PIT TAG SPECIFICATION DOCUMENT

Columbia River Basin

PIT Tag Information System:

Data Source Input Specifications

March 1, 1990

1990
PIT TAG SPECIFICATION DOCUMENT

I. Rationale

This specification document has been prepared to ensure interagency continuity of PIT tag data as well as facilitate data entry and retrieval to and from the Columbia River Basin PIT Tag Information System (PITAGIS). Some flexibility exists to modify data inputs as the system evolves. However, all changes to this document must be reviewed annually by the PIT Tag Work Group. Reviewing and changing this specification document will occur annually prior to March. Questions concerning this document should be addressed to the PIT Tag Work Group members (See III,11).

II. Data Files

There are six file types that are recognized by the system. These are **Tagging**, **Release Information**, **Interrogation**, **Monitored Release**, **Mortality**, and **Test Tags**. All files must be in ASCII format and comply with the following specifications. The first record of each of these files will be the "FILE TYPE" record. .

Format: **"FILE TYPE"** starting in column 5; a colon (:) in column 36; and the File Type Name (as listed below) starting in column 38 (**"TAGGING"**, **"RELEASE INFORMATION"**, **"INTERROGATION"**, **"MONITORED RELEASE"**, **"MORTALITY"**, or **"TEST TAGS"**)

Please see Figures 1-6 (examples) for additional information.

A. *Tagging File*

Tagging files are created using the program **PITTAG.exe**. Only the most current version of the program (4/21/89) should be used. This document refers to features not found in previous versions of the program. Older versions of the program should be discarded. Updated programs are available through PIT Tag Work Group members (See III. 11.).
A tagging file consists of five record categories: **File type**, **Header**, **Tag**, **Note**, and **Additional Record Types**. All records must have at least four characters (even blank records will have four blanks). Any number of **Header**, **Tag**, and **Note** records are allowed. A **Header** record is distinguished by blanks in columns 1-4 and a colon (:) in column 36. A **Tag** record is distinguished by at least one right justified digit in columns 1-4. **Notes**, **Headers**, and **Session Message** records are distinguished by blanks in columns 1-4.

i. **File Type Record** (For format, See section II.)

1. **FILE TYPE**: **TAGGING** (Computer generated, Mandatory)

ii. **Header Records** (See Figure 1)

Data should be entered in the **Header** using the following format: Field name (columns 5-34), a colon (:) (column 36), and Data (columns 38+). Lines of spaced dashes will be in the Header on lines 2 and 4.

1. **SESSION** or **PROJECT MESSAGE**: {TEXT, 76 characters max. Optional}
2. **FILE TITLE**: xxxYYDDD.zzz {Mandatory format includes a 3 digit ID (initials) of the individual tagging supervisor and the julian date. The extension is optional and variable}
3. **CREATION DATE**: MM/DD/YY {Computer Generated, *Mandatory*}
4. **CREATION TIME**: HH:MM {Computer Generated, Mandatory}
5. **TAGGER**: {Tagger's name, 20 characters max. Mandatory}
* 6. **SPECIES**: {See III.2. for codes. 1 character max. Mandatory}
* 7. **RUN**: {Spring, Summer, Fall, Winter. See III.3. for codes, 1 character max. Mandatory}
* 8. **REARING TYPE**: {Wild, Hatchery, Mixed. See III.4. for codes, 1 character max. Mandatory}
9. **HATCHERY SITE**: {See III. 6. for Codes, 4 characters max. Mandatory}
12. **STOCK**: {15 characters max., Optional}
11. **BROOD YR**: {last 2 digits of calendar year when eggs were collected, Optional}
12. **MIGRATORY YR**: {last 2 digits of earliest calendar year when fish will be interrogated. Mandatory}
13. **TAG SITE**: {6 characters max. Mandatory}
14. **RACEWAY/TRANSECT**: {6 characters max. Optional}
15. **CAPTURE METHOD**: {6 characters max. - see III.7. below. Optional}
16. **RELEASE TEMP**: {nn.n, temp (C) outdoor raceways. Mandatory}
17. **TAGGING TEMP**: {nn.n, temp (C) tagging troughs. Mandatory}
18. **TAGGING METHOD**: {**AUTO** or **HAND**. Mandatory}
19. **AGENCY**: {see III.8., 6 characters max. Mandatory}
20. **COORDINATOR ID**: {see III.1 for codes. Mandatory}
21. **COMMENTS**: {Optional}

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* **Mandatory entry. Can be omitted from header if the information is entered in the tagging record (See iii. 10. 1).**

In addition to the above mentioned **Header** field names, all **Header** field types found in the **Release Information File** can be added to the **Tagging Header** if the fish are to be released on the same day as tagging (See II,B,ii).

iii. Tag Records

1. **SEQUENCE NUMBER**: {Columns 1-4, numeric. Mandatory}
** 2. **PITCODE**: {Columns 7-16, alpha-numeric. Mandatory}
3. **CHECKSUM**:{Columns 19-20, alpha-numeric. Mandatory}
4. **FORKLENGTH**: {Columns 21-28, numeric. Mandatory}
5. **WEIGHT**: {Columns 29-38, numeric with one digit to the right of the decimal point. Optional}
6. **SPECIES**: {Column 41, numeric, see codes III.2.}
7. **RUN**: {Column 42, numeric, see codes III.3.}
8. **REARING TYPE**: {Column 43, alpha-numeric, see codes III.4.}
9. **RELEASE TIME VARIABLE**: {Columns 44-45}
10. **COMMENTS**: 3 Types:

1. **Positional Comments** (entered via the digitizer) Only positional comments defined in this specification document can be used. Additional **positional comments** can be added, up to the maximum space allowed, but will not be recognized by PITAGIS without prior committee approval (space is allocated for up to 50 characters). **Positional comments** will overwrite header information for the individual tag record it is assigned to. The **positional comments** currently specified are as follows:

a. **Species**
b. **Run**
c. **Rearing Type**
d. **Release Time Variable**:{column 44, 45, 01...99.} (Each unique release time variable must have a corresponding accompanying note record that reports the actual time of release - see Section iv "Note Records".)

2. **Conditional Comments** (entered via the digitizer) Only approved **flag codes** will be recognized as conditional comments (see section 5 **"flag codes"**). Conditional comments, if present, are preceded by a

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**** PIT tags can only be re-used in the columbia River system if the tag is removed from a fish and the tag code with check sum are changed to ten periods followed by a space and two periods (.......... ..) prior to the tagging file being submitter to PITAGIS. All other fields in the individual record must remain intact for future reference.**

vertical bar "|" and are separated by spaces. Space is allocated for up to 50 characters in this field.

3. **Textual Comments** (entered via the keyboard) Textual comments are preceded by a second vertical bar "|", and consist of information specific to an individual fish. Space is allocated for up to 50 characters in this field.

iv. Note Records (Typed via keyboard)
Any text starting in column 5 entered from the keyboard. All notes of a non-specific nature, or those pertaining to fish recorded previously in the file, can be entered from the keyboard starting at column five. Variable release time notations are included in this category, but follow a strict format: The record begins with a "V" in column five, followed by the two digit release variable in columns six and seven, equals sign "=" in column eight, the two digit military-style hour of release in columns nine and ten, a colon ":" in column eleven, and the two digit minutes of release in columns twelve and thirteen, i.e., V03=16:45".

v. Additional Record Types

Additional Record Types include **time stamp** (preformatted), **blank lines**, and **closing records**. All additional record types start in col. 5. The closing records are the same format as header records.

1. FILE CLOSED Date, : at column 36, MM/DD/YY at column 38.
2. FILE CLOSED Time, : at column 36, HH:MM at column 38.

B. Release Information File

A release information file consists of information about a tag file, or a group of tag files, which was not available at the time of tagging. This type of file contains three records categories: **File Type**, **Header**, and **Tag File Name**(s). The **File Type** record must be formatted as previously mentioned {section II. Data}. The **Header** records are formatted with the description beginning in column 1, the colon ":" at column 25, and the data beginning in column 27. **Tag File** name records are formatted the same as the previously mentioned header record. Additional tag file titles must form a column, each with the same format. (See Figure 2.)

i. File type record (For format, See section II. Data)
1. **FILE TYPE: RELEASE INFORMATION** {Mandatory}

ii. Header Records

1. **FILE TITLE**: REL<YY><ID>.xxx {Format includes REL, year of release (two digits), and the coordinator ID. The extension is up to the tagging coordinator and is optional. See section III.1. for the list of coordinator *ID* codes.}
2. **BEG RELEASE DATE**: MM/DD/YY {Mandatory}
3. **BEG RELEASE TIME**: HH:MM {Mandatory}
4. **END RELEASE DATE**: MM/DD/YY {Optional}
5. **END RELEASE TIME**: HH:MM {Optional}
6. **RELEASE LOCATION**: Name {6 characters max. Mandatory}
7. **RELEASE RIVER KM**: {See Section III.10a below. Mandatory}
8. **NUMBER RELEASED**: nnnnn {Numeric. Mandatory}
9. **TRANSPORT DURATION**: HH:MM {Time elapsed while fish are being transported. Optional}
10. **TRANSPORT TYPE**: {20 characters. Optional}
11. **CLOUD COVER**: {10 characters. Optional}
12. **WATER TEMP**: (C), nn.n {Mandatory}
13. **RELEASE WAS MONITORED**: (YES, NO) {Mandatory}
14. **FISH HEALTH/CONDITION** (for group): (TEXT) {Optional}
15. **ASSOCIATED MARK**: (TEXT) {Optional}
16. **RELEASE REMARKS**: (TEXT) {Optional}.

iii. Tag File Name

1. **TAG FILE NAME**: 12 characters, (Name of tag file(s) associated with release tags. One or more tag file records are allowed).

C. Interrogation Files

Interrogation Files are files created at the monitor sites by the automatic detection equipment in two format types (**Formats One** and **Two** are explained separately below. See Figure 3 and 4.). All records are computer generated. File titles are 12 characters {Format includes a 3 digit site code and the julian date. The extension is reserved for partitions (a, b, c etc.). Interrogation site codes (See III. 9), system ID codes, and coil ID codes are assigned when the system is installed at a dam. These codes can be changed by software or dip switch settings only (See III. 12). Tags are sometimes used to test equipment while in an operational mode. These tags must be reported prior to use (See F. Test Tags below). Interrogation files consist of 4 categories of records: **File Type, Start** and **End Messages, Interrogation Data Record,** and **Other Record Types.**

i. **File Type Record** (For format, See section II. Data)

A. **Format One**
   1. **FILE TYPE: INTERROGATION** {Mandatory}

B. **Format Two**
   1. **FILE TYPE: INTERROGATION 2** {Mandatory}

ii. **Start and End message** {Same for both format types}

A. **FILE TITLE**: file name (eg. PRJ89114.A), followed by a blank line. {Mandatory}

B. **FILE CREATED**: date and time (eg. 24 April 1989 AT 00:00) {Mandatory}

C. **FILE CLOSED**: date and time (eg. 23 March 1989 at 16:45.) {Mandatory}

iii. **Interrogation Data Records** {Computer generated. Mandatory}

A. **Format One**
   1. **|** {column 1}
   2. **CONTROLLER**: {column 3-4, alpha-numeric}
   3. **DATE**: MM/DD/YY {column 6-13}
   4. **TIME**: HH:MM:SS {column 15-22}
   5. **PITCODE**: {column 24-33, alpha-numeric}
   6. **CHECKSUM**: {column 35-36, alpha-numeric}
   7. **COILID**: {column 39-40, 42-43, 45-46, 48-49, 51-52, 54-55, 57-58, and 60-61; alpha-numeric}

B. **Format Two** {Consists of two lines of data}
    1. Line one: {Hourly time record}
        a. | {column 1}
        b. **CONTROLLER**: {column 3-4, alpha-numeric}
        c. **DATE**: MM/DD/YY {column 6-13}
        d. **TIME**: HH:MM:SS {column 15-22}
    2. Line two: {Individual fish data}
        a. **COLON**: {column 1}
        b. **TIME**: MM:SS {column 2-6}
        c. **PITCODE**: {column 8-17, alpha-numeric}
        d. **CHECKSUM**: {column 19-20, alpha-numeric}
        e. **COILID**: {column 23-24, 26-27, 29-30, 32-33, 35-36, 38-39, 41-42, and 44-45; alpha-numeric}

iv. Other Record Types (Do not begin with "|" in column 1.

A. System checks
B. Time Checks
C. BLANK LINE

D. Monitored Release File

Same format as interrogation file, except that first record is FILE TYPE: **"MONITORED RELEASE"**.

E. Mortality File

Mortality files are created using the tagging program **(PITTAG.EXE)**. A mortality file consists of the following categories: File type record; Header records; Mortality records; and Other Record Types (see Figure 5).

i. File Type Record(For format, See section II. Data)

1. **FILE TYPE**: **MORTALITY** (Mandatory)
   By typing **"PITTAG M"** (PITTAG <space> capital M) to start the program, the file type **Mortality** will automatically be entered.

ii. Header Records

1. **Session** or **Project Message**: {Text; 76 characters max. Mandatory}
2. **FILE TITLE**: xxxYYDDD.zzz {Format includes a 3 digit ID (initials) of the individual creating mortality file and the julian date. The extension is up to the coordinator and is optional. Mandatory}
3. **CREATION DATE**: MM/DD/YY {Mandatory}
4. **CREATION TIME**: HH:MM {Mandatory}
5. **COLLECTION SITE**: name {6 character max. Mandatory}
6. **COLLECTION RIVER KM**: {See III.10. Mandatory}
7. **CAPTURE METHOD**: {6 character max. - See III.7. Mandatory}
8. **AGENCY**: Agency collecting mortality data {6 character max. - see III. 8. Mandatory}
9. **COORDINATOR ID**: {See III. 1. Mandatory}

iii. Mortality Records

1. **SEQUENCE NUMBER**: {Columns 1-4, numeric. Mandatory}
2. **PITCODE**: {Columns 7-16, alpha-numeric. Mandatory}
3. **CHECKSUM**: {Columns 19-20, alpha-numeric. Mandatory}
4. **FORKLENGTH**: {Columns 21-28, numeric. Optional}
5. **WEIGHT**: {Columns 29-38, numeric with 1 digit right of the decimal point. Optional}
6. MORT. DATE:MM/DD/YY {columns 41-48. optional}
7. **COMMENTS**: {Conditional (flagcodes, See III.5 below) and textual, See II.A.iii for format. Optional}

iv. Note Records
{See Section II.A.iv. Note records.}

v. Additional Record Types
{See Section II.A.v. Additional Record Types.}

F. Test Tag File

Test tags are used to test the monitoring systems at each of the sites. These tags are removed from the portion of the database accessed by most users. Therefore, in order to expedite data handling all test tags must be reported to the central processing in the form of a Test Tag File, prior to their use. Test tags files consist of the following record categories: **File Type**, **Year Record**, and **Test Tag Records** (See Figure 6).

i. File type record
(For format, See section II. Data)

1. **FILE TYPE: TEST TAG** (constant value)

ii. Year Record
A two digit integer specifying the year for which the test-tags are applicable.

1. **YEAR**: yy {A free format is allowed for the year record, as long as the order of symbols is maintained.}

iii. Test Tag Records
1. **TEST TAG ID** (PITCODE): {Column 1-10, alpha-numeric; at least one test tag record is Mandatory}
2. **CHECKSUM**: {Columns 12-13, alpha-numeric, Optional}

III. Code Lists

Lists of standardized codes that must be used in the Columbia River Basin PIT Tag Information System (PITAGIS). *If tagging coordinators have additional codes they would like to use, please submit these to your agency's PIT tag Work Group member for review by the committee and inclusion in the next Specification Document.*

1. **Tag Coordinator Identification Codes** are the initials (use all, three max.) for the project leader responsible for the data (not necessarily the person conducting the tagging or creating the tagging file). Only codes reported in this specification document will be recognized. (The date column of the following table represents the dates these tag coordinators will be found in the data base.)

   Tag Coordinator Identification Codes:

ID	NAME	AGENCY	DATE
EWB	Ed Buettner	IDFG	1988-PRESENT
EFP	Earl Prentice	NMFS	1989
LCS	Lowell Stuehrenburg	NMFS	1987-89
RBK	Russ Kiefer	IDFG	1987-PRESENT
LRB	Larry Basham	FPC	1988
CSM	Scott McCutcheon	NMFS	1985-PRESENT
SA	Steve Achord	NMFS	1987-PRESENT
TAF	Tom Flagg	NMFS	1989-PRESENT
DAC	Dave Cannamela	IDFG	1990
CMP	Chuck Pevin	CPUD	
TGC	Tim Cochnauer	IDFG	1989
E L	Eric Leitzinger	IDFG	1990

2. **Species Codes:**

   1 = Chinook
   2 = Coho
   3 = Steelhead
   4 = Sockeye
   5 = Chum

3. **Run Codes:**

   1 = Spring
   2 = Summer
   3 = Fall
   4 = Winter
   5 = Unknown (River Migrants)

4. **Rearing Type Codes:**

   H = Hatchery reared fish
   W = Wild fish or Natural Production
   U = Unknown or Mixed hatchery & wild

5. **Flag Codes**: (An abbreviated comment field used in the **Tagging and Mortality files**.)

0 = Possible 0 aged chinook
1< = Descaled less than 10%
1> = Descaled greater than 10%
1P = Descaled - patchy
1S = Descaled - scattered
AD = Adipose fin clip
AF = Adipose fin damage
AN = Anal fin damage
B = Bleeding after tagged
BL = Bloated
BS = Body Scars
CA = Caudal fin damage
CY = Cyst
D = Dropped
DB = Double Tagged
DI = Deep Insertion
DK = Dark
DO = Dis-Orbited Eye
EB = Electro-shocker burn
EL = Damaged eye - left (found after tagged)
EM = Excessive mucous
ER = Damaged eye - right (found after tagged)
FE = Female
FU = Fungus
HE = Hemorrhage
I = Body injury - prior to tagging
IM = Immature
JA = Jack
JW = Jaw damage
KD = Possible BKD
L = Fish lost/or rejected tag prior to release
LA = Lacerations
LT = Light Body Color
M = Mortality
MA = Male
MB = Bleeding at tagging/died prior to release
MK = Removed from release group (killed)
MS = Sample mort
MT = Mature
NF = Non-Functional tag also in fish
NM = No mucous
OP = Opercule damage
PA = Parasite
PB = Previously branded
PR = Precocious
PT = Pectoral fin damage
PV = Pelvic fin damage

Q1 = Complete and legible freeze brand
Q2 = Brand is legible but defective in some manner
Q3 = Brand is not legible
Q4 = Brand rotation or position is wrong
Q5 = No brand
Q6 = Brand caused light, moderate or excessive burning
RE = Recapture
SC = Scoliosis
SV = Silvery body color
TM = Tagged in muscle
UL = Ulcer

6. **Hatchery Codes:**

ABEH ABERNATHY HATCHERY
BEAH BEAVER CREEK HATCHERY
BIGC BIG CREEK HATCHERY
BONH BONNEVILLE HATCHERY
CARS CARSON NATIONAL FISH HATCHERY
CASC CASCADE HATCHERY
CHEL CHELAN PUD HATCHERY
CLAH CLACKAMAS HATCHERY
CLWH CLEARWATER HATCHERY
COWH COWLITZ HATCHERY
CROP CROOKED RIVER REARING POND
DEXT DEXTER POND
DWOR DWORSHAK NATIONAL FISH HATCHERY
EAGH EAGLE CREEK HATCHERY
ELOK ELOKOMIN HATCHERY
ENTH ENTIAT NATIONAL FISH HATCHERY
GNAT GNAT CREEK HATCHERY
GRAY GRAYS RIVER HATCHERY
HAGE HAGERMAN NATIONAL FISH HATCHERY
IRRI IRRIGON HATCHERY
KALA KALAMA FALLS HATCHERY
KLAS KLASKANINE HATCHERY
KLIH KLICKITAT HATCHERY
KOOS KOOSKIA NATIONAL FISH HATCHERY
LEAB LEABURG HATCHERY
LEAV LEAVENWORTH NATIONAL FISH HATCHERY
LEWH LEWIS RIVER HATCHERY
LOOH LOOKINGGLASS HATCHERY
LOWK LOWER KALAMA HATCHERY
LWSH LITTLE WHITE SALMON HATCHERY
LYFE LYONS FERRY HATCHERY
MARI MARION FORKS HATCHERY
MAVA MAGIC VALLEY HATCHERY
MCCA MCCALL HATCHERY
MCKE MCKENZIE HATCHERY

MONT	MONTLAKE HATCHERY
NCHH	NACHES HATCHERY
NISP	NIAGARA SPRING HATCHERY
OASP	OAK SPRINGS HATCHERY
OXBO	OXBOW HATCHERY
PAHH	PAHSIMEROI HATCHERY
POWP	POWELL REARING POND
PRDH	PRIEST RAPIDS HATCHERY
RAPH	RAPID RIVER HATCHERY
REDP	RED RIVER REARING POND
RING	RINGOLD HATCHERY
ROAR	ROARING RIVER HATCHERY
ROBU	ROUND BUTTE
RRHH	ROCKEY REACH HATCHERY
SAND	SANDY HATCHERY
SAWT	SAWTOOTH HATCHERY
SKAM	SKAMANIA HATCHERY
SOSA	SOUTH SANTIAM HATCHERY
SPEE	SPEELYAI HATCHERY
SPRC	SPRING CREEK NATIONAL FISH HATCHERY
STAY	STAYTON POND
TOUT	TOUTLE HATCHERY
TRAS	TRASK HATCHERY
TROJ	TROJAN POND
TUCH	TUCANNON HATCHERY
TURO	TURTLE ROCK HATCHERY
VANC	VANCOUVER HATCHERY
WAHA	WASHOUGAL HATCHERY
WAHK	WAHKEENA POND
WALH	WALLOWA HATCHERY
WELF	WELLS HATCHERY, WDF
WELG	WELLS HATCHERY, WDW
WILH	WILLAMETTE/DEXTER HATCHERY
WILL	WILLARD NATIONAL FISH HATCHERY
WINT	WINTHROP NATIONAL FISH HATCHERY
WSPH	WARM SPRINGS HATCHERY
YAKH	YAKIMA HATCHERY

7. **Capture Method Codes:**

BPSUB = Bypass sub-sample
BSEINE = Beach Seine
BTRAP = Box Trap
SCOTRP = Scoop Trap
CMTRAP = Cray-Meeken Trap
DIPNET = Dip Net
GWDIP = Gatewell Dip net
GWFYKE = Gatewell Fyke net
SHOCK = Electro-Shock
PSEINE = Purse Seine
DIPTRP = Dipper Trap
WTRAP = Weir Trap
SCREWT = Screw Trap

8. **Agency Codes:**

IDFG = Idaho Dept. of Fish and Game
NMFS = National Marine Fisheries Service
FPC = Fish Passage Center
ODFW = Oregon Dept. of Fish and Wildlife
WDF = Washington Dept. of Fish
WDW = Washington Dept. of Wildlife
USFWS = U.S. Fish and Wildlife Service

9. **Interrogation Sites Codes:**

McNary Juvenile	= MCJ
McNary sub-sample	= MC2
Little Goose Juvenile	= GOJ
Little Goose sub-sample	= GO2
Lower Granite Juvenile	= GRJ
Lower Granite Adult	= GRA
Prosser Juvenile	= PRO
Snake River Trap	= SNJ
Clearwater River Trap	= CLJ
Yakama River Trap (1)	= Y1J

10. **Release and Collection Site Designation Codes:**

a. Release Site (Tagging and Release Information Files)
   1. River kilometer - Hierarchical coding scheme: Kilometers from mouth of Columbia to release site or tributaries [up to 5th order stream], with each tributary delimitated with a period.(eg. code for location of Lower Granite dam is 518.171 = 518 km from the mouth of the Columbia to the mouth of the Snake, and 171 km from the mouth of the Snake to the dam.) Comparative river mile index available from Scott McCutcheon, NMFS-Pasco.
   2. Release Sites - No domain specified at present.

b. Collection Site (Mortality File)
   1. Collection Sites - No domain Specified at present.

11. **PIT Tag Work Group Members, 1990.**

Name	Agency	Street	City	State	ZIP	PHONE-C
Lee Blankenship	WDF	115 General Admin. Bldg.	Olympia	WA	98504	(206)586-1995
Ed Buettner	IDFG	1540 Warner Ave.	Lewiston	ID	83501	(208)743-6502
Ivonne Nylund	PMFC/PACFIN	7600 Sand Point Way N.E.	Seattle	WA	98115	(206)526-4068
Dick Edwards	USFWS	9317 Highway 99, Suite 2	Vancouver	WA	98665	(206)696-7605
Gary Fenton	WDW	600 N. Capital Way	Olympia	WA	98504	(206)586-1995
Dave Marvin	FPC/CRITFC	825 N.E. 20th Ave., Suite 336	Portland	OR	97232-2295	(509)230-4289
Scott McCutcheon	NMFS-CZES	Build. 900, Big Pasco Industrial Park	Pasco	WA	99301-5898	(509)547-7518
Steve Vigg	ODFW	17330 S.E. Evelyn St.	Clackamas	OR	97015	(503)657-2038

12. **PIT Tag System Codes** are assigned by the agency maintaining the monitoring equipment. During 1990, the monitoring equipment will be maintained by the NMFS. Therefore, any questions, changes, or corrections should be addressed to that agency.

PIT TAG SYSTEM CODING BY LOCATIONS AND COIL NUMBERS
(as of 1/11/90)

MONITOR SITE	LOCATION	COIL NUMBERS
LOWER GRANITE ADULT	EAST	00-02-04-06
	WEST	08-0A-0C-0E
LOWER GRANITE JUV.	A MAIN	18-1A-1C-1E
	A SUB.	20-22-24-26
	B MAIN	10-12-14-16
	GATE CONTROL A	28-2A
	GATE CONTROL B	2C-2E
	FISH DIVERSION A	30-32-34
	FISH DIVERSION B	36-38-3A
LITTLE GOOSE JUV.	A MAIN	40-42-44-46
	B MAIN	48-4A-4C-4E
	SAMPLE ROOM	50-52-54-56
MCNARY JUV.	A MAIN	68-6A-6C-6E
	A SUB.	70-72-74-76
	B MAIN	60-62-64-66
	SAMPLE ROOM	80-82
SNAKE JUV. TRAP	MAIN	D4-D6
CLEARWATER JUV. TRAP	MAIN	D0-D2
PROSSER	MAIN	C8-CA-CC-CE
YAKAMA JUV. TRAP (1)	MAIN	B8-BA

Figure 1. Tagging file Example.

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FILE TYPE                        : TAGGING
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1990 SPECIFICATION DOCUMENT
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
FILE TITLE                       : CSM89332.EXP
CREATION DATE                    : 11/28/89
CREATION TIME                    : 11:45
TAGGER                           : KARL SMOLTSTICKER
SPECIES                          : 1
RUN                              : 1
REARING TYPE                     : H
HATCHERY SITE                    : DWOR
STOCK                            :
BROOD YR                         : 88
MIGRATORY YR                     : 90
TAG SITE                         : DWOR
RACEWAY/TRANSECT                 : B28
CAPTURE METHOD                   : DIPNET
RELEASE TEMP                     : 1.5 C
TAGGING TEMP                     : 2 C
TAGGING METHOD                   : AUTO
AGENCY                           : NMFS
COORDINATOR ID                   : CSM
RELEASE DATE                     : 11/28/89
RELEASE TIME                     :
RELEASE LOCATION                 : DWORSHAK
RELEASE RIVER KM                 : 522.224.65

SPECIFICATION DOCUMENT EXAMPLES

 1  7F7A2D4912  86     123            01
 2  7F7A2D4775  E7     120          32W01
 3  7F7A2C3177  D2     109            01
 4  7F7A2C325B  B7     139            01
 5  7F7A2D5116  92     111            02
 6  7F7A2D4C02  79     245          32H02 || SC EATEN BY THIS STHD
 7  7F7A2D4D0B  83     111            02
 8  7F7A2D4817  8A     115            02  | ER
 9  7F7A2D4B7E  F4     100            02
  <TIME CHECK> 28 NOVEMBER AT 13:01
10  7F7A290B4A  7C     113      16.7  02  | DI D BS
  V01=12:00
  V02=13:15

CLOSE DATE                       : 11/28/89
CLOSE TIME                       : 13:36
```

Figure 2. Release information file example.

```
     FILE TYPE                      : RELEASE INFORMATION
FILE TITLE                  : REL88CSM.R01
BEG RELEASE DATE            : 07/10/88
BEG RELEASE TIME            : 11:10
END RELEASE DATE            :
END RELEASE TIME            :
RELEASE LOCATION            : MCNARY
RELEASE RIVER KM            : 526
NUMBER RELEASED             : 1194
TRANSPORT DURATION          : 00:15
TRANSPORT TYPE              : TRUCK
CLOUD COVER                 :
WATER TEMP                  :
RELEASE WAS MONITORED       : NO
FISH HEALTH/CONDITION       :
ASSOCIATED MARK             : RA F1
RELEASE REMARKS             : RELEASE MADE WITHIN BYPASS SYSTEM AT
RELEASE REMARKS             : UNIT 2
TAG FILE NAME               : CSM88189.FC1    .
TAG FILE NAME               : CSM88188.BS1
TAG FILE NAME               : CSM88189.BS2
```

Figure 3. Interrogation and monitored release file example using format one.

```
    FILE TYPE                          : INTERROGATION
    FILE TITLE                         : PRJ89114.A
    FILE CREATED                       : 24 April 1989 AT 00:00

04/24/89 01:00:00
| F2 04/12/89 01:26:47 7F7E495445 DF  C8 CA
04/24/89 02:00:00
| F2 04/12/89 02:26:49 7F7E4D1A30 94  C8 CA CC
04/24/89 03:00:00
04/24/89 04:00:00
04/24/89 05:00:00
04/24/89 06:00:00
04/24/89 07:00:00
04/24/89 08:00:00
SYSTEM ID
STATION #F2
04/12/89 14:26:38

TOTAL NUMBER ID CARDS = 04
CARD ADDRESSES|C8 CA CC CE

C8-SELFTEST|00

CA-SELFTEST|00

CC-SELFTEST|00

CE-SELFTEST|00
04/24/89 08:10:00
04/24/89 09:00:00
04/24/89 10:00:00
| F2 04/12/89 10:26:52 7F7E4D5236 D2  C8 CA CC CE
04/24/89 11:00:00
04/24/89 12:00:00
04/24/89 13:00:00
04/24/89 14:00:00
| F2 04/12/89 14:26:49 7F7E201243 72  CC CE
04/24/89 15:00:00
04/24/89 16:00:00
04/24/89 17:00:00
04/24/89 18:00:00
| F2 04/12/89 18:26:52 7F7E243D31 8F  C8 CA CC CE
04/24/89 19:00:00
04/24/89 20:00:00
04/24/89 21:00:00
04/24/89 22:00:00
04/24/89 23:00:00
04/25/89 00:00:00

    FILE CLOSED                        : 25 April 1989 AT 00:00
```

Figure 4. Interrogation and monitored release file example using format two.

```
    FILE TYPE                          : INTERROGATION 2

    The File was created under the title MCJ90088.B
    The file was opened on 29 March 1990 AT 05:12

| 70 03/29/89 01:00:00
| 70 03/29/89 02:00:00
| 70 03/29/89 03:00:00
| 70 03/29/89 24:00:00
| 70 03/29/89 05:00:00
| 70 03/29/89 06:00:00
D4-SELFTEST:00
D6-SELFTEST:00
| 71 03/29/89 07:00:00

SYSTEM ID
STATION #70

TOTAL NUMBER ID CARDS =02
CARD ADDRESSES|D0 D2
| 70 03/29/89 07:43:46
:16:06 7F7E65363D D5  D0 D2
:36:07 7F7E65477E 27  D0 D2
:50:19 7F7E64002B 8C  D0 D2
:59:39 7F7E65484C F6  D0 D2
| 70 03/29/89 08:00:00
:45:01 7F7E4E3E27 B0  D0 D2
:51:00 7F7E65434B F0  D0 D2
| 70 03/29/89 09:00:00
| 70 03/29/89 10:00:00
| 70 03/29/89 11:00:00
:15:11 7F7E4E1A3A 9F  D4 D6
| 70 03/29/89 12:00:00
:45:12 7F7E654604 AC  D4
:45:12 7F7E4E2F25 9F  D4 D6
| 70 03/29/89 13:00:00
:45:19 7F7E64060D 74  D4 D6
:45:22 7F7E61687E 44  D4 D6
| 70 03/29/89 17:00:00
:45:23 7F7E653C7A 18  D4 D6
| 70 03/29/89 18:00:00
| 70 03/29/89 19:00:00
:45:54 7F7E655317 CC  D4 D6
| 70 03/29/89 20:00:00
| 70 03/29/89 21:00:00
| 70 03/29/89 22:00:00
| 70 03/29/89 23:00:00
| 70 03/30/89 00:00:00

    The file was closed on 30 March 1989 AT 00:00
```

Figure 5. Mortality file example.

```
FILE TYPE                        : MORTALITY
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
1990 SPECIFICATION DOCUMENT
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
FILE TITLE                       : CSM89333.BS1
CREATION DATE                    : 11/29/89
CREATION TIME                    : 11:45
COLLECTION SITE                  : GOJ
COLLECTION RIVER KM              : 522.113
CAPTURE METHOD                   : BPSUB
AGENCY                           : NMFS
COORDINATOR ID                   : CSM

SPECIFICATION DOCUMENT EXAMPLES

 1  7F7B2D4912  86     123            10/20/89  | M FU
 2  7F7B2D4775  E7     120            10/21/89  | M | FOUND IN SQUAWFISH
 3  7F7B2C3177  D2     109            10/24/89  | MS | BKD SAMPLE 89-234
 4  7F7B2C325B  B7     139            10/30/89  | MS | BKD SAMPLE 89-555
 5  7F7B2D5116  92     111            10/30/89  | MS | BKD SAMPLE 89-558
 6  7F7B2D4C02  79    1045            10/30/89  | M | DIED ON SEPERATOR
 7  7F7B2D4D0B  83     111            10/24/89  | M
 8  7F7B2D4817  8A     115            10/30/89  | M
 9  7F7B2D4B7E  F4     100            10/24/89  | M  || TAG IN INTESTINE
  <TIME CHECK> 28 NOVEMBER AT 13:01
10  7F7B290B4A  7C     113     16.7   10/24/89  | M
11  7F7A274C42  B3     108     14.6   10/30/89  | MS | BLOOD LOT 5-51
12  7F7A274B39  A9     113     22.2   10/24/89  | MS | BKD SAMPLE 89-675
13  7F7A267C64  04     121     21.5   10/30/89  | MS | BKD SAMPLE 89-690

CLOSE DATE                       : 11/28/89
CLOSE TIME                       : 15:36
```

Figure 6. Test tag file example.

```
     FILE TYPE                    : TEST TAG
YEAR : 90
7F7A50484F  AC
7F7B678901
7F7C34AB56  34
7F7D567890  44
7F7A666543  3C
7F7B6745D3  DD
7F7C5689FE  22
7F7D009D3C
```