

Proposal for

EXPANSION OF StreamNet DATABASE TO ALL ANADROMOUS SALMONID POPULATIONS IN THE STATES OF CALIFORNIA, IDAHO, OREGON, AND WASHINGTON

submitted by

Pacific States Marine Fisheries Commission

I. Introduction

This proposal addresses the National Marine Fisheries Service immediate need for accurate, standard and readily available data on salmon and steelhead abundance and production information by incorporating this need into established interagency data efforts.

Salmon abundance and production information gathered during ESA status review activities will be fully incorporated into the Interagency StreamNet database, expanding the geographic coverage (outside of the Columbia River Basin) of the database to include all salmon and steelhead stocks in Washington, Oregon and California. A system will be established for annual updates to the full database.

Work in future years in future years would focus on continued update and expansion of database coverage to Alaska and British Columbia, additional effort on aquatic habitat data, and refining data structure and access techniques.

II. Task List - Project Narrative

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

Objective: This task would expand the content and geographic scope of the current StreamNet data holdings to include historical information for all anadromous populations in Washington, Oregon, Idaho, and California by incorporating data from NMFS contract databases to the greatest extent feasible into the StreamNet database system.

Results and Benefits Expected: The StreamNet system is a regional repository for standardized anadromous fish information used to support fishery management decisions within the Columbia Basin and on the Oregon and Washington coasts. The StreamNet database system utilizes standardized geographic and data coding allowing data query, display, reporting, and export for all data types through a

single user interface. By expanding the geographic scope to include California, and incorporating longer term historical data currently not present in the StreamNet system (to be incorporated from the NMFS contract databases), the system will provide a more comprehensive and long term information source for west coast fishery managers, in a powerful user-friendly PC based application.

Sub-Task A: Expand StreamNet Abundance Database

Objective: This task would expand the content and geographic scope of the current StreamNet natural adult abundance data holdings to include historical information for all anadromous populations in Washington, Oregon, Idaho, and California by incorporating data from NMFS contract databases to the greatest extent feasible into the StreamNet database system.

Results and Benefits Expected: By expanding the geographic scope and historical contents of this data component, the database will provide a more comprehensive information set of natural spawning ground returns and other adult abundance indices. This information is vital in the assessment of stock status and population trends of Pacific Northwest anadromous salmonids.

Sub-Task B: Expand StreamNet Hatchery Database

Objective: This task would expand the content and geographic scope of the current StreamNet hatchery release and return holdings to include historical information for all anadromous populations in Washington, Oregon, Idaho, and California by incorporating data from NMFS contract databases to the greatest extent feasible into the StreamNet database system.

Results and Benefits Expected: By expanding the geographic scope and historical contents of this data component, the database will provide a more comprehensive information set of hatchery influences in the Pacific Northwest. This information is useful in the determination of wild stock status, as well as in the assessment of the health and status of Pacific Northwest populations of anadromous salmonids.

Sub-Task C: Expand StreamNet Harvest Database

Objective: This task would expand the content and geographic scope of the current StreamNet freshwater and marine harvest data holdings to include historical information for all anadromous populations in Washington, Oregon, Idaho, and California by incorporating data from NMFS contract databases to the greatest extent feasible into the StreamNet database system.

Results and Benefits Expected: By expanding the geographic scope and historical contents of this data component, the database will provide a more comprehensive information set of freshwater and marine harvest. This information is used to monitor harvest trends, and assess the health and status of Pacific Northwest populations of anadromous salmonids.

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

Objective: This task would update the datasets resulting from Task 1 through the 1995 run year where feasible.

Results and Benefits Expected: The completion of this task would result in a comprehensive information source with the most up to date information available.

Sub-Task A: Acquire and incorporate 1995 Abundance Data

Objective: This task would add 1995 run year data to the datasets resulting from task 1A.

Results and Benefits Expected: This task would provide and make accessible the most current data available in this category.

Sub-Task B: Acquire and incorporate 1995 Hatchery Data

Objective: This task would add 1995 run year data to the datasets resulting from task 1B.

Results and Benefits Expected: This task would provide and make accessible the most current data available in this category.

Sub-Task C: Acquire and incorporate 1995 Harvest Data

Objective: This task would add 1995 run year data to the datasets resulting from task 1C.

Results and Benefits Expected: This task would provide and make accessible the most current data available in this category.

Task 3. Establish a mechanism for regular updates of information

Objective: This task would create new or enhance existing mechanisms for acquiring regular, ongoing information updates for the datasets described in tasks 1 and 2.

Results and Benefits Expected: The completion of this task would ensure that the database would be maintained into the future with periodic updates resulting in a comprehensive, up-to-date information system for Pacific Northwest anadromous salmonids.

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

Objective: This task would provide PSMFC participation in a workgroup created by NMFS.

Results and Benefits Expected: Participation is at the request of NMFS and will be especially focused at the direct link of information needs of monitoring and harvest management reform discussions and the database efforts.

IV. Task Details

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

CONTRACTED TO: Pacific States Marine Fisheries Commission (PSMFC)

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

Sub-Task 1A: Expand StreamNet Abundance Database

I. Work to be Accomplished

This sub-task will expand the scope of adult abundance data in the StreamNet database to include all of the populations in California, Idaho, Oregon, and Washington by incorporating existing information from the NMFS contract databases into the StreamNet database.

Specific work items include:

- a. Examine and incorporate as appropriate into StreamNet database adult abundance records from NMFS contract datasets. Process will include 1) comparison with existing data in StreamNet to prevent duplication and validation of new data added to system, 2) reformatting and coding of data to meet StreamNet standards, 3) addition of standardized geographic reference codes (EPA reach numbers) to all trends incorporated and 4) addition of reference information into StreamNet reference system. The following NMFS contract datasets will be processed (from Catch, Escapement, and Historical Data reports for Chinook Salmon, Chum Salmon, Coho Salmon, Cutthroat Trout, Pink Salmon, Sockeye Salmon, and Steelhead Trout; reports for Northwest Fisheries Center, prepared by Big Eagle & Associates and LGL Limited, record counts are for target states only, original databases may contain additional records for Alaska and British Columbia):

Data Table	# of Records	Data Type	Year Range	States Included
CHINOOK				
CN_TREND.DBF	1,082	Adult Return	Varies	CA, ID, OR, WA
CN_DATA.DBF	20,580	Adult Return	Varies	CA, ID, OR, WA
MARCHIN.DBF	2,018	Marmot Dam Counts	1977-94	OR
NFCHIN.DBF	14,009	NF Clackamas Dam Counts	1957-94	OR
REDDCNTS.DBF	2,969	Redd Counts	1957-94	ID
CDFGSHIN.DBF	81	Carcass Count	1985-94	CA
NMFS_ALL.XLS	900	Redd/Carcass	1968-94	CA
ADLTSPCK.XLS	78	Prosser Dam Counts (Spring)	1983-94	WA
ADLFTCK.XLS	78	Prosser Dam Counts (Fall)	1983-94	WA
GRANDTAB.WK1	2,300	Fall Spawning Estimates	1952-91	CA
MILLDEER.WK1	850	Spawning Estimates	1940-94	CA
DDYRCT.WK1	252	Red Bluff Dam Counts	1967-93	
CHUM				
CM_TREND.DBF	432	Adult Return	Varies	WA
CM_DATA.DBF	6,695	Adult Return	Varies	WA
COHO				
CO_TREND.DBF	742	Adult Return	Varies	WA,OR
CO_DATA.DBF	11,988	Adult Return	Varies	WA,OR
KLAMCOHO.XLS	175	Adult Return/Redds	68-94	CA
WCOAUC.ZIP	1,344	Adult Return	81-94	OR
CUTTHROAT				
CT_TREND.DBF	13	Adult Return	Varies	WA,OR
CT_DATA.DBF	231	Adult Return	Varies	WA,OR
PINK				
PK_TREND.DBF	73	Adult Return	Varies	WA

Data Table	# of Records	Data Type	Year Range	States Included
PK_DATA.DBF	1,035	Adult Return	Varies	WA
Data Table	# of Records	Data Type	Year Range	States Included
SOCKEYE				
SO_TREND.DBF	50	Adult Return	Varies	WA,OR
SO_DATA.DBF	1,072	Adult Return	Varies	WA,OR
STEELHEAD				
ST_TREND.DBF	841	Adult Return	Varies	WA,OR, CA,ID
ST_DATA.DBF	9,225	Adult Return	Varies	WA,OR, CA,ID
NMFS_ALL.XLS	See Chinook Section			
MILLDEER.WK1	See Chinook Section			
DDYRCT.WK1	See Chinook Section			
MARSST.DBF	2,606	Marmot Dam Counts	1957-95	OR
MATWST.DBF	1,910	Marmot Dam Counts	1957-95	OR
NFSST.DBF	5,489	NF Clackamas Dam Counts	1957-95	OR
NFWST.DBF	3,381	NF Clackamas Dam Counts	1957-95	OR
CDFGSTHD.DBF	512	Spawning Ground Counts	1985-94	CA
ELLSTHD.DBF	180	Cape Horn Dam Count	1933-94	CA
REDD_CIS.DBF	206	Redd Counts	60-64	ID
STRESINV.ZIP	59 Excel Tables	Spawning Counts, Harvest Data	Varies	WA
WASTLD.XLS	44 Excel Tables	Spawning Counts, Harvest Data	Varies	WA
WASTLD2.XLS	100+	Spawning Counts, Harvest Data	Varies	WA

Sub-Task 1B: Expand StreamNet Hatchery Database

I. Work to be Accomplished

This sub-task will expand the scope of hatchery data in the StreamNet database to include all of the populations in California, Idaho, Oregon, and Washington by incorporating existing information from the NMFS contract databases into the StreamNet database.

Specific work items include:

- a. Examine and incorporate as appropriate into StreamNet database hatchery records from NMFS contract datasets. Process will include 1) comparison with existing data in StreamNet to prevent duplication and validation of new data added to system, 2) reformatting and coding of data to meet StreamNet standards, 3) addition of standardized geographic reference codes (EPA reach numbers) to all trends incorporated and 4) addition of reference information into StreamNet reference system. The following NMFS contract datasets will be processed (from hatchery production data submitted to PSMFC by Greg Ruggerone of Natural Resources Consultants on 3/11/96, record counts are for target states only, original databases may contain additional records for Alaska and British Columbia).

Data Table	# of Records	Data Type	Species	Year Range	States Included
CHINREL.DBF	32,258	Releases	Ch	Varies	ID, WA, OR, CA
CHUMREL.DBF	3,207	Releases	Cm	Varies	OR, WA
COHOREL.DBF	36,216	Releases	Co	Varies	WA, OR, CA
CUTTREL.DBF	8,670	Releases	Ct	Varies	WA, OR, CA
PINKREL.DBF	250	Releases	Pk	Varies	OR, WA
SOCKREL.DBF	1,057	Releases	So	Varies	ID, WA, OR
STEELREL.DBF	30,152	Releases	St	Varies	ID, WA, OR, CA
CHINSPSU.DBF	5,445	Returns	Ch	Varies	ID, WA, OR, CA
CHUMSPSU.DBF	907	Returns	Cm	Varies	OR, WA
COHOSPSU.DBF	3,554	Returns	Co	Varies	WA, OR, CA
CUTTSPSU.DBF	170	Returns	Ct	Varies	WA, OR

PINKSPSU.DBF	189	Returns	Pk	Varies	OR, WA
SOCKSPSU.DBF	388	Returns	So	Varies	ID, WA, OR
STEELSPSU.DBF	2,509	Returns	St	Varies	ID, WA, OR, CA

Sub-Task 1C: Expand StreamNet Harvest Database

I. Work to be Accomplished

This sub-task will expand the scope of harvest data in the StreamNet database to include all of the populations in California, Idaho, Oregon, and Washington by incorporating existing information from the NMFS contract databases into the StreamNet database.

Specific work items include:

- a. Examine and incorporate as appropriate into StreamNet database **marine** harvest records from NMFS contract datasets. Process will included 1) comparison with existing data in StreamNet to prevent duplication and validation of new data added to system; 2) reformatting and coding of data to meet StreamNet standards; 3) addition of standardized geographic reference codes (EPA reach numbers) to all trends incorporated; and 4) addition of reference information into StreamNet reference system. The following NMFS contract datasets will be processed (from Marine Commercial and Sport Catch Databases with Information on Salmon and Steelhead, a report for Northwest Fisheries Center, prepared by Big Eagle & Associates and LGL Limited, record counts are for target states only, original databases may contain additional records for Alaska and British Columbia):

Data Table	# of Records	Data Type	Species	Year Range	States Included
MACA1.DBF	56,583	Marine Comm.	All	1981-93	WA, OR, CA
MACA2.DBF	3,508	Marine Troll	All	1950-69	WA
MACA3.DBF	43,156	Marine Comm.	All	1970-93	WA
MACA4.DBF	2,044	Marine Sport.	All	1950-93	WA
MACA5.DBF	7,888	Marine Sport.	All	1967-93	WA
MACA8.DBF	2,139 3,568	Marine Troll	Co, Cn, Pk	1952-90 1925-91	CA OR
MACA9.DBF	1,752 819	Marine Sport	Co, Cn	1962-90 1974-90	CA OR
O-CP-CHIN.XLS	360	Marine Sport	Cn	1974-93	OR
OCEAN.WK1	480	Marine	Cn	1947-91	CA

Data Table	# of Records	Data Type	Species	Year Range	States Included
		Comm. & Sport			

b. Examine and incorporate as appropriate into StreamNet database **freshwater** harvest records from NMFS contract datasets. Process will included 1) comparison with existing data in StreamNet to prevent duplication and validation of new data added to system, 2) reformatting and coding of data to meet StreamNet standards, 3) addition of standardized geographic reference codes (EPA reach numbers) to all trends incorporated and 4) addition of reference information into StreamNet reference system. The following NMFS contract datasets will be processed (from Catch, Escapement, and Historical Data reports for Chinook Salmon, Chum Salmon, Coho Salmon, Cutthroat Trout, Pink Salmon, Sockeye Salmon, and Steelhead Trout; reports for Northwest Fisheries Center, prepared by Big Eagle & Associates and LGL Limited, record counts are for target states only, original databases may contain additional records for Alaska and British Columbia):

Data Table	# of Records	Data Type	Year Range	States Included
COMBINED				
76FW.XLS (wafwsprt.zip)	19,256	FW Sport	1976-85	WA
86FW.XLS (wafwsprt.zip)	23,408	FW Sport	1986-93	WA
SRTxx Files	Varies	FW Sport and Commercial	Varies	Col. River
CHINOOK				
FWCNTRND.DBF	240	FW Sport	Varies	OR
FWCNDATA.DBF	4,202	FW Sport	Varies	OR
WACNFWIN.XLS	1,200	Treaty FW	1935-91	WA
CHUM				
OR_FW_SP.XLS	200	FW Sport - Tillamook District	1969-91	OR
CM_TILL.XLS	22	FW Sport/Comm - Tillamook Bay	1969-91	OR
WA_FW_IN.XLS	300	FW Treaty	1982-91	WA
COHO				
FWCOTRND.DBF	135	FW Sport	Varies	OR, WA
FWCODATA.DBF	2,352	FW Sport	Varies	OR, WA
WACOFWIN.XLS	876	FW Treaty	1935-91	WA

Data Table	# of Records	Data Type	Year Range	States Included
CUTTHROAT				
FWCNTRND.DBF	9	FW Sport	Varies	OR, WA
FWCNDATA.DBF	95	FW Sport	Varies	OR, WA
PINK				
N/A				
SOCKEYE				
WASOFWIN.XLS	870	FW Treaty	1982-91	WA
STEELHEAD				
FWSTRND.DBF	1,292	FW Sport	Varies	CA, ID, OR, WA
FWSTDATA.DBF	16,383	FW Sport	Varies	CA, ID, OR, WA
STRESINV.ZIP	59 Excel Tables	Spawning Counts, Harvest Data	Varies	WA
WASTLD.XLS	44 Excel Tables	Spawning Counts, Harvest Data	Varies	WA
WASTLD2.XLS	100+	Spawning Counts, Harvest Data	Varies	WA
HARV_CIS.DBF	645	FW Sport	Varies	ID

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

CONTRACTED TO: Pacific States Marine Fisheries Commission (PSMFC)

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

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.

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.

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.