks (under a separate contract). Data have been gathered and will be submitted to PSMFC next quarter.
CRITFC	2	Update available tribal spawning ground survey data.	Effort that normally would have gone to this task was diverted to critical subbasin planning data tasks (under a separate contract). Data have been gathered and will be submitted to PSMFC next quarter.
MFWP	1	Collect all 2002 survey data during field office visits.	Data gathering was continued in the third quarter.

MFWP	2	Input 2002 data into MFISH, including trend, count and references. We will explore which DEF is appropriate for resident fish population surveys and provide bull trout redd count trends at the stream level.	Data entry was ongoing in the third quarter.
ODFW	1	Update existing anadromous, resident, and non-game abundance and index trends through 2001 and opportunistically collect new trend information.	Time was spent proofing the Trend data Oregon StreamNet had previously submitted. The method for checking data consisted of randomly pulling records and verifying the trend data against hard copy reference material.
WDFW	1	Continue to update and enhance the existing natural spawner database (escapement estimates and/or detailed counts) for available species.	WDFW's Region 5 StreamNet staff's ongoing efforts to improve natural spawner data development and data flow paid off. Bob Woodard, the Region 5 StreamNet Data Manager, finalized most the 60K trend resolution (see Item 3), resolved the internally rejected records and submitted a data update to StreamNet in June. This is Woodard's first StreamNet submission that didn't go through the WDFW Data Manager and Woodard will continue submitting natural spawner and hatchery return data to the StreamNet Regional Manager.

Woodard met with the Region 5 biologists to standardize data collection procedures. The group is committed to this issue and set up a series of meetings.

All the remaining unresolved 60K Washington trends use Reference 60117. This reference includes a variety of data types (hatchery returns, natural spawner population estimates, etc) described under one location description. Both the location descriptions and specific data type descriptions are suspect in the reference's effort to provide run reconstruction estimates. The publication is too simplistic too convey all the variety of data. We identified few 60K trends that are already covered under a WDFW trend and need to find other references for the bulk of these 60K trends.

Objective   1   Data acquisition and development

Task   4   Hatchery releases

Develop and maintain information on the release of hatchery reared fish. Priority is given to updating anadromous release records using RMIS data for anadromous species through 2001. Release data for resident species under base funding will be developed only where the data are readily available (primarily Montana). Efforts this year will focus on creating cross references between PSC release codes and LLID stream location identifiers. We will explore means of providing unrolled data on specific release locations rather than more general PSC codes. This is priority 1 under base funding. (Note: We need to reach a SC decision on exactly what we intend to do with this important data category this year under the base funding scenario)

Project	Job	Planned work elements	Accomplishments, Third Quarter 2003
MFWP	1	Explore current DEF for hatchery releases and provide Montana data in exchange format, if requested.	Montana data has not been requested yet. When the DEF is complete, it will be exchanged promptly.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2003
ODFW	1	Update anadromous hatchery releases through 2001.	Our Database Manager downloaded individual (unrolled) juvenile release records from ODFW's Hatchery Management Information System (HMIS), totaling nearly 13 MB of data. Several lookup tables that function with this data were also downloaded. Everything has been imported into an Access database so we could begin to process the information into StreamNet format.

Oregon StreamNet's Data Analyst obtained County codes related to the downloaded HMIS release data, and updated the information with County names. This information will be used to georeference each release location. During the quarter, staff were able to assign LLID's to about half of the 9,102 records. |
| WDFW | 1 | For anadromous species, finish researching, compiling, converting existing WDFW anadromous release data as detailed, "unrolled" records. Submit the data directly to StreamNet (instead of via RMIS). | We intensified efforts to cross-reference PSC codes with StreamNet's location coding regime. Relevant WDFW staff met with the WDFW StreamNet staff to discuss WDFW's internal release file and master PSC code file (Walocs). They decided the internal WDFW StreamNet file (PscXGeopkg) would carry the cross-references and Walocs would exclude these references to adopt a normalized nature for easier maintenance on Sybase. |

Objective   1   Data acquisition and development

Task   5   Hatchery returns

Develop and maintain information on the return, disposition and straying of adult fish returning to hatcheries, including information on coded wire tags. This is an anadromous related task only. Priority will be placed on updating total return and egg take data through 2001. Development of disposition data is lower priority and would require additional resources. This is priority 1 under base funding.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2003
FWS	1	Compile FWS hatchery return data for FWS hatcheries for the most recent return year and submit to the regional database. FWS will also account for all adults returning to federal hatcheries.	The FWS project leader participated in forum discussions on how to deal with hatchery return data. Work is continuing.
IDFG	1	Complete compilation of the 2001 field season hatchery return data from IDFG and exchange with StreamNet database.	IDFG hatchery return data, current through the 2001 return year, were submitted to the StreamNet regional office on 5/1/2003. This Job is now done.
IDFG	2	Start compilation of the 2002 field hatchery return data from IDFG. Data will be incomplete because all reports may not be available within this project year.	IDFG hatchery return data, current through the 2002 return year, were submitted to the StreamNet regional office on 5/1/2003. This Job is now done

WDFW	1	Continue to update and enhance the existing hatchery return database for available species.	We spent some time transferring the hatchery returns supporting files from Paradox format to MS Access 2000 format.
			The WDFW StreamNet Project Manager worked with Steve Pastor on a follow-up issue from the April Steering Committee meeting to ensure that Steve's problems with USFWS hatchery return CWT data housed at PSMFC's RMIS site were not the result of WDFW staff's joint work on some of those data years. WDFW staff offered to assist USFWS on converting these data to the new PSC Version 4 formats if needed.

Objective　1　Data acquisition and development

Task　6　Dams and Fish Passage Facilities

Develop and maintain information on dam facilities. Primary emphasis is now on maintenance of existing information, with occasional updates as necessary. This is priority 1 under base funding.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2003
MFWP	1	Provided an updated Montana dams spatial coverage and associated data in the StreamNet exchange format if additions, deletions or modifications are made to the Montana coverage.	No progress was made on this task in the third quarter. Data will be exchanged in the fourth quarter.
ODFW	1	Maintain and update, as needed, based on errors found in the Oregon dam and fish passage facilities information.	Oregon StreamNet staff maintained the existing dam and fish passage facility information. A small number of records with erroneous fishway codes were identified and corrected.
			Oregon StreamNet's GIS Analyst initiated an effort to identify and fill gaps in the FishBarrier table coding, in particular those records related to dams. A visual q/a process was used to determine the different types of unique cases that exist between the distribution and the FishBarrier table coding for all anadromous salmonids. A batch of dam records (58) remain that need to be reviewed on a case-by-case basis. This work will be completed once a new barrier staff person is hired.
			Staff identified and flagged off-channel dams with a new field in the internal ODFW database.
WDFW	1	Update the dam database adding records and improving field entries as warranted.	Internally we identified a few more dam points and organized the internal PscXGeopkg file to coordinate beg/endfts reported in the trend table with any relevant dam in the Dam table.

Objective   1   Data acquisition and development

Task   7   Hatchery facilities

Develop and maintain information on anadromous and resident hatchery facilities, including information on location, design, management and authorization. Primary emphasis is now on maintenance of existing information, with occasional updates as necessary. This is priority 1 under base funding.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2003
MFWP	1	Update the StreamNet hatchery database with Montana's public and private facilities. Exchange with StreamNet upon completion.	Data has arrived from Helena MFWP Headquarters, the internal database and spatial coverage have been updated and the data will be exchanged in the fourth quarter.
ODFW	1	Maintain and update, as needed, based on errors found in the Oregon hatchery facilities information.	Oregon StreamNet's Assistant Database Manager/Developer updated the CountyID for six hatchery facility records, reviewed and updated the "LastYear" field for four records, and corrected the name of one facility.
WDFW	1	Update the hatchery database adding records and improving field entries as warranted, including record updates for related tables (i.e. HatcheryXProduction data).	WDFW's StreamNet Data Manager made plans to meet with WDFW's Agency GIS Data Manager (Tim Young) in July to improve WDFW's internal system for updating and sharing facility information. Under separate funding, the Olympia WDFW StreamNet Tabular/GIS Compiler continued work on the Hatchery Scientific Review Group (HSRG) Project. Ultimately this work will aid an effort to submit data for StreamNet's HatcheryXProduction tables.

Objective   1   Data acquisition and development

Task   8   Harvest

Develop and maintain information on sport and commercial harvest. Higher priority is assigned to anadromous species. This is priority1 under base funding.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2003
CRITFC	1	Complete and update ocean and Columbia River catch data through 2002.	No work this quarter. This is an unfunded activity. The NWPCC approved supplemental funding for this task at its July meeting. Work will be done in the fourth quarter.
ODFW	1	Compile and exchange Oregon sport harvest data through 2000, in two submissions.	The Project Leader reviewed the status of existing harvest trends and obtained copies of past references used to create these trends. This information was passed on to our Data Analyst and she used it to pursue more information that can be used to update Oregon's harvest trends, including marine harvest trends. Work continued on updating freshwater harvest trends. Fully updated data will be submitted next quarter at the next trend submission deadline.

| WDFW | 1 | Re-submit any existing StreamNet Washington harvest data, updating it per StreamNet's current location coding format to validate and correct the conversion that was completed by non-WDFW personnel. | WDFW's StreamNet Data Manager submitted corrections to the old location coding for any existing harvest locations. |
| | | | The WDFW StreamNet Project Manager worked with a WDFW modeler on the PSC Chinook and Coho Technical teams to learn about the availability of stock-based ocean and Columbia River mainstem harvest figures that are generated and used in the coastal season- setting process. This modeler felt that post-season figures would be much more useful and accurate that those generated for the pre-season process, and promised to urge the two Technical Teams to devote some resources to begin compiling their post-season figures in a standard format. He also felt that StreamNet could provide a valuable service by making these data more generally available, once they were ready. |

Objective   1   Data acquisition and development

Task   9   Habitat restoration / improvement projects

Acquire data sets related to habitat restoration / improvement projects from the multiple agencies, tribes and organizations within the Columbia Basin and compile and maintain them in standardized, consistent formats. This data category is still being organized, but interest in this information is growing as there is no consistent source of this information on a regional basis. This is priority 2 under base funding, and will be addressed only as time and other priorities allow.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2003
MFWP	1	Continue to collect, centralize and maintain all stream restoration projects data for Montana using the "Future Fisheries Interface" which StreamNet staff maintains and the Fisheries Division inputs data. Exchange data to the Region twice during the year.	This conversion has been completed and the data will be exchanged in the fourth quarter.
ODFW	1	Maintain and update, as needed, based on errors found in Oregon's existing tabular restoration data. Maintenance only; no new updates are planned.	Oregon StreamNet's Assistant Database Manager/Developer responded to a request for a user interface for Mitigation/Restoration data, and provided updated RunID data for four records.

Task   10   Barriers and diversion/screening

Develop and maintain data sets for barriers to fish migration and diversion structures with information on screening status. This category is still being organized. Existing data on adult barriers will be maintained and updated as practical. Other sources of data will be explored. Work on juvenile barriers, culverts and diversion screening may require additional resources. The primary emphasis is on anadromous species except in non-anadromous areas. This is priority 2 under base funding, and will be addressed only as time and other priorities allow.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2003
IDFG	1	Participate in the Westslope Cutthroat Trout Conservation Assessment. In response to a decision by the 9th District court to require a new status review for westslope cutthroat trout, the states of Idaho, Montana, Washington, and Oregon, along with the Fish and Wildlife Service and the Forest Service, have agreed to work together to prepare the new status review. IDFG/StreamNet will send staff to several workshops to facilitate the capture of data that will include barriers. The data will be prepared for inclusion into StreamNet. Delivery is dependent on the Forest Service completing the database.	The final Westslope Cutthroat Trout Assessment database for Idaho was obtained from the US Forest Service.
IDFG	2	As a result of our participation in work component 1 of this task, we will obtain the data from a similar effort for Yellowstone Cutthroat Trout. The data will be prepared for inclusion into StreamNet. Delivery is dependent on the Forest Service completing the database.	We are still waiting for the final Yellowstone Cutthroat Trout Assessment database.
MFWP	1	Continue to collect barrier location, species affected and other fields on stream barriers in Montana. Information will be collected on all species regardless of life history. Exchange Barriers data with the StreamNet database.	The barriers edits have just been received from the Westslope Cutthroat Trout Assessment, but need to be reviewed by the department biologists before being incorporated into our dataset. This will likely not occur until after the fourth quarter, so the current dataset with the few additions will be exchanged in the fourth quarter.
ODFW	1	Compile and exchange Oregon fish screening and diversion data assuming a new DEF is adopted. If no DEF is approved, data will be posted on the NRIMP site and linked to StreamNet as an 'as is' submission.	Oregon StreamNet's Webmaster made the ODFW Fish Screening and Passage Program's project data available on the NRIMP web site by April 15, 2003. After receiving permission from Fish Screening and Passage Program staff, the pages were made public on April 24th.
ODFW	2	Update and maintain Oregon's barrier data and minimal fish barrier data development based on new barrier information.	Oregon StreamNet staff identified four FishBarrier table records that had a location upstream of distribution, and deleted those four erroneous records from the database. Other efforts completed this quarter included the submission of 43 barrier table records that already had corresponding FishBarrier table records in the StreamNet system, and providing the latitude and longitude coordinates for BarrierID 50949.

| WDFW | 1 | As funding and time permits, review existing Washington state barriers and/or screening data and identify additions and corrections needed and plan for future exchanges. | WDFW's distribution data proofing parties (described in Objective 1 Task1) also targeted confirmation of barrier sites. |

Objective   1   Data acquisition and development

Task   11   Juvenile data, abundance and outmigration

Develop and maintain information on smolt production (as determined from smolt traps), juvenile abundance (as determined through snorkel, electrofishing, and other surveys), and smolt density model estimates. Primary emphasis will be on maintaining the existing smolt density model data and development of a DEF for these data. The rest of the work for this data category is still under development and will require additional resources to accomplish. This is priority 2 under base funding, and will be addressed only as time and other priorities allow.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2003
CRITFC	1	Seek to obtain tribal data on smolt abundance. Inform Steering Committee of data availability.	No work this quarter. These data will be sought in each river during the subbasin planning process.
IDFG	1	Depending on the adoption of an appropriate StreamNet juvenile data exchange format (see Task 3.4), prepare existing IDFG juvenile trapping data for inclusion in StreamNet.	An official process for development or modifications of data exchange formats was adopted by the Steering Committee during this quarter. Unfortunately, it is too late in the contract period to complete a juvenile data exchange format and exchange data during this fiscal year. This job has, therefore, been postponed to next fiscal year.
MFWP	1	Pursue incorporation of resident fish survey data into the DEF, if a DEF is adopted.	The forum topic on fish survey concept continued in the third quarter.
WDFW	1	As funding and time permits, keep informed about other WDFW agency staff efforts to organize the juvenile data and scope existing juvenile data to plan future conversion and submission efforts.	WDFW's Region 5 StreamNet compiler continued improving the Cedar Creek adult and smolt trap databases by generating statistically accurate figures, improving the data flow and updating the database records.

Objective   1   Data acquisition and development

Task   12   Age

Develop and maintain information on age/sex composition of returning adults, primarily for anadromous species. This is a medium priority, with the primary focus on developing data for a few test locations as a means of testing data organization/format and utility. Remaining DEF issues will be resolved. This is priority 2 under base funding, and will be addressed only as time and other priorities allow.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2003
CRITFC	1	Use CRITFC age data on sockeye populations and Bonneville Dam sampling to evaluate and develop an age DEF.	Critical subbasin planning activities diverted effort from this task. We expect to finish the task next quarter.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2003
IDFG	1	Complete the compilation of the 2001 field season age data using hatchery returns data from IDFG.	Final 2001 return year age composition data was completed.
IDFG	2	Start compilation of the 2002 field age data from IDFG. Data will likely be incomplete because all reports may not be available by the end of the fiscal year.	Final 2002 return year age composition data was completed.
ODFW	1	Compile age frequency data for an as-yet undetermined basin or hatchery in the Oregon portion of the Columbia Basin as a test case for this data type.	We compiled age data in support of Oregon Subbasin Planning efforts. These data will be submitted in StreamNet format with the trend submission next quarter.
WDFW	1	Stay in step with the other StreamNet cooperating agencies' efforts to research, compile, convert and submit age data for natural spawner data in one prototype subbasin (probably Lower Columbia R). This effort is to assess any problems with the existing format and standardization with other agencies' data , and plan for further data submittals.	One data compiler focused most of her time this quarter on compiling age data to stay in step with other StreamNet data contributors to submit age data as soon as possible. S.P. Cramer & Associates collaborated with us by compiling raw data for the Lower Columbia River Recovery Plan. Then we converted the raw data to our internal format and are working on the StreamNet conversion and submission.

Objective   1   Data acquisition and development

Task 13 Production factors and run reconstruction

Develop and maintain information on survival, production factors, spawner / recruit estimates, and run reconstruction. This is currently a low priority, but the existing spawner / recruit estimate data will be maintained. This is priority 2 under base funding, and will be addressed only as time and other priorities allow.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2003
CRITFC	1	Coordinate with ESA recovery planning and NWPPC subbasin planning efforts to capture available anadromous fish and bull trout productivity data for eventual DEF testing and inclusion in StreamNet.	Subbasin planning data assembly began late this quarter. Most of the available information will be assembled in the last quarter of this fiscal year and the first quarter of next fiscal year.

Objective   1   Data acquisition and development

Task   14   Habitat

Acquire data sets related to fish habitat (including water quality, stream/watershed habitat quality, temperature, invertebrates, and miscellaneous habitat data) from the multiple agencies, tribes and organizations within the Columbia Basin and compile and maintain them in standardized, consistent formats or archive them in original format, as appropriate. This is currently a low priority under the existing contract, and data development will be pursued only on other funding. Data developed on other funding will be organized and included in the StreamNet database.   This is priority 2 under base funding, and will be addressed only as time and other priorities allow.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2003
CRITFC	1	Coordinate with ESA recovery planning and NWPPC subbasin planning processes to capture watershed assessment data for DEF testing and eventual inclusion into StreamNet.	Test data sets are nearly complete for the Deschutes and Imnaha subbasins. These datasets will be reviewed and added to at local workshops in September. Test DEFs will be developed in Q4, FY03 or Q1, FY04, depending on when the test data sets are approved by local reviewers.

Objective   1   Data acquisition and development

Task   15   Genetics

Develop and maintain information on genetic information and data sources for areas where genetics data exist. Efforts this year will concentrate on organizing existing information, and then working on a Data Exchange Format. This is priority 1 in Montana but priority 2 under base funding for the other states and will be addressed only as time and other priorities allow.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2003
CRITFC	1	Work through the coast-wide genetics work group to update the genetics data catalog.	An FY-02 recommendation was to discontinue trying to treat genetic data as a core standardized dataset. Individual agencies may contribute this information as independent data sets.
MFWP	1	Obtain results from genetic analysis from the University of Montana Genetics Lab for sampled populations of Montana's species of special concern.	Genetic information was entered as it was received from the U M Genetics Lab.
MFWP	2	Update fish distribution table when new genetic samples affect fields/records. Finalize a GeneticSample table field to facilitate querying purity	The fish distribution was updated as genetic samples were received.
MFWP	3	Exchange data to the StreamNet regional database when a DEF is approved by the Steering Committee, and/or provide data as a "showcase" data set.	The genetic data was provided to Regional StreamNet staff as an independent data set; the data were posted in June.

Objective   1   Data acquisition and development

Task   16   Other data sets

On an opportunistic basis, conduct scoping or exploratory level work on the availability of other types of fish related data, as requested by FWP participants. Actual acquisition, standardization, georeferencing and distribution of these data would be dependent on funding for new work. This is priority 2 under base funding, and will be addressed only as time and other priorities allow.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2003
IDFG	1	We will work with IDFG and other agency staff to facilitate either the incorporation of their data into StreamNet or independently posting their data on the StreamNet web site.	Final review and quality control of the Idaho General Parr Monitoring database is underway; it is being conducted by IDFG Fisheries staff.
MFWP	1	Will explore as opportunities arise	We generated LLID and measures for the Whirling disease database. We are still discussing the possibility of adding a web report for the data.
ODFW	1	Develop data sets outside Oregon StreamNet's base efforts if requested by subbasin planners, as time and funding allow.	Oregon StreamNet's Data Analyst compiled hatchery fraction data, along with age, hatchery release, aquatic habitat inventory, gradient, and barrier information by subbasin to assist in EDT analysis in support of Subbasin Planning efforts.
Region	1	Advise and assist data developers with other data sets not currently in the StreamNet system. Low priority, and within current resources only.	This quarter, Regional staff added a Montana trout genetics purity data set, the 2002 interagency westslope cutthroat trout status assessment report and supporting data, and reports and supporting data from two BPA-funded projects (1998-035-01 and 2002-027-00). Since these data do not fit the existing data categories in the StreamNet Data Exchange Format (DEF), these data sets were posted as Independent Data Sets.

Objective 2 Data management and delivery

Provide high quality data management services, with specific emphasis on the creation of regionally consistent data sets and the timely delivery of data to users in formats that meets their policy, planning, monitoring, and management needs

Objective   2   Data management and delivery

Task 1 Maintain and enhance the tabular database systems at the project and regional levels

Maintain functional tabular database programs at the agency and regional levels to make consistent tabular data sets for anadromous and resident fish available through the StreamNet online database system. At both the regional and agency levels, provide database management and administration necessary for accomplishing StreamNet objectives, to include: 1) maintaining and updating the hardware and software systems necessary to support the StreamNet project, 2) enhancing or optimizing StreamNet database structures and capabilities, and 3) developing and maintaining electronic tools to facilitate data loading, management and quality assurance.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2003
CRITFC	1	Manage, maintain and enhance existing tabular database systems, including hardware, software, tools, QA/QC activities, and system administration, backup and security.	Existing systems and data are being maintained. Budget constraints do not allow any enhancement of hardware or software.
CRITFC	2	Develop prototype electronic data exchange procedures with the Yakama Nation to simplify updates of fish abundance data.	Yakama staff completed a major overhaul of their data and reporting system. They plan a workshop on the new system in July. Prototype development will begin after that workshop.
IDFG	1	Manage, maintain and enhance existing tabular database systems, including hardware, software, tools, QA/QC activities, and system administration, backup and security.	We continued our migration to Microsoft **.**NET. Much of this work is behind the scenes and is not directly visible in data products. However, we believe that it will greatly improve our efficiency and abilities to supply data to StreamNet. We also completed the installation and "proof of concept" prototyping for web-enabling our fish data management tools over the IDFG Intranet. This will allow biologists to enter and compile their data from their office over the Department's Intranet. We also prototyped an ArcIMS web mapping application. ArcIMS will be used as an integral part of our fish and wildlife data management system. Anticipating extending our Intranet portal to partner agencies, IDFG/StreamNet initiated the purchase and installation of a dedicated Internet server for IDFG. We plan on allowing partner agencies access to our databases, which will provide additional data content to StreamNet.

We completed normal system administration functions. |

IDFG	2	Complete the administrative programs to convert locally held data to StreamNet data exchange format. This includes: redd counts, hatchery returns, hatchery facilities, and references. Depending on the adoption of an appropriate StreamNet juvenile data exchange format (see Task 3.4), juvenile trap data map also be included.	An integral part of our migration to Microsoft .NET is the redesign and recoding of much of our internal data management system. This includes the development of administrative tools for the automatic conversion of our data to StreamNet data exchange formats. That work has proceeded with most emphasis being put on our anadromous hatchery returns and age composition data, a new job this fiscal year. The speed of the migration to .NET and longer-than-expected time to install and prototype our Intranet portal for web-enabled applications indicates that we will not be able to complete all the components that we had hoped for. Work is, however, proceeding and we should be completed next fiscal year.
IDFG	3	Prepare documentation of the Idaho Fish and Wildlife Information System (IFWIS). IFWIS is the information system at IDFG that contains the locally held and compiled StreamNet data. Documentation should include resource diagrams, entity relationship diagrams, database standards document, programming standards document, and database metadata.	Documentation of the Idaho Fish and Wildlife Information System is an ongoing aspect of our development work. All computer code is carefully documented with internal comments and explanations. Entity relationship diagrams of our database have been developed. System diagrams are also completed. Further documentation is proceeding.
IDFG	4	Maintain existing modules of IFWIS, including the spawning ground, juvenile trapping, collecting permit reports, and the reference programs. This includes maintenance of data integrity in the IFWIS database.	Working with IDFG Fisheries staff, we made minor updates to both the Spawning Ground application and the Juvenile Trap application.
IDFG	5	Build additional IFWIS components, interfaces or tools as required to complete other tasks. Specific jobs will be identified on an as needed basis, but may include tools to evaluate existing trend-based data.	We developed a "proof of concept" portal that included the ability for biologists in IDFG to query our databases and an ArcIMS web-mapping application.
IDFG	6	Conduct a review of IDFG redd count trends. We have identified that some historic redd counts have changed significantly in location, length or method, yet remain in the same StreamNet trend. We will evaluate each existing trend and create new trends where necessary. When completed, the updated data will be prepared for and updated in StreamNet.	Due to longer than expected work on our .NET migration, installation and testing of our Intranet portal, and the unplanned, high-priority task of converting hatchery returns and age composition data to new data exchange formats, our review of IDFG trends has been dropped from this fiscal year. Existing trends will continue to be used.
MFWP	2	Modify/expand the edit/entry interface for the MFWP Collector's Permit fisheries survey data and build other interface/editing tools as needed	We worked with the Gallatin and Beaverhead National Forest this quarter on interfaces for their use.
ODFW	1	Manage, maintain and enhance existing tabular database systems, including hardware, software, tools, QA/QC activities, and system administration, backup and security.	Two replicas of the Fish Presence Survey Database were created and distributed to ODFW field staff for data entry.

Our Assistant Database Manager/Developer initiated and completed the first draft of the modified ODFW barrier/dam database structure that will ultimately be used in ODFW's corporate data system. The structure was distributed to Oregon StreamNet staff for review and comment. Oregon StreamNet staff worked collaboratively to review the design of the ODFW Barrier database and proposed a number of potential changes to the schema to more effectively manage the data. This process is ongoing.

Staff worked collaboratively to develop draft ODFW procedures for updating fish distribution data.

The GIS Analyst completed a pilot effort to merge ODFW's Observation event records into the distribution event table in order to identify issues that need to be addressed if these two tables are to be merged into one.

Requested modifications and additions to the FishScreen database were made during this quarter. The User's Guide was updated to reflect these changes. Version 3.0 of the Fish Screening and Passage Program ("FishScreen") Database was released this quarter.

ODFW	2	Conduct initial development of a corporate information system for trends and barrier/dam data	Oregon StreamNet's Database Manager/Developer reviewed an existing reference table that was created to replace our current reference table. We migrated our current reference table's data into a SQL Server database, which will be used as a project test. Corporate Information System development focused on completing four of the main interfaces for the application - two for the console and two for the snap-ins. These interfaces allow the console to communicate with the snap-ins and vice versa.
Region	1	Manage, maintain and enhance existing tabular database systems, including hardware, software, tools, QA/QC activities, and system administration, backup and security.	Routine maintenance, administration, and backup of the SQL Server databases and servers continued. State compilers assisted by providing updates to many tables that were found to contain ambiguous location coding or reference IDs out of properly assigned ranges, etc. QA efforts were also performed on Fish Barrier and Hatchery Facility data. A new rack mounted Dell Poweredge 2650 web server was purchased and brought online this quarter in order to dedicate the existing server to geographic information processing and physically separate the web server software from the map server software.
Region	2	Update or develop data entry and management tools. Assist the cooperating agencies with tool development, as needed and requested. Tools may include input interfaces, error checking, geographic locators, etc.	The Programmer made updates and enhancements to the Forum web- based issue discussion tool.

| WDFW | 1 | Manage, maintain and enhance existing tabular database systems, including hardware, software, tools, QA/QC activities, and system administration, backup and security. | WDFW's Mark Hino contributed his time and created a tool to simultaneously convert internal Mucodes to longitude and latitudes. |

WDFW's Mark Hino contributed his time and created a tool to simultaneously convert internal Mucodes to longitude and latitudes.

Currently we use about eight discreet Paradox tools for data compiling work. We re-programmed two of these as MS Access tools and will continue the re-programming until all the tools are converted.

WDFW Region 5 StreamNet staff attended a two-day ARGIS class in Olympia to improve their ability to manipulate GPS readings for tabular natural spawner and hatchery return data.

We continued to add and refine our cross-reference of PSC codes and StreamNet's location coding regime. We redefined tracking codes (geo- types and ft-mgr codes) to cope with the growing variety of location data that come from different master files and are conveyed in several StreamNet files.

Before leaving for another position, Gil Lensegrav (the WDFW StreamNet Tabular/GIS compiler) quickly trained the WDFW StreamNet Data Manager on how to run our existing ArcView tools and he summarized outstanding hatchery facility layer location issues. Unfortunately, ArcView creates too many files to easily document them and the file storage system needs re- organization to intuitively find pertinent files. Before Lensegrav left, we could not simply move the files to a simpler folder structure without breaking all the internal path descriptions. This experience (which isn't over yet) will be complicated to untangle yet will be a good learning experience on how to better organize and label these files.

Objective   2   Data management and delivery

Task   2   Maintain and enhance the GIS and hydrography database systems at the project and regional

Maintain functional Geographic Information System programs at the agency and regional levels to make consistent GIS layers for anadromous and resident fish available through the StreamNet online database system. At both the regional and state levels, provide GIS management and administration necessary for accomplishing StreamNet objectives, to include: 1) maintaining regional and agency-level GIS systems, including hardware and software, 2) maintaining a regionally consistent hydrography layer at the 1:100,000 scale, and 3) developing and maintaining tools to facilitate use and manipulation of GIS data.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2003
IDFG	1	Maintain and update, as necessary, the hardware and software, including ArcView and other tools, extensions and projects, that constitute the regional and cooperating state agency Geographic Information Systems. Provide system administration, backup and recovery, and security.	We completed normal system administration functions.

IDFG	2	Maintain and update, as necessary, the 1:100,000 scale hydrography files for the states and the PNW region. Submit all changes to the StreamNet database at the Regional office.	Updates to our 1:100,000 scale hydrography began this quarter. Efforts this quarter were focused on updating and adding new lakes.
ODFW	1	Maintain and update, as necessary, the hardware and software, including ArcView and other tools, extensions and projects, that constitute the regional and cooperating state agency Geographic Information Systems. Provide system administration, backup and recovery, and security.	Oregon StreamNet's GIS Analyst completed the annual GIS maintenance agreement with ESRI for 3 ArcInfo, 2 Spatial Analyst, 2 ArcPress and 1 Network license. He also requested an ArcInfo license Keycode transfer from ESRI in order to move a license from Corvallis to Portland to support Subbasin Planning efforts. He installed ArcGIS 8.3 and updated the Keycode files on the license server. He loaded ArcInfo 8.2 on one of our laptops to have on hand as an alternative GIS machine. Lastly he synchronized a replicate copy of the ODFW Distribution database with the Design Master copy and reconciled differences.
ODFW	2	Maintain and update, as necessary, the 1:100,000 scale hydrography files for the states and the PNW region. Submit all changes to the StreamNet database at the Regional office.	Oregon StreamNet's GIS Analyst performed a cursory assessment of the scope of disconnected routes that should be connected. This was done in response to a request from regional StreamNet staff.
Region	1	Maintain and update, as necessary, the hardware and software, including ArcView and other tools, extensions and projects, that constitute the regional and cooperating state agency Geographic Information Systems. Provide system administration, backup and recovery, and security.	Routine management and maintenance of the GIS system at the Regional office continued during the quarter. An attempt to upgrade the ArcIMS Internet mapping software was delayed until the new database server was installed and the GIS and database software were separated onto two machines. This was necessitated because, for some unknown reason, the new IMS software conflicted with the database software. The upgrade will be accomplished first thing next quarter.
Region	2	Maintain and update, as necessary, the 1:100,000 scale hydrography files for the states and the PNW region. Submit all changes to the StreamNet database at the Regional office.	StreamNet GIS staff began to examine the 1:100K hydrography to identify and rectify a few inconsistencies in the connectivity. Preliminary review indicated that many cases of non-connectivity downstream are legitimate, resulting from some streams (particularly in the eastern portions of the basin) going subsurface and some streams connecting to a large river with a braided channel. In cases of braided channels, only the largest is represented on the hydrography, but in some cases a tributary enters a different braid, giving the appearance of no connection.
Region	3	Integrate the functioning of the GIS system with the StreamNet fisheries and habitat database in support of the query system. Maintain up-to-date cross tables used via the StreamNet web interface to select information by geographic area.	The Regional GIS specialist created the first set of cross reference tables for the California routed hydrography.
Region	4	Maintain and improve the LLID/NHD hydrography conversion tool. Immediate need is to complete error trapping routines and polish the final application.	StreamNet GIS specialist will continue to work on finalizing the conversion application with the assistance of previous specialist. This work will continue in FY-04.

WDFW	1	Maintain and update, as necessary, the hardware and software, including ArcView and other tools, extensions and projects, that constitute the regional and cooperating state agency Geographic Information Systems. Provide system administration, backup and recovery, and security.	Our WDFW StreamNet Tabular/GIS compiler assisted the WDFW StreamNet Project Manager in gathering information on ArcView upgrades for all relevant Fish Program staff. A complete report was delivered to the WDFW Information Services Section in May and installations of the Version 8 software began in June.
WDFW	2	Maintain and update, as necessary, the 1:100,000 scale hydrography files for the states and the PNW region. Submit all changes to the StreamNet database at the Regional office.	We started correcting the 1:100K hydrography. Our compiler left this position before completing this project. We will finalize the work but it's postponed until late in Q4.

Objective   2   Data management and delivery

Task   3   Data management and coordination

This task includes GIS and tabular data management at the regional and cooperating project levels after the data have been developed. Once data are submitted to the regional database, assure they fit established formats, perform appropriate error checks, and load the data into the StreamNet database and perform routine management of the data. The region and contributing agencies will collaborate to fix problems and assure seamless loading of data into the database. The cooperating projects will perform similar functions for managing data in their systems.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2003
CRITFC	1	Maintain and manage data developed under Objective 1 in functional database systems. Coordinate with regional staff to assure smooth submission of data to the regional database.	No work this quarter. Aside from the Library (see below) CRITFC does not maintain agency databases for the StreamNet system.
CRITFC	2	Prepare FGDC standard metadata for all GIS layers developed by the cooperating agencies and submit to the regional StreamNet database.	River reaches for subbasin planning have been developed through a series of local workshops for most Oregon subbasins. These reaches are entered as GIS events. Metadata are being developed as reaches are entered.
CRITFC	4	Develop data handling applications to ease transfer of tribal data to StreamNet	No work this quarter. Tribal data will be developed and submitted as part of the subbasin planning process. Data entry procedures are being developed for subbasin planning. Other applications will be tested as part of the Yakama Nation prototyping effort (see Task 2.1.2).
IDFG	1	Maintain and manage all data developed under Objective 1 in functional database systems at the cooperating agency level. Coordinate with regional staff to assure smooth submission of data to the regional StreamNet database.	We have utilized components of our internal fisheries information system to manage all the data that we have submitted to PSMFC. This includes both new data compilation and QC of the existing historical data. During data submission, we have coordinated closely with the PSMFC data manager to work out data formatting and submission issues.
IDFG	2	Prepare FGDC standard metadata for all GIS layers developed by the cooperating agencies and submit to the regional StreamNet database.	We have not submitted any GIS data (just tabular) and, therefore have not needed to submit any FGDC compliant metadata. We don't anticipate submitting any GIS data this year.

IDFG	3	Work cooperatively to define the level of effort needed to develop metadata for tabular StreamNet data.	This topic was discussed at the Steering Committee meeting.
IDFG	4	On an opportunistic basis, coordinate with IDFG fishery programs to facilitate the use of data standards that are consistent with StreamNet and other regional standards.	The IDFG/StreamNet data coordinator initiated some improvements in the way IDFG regional and fisheries staff approach data compilation and record keeping in their field surveys. These included obtaining LLIDs and measures, defining survey transects, use of GPS for location and best practices for data management. Regional visits were made to the IDFG Clearwater Region, Salmon Region, Southwest Region, McCall subregion and Nampa Fish Research.
ODFW	1	Maintain and manage all data developed under Objective 1 in functional database systems at the cooperating agency level. Coordinate with regional staff to assure smooth submission of data to the regional StreamNet database.	The Database Analyst responded to data questions from Regional StreamNet staff concerning updating references and errors in harvest data trends. These questions are being addressed as time allows, however all will be reviewed before the next trend submission. Corrections will be submitted at that time.

The Assistant Database Manager/Developer provided Regional StreamNet's Database Manager with information he requested on 43 of our barrier records. She also responded to an inquiry regarding the hatchery facility AdultCap, Spawn, Hatch, Rear, Acclimate and Release field values for 35 records.

The Project Leader requested a set of restoration project test records from Oregon Watershed Enhancement Board staff so Regional StreamNet could scope the workload of converting OWEB's database to the new restoration project format being proposed. |
| ODFW | 2 | Prepare FGDC standard metadata for all GIS layers developed by the cooperating agencies and submit to the regional StreamNet database. | Bull Trout metadata created with the old Arc Document command was imported into ArcCatalog which gives us more options in terms of data formats that we can export out to, including XML.

Anadromous salmonid distribution metadata from the old Arc Document format was converted to ArcGIS format and updated to include descriptions of the recent changes. |
| ODFW | 3 | Work cooperatively to define the level of effort needed to develop metadata for tabular StreamNet data. | Oregon's Tier 1 level non-spatial metadata format was provided to StreamNet Steering Committee members for review. |
| Region | 1 | Update and append data as submitted by StreamNet participants. Isolate erroneous or duplicative data and work with source agencies to correct problems. Produce downloadable versions of StreamNet databases.   Maintain logs of data submissions and major database changes. | Data additions in the third quarter of the project year included: 4,000 new Escapement Count Data records and 11 new data References. Eighty-six fewer time series Trends resulted from consolidation of previously discontinuous Trends.

Unreported in the previous Quarterly report was the creation of a downloadable Access database of StreamNet data tables and associated lookup tables, indexes and relationships for online downloading in both Access 97 and Access 2000 database formats. |

Region	3	Maintain a library of StreamNet GIS layers for internal use and as downloadable data on the web site with complete documentation (metadata).	The GIS layers and map catalog were maintained and they remained available over the StreamNet website.
Region	5	Revise the way hatchery release data are handled. Since it is not currently possible to georeference the RMIS hatchery release data to the 100K hydrography and the data can't be updated without such georeferencing, send data users to the RMIS site for current release information. Work with RMIS and the StreamNet partners to develop a means of georeferencing release data.	We maintained the temporary statement that sends users to the RMIS site for hatchery release data. Work continues in the cooperating agencies to in the future obtain release data that is specific to actual location stocked, not rolled up into PSC codes, which cover larger areas with multiple stocking locations.
Region	6	Assist the database manager with the spatial component of data and its implementation online, as needed.	Regional staff assisted WDFW and USFWS in locating a dam on the Wenatchee River, and in determining the correct dam name. A GIS measure was also generated for this dam.
Region	7	Assist data contributing agencies in development of data, including formatting, coding, data entry, error checking, and submitting to the regional database.	ODFW StreamNet staff reviewed the logical problems noted previously in the original design of the Fish Barrier data category and accepted the regional data manager's proposal to change the structure of the Barrier and FishBarrier tables. We worked with IDFG StreamNet and the StreamNet Library staff to recode problematic data reference identifiers (RefIDs) into the IDFG range. We acquired various versions of Habitat Restoration data entry databases from state compilers in order to assemble useful options for the Nez Perce Tribe staff to enter Habitat Restoration data that might be shared with StreamNet.
Region	8	Examine the StreamNet database for errors and report any found to the appropriate entity for correction.	Limited-scale errors encountered this quarter by Regional personnel included questionable coding of "subruns" in marine harvest data, hatchery facilities that were incorrectly coded as having been closed, a possible duplicate record for a dam in Montana, hatcheries without traps showing capture of returning fish, an error in the hydrography GIS layer, and marine harvest records that were recorded as freshwater sport harvest. These erroneous records were reported to the appropriate data- generating agency for correction.

One major systematic error was found this quarter. The StreamNet Program Manager found an example of a time series (trend) record for which the reference cited was earlier than the date of the survey in the field. On examining the database we found about 12,000 such instances. Obviously a very large systematic error has occurred. The cause is being determined and we hope to have these errors fixed in the shortest possible time. However, given the magnitude of this problem it may take months to address. In at least some cases, these are ongoing reports that are updated annually, but for some reason the citations were not updated. |

| WDFW | 1 | Maintain and manage all data developed under Objective 1 in functional database systems at the cooperating agency level. Coordinate with regional staff to assure smooth submission of data to the regional StreamNet database. | WDFW's StreamNet Data Manager responded to any issues raised by StreamNet's Regional staff (i.e. small beg/endfts causing problems with the query system display, odd run/subruns, etc.). She worked with the WDFW StreamNet Project Manager and WDFW's Fish GIS Manager to assess reported "invalid" event measures that appear to lie beyond the end of the stream, as denoted in a database maintained by StreamNet Regional staff. This database does not agree with the WDFW hydro database in many cases. This topic will be prepared for anticipated Steering Committee discussion at the July meeting. |

Objective   2   Data management and delivery

Task   4   Data exchange standards

Establish and maintain data exchange standards to ensure consistent content and format of data that originate from multiple data sources. Monitor adopted and proposed data exchange formats for data categories described under Objective 1. This task will provide coordination and technical assistance regarding interpretation of database structures and codes.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2003
All	2	Develop a protocol / process for changing and making additions to the DEF	With leadership from the Montana StreamNet project, all Steering Committee members successfully adopted a protocol for making changes to and developing new Data Exchange Formats. A protocol document was created showing the steps to be followed and the responsibilities of the cooperators. This document was distributed to all Steering Committee members and made available on the StreamNet website.
CRITFC	1	All project participants will jointly work through the Steering Committee to revise the existing and develop new DEFs to assure regional data consistency and allow for inclusion of new data types.	CRITFC data responsibilities are fairly routine and do not normally involve DEF issues. Steering Committee discussions are monitored and suggestions offered as appropriate.
IDFG	1	All project participants will jointly work through the Steering Committee to revise the existing and develop new DEFs to assure regional data consistency and allow for inclusion of new data types.	The IDFG/StreamNet project leader discussed DEF issues at the Steering Committee meeting.
IDFG	3	Provide lead development of a DEF for juvenile data.	Because the approval of an official process for developing new data exchange formats finished so late in the contract period, work on a new juvenile DEF was delayed. It is doubtful that it can be finished this fiscal year, but initial work will begin.
MFWP	1	All project participants will jointly work through the Steering Committee to revise the existing and develop new DEFs to assure regional data consistency and allow for inclusion of new data types.	Several DEF issues were resolved either through the forum or at the SC meeting in April.

ODFW	1	All project participants will jointly work through the Steering Committee to revise the existing and develop new DEFs to assure regional data consistency and allow for inclusion of new data types.	Staff provided input to the StreamNet Forum discussion topic related to the Draft FishSurvey (Sightings/Observation) table.

Oregon StreamNet's Assistant Database Manager/Developer provided feedback on the proposal to consolidate the barrier and dam data into one table, and to eliminate the DamID field from the FishBarrier table. |
| Region | 1 | All project participants will jointly work through the Steering Committee to revise the existing and develop new DEFs to assure regional data consistency and allow for inclusion of new data types. | DEF version 2003.1 (draft) was further updated. As of the end of the quarter it was close to being ready for adoption. The big issue has been a conversion of georeferencing that was okayed in spring 2002 but has not yet been implemented. The details of this change are more complex than anticipated, and required much discussion and analysis.

The Regional Fisheries Biologist worked with PSMFC personnel in California (working under other funding) to convert the existing StreamNet restoration projects data, and new Oregon Watershed Enhancement Board data, into the proposed new restoration projects structure. This collaboration will benefit StreamNet by getting our existing data updated, improving our data structure, and receiving new data, all at very low cost. |
| Region | 4 | Assist with development of XML schema based data exchange options for both incoming and outgoing data. Develop a written recommendation on how to utilize XML to maximize exchange of data for consideration by the StreamNet Steering Committee for future action. | We updated and enhanced XML output for the web query system. |
| WDFW | 1 | All project participants will jointly work through the Steering Committee to revise the existing and develop new DEFs to assure regional data consistency and allow for inclusion of new data types. | WDFW's Region 5 StreamNet Data Manager (Bob Woodard) led the final efforts to revise and adopt the new Hatchery Returns format and lookup tables. |

Objective   2   Data management and delivery

Task   5   StreamNet Internet site

Continue to maintain and enhance the existing client-server system to provide access to StreamNet data products through the Internet at both the regional and cooperating project levels. The StreamNet home page will continue to be utilized as the project's primary data delivery vehicle. Priority will be given to incorporating data developed through Objective 1 and providing access to reference materials secured through Objective 3. GIS systems will be used to promote data sharing, data transfer, communication, and to pilot efforts that improve efficiency in data migration to the StreamNet database. Appropriate training on the use of the system will be provided through a combination of on-line help and in-person training sessions.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2003
All	1	Provide ongoing review of the StreamNet Internet site, as time permits. Identify problems or needed improvements, and critique new features and functions.	Project participants routinely provided feedback on the StreamNet Internet site as issues were detected. IDFG reviewed data displays of their data on the web site and identified a number of data issues that need to be corrected. Work on those corrections will begin next quarter.
ODFW	2	Manage and maintain Oregon's web-based data integration, communication, and transfer system site and their links to	Many additions, modifications & improvements were made to the NRIMP web site. Oregon's Webmaster consulted OSU's Central Web Services "Known Issues" page and found that web site statistics and hit counter services are still not available, so. due to continued server restrictions, the NRIMP web site statistics will not be available for an indefinite period of time. The web statistics information normally contained in the quarterly reports has been discontinued until we regain access to the information, or migrate the NRIMP web site to a different server. Oregon StreamNet staff addressed issues related to a disk filling up and permission issues with our FTP server. The root password was changed as a precaution. We completed transfer of responsibilities for managing the agency's FTP server from Oregon's GIS Analyst to ODFW Information Systems Division staff. Content transition was launched at the end of the quarter to remove / transfer accounts for nearly 30 users. Oregon's GIS Analyst worked with other ODFW staff to troubleshoot selective availability of access to the Agency FTP and web server.
Region	1	Maintain and upgrade the StreamNet web server and software, including programming, tool development, system security, etc.	We migrated the web server and web query system to a new web server for increased performance. The old web server hardware was configured to be an exclusive ArcIMS map serving system which has increased the speed of serving maps as well. The Links pages were updated as necessary. Dead links were updated or removed. Several links were added, including one to the EPA funding program page and one to the National Biological Information Infrastructure (NBII). We also helped NBII select the most appropriate spot on their web site where they might link to

StreamNet. An attempt was made to reorganize the links page, but the proposal was not considered workable. Future work on reorganizing these pages will occur. A link to a units of measure web site was added to our Public Education web page.

Discussions took place on how/whether to update the entity- relationship diagram help pages on the web site. These pages are supposed to show how users can link the various database tables together in order to query out data. However, these diagrams have become outdated since they were create. No conclusion was reached on the best path to proceed, so discussions on this topic continue.

A list of query system problems and potential enhancements has been maintained for several years. This list was reviewed this quarter, and a number of the items were checked off following their completion.

Region	2	Maintain and enhance the functionality, look and usability of the StreamNet web-based query system.	After further testing of the test query system, we implemented the changes referred to in the second quarter in the production web query system. A new set of enhancements, including an updated Barriers data category, was also implemented in the web query system.

After further testing of the test query system, we implemented the changes referred to in the second quarter in the production web query system. A new set of enhancements, including an updated Barriers data category, was also implemented in the web query system.

The order of items presented in the pick lists can affect the user- friendliness of the query system. Currently, for all criteria except 'State' we order items alphabetically. Because of the number of species in the 'species' list, we made several attempts to create a better order of appearance for the species. We would like to have the most frequently desired species high in the list, but want to avoid illogical groupings of dissimilar or unrelated species. No consensus was reached, so no action was taken. This topic will likely come up in the future.

The web query system User's Guide was updated this quarter. It had grown obsolete as the query system developed the past few years. Technical problems in converting the file to .pdf format resulted in formatting errors, mainly misplaced graphics. These problems will be addressed in the future.

A prototype for a new habitat restoration projects layout was shown to several regional personnel. Further discussion and review will be necessary before this prototype can become the model for this data category's output on the web site.

Region	3	Maintain GIS Data, Map, and PNW Reach File Internet pages.	These pages were maintained as a routine part of managing the system.
Region	4	Maintain, update as necessary, and improve the Internet mapping component to the StreamNet web site to allow users to access StreamNet data through interactive map interfaces. Improvements might include such items as adding DRGs or aerial photos to the IMS applications, and showing trend locations in the query system.	Routine management of the mapping system continued this quarter.

Region	5	Guide development and enhancement of the StreamNet web query system from the perspective of data users. Review changes to the web query system to ensure they are implemented appropriately and do not create unforeseen problems.	The Regional Fisheries Biologist worked with the Programmer on appropriate output for the barriers data categories. It was determined that two separate outputs should be made. First, a simple listing of barriers should be made available for the geographic region selected. Second, if a species has been chosen in the query system, then the output should show the information contained in the FishBarrier table, which contains details of how individual barriers affect a single species/run. This discussion guided the final output that was developed.
Region	7	Convert the core data query system to an open ColdFusion environment	Additional work was completed including XML output options and a test interface for our Calfish partner project.
Region	9	Maintain logs of web query history and error events. Track and report Internet site usage by month and investigate web query system errors encountered.	Logs were maintained for website use and problem occurrence. Usage of the StreamNet website in the third quarter is summarized below.

	Apr-03	**May-03**	**Jun-03**
Overall Page Requests	27,291	41,412	36,868
Data Query Page Requests	9,142	15,172	16,828
Unique Sessions	2,256	5,449	8,473
Data Reports Viewed	1,632	2,297	1,540
Top 10 individual requesters	attbi.com, noaa.gov, aol.com, uswest.net, 207.173.155, pacbell.net, army.mil, oregonstate.edu, 103.107, usda.gov	attbi.com, aol.com, noaa.gov, clackesd.k12.or.us, 144.92, uswest.net, comcast.net, state.id.us, easystreet.com, ucsc.edu	bellsouth.net, attbi.com, uswest.net, aol.com, noaa.gov, deq.state.or.us, washington.edu, easystreet.com, comcast.net, cableone.net

Objective   2   Data management and delivery

Task   6   Respond to data / information requests

Receive and respond to requests for data and information, source materials, and custom products. Response to requests will be honored within the limits of available resources, with priority given to information requests having direct relevance to the Fish and Wildlife Program. Other priorities will include implementation of the Endangered Species Act and federal, state, and tribal natural resource management activities.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2003
CRITFC	1	Respond to requests for data, maps, technical assistance, source materials, or custom data products, within the capabilities provided by the base funding level. All requests will be logged and reported	No work this quarter. This is not a primary CRITFC data activity. See also services to Library users under Objective 3.
IDFG	1	Respond to requests for data, maps, technical assistance, source materials, or custom data products, within the capabilities provided by the base funding level. All requests will be logged and reported	We responded to 40 requests for data or information: 6 from federal agencies, 15 from state agencies, 5 from universities, 1 from a tribal agency, 11 from private industry and 2 from non-governmental organizations. Twenty-six of the requests were for species distribution information, 6 for general GIS data, 3 for redd counts, 3 for technical assistance, 1 for age composition data and 1 for hatchery return data.
MFWP	1	Respond to requests for data, maps, technical assistance, source materials, or custom data products, within the capabilities provided by the base funding level. All requests will be logged and reported	Staff provided data and/or maps for 20 GIS related requests; 4 of these were fisheries related.
ODFW	1	Respond to requests for data, maps, technical assistance, source materials, or custom data products, within the capabilities provided by the base funding level. All requests will be logged and reported	Our GIS analyst developed a new process to summarize FTP downloads. The old process used some Unix scripts - the new one uses Access. Six hundred ninety-nine unique users viewed / downloaded data from the ODFW FTP site during this quarter. Also, 3,836 data downloads were made from this site. A total of 18 data, 1 document, 1 map, and 14 'other' requests were answered during this quarter. A detailed list by requester and request type can be made available upon request. The list of requests below is provided as an example of the range of requests we respond to. These requests included: a. Provided observation data to NOAA Fisheries. b. Processed statewide distribution datasets into UTM zone 11 and provided to Wallowa County for a watershed assessment of the Lostine River. c. Converted and made available a MS Word format copy of the Oregon Lamprey Report for editing purposes. Posted the updated report back to the web after converting it back to PDF format. d. Spoke at length with a landowner in regards to the basis for the designation of essential salmonid habitat in his area, helping him understand how StreamNet data were used in the process.

e. Assisted OWEB staff with ArcView theme display and map legend creation for restoration project maps they were developing.
f. Helped to coordinate a software loan agreement between two ODFW staff members to improve self-sufficiency in the area of GIS.
g. Explained to a Yamhill County FSA staff person how to acquire appropriate GIS data for making their own custom maps.
h. Discussed our Barrier and Fishbarrier data with NOAA Fisheries staff, explaining how the two relate to one another and also why there is not a one-to-one match between them.
i. Located old beaver mapping project data from 8mm tape and plotted 19 maps for a requester.

Region	1	Respond to requests for data, maps, technical assistance, source materials, or custom data products, within the capabilities provided by the base funding level. All requests will be logged and reported	The Regional StreamNet office at PSMFC received a total of 41direct data / information requests, which were promptly addressed. These did not include data, maps or other information downloaded directly from the StreamNet web site.
Region	2	Develop a standard format for reporting requests in the quarterly reports	The Regional fish biologist worked with Steering Committee members to get input on the format used at PSMFC to track information requests, with the intent of developing a common approach among the cooperators. As expected, each agency approaches this differently, so it will take time to develop a common approach.
WDFW	1	Respond to requests for data, maps, technical assistance, source materials, or custom data products, within the capabilities provided by the base funding level. All requests will be logged and reported	WDFW StreamNet staff responded to 33 data requests this quarter. The requests to Region 5 staff required more time than normal. Custom map requests have dwindled (down to ten this quarter) since we lost our Tabular/GIS compiler. Generalized fish distribution data and juvenile/adult trap figures are the most popular data categories for requests. This quarter's main recipients included staff from WDFW, NOAA-Fisheries, and Cramer Associates, Inc. (a consulting firm).

Objective 3 Library and reference services

Provide professional library services to the Columbia Basin's fish and wildlife decision-makers, planners, managers, and researchers by acquiring and cataloging StreamNet source documents and other related material; and by providing open and efficient access to these materials

Objective 3 Library and reference services

Task 1 Collection development

Develop a collection of materials applicable to the mission of StreamNet. Collect, catalog and organize materials to document data sources, Fish and Wildlife Program activities and reports, and other gray literature for access by regional scientists, agencies, interested parties, and other libraries. Project participants will submit reference documents for all data to be included in the collection.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2003
CRITFC	1	Obtain reference documents for all data developed under Objective 1 and submit them to the StreamNet Library for inclusion in the collection and catalog.	The Library received 3 shipments of reference documents from participants. The Library also agreed to provide archiving services for the NWPCC subbasin planning effort. The Council agreed to provide temporary funding for 1 additional Library Technician to carry out this function.
CRITFC	2	Coordinate source material submissions for data compiled by participants.	The Library accepted donations of documents from other libraries and clients.
CRITFC	3	Develop a collection of materials related to the Columbia Basin, including reports from other Fish and Wildlife Program projects, other agency documents as they relate to the Basin, and other published and unpublished materials as requested by clients.	Library staff have identified several bibliographies of materials that are relevant to the collection. We are working to identify those documents we already own so that we can focus on obtaining documents that we need for the collection.
CRITFC	4	Maintain and develop a collection of journals related to fisheries and aquatic sciences as well as other related scientific topics.	We continue to identify new journal titles that are relevant to the collection and researchers in the Columbia Basin. We are looking at ways of obtaining these titles, including exchanges with other libraries.
IDFG	1	Obtain reference documents for all data developed under Objective 1 and submit them to the StreamNet Library for inclusion in the collection and catalog.	Reference materials for our 2001 and 2002 hatchery return data were submitted to the StreamNet library.
ODFW	1	Obtain reference documents for all data developed under Objective 1 and submit them to the StreamNet Library for inclusion in the collection and catalog.	The Data Analyst reviewed reference information and sent a library submission with corrections and updates to Lenora Oftedahl at the StreamNet Library. Staff worked though the reference table looking for duplicates, checking the accuracy of the references, and performing other general QA/QC activities.

Region	1	Obtain reference documents for all data developed under Objective 1 and submit them to the StreamNet Library for inclusion in the collection and catalog.	11 new reference titles were added this quarter.
Region	2	Enhance the StreamNet data reference system by repairing or establishing procedures for updating and reconciling data -related references between the StreamNet database at PSMFC and the StreamNet Library database housed at CRITFC.	A test export of the StreamNet Library holdings was received at the regional office and a review of all available fields was conducted to specify the appropriate information needed for future export to StreamNet regional data manager, as well as desired field naming and data type conventions.
WDFW	1	Obtain reference documents for all data developed under Objective 1 and submit them to the StreamNet Library for inclusion in the collection and catalog.	Reference documents were provided as part of routine operations.

Objective   3   Library and reference services

Task   2   Provide access to collection

Provide user access to the materials described in Task 3.1 by providing facilities for storage of paper and electronic copies of documents, an online catalog of all documents in collections, and staff to answer location questions and respond to requests.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2003
CRITFC	1	Provide and maintain an appropriate facility for the storage and public use of the StreamNet Library collections.	The Library expansion and remodel was accomplished this quarter. The Library remained open for the duration of the construction.
CRITFC	2	Catalog and organize the materials for ease of use by clients and staff.	Cataloging was limited this quarter, as we were busy with the expansion and remodeling of the physical space.
CRITFC	3	Provide access to the catalog of materials via the Internet and update the online catalog on at least a monthly basis.	We updated the catalog as necessary to keep current information available to clients.
CRITFC	4	Develop and execute a plan to place electronic documents in the catalog and on the library website.	We continue to add electronic documents to the Library website.
CRITFC	5	Develop and keep a schedule of open times and reference desk staff hours.	The library has a regular schedule and includes non-traditional business hours in the mornings. The staff coordinates schedules for lunches and meetings in order that the library remain open from 8-5 Monday through Friday.

Objective   3   Library and reference services

Task   3   Library services

Manage the StreamNet Library and provide library services to the StreamNet user community, Fish and Wildlife Program, and the general public.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2003
CRITFC	1	Provide information and reference services to library clients	The U.S. Fish and Wildlife Service is our most frequent client. Consultants and unidentified affiliations are the next highest categories.
CRITFC	2	Provide information about services and hours to library clients via print and Internet	The staff updated the webpage regularly to keep clients current on the expansion and remodel. We continue to provide up-to-date information via the Internet.
CRITFC	3	Provide interlibrary borrowing services for library patrons to access materials not yet owned by the StreamNet Library.	The Library responded to over 316 requests for information from April through June 2003. In addition, there were approximately 15 walk-in requests for information. The reduction in number from the previous quarter is partially due to the construction noise during the expansion and remodel.
CRITFC	4	Provide access to hardcopy and electronic files of draft and final documents related to subbasin planning and the NPPC amendment process.	We continued to look at the bibliographies for the 1990 subbasin plans. In addition, we have begun to identify the lead agencies for current subbasin plans to capture the materials they are using for current plans.

Objective   3   Library and reference services

Task   4   Inter-library coordination

Engage in networking activities with other agency and regional library service providers to provide better access to other collections that will enhance the StreamNet Library and to avoid unnecessary duplication of effort and materials

Project	Job	Planned work elements	Accomplishments, Third Quarter 2003
CRITFC	1	Provide interlibrary lending services for other libraries to access the library's unique collection	The library filled over 60 requests from other libraries for materials in our collection.
CRITFC	2	Maintenance of memberships in appropriate library and subject-related associations. Ex. IAMSLIC, NRIC, OFWIM, etc.	Membership in the Pacific Northwest Library Association was renewed.
CRITFC	5	Work with subbasin planning groups and TRTs to identify modifications and new uses to make information related to these processes easier to retrieve	No work was accomplished. Subbasin planning activities continue to be behind schedule.

Objective   4 Services to the Fish and Wildlife Program

Provide technical data services to Fish and Wildlife Program decision-makers and appropriate Fish and Wildlife Program projects

Objective   4   Services to the Fish and Wildlife Program

Task   1 Data and services to support the Fish and Wildlife Program (Base project level only)

Provide data management assistance to the Fish and Wildlife Program, as requested. Services may include custom development of data, provision of data from the StreamNet database to support FWP activities (such as planning, monitoring and evaluation, etc.), and general advice and technical assistance with database management, data delivery, and GIS. Under base funding, requests under this objective will have to be balanced against other ongoing activities.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2003
CRITFC	1	Support Fish and Wildlife activities, such as subbasin planning and monitoring, by providing data and maps of existing StreamNet data and technical information management advice, as requested, and only within available time and budget under base level funding.	StreamNet data sets were assembled for the Deschutes prototype data system. StreamNet GIS data were used for development of the subbasin planning river reaches.
CRITFC	2	Participate in various NWPPC planning and management work groups to improve and coordinate regional information management programs, such as serving as leader of the technical work group for Oregon's Subbasin Planning effort.	As chair of the Oregon technical assistance team for subbasin planning (TOAST), the project leader conducted successful technical workshops for subbasin planners in the Walla Walla, Umatilla, Imnaha, Grande Ronde and John Day basins. Further modifications to the standard EDT assessment approach were developed and tested which better integrates GIS technology into assessments and databases. This work is supported under separate funding.
IDFG	1	Support Fish and Wildlife activities, such as subbasin planning and monitoring, by providing data and maps of existing StreamNet data and technical information management advice, as requested, and only within available time and budget under base level funding.	We began a search for a limited service GIS Analyst and Data Coordinator to provide support for development of subbasin assessments for the Salmon, Upper Mid-Snake (including the Boise, Payette and Weiser) and Upper Snake subbasins.
MFWP	1	Support Fish and Wildlife activities, such as subbasin planning and monitoring, by providing data and maps of existing StreamNet data and technical information management advice, as requested, and only within available time and budget under base level funding.	Staff assisted with data compilation, reviewed the "Qualitative Habitat Assessment Tool" created by a contractor and the "Multi-scale Resource Integration Tool" created by the Forest Service for the feasibility of using for analysis in the subbasin planning process, assisted in planning the Subbasin Planning Assessment three-day retreat, and acted as GIS and data technician for the Kootenai basin sub group at the assessment. Provide planning documents on the FWP website for the Flathead and Kootenai subbasin plans http://fwp.state.mt.us/flatheadsubbasinplan/ and http://fwp.state.mt.us/kootenai_MTsubbasinplan

ODFW	1	Support Fish and Wildlife activities, such as subbasin planning and monitoring, by providing data and maps of existing StreamNet data and technical information management advice, as requested, and only within available time and budget under base level funding.	Oregon StreamNet staff continued to provide data and management advice as requested in support of Oregon Subbasin Planning efforts.
Region	1	Support Fish and Wildlife activities, such as subbasin planning and monitoring, by providing data and maps of existing StreamNet data and technical information management advice, as requested, and only within available time and budget under base level funding.	The Program Manager participated in several meetings with CBFWA on development of the RM&E proposal. Data management details have not yet been incorporated into the proposal. Regional staff provided Oregon subbasin planners with nutrient data that were gathered several years ago by PSMFC employees. Data were delivered to subbasin planners via the ODFW StreamNet staff.
Region	2	Participate in regional discussions of Monitoring and Evaluation and/or Subbasin Planning to identify means of capturing information generated and making them available regionally.	The Program Manager and Oregon StreamNet Project Leader attended a meeting of the Federal Action Agencies' Habitat and RM&E Teams and discussed project capabilities related to habitat and monitoring needs.
WDFW	1	Support Fish and Wildlife activities, such as subbasin planning and monitoring, by providing data and maps of existing StreamNet data and technical information management advice, as requested, and only within available time and budget under base level funding.	WDFW Region 5 StreamNet staff filled various data requests for consulting firms that are working on the Lower Columbia River recovery plan.

Objective   4   Services to the Fish and Wildlife Program

Task   2   Archive and deliver independent data sets, as requested

Work with regional entities to aid in the capture and distribution of data generated through Fish and Wildlife Program activities and to help determine the most appropriate means of storing and disseminating them. Where data do not fit in existing StreamNet data sets, develop archive functions to, at a minimum, make data available 'as is', regardless of their current form.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2003
CRITFC	1	On an opportunistic basis, obtain, warehouse and deliver data sets of non-StreamNet type fish and wildlife data from FWP participants or related entities. These data sets will be maintained in their original formats for posting 'as is' to make them available regionally through the regional StreamNet web site, but not through the StreamNet online data query system.	The Project Leader and non-StreamNet staff are cooperating with a variety of state and federal agencies to identify and query diverse databases useful for subbasin assessment. These datasets will be organized according to a stream reach system in each subbasin and made available regionally through StreamNet as they are developed.
CRITFC	2	Develop strategies for ESA recovery planning and NWPPC subbasin planning efforts to ensure data and technical literature are captured and made regionally accessible. This will be done 'as possible' under base level funding.	The NWPCC approved the proposal to use the StreamNet Library as the archive site for subbasin planning data and information. Supplemental funding will be provided for one temporary Library Technician to provide this function.

MFWP	1	On an opportunistic basis, obtain, warehouse and deliver data sets of non-StreamNet type fish and wildlife data from FWP participants or related entities. These data sets will be maintained in their original formats for posting 'as is' to make them available regionally through the regional StreamNet web site, but not through the StreamNet online data query system.	Montana provided the Montana genetics database to regional StreamNet staff; posting occurred as an independent data set.
Region	1	On an opportunistic basis, obtain, warehouse and deliver data sets of non-StreamNet type fish and wildlife data from FWP participants or related entities. These data sets will be maintained in their original formats for posting 'as is' to make them available regionally through the regional StreamNet web site, but not through the StreamNet online data query system.	The Program Manager participated in a workshop with project sponsors in Lewiston, ID, at the request of BPA. One purpose of the presentation was to explain how StreamNet can post data from projects when the sponsors are not prepared to publicly host their own data.
Region	2	Develop basic standards for description of independent data sets posted on the StreamNet web site	During this quarter significant advances were made in our ability to display and deliver independent data sets from the StreamNet web site. "Independent data sets" are defined as those that do not fit in one of the existing StreamNet data categories. Such data sets are posted in their entirety on the web site for download without attempting to standardize them. In addition to adding several data sets as simple html links, we devised a method for making these data sets searchable and also automate their delivery by using Cold Fusion and a database. Adding the ability to search these data sets will allow us to house many of them without major html page upkeep. Though we have created the concept for how to do this, we still need to develop and implement the system, as well as determine the types of information and metadata we would ask people to provide in order to make their data searchable.

Objective   4   Services to the Fish and Wildlife Program

Task   3   Protected Areas

StreamNet will a) maintain and provide access to the Council's Protected Areas dataset, b) archive the official version as a historic record, c) in consultation with the Council, respond to requests for information concerning Protected Areas, and d) modernize georeferencing and make data available through online mapping.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2003
Region	1	Maintain the Protected Areas database within the StreamNet database.	A SQL Server Stored Procedure was created to periodically rebuild a table of Columbia Basin streams formatted for use with the Protected Areas online data query system.

Objective 5 Project management and coordination

Provide effective leadership that ensures the production of high quality information products targeted at critical applications and the development of these products in a timely, cost-effective manner.

Objective 5 Project management and coordination

Task 1 Manage project activities

Administer all aspects of the StreamNet project at the regional and cooperator levels, including oversight of budget, personnel (including training and staff development), work statement preparation and implementation, coordination among participating agencies, active participation in steering committee work, and project reporting.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2003
All	1	Project oversight and guidance. Participate cooperatively in the StreamNet Steering Committee to guide the direction of the project, coordinate within respective agencies, and resolve policy and technical issues for the project	Steering Committee members from all of the cooperating projects participated in the Aril Steering Committee meeting, where they contributed to establishing project direction and resolution of various technical data management issues. All members also contributed to discussions related to project capabilities and efforts to inform agency and Council decision makers about the project as part of the approval process for the Mainstem/Systemwide projects. In addition, the StreamNet Program Manager participated in several program manager's meetings within PSMFC. Because of growth in PSMFC projects, office space is becoming limiting, and the commission may have to relocate its headquarters. That will result in relocating the StreamNet project, with unknown impacts to the project during the course of any move and potentially changed rental costs in the future.
All	2	Supervision. Supervise project staff at the cooperating agency and regional levels to provide guidance and staff development.	All cooperating projects conducted normal supervision of staff members during the quarter. Some specific actions by the individual projects included: CRITFC: Discussions with Library staff about smoothing the integration of library Operations with the StreamNet databases. IDFG: The project development manager participated in continuing education by attending the Oregon-SW Washington URISA conference. Region: The Program Manager conducted scheduled performance appraisals of staff members
All	3	Budget. Manage expenditures to accomplish the jobs in the Statement of Work within the approved budget.	All cooperating projects monitored spending to remain within budgets. They also developed spending accrual estimates for use in the new BPA contracting approach.

All	4	Develop the annual project proposal and budget within submission deadlines	The cooperating project leaders worked to provide information needed to support the ongoing review of the StreamNet project within the FY-03 Mainstem / Systemwide review process, which has now become the FY-04 review process. This effort took up a considerable amount of time for the StreamNet Program Manager.
All	5	Report accomplishment of the work outlined in the annual SOW through quarterly reports submitted to BPA within 30 days of the end of each quarter	All project cooperators contributed input into the performance report for the second quarter, which was completed, reviewed, and submitted to BPA.

Objective   5   Project management and coordination

Task   2   Participate in Fish and Wildlife Program development activities

Work with regional entities to assist in the area of data management as requested to support development of Fish and Wildlife Program projects and programs. Organize, facilitate, and/or participate in appropriate coordination meetings with BPA, CBFWA, the Council, ESA officials, ISAB/ISRP, and/or staff and management of participating organizations to identify ways StreamNet can effectively contribute to the Fish and Wildlife Program (FWP) and facilitate capture and dissemination of data. Participate in advisory groups, task forces, and other groups whose purpose is enhancing the effectiveness of the Fish and Wildlife Program relative to its data development activities.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2003
CRITFC	1	Work with regional entities to contribute data management expertise toward development of activities within the scope of the Fish and Wildlife Program. Serve as a data management resource to the FWP.	The Project Leader and Database Programmer worked with subbasin planning staff at the regional and local levels in Oregon to develop and test databases and database management tools for subbasin planners. A prototype data system and data catalog were refined and extended.
MFWP	1	Work with regional entities to contribute data management expertise toward development of activities within the scope of the Fish and Wildlife Program. Serve as a data management resource to the FWP.	No requests were received this quarter..
ODFW	1	Work with regional entities to contribute data management expertise toward development of activities within the scope of the Fish and Wildlife Program. Serve as a data management resource to the FWP.	Bruce Schmidt and Cedric Cooney met with the Federal Management Agency leaders to discuss StreamNet's roll and contributions in the Columbia Basin and the Fish and Wildlife Program. The Project Leader participated in the Oregon Subbasin Planning Coordination Group meeting via conference call on May 30th.
Region	1	Work with regional entities to contribute data management expertise toward development of activities within the scope of the Fish and Wildlife Program. Serve as a data management resource to the FWP.	The Program Manager participated with CBFWA on development of the RM&E proposal. Data management details have not yet been incorporated into the proposal. He also met with the Action Agencies to discuss StreamNet's capabilities to support habitat and RM&E efforts.

Objective   5   Project management and coordination

Task   3   Coordinate with other related activities

Maintain communications between StreamNet and other applicable regional and state-level fish and wildlife activities and agencies beyond the Council's Fish and Wildlife Program to identify means for collaborative data collection, storage, and dissemination. Collaborative data activities will include tribal fishery programs within the Columbia Basin, federal land managers' fishery programs, state fish and wildlife agencies, and, with respect to water use and stream development, state water resource management and environmental quality agencies. Collaboration with coast-wide and private data collection/compilation efforts will be pursued when this supports overall project goals.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2003
IDFG	1	On an opportunistic basis, coordinate with other state, federal, or tribal agencies and various regional inter agency planning and management work groups to enhance the collection and management of data related to management of fish and wildlife resources.	The IDFG/StreamNet data coordinator met with biologists from the Nez Perce Tribe to provide technical assistance and to demonstrate some of our data management tools, including the Spawning Ground application and various ArcView tools.
ODFW	1	On an opportunistic basis, coordinate with other state, federal, or tribal agencies and various regional inter agency planning and management work groups to enhance the collection and management of data related to management of fish and wildlife resources.	The Project Leader met the Acting Fish Passage Coordinator to get a briefing on what the Fish Passage Task Force has been doing relative to barrier removal prioritization. The Task Force desired Oregon StreamNet to develop a prioritization process model, and/or possibly a web-based prototype of a modeling system. After funding support was provided, our GIS Analyst took the lead on this effort.

ODFW accomplishments (continued):

Our Data Analyst is currently researching and writing a grant to apply for the National Environmental Information Exchange Network Grant for funds to increase Oregon StreamNet personnel, and to technologically advance data flow and database management efforts within ODFW.

The Assistant Database Manager/Developer met with Wildlife Division staff to discuss the development of a new Sage Grouse database for ODFW's Wildlife (Game Bird) Program. If this effort is taken on, it will be funded with outside money, and the resulting data and database structure will be shared with StreamNet.

Our GIS Analyst attended the second bi-annual Geospatial Standards Forum that was held in The Dalles. This effort is Oregon's version of the national Framework data development that is being led by the Federal Geographic Data Committee. He agreed to participate in the Aquatic Species sub-group which will meet to discuss data content standards for data such as fish distribution.

The Project Leader attended a presentation of the Washington Natural Resources Data Management web site (their data portal) in Salem. The portal was developed for around $100K, and is being considered a model for Oregon's natural resource data portal, currently being coordinated by OWEB, but may be shifted to OSU.

Staff followed up on issues related to ongoing efforts by NOAA staff to convert the 24K distribution data points into a linear format.

Region	1	On an opportunistic basis, coordinate with other state, federal, or tribal agencies and various regional inter agency planning and management work groups to enhance the collection and management of data related to management of fish and wildlife resources.	Regional staff reviewed a first draft of the Pacific Northwest Water Quality Data Exchange strategy and document, provided by Curtis Cude of Oregon DEQ. Significant comments were provided for their consideration.

Regional staff met with Stan Allen and agreed on a split in staff time to work on StreamNet like activities for California. This will cover a portion of the time of Regional staff that is not covered by the StreamNet contract.

NOAA Fisheries contacted the project regarding information on fish distribution and means of involving the public in establishing Critical Habitat designations for listed salmon and steelhead. To assist in this project, we contacted David Graves, former GIS Specialist for StreamNet and arranged for him to work with NOAA Fisheries from the StreamNet office. This project was rapidly made operational and will continue into September, when David will enter graduate school. We will continue to assist the Critical Habitat work as much as possible. |
| Region | 2 | Coordinate with agencies and organizations involved with habitat restoration work in the Columbia Basin regarding data needs, standards and formats, storage and delivery. Work toward achieving regional consistency in restoration project data with efforts such as the REO and AREMP. | Regional and ODFW personnel attended the Oregon State Biological Data Standards meeting in The Dalles on June 12. This effort is part of the Framework process, and seeks to improve sharing of biological data. |
| Region | 4 | Participate with regional entities in the development of effective regional data management programs and approaches, such as through SAIC and RPA 198. | The Program Manager continued to work with the Project Team on the SAIC data project. The final recommendations from the Project Team were submitted to the Council and were posted on the Council website for public review. Following discussion at the Steering Committee meeting, a number of points were raised about the summary of the project. Subsequently, the Program Manger provided written comments to the Council regarding the project recommendations reflecting the issues raised by Steering Committee members.

The Program Manager was approached by a BPA COTR, requesting assistance in providing information on data management to a number of contractors. The Program Manager participated in a data management workshop organized by BPA in Lewiston, ID, discussing the broad issues behind data management, and the need to make data as available as possible to further fisheries work beyond just the individual project level. |

| WDFW | 1 | On an opportunistic basis, coordinate with other state, federal, or tribal agencies and various regional inter agency planning and management work groups to enhance the collection and management of data related to management of fish and wildlife resources. | The WDFW StreamNet Project Manager convened a meeting of WDFW Fish GIS staff with Steve Stone and Gary Rule of NOAA-Fisheries to discuss the status and resolution of WDFW's streams and fish distribution spatial datasets. The NOAAF staff want to compile the most current generalized fish distribution information to help inform their process on determining Critical Habitat for anadromous salmonids in the Pacific Northwest. WDFW staff sent streams and fish distribution data coverages to NOAA-Fisheries after the meeting, and began a series of regular contacts to keep NOAAF staff informed as to progress on data updates for key Olympia Peninsula basins. |

Objective   5   Project management and coordination

Task   4   Prepare and present public and professional information related to the StreamNet Project.

As needed, produce public information materials and participate in various meetings and forums (public or professional) to explain the project's capabilities and purpose and to generate support and additional data sources. Activities may include brochures, demonstrations, posters and talks to public, policy or professional groups and organizations.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2003
Region	1	Prepare and deliver presentations to scientific and professional meetings to demonstrate project capabilities, services and accomplishments and to solicit additional data and involvement or coordination with the project.	We received a request at PSMFC to participate in a symposium on the value of information management systems to fisheries resources at the annual American Fisheries Society meeting. While it was not clear who would participate, the Program Manager developed an abstract for a presentation and submitted it to the program committee.
Region	2	Develop materials to support the project. Improve public materials such as the StreamNet brochure, data inventories, etc. as needed. Maintain and update explanatory materials such as the Query System User Guide and documents that explain data categories and structures. Prepare and deliver StreamNet E-Newsletter at least twice as information becomes available.	A user's guide for understanding the habitat restoration project category's data contents was finalized this quarter. The guide was converted to .pdf format and added to the StreamNet web site as a help file.

The second StreamNet Newsletter was mailed out on May 23. Thirty nine email bounces required us to update or delete those entries from our distribution list. A total of 941 people are now subscribed to the newsletter. |

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Supplemental Information. Work accomplished outside the specific work elements in the Statement of Work

Specific accomplishments during the quarter, often on other funding sources, that did not relate specifically to any of the Tasks / Jobs in the annual Statement of Work, but that did relate to StreamNet and served the project mission.

Project | Accomplishments, Second Quarter 2003

CRITFC
Much of the work reported for the third quarter related to subbasin planning was accomplished outside of StreamNet contract funding. At the present time, none of the CRITFC StreamNet Project Leader's time is covered under the contract.

IDFG
At last quarter's Steering Committee meeting, it was agreed that all state subcontractors would submit age composition data in the new data exchange format. Idaho StreamNet determined that it would be most effective to convert the hatchery returns data to the new DEF at the same time because there is an integral relationship between the two. Further, conversion of our hatchery returns and age composition data are tied to our conversion to Microsoft .NET. This has, therefore, turned into quite a large task and we have had to postpone several jobs from the current statement of work to next fiscal year. We are making progress on the hatchery returns and age composition and hope to have them completed by the end of the contract period.

MFWP
Visits to 5 of the 7 MFWP regions were completed to discuss projects within the Information Services Unit including StreamNet; the website was demonstrated at each region. Work continued on the Fish Planner; hope to have it completed next quarter. Design changes to the MFISH website were discussed and work has begun in conjunction with the Fish Planner. Attended a training session in SLC on the Comprehensive Fish and Wildlife Plan; 2 staff members hired to work on the plan began work. Have spent considerable time involved with chairing SWG Technical Committee. Considerable coordination has occurred between the Montana Natural Heritage Program and MFWP with respect to the Occurrence database and monitoring databases necessary to house the data for the plan.

ODFW
Our GIS Analyst took on the task of designing and modifying Oregon's barrier database to facilitate prioritization and a new statewide barrier prioritization ranking approach, in support of the Fish Passage Task Force. The pilot approach was presented to the Prioritization subgroup of the Fish Passage Task Force on April 16th. The meeting resulted in a revised barrier prioritization criteria, which was subsequently distributed to the subgroup for review. He subsequently completed the 1st cut of the barrier ranking methodology.

The Assistant Database Manager/Developer completed the Wildlife Habitat Conservation and Management Program Database and User's Guide, and distributed its components to future database users. She was also retained to develop an accounting component to ODFW's FishScreen Database. Versions 2.2, 2.3, and 3.0, as well as an updated User's Guide were distributed during this quarter.

The Project Leader worked with DEQ staff on a strategy to perform quality checks on our timing data, and to fix known problems with the data. Final Q/A was performed on the Timing GIS dataset, the metadata was completed, and the timing units were made public for the purposes of enabling access to timing data tables.

Oregon StreamNet staff coordinated with Wildlife Division staff regarding project scoping, hiring, and other details related to developing Hunt Unit / Travel Management Area (TMA) maps. Our GIS Analyst provided a brief orientation to the new TMA staff person, helped her assemble the data layers she needed, and provided technical assistance to her when needed

Reconciliation between the CREP project quality criteria data and ODFW's current distribution data was completed during this quarter. Also, 236 additional 1:24,000 scale distribution records were incorporated into the ODFW Distribution database that had not been previously incorporated from the past CREP project.

The GIS Analyst incorporated closed basin Redband data (updated October, 2001) into the distribution database.

Region   Several members of the Regional StreamNet staff assisted the StreamNet Library with moving and installing shelving as part of the Library expansion.

The GIS Specialist continued working part time under funding from PACFIN to develop GIS data for marine harvest information. This was part of the effort to provide outside funding for project staff to cover time not included under the StreamNet contract

The Programmer and Database Manager worked part time on work for CalFish, the California equivalent to StreamNet. This was also part of the effort to provide outside funding for project staff

WDFW   The WDFW StreamNet Project Manager met with Jim Lemieux, Joint Stock Assessment Project Database Manager in Spokane to get trained on preparing and coding WDFW resident fish and habitat field sampling data for entry into the new Universal Database. WDFW will take over responsibility to enter these data and will take the lead on providing subsets of this new database to StreamNet for posting as an "Independent Dataset" some time in late fall, 2003.

The WDFW StreamNet Project Manager generated and posted a description of the StreamNet Online Database/Web site to the Washington State Natural Resources Data Portal. A demonstration of this Portal will be provided at the July Steering Committee meeting

WDFW StreamNet staff participated in reviews of the fish distribution, hatchery facilities, hydrology and other spatial data layers that have been posted on the WDFW SalmonScape ArcIMS Web site for public viewing and access. Staff also tested the capabilities of the ArcIMS application and provided detailed comments to the WDFW GIS Manager responsible for this development project.

The WDFW StreamNet Project Manager is helping to connect PDA-based data recording programs with existing core datasets by developing CSV (comma-separated-value) interchange formats to bridge the format differences between the PDA formats and these core data collections.
In a recent WDFW re-organization, the four staff who manage the agency's hatchery databases were merged into the Biological Data Systems Unit, led by the WDFW StreamNet Project Manager. This places the people responsible for collection, input, and QC of our key hatchery databases side-by-side with WDFW StreamNet staff, which should greatly enhance data quality and management effectiveness in the future.

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