

**National Marine Fisheries Service Contract for Expansion of
StreamNet Database**

Annual Report, FY 1997

Submitted By
Pacific States Marine Fisheries Commission

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Introduction

This is the first annual progress report on the award entitled *Expansion of StreamNet Database to all Anadromous Salmonid Populations in the States of California, Idaho, Oregon, and Washington*. Two status reports of progress were provided earlier. The first status report (2/4/97) summarized the status of data to be processed as part of Task 1 of the contract. The second status report (4/30/97) updated the status of Tasks 1-4. Both are available on the StreamNet web site (www.streamnet.org) under *Project Management*.

In general, considerable progress was made on this project during FY 97. However, due to the complexity and scope of this contract we experienced several start-up delays in the implementation of the agreement. There were hundreds of files involved in the agreement and we spent considerably more time than anticipated reviewing these files and developing strategies for incorporating the data contained in the files into the StreamNet database. This factor caused the delay of establishing sub-contracts with participating agencies as well as the delay of the completion of several of the tasks. A considerable amount of the original budget (approximately \$140,000) was not spent during the fiscal year, and has been obligated as a no-cost extension to continue through FY 98.

All StreamNet data are now available on the world wide web (www) through StreamNet's web page at www.streamnet.org. Ad hoc query systems are in place which provide a variety of selection criteria, and outputs including detailed and summary tables, and graphs, some online mapping capabilities, and download options.

Task 1: Expand StreamNet abundance, hatchery, and harvest databases

Sub-Task 1A: Expand StreamNet Abundance Database

Status: This task is largely complete. A summary by state is listed below. Table 1 (below) shows the detailed status of each electronic file submitted to us for inclusion in this contract.

California : NMFS data files contained approximately 140 abundance trends. Of these, 57 were new trends. We have completed the addition of these trends to the StreamNet database. No further action is deemed necessary.

Idaho : NMFS data files contained very few new, or updated abundance trends. The few that are unique are being reviewed by IDFG StreamNet personnel and will be incorporated if appropriate. No further action is deemed necessary.

Oregon : NMFS data files contained 960 trends for various species in Oregon. Of these, approximately 400 were 'new' trends currently not in the StreamNet

database (most in the Oregon coastal area). We have completed the addition of these trends to the StreamNet database. No further action is deemed necessary.

Washington: NMFS data files contained nearly 1,500 trends for various species in Washington. Of these, approximately 600 are ‘new’ trends currently not in the StreamNet database (most in Puget Sound and coastal areas). WDFW StreamNet staff are reviewing these trends and incorporating them as appropriate. Review of Columbia Basin salmon and steelhead data are complete and new trends have been incorporated as appropriate. Puget Sound and Coastal steelhead trends have been reviewed and incorporated as appropriate. Salmon trends outside the Columbia Basin are not complete. We anticipate that this task will be completed in the first half of FY 98 under the no-cost extension.

Table 1. Detailed status of each electronic file submitted to us by NMFS for inclusion in this project.

Data Table	# of Records	Data Type	Year Range	States Included	Status
CHINOOK					
CN_TREND.DBF	1,082	Adult Return	Varies	CA, ID, OR, WA	Complete for all except WA
CN_DATA.DBF	20,580	Adult Return	Varies	CA, ID, OR, WA	Complete for all except WA
MARCHIN.DBF	2,018	Marmot Dam Counts	1977-94	OR	Complete (annual only)
NFCHIN.DBF	14,009	NF Clackamas Dam Counts	1957-94	OR	Complete (annual only)
REDDCNTS.DBF	2,969	Redd Counts	1957-94	ID	Complete
CDFGSHIN.DBF	81	Carcass Count	1985-94	CA	Data unusable
NMFS_ALL.XLS	900	Redd/Carcass	1968-94	CA	Complete, included only trends with at least 5 yrs of data
ADLTSPCK.XLS	78	Prosser Dam Counts (Spring)	1983-94	WA	Complete
ADLFTCK.XLS	78	Prosser Dam Counts (Fall)	1983-94	WA	Complete
GRANDTAB.WK1	2,300	Fall Spawning Estimates	1952-91	CA	Complete
MILLDEER.WK1	850	Spawning Estimates	1940-94	CA	Complete
DDYRCT.WK1	252	Red Bluff Dam Counts	1967-93	CA	Complete
CHUM					
CM_TREND.DBF	432	Adult Return	Varies	WA	Incomplete
CM_DATA.DBF	6,695	Adult Return	Varies	WA	Incomplete
COHO					

Data Table	# of Records	Data Type	Year Range	States Included	Status
CO_TREND.DBF	742	Adult Return	Varies	WA,OR	<i>Complete for OR</i>
CO_DATA.DBF	11,988	Adult Return	Varies	WA,OR	<i>Complete for OR</i>
KLAMCOHO.XLS	175	Adult Return/Redds	68-94	CA	<i>Complete</i>
WCOAUC.ZIP	1,344	Adult Return	81-94	OR	<i>Complete</i>
CUTTHROAT					
CT_TREND.DBF	13	Adult Return	Varies	WA,OR	<i>Complete for OR</i>
CT_DATA.DBF	231	Adult Return	Varies	WA,OR	<i>Complete for OR</i>
PINK					
PK_TREND.DBF	73	Adult Return	Varies	WA	<i>Incomplete</i>
PK_DATA.DBF	1,035	Adult Return	Varies	WA	<i>Incomplete</i>
SOCKEYE					
SO_TREND.DBF	50	Adult Return	Varies	WA,OR	<i>Complete for Or</i>
SO_DATA.DBF	1,072	Adult Return	Varies	WA,OR	<i>Complete for Or</i>
STEELHEAD					
ST_TREND.DBF	841	Adult Return	Varies	WA,OR,CA,ID	<i>Complete for all except WA</i>
ST_DATA.DBF	9,225	Adult Return	Varies	WA,OR,CA,ID	<i>Complete for all except WA</i>
NMFS_ALL.XLS	See Chinook Section				<i>Complete</i>
MILLDEER.WK1	See Chinook Section				<i>Complete</i>
DDYRCT.WK1	See Chinook Section				<i>Complete</i>
MARSST.DBF	2,606	Marmot Dam Counts	1957-95	OR	<i>Complete</i>
MATWST.DBF	1,910	Marmot Dam Counts	1957-95	OR	<i>Complete</i>
NFSST.DBF	5,489	NF Clackamas Dam Counts	1957-95	OR	<i>Complete</i>
NFWST.DBF	3,381	NF Clackamas Dam Counts	1957-95	OR	<i>Complete</i>
CDFGSTHD.DBF	512	Spawning Ground Counts	1985-94	CA	<i>Complete</i>
ELLSTHD.DBF	180	Cape Horn Dam Count	1933-94	CA	<i>Complete</i>

Data Table	# of Records	Data Type	Year Range	States Included	Status
REDD_CIS.DBF	206	Redd Counts	60-64	ID	<i>Complete</i>
STRESINV.ZIP	59 Excel Tables	Spawning Counts, Harvest Data	Varies	WA	<i>Complete</i>
WASTLD.XLS	44 Excel Tables	Spawning Counts, Harvest Data	Varies	WA	<i>Complete</i>
WASTLD2.XLS	100+	Spawning Counts, Harvest Data	Varies	WA	<i>Complete</i>

Sub-Task 1B: Expand StreamNet Hatchery Database

Status: All 14 files containing hatchery data included in the contract have been pre-processed into 2 consistent databases; hatchery releases and hatchery returns. Data from NMFS files has been re-formatted to meet StreamNet data standards and cross checked with existing StreamNet data trends.

Hatchery Releases: As reported in the first and second status updates, the hatchery release dataset probably poses the largest challenge to us in completion of this contract. The database submitted to PSMFC from the NRC consultants contains nearly 112,000 records for the states of OR, ID, WA, and CA. About 27% of these records came from PSMFC's Coded Wire Tag database which is the primary source for hatchery release data in StreamNet. That leaves nearly 82,000 from 'non PSMFC' sources in the NMFS database that must be processed. It is our basic strategy at this time to use PSMFC's CWT database for the primary source of release data from 1980 on and to use the data from the NMFS contractors to backfill the release data prior to 1980. This strategy varies a little from state to state and is summarized below.

California : Utilize information from the CWT database as the 'official' version of releases for tagged fish. Use data from NMFS files for releases of unmarked, unassociated fish and releases prior to data submitted to CWT database (NMFS data goes back to 1943). Establish liaison with CDFG for verification of data.
Status : Incomplete.

Idaho : Utilize information from the CWT database as the 'official' version of releases for tagged and untagged fish from 1975 through the present. Utilize StreamNet staff at IDFG to isolate and correct inconsistencies during this time period. Use data from NMFS files for years prior to 1975 (data goes back to 1940).
Status : Incomplete.

Oregon : Utilize information from the CWT database as the 'official' version of releases for tagged and untagged fish from 1975 through the present with the exception of unmarked, unassociated releases prior to 1982. These will be taken

from the NMFS files as they have not been submitted to the CWT database. Utilize staff at PSMFC to isolate and correct inconsistencies during this time period. Use data from NMFS files for any years prior to 1975 (data goes back to 1900). **Status : Incomplete.**

Washington: Utilize information from the CWT database as the ‘official’ version of releases for tagged and untagged fish from 1975 through the present with the exception of unmarked, unassociated releases of steelhead for all years. These will be taken from the NMFS files as they have not been submitted to the CWT database. Utilize StreamNet staff at WDFW to isolate and correct inconsistencies during this time period. Use data from NMFS files for any years prior to 1974 (data goes back to 1913). **Status : Incomplete.**

Hatchery Returns: The database submitted to PSMFC from the NRC consultants contains over 13,000 return records for the states of OR, ID, WA, and CA. We have analyzed these records and grouped them into logical trends (defined as a group of a particular stock returning to a particular hatchery). The table below summarizes the status of these data. As you can see, there are a significant number of trends in the NMFS database that are either missing altogether in StreamNet or missing some years.

STATE	# Trends	StreamNet Status
CA	54	Not in StreamNet
CA	10	Missing Some Years
ID	12	Not in StreamNet
ID	17	Missing Some Years
ID	9	Same as Streamnet
OR	152	Not in StreamNet
OR	66	Missing Some Years
OR	49	Same as Streamnet
WA	247	Not in StreamNet
WA	128	Missing Some Years
WA	34	Same as Streamnet

California : Utilize information from NMFS database and update StreamNet database. Establish liaison with CDFG for verification of data. **Status : Incomplete.**

Idaho : Utilize StreamNet staff at IDFG to error check and incorporate data from NMFS database that is missing from StreamNet. **Status : Complete**

Oregon : Utilize StreamNet staff at ODFW to error check and incorporate data from NMFS database that is missing from StreamNet. **Status :**
Incomplete.

Washington: Utilize StreamNet staff at WDFW to error check and incorporate data from NMFS database that is missing from StreamNet.
Status : Complete for Salmon in the Columbia Basin, incomplete for salmon and steelhead outside the basin and steelhead inside the basin.

Sub-Task 1C: Expand StreamNet Harvest Database

Marine : Marine harvest data consists primarily of 11 large data files from various sources. We have reviewed this data and are in the process of setting up meetings with the appropriate harvest managers in Oregon and Washington to determine the best route in incorporating this data. The proposal for future updates would be to acquire this data from the PacFin database. **Status : Incomplete.**

Freshwater: Freshwater harvest data falls into 3 broad categories: Columbia River mainstem harvest, tributary sport harvest, and tributary tribal harvest. We have reviewed these datasets and will proceed as follows.

Columbia River: We are in the process of setting up meetings with the appropriate harvest managers in Oregon and Washington to determine the most appropriate way to incorporate Columbia River harvest data and anticipate that this will be fairly easily accomplished. **Status : The meetings have not yet occurred but data for Columbia River harvest is complete and in the system. Format changes may occur in the future but no more action on this item is deemed necessary.**

Tributary Sport Harvest: Washington is in the process of updating sport harvest data for the entire state. We anticipate that this will supersede the need to review NMFS files for Washington. Idaho data files for harvest match StreamNet trends one for one and will be updated only. Oregon has updated sport harvest data for the entire state. All California data for sport harvest was obtained from StreamNet and therefore needs no review. **Status : Data is being updated at the state level and will be incorporated as soon as possible, no more action on this item is deemed necessary.**

Treaty Freshwater Harvest: We will review these on a trend by trend basis and add as appropriate. **Status : Incomplete.**

Task 2: Update abundance, hatchery, and harvest data through 1995

I. Work to be Accomplished

This task will update data holdings through 1995 by acquiring new data from agency contacts and incorporating this information into the StreamNet database.

Specific work items include:

- a. Acquire and incorporate 1995 information for abundance trends in the StreamNet database resulting from the completion of Task 1A of this proposal.
- b. Acquire and incorporate 1995 information for hatchery trends in the StreamNet database resulting from the completion of Task 1B of this proposal.
- c. Acquire and incorporate 1995 information for harvest trends in the StreamNet database resulting from the completion of Task 1C of this proposal.

Status: With a few exceptions, we have completed this task. We have encountered some delays from our State participants, but most data have been provided and are incorporated in the database.

Task 3. Establish a mechanism for regular updates of information

CONTRACTED TO: Pacific States Marine Fisheries Commission (PSMFC)

TIME FRAME: October 1, 1996 - September 30, 1997

I. Work to be Accomplished

The existing StreamNet project provides a mechanism for data updates for the states of Idaho, Oregon, and Washington. Data compilers and coordinators in each state work together with the regional data manager to insure regular updates of information in a standardized format. This infrastructure is not in place in California, however, because California is outside the geographic scope of the current StreamNet project. This task would focus on establishing similar mechanisms in California, as currently exist in the StreamNet states of Idaho, Oregon, and Washington.

Status: We have not engaged in formal talks with representatives from California at this time. However, we have established data contacts. We will continue to explore the options available for continued updates of information from California.

Task 4. Participate in an interagency workgroup on salmon monitoring and harvest management reform.

CONTRACTED TO: Pacific States Marine Fisheries Commission (PSMFC)

TIME FRAME: October 1, 1996 - September 30, 1997

I. Work to be Accomplished

This task will provide for PSMFC and StreamNet participation in the interagency workgroup on salmon monitoring and harvest management reform. Participation will be especially focused on the information needs of managers and how those needs can be met by the various data activities coordinated through PSMFC.

Status: This group has not been formed (to our knowledge) and we have not done any work on this task.

Summary

The majority of effort on this project is contained in Task 1 (expand StreamNet databases with abundance, hatchery, and harvest data). Most of our progress in FY 97 on this task was within subtask 1A (abundance data). With the exception of salmon data outside of the Columbia Basin in Washington, this task is complete.

Subtask 1B (hatchery releases and returns) and 1c (harvest data) will be the primary focus of our activities in the FY 98 no cost extension to this contract. These data turned out to be considerably more complex and involved than we had anticipated, necessitating the contract extension. We anticipate completion of these tasks in FY 98.

Task 2 and 3 (update data through 95 and establish regular mechanisms for updates) have largely been completed with the exception of the State of California. We will be pursuing avenues for data capture and update in California with CDFG in early 1998.

Task 4 (Participate in an interagency workgroup on salmon monitoring and harvest management reform) remains incomplete as the work group has not been formed to our knowledge. If the group is formed, we will participate.