



StreamNet Project

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Second Quarter Progress Report

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Introduction

StreamNet is a cooperative, multi-agency data compilation and data management project authorized by the Northwest Power and Conservation Council's (NPCC) Fish and Wildlife Program (FWP) and is funded primarily by the Bonneville Power Administration. The project 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 (CRITFC) and the US Fish and Wildlife Service (USFWS) to develop databases within the respective agencies and to facilitate data standardization and transfer regionally. The remaining fourth consists of the regional staff at PSMFC, which includes project management, database management and data dissemination functions.

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 (100K) 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 (www.streamnet.org) 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 queryable database and also provides maps, individual data sets not contained in the queryable database, and library references. All data in the StreamNet database are referenced to source documents that are housed in the StreamNet Library (www.fishlib.org). Work reported herein is tied to the specific jobs contained in the Fiscal Year 2005 (FY-05) Statement of Work, available at www.streamnet.org/about-sn/project_management.html.

Work priorities for FY-05 include conducting a thorough Quality Assessment of data, 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 FWP, and project administration. This report documents accomplishments made by the project and its cooperators during the second quarter of FY-05. 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 Work Statement, 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.

Activities in the second quarter of FY-05 included routine development and maintenance of data sets, routine administrative activities to continue project function, and data management support for components of the FWP. The project continued supporting the Columbia Basin Fish and Wildlife Authority's (CBFWA) Collaborative Systemwide Monitoring and Evaluation Project (CSMEP). StreamNet has volunteered to contribute two person months per state to conduct data inventories and enter the information in the online data entry tool developed by Oregon StreamNet. This effort is seen as a top priority by the region's fish managers despite the fact that it alters priorities established in the StreamNet Statement of Work and will result in the delay of some planned work on existing data sets.

Key highlights of activities by all project components this quarter are presented by work objective are described below.

Data Acquisition and Development

The cooperating StreamNet projects continued development (acquisition, updating, formatting and delivery) of data during the second quarter. Project cooperators continued to progress toward developing a 1:24,000 (24K) hydrography and generation of linear event data for the basin's 24K fish distribution. Additional specific activities included:

Montana StreamNet (MFWP) nearly completed their annual visits to gather 2004 survey data from Montana fisheries biologists; the remainder will be completed early in the third quarter. Prior to the visits, StreamNet staff assisted the Fisheries Division in the development and deployment of a questionnaire assessing current monitoring efforts of Fisheries Division field staff. The questionnaire was provided to field biologists during the regional visits and StreamNet staff conducted the interviews with biologists to complete the survey. Survey results were entered into a database and will be part of an overall assessment of Division activities including standard field survey forms to increase efficiency. Assessment of habitat fields could become an outcome of the stream survey form standardization process. Conversations on funding the completion of the 24k NHD continued in the second quarter and a meeting is scheduled to discuss this issue in the third quarter with USGS National Map representative and other interested parties in Montana. The FWO restoration database was rewritten to facilitate data exchange with StreamNet and to accommodate additional data. Discussions with Peter Lofy from BPA began on a genetics DEF; several emails were exchanged and it was determined that a face-to-face and/or telephone conversation would be in order.

Oregon StreamNet (ODFW) made progress on most project deliverables slated for attention during the quarter. Their focus on QA/QC of existing data is paying dividends in that existing data records are being corrected and/or made consistent across the years of data availability,

and their QA/QC protocol documents are being improved and refined as error-checking strategies are added or improved, and employed. All abundance trends, including age and juvenile abundance information are seeing improvement, as well as information related to fish passage at various in-stream impediments in Oregon. Progress continued to be made toward establishing an agreed upon approach to address 24K hydrography development and the generation of linear event data for the Basin's 24K fish distribution.

Washington StreamNet (WDFW) data compilers completed extensive QA/QC and conversion work before exchanging over 35,000 adult abundance (escapement) records and over 4,500 age records. In addition, several thousand hatchery return records were updated to adhere to the new DEF, and will be exchanged in the third quarter once verified LocMaster entries are assigned to them.

Data Management and Delivery

Routine data management and administration of the database and Internet systems continued at all StreamNet cooperators during the quarter. Additional specific activities included:

At the central PSMFC component of StreamNet (Region), the Data Exchange Format (DEF) was upgraded to version 2005.1, including significant improvements to the barriers, hatchery returns, and habitat restoration projects data structures. Significant steps were taken toward developing the ability to deliver age data in standard formats. The Data Manager focused on data consistency issues, reconciling the StreamNet database table structure with the new data exchange format specifications, and loading data as soon as it was submitted. The web query system's ASCII and Excel file downloads were improved by stripping carriage return and line feed characters out of the downloaded files, leading to a significant improvement in usability for people who download large data sets for analysis. The Internet Map Server was given a clean start including an upgrade of the Operating System and a clean install of ArcIMS configured with Internet Information Services (IIS) as the web server. This is an important change in the site configuration and will allow StreamNet to take advantage of active server pages and the IMS viewer developed by California Dept. of Fish and Game for CalFish.

Idaho StreamNet (IDFG) crossed some major hurdles regarding infrastructure for implementing the Idaho Fish and Wildlife Information System (IFWIS). Among those were implementing a proxy server to allow distribution of information via the web, reconfiguring the IFWIS data framework and configuring Reporting Services. These accomplishments will allow us to move forward with full implementation of IFWIS. By providing access by biologists to the information that we ask for StreamNet and giving them tools that will increase their productivity, we will increase their ability and willingness to provide information that can be used by StreamNet. IDFG also modified their data framework, making it easier to manage the entire database, which is getting quite large and complex. It also ties the internal IDFG side of the system with the data that we format for StreamNet.

MFWP held discussions with the new FWP Network Supervisor to move MFISH and other FWP Information Management Unit data to FWP's new server system. The move will likely occur next quarter. The work needed to provide information on restoration projects as part of the MFISH web-based query system was outlined to NRIS contract staff and work was begun. Due to changes in the table structure that

Montana maintains, release of the report will occur next quarter. Considerable work has occurred in providing a better organization of FWP GIS data within the infrastructure of NRIS. MFWP Staff handled 10 fisheries related requests this quarter from FWP staff; provided mapping products for the Montana Comprehensive Fish and Wildlife Conservation Plan, the Montana Natural Heritage Program for Element Occurrence record development and conceptual ideas to the Fisheries Division for the creation of the Statewide Fisheries Management Plan.

ODFW expended a significant amount of time this quarter on efforts to modernize data management and dissemination capabilities through the use of SQL Server and ArcIMS software packages. They received approval to purchase the necessary software and equipment during the quarter. Other work this quarter related to data and database management infrastructure improvements, including tool, website, and database development, as described in this report. Of particular note was the deployment of a new statewide data repository to allow for the capture of metadata for all Oregon data collection efforts. Also, a rough draft of the QA/QC protocol document for Harvest data was completed.

The WDFW Location Data Manager made significant progress in learning ArcGIS 8.3/9.0, creating her first routines for generating and verifying location-related spatial data. She also began incorporating the changes stemming from the improved LocMaster table into her conversion and QA/QC routines. The stage is being set for much more efficient location code identification and verification for all future StreamNet data exchanges.

Library and Reference Services

Columbia River Intertribal Fish Commission StreamNet (CRITFC) operated the StreamNet Library throughout the quarter. Routine library services continued but were hampered by a hard drive failure on the library's server at the end of December. Crash recovery occurred in January. No data were lost and library services to users were only slightly impacted. As a result of the experience, however, stronger crash prevention and recovery programs were implemented. The server will be upgraded to a RAID disk system and a complete backup of the Library system will be stored at the Regional office monthly.

ODFW located a large set of historic typed and handwritten daily dam count records dating back to the 1930's, which were moved into the ODFW Library. As far as anyone knows, this is the only non-summarized record of this information.

MFWP coordinated with the MT Natural Heritage Program to explore creating one reference system that would meet the needs of both agencies and StreamNet. A solution is being designed and discussions will continue next quarter.

Services to Fish and Wildlife Program Activities

The Region and the cooperating projects continued to support various other FWP programs throughout the basin. The Regional Program Manager continued participation in several regional scope programs, including CSMEP, NED and PNAMP, to provide input and support related to data management. Along with the CRITFC StreamNet Project Leader, he collaborated with NPCC staff to develop a plan to capture data developed through the Council's subbasin planning effort. The StreamNet cooperators also expended significant effort to respond to a CBFWA request for suggestions about ways to roll data up into high level indicators to summarize population status. Our conclusion was that existing data were not collected to address that objective, and a simple means of doing this was not immediately available.

CRITFC contributed to completion of the John Day subbasin assessment. A major reanalysis of habitat conditions and fish production was completed for the John Day Subbasin Plan. Files on the StreamNet system were updated with the revised data sets. They also made progress toward developing regional data management and monitoring standards. Progress is slow but steady in efforts to improve data sharing and standardization. We expect these discussions will clarify and strengthen the role of StreamNet within the Columbia Basin.

The MFWP Project Manager reviewed management portions of subbasin plans for the Kootenai and the Flathead and will report at the April StreamNet Steering Committee meeting. The project manager continues to be engaged with the activities of NED and will provide input as necessary.

IDFG continued data inventory efforts for the FWP funded Collaborative Systemwide Monitoring and Evaluation Project (CSMEP).

ODFW maintained the online data inventory interface and database for the CSMEP project which they had developed.

WDFW entered all Methow Basin dataset inventory entries received from WDFW sources into the CSMEP Web-based data entry system and verified content by retrievals.

Project Management and Coordination

Routine project management and coordination continued at all levels of the StreamNet Project during the quarter. Project management activities included personnel management, project guidance, budget management, and reporting. Coordination activities included working on StreamNet related topics with other projects/programs/agencies that are not specifically part of the FWP and therefore not covered in the objective above. In addition to routine data development, the state StreamNet projects completed a grant application to the Doris Duke Foundation for funding of a regional approach to collecting non-game fish data to support development of the federally mandated Comprehensive Fish and Wildlife Conservation Plans. If approved, the grant would support time of StreamNet staff that is not currently covered under the contract with BPA.

A major administrative accomplishment at the Region during the second quarter was conversion of the Statement of Work to the new BPA project tracking system, Pisces. The five project objectives were reorganized to fit under a dozen BPA-defined Work Elements. The conversion was not without some glitches, but given the complexity of this project, it converted reasonably well. No changes were made to project goals or scope through the conversion, although some delivery schedules were adjusted. Future work statements will be developed under the new Pisces format. In addition, the FY-04 report was converted into a brochure for easier reading, and the fourth StreamNet Newsletter was delivered to about 1000 people.

Project management at CRITFC was routine, except for potential loss of the Database Programmer position. StreamNet support for this position has been eroded over the years by inflation and level project funding, and if replacement funding cannot be found, the position may have to be terminated. The result would be that CRITFC would not be able to maintain the data trends it presently handles (dam counts, tribal juvenile abundance, etc.). Should this occur, CRITFC will work with regional staff to see whether someone else can maintain these trends.

Some ODFW efforts were hampered this quarter by the loss of two staff members. However, a new Library Technician was hired. Coordination activities included the Natural Resources Information Management Program (NRIMP - aka Oregon StreamNet) and the Marine Resources Program (MRP) collaborating to develop an online harvest status tracking system for the 2005 marine sport season. The site can be accessed via a link from the main MRP website (<http://nrimp.dfw.state.or.us/mrp/default.aspx?p=40>). ODFW continued support of the Oregon Plan Assessment via data compilation of Oregon Watershed Council datasets, data management, database and web site development. Staff continued to support the Comprehensive Wildlife Conservation Strategy throughout the quarter, mainly focused on providing GIS and analytical support. They worked with the ODFW Restoration and Enhancement Board and Wildlife Division staff to secure funding for staff training and the development of a new R&E website, and to purchase ArcIMS, ArcSDE, and SQL Server. They met with the INR (Institute for Natural Resources) to coordinate efforts between the North Coast Portal and the Oregon Plan Review Site, and continued database and web support. And, staff members attended the Oregon Chapter of the American Fisheries Society annual conference in Corvallis on Wednesday through Friday, Feb. 23 – 25 to promote StreamNet and data sharing.

WDFW's new focus on tracking progress this year made itself felt in several activities this quarter. WDFW staff provided an expanded (written) Roundtable report, including status of outstanding assignments from previous meetings. Midway through the quarter, staff also provided written updates on existing project work to keep the Project Manager more closely informed on WDFW StreamNet activities. Accountability has been stepped up this quarter, and the Project feels more on track as a result.

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 level base funding. Work on the low priority types will largely be limited in scope or effort unless new funding is approved. Primary focus this fiscal year will be to Quality Check the data in the StreamNet databases and to correct as necessary. Data updates will be delayed during the QC

Objective 1 Data acquisition and development

Task 1 Anadromous distribution and life history (habitat use) at the 1:100,000 scale

Document the occurrence, distribution and life history characteristics of anadromous fish species. Project participants made major updates last fiscal year utilizing the new Data Exchange Format (DEF). Maintenance of this data set will continue. This is a high priority data set.

Project Job Planned work elements

Accomplishments, Second Quarter 2005

IDFG 1 On an opportunistic basis, capture and update 100K anadromous fish distributions.

We did not submit new generalized fish distribution as planned, but will target it for the third quarter.

ODFW 1 Update, maintain, correct and exchange anadromous fish distribution and documentation information.

Routine maintenance was performed on Oregon's anadromous fish distribution and documentation information during the quarter.

WDFW 1 Convert newest Washington anadromous fish distribution data to StreamNet format (once streams layer can accommodate 24K streams). Exchange data when completed.

In January the Location Data Manager started conferring with ODFW StreamNet to resolve overlapping and sometimes contradictory fish distribution data. This effort focused on existing StreamNet data, but it also forces a review, QC and partial preparation of pending StreamNet 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, and project participants will begin expanding data for additional species. This is high priority for Montana and Idaho, and new data will be developed by the other states as time allows.

Project Job Planned work elements

Accomplishments, Second Quarter 2005

IDFG 1 On an opportunistic basis, capture and update 100K resident fish distributions.

We finished off the last remaining details on the bull trout 5-year status review project. It was submitted to PSMFC as an independent data set for the StreamNet web site.

		The generalized fish distribution update for bull trout has not been submitted to PSMFC. We will target it for the third quarter.
MFWP	1	Complete Distribution and Use Types data sets from data collected from biologists, documents and reports during 2002-2003 using LLID stream routes and Montana's lakes coverage and water code system. Exchange with StreamNet. Complete distribution and use type data sets for 2003-2004. Update entire state. Focus on target species during the year if opportunity arises. Exchange the data to the regional database in the approved DEF format.
		Data was entered as it was received.
MFWP	2	Visit MFWP, other state and federal fisheries biologists in 2005 to collect 2003-2004 fish distribution and supporting survey data and references.
		The visits to fisheries biologists to obtain data were nearly completed; the remainder will be completed early in the third quarter.
MFWP	3	Work with FWP Fisheries Division to assist in the development of fisheries field collection survey standards.
		StreamNet staff assisted the Fisheries Division in the development and deployment of a questionnaire assessing current monitoring efforts of Fisheries Division field staff. The questionnaire was provided to field biologists during the regional visits and StreamNet staff conducted the interviews with biologists to complete the survey. Survey results were entered into a database and will be part of an overall assessment of Division activities including standard field survey forms to increase efficiency.
MFWP	4	Explore commonly used habitat fields collected on streams to see if there is a core set related to fish distribution data.
		Assessment of habitat fields could become an outcome of the stream survey form standardization discussed in Objective 1 Task 2 Job 4.
ODFW	1	As time and funding permits update, maintain, correct and exchange resident fish distribution and documentation information.
		Routine maintenance was performed on Oregon's resident fish distribution and documentation information during the quarter.
WDFW	1	Using formal fish distribution mapping parties, organize the effort to update Washington west slope cutthroat distribution data and compile that data in concert with the existing federal data that was compiled in 2002.
		No further WDFW mapping parties will be conducted to update cutthroat trout data this year. The federal data from 2002 will be added to our fish distribution database during the third quarter (based on projected progress on our working with ArcGIS 9).
WDFW	3	Incorporate any Washington bull trout distribution data updates resulting from the regional 5-year bull trout status review.
		All bull trout distribution and use updates from the status review were entered into the database.

Objective 1 Data acquisition and development

Task 3 Adult abundance in the wild

Develop and maintain (update) 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 by other agencies). This is a high priority data type. 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. These are lower priority under base funding.

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Accomplishments, Second Quarter 2005</u>
CRITFC	1	Update mainstem Columbia and Snake River dam counts through 2003 and provide updated data to the StreamNet database.	We began updating the dam count trends at the end of the second quarter. They will be completed early in Q3.
CRITFC	2	Update available tribal spawning ground survey data.	We began updating the spawning ground trends at the end of the second quarter. They will be completed early in Q3.
IDFG	1	Compile and submit the 2004 field season redd count data from IDFG.	We found some missing redd count data from 2001 through 2004 and added it to our database. We also found some new redd count data that we incorporated. We are awaiting submission to PSMFC for the completion of the 2001-2003 Spawning Ground Report.
MFWP	1	Receive all 2004 stream and lake fish survey data during field office visits; data may be one time visits, index streams and/or results from gill nets in lakes and reservoirs.	Adult abundance data were gathered in the second quarter during the regional and area office visits.
MFWP	2	Input 2003 data into MFISH, including trend, count and references.	Work continued on this ongoing task.
ODFW	1	Maintain existing anadromous, resident, and non-game abundance and index trends. Any updates will be the result of QA/QC efforts, and easily incorporated trend data.	Routine maintenance was performed on Oregon's abundance and index trend information during the quarter, including requesting information from data providers in order to perform trend corrections, and to update StreamNet trends.
WDFW	1	Update and enhance the existing natural spawner database (escapement estimates and/or detailed counts) for available species. Convert and exchange data.	<p>Escapement data through the 2003 return year was delivered to PSMFC on March 15,2005 (XchangeWDFW_2005_03_15.mdb). A total of 35,015 escapement records and 1,954 trend records were delivered.</p> <p>Stream survey cards for the 2004 return year were entered into the Survey Card database branch of the master Escapement database. A total of 87 records have been entered for the Columbia River and tributary specific sites this quarter. The 2004 return year Survey Card data base is complete and up to date now.</p> <p>Work began to collect final 2004 escapement estimates from statewide managers. The final escapement estimates from the 2004 return year that have been received were entered into the master Escapement database. A total of 90 entries have been made so far with data coming in daily.</p>

Continued effort was made to write up sub-basin descriptions and historical information to supplement the master Escapement database.

WDFW 2 Continue maintaining and updating adult trap databases on all traps in Region 5 (lower Columbia River).

Cedar Creek adult trap data were entered into the master data base. A total of 169 records were entered and proofed this quarter. The supporting Excel spreadsheet used by managers was also updated and sent to the appropriate people.

Objective 1 Data acquisition and development

Task 4 Hatchery releases

Develop and maintain (update) information on the release of hatchery reared fish. Emphasis this year will be on developing release data before release information is rolled up into PSC location codes. Release data for resident species under base funding will be developed only where the data are readily available (primarily Montana). Efforts will be made to complete cross references between PSC release codes and LLID stream location identifiers. This is a high priority data set.

Project Job Planned work elements

Accomplishments, Second Quarter 2005

FWS 1 Acquire and process hatchery release information from national fish hatcheries in the region.

Release, recovery, and catch sample information for 2004 was submitted to RMIS through the USFWS Western Washington Office.

MFWP 1 Exchange Montana's hatchery release data after development of a resident DEF and/or modifications to the existing anadromous hatchery release DEF. Number of years and number of waters will need to be determined.

Exchange will occur in August if a DEF is developed.

ODFW 1 Compile and submit anadromous hatchery releases through 2003, and 2004 where available, in an unrolled format if possible.

Our GIS Analyst attempted to relate PSC codes to location identifiers for a number of hatchery releases in the High Desert region. Given the inconsistent format in which the data have been provided to us, this stage of the process is mostly manual and very time consuming. There are 11 sites remaining in the High Desert region where LLID's have yet to be assigned.

WDFW 2 Complete compilation and QC for resident fish hatchery stocking data once lakes location issues are settled.

The Location Data Manager attended a Hatchery Sub-Unit meeting to learn of the database progress made by Mark Downen of Region 4 WDFW. It appears Downen's work will simplify the geo-referencing work needed on Region 4 resident releases.

Objective 1 Data acquisition and development

Task 5 Hatchery returns

Develop and maintain (update) information on the return, disposition and straying (e.g., from other hatcheries) 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 2002. Development of disposition data is lower priority and would require additional resources. This is a high priority data set.

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Accomplishments, Second Quarter 2005</u>
FWS	1	Complete work on the new program to convert information from the FWS CRiS format to the new StreamNet hatchery returns format.	The FWS Project Leader reviewed documentation for trend no. 60317 fall Chinook salmon at Eagle Creek NFH, and determined that this trend had been misidentified in an initial StreamNet data set obtained from a contractor. These returns were for Eagle Creek in the Columbia River Gorge, not Eagle Creek NFH. Trend 30810, which was a place holder for that same, non existent run, was deleted from the Trend table.
IDFG	1	Compile and submit the 2004 field season hatchery return data from IDFG.	We added some missing 2004 hatchery return data to our database. It is awaiting submission to PSMFC.
WDFW	1	Complete the conversion of old DEF hatchery returns data to the new DEF for all species and sites. Exchange data when complete.	The Location Data Manager started the updates for a hatchery return data submission that will be completed next quarter. All WDFW hatchery returns data have been converted to the new DEF. Some adjustments to WDFW data were made to better reflect disposition. Proofing of data was nearly completed in Q2. Once proofing is done and hatchery LLIDs are complete, these data will be delivered early in Q3.
WDFW	2	Work jointly with other WDFW hatchery data unit staff to create a more efficient means to improve the internal WDFW hatchery returns data system and simplify data flow from this database into the conversion and exchange process.	StreamNet staff and WDFW staff worked closely to convert historical alpha naming conventions of hatchery facilities to 19 digit PSC code that is cross referenced with LLIDs. This was not an easy task as hatchery names have changed over the years and not documented well so they could be easily translated. Due to the retiring of key agency staff and the subsequent loss of institutional memory, the timing could not have been placed on hold without losing some valuable data. Now that the hatchery location codes, species, run, sub-run, disposition, and use codes have been converted, these data can be saved and stored in a more useful format.
WDFW	3	Help WDFW regional biologists with run reconstruction efforts in order to better feed the WDFW-StreamNet master databases and meet other urgent needs of the agency.	No work was performed this quarter due to other contractual obligations taking precedence.

Objective 1 Data acquisition and development

Task 6 Dams and Fish Passage Facilities

Develop and maintain information on dam facilities. Update information as necessary. This is a high priority data set.

Project Job Planned work elements

Accomplishments, Second Quarter 2005

ODFW 1 Maintain existing dam and fish passage facilities information. Any updates will be the result of QA/QC efforts, and easily incorporated dam and fish passage data.

Routine maintenance was performed on Oregon's existing dam and fish passage facilities information during the quarter. Effort this year is focused on improving the quality of existing information rather than updating or adding to the existing data. For details on this quarter's QA/QC efforts, see Objective 2, Task 3, Job 2.

WDFW 1 Update the dam database, adding records and improving field entries as warranted.

New research on a barrier data submission revealed potential insights into the dams / fishways in WDFW's undocumented Facility layer (one source that was used for the StreamNet dam table) . Cross-comparisons to improve the StreamNet dam table will continue once the barrier submission is complete.

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. Update information as necessary. This is a high priority data set.

Project Job Planned work elements

Accomplishments, Second Quarter 2005

WDFW 1 Update the hatchery database, adding records and improving field entries as warranted, including record updates for related tables (i.e. HatcheryXProduction data). Convert and exchange data when complete.

The Location Data Manager started re-organizing the internal Facility layer to allow for better data collection and StreamNet submissions.

Objective 1 Data acquisition and development

Task 8 Harvest

Develop and maintain (update) information on sport and commercial harvest. Higher priority is assigned to anadromous

Project Job Planned work elements

Accomplishments, Second Quarter 2005

CRITFC 1 Update available ocean and mainstem Columbia River harvest numbers through 2004, as available.

This is an un-funded activity in our work statement. We met with regional staff about them assuming this task. We will schedule a meeting with Bill Kinney early in Q3 to discuss the feasibility of this transfer.

ODFW 1 Maintain existing harvest trends. Any updates will be the result of QA/QC efforts, and easily incorporated trend data.

Routine maintenance was performed on Oregon's existing harvest information during the quarter. Effort this year is focused on improving the quality of existing information rather than updating or adding to the existing data. For details on this quarter's QA/QC efforts, see Objective 2, Task 3, Job 2.

Objective 1 Data acquisition and development

Task 9 Hydrography

Maintain a regionally consistent routed hydrography layer at the 1:100,000 scale. This LLID based hydrography is the basis for georeferencing and displaying locations for all other data in the StreamNet database, and as such is an essential data set. Data will be updated as necessary. Exploratory work will be initiated in preparation for the eventual, inevitable move to the 1:24,000 scale hydrography being developed by other entities.

Project Job Planned work elements

Accomplishments, Second Quarter 2005

MFWP 1 Using the NHD, continue to update the routes using the updated NHD layer, including lakes; quality check the cross-reference between the LLID system and MFWP's water code system. Pursue any needs developed by the Steering Committee for a 1:24 K product.

Conversations on funding the completion of the 24k NHD continued in the second quarter. A meeting is scheduled to discuss this issue in the third quarter with USGS National Map representative and other interested parties in Montana.

ODFW 2 Assist regional staff with the development of a hybrid 100k and 24k hydro layer that will enable display of all distribution data in a linear format

Our GIS Analyst compared High Density NHD and Framework Hydro data in the Coos basin, attempting to identify a clean and quick way to derive a consistent "24k" level of density from the Framework data. The Framework attributes allow for this to be possible, but are not coded as such at this time.

WDFW 1 Build and submit a "hybrid" layer containing 24K representation of all 100K Washington streams PLUS 24K-only streams containing StreamNet data.

The WDFW GIS Manager reformatted WDFW's WRIA-based 24K hydro database to include the ability to provide data by HUCs or WRIA (Washington administrative basins), a pre-cursor to construction of a statewide operational layer to merge with the regional StreamNet 100K layers. This operational layer will include all 100K streams, additional named 24K streams and those unnamed 24K streams with data associated with them.

The concept of using the NHD line work as a basis was shelved after testing due to (1) patchy NHD coverage in eastern Washington and (2) line work and attribute problems that were discovered in the base hydro being fed the NHD layer from the Oregon/Washington Framework project.

To date, WRIsAs have been completed in the lower Columbia, lower Snake, and the area above Grand Coulee Dam. Additional watersheds have been added and completed to provide comprehensive coverage of the Washington/Idaho border. Attributes for the WDFW 24K that have been added include the major and minor codes and a HUC variable (so that the lines belonging to a given HUC can be pulled and a route system rebuilt upon the pulled lines). All lines along WRIA boundaries have been edge matched so that they will snap together during the upcoming cross-border processing.

Remaining areas in the Washington portion of the Columbia Basin include the Yakima and mid-Columbia areas, which will be completed in the Third Quarter.

WDFW	2	Finalize creation and QC of a 24K spatial/tabular lakes dataset to support data compilation and exchange for resident fish releases and other data under Objective 1.	The Location Data Manager met again with Chris Snyder of DNR to discuss DNR's effort to cross-reference the DNR lake layer with Wolcott's Lakes of Washington. Near the end of the quarter DNR delivered their ARCGIS 9 product. Once we upgrade our ARCGIS software she will use it to improve our WDFW lake layer cross-reference.
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Objective 1 Data acquisition and development

Task 10 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. Preliminary work has been completed on this data type, but regional priority has not been assigned to developing these data. Work continues on improving the data structure and DEF, primarily through work being done by a related project in California. This currently remains a low priority data type under current base funding, but is ready should a higher priority be assigned by regional

Project	Job	Planned work elements	Accomplishments, Second Quarter 2005
CRITFC	1	Provide tribal PCSRF project information	The tribal database is available. Discussions conducted by the Northwest Environmental Data-network, Subbasin Planning Work Group, suggested that it may be useful to make all project description files available through one source. This will require additional scoping to see whether we can present the information in one file or whether we postpone merging the files. At the least we will send the files we have available to StreamNet next quarter.
MFWP	1	Continue to collect, centralize and maintain all stream restoration projects data for Montana using the "Future Fisheries Interface".	The in-house restoration projects database was rewritten to facilitate data exchange with StreamNet and to accommodate additional data. This task is ongoing.
WDFW	1	Complete conversion and exchange of Washington habitat restoration project information extracted from IAC's PRISM system and 2000-2002 NWIFC PCSRF data, given that a final DEF exists for this data category. Scope out additional content from WDFW's LIP initiative and other sources as time permits.	The new WDFW data compiler completed populating the electronic glossary of habitat restoration and barrier terms (including adding scanned images, rectifying redundancies in the entries, and adding a simple user interface). However, attempts to get permission to redistribute the content among StreamNet partners were rebuffed by AFS, which owns the publication rights to Neil Armantrout's original work. The glossary can be used within WDFW but not distributed any further at this point.

Objective 1 Data acquisition and development

Task 11 Barriers

Develop and maintain data sets for barriers to fish migration. 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 and culverts may require revisions to the DEF. The primary emphasis is on anadromous species except in non-anadromous areas. This is a low priority data set under current base funding, and will be addressed as time and other priorities allow.

Project	Job	Planned work elements	Accomplishments, Second Quarter 2005
MFWP	1	Maintain 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.	Work continued on this ongoing task.
ODFW	1	Update and maintain Oregon's Barrier data and minimal Fish Barrier data development based on new barrier information, including information from non-ODFW sources.	<p>Our GIS Analyst wrote a Visual Basic program to identify the co-occurrence of particular fish species / run presence at passage barriers within our Barrier database where no related fish passage table records exist. He analyzed unique fish passage table combinations to determine which records have accompanying "empty" records that could potentially be populated based on assumed passage similarities between species / life stages. From this, he identified the unique set of species / run / life stage / blockage extent and position combinations within the Fish Passage table and identified which combinations could be applied to previously uncoded records. This generated a "draft" set of records that will enable the explicit coding of the passage status for each species / run at each barrier within or at the end of their current distribution. All uncoded records were labeled in one of 4 categories: "ok to apply"; "possibly ok to apply"; "not ok to apply"; and "need to investigate further to understand why the fish passage record is coded the way it is" (e.g. distribution stops at a partial barrier). The passage for most of these records will be coded as "unknown", but this will be an improvement over the current status of "uncoded". Our plan is to clean up the document describing our decisions and requesting additional review / confirmation before proceeding with the automated assignment of fish passage table records.</p> <p>In a related effort, he began researching a recently completed fish passage assessment of the Clear and Foster Creek watersheds within the Clackamas basin, with the hope of using this recently compiled "field" data to q/a some of our more questionable fish passage data.</p>
WDFW	1	Scope existing Washington state barriers datasets for a pilot data submission this FY. Data sources will at least include the Salmon and Steelhead Habitat Inventory and Assessment Project (SHIAP) and TAPPS (now renamed as the Fish Passage and Diversion Screening Inventory - FPDSI) databases.	<p>The Location Data Manager drafted a Data Dictionary to document the cross-reference issues between the FPDSI and StreamNet formats.</p> <p>The new Data Compiler participated in the final round of Forum discussions concerning the new Barriers DEF. He then obtained a copy of the draft WDFW</p>

FPDSI (Fish Passage, Dams, and Structures Inventory) database, and began identifying all content that has a StreamNet equivalent. A draft of this list has been sent to the FPDSI data manager for review, and conversion routines for the simpler structures (culverts and fishways) are now being developed.

Objective 1 Data acquisition and development

Task 12 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 a low priority data set under current base funding, and will be addressed as time and other priorities allow.

Project Job Planned work elements

Accomplishments, Second Quarter 2005

CRITFC 1 Provide tribal juvenile abundance and/or outmigration data as time and availability allow.

We began updating the juvenile abundance trends at the end of the second quarter. They will be completed early in Q3.

ODFW 1 Maintain existing juvenile data records. Any updates will be the result of QA/QC efforts and easily incorporated trend data.

Routine maintenance was performed on Oregon's existing juvenile abundance information during the quarter. Effort this year is focused on improving the quality of existing information rather than updating or adding to the existing data. For details on this quarter's QA/QC efforts, see Objective 2, Task 3, Job 2.

WDFW 1 Continue maintaining and updating smolt trap databases on all traps in Region 5 (lower Columbia River). Scope out a pilot data conversion and exchange effort for Cedar Creek data.

Prep work was performed to create an empty 2005 spring smolt trapping table. Statistical week tables for 2004 data for steelhead, cutthroat, wild coho and hatchery coho were completed. QA/QC was performed on Juvenile data and errors were corrected. Supporting Excel tables were then corrected so final reports that are generated will reflect the QC changes. Tag code information that was missing or incorrect was updated. More supporting tables with calculations built in were built to speed up reporting to head biologists.

We proofread the 2003 Cedar Creek smolt trap report for Regional Fish Biologist Dan Rawding.

Objective 1 Data acquisition and development

Task 13 Age

Develop and maintain information on age/sex composition of returning adults, primarily for anadromous species. Emphasis on this data type will increase once the draft DEF is tested and finalized. This is a low priority under current base funding.

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Accomplishments, Second Quarter 2005</u>
CRITFC	1	Provide CRITFC age data on sockeye populations and Bonneville Dam sampling	An e-mail dialog and meetings were held with regional StreamNet staff to refine the age DEF. New data will be submitted in the revised format next quarter.
FWS	1	Finish work on the new program to transform age information from the CRiS format to the new StreamNet format.	The Project Leader discussed possible changes to the Age table with Mike Banach.
ODFW	1	Maintain existing age data trends. Any updates will be the result of QA/QC efforts and easily incorporated trend data.	Routine maintenance was performed on Oregon's existing age information during the quarter. Effort this year is focused on improving the quality of existing information rather than updating or adding to the existing data. For details on this quarter's QA/QC efforts, see Objective 2, Task 3, Job 2.
WDFW	1	Update and exchange age data records gleaned from hatchery returns and adult abundance exchanged data.	Age data for escapement data through the 2003 return year (4,520 records) were delivered to PSMFC this quarter. Tables for the 2004 return year have been built to contain number sampled, mean fork length, and standard deviation. These tables will support the master database and make it easier to deliver final numbers to managers for analysis. There have been 280 new age records entered supporting the 90 new records in the master escapement database for the 2004 return year.

Objective 1 Data acquisition and development

Task 14 Production factors and run reconstruction

Develop and maintain information on survival, production factors, spawner / recruit estimates, and run reconstruction. This is a low priority data type under current base funding, but the existing spawner / recruit estimate data will be maintained. Current effort will focus on what aspects of this kind of data are most needed.

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Accomplishments, Second Quarter 2005</u>
CRITFC	1	Provide productivity data from subbasin planning and other technical analyses as available	Initial work was completed for Oregon in the second quarter. Subsequent discussion has occurred in the Northwest Environmental Data-network, Subbasin Planning Work Group and with Power and Conservation Council staff have indicated a need and a willingness to archive these data for Washington and Idaho and new information developed during the Council's provincial "roll-up" planning process. Funding is being sought for this archiving, but the time schedule is uncertain at present.

Objective 1 Data acquisition and development

Task 15 Diversion Screening

Explore the availability of data on diversion screening. Capture data on screens as time and other priorities allow. The DEF will need to be finalized before much can be done with this data type. This is a low priority data set under current base level.

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Accomplishments, Second Quarter 2005</u>
MFWP	1	If available, collect diversion screening data from the MFWP Habitat Bureau collected as a result of FRIMA activities in Montana.	Staff gathered additional data related to screening.
ODFW	1	Compile Oregon fish screening and diversion data. Data will be posted on the NRIMP site and linked to StreamNet as an 'as is' submission until a DEF is adopted.	Two events have caused a delay in this effort. First, the staff member assigned to compile the fish screen information left the project in January - his replacement has not yet been hired. Second, the Fish Screen and Passage Program has elected to completely redesign their database, meaning no updates will be made until the new version is complete. For these reasons, it is uncertain at this time if this task will be completed this fiscal year.
ODFW	2	Capture GPS coordinates for water diversions and fish screens in the Willamette subbasin.	The staff member assigned to capture fish screen GPS coordinates resigned from the project in March and her replacement has not yet been hired. It is uncertain at this time if this task will be completed this fiscal year.

Objective 1 Data acquisition and development

Task 16 Other data sets

On an opportunistic basis, develop other types of data as available or as requested by FWP participants. This relates to data relevant to StreamNet objectives which would be developed by StreamNet cooperators. Actual acquisition, standardization, georeferencing and distribution of these data will be dependent on available time and funding. These data may be included in the DEF in the future, or may be obtained and distributed as independent data sets in 'as is' condition. This is a low priority data set under current base level.

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Accomplishments, Second Quarter 2005</u>
MFWP	1	Provide updated genetic results information on Montana's species of concern. Explore providing data on Whirling Disease results; fishing pressure data on Montana's lakes and streams and other data sets if appropriate.	Discussions with Peter Lofy from BPA began on a genetics DEF; several emails were exchanged and it was determined that a face-to-face and/or telephone conversation would be in order.

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 meet their policy, planning, monitoring, and management needs. A primary data management effort this year will be to Quality Check the data already contained in the StreamNet databases and correct as necessary, which may delay the delivery of data updates.

Objective 2 Data management and delivery

Task 1 System Administration

Manage and maintain the computer systems (hardware and software) necessary for supporting the tabular and GIS data systems at the regional and cooperating agency levels, including system backup.

Project	Job	Planned work elements	Accomplishments, Second Quarter 2005
CRITFC	1	Manage, maintain and enhance the computer systems (hardware and software) necessary for supporting the StreamNet Library, including system administration, backup and recovery, hardware and software upgrades, and security.	We met with regional StreamNet staff to discuss additional security and backup procedures. We will purchase a DVD burner next quarter and create an off-site copy of the Library system at PSMFC.
IDFG	1	Manage, maintain and enhance the computer systems (hardware and software) necessary for supporting the tabular and GIS data systems, including system administration, backup and recovery, hardware and software upgrades, and security. coordination with the StreamNet data formats.	<p>We completed and implemented a proxy server, allowing the official Idaho Department of Fish and Game web server, which sits outside the firewall, to act as a conduit to our internal web server and web applications. This was a major step to allow IDFG staff access to fisheries applications that we are developing in</p> <p>We have configured and are testing Reporting Services on a development machine. It has not yet been installed on our production server, but should be soon. This will allow IDFG staff and outside individuals to access and query data in our databases.</p>
MFWP	1	Manage, maintain and enhance the computer systems (hardware and software) necessary for supporting the tabular and GIS data systems, including system administration, backup and recovery, hardware and software upgrades, and security.	Discussions have occurred with the new FWP Network Supervisor to move MFISH and other FWP Information Management Unit data to FWP's new server system. The move will likely occur next quarter.
ODFW	1	Manage, maintain and enhance the computer systems (hardware and software) necessary for supporting the tabular and GIS data systems, including system administration, backup and recovery, hardware and software upgrades, and security.	Routine system administration and management continued throughout the quarter. We continued to expend significant effort trying to acquire SQL Server, ArcIMS and ArcSDE, including testing evaluation copies of the software, reconfiguring existing hardware addressing various connectivity and configuration issues to facilitate the efficient use of these software packages, researching system design specifications related to recommended ArcIMS hardware configurations, and finalizing a justification package for the purchase of IMS software, hardware and related training. The purchase request was approved by ODFW during the quarter, but still must be approved by Oregon's Dept of Administrative Services.

			Our Database Manager acquired and configured two servers from ODFW's Information Systems Division for use as development servers for NRIMP. These servers had been taken out of service within ISD but will work well for our in-house needs.
Region	1	Maintain and update, as necessary, the hardware and software, including ArcView and other tools, extensions and projects, that constitute the regional Geographic Information System. Provide system administration, backup and recovery, and security.	<p>The GIS was maintained and updated this quarter, including the installation of service packs for ArcGIS and ArcIMS. A meeting was held with PSMFC staff where we explored the potential to work toward a more coordinated approach to GIS within the agency, leading to greater total capability and more efficient use of available funding.</p> <p>The Internet Map Server was given a clean start including an upgrade of the Operating System and a clean install of ArcIMS configured with Internet Information Services (IIS) as the web server. This is an important change in the site configuration and will allow StreamNet to take advantage of active server pages and the IMS viewer developed by California Dept. of Fish and Game.</p>
Region	2	Maintain and upgrade the StreamNet web server and software, including programming, system security, etc.	Second quarter web site up-time and query system availability were excellent, exceeding the target.
Region	3	Assist with development of XML schema based options for both incoming and outgoing data. Continue exploration of how XML can enhance data exchange.	We continued research and testing for remote database access in the second quarter. This is a slight variation on the XML schema concept of data submittal and validation, however it would accomplish the same goal eventually and we decided it was a viable option to explore more thoroughly.
Region	4	Maintain database servers and SQL Server software and databases; installing updates, patches and service packs as they become available. Manage logins and permissions. Routinely backup all databases. Assist with system administration and purchasing.	Routine maintenance of two SQL Servers occurred. The Database Manager helped design specifications for a new server to house the spatial data engine in SQL Server 2000.
WDFW	1	Manage, maintain and enhance the computer systems (hardware and software) necessary for supporting the tabular and GIS data systems, including system administration, backup and recovery, hardware and software upgrades, and security.	Routine system administration continued. All necessary software upgrades and security patches were installed on all computers managed by Vancouver StreamNet staff. ArcGIS 9.0 was installed on StreamNet computers to replace ArcGIS 8.1.

Objective 2 Data management and delivery

Task 2 Application and Interface Development

Develop computer applications and interfaces that facilitate the entry, management and dissemination of tabular and GIS data at the regional and cooperating agency levels. This will include development of new applications and tools as well as maintenance or modification of existing applications.

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Accomplishments, Second Quarter 2005</u>
CRITFC	1	Develop and/or maintain computerized databases, applications and interfaces that facilitate the entry, compilation, management and dissemination of tabular and GIS data.	Updating databases was begun in the second quarter. Systems are functioning adequately to accomplish this work efficiently.
IDFG	1	Develop and/or maintain computerized databases, applications and interfaces that facilitate the entry, compilation, management and dissemination of tabular and GIS data.	<p>Our Fish References System, which tracks fish observations, collecting permits, hatchery returns, redd counts and other fisheries data was 95% completed. This included porting the original user interface from Visual Basic 6 to VB.Net and redesigning the data tables to match recent changes in the StreamNet data exchange formats and internal database design modifications. The Fish Reference System is our core system for managing StreamNet bound data. There are a few minor tweaks remaining in the user interface. The data migration process from the old database to the new database has been run, but requires data validation before we can say we are done.</p> <p>We started work on porting our Spawning Ground Survey system, including the user interface and databases, from VB 6 to VB.Net.</p> <p>We updated our information system framework, creating further integration of our business rules engine and data validation process directly into the databases. We also reworked the design of the overall database structure, creating a master database holding our basic data such as hydrography and restricting the individual data category databases to their specific data elements. This will help create a tighter integration between the StreamNet side of our system and our internal data.</p> <p>We developed some developer-level (not user-level) documentation for our data framework, including data classes and applications.</p>
MFWP	1	Develop and/or maintain computerized databases, applications and interfaces that facilitate the entry, compilation, management and dissemination of tabular and GIS data.	The work needed to provide information on restoration projects as part of MFISH was outlined to NRIS contract staff and work was begun. Due to changes in the table structure that Montana maintains, release of the report will occur next quarter.
ODFW	1	Develop and/or maintain computerized databases, applications and interfaces that facilitate the entry, compilation, management and dissemination of tabular and GIS data.	A new statewide data repository called the NRIMP Data Clearinghouse was implemented during the quarter to allow for the capture of metadata for all Oregon data collection efforts beyond those efforts associated with the Coastal Coho Assessment.

			An XML viewer component was added to the web application framework. This will allow all web applications that utilize the framework to natively display XML files regardless of the users' choice of browsers. Normally browsers have different ways of interpreting XML and XSL documents which cause them to display differently. These files are now pre-processed on the server and delivered as normal HTML content.
Region	3	Develop and/or maintain computerized databases, applications and interfaces that facilitate the entry, compilation, management and dissemination of tabular and GIS data.. Assist cooperating agencies with tool development, as requested. Tools may include input interfaces, error checking, geographic locators, etc.	Updates were made to enhance and optimize the XRef builder tool. This is the tool that creates the fast lookup de-referencing tables used by the query system.
WDFW	1	Develop and/or maintain computerized databases, applications and interfaces that facilitate the entry, compilation, management and dissemination of tabular and GIS data.	The Location Data Manager started converting location related data organization to take advantage of the LocMaster table improvements. Primarily this work focused on point layer management and Beg/Endft determination processes. She also explored ARCGIS techniques for accurately capturing river milepost locations from the Washington State Stream Catalog

Objective 2 Data management and delivery

Task 3 Data (content) Management

Manage data at the regional and cooperating agency levels to assure timely and accurate data flow from source to final distribution. Activities include exchange of data to PSMFC, data loading, updating data, quality assurance procedures,

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Accomplishments, Second Quarter 2005</u>
CRITFC	1	Perform comprehensive QA/QC on all datasets maintained by CRITFC.	This will be completed and procedures reviewed and improved, if necessary, at the conclusion of the updating process next quarter.
MFWP	1	Manage data at the agency level, develop and maintain FGDC compliant metadata for GIS data, and exchange data to PSMFC according to deadlines specified in this work statement.	Considerable work occurred in providing a better organization of FWP GIS data within the infrastructure of NRIS.
ODFW	1	Manage ODFW-NRIMP and StreamNet data, including metadata development/maintenance, QA/QC activities, and work with regional staff as necessary to assure seamless loading of data into the regional database.	Our GIS Analyst participated in a number of GIS data coordination meeting during the quarter, discussing various topics such as CA / OR Hydro Synchronization, Mixed Scale Hydrography data development, overlapping distribution data, and ways in which to track changes to distribution data based on barriers that have been removed. Also during the quarter, he completed several data update and coordination efforts, including:

- a) Compiling a draft data coordination agreement for use between ODFW and WDFW in regards to synchronizing our distribution data before making data submissions to regional StreamNet.
- b) Updating fishway codes within the barrier database to reflect the recent changes to the DEF. Data and direction were provided to StreamNet regional staff for updating fishway data related to Oregon barriers, dams and hatcheries.
- c) Reviewing some Bull Trout distribution records with potential overlap. Data from a March 2003 submission to StreamNet contained 3 overlaps, which were not identified at the time. The data had since been cleaned up within our database, but the changes had not been passed along to regional StreamNet. The necessary information was compiled to submit to the Region to request modification of the records, but it will not be submitted until other cross-border issues can be addressed and a single data submission can be made to fix all known issues.
- d) As part of the coordination effort to address cross-border distribution conflicts, developing a program to identify the set of resident species records that are in conflict (despite inconsistent RunID coding between the states for the same populations). He notified regional StreamNet staff of the issue, and characterized conflict issues relevant to resident species in preparation for additional coordination with WDFW and the regional staff.
- e) Compiling and integrating ODFW distribution / documentation data for summer steelhead and Bull trout in the Walla Walla basin in order to facilitate comparison with WDFW data for the basin. The data were provided to WDFW, and a conference call occurred in late March to explain our efforts.

Our GIS Analyst responded to a request from StreamNet regional staff for changes made to the Generalized Fish Distribution (now call FishDist) table since our last data submission. He submitted updates for 50 records based on changes that occurred related to recently investigated culvert / passage issues, chum spawning use in the mainstem Columbia, and also a couple of changes related to overlapping bull trout records that had been resolved internally but had not yet been shared with regional StreamNet.

Our Data Analyst completed a rough draft of the QA/QC protocol document for Harvest data.

ODFW 2 Perform comprehensive QA/QC on all Oregon Trends, Age, Harvest, Dams, and Barrier datasets.

Staff continued to document data compilation approaches/decisions related to maintenance of the trend and reference databases. This will assist in the QA/QC process and development of protocol documents by documenting existing guidelines that are followed, as well as identify and spell out new guidelines that are needed.

			<p>Significant effort was spent this quarter ensuring the data quality of Oregon's existing StreamNet Trend information, completing the Lower Columbia chum trends, while continuing to focus on Lower Columbia coho, the Grande Ronde, Imnaha, Wenaha, and Lostine, as well as Oregon trends in other parts of the Columbia basin. A specific review to identify Trends where the Null box is checked (meaning no survey was conducted that year), but Sampling Method was coded with something other than 'Not Applicable' was conducted for all Oregon trends resulting in a change to the Sampling Method and/or Calculation Method field where appropriate. Trends where the Null box was checked but there was a zero in the Count field were also reviewed and changed where appropriate.</p>
ODFW	3	Coordinate and work with internal ODFW staff to improve the agency data collection efforts to allow more efficient compiling into internal intermediate NRIMP-Oregon StreamNet databases and/or StreamNet databases at the regional scale.	Two staff members attended an Insyte Inwin training session, which was provided by ODFW Information Systems Division staff on January 19th. Inwin is the application we use to remotely access the data on ODFW's mainframe system, such as HMIS.
Region	1	Assist data contributing agencies in development of data, including formatting, coding, data entry, error checking, and submitting to the regional database.	<p>The Regional Fisheries Biologist worked with a MFWP StreamNet data compiler in order to map MFWP habitat restoration project data to the StreamNet DEF.</p> <p>The Regional Fisheries Biologist worked with a WDFW StreamNet data compiler to map WDFW barriers data to the StreamNet DEF.</p> <p>The Regional Data Manager worked with ODFW to resolve overlapping issues in fish distribution in the states of Oregon, Washington and Idaho.</p>
Region	2	Examine the StreamNet database for errors and report any found to the appropriate entity for correction. Continue to improve error-checking capabilities.	Various error reports, when encountered, were provided via email to state agency compilers, the StreamNet Librarian at CRITFC and the StreamNet Steering Committee representative at USFWS.
Region	3	Whenever new tabular data with a spatial component are submitted to the Region (e.g., fish distribution, hatchery facilities, etc.), create regional GIS layers from this information where possible. Verify correct format, accuracy and logical consistency of spatial data sets and attributes through coordination with state GIS contacts and then load data to the regional database in coordination with the database manager. Post mappable layers to the online query system, the ArcIMS interactive mapping system, and as downloadable layers for StreamNet GIS users.	Updates to the fish distribution data were received from Oregon and Montana this quarter. Integration at the regional level required coordination with the states to review and update changes made to the underlying regional hydrography. While these efforts began in the 2nd quarter, they are ongoing.
Region	4	Maintain a library of StreamNet GIS layers for internal use and as downloadable data on the web site with complete documentation (metadata).	The StreamNet GIS library and data download site were maintained and updated.

Region	7	Coordinate efforts by the StreamNet partners to maintain and update, as necessary, the 1:100,000 scale hydrography files for the states and the PNW region.	The GIS Specialist quality checked fish distribution records submitted by Oregon and Montana and identified instances where state level updates to the hydrography need to be incorporated into the regional dataset.
Region	8	Coordinate efforts by the StreamNet partners to create a hybrid 1:100,000 / 1:24,000 scale hydrography for the states and the PNW region. Implement these changes at the Regional office.	The GIS Specialist maintained contact with the key states involved in this project and stewarded this thread on the StreamNet Forum.
Region	9	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.	Links to and from the query system and the GIS were maintained.
Region	10	Update and append data as submitted by StreamNet participants. Maintain logs of data submissions and major database changes. Manage logins and permissions. Produce downloadable versions of the StreamNet databases to keep in synch with the updated regional databases. Create views and stored procedures for use by the web query system and in the data loading process. Routinely backup all databases. Create and revise database structures and indexes. Develop and run QA/QC processes on new and existing data tables to Isolate missing, erroneous or duplicative data and work with source agencies to correct problems.	Major data submissions were processed from WDFW (over 35,000 escapement records as well as Age data and location updates), and from MFWP (complete replacement of all Fish Distribution records), CRITFC (complete StreamNet Library database dump), and fish distribution updates were processed from ODFW. Work also focused on reconciling StreamNet databases with the developing data exchange formats, consistency issues with existing data in StreamNet tables, location coding for hatchery and dam facilities, design of age data, and removing all hatchery release data and related Trend records from the StreamNet database.
Region	11	Assist the StreamNet Librarian to export the library reference database of StreamNet documents for routine inclusion in the StreamNet database for use by the web query	A complete StreamNet Library dump was transmitted from CRITFC to the regional StreamNet database. This information was reconciled with the StreamNet Reference table that associates each data record with the source of the information, and updates and additions were processed. A procedure was developed to reformat authors in the database from the format used in the Library (each author last name first separated by a vertical bar concatenation character) to a format more similar to scientific journal bibliographies (first author last name first followed by successive authors with first name first). This form is now used in the StreamNet Reference table that annotates the source documents for all data records in StreamNet.
Region	12	Work with the Steering Committee to complete a document describing the QA/QC processes followed by project cooperators	Formal responsibility for building a document to describe the QA/QC process followed by the StreamNet cooperators was transferred to the Project Leader from the WDFW Project Leader who developed the initial draft. All cooperators were requested to provide examples of procedures for one test data type early in the third quarter.

WDFW	1	Manage data at the agency level, develop and maintain FGDC compliant metadata for GIS data, and exchange data to PSMFC according to deadlines specified in this work statement.	QA/QC was performed on 2003 escapement data. Once the escapement data were complete and accurate to the best of our knowledge they were delivered to PSMFC. Age data were also delivered as well as all supporting information.
WDFW	2	Provide and update geo-reference field data as needed for all StreamNet data submissions. Improved geo-references generally contribute to multiple Objective 1 data categories.	The Location Data Manager updated the natural spawner location codes for the 2005-03-18 submission. She also re-submitted select Trends on 2005-03-25 to correct the location data after something went awry with the original submission.
WDFW	3	Create standardized storage formats and protocols for area biologists to use with data collected at various fish collection facilities.	Work was performed on Smolt and Adult trap databases to build supporting Excel spreadsheets for data summarization. These tables will help area biologists receive the summarized data in a timely fashion. Some biologists find it difficult and a timely chore to learn how to manipulate data in a database. These Excel tables will help remove the fear of large datasets and supply a product that they can use.
WDFW	4	Continue collecting GPS locations and converting all index sampling areas from alpha naming to a standardized LLID plus River Mile (RM) format.	No work was performed on GPS data collection this Quarter due to other pressing issues.
WDFW	5	Generate a MS Access table that contains links to GPS Index area maps, survey card database and master escapement database.	WDFW Biologist Steve Vanderploeg continued work on linking GPS index area maps with the MS Access Escapement database. We worked on documentation of this process this quarter to help with future referencing.

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. The formal process for creating new and revising old DEFs may require significant amounts of time, potentially more than a year, for

Project Job Planned work elements

Accomplishments, Second Quarter 2005

CRITFC 1 Work cooperatively through the Steering Committee, following the DEF Process document, to revise existing and develop new DEFs to assure regional data consistency and allow for inclusion of new data types.

CRITFC staff worked with regional StreamNet staff to modify the age DEF.

IDFG 1 Work cooperatively through the Steering Committee, following the DEF Process document, to revise existing and develop new DEFs to assure regional data consistency and allow for inclusion of new data types.

The IDFG Data Coordinator worked via the phone and the StreamNet forum on resolving the hatchery returns DEF, the barriers DEF and the age composition DEF.

MFWP	1	Work cooperatively through the Steering Committee, following the DEF Process document, to revise existing and develop new DEFs to assure regional data consistency and allow for inclusion of new data types.	Work on several DEFs occurred during the quarter through the StreamNet forum.
ODFW	1	Monitor adopted and proposed data exchange formats and provide comments, feedback, and/or recommended changes as necessary. Work cooperatively through the Steering Committee, following the DEF Process document, to revise existing and develop new DEFs to assure regional data consistency and allow for inclusion of new data types. New or modifications to existing DEFs will be submitted as warranted.	<p>Staff met in January to discuss the StreamNet Forum topic, "TrendID and EMAP", which refers to the number of TrendID's that could be created by an expansion of the EMAP/Random survey effort. Incorporating EMAP (Environmental Monitoring and Assessment Program) data into the StreamNet system poses special problems, which we are working to find solutions to.</p> <p>Our Data Analyst worked with regional StreamNet staff and ODFW biologists to develop an appropriate Calculation Method ID in the DEF for Spawner Recruit Data. It was decided the best approach would be to add a new Calculation Method ID that is fitting exclusively to Spawner-Recruit Data. The ID will be #315: Run Reconstruction, to encompass the varied calculations that take place to derive this data type.</p> <p>Staff reviewed the draft 2005.1 DEF document and provided comments where appropriate. One issue that was discussed centered on the Stage ID code "Spawner" and its use in trend data.</p> <p>Our Data Analyst met with regional StreamNet and ODFW's age data expert to discuss Age Data and what the regional database should be like. Additional difficult issues with getting the age data into the DEF process were identified during the meeting. They also examined some fish scales of Rogue Basin Steelhead "half-pounders" for a visual representation of why they are aged differently, and for general education.</p>
Region	1	Work cooperatively through the Steering Committee, following the DEF Process document, to revise existing and develop new DEFs to assure regional data consistency and allow for inclusion of new data types. The regional Biologist will serve as the primary coordinator of the DEF process and is responsible for updating and publishing the official DEF document.	<p>Version 2005.1 of the StreamNet Data Exchange Format was published this quarter. Changes were made for hatchery returns data so that returns can be tracked by capture location, The DEF for fish migration barriers was improved, especially in regards to passage facilities at barriers. The new format for habitat restoration projects contains several important changes from the old structure. Many additional, relatively minor changes were made.</p> <p>The WDFW Location Data Manager met with PSMFC StreamNet staff to discuss location coding for the Hatchery table. A proposal was created for modifying this table, and this proposal will be brought before the full StreamNet group for inclusion in the DEF.</p>

Because we have struggled to provide age data, and because this data type is very important and useful for a variety of fisheries management needs but no regional standards exist, the decision was made this quarter to set age data as the highest priority for developing the next DEF. The Regional Fisheries Biologist began a thorough and in-depth investigation into the ways in which age data are collected, stored, used, and presented, and how these vary by species, life history types, agency, and need. We are finding that this type of data is much more diverse than we realized, and new issues continue to arise as this work progresses. The Regional Fisheries Biologist thus spent much time on this task this quarter, and because of the high priority set for this task, progress was retarded somewhat for the unified user request database and for the fish sightings DEF. Age DEF work continued into the third quarter, as we identify the major issues and how they may be overcome.

WDFW 1 Work cooperatively through the Steering Committee, following the DEF Process document, to revise existing and develop new DEFs to assure regional data consistency and allow for inclusion of new data types.

On Feb 9 the Location Data Manager met with Regional staff to draft revisions to the latest DEF (Version 2005.1). Following the meeting she started converting the WDFW hatchery data to test them before Regional staff broadcast the proposal for adoption.

She also created internal documentation of past Exchanges and a process to organize future documentation now that many folks will submit data directly to StreamNet.

The Project Leader expanded on his January Steering Committee meeting topic of improving use of the UpdDate field by posting two Forum threads. The first reviewed use of fields in the current DEF that document the "who" and the "when" of exchanges and proposed a merger of the existing Data Entry and CompilerID fields. The second proposed replacing the AddUpd and UpdDate fields with three fields that would capture Create, Modify, and Validate dates for appropriate data records. As of 4/11/2005, there had been no further Forum discussion of either posting.

WDFW 2 Co-lead (with MFWP) final development and implementation of a hatchery release DEF that accommodates both resident and anadromous fish.

We need to complete Hatchery DEF work before continuing the Hatchery Release discussion. The Hatchery DEF revisions are almost complete so this discussion will likely take off in the third quarter.

Objective 2 Data management and delivery

Task 5 StreamNet Internet sites

Continue to maintain and enhance the StreamNet Internet sites. Provide access to StreamNet data products through the Internet at both the regional and cooperating project levels. The StreamNet home page (www.streamnet.org) 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. The site will also be used to archive data sets developed by FWP participants for data that do not fit within the StreamNet DEF, including the means to index and

Project Job Planned work elements

Accomplishments, Second Quarter 2005

MFWP 1 Provide ongoing review of the StreamNet website through routine use of the site, providing feedback to StreamNet staff at PSMFC on any problems, errors or needed improvements.

Montana StreamNet staff provided a newsletter item to the regional website on the FWP Fishing Guide.

ODFW 1 Monitor and provide feedback on existing and new StreamNet internet features.

Ongoing review of the StreamNet website took place throughout the quarter.

ODFW 2 Manage and maintain Oregon's web-based data integration, communication, and data transfer systems and their links to StreamNet.

Personal FTP directories on the NRIMP server were provided to several ODFW staff during the quarter.

For the period of January through March 2005, our web server provided an average of 20,865 page views per month to an average of 4,056 unique IP addresses. A summary of StreamNet related Oregon website usage is provided in Table 1. See Supplemental Information for a usage summary of other sites maintained by NRIMP.

Table 1. Use (page views) of the Oregon StreamNet related websites during the second quarter, FY-2005.

	Jan. 05	Feb. 05	Mar. 05
NRIMP (OR StreamNet)	9,415	9,406	8,935
CSMEP Web App	306	3,205	292

Region 1 Maintain and improve the StreamNet Internet site, including correcting errors, adding or fixing links, improving performance, improving looks and usability, etc.

Several links were added, including links to the National Fish and Wildlife Foundation, the Pacific Northwest Aquatic Monitoring Partnership, WDFW's SalmonScape and Wild Salmon Population Monitoring, NOAA Fisheries Northwest Region's Adult Anadromous Fish Radiotelemetry Project, EPA's EMAP site, USDA's InvasiveSpecies.gov, the USFWS's Habitattitude site, and the Global Amphibian Assessment.

Region	2	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 storage and delivery of data collected using EMAP (randomized) sampling designs is a special case that we suspect is not yet appropriately handled in the StreamNet database or delivered to StreamNet users. This quarter, an appropriate EMAP expert, Dr. Don Stevens of Oregon State University, was identified and contacted. A May meeting will take place with Dr. Stevens so that we may learn the proper way to collect, manage, and deliver this special type of data.
Region	3	Conduct a thorough review of the web query system. Identify and address errors and omissions in data delivery. Improve help files.	<p>A problem with embedded hard returns has affected data downloaded from the web query system for years. These embedded hard returns (carriage return and line feed characters) result in inappropriate line breaks in ASCII downloads, and also negatively affect Excel spreadsheet files created by the query system. This quarter, we believe this issue was completely solved and that the query system now removes these characters from all downloads. This is a major accomplishment and a major improvement in data deliver to StreamNet users. Related to this, a program was written that scans the entire database for all character codes. This program will let us find and address uncommon or non-standard character coding in the database file.</p> <p>A problem was identified in the Excel downloads. Long text fields are being truncated when the data are placed into Excel spreadsheets. The Programmer is investigating this problem.</p>
Region	5	Maintain the GIS Data, Map, and PNW Reach File Internet pages.	All GIS related Web sites were maintained.
Region	8	Deploy new query system components and data categories that are approved by the Steering Committee	A new and enhanced full web site and online document search feature was added to the StreamNet website. This replaces the old web site search functionality which was generally inadequate.
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.	Use of the StreamNet website remained strong during the second quarter (Table 2). Total users and page views decreased slightly from the first quarter, but data reports viewed increased from a monthly mean of 1,662 to 2,204. Use of the tabular data query system, specifically jumped significantly in February from 10,438 unique sessions to 23,864, but that was followed by an even more significant decrease in March. The tabular data query remained the primary means for people to locate data, with the number of unique data query sessions exceeding the number of map (IMS) visits by approximately an order of magnitude. It is possible that users may not be fully aware that the interactive map can be used to locate and obtain tabular data, and we will look for ways to make that capability better known in the future.

Table 2. Summary of use for the StreamNet website, second quarter FY-05.

	Jan-05	Feb-05	Mar-05
<u>Main Web server</u>			
Total Page Requests, tabular	69,320	66,734	43,050
Number of Visits	7,681	7,296	6,413
Unique Visitors	4,400	4,291	3,774
Data Query Page Requests	22,259	32,012	13,816
Unique Query Sessions	10,438	23,864	3,521
Unique Query Sessions / hr.	14.0	33.1	4.7
Data Reports Viewed	2,581	1,857	2,174
FTP Files Downloaded	1,900	1,262	1,319
<u>ArcIMS Map server</u>			
Total IMS Page Requests	84,738	72,070	74,066
Number of IMS Visits	1,616	1,407	1,504
Unique IMS Visitors	817	745	737
Mean pages/visit	52	51	49

Private Internet Providers remained the largest identifiable group of users of the StreamNet website (Table 3). However, with such a large number of unresolved IP addresses, it is possible we are not able to accurately evaluate use by individual types of users. Agencies and organizations in this table are certainly regular users of StreamNet, but we cannot determine how many other agencies or organizations are included in the unresolved category and how frequently they use the web site.

Table 3. Top users of the StreamNet website, second quarter FY-05.

1. Private ISPs	10. USFWS
2. Unresolved IP Address	11. Nez Perce Tribe
3. ODFW	12. ODEQ
4. schools	13. USACE
5. Oregon State University	14. Hillsboro (city)
6. BLM	15. State of Idaho
7. Bureau of Reclamation	16. NOAA
6. CDFG	17. BC, Canada
9. BPA	18. OR Dept. Transportation

Region 10 Maintain and enhance the functionality, look and usability of the StreamNet web-based query system.

Some further work done on the new data download formats available that were mentioned in last quarter's work. Also, work continued toward replacing the Map Objects mapping functionality in the query system with an ArcIMS application. This will further simplify the query system and hopefully speed up the delivery of pages that contain selectable click

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 at the regional and cooperating agency levels. 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, Second Quarter 2005

CRITFC 1 Respond to requests for data, maps, technical assistance, source materials, or custom data products at the agency level, within the capabilities provided by base funding. Requests will be logged and reported.

Library data requests are reported under Objective 3.

IDFG 1 Respond to requests for data, maps, technical assistance, source materials, or custom data products at the agency level, within the capabilities provided by base funding. Requests will be logged and reported in quarterly reports.

We filled 41 requests for data during the second quarter. There were 14 requests from private companies, 20 from state agencies, 2 from tribal agencies, 2 from non-governmental organizations, 2 from federal agencies and 1 from a university. The data types requested were as follows: barriers = 1, distribution/presence = 28, GIS layers = 8, redd counts = 3 and general technical assistance = 1.

We did not report a break down of requests in the first quarter. We have since entered those requests and can now report that in the first quarter we filled 10 requests (we put some off because we were so busy with the bull trout status review). There were 9 requests for distribution/presence information and 1 for GIS layers. Private companies made 5 of the requests and state agencies the other 5.

MFWP 1 Respond to requests for data, maps, technical assistance, source materials, or custom data products at the agency level, within the capabilities provided by base funding. Requests will be logged and reported.

Staff handled 10 fisheries related requests this quarter from FWP staff. They provided mapping products for the Montana Comprehensive Fish and Wildlife Plan, the Montana Natural Heritage Program for Element Occurrence record development and conceptual ideas to the Fisheries Division for the creation of the Statewide Fisheries Management Plan.

ODFW 1 Respond to requests for data, maps, technical assistance, source materials, or custom data products at the agency level, within the capabilities provided by base funding.

Staff responded to 50 information requests during the quarter (Table 4). Twenty-one requests were from ODFW staff totaling 8 hrs and 9 minutes, while the other twenty-nine were external requests totaling 5 hours and 26 minutes. Also, our GIS Analyst assisted staff from ODFW's Fish Screening and Passage Program in the QA of project locations and created two maps for their end of fiscal year report.

Table 4. Type and requesting organization information for help requests serviced by Oregon StreamNet staff during the first quarter, FY-05.

Request Type	No.	Requester	No.
Analysis	5	Federal Agency	11
Data	18	Student/University	3
Document	5	State (non-ODFW)	4
Map	5	ODFW	21
Other	13	Local County	1
Tech. Support	3	Consultant	6
Technical Review	1	Private Citizen	4
Total	50	Total	50

Region 1 Respond within one business day to requests for data, information or help. Log and report responses to all requests received.

The Region responded to 16 requests for information during the quarter (Table 5)

Table 5. Number and types of information and help requests serviced by Regional staff during the first quarter, FY-05.

<u>Requester Type</u>	<u>No.</u>	<u>Type of Request</u>	<u>No.</u>
Federal agency	3	Can't find data	1
General public	4	Data interpretation	1
Private consultant	2	Error report	1
School (elem./high) faculty	1	General fish boil.	3
State agency	5	GIS	4
Unknown	<u>1</u>	Library	1
Total	16	Other	4
		Query help	<u>1</u>
		Total	16

Region 2 Finalize a standard user request tracking database structure so that all StreamNet partner agencies can use the same format for reporting responses to requests for data and other information or help.

Work proceeded on creation of a standard user request database that can be used by all StreamNet agencies to summarize user requests for the quarterly and annual report. This task was not quite finished due to the age data DEF taking priority this quarter.

WDFW 1 Respond to requests for data, maps, technical assistance, source materials, or custom data products at the agency level, within the capabilities provided by base funding. Requests will be logged and reported.

Forty data requests involving StreamNet-related data were filled this quarter and were logged into the WDFW-StreamNet requests database. Only three were related to standard tabular data (smolt and adult trap counts), while the rest were related to our spatial data layers. There were 24 requests for coverages of 24K anadromous and/or resident fish and hydro data, 10 map requests, and three requests related to facilities data points. 27 of the requests came from WDFW or NOAA Fisheries, with USFWS, local conservation districts, and other state/county government entities comprising the rest.

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. Provide a repository for the source documents for the data contained in the StreamNet database.

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 contained in the StreamNet database.

Project	Job	Planned work elements	Accomplishments, Second Quarter 2005
CRITFC	1	Coordinate source material submissions for data compiled by participants	The first two months of the quarter, the library cataloging system was down as a result of a hard drive crash in December. The last month was devoted to recovery and quality control issues. Reference documents were received normally and the backlog will be caught up next quarter.
CRITFC	2	Develop a collection of materials related to the Columbia Basin, including reports from other Fish & Wildlife Program projects, other agency documents as they relate to the Basin, and other published and unpublished materials as requested by clients.	We continued to work on completing the collection of BPA documents. We began work on the digital library for Vancouver Lake in Clark County, Washington.
CRITFC	3	Maintain and develop a collection of journals related to fisheries and aquatic sciences as well as other related scientific topics.	We submitted renewals for key journals. We are continuing to evaluate journal titles based on availability in other libraries and subscription costs.
MFWP	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.	Work continued on this ongoing task. Coordination occurred with the MT Natural Heritage Program to explore creating one reference system that would meet the needs of both agencies and StreamNet. A solution is being designed and discussions will continue next quarter.
ODFW	1	Provide originals/copies of all documents and reports referenced in the compilation of new StreamNet data holdings, but not already housed in the StreamNet Library.	A large set of historic typed and handwritten daily dam count records dating back to the 1930's, was located and moved into the Library. As far as anyone knows, this is the only non-summarized record of this information.
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.	Documents were received from WDFW biologists, the USFWS, and area PUD's containing information on 2004 escapement estimates. The data from these documents will be added to adult abundance datasets and will accompany the next data exchange. The reports themselves were mailed to the StreamNet library for cataloging.

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 the collection, and staff to answer location questions and respond to

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Accomplishments, Second Quarter 2005</u>
CRITFC	1	Provide and maintain appropriate facilities for the storage and public use of the StreamNet Library collections.	We continued to work on providing appropriate conditions for materials. We received a donation of large map files from NOAA Fisheries. We also began working on the possibility of receiving compact shelving as a donation from a corporation.
CRITFC	2	Catalog and organize the materials for ease of use by clients and staff	We worked on material organization during this quarter as the library software was not functioning during much of this quarter due to the hard disk crash.
CRITFC	3	Provide access to the catalog of materials via the Internet and update the online catalog on at least a monthly basis.	The new server was installed and software was upgraded for Internet accessibility. The catalog has been updated for web access.
CRITFC	4	Maintain and Implement a plan to place electronic documents in the catalog and on the library website.	We created a digital library for Vancouver Lake. We continued to evaluate our resources and ability to place materials on the web. We are also working on getting all StreamNet documents available in digital format with links in the catalog records.
CRITFC	5	Develop and keep a schedule of open times and reference desk staff hours	Staff are scheduled and the reference desk is handled during posted hours. Staff members have been working some weekends.

Objective 3 Library and reference services

Task 3 Library services

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

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Accomplishments, Second Quarter 2005</u>
CRITFC	1	Provide information and reference services to library clients	Regular library visits from a variety of researchers, public and private, continued.
CRITFC	2	Provide information about services and hours to library clients via print and Internet	The library web page continued to reflect current hours of operation. Signs for unusual circumstances were posted when necessary.
CRITFC	3	Provide interlibrary borrowing services for library patrons to access materials not yet owned by the StreamNet Library.	201 interlibrary loans were made in the second quarter; 104 were for CRITFC staff, 3 for NOAA, 14 for consultants, 4 for State agencies, 11 for USFWS, 4 for tribes, 1 for BIA and 60 for other entities.
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 evaluation of how to best serve these documents to the public.

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

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Accomplishments, Second Quarter 2005</u>
CRITFC	1	Provide interlibrary lending services for other libraries to access the library's unique collection.	The library provided nearly 90 items to other libraries.
CRITFC	2	Maintain memberships in appropriate library and subject-related associations. Ex. IAMSLIC, NRIC, OFWIM,	Professional memberships were renewed. The Librarian attended the Cyamus conference in early March. Cyamus is a regional group of IAMSLIC.
CRITFC	3	Provide consultations for groups and other agencies on library organization and services	We responded to a request for assistance from the Yakima Fish and Wildlife Dept.
CRITFC	4	Coordinate with other StreamNet libraries, library clients and other libraries to improve service to clients and limit duplication of efforts	We continued to work with other libraries that have similar collections, primarily through providing inter-library loan services to the region. We assisted the Vancouver Library in developing a Vancouver Lake collection.
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 further work was accomplished in this area. Subbasin planning activities were substantially completed in FY-04. Possible additional archiving work was discussed with NPCC staff for their provincial "roll-up" process. Work plans and budgets will be discussed next quarter.

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 Data Services to Support the Fish and Wildlife Program

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. Work under this task will have to be based on time available, particularly for larger requests.

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Accomplishments, Second Quarter 2005</u>
CRITFC	1	Support Fish and Wildlife Program activities, such as RM&E, subbasin assessment, etc., by providing data, maps and technical information management advice or assistance as requested, within available time and budget under base level funding.	The watershed assessment and identification of limiting factors was completed and delivered to the John Day Subbasin Planning group and was incorporated into the final Subbasin Plan submitted on 3/15/05. The Project Leader continued activities in other regional data management

IDFG	2	Provide data inventory services to the Coordinated Systemwide Monitoring and Evaluation Project (CSMEP).	The IDFG data coordinator guided and supervised entry of CSMEP data inventory information for the Upper Salmon and Middle Fork Salmon subbasins. He also started work on a presentation for the CSMEP Integrated Database presentation, taking place in early April. This demonstration will show how it is possible to link databases in the Idaho Fish and Wildlife Information System and visually display in GIS. Database include the Spawning Ground Survey, Standard Stream Survey, Juvenile Trapping and Collecting Permit Reports. These applications have been used by multiple agencies to compile this information, including IDFG, the Nez Perce Tribe, and the US Forest Service.
MFWP	1	Support Fish and Wildlife Program activities, such as RM& E, subbasin assessment, etc., by providing data, maps and technical information management advice or assistance as requested, within available time and budget under base level funding.	The MT StreamNet project manager reviewed management portions of subbasin plans for the Kootenai and the Flathead. She will report findings at the April StreamNet Steering Committee meeting.
ODFW	1	At the agency level, provide tabular and/or spatial data, technical advice/assistance and data services to Fish and Wildlife Program participants, as requested. Support F&W Program activities, such as R, M & E, subbasin assessment, etc., within available time and budget under base level funding.	<p>In response to a request from Tom Iverson (CBFWA), our Data Technician generated a data comparison of the Fifteenmile, Hood, John Day, Deschutes, and Willamette subbasin plans. The goal was to find a way to graphically describe the status of focal species within these basins. We decided to use several examples to describe the possible approaches, and put together a narrative regarding the similarities /differences between the plans. We completely evaluated the consistency of data used to complete these subbasin plans during the quarter, and concluded that there was little ability to compare data between subbasin plans since data for any particular focal species were either reported differently, or not at all.</p> <p>Currently there are 1,136 records in the CSMEP web application, eighty-five of which were added this quarter by all CSMEP participants. The only requested change to the CSMEP web application was to add a sub-basin/species combination for WDFW to the available choices, which our Database Manager completed.</p>
Region	1	At the regional level, support Fish and Wildlife Program activities, such as R, M & E, subbasin assessment, etc., by providing data and maps of existing StreamNet data and technical information management advice or assistance as requested, within available time and budget under base level funding.	No specific requests for data for these functions were received.

Objective 4 Services to the Fish and Wildlife Program

Task 2 Participate in Fish and Wildlife Program Development Activities

Participate in planning, development and/or coordination meetings with regional entities to provide assistance in the area of data management, as requested, to support development of Fish and Wildlife Program projects and programs. Provide input on ways StreamNet can effectively contribute to the programs and general advice about data management. Participate in advisory groups, task forces, and other groups whose purpose is to enhance the effectiveness of the Fish and Wildlife Program relative to its data development activities.

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Accomplishments, Second Quarter 2005</u>
CRITFC	1	Participate in various NWPPC planning and management work groups to improve and coordinate regional information management programs.	The Project Leader continued serving on the steering committees of the Pacific Northwest Aquatic Monitoring Partnership and the Northwest Environmental Data-network. Data management and sharing issues are regularly discussed in these groups. These groups have developed work plans to further their purposes and funding will be discussed next quarter.
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.	No work this quarter. This is an un-funded activity under the base StreamNet budget.
MFWP	1	At the agency level, 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 manager continues to be engaged with the activities of NED and will provide input as necessary.
ODFW	1	At the agency level, 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.	Oregon StreamNet staff participated in five regularly scheduled CSMEP meetings / conference calls throughout the quarter.
Region	1	At the regional level, 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 in several meetings to discuss potential capture, management and dissemination of data developed during the subbasin planning process. StreamNet may participate in a portion of such an effort.
Region	2	Continue participation on the Program Team for the Council's project to develop a Northwest Environmental Data-network to convey recommendations based on experience in the development of a regional approach to data	The Program Manager continued participation in NED as a member of the Program Team. He provided input regarding development of a regional data sharing workshop intended to assemble multiple data using and data creating agencies to identify needs and impediments to sharing fish, wildlife and habitat data among agencies on a regional basis. The meeting will take place in the third quarter, May 25-26.

Region	3	Continue participation in the Pacific Northwest Aquatic Monitoring Partnership for watershed and fishery data coordination. Participate in other R, M & E groups, including the Action Agencies, Federal Caucus and CBFWA, to provide support and data management expertise.	The Program Manager continued serving on the PNAMP Steering Committee and in several work groups. He also participated in the formal meeting to introduce PNAMP at the Northwest Power and Conservation Council in March.
Region	4	Participate with CBFWA in support of data management efforts, including work with the Collaborative Systemwide Monitoring and Evaluation Project.	The Program Manager continued participation with the CSMEP project through several phone conference meetings. StreamNet involvement in CSMEP has decreased slightly as the project has moved beyond the data inventory stage to the data analysis and monitoring approach development phases.

Objective 4 Services to the Fish and Wildlife Program

Task 3 Support to Subbasin Planning

At the regional and cooperating agency levels, work with subbasin planners to provide needed information from the StreamNet database and to capture data developed as part of the subbasin planning process.

Project	Job	Planned work elements	Accomplishments, Second Quarter 2005
MFWP	1	Work with subbasin planners to determine type of data within the Montana subbasin plans and opportunities for incorporating those data into StreamNet. Assist in providing data on the FWP website.	No assistance was necessary or requested during this quarter.
Region	1	At the regional level, and within existing resources, work with subbasin planning groups to provide needed information from the StreamNet database. Work with regional entities and subbasin planning groups to provide data management expertise and services related to capturing data developed during the subbasin planning process and making them readily available. Assist with archiving subbasin planning data, and means of publicly distributing them, as requested. This effort will have to be scaled to fit within existing resources and available time.	With the TOAST effort completed, regional staff moved the TOAST- generated files to a different location on the StreamNet Internet site. TOAST files can now be found along with StreamNet data and DRGs provided for the subbasin planners at http://www.streamnet.org/subbasin/2001-subbasin-data.html . This page provides links to the files which are stored at ftp://ftp.streamnet.org/pub/streamnet/SubPlanning . The Program Manager participated in several meetings to determine long term needs to acquire, store and disseminate data developed during the subbasin planning process, particularly in states other than Oregon.

Objective 4 Services to the Fish and Wildlife Program

Task 4 Archive and deliver independent data sets, as requested

Work with participants 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, post data in the archive as independent data sets in their native formats.

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Accomplishments, Second Quarter 2005</u>
CRITFC	1	Continue efforts to capture and archive subbasin planning data and literature, as base funding allows.	Final John Day subbasin assessment data and results were uploaded to the StreamNet database and are available to the region.
MFWP	1	Work with FWP supported projects in the state to assist them with submission of their data sets to StreamNet for archiving and dissemination as part of the formal DEF or as Independent Data Sets.	No assistance was necessary or requested during this quarter.
Region	1	Coordinate with BPA and BPA contractors, StreamNet cooperators, and others to capture data sets, reports, and other electronic materials for inclusion on the StreamNet Independent Data Sets Internet page. Post these items on the Independent Data Sets page.	<p>Two independent data sets were received and added to the Independent Data Sets page this quarter:</p> <ol style="list-style-type: none">1) Chris Cook of Battelle provided a data set that models the hydrologic and temperature regimes that result in the lower Snake River from the summer release of cold water from Dworshak Reservoir.2) The Idaho StreamNet project provided the "Idaho Department of Fish and Game Bull Trout Status Review and Assessment in the State of Idaho, December 20, 2004." <p>Work began this quarter to review the StreamNet links web pages in search of fisheries data on other web sites. Our intention is to expand the concept of the Independent Data Sets page to be a combination of data set archive and also a way to locate data on other sites.</p> <p>Because the independent data sets tool is software that must be installed, some users are unable to use it because they lack administrative permissions on their computer. Others may be unwilling to install software. So as an alternative, we created an Excel spreadsheet template as a second way for people to be guided through the metadata creation process. This was made available on the web site.</p> <p>The StreamNet Newsletter that went out this quarter contained an item about the availability of the independent data sets page, and mentioned that it could be used by anyone to archive data sets. We did not know the degree to which people might be interested in this, but at this point (end of second quarter of fiscal year 2005) it appears no significant interest was generated. While several downloads of the independent data sets tool were done, no data sets have come in. At this point, it appears that independent data sets will be something done by data project staff or under direction of funding agencies, rather than as a voluntary action.</p>

Region	2	Review StreamNet Links web pages. For Internet sites that provide on-line data, add the sites to the Independent Data Sets page.	We began to review the StreamNet links web pages in search of fisheries data on other web sites with intent to expand the concept of the Independent Data Sets (IDS) page to be a combination of data set archive and also a way to locate data on other sites. Thus, we will provide outside links in two places on the StreamNet website, on the links pages and the IDS page.
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Objective 4 Services to the Fish and Wildlife Program

Task 5 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 these data available through online mapping. If the Council so directs, work with subbasin planners to record any desired changes to the protected status of individual streams.

Project	Job	Planned work elements	Accomplishments, Second Quarter 2005
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Region	1	Maintain the Protected Areas database. Provide access to the Protected Areas data through the online database and through the interactive map application. As time allows, work to resolve the remaining unresolved location issues that resulted from conversion from the 1:250,000 scale to the 1:100,000 regional hydrography.	The Protected Areas database was maintained.
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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 cooperating agency 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, Second Quarter 2005
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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.	All cooperators contributed to project guidance through participation in the quarterly meeting of the Steering Committee January 25-26, 2005. CRITFC was represented by the StreamNet Librarian on day 2. Topics included a review of the new BPA requirements related to the PISCES project tracking database, progress on the mixed scale hydrography, final review and approval of DEF version 2005.1, ways to propose new work, ways to speed up data updates, and review of the NOAA critical habitat project. Increased emphasis was placed on accountability for completing Steering Committee assignments, with progress tracked through the quarter in the assignments table.
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Project leaders in each participating agency also provided guidance to their individual projects and provided guidance and feedback to the Region throughout the conversion of the work statement to the BPA Pisces system, reviewed draft meeting notes, and through ongoing coordination and communication.

The state Project Leaders worked on developing a funding proposal for the Doris Duke Foundation with IDFG taking the lead. ODFW dropped out at the last minute based on an agency decision to cooperate using Wildlife Grant funds and not request funding through the proposal.

ODFW and WDFW staff met several times during the quarter to discuss a number of topics, including consistency issues associated with run and subrun in regards to the different combinations that each of the states are using, and UseType conflict issues. Potential changes were identified to make the code combinations more compatible, and a plan was formulated to present respective agency's' documentation / confidence data to one another so that we can determine a workable process for reconciling distribution data. This effort will be ongoing.

In response to a regional StreamNet request, ODFW's Project Leader contacted ODFW Propagation staff about discussions RMIS (Regional Mark Information System) participants had concerning compiling unrolled coded wire tag and hatchery release data. It appears that Oregon supports the idea, but acknowledges it will take money and people for Oregon to be able to participate. The CWT data will be particularly problematic since the unrolled information only exists at the hatcheries.

The WDFW Project Lead provided copies of the current version and summary of agreed-upon participant assignments for the StreamNet QA/QC Report. Responsibility for guiding this report to its final conclusion was transferred to the Regional Project Manager (PSMFC). WDFW will submit its first draft contribution to this report in late April.

- All 2 Supervise project staff at the cooperator level to provide guidance and staff development.

Normal staff supervision (including performance appraisal) was provided by project leads in all agencies except FWS, which has no other project staff members.

CRITFC has been unable to secure additional funding to support the Database Programmer position full time. The incumbent may have to be let go. A final decision will be made next quarter.

MFWP identified training needs for several staff and began to investigate options.

ODFW lost the Asst. Database Manager and Data Technician, but filled the Library Tech position and continued the hiring process for the Cartographer. Recruitment for the Asst. Database Manager was begun.

ODFW provided training for several staff members at no cost to StreamNet, including a live web training seminar on Data Models presented by ESRI, an HTML class offered through the OSU College of Forestry, the web-based version of Learning ArcGIS 8 using the free ESRI Virtual Campus courses, a Dreamweaver workshop at OSU, and a 3-day class on ArcIMS Administration.

The Regional Program Manager assisted the PSMFC Senior Program Manager in interviewing and selecting an Administrative Assistant who will work a small portion of her time for StreamNet. Amy Milliken was selected, starting April 13.

WDFW held detailed discussions concerning transfer of additional staff supervisory responsibilities from the Project Lead to the Region 5 Data Manager. Agency approval of this re-organization of WDFW StreamNet is expected in early April.

All 3 Budget. Manage expenditures to accomplish the jobs in the Statement of Work within the approved budget.

All project cooperators performed routine budget tracking and accounting of expenditures.

Some CRITFC accomplishments this quarter (e.g. John Day subbasin assessment, participation in regional groups, revision of the age DEF) were accomplished with non-StreamNet funding. This amounts to a substantial in-kind contribution to the StreamNet project.

The Region had to delay billing to BPA due to time lags in receiving a signed contract back from BPA.

All 4 Develop the annual project proposal and budget within submission deadlines.

The Program Manager spent considerable time during the quarter converting the existing Statement of Work into the new PISCES database. The internal StreamNet SOW database was converted to rearrange the jobs under the newly defined BPA Work Elements. The WEs were treated as being at the same level as our existing Objectives. Our existing tasks were treated as similar to individual WE Titles, and the individual jobs were treated as Milestones. All cooperators assisted the Region in the conversion to the new BPA PISCES format

The largest issue in the conversion was related to definitions of the Work Elements and where the individual jobs fit under them. We ended up using 12 WEs to replace our 5 objectives. The jobs transferred reasonably well, and a specific effort was made to not change the scope or intent of the project.

Initial work was done to develop a template database using the Work Elements for development of the Statement of Work for FY-06. Work will continue on this effort into the third quarter, when next year's SOW will be written.

All	5	Report accomplishment of the work outlined in the annual Statement of Work through quarterly progress reports submitted to PSMFC within 20 days of the end of each quarter.	All project cooperators prepared and submitted input for the performance report for the first quarter of FY-05. The Region assembled and finalized the report and submitted it to BPA essentially on schedule. In addition, ODFW reviewed and commented on their corporate first quarter report. WDFW began submitting internal input for the Q2 report at the end of the quarter in order to meet the new, speeded up BPA report schedule.
Region	6	Submit the FY-04 annual progress report to BPA within 60 days of the end of the fiscal year.	The FY-04 annual report was completed, with cooperator input and review, and submitted to BPA at the very beginning of the second quarter. Later in the quarter the report was converted into a brochure format for use in disseminating information about the project and its accomplishments and circulated among staff and Steering Committee members for review. Plans were made to present the new report, when finished, to the NPCC and to the CBFWA Members Management Group.

Objective 5 Project management and coordination

Task 2 Coordinate with Related Activities Beyond the FWP

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.

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Accomplishments, Second Quarter 2005</u>
IDFG	1	On an opportunistic basis, coordinate with other state, federal, or tribal agencies and various local inter-agency planning and management work groups beyond the FWP to enhance the collection and management of data related to management of fish and wildlife resources.	The IDFG/StreamNet coordinator participated on the IDFG Standard Stream Survey (SSS) committee. The SSS is shaping up to be an important source of StreamNet ready data on fish distributions and abundance.
MFWP	1	Coordinate with other state, federal, or tribal agencies and various local inter-agency planning and management work groups beyond the FWP to enhance the collection and management of data related to management of fish and wildlife resources.	We met with the USFS, University and FWP representatives on the restoration data structures.
ODFW	1	On an opportunistic basis, coordinate with other state, federal, or tribal agencies and various local inter-agency planning and management work groups beyond the FWP to enhance the collection and management of data related to management of fish and wildlife resources.	Staff collaborated to develop the data management component of the "Proposed ODFW Spending Plan for Additional Measure 66 Funds". The complete proposal was submitted to Fish Division on February 4th. Four priority projects made up the proposal; the data management component was included in the write-up of the top priority project. The funding proposals are based on guidance provided in the Oregon Plan Monitoring strategy.

Two staff members participated in a multi-agency fish passage barrier data standards development meeting on February 9th. Participants included ODFW, OWEB, ODOT, ODF, WRD, BLM, USFS, NOAA, StreamNet, county and watershed council representatives. The Project Leader also participated via conference call in the second Oregon Fish Passage Barrier Meeting on March 8th. This will be an ongoing effort to identify and prioritize barrier improvement projects in Oregon.

Staff reviewed and commented on the Doris Duke grant proposal submitted by the OR Natural Heritage Information Center. The proposal calls for WDFW, ODFW, and IDFG, along with other partners, to work together to develop a set of ecoregional portals or web sites for the Pacific Northwest to provide multi-state, comprehensive wildlife conservation strategy information and data to the public. The sites will also provide data from all other available ecoregional assessments, and integrate information from the strategies of the three states.

Our GIS Analyst reviewed the Draft Stock Status Report to better inform himself of pending work within the Fish Division Conservation and Recovery Program and how we might be able to prioritize some of our work to meet their needs. He met with the Conservation and Recovery Program to discuss some ways that NRIMP may be able to target our data development efforts in ways that would support the development of priority conservation plans, as part of the Native Fish Conservation Policy. Several potential areas were identified, with fish passage and "historic" habitat among the top priorities. Interest was expressed in the development of an "intrinsic potential" layer for Spring Chinook. One issue that may prevent us from spending too much time toward this (unless we get some of the funding issues resolved) is that many of the areas where they will be developing the initial conservation plans fall outside the Columbia basin.

Our GIS Analyst met with OR Dept. of Forestry staff to learn more about their effort to digitize the complete set of fish presence maps. The project is titled; "Private Community Forest Program Stream Attribution Project" and it will include fish presence survey locations, barrier locations and stream size. They are piecing together hydro data from multiple sources in order to create their own "unique" ArcInfo coverage linear representation of this information. The barrier information will most likely be of greatest interest to our program given the lack of species-specific information for the fish presence surveys.

Staff met with a Fish Screening and Passage Program staff member to discuss the new iteration of the Fish Screening and Passage Database. A completely redesigned system is being requested, a centralized web-based application that addresses issues related to poor connections at ODFW facilities using dial-up connections. We proposed a development process plan and are now waiting for a more complete workflow process/operating procedure description for the FSP Program.

Region 1 On an opportunistic basis, coordinate with other state, federal, or tribal agencies and various regional inter agency planning and management work groups beyond the FWP to enhance the collection and management of data related to management of fish and wildlife resources.

The Regional Fisheries Biologist attended a meeting of the Columbia Basin Water Transactions Program, where he presented ways in which StreamNet might be able to help them archive data and make them available to the public.

PSMFC StreamNet staff met with PSMFC RMIS staff to discuss the future of hatchery release and return data. (RMIS = Regional Mark Information System; the coded-wire tag database.) Georeferencing of hatchery releases was a major topic of conversation.

The Program Manager participated in a kick-off meeting of an effort led by OWEB, with Oregon StreamNet, to develop a program to acquire fish barrier information from across the state. This effort will include multiple agencies and the counties, with the potential to develop a truly comprehensive set of data on barriers.

Objective 5 Project management and coordination

Task 3 Professional and Public Involvement

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, issue papers, demonstrations, posters and talks to public, policy or professional groups and organizations.

Project Job Planned work elements

Accomplishments, Second Quarter 2005

Region 1 Publish at least two editions of the StreamNet Newsletter during the fiscal year, providing readers with information about StreamNet activities, available data, data updates, new data services, etc.

The fourth StreamNet Newsletter was delivered to 1,090 email addresses on February 10, 2005. About 90-100 of those email addresses were no longer valid, so the mailing went out to about 990 people. In addition, a special mailing was done to members of the Northwest Power and Conservation Council. More people have signed up for the Newsletter since, and as of the end of the quarter there were 1,007 signed up for future newsletters.

Supplemental Information

Work accomplished outside the specific work elements in the SOW

This section describes specific accomplishments during the second quarter that did not relate specifically to any of the Tasks / Work Elements in the annual Statement of Work. These activities either were performed on StreamNet contract funding but related to topics that were not specifically covered by a task or job in the Statement of Work (SOW) or they were performed by staff of the various StreamNet projects but on other funding. Work is often done by StreamNet staff on other funding because the StreamNet contract is not always sufficient to support all staff time. Such work is reported here when it relates specifically to StreamNet objectives or is ultimately of benefit to the project.

Project Accomplishments, Second Quarter 2005

CRITFC The Project Leader continued to serve on several regional data management and monitoring groups whose activities involve data management issues.

MFWP 1 Discussions have continued with the Montana Natural Heritage Program concerning coordination of a variety of shared activities. Staff has meet with Fisheries Division staff to go over the conceptual ideas for the creation of the Statewide Fisheries Management Plan. As part of serving Fisheries Division better, we are exploring the development of a Fisheries and a Wildlife internal home page where they could easily obtain applications and other sources of interest.

StreamNet coordinators from the 4 states completed a grant application to the Doris Duke Foundation for funding of a regional approach to the collection of non-game fish data. The Mountain Prairie Node of NBII is redesigning their website and creating a strategic plan; FWP has been actively involved. IMU staff are involved in the development of a Wildlife Trend Information System for all game species, a Wildlife Conflict/Game Damage Information System and a Wetlands GIS data layer.

ODFW 1 Web use statistics for the various web sites maintained by or related to Oregon StreamNet are provided in Table 6.

Table 6. Page views recorded in the first quarter, FY-05 for the web pages maintained by or related to Oregon StreamNet.

	Jan. 05	Feb. 05	Mar. 05	Distinct IP's (monthly mean)
Oregon Plan Metadata Warehouse	1,500	54	142	13
Or. Plan Review	1,281	2,059	855	119
Oregon Fish Finder	3,171	4,943	6,708	623
Marine Resources Program	2,135	1,224	1,422	240

WDFW The Project Lead participated in discussions with other StreamNet representatives to determine what the fish and wildlife agencies wanted to submit as data development proposals to a grant program sponsored by the Doris Duke Foundation. He provided WDFW work statement and budget information to IDFG, who generated and submitted a proposal involving compilation of non-game fish data.

WDFW's new Database Manager for spawner survey and age databases made great strides in catching the spawner database up to current (2003-2004) data for Puget Sound and Coastal streams. He will conduct detailed discussions with the Region 5 (Vancouver) Data Manager during the second quarter about integrating content from the lower Columbia R. spawner database and options for future management of these data from a statewide perspective.

Data and metadata from the Joint Stock Assessment Project's 2003 sampling year were prepared for submission as another StreamNet Independent Dataset. However, submission and posting of these data were postponed at the request of the JSAP Project Manager until the 2003 Annual Project Report could be finalized (pending some detailed DNA result analysis). We project this posting will take place in early May, followed within two months by a posting of the data and metadata from the 2004 sampling year.