CHAPTER 1

INTRODUCTION, DEFINITIONS, AND RULES

**CWT data must be exchanged in the form of a PSC Format Version 4.1 dataset.**

The definition and specification of PSC Format Version 4.1 is described in this set of documents.

1. Points of Data Exchange

Valid points of exchange are:

* Canada site: Mark Recovery Unit, Pacific Biological Station, Fisheries & Oceans Canada
* U.S. site: Pacific States Marine Fisheries Commission’s Regional Mark Processing Center (hereafter “Mark Center”) [http://www.rmpc.org](http://www.rmpc.org/)

1. Scheduled Frequency of Data Exchange

Any data should be exchanged as soon as it is considered to be complete. The minimal schedule in which data needs to be exchanged is as follows:

1. From the Mark Center to Canada:

* + 1. Release and Location datasets will be sent to Canada:
       1. when specifically requested by Canada, or
       2. within two weeks of validation and processing at the Mark Center
    2. Recovery, Catch/Sample, and Catch & Effort datasets will be sent to Canada:
       1. when specifically requested by Canada, or
       2. immediately upon validation and processing at the Mark Center

2. From Reporting Agencies to the Mark Center:

a. Release:

* + - 1. Mid-Year Release (CWT Only): Incomplete mid-year data records for the current calendar year (i.e. where first\_release\_date equals the current calendar year) should be reported no later than **August** 15 of the current calendar year. Preliminary release data must include at a minimum all of the following fields: record\_code, format\_version, submission\_date, reporting\_agency, release\_agency, coordinator, tag\_code\_or\_release\_id, tag\_type, species, brood\_year, rearing\_type, first\_release\_date, last\_release\_date, and hatchery\_location\_code. NOTE: Only the year portion of the first\_release\_date and last\_release\_date field is required.
      2. Final Release: Complete data records for the current calendar year should be reported no later than **January 31** of the following year.
    1. Recovery: Preliminary data for the current calendar year should be reported no later than **January 31** of the following year. This applies to Recovery records where field “Run Year” is equal to the current calendar year.
    2. Catch/Sample: Preliminary data for the current calendar year should be reported no later than **January 31** of the following year. This applies to Catch/sample records where field “Catch Year” is equal to the current calendar year.
    3. Catch & Effort: Preliminary data for the current calendar year should be reported no later than January 31 of the following year. This applies to Catch & Effort records where field “Catch Year” is equal to the current calendar year.
    4. Location: Locations can be sent whenever updates are deemed necessary by the reporting agency as required to validate data files mentioned above.
    5. Description: One corresponding Description file must be submitted with any data file mentioned above when submitted to the Mark Center. However, a Description file should not be re-submitted when a data file is re-submitted solely for the purpose of correcting validation errors**.**  One and only one description file should be sent in association with a set of one or more data files for a given submission date. In the event that more than one description file for the associated data file(s) is sent, only the latest description file uploaded for the given submission date will be processed for the database and also displayed on the Data Status web page.

1. Required Grouping of Records within Data Type Files

1. From Mark Center to Canada:

* + 1. Release: All releases per file.
    2. Recovery: One reporting agency, one run year, and all data to date per file.
    3. Catch/Sample: One reporting agency, one catch year, and all data to date per file.
    4. Catch & Effort: One reporting agency, one calendar year, and all data to date per file.
    5. Location: All locations per file.

2. From Reporting Agencies to the Mark Center:

* + 1. Release: One reporting agency and any number of release records per file.
    2. Recovery: One reporting agency, one run year, and all data to date per file.
    3. Catch/Sample: One reporting agency, one catch year, and all data to date per file.
    4. Catch & Effort: One reporting agency, one calendar year (date\_catch\_effort\_year), and all data to date per file.
    5. Location: One reporting agency and all Location Codes to date per file.
    6. Description: One reporting agency and only new Descriptions since last submission per file.

For information on how to remove data records and submit full data sets, see Section H below.

1. General Data File Requirements

1. All PSC Format data must be presented in Comma-Separated Value (CSV) files using the ASCII character set;

2. All files must contain only newline-delimited records (i.e. one record per line);

3. The first record in the dataset must contain the corresponding “Data Field Names” as they are defined (with underscores replacing spaces) for the data type in this specification.

4. All fields which contain a data value must not contain any leading or trailing blanks unless specifically allowed in the Description & Validation notes for a particular field;

5. All fields which contain a data value must be surrounded on both ends by double-quotes (“) and must be separated by a comma (,);

6. All fields which do not contain a data value (for whatever reason) are considered NULL values and must have NO representation whatsoever in the data file. The fields for which data is absent will simply be represented by two consecutive commas (,,);

7. No double-quotes (“) are allowed in the contents (i.e. values) of any data field because the double-quote (“) is sequestered for exclusive use as the delimiter character for data exchange;

8. Leading zeros are optional unless they are part of a value in a lookup field. An Example of a required leading zero as part of the value in a lookup field is: value ‘01’ for the Release coordinator field. Decimal and trailing zeros are optional for numeric values in which all the digits after the decimal point would be zeros. For numeric values with a fractional part the decimal should be present. Implied decimals are not allowed;

9. Data field types and ranges:

* All data specified as “Numeric” must contain only ASCII characters in the range: ’0’ through ’9’ or a decimal character ’.’;
* All data specified as “Lookup” are considered coded values having a corresponding lookup table, even if they appear numeric;
* Date values should have neither blank ( ) nor zero (0) characters appended to optional components (i.e. in cases where only partial dates are permitted). For example, the date August, 2001 should be formatted as follows:
* Correct formatting: “200108”
* Incorrect formatting: “20010800” or “200108 “;

10. Data file names must not contain any blank spaces.

1. Methods of Data File Exchange

1. Methods of file transfer may be any of the following:

* Internet File Transfer Protocol (FTP) using the RMPC Internet web-site at the following address: [http://www.rmpc.org](http://www.rmpc.org/)
* Internet File Transfer Protocol (FTP) using an individual login account on the Mark Center computer; FTP to this address: [ftp.rmpc.org](ftp://ftp.rmpc.org/)
* CD-ROM disc

2. For file-transfer purposes, files may be compressed using PKZip, or Unix “gzip” file compression software;

1. Explanation of Columns in Data Type Tables

1. PSC Fld # Field number for Format Version 4.1;

2. PSC Common Name Common usage name;

3. Data Field Name Header record field name;

4. Max Cols Maximum field width (i.e. columns or bytes);

5. Reqd Required field. May indicate one of the following:

* Yes: The field must contain data for the record to be considered a valid PSC Format record.
* No: The field is optional. **NOTE: Some fields, however, are conditionally required**;

6. Format /Use This column identifies how the field is to be interpreted and used for database management purposes. It may contain any of the following:

* ‘Lookup’ The field contains codes that have a corresponding value in a lookup table.
* ‘Primary Key Lookup’ Field used to look up specific and distinct records within a data type.
* ‘Foreign Key Lookup’ Field used to associate many records within a data type to specific and distinct records of another data type.
* ‘Numeric’ The field can contain only numeric characters and can be treated as a mathematical quantity.
* ‘Alpha-Numeric’ The field can contain alpha and/or numeric characters and cannot be used as a mathematical quantity.
* Data Type or List Possible values the field may contain. The meaning of each value would be described in the “Validation” column.
* Pattern Template Shows the exact order and required contents of each character in the field;

7. Validation Rules This column will contain some combination of the following:

* A brief explanation of the meaning of the field along with any pertinent notes to be aware of when determining a value to go in the field.
* A list of meanings corresponding to the values listed in the Format column described in item 6 above.
* Conditions under which the field is required, if any.
* Ranges permitted in numeric data type fields.
* Special values which have complex patterns or which are dependent on the contents of other fields;

1. Data Type Record Examples (NOTE: All field names are required for header records)

1. Release Data – row and column excerpts:

|  |  |
| --- | --- |
| Header  Record | record\_code,format\_version,submission\_date,reporting\_agency,release\_agency,coordinator,tag\_code\_or\_release\_id,tag\_type,first\_sequential\_number,last\_sequential\_number,related\_group\_type,related\_group\_id,species,run,brood\_year,first\_release\_date,last\_release\_date,release\_location\_code,hatchery\_location\_code,stock\_location\_code,release\_stage,rearing\_type,study\_type,release\_strategy,avg\_weight,avg\_length,study\_integrity,cwt\_1st\_mark,cwt\_1st\_mark\_count,cwt\_2nd\_mark,cwt\_2nd\_mark\_count,non\_cwt\_1st\_mark,non\_cwt\_1st\_mark\_count,non\_cwt\_2nd\_mark,non\_cwt\_2nd\_mark\_count,counting\_method,tag\_loss\_rate,tag\_loss\_days,tag\_loss\_sample\_size,tag\_reused,comments |
| line #1 | "N","4.1","20090402","CDFO","CDFO","03","!03NOCO9703",,,,,,"2","3","1997","19980512","19980512","2FS JNSTR2532","2FS JNSTH2532","2FS JNSTS5428","F","H","B",,"2.1",,,,,,,"0000","7316",,,"W",,,,,"FED FRY RELEASE" |
| line #2 | "T","4.1","20090402","CDFO","CDFO","03","185126","0",,,,,"1","3","2002","20030507","20030509","2FS JNSTR0106","2FS JNSTH0106","2FS JNSTS0106","S","H","B",,"3.07","66",,"5000","30976",,,"0000","186439","5000","614","W",".0194","10",  "1699",,"DELAYED FED FRY REL TO LOWER QUINSAM LAKE." |
| line #n | ,,,,,,,,,,,, |

2. Recovery Data—row and column excerpts:

|  |  |
| --- | --- |
| Header  Record | "record\_code","format\_version","submission\_date","reporting\_agency","sampling\_agency","recovery\_id","species","run\_year","recovery\_date","recovery\_date\_type","period\_type","period","fishery","gear","adclip\_selective\_fishery","estimation\_level","recovery\_location\_code","sampling\_site","recorded\_mark","sex","weight","weight\_code","weight\_type","length","length\_code","length\_type","detection\_method","tag\_status","tag\_code","tag\_type","sequential\_number","sequential\_column\_number","sequential\_row\_number","catch\_sample\_id","sample\_type","sampled\_maturity","sampled\_run","sampled\_length\_range","sampled\_sex","sampled\_mark","estimated\_number" |
| line #1 | "R","4.1","20090402","ODFW","ODFW","L8359","2","2006","20061009","R","6","42","21","13",,"4","5F33209 R3 13","3","5000",  "F","00.63","1","1","0752","0","1","E","1","631561","13",,,,"2006130097","1","4",,,,,"00002.00" |
| line #2 | "R","4.1","20090402","ODFW","ODFW","G3956","1","2006","20060424","R","6","18","46","14","S","4","5F33307 R1 14","1",  "5000",,,,,"0780","0","1","V","1","093613","11",,,,"2006140007","1","4","1",,,,"00003.11" |
| line #n | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |

3. Catch/Sample Data—row and column excerpts:

|  |  |
| --- | --- |
| Header  Record | record\_code,format\_version,submission\_date,reporting\_agency,sampling\_agency,catch\_sample\_id,species,catch\_year,period\_type,period,first\_period,last\_period,fishery,adclip\_selective\_fishery,estimation\_level,catch\_location\_code,detection\_method,sample\_type,sampled\_maturity,sampled\_run,sampled\_length\_range,sampled\_sex,sampled\_mark,number\_caught,escapement\_estimation\_method,number\_sampled,number\_estimated,number\_recovered\_decoded,number\_recovered\_no\_cwts,number\_recovered\_lost\_cwts,number\_recovered\_unreadable,number\_recovered\_unresolved,number\_recovered\_not\_processed,number\_recovered\_pseudotags,mr\_1st\_partition\_size,mr\_1st\_sample\_size,mr\_1st\_sample\_known\_ad\_status,mr\_1st\_sample\_obs\_adclips,mr\_2nd\_partition\_size,mr\_2nd\_sample\_size,mr\_2nd\_sample\_known\_ad\_status,mr\_2nd\_sample\_obs\_adclips,mark\_rate,awareness\_factor,sport\_mark\_incidence\_sampl\_size,sport\_mark\_inc\_sampl\_obs\_adclips |
| line #1 | "S","4.1","20090402","ODFW","ODFW","2006140007","1","2006","6","18",,,"46","S","4","5F33307 R 14","V","1","4",,,,,"1196"  ,,"384","3.11","39","4",,"1",,,,"384","384","384","44",,,,,".1145",,, |
| line #2 | "S","4.1","20090402","ODFW","ODFW","2006130097","2","2006","6","42",,,"21",,"4","5F33209 R 13","E","1","4",,,,,"9075",,  "4032","2.27","201","13","2",,,,,"216","216","0","161","3816","273","273","208",".721",,, |
| line #n | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |

4. Catch & Effort Data—row and column excerpts:

|  |  |
| --- | --- |
| Header  Record | record\_code,format\_version,submission\_date,reporting\_agency,sampling\_agency,catch\_sample\_id,species,catch\_year,period\_type,period,first\_period,last\_period,fishery,adclip\_selective\_fishery,estimation\_level,catch\_location\_code,detection\_method,sample\_type,sampled\_maturity,sampled\_run,sampled\_length\_range,sampled\_sex,sampled\_mark,number\_caught,escapement\_estimation\_method,number\_sampled,number\_estimated,number\_recovered\_decoded,number\_recovered\_no\_cwts,number\_recovered\_lost\_cwts,number\_recovered\_unreadable,number\_recovered\_unresolved,number\_recovered\_not\_processed,number\_recovered\_pseudotags,mr\_1st\_partition\_size,mr\_1st\_sample\_size,mr\_1st\_sample\_known\_ad\_status,mr\_1st\_sample\_obs\_adclips,mr\_2nd\_partition\_size,mr\_2nd\_sample\_size,mr\_2nd\_sample\_known\_ad\_status,mr\_2nd\_sample\_obs\_adclips,mark\_rate,awareness\_factor,sport\_mark\_incidence\_sampl\_size,sport\_mark\_inc\_sampl\_obs\_adclips |
| line #1 | "S","4.1","20090402","ODFW","ODFW","2006140007","1","2006","6","18",,,"46","S","4","5F33307 R 14","V","1","4",,,,,"1196"  ,,"384","3.11","39","4",,"1",,,,"384","384","384","44",,,,,".1145",,, |
| line #2 | "S","4.1","20090402","ODFW","ODFW","2006130097","2","2006","6","42",,,"21",,"4","5F33209 R 13","E","1","4",,,,,"9075",,  "4032","2.27","201","13","2",,,,,"216","216","0","161","3816","273","273","208",".721",,, |
| line #n | ,,,,,,,,,,,,,,,,,,,,, |

5. Location Data—row and column excerpts:

|  |  |
| --- | --- |
| Header  Record | record\_code,format\_version,submission\_date,reporting\_agency,location\_code,location\_type,name,latitude,longitude,psc\_basin,psc\_region,epa\_reach,description |
| line #1 | "L","4.1","20090402","IDFG","4F-1706020804408.44","1","JOHNSON CREEK TRAP",,,"SALM","SNAK","1706020804408.44","The NPT Johnson Creek trap facility." |
| line #2 | "L","4.1","20090402","IDFG","4F-1706030800100.09","3","CLEARWATER HATCHERY",,,"CLEA","SNAK","1706030800100.09","CLEARWATER HATCHERY" |
| line #n | ,,,,,,,,,,,, |

6. Description Data—row excerpt (all columns shown here):

|  |  |
| --- | --- |
| Header  Record | "record\_code","format\_version","submission\_date","reporting\_agency","submission\_status","file\_type","file\_status","first\_year","last\_year","description" |
| line #1 | "D","4.1","20090219","CDFO","R",""LC","C",,,"Increasing readability of recovery and catch locations strips for Fraser River sport fishery for modeling purposes. Modifications to Chinook catch for Fraser gillnet/first nations fishery and West Coast Vancouver Island troll fisheries" |
| line #2 | "D","4.1","20090402","CDFW","N","RL","I",,,"CWT 2007 RELEASES OF BY2006 CHINOOK FROM THE YUBA RIVER WERE SUBMITTED" |
| line #3 | "D","4.1","20090402","CDFW","R","RC","C","2007",,"UPDATE TO 2007 RECOVERY YEAR - ADDED INLAND RECOVERIES ASSOCIATED WITH SNAKE RIVER SPAWNING SAMPLES" |

**H.** **Methods of Removing Data Records (for one Reporting Agency)**

1. Release: To delete release records from the CWT/RMIS database, release data must be processed as a "full set" of releases. To cause this to happen, please do the following:

a. Prepare a COMPLETE Releases data file for your Reporting Agency. I.e. **The file must include all legitimate records of releases from your Reporting Agency -- both tagged and untagged (records beginning with the "!" /Bang character) -- and for ALL HISTORY.**

b. REMOVE any records that are now deemed not legitimate by your agency and you would like to have deleted from the CWT/RMIS database.

c. Place the following text into the filename: "FULLSET". I.e. the text "..FULLSET.." must appear somewhere in the actual name of the file uploaded to the RMPC. The RMPC Data Administrator will look for the string "FULLSET" in the filename. If seen, the administrator is to process the data file as a full set of release data. In that case, the database load process will compare all new records with all existing records (BOTH tagged and untagged) on file in the database. For any tagged record not included, a check is done to determine if any recoveries exist where Tag Status = '1' for the tagcode. If recoveries exist then the record will not be archived. Any records not included in the new dataset that can be archived will be archived. Thereafter the record(s) will be permanently deleted from the CWT database. If any recoveries with Tag Status '1' exist for a tagcode then it cannot be deleted, regardless of the Reporting Agency.

d. Proceed w/ the FTP upload to the RMPC as with any other file (see Section E above).

Please note that Release records may be sent as a partial dataset (i.e. any number of records from 1 up to all records for given agency, see Section C.2. a above); however, this method allows only replacement of existing release records or addition of new release records, not removal of release records.

2. Recovery: To remove one or more recovery records from the CWT/RMIS database, simply remove the intended records from the recovery data set by Run Year, and re-submit the entire set of Recovery data (all remaining legitimate records) for the given Run Year to the RMPC (see Section C.2.b above).

3. Catch/Sample: To remove one or more catch/sample records from the CWT/RMIS database, simply remove the intended records from the catch/sample data set by Catch Year, and re-submit the entire set of Catch/Sample data (all remaining legitimate records) for the given Catch Year to the RMPC (see Section C.2.c above).

4. Catch & Effort: To remove one or more catch & effort records from the CWT/RMIS database, simply remove the intended records from the catch & effort data set by Calendar Year, and re-submit the entire set of Catch & Effort data (all remaining legitimate records) for the given Calendar Year to the RMPC (see Section C.2.d above).

5. Location: To remove one or more location code records from the CWT/RMIS database, simply remove the intended records from the locations data set (all records) for the Location Reporting Agency, and re-submit the entire set of location codes (all remaining legitimate records) to the RMPC (see Section C.2.e above). The database load process will compare all new records with all existing records on file in the database. For any location code record not included, a check is done to determine if any data exist which reference that location code. If any referenced data exist then the record will not be archived. Any records not included in the new dataset that can be archived will be archived. Thereafter the record(s) will be permanently deleted from the CWT/RMIS database.

6. Description: Description data (metadata) are regarded as a permanent record of data changes and cannot be removed except by special request to the RMPC data administrator.

See also Section C.2.f above.

CHAPTER 2

Release Data

| **PSC** | **PSC Common Name** | **Max** | **Reqd** | | **Format /Use** | **Description & Validation Rules.......................................................................................................................................** |
| --- | --- | --- | --- | --- | --- | --- |
| **Fld #** | and Data Field Name | **Cols** |  | |  |  |
| 1 | **Record Code** | 1 | Yes | | Lookup | Code to indicate the CWT data file classification (class) of this individual record. Must match one of the following: |
|  | record\_code |  |  | | ’T’ | =Tagged Release record |
|  |  |  |  | | ’N’ | =Non-Associated Release record |
|  |  |  |  | |  | See chapter 16 for further discussion of the use of this field. |
|  |  |  |  | |  |  |
| 2 | **Format Version** | 4 | Yes | | ’4.1’ | Format version used to report data |
|  | format\_version |  |  | |  | **Must have the value: ’4.1’** |
|  |  |  |  | |  |  |
| 3 | **Submission Date** | 8 | Yes | | YYYYMMDD | Date of submission for this set of records. Date should be close to actual date when this row is sent to the Mark Center |
|  | submission\_date |  |  | |  | **Must have the same value for all records in this data submission** |
|  |  |  |  | |  | Should match submission\_date in corresponding Description file |
|  |  |  |  | |  |  |
| 4 | **Reporting Agency** | 10 | Yes | | Lookup | Abbreviation for reporting agency of this dataset for this data exchange |
|  | reporting\_agency |  |  | |  | **Must contain an agency code defined in chapter 8** |
|  |  |  |  | |  | **Must be the same for all records** |
|  |  |  |  | |  |  |
| 5 | **Release Agency** | 10 | Yes | | Lookup | Abbreviations for tagging agencies |
|  | release\_agency |  |  | |  | **Must contain an agency code defined in chapter 8** |
|  |  |  |  | |  |  |
| 6 | **Coordinator** | 2 | Yes | | Lookup | Reporting coordinator for the release group of this individual record |
|  | coordinator |  |  | |  | **Must match one of the following:** |
|  |  |  |  | | ’01’ | =ADFG (S.E. Alaska) |
|  |  |  |  | | ’02’ | =NMFS – Alaska |
|  |  |  |  | | ’03’ | =CDFO |
|  |  |  |  | | ’04’ | =WDFW |
|  |  |  |  | | ’05’ | =ODFW |
|  |  |  |  | | ’06’ | =NMFS – Columbia River |
|  |  |  |  | | ’07’ | =USFWS |
|  |  |  |  | | ’08’ | =CDFG |
|  |  |  |  | | ’09’ | =BCFW |
|  |  |  |  | | ’10’ | =IDFG |
|  |  |  |  | | ’11’ | =YAKA |
|  |  |  |  | | ’12’ | =ADFG (S. Central AK) |
|  |  |  |  | | ’13’ | =MIC (Metlakatla, AK) |
|  |  |  |  | | ’14’ | =NWIFC |
|  |  |  |  | | ’15’ | =CRITFC |
|  |  |  |  | | ‘16’ | =NEZP |
|  |  |  |  | | ‘17’ | =QDNR |
|  |  |  |  | | ‘18’ | =STIL |
|  |  |  |  | |  |  |
| 7 | **Tag Code or Release ID** | 12 | Yes | | Primary Lookup | This identifier represents either: |
|  | tag\_code\_or\_release\_id |  |  | | AGD1D2D3D4 | Case 1) If this release contains CWT fish: Enter tag\_code\_or\_release\_id as follows: |
|  | See notes to follow |  |  | |  | Cols. 1 – 2: Agency; Cols. 3 - 4: Data 1; Cols. 5 - 6: Data 2; Cols. 7 - 12:Data 3 and 4 |
|  |  |  |  | |  | Color coded tags and rare-earth tags: Report in Alpha only |
|  |  |  |  | |  | Sequential tags: Report only AG,D1,D2 for Release data; Report D3, D4 only in Recovery data file, fields ‘sequential\_column\_number’ and ‘sequential\_row\_number’ |
|  |  |  |  | |  | **Must have record\_code = ‘T’** |
|  |  |  |  | |  | **Must have even number of characters** |
|  |  |  |  | |  | **Must be unique** |
|  |  |  |  | |  | **Must match one of the following patterns:** |
|  |  |  |  | |  | All numeric OR all Alpha OR 1 Alpha then all numeric OR all numeric then ’\*’ then 1 numeric OR |
|  |  |  |  | |  | 1 Alpha then all numeric then ’\*’ then 1 numeric OR all Alpha then ’\*’ then 1 numeric OR ’##’ then 2 Alpha |
|  |  |  |  | |  | OR ’##’ then 2 Alpha then ’\*’ then 1 numeric OR ’$$’ then 2 Alpha OR ’$$’ then 2 Alpha then ’\*’ then 1 numeric |
|  |  |  |  | |  | OR Special cases: ’XX0500’ ’HF1505’ ’HF1515’ |
|  |  |  |  | |  | See notes to follow |
|  |  |  |  | |  | Case 2) If this release contains no CWT fish: Enter tag\_code\_or\_release\_id as follows: |
|  |  |  |  | |  | **Column 1 must be ’!’** |
|  |  |  |  | |  | **Columns 2 and 3 must match one of the valid coordinator codes for the Releases coordinator field:** |
|  |  |  |  | |  | **Must have record\_code = ‘N’** |
|  |  |  |  | |  | **Must be unique** |
|  |  |  |  | |  |  |
| NOTES for tag\_code\_or\_release\_id:  1) Re-use of tag codes is not approved. In those cases when a tag code is re-used, whether by accident or intentionally, any subsequent recoveries may be regarded as unresolved discrepancies (where tag status [Recovery file] is ’7’) as determined by the reporting agency.  2) In cases where a tag code is accidentally re-used, the first occurrence may be appended with a ’\*1’. The second occurrence must have the suffix ’\*2’ appended, and the n-th occurrence thereafter must have the suffix ’\*n’ appended. Additionally, the field ’tag\_reused’ must be assigned the value ’Y’ for the original tag code and all subsequent instances of the tag code.  3) See chapter 16 for discussion regarding the use of Blank or Agency-Only wire. | | | | | | |
|  |  |  |  |  | |  |
|  |  |  |  |  | |  |
| 8 | **Tag Type** | 2 | No | Lookup | | Code to indicate type of tag used for release group; If present, must match one of the following: |
|  | tag\_type |  |  | ’0’ | | =Standard binary (1mm) |
|  |  |  |  | ’1’ | | =Half tags (H type) |
|  |  |  |  | ’2’ | | =Half tags (B type) |
|  |  |  |  | ’3’ | | =6 word half length tags |
|  |  |  |  | ’4’ | | =X-ray binary ( tag\_code\_or\_release\_id must be ’XX0500’) |
|  |  |  |  | ’5’ | | =Standard color |
|  |  |  |  | ’6’ | | =Solid color (##) |
|  |  |  |  | ’7’ | | =Striped color ($$) |
|  |  |  |  | ’8’ | | =Rare Earth |
|  |  |  |  | ’9’ | | =Repeating series |
|  |  |  |  | ’10’ | | =Sequential 6 word binary; |
|  |  |  |  | ’11’ | | =Length & ½ Binary (1.5mm) |
|  |  |  |  | ’12’ | | =Standard Alphanumeric, includes Decimal (1 mm) |
|  |  |  |  | ’13’ | | =Length & ½ Alphanumeric, includes Decimal (1.5 mm) |
|  |  |  |  | ’14’ | | =Sequential Alphanumeric, includes Decimal |
|  |  |  |  | ’15’ | | =Half length Alphanumeric, includes Decimal (0.5mm) |
|  |  |  |  | ’16’ | | =Pseudo tag, blank wire |
|  |  |  |  |  | | If tag\_type = ’10’, then first\_sequential\_number is required and last\_sequential\_number is required |
|  |  |  |  |  | | **Required if record\_code is ‘T’** |
|  |  |  |  |  | | If tag\_type = ‘0’ thru ‘15’ then record\_code must be ‘T’ |
|  |  |  |  |  | | If tag\_type = ‘16’ then record\_code must be ‘N’ |
|  |  |  |  |  | | See chapter 16 for further discussion of the use of this field. |
|  |  |  |  |  | |  |
| 9 | **First Sequential Number** | 5 | No | Numeric | | Smallest value in sequential number series; Field used for sequential tags only |
|  | first\_sequential\_number |  |  |  | | If present, must be numeric in the range ’0’ through ’16383’ for tag\_type ‘10’ or ‘0’ through ‘99999’ for tag\_type ‘14’ |
|  |  |  |  |  | | **Must be absent unless tag\_type is ’10’, ’14’** |
|  |  |  |  |  | |  |
| 10 | **Last Sequential Number** | 5 | No | Numeric | | Largest value in sequential number series; Field used for sequential tags only |
|  | last\_sequential\_number |  |  |  | | If present, must be numeric in the range ’0’ through ’16383’ for tag\_type ‘10’ or ‘0’ through ‘99999’ for tag\_type ‘14’ |
|  |  |  |  |  | | **Must be absent unless tag\_type is ’10’, ’14’** |
|  |  |  |  |  | |  |
| 11 | **Related Group Type** | 1 | No | Lookup | | Code indicating whether this release group is double index tagging or otherwise |
|  | related\_group\_type |  |  |  | | **Required if related\_group\_id is present** |
|  |  |  |  |  | | If present, must match one of the following: |
|  |  |  |  | ‘D’ | | =Double index tag groups |
|  |  |  |  | ‘O’ | | =Other related groups |
|  |  |  |  |  | |  |
| 12 | **Related Group ID** | 15 | No | Alpha-Numeric | | Specifies linkage among double index tag groups or other related groups |
|  | related\_group\_id |  |  |  | | **Required if related\_group\_type is present** |
|  |  |  |  |  | | If present, first 2 columns must match one of the valid coordinator codes for the Releases coordinator field: |
|  |  |  |  |  | | AND columns 3 - 6 must contain year of release |
|  |  |  |  |  | | AND columns 7 – 15 are agency defined alpha-numeric text |
|  |  |  |  |  | | If present, at least one other record must exist with this same value  Within a new dataset, if Related Group type (field 11) is ‘D’ then, at least 1 record must exist with the “AD Clip” condition where:  1) cwt\_1st\_mark starts with ‘5’ OR cwt\_2nd\_mark starts with ‘5’; |
|  |  |  |  |  | | AND 2) cwt\_1st\_mark count + cwt\_2nd\_mark count > 0  AND at least 1 record must exist with the “no Ad Clip” condition where:  1) cwt\_1st\_mark starts with ‘0’ OR cwt\_2nd\_mark starts with ‘0’;  AND 2) cwt\_1st\_mark count + cwt\_2nd\_mark count > 0  AND all records involved must have the same Related Group Id (field 12), Species (field 13) and Brood Year (field 15). |
| 13 | **Species** | 2 | Yes | Lookup | | Code indicating species of release group; Must match one of the following: |
|  | species |  |  | ’1’ | | =Chinook |
|  |  |  |  | ’2’ | | =Coho |
|  |  |  |  | ’3’ | | =Steelhead |
|  |  |  |  | ’4’ | | =Sockeye |
|  |  |  |  | ’5’ | | =Chum |
|  |  |  |  | ’6’ | | =Pink |
|  |  |  |  | ’7’ | | =Masu |
|  |  |  |  | ’8’ | | =Cutthroat |
|  |  |  |  | ’9’ | | =Atlantic Salmon |
|  |  |  |  |  | |  |
| 14 | **Run** | 2 | No | Lookup | | Code to indicate run of this release group; If present, must match one of the following: |
|  | run |  |  | ’1’ | | =Spring |
|  |  |  |  | ’2’ | | =Summer |
|  |  |  |  | ’3’ | | =Fall (includes type S Coho) |
|  |  |  |  | ’4’ | | =Winter |
|  |  |  |  | ’5’ | | =Hybrid |
|  |  |  |  | ’6’ | | =Landlocked |
|  |  |  |  | ’7’ | | =Late Fall (includes type N Coho) |
|  |  |  |  | ’8’ | | =Late Fall Upriver Bright Chinook |
|  |  |  |  |  | |  |
| 15 | **Brood Year** | 4 | Yes | YYYY | | Calendar year when majority of parents of these fish spawned; |
|  | brood\_year |  |  |  | | If more than one brood present (i.e. wild tagging), then use dominant brood and report mixed stock tagging in Comments  **Must be less than or equal to the current year** |
|  |  |  |  |  | |  |
| 16 | **First Release Date** | 8 | No | YYYYMMDD | | Date in which releasing began for this release group |
|  | first\_release\_date |  |  |  | | Must be of the form ’YYYYMMDD’ where: |
|  |  |  |  |  | | MM must be in the range ’01’ through ’12’. May be absent |
|  |  |  |  |  | | DD must be in the range ’01’ through the last day of the month referenced by MM. Must be absent if MM is absent. May be absent when MM is present |
|  |  |  |  |  | | This date must be less than or equal to today |
|  |  |  |  |  | | First\_release\_date must be less than or equal to last\_release\_date |
|  |  |  |  |  | | **Required if study\_integrity is not ‘D’** |
|  |  |  |  |  | | YYYY portion of date is required. |
|  |  |  |  |  | |  |
| 17 | **Last Release Date** | 8 | No | YYYYMMDD | | Date in which releasing ended for this release group |
|  | last\_release\_date |  |  |  | | If the release occurs on a single day, report that date for both first and last date fields. |
|  |  |  |  |  | | Must be of the form ’YYYYMMDD’ where: |
|  |  |  |  |  | | MM must be in the range ’01’ through ’12’. May be absent |
|  |  |  |  |  | | DD must be in the range ’01’ through the last day of the month referenced by MM. Must be absent if MM is absent. May be absent when MM is present |
|  |  |  |  |  | | This date must be less than or equal to today |
|  |  |  |  |  | | Last\_release\_date must be greater than or equal to first\_release\_date |
|  |  |  |  |  | | **Required if study\_integrity is not ‘D’** |
|  |  |  |  |  | | YYYY portion of date is required. |
|  |  |  |  |  | |  |
| 18 | **Release Location Code** | 19 | No | Lookup | | Hierarchical location code to geographically identify actual release location |
|  | release\_location\_code |  |  |  | | All location codes are standardized within a given State or Province, and coordinated by the State/Province |
|  |  |  |  |  | | If present, must exactly match the location\_code of location\_type ’4’ in the PSC Location file |
|  |  |  |  |  | | **Required if study\_integrity is not ‘D’** |
|  |  |  |  |  | | **Trailing blanks should not be included** |
|  |  |  |  |  | |  |
| 19 | **Hatchery Location Code** | 19 | No | Lookup | | Hierarchical location code to geographically identify actual site of hatchery |
|  | hatchery\_location\_code |  |  |  | | All location codes are standardized within a given State or Province, and coordinated by the State/Province |
|  |  |  |  |  | | If present, must exactly match the location\_code of location\_type ’3’ in the PSC Location file |
|  |  |  |  |  | | **Required if rearing\_type is ’H’** |
|  |  |  |  |  | | **Must be absent if rearing\_type is ’W’ or ’M’** |
|  |  |  |  |  | | **Trailing blanks should not be included** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |
| 20 | **Stock Location Code** | 19 | No | Lookup | Hierarchical coding scheme to identify the stock’s location or stream |
|  | stock\_location\_code |  |  |  | All location codes are standardized within a given State or Province, and coordinated by the State/Province |
|  |  |  |  |  | If present, must exactly match the location\_code of location\_type ’5’ in the PSC Location file |
|  |  |  |  |  | **Trailing blanks should not be included** |
|  |  |  |  |  |  |
| 21 | **Release Stage** | 1 | No | Lookup | Code indicating stage of majority of release group at point of release; If present, must match one of the following: |
|  | release\_stage |  |  | ’Z’ | =Zygote (eyed eggs) |
|  |  |  |  | ’E’ | =Emergent fry |
|  |  |  |  | ’F’ | =Fed fry |
|  |  |  |  | ’G’ | =Fingerling |
|  |  |  |  | ’V’ | =Advanced fingerling |
|  |  |  |  | ’Y’ | =Yearling |
|  |  |  |  | ’P’ | =Pre-smolt |
|  |  |  |  | ’S’ | =Smolt |
|  |  |  |  | ’A’ | =Adult |
|  |  |  |  | ’M’ | =Multiple release stages |
|  |  |  |  |  | If ’M’ then comments are required |
|  |  |  |  |  |  |
| 22 | **Rearing Type** | 1 | Yes | Lookup | Code indicating most prevalent rearing method for this release group; If present, must match one of the following: |
|  | rearing\_type |  |  | ’H’ | =Hatchery reared fish (includes any wild fish reared in the hatchery) |
|  |  |  |  | ’W’ | =Wild fish |
|  |  |  |  | ’M’ | =Mixed hatchery & wild (downstream migrant or marine tagging) |
|  |  |  |  | ’U’ | =Unknown (unavailable from release agency) |
|  |  |  |  |  | If ’H’ then hatchery\_location\_code is required |
|  |  |  |  |  | If ’W’, or ’M’ then hatchery\_location\_code must be absent and release\_strategy must be absent |
|  |  |  |  |  |  |
| 23 | **Study Type** | 1 | No | Lookup | Code indicating type of study reflected by release group; If present, must match one of the following: |
|  | study\_type |  |  | ’E’ | =Experimental |
|  |  |  |  | ’P’ | =Production |
|  |  |  |  | ’B’ | =Both experimental and production |
|  |  |  |  | ’O’ | =Other |
|  |  |  |  | ’K’ | =PSC key indicator stocks |
|  |  |  |  | ’I’ | =Other index streams |
|  |  |  |  |  |  |
| 24 | **Release Strategy** | 2 | No | Lookup | Code indicating strategy used to liberate majority of release group; If present, must match one of the following |
|  | release\_strategy |  |  | ‘FR’ | =Forced release |
|  |  |  |  | ‘MX’ | =Mixed release strategies |
|  |  |  |  | ‘VO’ | =Volitional release |
|  |  |  |  |  | **Must be absent if rearing\_type is ‘W’ or ‘M’** |
| 25 | **Avg Weight** | 7 | No | Numeric | Average weight of a fish in this release group at point of release |
|  | avg\_weight |  |  |  | Units = grams/fish |
|  |  |  |  |  | If present, must be numeric in the range:’.01’ through ’9999.99’ |
|  |  |  |  |  | No implied decimal. Decimal optional with up to 2 digits after the decimal point |
|  |  |  |  |  |  |
| 26 | **Avg Length** | 6 | No | Numeric | Average length of a fish in this release group at point of release |
|  | avg\_length |  |  |  | Units = millimeters (fork length) |
|  |  |  |  |  | If present, must be numeric in the range: ’1’ through ’999999’ |
|  |  |  |  |  |  |
| 27 | **Study Integrity** | 1 | No | Lookup | Code indicating the survival viability of this release group or the integrity of this study |
|  | study\_integrity |  |  |  | If present, must match one of the following: |
|  |  |  |  | ’N’ | =Normal range expected |
|  |  |  |  | ’D’ | =Fish destroyed; zero survival assumed |
|  |  |  |  | ’W’ | =Warning flag for serious problems |
|  |  |  |  |  | **If ’W’ then comments are required** |
|  |  |  |  |  |  |
| 28 | **CWT 1st Mark** | 4 | No | Lookup | Mark(s) on CWT fish corresponding to count value in cwt\_1st\_mark\_count |
|  | cwt\_1st\_mark |  |  |  | If present, must match a mark code from Mark Coding table in chapter 11 |
|  |  |  |  |  | **Required if record\_code is ‘T’** |
|  |  |  |  |  | **Must be absent if record\_code is ‘N’** |
|  |  |  |  |  | **Required if corresponding cwt\_1st\_mark\_count is present** |
|  |  |  |  |  | **Must be absent if corresponding cwt\_1st\_mark\_count is absent** |
|  |  |  |  |  | **Must not begin with ‘9’ if brood\_year is greater than 1994** |
|  |  |  |  |  | See chapter 15 for further discussion of the use of this field. |
|  |  |  |  |  |  |
| 29 | **CWT 1st Mark Count** | 8 | No | Numeric | Number tagged with CWT corrected for tag loss and mortality |
|  | cwt\_1st\_mark\_count |  |  |  | Corresponds to mark code value in cwt\_1st\_mark |
|  |  |  |  |  | **Required if corresponding cwt\_1st\_mark is present and study\_integrity is not ‘D’** |
|  |  |  |  |  | **Must be absent if corresponding cwt\_1st\_mark is absent** |
|  |  |  |  |  | If present, must be numeric in the range: ’0’ through ’99999999’ |
|  |  |  |  |  | See chapter 15 for further discussion of the use of this field. |
|  |  |  |  |  |  |
| 30 | **CWT 2nd Mark** | 4 | No | Lookup | Mark(s) on CWT fish corresponding to count value in cwt\_2nd\_mark\_count |
|  | cwt\_2nd\_mark |  |  |  | If present, must match a mark code from Mark Coding table in chapter 11 |
|  |  |  |  |  | **Must be absent if record\_code is ‘N’** |
|  |  |  |  |  | **Required if corresponding cwt\_2nd\_mark\_count is present** |
|  |  |  |  |  | **Must be absent if corresponding cwt\_2nd\_mark\_count is absent** |
|  |  |  |  |  | **Must not contain the same value as cwt\_1st\_mark**  **Must not begin with ‘9’ if brood\_year is greater than 1994**  See chapter 15 for further discussion of the use of this field. |
|  |  |  |  |  |  |
| 31 | **CWT 2nd Mark Count** | 8 | No | Numeric | Number tagged with CWT corrected for tag loss and mortality |
|  | cwt\_2nd\_mark\_count |  |  |  | Corresponds to mark code value in cwt\_2nd\_mark |
|  |  |  |  |  | **Required if corresponding cwt\_2nd\_mark is present and study\_integrity is not ‘D’** |
|  |  |  |  |  | **Must be absent if corresponding cwt\_2nd\_mark is absent** |
|  |  |  |  |  | If present, must be numeric in the range: ’0’ through ’99999999’ |
|  |  |  |  |  | **Must be absent if cwt\_1st\_mark\_count is zero or absent** |
|  |  |  |  |  | See chapter 15 for further discussion of the use of this field. |
|  |  |  |  |  |  |
| **32** | **Non CWT 1st Mark** | 4 | No | Lookup | Mark(s) on Non-CWT fish corresponding to count value in non\_cwt\_1st\_mark\_count |
|  | non\_cwt\_1st\_mark |  |  |  | If present, must match a mark code from Mark Coding table in chapter 11 |
|  |  |  |  |  | **Required if record\_code is ‘N’** |
|  |  |  |  |  | **Required if corresponding non\_cwt\_1st\_mark\_count is present** |
|  |  |  |  |  | **Must be absent if corresponding non\_cwt\_1st\_mark\_count is absent** |
|  |  |  |  |  | **Must not begin with ‘9’ if brood\_year is greater than 1995** |
|  |  |  |  |  | See chapter 15 & 16 for further discussion of the use of this field. |
|  |  |  |  |  |  |
| 33 | **Non CWT 1st Mark Count** | 9 | No | Numeric | Number with No CWT Tag |
|  | non\_cwt\_1st\_mark\_count |  |  |  | Corresponds to mark code value in non\_cwt\_1st\_mark |
|  |  |  |  |  | **Required if corresponding non\_cwt\_1st\_mark is present and study\_integrity is not ‘D’** |
|  |  |  |  |  | **Must be absent if corresponding non\_cwt\_1st\_mark is absent** |
|  |  |  |  |  | If present, must be numeric in the range: ’0’ through ’999999999’ |
|  |  |  |  |  | See chapter 15 & 16 for further discussion of the use of this field. |
|  |  |  |  |  |  |
| **34** | **Non CWT 2nd Mark** | 4 | No | Lookup | Mark(s) on Non-CWT fish corresponding to count value in non\_cwt\_2nd\_mark\_count |
|  | non\_cwt\_2nd\_mark |  |  |  | If present, must match a mark code from Mark Coding table in chapter 11 |
|  |  |  |  |  | **Required if corresponding non\_cwt\_2nd\_mark\_count is present** |
|  |  |  |  |  | **Must be absent if corresponding non\_cwt\_2nd\_mark\_count is absent** |
|  |  |  |  |  | **Must not contain the same value as non\_cwt\_1st\_mark** |
|  |  |  |  |  | **Must not begin with ‘9’ if brood\_year is greater than 1995** |
|  |  |  |  |  | See chapter 15 & 16 for further discussion of the use of this field. |
|  |  |  |  |  |  |
| 35 | **Non CWT 2nd Mark Count** | 9 | No | Numeric | Number with No CWT Tag |
|  | non\_cwt\_2nd\_mark\_count |  |  |  | Corresponds to mark code value in non\_cwt\_2nd\_mark |
|  |  |  |  |  | **Required if corresponding non\_cwt\_2nd\_mark is present and study\_integrity is not ‘D’** |
|  |  |  |  |  | **Must be absent if corresponding non\_cwt\_2nd\_mark is absent** |
|  |  |  |  |  | **Must be absent if non\_cwt\_1st\_mark\_count is absent** |
|  |  |  |  |  | If present, must be numeric in the range: ’0’ through ’999999999’ |
|  |  |  |  |  | See chapter 15 & 16 for further discussion of the use of this field. |
|  |  |  |  |  |  |
| 36 | **Counting Method** | 1 | No | Lookup | Method used to determine number of non-CWT fish in the given release group; If present, must match one of the following: |
|  | counting\_method |  |  | ’B’ | =Book estimates |
|  |  |  |  | ’C’ | =Actual physical counts |
|  |  |  |  | ’P’ | =Petersen estimates |
|  |  |  |  | ’W’ | =Weight derived estimates |
|  |  |  |  | ’V’ | =Volumetric Conversion |
|  |  |  |  | ’F’ | =Feed Conversion Estimates |
|  |  |  |  |  |  |
| 37 | **Tag Loss Rate** | 6 | No | Numeric | Proportion of fish which shed the CWT from the tag loss sample (expressed as a decimal) |
|  | tag\_loss\_rate |  |  |  | If present, must be numeric in the range: ’0’ through ’1’ |
|  |  |  |  |  | No implied decimal. Decimal optional with up to 4 digits after the decimal point |
|  |  |  |  |  | **Must be absent if record\_code is ‘N’ and tag\_type is not ‘16’** |
|  |  |  |  |  | May be present if record\_code is ‘N’ and tag\_type is ‘16’ |
|  |  |  |  |  | See chapter 15 for further discussion of the use of this field. |
|  |  |  |  |  |  |
| 38 | **Tag Loss Days** | 3 | No | Numeric | Number of days fish held to measure tag loss; Fish tagged and released the same day are assigned ’0’ |
|  | tag\_loss\_days |  |  |  | If present, must be numeric in the range: ’0’ through ’999’ |
|  |  |  |  |  | **Must be absent if record\_code is ‘N’ and tag\_type is not ‘16’** |
|  |  |  |  |  | May be present if record\_code is ‘N’ and tag\_type is ‘16’ |
|  |  |  |  |  |  |
| 39 | **Tag Loss Sample Size** | 5 | No | Numeric | Number of fish sampled to calculate tag loss rate |
|  | tag\_loss\_sample\_size |  |  |  | If present, must be numeric in the range: ’0’ through ’99999’ |
|  |  |  |  |  | **Must be absent if record\_code is ‘N’ and tag\_type is not ‘16’** |
|  |  |  |  |  | May be present if record\_code is ‘N’ and tag\_type is ‘16’ |
|  |  |  |  |  |  |
| 40 | **Tag Reused** | 1 | No | Boolean | Flag to indicate whether or not this record’s tag code has been re-used |
|  | tag\_reused |  |  |  | **Required if record\_code is ‘T’ and this record is either the original of a reused tag code or any** |
|  |  |  |  |  | **instance of a reused tag code** |
|  |  |  |  |  | If present, must have the value ’Y’ |
|  |  |  |  |  | **Must be absent if record\_code is ‘N’** |
|  |  |  |  |  |  |
| 41 | **Comments** | 80 | No | Text | Permits brief summary of pertinent information regarding release group |
|  | comments |  |  |  | **Required if study\_integrity is ’W’ or release\_stage is ‘M’** |

CHAPTER 3

Recovery Data

| PSC | PSC Common Name | Max | Reqd | Format /Use | **Description & Validation Rules**........................................................................................................................................... |
| --- | --- | --- | --- | --- | --- |
| Fld # | and Data Field Name | Cols |  |  |  |
| 1 | **Record Code** | 1 | Yes | Lookup | Code to indicate the CWT data file classification (class) of this individual record. Must have the value ’R’: |
|  | record\_code |  |  | ’R’ | =Recovery record |
|  |  |  |  |  |  |
| 2 | **Format Version** | 4 | Yes | ’4.1’ | Format version used to report data |
|  | format\_version |  |  |  | **Must have the value: ’4.1’** |
|  |  |  |  |  |  |
| 3 | **Submission Date** | 8 | Yes | YYYYMMDD | Date of submission for this set of records. Date should be close to actual date when this row is sent to the Mark Center |
|  | submission\_date |  |  |  | **Must have the same value for all records in this data submission** |
|  |  |  |  |  | **Must match submission\_date in corresponding Description file** |
|  |  |  |  |  |  |
| 4 | **Reporting Agency** | 10 | Yes | Lookup | Abbreviation for reporting agency of this dataset for this data exchange |
|  | reporting\_agency |  |  |  | **Must contain an agency code defined in chapter 8** |
|  |  |  |  |  | **Must be the same for all records** |
|  |  |  |  |  |  |
| 5 | **Sampling Agency** | 10 | No | Lookup | Agency responsible for sampling or collecting and tag recovery; May differ from reporting\_agency |
|  | sampling\_agency |  |  |  | If present, must contain an agency code defined in chapter 8 |
|  |  |  |  |  |  |
| 6 | **Recovery ID** | 10 | Yes | Primary Lookup | Unique ID’s assigned to each recovery record by the recovery agency |
|  | recovery\_id |  |  |  | Once reported, must remain the same forever for this snout recovery |
|  |  |  |  |  | **Must be unique for a given reporting\_agency and run\_year** |
|  |  |  |  |  | **Must not contain embedded blanks** |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  | |  |
| 7 | **Species** | 2 | Yes | Lookup | | Code indicating species of this recovered fish; Must match one of the following: |
|  | species |  |  | ’1’ | | =Chinook |
|  |  |  |  | ’2’ | | =Coho |
|  |  |  |  | ’3’ | | =Steelhead |
|  |  |  |  | ’4’ | | =Sockeye |
|  |  |  |  | ’5’ | | =Chum |
|  |  |  |  | ’6’ | | =Pink |
|  |  |  |  | ’7’ | | =Masu |
|  |  |  |  | ’8’ | | =Cutthroat |
|  |  |  |  | ‘9’ | | =Atlantic Salmon |
|  |  |  |  |  | | **Must match the value in corresponding Catch/Sample data file, species** |
|  |  |  |  |  | |  |
| 8 | **Run Year** | 4 | Yes | YYYY | | Calendar year corresponding to catch of this recovery in the fishery. For escapement which crosses year |
|  | run\_year |  |  |  | | boundaries, it is the year in which majority of run returns |
|  |  |  |  |  | | **Must match Catch Year of corresponding Catch/Sample data file.** |
|  |  |  |  |  | | **For recoveries without an associated Catch/Sample, report same year as those with an associated catch/sample** |
|  |  |  |  |  | | **Must be the same for all records in this dataset** |
|  |  |  |  |  | |  |
| 9 | **Recovery Date** | 8 | Yes | YYYYMMDD | | Date closest to that in which the catch occurred in the fishery for this decoded tag |
|  | recovery\_date |  |  |  | | **Must be of the form ’YYYYMMDD’ where:** |
|  |  |  |  |  | | **YYYY is Required and must be in range; ’1970’ through the current year** |
|  |  |  |  |  | | **MM must be in the range ’01’ through ’12’.** May be absent |
|  |  |  |  |  | | **DD must be in the range ’01’ through the last day of the month referenced by MM. Must be absent if MM is absent.** May be absent if MM is present |
|  |  |  |  |  | | **Must not contain embedded blanks** |
|  |  |  |  |  | | Example: April 29, 2000 is coded: 20000429 |
|  |  |  |  |  | |  |
| 10 | **Recovery Date Type** | 1 | No | Lookup | | Code indicating the method used to determine recovery\_date; If present, must match one of the following: |
|  | recovery\_date\_type |  |  | ’R’ | | =Reported date |
|  |  |  |  | ’C’ | | =Calculated date |
|  |  |  |  |  | |  |
| 11 | **Period Type** | 2 | No | Lookup | | Code to Indicate the type of time periods in which sampling occurred in the fishery / stratum for this tag recovery; |
|  | period\_type |  |  |  | | If present, must match one of the following: |
|  |  |  |  | ’1’ | | =Escapement period (across years possible) |
|  |  |  |  | ’2’ | | =Bi-weekly (statistical 2 week) |
|  |  |  |  | ’3’ | | =Semi-monthly (calendar) |
|  |  |  |  | ’4’ | | =Statistical month |
|  |  |  |  | ’5’ | | =Calendar month |
|  |  |  |  | ’6’ | | =Statistical week (beginning Monday) |
|  |  |  |  | ’7’ | | =Week (beginning Sunday) |
|  |  |  |  | ’8’ | | =Seasonal (Use for spring, summer, fall, or winter run periods) |
|  |  |  |  | ’10’ | | =Weekend (Saturday, Sunday & observed holiday(s)) |
|  |  |  |  | ’11’ | | =Weekday (Monday – Friday excluding observed holiday(s)) |
|  |  |  |  |  | | **Required if sample\_type is ’1’, ’2’, ’4’, or ’6’** |
|  |  |  |  |  | | **Required if period present;** |
|  |  |  |  |  | | **period\_type and period must match that used in Catch/Sample data file for the given stratum** |
|  |  |  |  |  | |  |
| 12 | **Period** | 2 | No | Lookup | | Indicates the complete range of time in which sampling occurred in the fishery / stratum for this tag recovery; Possible Ranges: |
|  | period |  |  | n=’01’ | | =Escapement period (across years possible) |
|  |  |  |  | n=’01-26’ | | =Bi-weekly (statistical 2 week) |
|  |  |  |  | n=’01-24’ | | =Semi-monthly (calendar) |
|  |  |  |  | n=’01-12’ | | =Statistical month |
|  |  |  |  | n=’01-12’ | | =Calendar month |
|  |  |  |  | n=’01-54’ | | =Statistical week (beginning Monday) |
|  |  |  |  | n=’01-54’ | | =Week (beginning Sunday) |
|  |  |  |  | n=’01-04’ | | =Seasonal periods ( 01=Spring, 02=Summer, 03=Fall, 04=Winter) |
|  |  |  |  | n=’01-54’ | | =Weekend beginning Saturday (or Friday if on observed holiday) |
|  |  |  |  | n=’01-54’ | | =Weekday beginning Monday (or first working day following observed holiday) |
|  |  |  |  |  | | **Required to map across to sampling period range in the Catch/Sample data file** |
|  |  |  |  |  | | **Required if period\_type present** |
|  |  |  |  |  | | **period\_type and period must match that used in Catch/Sample data file** |
|  |  |  |  |  | | **for the given stratum** |
|  |  |  |  |  | |  |
| 13 | **Fishery** | 3 | Yes | Lookup | | Code (standardized PSC fishery code) to indicate the fishery in which this recovery occurred |
|  | fishery |  |  |  | | **Must match a code in the “Fishery” column from Chapter 9** |
|  |  |  |  |  | | **Must match the value in corresponding Catch/Sample data file, fishery** |
|  |  |  |  |  | |  |
| 14 | **Gear** | 6 | No | Lookup | | Code used by Agency “in-house” to identify its individual fishery or gear |
|  | gear |  |  |  | | If present, should match a code in the “Fishery or Gear” column from Chapter 9 |
|  |  |  |  |  | |  |
| 15 | **Adclip Selective Fishery** | 1 | No | Boolean | | Flag to indicate whether this recovery came from a fishery where only adipose clipped fish were allowed to be harvested |
|  | adclip\_selective\_fishery |  |  |  | | **Required if Run Year (field 8) > 2007** |
|  |  |  |  |  | | **Must match one of the following:** |
|  |  |  |  | ‘S’ | | = Yes /adclip selective fishery |
|  |  |  |  | ‘M’ | | = Yes /mixed selective fishery (ad-clipped plus unclipped fish); see note below |
|  |  |  |  | ‘N’ | | = Not selective |
|  |  |  |  |  | | **Must have the value ‘S’ or ‘M’ if fishery is selective for ad-clips** |
|  |  |  |  |  | |  |
| NOTE: for adclip\_selective\_fishery ‘M’: refers to ad-clipped and unclipped catch. For example” a bag limit of 1 unclipped but multiple clipped fish. | | | | | | |
|  |  |  |  |  | |  |
| 16 | **Estimation Level** | 1 | No | Lookup | | Level of resolution at which expansion is made; If present, must match one of the following: |
|  | estimation\_level |  |  | ’2’ | | =Level 2 (Sector) |
|  |  |  |  | ’3’ | | =Level 3 (Region) |
|  |  |  |  | ’4’ | | =Level 4 (Area) |
|  |  |  |  | ’5’ | | =Level 5 (Location) |
|  |  |  |  | ’6’ | | =Level 6 (Sub-Location) |
|  |  |  |  |  | | **Must match the value in corresponding Catch/Sample data file estimation\_level** |
|  |  |  |  |  | | **Required if estimated\_number is greater than ’0’** |
|  |  |  |  |  | |  |
| 17 | **Recovery Location Code** | 19 | Yes | Lookup | | Hierarchical and geographical coding scheme rendering multiple levels of resolution to Recovery Site |
|  | recovery\_location\_code |  |  |  | | All location codes are standardized within a given State or Province, and coordinated by the State/Province |
|  |  |  |  |  | | **Must exactly match the Location Code of Location Type ’1’ in the PSC Location file** |
|  |  |  |  |  | | Trailing blanks should not be included |
|  |  |  |  |  | |  |
| 18 | **Sampling Site** | 4 | No | Alpha-Numeric | | Agency “in-house” codes for Port of landing, hatchery, etc. |
|  | sampling\_site |  |  |  | |  |
|  |  |  |  |  | |  |
| 19 | **Recorded Mark** | 4 | Yes | Lookup | | External mark recorded by sampler (See Note to follow) |
|  | recorded\_mark |  |  |  | | **Must contain a code defined in chapter 11** |
|  |  |  |  |  | |  |
| NOTES for recorded\_mark:  If **Adipose clip status is Known** then the recorded\_mark should be:  0xxx if fish has not been Adipose clipped  5xxx if fish has been Adipose clipped  where xxx represents other marks which may have been checked and recorded  If **Adipose clip status is Unknown** then the recorded\_mark should be:  9xxx where xxx represents other marks which may have been checked and recorded | | | | | | |
|  |  |  |  |  |  | |
| 20 | **Sex** | 1 | No | Lookup | Code to indicate sex of this recovered fish; If present, must match one of the following: | |
|  | sex |  |  | ’F’ | =Female | |
|  |  |  |  | ’M’ | =Male | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |
| 21 | **Weight** | 5 | No | Numeric | Weight in Kilograms |
|  | weight |  |  |  | If present, must be numeric in the range: ’.01’ through ’99.99’ |
|  |  |  |  |  | No implied decimal. Decimal optional with up to 2 digits after the decimal point |
|  |  |  |  |  | **These fields must all have values or must all be absent:** |
|  |  |  |  |  | **– weight** |
|  |  |  |  |  | **– weight\_code** |
|  |  |  |  |  | **– weight\_type** |
|  |  |  |  |  |  |
| 22 | **Weight Code** | 1 | No | Lookup | Code to indicate method of measuring fish for weight; If present, must match one of the following: |
|  | weight\_code |  |  | ’1’ | =Round |
|  |  |  |  | ’2’ | =Dressed, head on |
|  |  |  |  | ’3’ | =Dressed, head off |
|  |  |  |  |  | **These fields must all have values or must all be absent:** |
|  |  |  |  |  | **– weight** |
|  |  |  |  |  | **– weight\_code** |
|  |  |  |  |  | **– weight\_type** |
|  |  |  |  |  |  |
| 23 | **Weight Type** | 1 | No | Lookup | Code to indicate how weight was determined; If present, must match one of the following: |
|  | weight\_type |  |  | ’1’ | =Actual weight |
|  |  |  |  | ’2’ | =Calculated weight (Sample size may be unknown) |
|  |  |  |  |  | **These fields must all have values or must all be absent:** |
|  |  |  |  |  | **– weight** |
|  |  |  |  |  | **– weight\_code** |
|  |  |  |  |  | **– weight\_type** |
|  |  |  |  |  |  |
| 24 | **Length** | 4 | No | Numeric | Length in millimeters |
|  | length |  |  |  | If present, must be numeric in the range: ’1’ through ’9999’ |
|  |  |  |  |  | **Must not be greater than 1600mm if Species (field 7) is ‘1’ (Chinook)** |
|  |  |  |  |  | **Must not be greater than 1300mm if Species (field 7) is not ‘1’** |
|  |  |  |  |  | **These fields must all have values or must all be absent:** |
|  |  |  |  |  | **– length** |
|  |  |  |  |  | **– length\_code** |
|  |  |  |  |  | **– length\_type** |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  | |
| 25 | **Length Code** | 1 | No | Lookup | Code to indicate method of measuring fish for length; If present, must match one of the following: | |
|  | length\_code |  |  | ’0’ | =Fork length (preferred measurement) | |
|  |  |  |  | ’1’ | =Mid-eye to fork | |
|  |  |  |  | ’2’ | =Mid-eye to caudal peduncle | |
|  |  |  |  | ’3’ | =Total length | |
|  |  |  |  | ’4’ | =Head length: Eye to opercula | |
|  |  |  |  | ’5’ | =Head length: Tip of snout to opercula | |
|  |  |  |  |  | **These fields must all have values or must all be absent:** | |
|  |  |  |  |  | **– length** | |
|  |  |  |  |  | **– length\_code** | |
|  |  |  |  |  | **– length\_type** | |
|  |  |  |  |  |  | |
| 26 | **Length Type** | 1 | No | Lookup | Code to indicate how length was determined; If present, must match one of the following: | |
|  | length\_type |  |  | ’1’ | =Actual length | |
|  |  |  |  | ’2’ | =Calculated length (Sample size may be unknown) | |
|  |  |  |  |  | **These fields must all have values or must all be absent:** | |
|  |  |  |  |  | **– length** | |
|  |  |  |  |  | **– length\_code** | |
|  |  |  |  |  | **– length\_type** | |
|  |  |  |  |  |  | |
| 27 | **Detection Method** | 1 | No | Lookup | Code indicating the method used to detect the presence of a tag on the fish; If present, must match one of the following: | |
|  | detection\_method |  |  | ’E’ | =Electronic; used only when all fish in the sample pass through electronic detection, regardless of clip status | |
|  |  |  |  | ’V’ | =Visual; used when all fish in the sample are first identified for an adipose fin clip, regardless of the use or timing of electronic detection methods | |
|  |  |  |  |  | **Required if catch\_sample\_id is present** | |
|  |  |  |  |  | If present, must match the value in corresponding Catch/Sample data file, detection\_method | |
|  |  |  |  |  |  | |
| 28 | **Tag Status** | 1 | Yes | Lookup | Must match one of the following: | |
|  | tag\_status |  |  | ’1’ | =Tag read OK (i.e. tag\_code corresponds to a valid CWT release & has no unresolved discrepancies) | |
|  |  |  |  | ’2’ | =No tag | |
|  |  |  |  | ’3’ | =Tag lost before read | |
|  |  |  |  | ’4’ | =Tag not readable | |
|  |  |  |  | ’7’ | =Unresolved discrepancy (see notes to follow) | |
|  |  |  |  | ’8’ | =Head not processed | |
|  |  |  |  | ‘9’ | =Pseudo tag, blank wire | |
|  |  |  |  |  | **If ’1’ or ‘9’, then tag\_code is required** | |
|  |  |  |  |  |  | |
| NOTES for tag\_status:  The following instances may warrant a status of “Unresolved discrepancy”:  1) If the tag\_code has been re-used (contains “\*”) and may; therefore, have more than one possible release  2) If the tag\_code does not match a CWT Release Group in the Release data file  3) Species of recovered fish does not match that in Release data file  4) Age of fish is illogical (where Age is the difference between brood\_year and the year of Recovery)  5) tag\_code shows up in recovery when Release record has Expected Survival of “D” (Destroyed)  Records classified as “Unresolved discrepancy” are still subject to all other validation requirements | | | | | | |
|  |  |  |  |  | |  |
| 29 | **Tag Code** | 12 | No | Foreign Lookup | | Identifier coded on a tag to denote a release group |
|  | tag\_code |  |  | AGD1D2D3D4 | | **Required if Tag Status is ‘1’ or ‘9’** |
|  |  |  |  |  | | For tag\_status ‘1’: |
|  |  |  |  |  | | Required for it to be a valid CWT release |
|  |  |  |  |  | | For tag\_status ‘9’: |
|  |  |  |  |  | | 1) If completely blank wire was used, report verbatim the text: ’BLANK’ in this field; |
|  |  |  |  |  | | 2) If agency-only coded wire was used, report verbatim the numeric agency wire prefix (i.e. Data 1) followed by the verbatim text: ’BLANK’ in this field (e.g. agency 63 wire would be coded ’63BLANK’) |
|  |  |  |  |  | | For Sequential Tags Only: |
|  |  |  |  |  | | 1) Binary - the Sequential Table column and row information stored in Data 3 and Data 4 is not Reported here but rather in sequential\_column\_number & sequential\_row\_number; |
|  |  |  |  |  | | 2) Decimal - the Decimal Sequential information for Decimal Sequential tags is stored in sequential\_number |
|  |  |  |  |  | |  |
| 30 | **Tag Type** | 2 | No | Lookup | | Code to indicate type of tag wire found in the recovery snout; If present, must match one of the following: |
|  | tag\_type |  |  | ’0’ | | =Standard binary (1mm) |
|  |  |  |  | ’1’ | | =Half tags (H type) |
|  |  |  |  | ’2’ | | =Half tags (B type) |
|  |  |  |  | ’3’ | | =6 word half length tags |
|  |  |  |  | ’4’ | | =X-ray binary (tag\_code must be ’XX0500’) |
|  |  |  |  | ’5’ | | =Standard color |
|  |  |  |  | ’6’ | | =Solid color (##) |
|  |  |  |  | ’7’ | | =Striped color ($$) |
|  |  |  |  | ’8’ | | =Rare Earth |
|  |  |  |  | ’9’ | | =Repeating series |
|  |  |  |  | ’10’ | | =Sequential 6 word binary |
|  |  |  |  | ’11’ | | =Length & ½ Binary (1.5mm) |
|  |  |  |  | ’12’ | | =Standard Alphanumeric, includes Decimal (1 mm) |
|  |  |  |  | ’13’ | | =Length & ½ Alphanumeric, includes Decimal (1.5 mm) |
|  |  |  |  | ’14’ | | =Sequential Alphanumeric, includes Decimal |
|  |  |  |  | ’15’ | | =Half length Alphanumeric, includes Decimal (0.5mm) |
|  |  |  |  | ’16’ | | =Pseudo tag, blank wire |
|  |  |  |  |  | | **Required if tag\_status is ’1’ or ‘9’** |
|  |  |  |  |  | | **Must be ‘16’ if tag\_status is ‘9’** |
|  |  |  |  |  | |  |
| 31 | **Sequential Number** | 5 | No | Numeric | | Value identifying decimal number for this tag code; Used for decimal tags only |
|  | sequential\_number |  |  |  | | If present, then tag\_type must be ’10’ or ’14’ |
|  |  |  |  |  | |  |
| 32 | **Sequential Column** | 3 | No | Numeric | | Value in “Table Column”; Corresponds to column number in Sequential Numbers Table; Used for sequential tags only |
|  | **Number** |  |  |  | | If present, must be numeric in the range: ’0’ through ’127’ |
|  | sequential\_column\_number |  |  |  | | If present, then tag\_type must be ’10’ |
|  |  |  |  |  | |  |
| 33 | **Sequential Row Number** | 3 | No | Numeric | | Value in “Table Row”; Corresponds to row number in Sequential Numbers Table; Used for sequential tags only |
|  | sequential\_row\_number |  |  |  | | If present, must be numeric in the range: ’0’ through ’127’ |
|  |  |  |  |  | | If present, then tag\_type must be ’10’ |
|  |  |  |  |  | |  |
| 34 | **Catch Sample ID** | 10 | No | Foreign Lookup | | Agency assigned ID used to associate recovery records in Recovery data file to corresponding catch/sample record in |
|  | catch\_sample\_id |  |  |  | | Catch/Sample data file. |
|  |  |  |  |  | | **Required if sample\_type is ‘1’, ’2’, ’4’, or ‘6’** |
|  |  |  |  |  | | If present, must match the value in corresponding Catch/Sample data file, catch\_sample\_id |
|  |  |  |  |  | | **Must not contain embedded blanks** |
|  |  |  |  |  | |  |
| 35 | **Sample Type** | 1 | Yes | Lookup | | **Must match one of the following:** |
|  | sample\_type |  |  | ’1’ | | =In-sample recoveries from a sampled fishery with known catch; |
|  |  |  |  |  | | estimated\_number must be absent or greater than ‘0’ |
|  |  |  |  | ’2’ | | =Voluntary recoveries from a sampled fishery with known catch; Awareness estimates are available; |
|  |  |  |  |  | | estimated\_number must be absent or greater than ‘0’ (e.g., Puget Sound Sport) |
|  |  |  |  | ’3’ | | =Voluntary recoveries from an unsampled fishery. Awareness approximations may be possible yielding non-zero |
|  |  |  |  |  | | estimated\_number; otherwise estimated\_number should be absent. (e.g., Hoh River freshwater sport fishery) |
|  |  |  |  | ’4’ | | =In-sample or voluntary recoveries from a sampled fishery with unknown catch; |
|  |  |  |  |  | | estimated\_number must be absent. (e.g., Stream Survey) |
|  |  |  |  | ’5’ | | =Voluntary or select recoveries from a sampled fishery with known catch and no awareness estimates available; Use of these |
|  |  |  |  |  | | recoveries leads to double counting; see also Note #3 to follow |
|  |  |  |  |  | | estimated\_number must be equal to ‘0’. (e.g., commercial voluntary recoveries); |
|  |  |  |  | ’6’ | | =Mark Incidence – Indirect Sample: Voluntary recoveries from indirectly sampled sport fishery; estimated\_number are calculated |
|  |  |  |  |  | | from sport\_mark\_inc\_sampl\_obs\_ads in sport\_mark\_incidence\_sampl\_size from the corresponding Catch Sample record |
|  |  |  |  | ’7’ | | =Pass-Through Sample: Recoveries that are selectively removed from certain in-river sampling programs; The migrant fish are |
|  |  |  |  |  | | subject to subsequent destination sampling |
|  |  |  |  |  | | number\_caught must equal number\_sampled. see also Note #3 to follow |

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|  |  |  |  |  | |  |
| Notes for sample\_type: (see also notes for Catch/Sample sample\_type field #18)  1) Four keys are used to distinguish the type of sample:  a) Sample: In-sample or Voluntary  b) Fishery: Sampled or Unsampled  c) Catch: Known or Unknown  d) Awareness: Available or Unavailable  2) Awareness estimates (Sample Type Code 2) are based on current year’s data, while awareness approximations (Sample Type Code 3) are based on extrapolations of data from other periods or locations.  3) “Pass-through” Sampling (Sample Type Code 7) In certain sampling programs, some fish are released while selected fish are killed and snouts removed. The non-sampled fish are subject to subsequent destination sampling and the lack of reporting would result in underestimation of the tag codes. In this sampling situation, the number of fish pulled out of the pass-through equals the number sampled and generally gives an estimated number of 1.  4) Any associated Catch/Sample and Recovery records must have the same value of sample type. | | | | | | |
|  |  |  |  |  |  | |
|  |  |  |  |  |  | |
| 36 | **Sampled Maturity** | 1 | No | Lookup | Code to indicate maturity class of sample in which this recovery occurred; If present, must match one of the following; | |
|  | sampled\_maturity |  |  | ‘1’ | =Immature(0-Ocean Fish) | |
|  |  |  |  | ‘2’ | =Jacks (1-Ocean fish) | |
|  |  |  |  | ‘3’ | =Adults | |
|  |  |  |  | ‘4’ | =Mixed(adult, jack and immatures) | |
|  |  |  |  |  | **Must match the value in corresponding Catch/Sample data file, sampled\_maturity** | |
|  |  |  |  |  |  | |
| 37 | **Sampled Run** | 2 | No | Lookup | Code to indicate run when sample is stratified by entry run timing (e.g., freshwater sport fisheries where runs can be | |
|  | sampled\_run |  |  |  | identified by morphological differences); If present, must match one of the following: | |
|  |  |  |  | ’1’ | =Spring | |
|  |  |  |  | ’2’ | =Summer | |
|  |  |  |  | ’3’ | =Fall (includes type S Coho) | |
|  |  |  |  | ’4’ | =Winter | |
|  |  |  |  | ’5’ | =Hybrid | |
|  |  |  |  | ’6’ | =Landlocked | |
|  |  |  |  | ’7’ | =Late Fall (includes type N Coho) | |
|  |  |  |  | ’8’ | =Late Fall Upriver Bright Chinook | |
|  |  |  |  |  | **Must match the value in corresponding Catch/Sample data file, sample\_run** | |
|  |  |  |  |  |  | |
| 38 | **Sampled Length Range** | 8 | No | Numeric | Length interval range in millimeters (mm); Example: 800 - 900 mm. length interval coded as 08000900 | |
|  | sampled\_length\_range |  |  |  | If present, must be numeric in the range: ’00000000’ through ’99999999’ | |
|  |  |  |  |  | The number represented by the first 4 bytes must be less than or equal to the number represented by the last 4 bytes | |

|  |  |  |  |  |  |
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|  |  |  |  |  |  |
| 39 | **Sampled Sex** | 1 | No | Lookup | Code to indicate sex of sample in which this recovery occurred; If present, must match one of the following: |
|  | sampled\_sex |  |  | ’F’ | =Female |
|  |  |  |  | ’M’ | =Male |
|  |  |  |  |  |  |
| 40 | **Sampled Mark** | 4 | No | Lookup | External mark used for differential sampling treatment. Used only if sampling treatments of returning fish were |
|  | sampled\_mark |  |  |  | different based upon the external mark of the fish |
|  |  |  |  |  | If present, must contain a code defined in chapter 11 |
|  |  |  |  |  | **Must match the value in corresponding Catch/Sample data file, sampled\_mark** |
|  |  |  |  |  |  |
| 41 | **Estimated Number** | 8 | No | Numeric | Estimated number of tagged fish in the catch with the same coded wire tag represented by this tag recovery, as estimated |
|  | estimated\_number |  |  |  | by the reporting agency |
|  |  |  |  |  | **Must be absent if this recovery is used to adjust the Estimated Number of other recoveries** |
|  |  |  |  |  | If present and greater than zero, then catch\_sample\_id should be present and, if present, must match an existing catch\_sample\_id in |
|  |  |  |  |  | the Catch/Sample file |
|  |  |  |  |  | If present, must be numeric in the range: ’0’ through ’99999.99’ |
|  |  |  |  |  | No implied decimal. Decimal optional with up to 2 digits after the decimal point |

CHAPTER 4

Catch/Sample Data

| PSC | PSC Common Name | Max | Reqd | Format / Use | **Description & Validation Rules**................................................................................................................................................... |
| --- | --- | --- | --- | --- | --- |
| Fld # | and Data Field Name | Cols |  |  |  |
| 1 | **Record Code** | 1 | Yes | Lookup | Code to indicate the CWT data file classification (class) of this individual record. Must have the value ’S’: |
|  | record\_code |  |  | ’S’ | =Catch/Sample record |
|  |  |  |  |  |  |
| 2 | **Format Version** | 4 | Yes | ’4.1’ | Format version used to report data |
|  | format\_version |  |  |  | **Must have the value: ’4.1’** |
|  |  |  |  |  |  |
| 3 | **Submission Date** | 8 | Yes | YYYYMMDD | Date of submission for this set of records. Date should be close to actual date when this row is sent to the Mark Center |
|  | submission\_date |  |  |  | **Must have the same value for all records in this data submission** |
|  |  |  |  |  | **Must match submission\_date in corresponding Description file** |
|  |  |  |  |  |  |
| 4 | **Reporting Agency** | 10 | Yes | Lookup | Abbreviation for reporting agency of this dataset for this data exchange |
|  | reporting\_agency |  |  |  | **Must contain an agency code defined in chapter 8** |
|  |  |  |  |  | **Must be the same for all records** |
|  |  |  |  |  | **Must match reporting\_agency of corresponding Recovery data file** |
|  |  |  |  |  |  |
| 5 | **Sampling Agency** | 10 | No | Lookup | Agency responsible for sampling or collecting and tag recovery; May differ from reporting\_agency |
|  | sampling\_agency |  |  |  | If present, must contain an agency code defined in chapter 8 |
|  |  |  |  |  |  |
| 6 | **Catch Sample ID** | 10 | Yes | Primary | Unique IDs assigned to each sample record by the reporting agency |
|  | catch\_sample\_id |  |  | Lookup | **Must be unique for a given reporting\_agency and catch\_year** |
|  |  |  |  |  | **Must not contain embedded blanks** |

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| 7 | **Species** | 2 | Yes | Lookup | Code indicating species of this catch group; Must match one of the following: |
|  | species |  |  | ’1’ | =Chinook |
|  |  |  |  | ’2’ | =Coho |
|  |  |  |  | ’3’ | =Steelhead |
|  |  |  |  | ’4’ | =Sockeye |
|  |  |  |  | ’5’ | =Chum |
|  |  |  |  | ’6’ | =Pink |
|  |  |  |  | ’7’ | =Masu |
|  |  |  |  | ’8’ | =Cutthroat |
|  |  |  |  | ’9’ | =Atlantic Salmon |
|  |  |  |  |  | **Must match the value in corresponding Recovery data file, species** |
|  |  |  |  |  |  |
| 8 | **Catch Year** | 4 | Yes | YYYY | Corresponds to Run Year in Recovery file. Year when catch was made. For escapement which crosses year boundaries, use year |
|  | catch\_year |  |  |  | when majority of run returns |
|  |  |  |  |  | **Must match run\_year of corresponding Recovery data file** |
|  |  |  |  |  | **Must be the same for all records in this dataset** |
|  |  |  |  |  |  |
| 9 | **Period Type** | 2 | Yes | Lookup | Code to Indicate the type of time periods in which sampling occurred in the fishery / stratum; Must match one of the following: |
|  | period\_type |  |  | ’1’ | =Escapement period (across years possible) |
|  |  |  |  | ’2’ | =Bi-weekly (statistical 2 week) |
|  |  |  |  | ’3’ | =Semi-monthly (calendar) |
|  |  |  |  | ’4’ | =Statistical month |
|  |  |  |  | ’5’ | =Calendar month |
|  |  |  |  | ’6’ | =Statistical week (beginning Monday) |
|  |  |  |  | ’7’ | =Week (beginning Sunday) |
|  |  |  |  | ’8’ | =Seasonal (Use for spring, summer, fall, or winter run periods) |
|  |  |  |  | ’10’ | =Weekend (Saturday, Sunday & observed holiday(s)) |
|  |  |  |  | ’11’ | =Weekday (Monday – Friday excluding observed holiday(s)) |
|  |  |  |  |  | **period\_type and period must match that used in Recovery data file for the given stratum** |
|  |  |  |  |  |  |
| 10 | **Period** | 2 | Yes | Lookup | Indicates the complete range of time in which sampling occurred in the fishery / stratum; Possible Range: |
|  | period |  |  | n=’01’ | =Escapement period (across years possible) |
|  |  |  |  | n=’01-26’ | =Bi-weekly (statistical 2 week) |
|  |  |  |  | n=’01-24’ | =Semi-monthly (calendar) |
|  |  |  |  | n=’01-12’ | =Statistical month |
|  |  |  |  | n=’01-12’ | =Calendar month |
|  |  |  |  | n=’01-54’ | =Statistical week (beginning Monday) |
|  |  |  |  | n=’01-54’ | =Week (beginning Sunday) |
|  |  |  |  | n=’01-04’ | =Seasonal periods ( 01=Spring, 02=Summer, 03=Fall, 04=Winter) |
|  |  |  |  | n=’01-54’ | =Weekend beginning Saturday (or Friday if on observed holiday) |
|  |  |  |  | n=’01-54’ | =Weekday beginning Monday (or first working day following observed holiday) |
|  |  |  |  |  | **period\_type and period must match that used in Recovery data file for the given stratum** |
|  |  |  |  |  |  |
| 11 | **First Period** | 2 | No | Lookup | Beginning sampling period number for situations where catch data are pooled across time periods |
|  | first\_period |  |  |  | Applies to non-standard estimated number calculations only |
|  |  |  |  |  | If present, must define a valid period |
|  |  |  |  |  | If present, Must be less than or equal to the value in last\_period |
|  |  |  |  |  |  |
| 12 | **Last Period** | 2 | No | Lookup | Ending sampling period number for situations where catch data are pooled across time periods |
|  | last\_period |  |  |  | Applies to non-standard estimated number calculations only |
|  |  |  |  |  | If present, must define a valid period |
|  |  |  |  |  | If present, must be greater than or equal to the value in first\_period |
|  |  |  |  |  |  |
| 13 | **Fishery** | 3 | Yes | Lookup | Code (standardized PSC fishery code) to indicate the fishery in which this catch occurred |
|  | fishery |  |  |  | **Must match a code in the “Fishery” column from Chapter 9** |
|  |  |  |  |  | **Must match the value in corresponding Recovery data file fishery** |
|  |  |  |  |  |  |
| 14 | **Adclip Selective Fishery** | 1 | No | Boolean | Flag to indicate whether or not this catch and sample were from a fishery where only adipose clipped fish were allowed to be |
|  | adclip\_selective\_fishery |  |  |  | harvested |
|  |  |  |  |  | **Required if Catch Year (field 8) > 2007** |
|  |  |  |  |  | Must match one of the following: |
|  |  |  |  | ‘S’ | = Yes /adclip selective fishery |
|  |  |  |  | ‘M’ | = Yes /mixed selective fishery (ad-clipped plus unclipped fish); see note below |
|  |  |  |  | ‘N’ | = Not selective |
|  |  |  |  |  | **Must have the value ‘S’ or ‘M’ if fishery is selective for ad-clips** |
|  |  |  |  |  |  |
| Note for adclip\_selective\_fishery ‘M’: Refers to ad-clipped and unclipped catch. For example: a bag limit of 1 unclipped but multiple clipped fish. | | | | | |
|  |  |  |  |  |  |
| 15 | **Estimation Level** | 1 | No | Lookup | Level of resolution at which estimation is made: |
|  | estimation\_level |  |  | ’2’ | =Level 2 (Sector) |
|  |  |  |  | ’3’ | =Level 3 (Region) |
|  |  |  |  | ’4’ | =Level 4 (Area) |
|  |  |  |  | ’5’ | =Level 5 (Location) |
|  |  |  |  | ’6’ | =Level 6 (Sub-Location) |
|  |  |  |  |  | **Required if number\_estimated is greater than ‘0’.** |
|  |  |  |  |  | **Must match the value in corresponding Recovery data file estimation\_level** |

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| 16 | **Catch Location Code** | 19 | Yes | Lookup | Hierarchical and geographical coding scheme to identify area of catch |
|  | catch\_ location\_code |  |  |  | All location codes are standardized within a given State or Province, and coordinated by the State/Province |
|  |  |  |  |  | **Must exactly match the Location Code of Location Type ’2’ in the PSC Location file** |
|  |  |  |  |  | Trailing blanks should not be included |
|  |  |  |  |  |  |
| **17** | **Detection Method** | 1 | Yes | Lookup | Code indicating the method used to detect the presence of a tag on the fish; Must match one of the following: |
|  | detection\_method |  |  | ’E’ | =Electronic |
|  |  |  |  | ’V’ | =Visual |
|  |  |  |  |  | **Must match the value in corresponding Recovery data file, detection\_method** |
|  |  |  |  |  |  |
| 18 | **Sample Type** | 1 | Yes | Lookup | **Must match one of the following:** (See notes to follow) |
|  | sample\_type |  |  | ’1’ | =In-sample recoveries from a sampled fishery with known catch; estimated\_number is non-zero. Also used to report unsampled |
|  |  |  |  |  | catch |
|  |  |  |  |  | estimated\_number must be absent or greater than ‘0’ |
|  |  |  |  | ’2’ | =Voluntary recoveries from a sampled fishery with known catch; Awareness estimates are available; |
|  |  |  |  |  | estimated\_number must be absent or greater than ‘0’ (e.g., Puget Sound Sport) |
|  |  |  |  | ’4’ | =In-sample or voluntary recoveries from a sampled fishery with unknown catch; |
|  |  |  |  |  | estimated\_number must be absent. (e.g., Stream Survey with no escapement estimate) |
|  |  |  |  | ’6’ | =Mark Incidence – Indirect Sample: Voluntary recoveries from indirectly sampled sport fishery; |
|  |  |  |  |  | estimated\_number are calculated from sport\_mark\_inc\_sampl\_obs\_ads in sport\_mark\_incidence\_sampl\_size from corresponding Recovery record. |
|  |  |  |  | ‘7’ | =Pass-Through Sample: Recoveries that are selectively removed from certain in-river sampling programs; |
|  |  |  |  |  | The migrant fish are subject to subsequent destination sampling; |
|  |  |  |  |  | number\_caught must equal number\_sampled |
|  |  |  |  |  | **Must match the value in corresponding Recovery data file, sample\_type** |
| See notes for Recovery sample\_type field # 35 | | | | | |
|  |  |  |  |  |  |
| 19 | **Sampled Maturity** | 1 | No | Lookup | Code to indicate maturity class of sample; If present, must match one of the following: |
|  | sampled\_maturity |  |  | ’1’ | =Immature (0-Ocean fish) |
|  |  |  |  | ’2’ | =Jack (1-Ocean fish) |
|  |  |  |  | ’3’ | =Adult |
|  |  |  |  | ’4’ | =Mixed (adult, jack, and immature) |
|  |  |  |  |  | **Must match the value in corresponding Recovery data file, sampled\_maturity** |

|  |  |  |  |  |  |  |
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| 20 | **Sampled Run** | 2 | | No | Lookup | Code to indicate run when sample is stratified by entry run timing (e.g., freshwater sport fisheries where runs can be |
|  | sampled\_run |  | |  |  | identified by morphological differences); |
|  |  |  | |  |  | If present, must match one of the following: |
|  |  |  | |  | ’1’ | =Spring |
|  |  |  | |  | ’2’ | =Summer |
|  |  |  | |  | ’3’ | =Fall (includes type S Coho) |
|  |  |  | |  | ’4’ | =Winter |
|  |  |  | |  | ’5’ | =Hybrid |
|  |  |  | |  | ’6’ | =Landlocked |
|  |  |  | |  | ’7’ | =Late Fall (includes type N Coho) |
|  |  |  | |  | ’8’ | =Late Fall Upriver Bright Chinook |
|  |  |  | |  |  | **Must match the value in corresponding Recovery data file, sampled\_run** |
|  |  |  | |  |  |  |
| 21 | **Sampled Length Range** | 8 | | No | Numeric | Length interval range in millimeters (mm); Example: 800 - 900 mm. length interval coded as 08000900 |
|  | sampled\_length\_range |  | |  |  | If present, must be numeric in the range: ’0’ through ’99999999’ |
|  |  |  | |  |  | The number represented by the first 4 bytes must be less than or equal to the number represented by the last 4 bytes |
|  |  |  | |  |  |  |
| 22 | **Sampled Sex** | 1 | | No | Lookup | Code to indicate sex of sample; **Must match one of the following:** |
|  | sampled\_sex |  | |  | ’F’ | =Female |
|  |  |  | |  | ’M’ | =Male |
|  |  |  | |  |  |  |
| 23 | **Sampled Mark** | 4 | | No | Lookup | External mark used for differential sampling treatment. Used only if sampling treatments of returning fish were |
|  | sampled\_mark |  | |  |  | different based upon the external mark of the fish (see note to follow) |
|  |  |  | |  |  | If present, must contain a code defined in chapter 11 |
|  |  |  | |  |  | **Must match the value in corresponding Recovery data file, sampled\_mark** |
|  |  |  | |  |  |  |
| NOTE for sampled\_mark: This field can only be used when the fish reported in number\_caught were all examined for marks (for example, at a freshwater trap or hatchery rack). | | | | | | |
|  |  | |  |  |  |  |
| 24 | **Number Caught** | | 8 | No | Numeric | Total catch of species for this area-period-fishery-age class stratum |
|  | number\_caught | |  |  |  | Required if sample\_type is ’1’ and number\_sampled is absent |
|  |  | |  |  |  | **Must be absent if sample\_type is ’4’** |
|  |  | |  |  |  | If present, must be numeric in the range: ’0’ through ’99999999’ |
|  |  | |  |  |  |  |
| 25 | **Escapement Estimation Method** | | 2 | No | Lookup | Identifies the methodology used to estimate the natural spawning escapement (e.g. method used to determine the  “number caught” in spawning ground carcass sampling); |
|  | escapement\_estimation\_me | |  |  |  | If present, must contain a code defined in chapter 12 |
|  | thod | |  |  |  | **Must be absent if fishery is not ‘54’ (Spawning Ground) or sample\_type is not ‘1’** |

|  |  |  |  |  |  |  |
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|  |  | |  |  |  |  |
| 26 | **Number Sampled** | | 8 | No | Numeric | Number of fish examined for presence of tag wire |
|  | number\_sampled | |  |  |  | **Required if sample\_type is ’1’ and number\_caught is absent** |
|  |  | |  |  |  | If present, must be greater than or equal to the sum of: |
|  |  | |  |  |  | number\_recovered\_decoded plus |
|  |  | |  |  |  | number\_recovered\_no\_cwts plus |
|  |  | |  |  |  | number\_recovered\_cwts\_lost plus |
|  |  | |  |  |  | number\_recovered\_unreadable plus |
|  |  | |  |  |  | number\_recovered\_unresolved plus |
|  |  | |  |  |  | number\_recovered\_not\_processed plus |
|  |  | |  |  |  | number\_recovered\_pseudotags |
|  |  | |  |  |  | If present, must be numeric in the range: ’0’ through ’99999999’ |
|  |  | |  |  |  |  |
| 27 | **Number Estimated** | | 8 | No | Numeric | Estimated number of fish in the catch represented by the individual recovery |
|  | number\_estimated | |  |  |  | If present, must be numeric in the range: ’0’ through ’99999.99’ |
|  |  | |  |  |  | No implied decimal. Decimal optional with up to 2 digits after the decimal point |
|  |  | |  |  |  |  |
| **28** | **Number Recovered Decoded** | | 5 | No | Numeric | Number of observed tags recovered and decoded in the sampling stratum; (i.e., Recovery tag\_status is ‘1‘) |
|  | number\_recovered\_decoded | |  |  |  | If present, must be numeric in the range: ’0’ through ’99999’ |
|  |  | |  |  |  | If present and sample\_type is not equal to ‘2’, must be less than or equal to number\_sampled |
|  |  | |  |  |  |  |
| 29 | **Number Recovered No CWTs** | | 4 | No | Numeric | Number of heads lacking CWT in sampling stratum; (i.e., Recovery tag\_status is ‘2‘) |
|  | number\_recovered\_no\_cwts | |  |  |  | If present, must be numeric in the range: ’0’ through ’9999’ |
|  |  | |  |  |  | If present and sample\_type is not equal to ‘2’, must be less than or equal to number\_sampled |
|  |  | |  |  |  |  |
| 30 | **Number Recovered Lost** | | 3 | No | Numeric | Number of lost CWTs in sampling stratum; (i.e., Recovery tag\_status is ’3’) |
|  | **CWTs** | |  |  |  | If present, must be numeric in the range: ’0’ through ’999’ |
|  | number\_recovered\_lost\_cwts | |  |  |  | If present and sample\_type is not equal to ‘2’, must be less than or equal to number\_sampled |
|  |  | |  |  |  |  |
| **31** | **Number Recovered** | | 3 | No | Numeric | Number of unreadable CWTs in sampling stratum; |
|  | **Unreadable** | |  |  |  | If present ,must be numeric in the range: ’0’ through ’999’ |
|  | number\_recovered\_unreadable | |  |  |  | If present and sample\_type is not equal to ‘2’, must be less than or equal to number\_sampled |
|  |  | |  |  |  |  |
| 32 | **Number Recovered** | | 3 | No | Numeric | Number of tag recoveries in sampling stratum which could not be assigned to a tag code (i.e., Recovery tag\_status is ’7’) |
|  | **Unresolved** | |  |  |  | If present, must be numeric in the range: ’0’ through ’999’ |
|  | number\_recovered\_unresolved | |  |  |  | If present and sample\_type is not equal to ‘2’, must be less than or equal to number\_sampled |
|  |  | |  |  |  |  |
| 33 | **Number Recovered Not** | | 5 | No | Numeric | Number of lost heads or heads not processed (i.e., no data) in sampling stratum; (i.e., Recovery tag\_status is ’8’) |
|  | **Pro­cessed** | |  |  |  | If present, must be numeric in the range: ’0’ through ’99999’ |
|  | number\_recovered\_not\_processed | |  |  |  | If present and sample\_type is not equal to ‘2’, must be less than or equal to number\_sampled |
|  |  | |  |  |  |  |
| **34** | **Number Recovered** | | 3 | No | Numeric | Number of fish among number\_sampled which contained tag type 16 (Pseudo tag, blank wire) as described under Tag Type in |
|  | **PseudoTags** | |  |  |  | Chapter 2 Releases. |
|  | number\_recovered\_pseudotags | |  |  |  | If present, must be numeric in the range: ’0’ through ’999’ |
|  |  | |  |  |  | If present and sample\_type is not equal to ‘2’, must be less than or equal to number\_sampled |
|  |  | |  |  |  |  |
| **35** | **MR 1st Partition Size** | | 8 | Yes | Numeric | Number of fish in first mark rate partition |
|  | mr\_1st\_partition\_size | |  |  |  | **Must be numeric in the range: ’0’ through ’99999999’** |
|  |  | |  |  |  | See Chapter 14 for discussion of the use of this field. |
|  |  | |  |  |  |  |
| **36** | **MR 1st Sample Size** | | 8 | Yes | Numeric | Number of fish among mr\_1st\_partition\_size which were visually sampled for adipose clips |
|  | mr\_1st\_sample\_size | |  |  |  | **Must be numeric in the range: ’0’ through ’99999999’** |
|  |  | |  |  |  | **Must be less than or equal to mr\_1st\_partition\_size** |
|  |  | |  |  |  | See Chapter 14 for discussion of the use of this field. |
|  |  | |  |  |  |  |
| **37** | **MR 1st Sample Known** | | 8 | No | Numeric | Number of fish among mr\_1st\_sample\_size which were found to have an adipose clip or no adipose clip (does not include fish which |
|  | **Ad Status** | |  |  |  | were found to have an 'undeterminable and therefore unknown' adipose clip) |
|  | mr\_1st\_sample\_known\_ad\_stat | |  |  |  | **Required if mr\_1st\_sample\_size is greater than ‘0’.** |
|  | us | |  |  |  | **Must be absent if mr\_1st\_sample\_size is equal to ‘0’ and sample\_type is not equal to ‘2’.** |
|  |  | |  |  |  | If present, must be numeric in the range: ’0’ through ’99999999’ |
|  |  | |  |  |  | If present and sample\_type is not equal to ‘2’, must be less than or equal to mr\_1st\_sample\_size |
|  |  | |  |  |  | See Chapter 14 for discussion of the use of this field. |
|  |  | |  |  |  |  |
| **38** | **MR 1st Sample Obs Adclips** | | 8 | No | Numeric | Number of fish among mr\_1st\_sample\_size which were found to have an adipose clip |
|  | mr\_1st\_sample\_obs\_adclips | |  |  |  | **Required if mr\_1st\_sample\_size is greater than ‘0’.** |
|  |  | |  |  |  | **Must be absent if mr\_1st\_sample\_size is equal to ‘0’ and sample\_type is not equal to ‘2’.** |
|  |  | |  |  |  | If present, must be numeric in the range: ’0’ through ’99999999’ |
|  |  | |  |  |  | If present and sample\_type is not equal to ‘2’, must be less than or equal to mr\_1st\_sample\_size |
|  |  | |  |  |  | See Chapter 14 for discussion of the use of this field. |
|  |  | |  |  |  |  |
|  |  | |  |  |  |  |
| **39** | **MR 2nd Partition Size** | | 8 | No | Numeric | Number of fish in second mark rate partition |
|  | mr\_2nd\_partition\_size | |  |  |  | **Required if mr\_2nd\_sample\_size is present** |
|  |  | |  |  |  | **Must be absent if mr\_2nd\_sample\_size is absent** |
|  |  | |  |  |  | If present, must be numeric in the range: ’0’ through ’99999999’ |
|  |  | |  |  |  | See Chapter 14 for discussion of the use of this field. |
|  |  | |  |  |  |  |
| 40 | **MR 2nd Sample Size** | | 8 | No | Numeric | Number of fish among mr\_2nd\_partition\_size which were visually sampled for adipose clips |
|  | mr\_2nd\_sample\_size | |  |  |  | **Required if mr\_2nd\_partition\_size is present** |
|  |  | |  |  |  | **Must be absent if mr\_2nd\_partition\_size is absent** |
|  |  | |  |  |  | If present, must be numeric in the range: ’0’ through ’99999999’ |
|  |  | |  |  |  | See Chapter 14 for discussion of the use of this field. |
|  |  | |  |  |  |  |
| 41 | **MR 2nd Sample Known Ad** | | 8 | No | Numeric | Number of fish among mr\_2nd\_sample\_size which were found to have an adipose clip or no adipose clip (does not include fish which |
|  | **Status** | |  |  |  | were found to have an 'undeterminable and therefore unknown' adipose clip) |
|  | mr\_2nd\_sample\_known\_ad\_stat | |  |  |  | **Required if mr\_2nd\_sample\_size is greater than ‘0’** |
|  | us | |  |  |  | **Must be absent if mr\_2nd\_sample\_size is equal to ‘0’ or is absent.** |
|  |  | |  |  |  | If present, must be numeric in the range: ’0’ through ’99999999’ |
|  |  | |  |  |  | If present, must be less than or equal to mr\_2nd\_sample\_size |
|  |  | |  |  |  | See Chapter 14 for discussion of the use of this field. |
|  |  | |  |  |  |  |
| 42 | **MR 2nd Sample Obs Adclips** | | 8 | No | Numeric | Number of fish among mr\_2nd\_sample\_size which were found to have an adipose clip |
|  | mr\_2nd\_sample\_obs\_adclips | |  |  |  | **Required if mr\_2nd\_sample\_size is greater than ‘0’.** |
|  |  | |  |  |  | **Must be absent if mr\_2nd\_sample\_size is equal to ‘0’ or is absent.** |
|  |  | |  |  |  | If present, must be numeric in the range: ’0’ through ’99999999’ |
|  |  | |  |  |  | If present, must be less than or equal to mr\_2nd\_sample\_size |
|  |  | |  |  |  | See Chapter 14 for discussion of the use of this field. |
|  |  | |  |  |  |  |
| 43 | **Mark Rate** | | 6 | No | Numeric | Proportion of fish in the number\_sampled that were adipose fin clip marked (expressed as a decimal percentage) |
|  | mark\_rate | |  |  |  | If present, must be numeric in the range: '0' through '1'. |
|  |  | |  |  |  | No implied decimal. Decimal optional with up to 4 digits after the decimal point |
| NOTE for mark\_rate:  Warning: If detection\_method='E' and mr\_1st\_sample\_size not equal to mr\_1st partition size or mr\_2nd\_sample\_size not equal to mr\_2nd\_partition\_size, the usefulness of this rate will be dependent upon the subsamples being adequately representative of the partitions. See chapter 14 for further discussion of the use of this field. | | | | | | |
|  |  |  | |  |  |  |
| 44 | **Awareness Factor** | 5 | | No | Numeric | Estimation factor used for voluntary recoveries in sport fisheries |
|  | awareness\_factor |  | |  |  | If present, must be numeric in the range: ’0’ through ’9.999’ |
|  |  |  | |  |  | No implied decimal. Decimal optional with up to 3 digits after the decimal point |
|  |  |  | |  |  |  |
| 45 | **Sport Mark Incidence** | 5 | | No | Numeric | Number of fish sampled for marks in sport fishery but heads not taken; Use only if sample\_type is ’6’ |
|  | **Sampl Size** |  | |  |  | **Must be absent if sample\_type is not ‘6’** |
|  | sport\_mark\_incidence\_sampl |  | |  |  | If present, must be numeric in the range: ’0’ through ’99999’ |
|  | \_size |  | |  |  |  |
|  |  |  | |  |  |  |
| **46** | **Sport Mark Inc Sampl Obs** | 4 | | No | Numeric | Number of observed ad clips in sport fishery but heads not taken; Use only if sample\_type is ’6’ |
|  | **Adclips** |  | |  |  | **Must be absent if sample\_type is not ‘6’** |
|  | sport\_mark\_inc\_sampl\_obs\_ |  | |  |  | If present, must be numeric in the range: ’0’ through ’9999’ |
|  | adclips |  | |  |  |  |

CHAPTER 5

Catch & Effort Data

NOTE: The presence of ‘C, E’ in the Reqd column indicates that the field is to be used for both Catch and Effort records. The presence of only a ‘C’ or ‘E’ in the Reqd column indicates the field is to be used for only: Catch records (C) or Effort records (E).

| PSC | PSC Common Name | Max | Reqd | Format / Use | **Description & Validation Rules**................................................................................................................................................... |
| --- | --- | --- | --- | --- | --- |
| Fld # | and Data Field Name | Cols |  |  |  |
| 1 | **Record Code** | 1 | Yes | Lookup | Code to indicate the data file classification (class) of this individual record. Must match one of the following: |
|  | record\_code |  | C, E | ’C’ | =Catch record |
|  |  |  |  | ’E’ | =Effort record |
|  |  |  |  |  |  |
| 2 | **Format Version** | 4 | Yes | ’4.1’ | Format version used to report data |
|  | format\_version |  | C, E |  | **Must have the value: ’4.1’** |
|  |  |  |  |  |  |
| 3 | **Submission Date** | 8 | Yes | YYYYMMDD | Date of submission for this set of records. Date should be close to actual date when this row is sent to the Mark Center |
|  | submission\_date |  | C, E |  | **Must have the same value for all records in this data submission** |
|  |  |  |  |  | **Must match the submission\_date in corresponding Description file** |
|  |  |  |  |  |  |
| 4 | **Reporting Agency** | 10 | Yes | Lookup | Abbreviation for reporting agency of this dataset for this data exchange |
|  | reporting\_agency |  | C, E |  | **Must contain an agency code defined in chapter 8** |
|  |  |  |  |  | **Must be the same for all records** |
|  |  |  |  |  |  |
| **5** | **Catch Effort Id** | 10 | Yes | Primary | Unique ID assigned to each catch or effort record by the reporting agency |
|  | catch\_effort\_id |  | C, E | Lookup | **Must be unique for a given reporting\_agency and catch\_year** |
|  |  |  |  |  | **Must not contain embedded blanks** |
|  |  |  |  |  |  |
| 6 | **Catch Year** | 4 | Yes | YYYY | Calendar year of landing |
|  | catch\_year |  | C, E |  | **Must be the same for all records in this dataset** |
|  | (see note, end of chapter) |  |  |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |
| 7 | **Period Type** | 2 | Yes | Lookup | Code to Indicate the type of time periods in which sampling occurred in the fishery / stratum; Must match one of the following: |
|  | period\_type |  | C, E | ’0’ | =Annual (calendar year) |
|  | (see note, end of chapter) |  |  | ’4’ | =Statistical month |
|  |  |  |  | ’5’ | =Calendar month |
|  |  |  |  | ’6’ | =Statistical week (beginning Monday) |
|  |  |  |  | ’7’ | =Week (beginning Sunday) |
|  |  |  |  |  |  |
| 8 | **Period** | 2 | Yes | Lookup | Indicates the complete range of time in which sampling occurred in the fishery / stratum; Possible Range: |
|  | period |  | C, E | n=’01’ | =Annual |
|  | (see note, end of chapter) |  |  | n=’01-12’ | =Statistical or calendar month |
|  |  |  |  | n=’01-54’ | =Statistical week (beginning Monday) |
|  |  |  |  | n=’01-54’ | =Week (beginning Sunday) |
|  |  |  |  |  |  |
| 9 | **Landing Status** | 1 | Yes | Lookup | Conditions under which the fish were harvested and landed; Must match one of the following: |
|  | landing\_status |  | C, E | ’1’ | =Standard |
|  | (see note, end of chapter) |  |  | ’2’ | =Test |
|  |  |  |  | ’3’ | =Seized |
|  |  |  |  | ’4’ | =Hatchery, cost recovery |
|  |  |  |  | ’5’ | =Hatchery, terminal area fishery |
|  |  |  |  | ’6’ | =Experimental |
|  |  |  |  | ’9’ | =Unspecified |
|  |  |  |  | ’U’ | =Unknown |
|  |  |  |  |  |  |
| 10 | **Catch Location Code** | 19 | Yes | Lookup | Hierarchical and geographical coding scheme to identify area of catch |
|  | catch\_location\_code |  | C, E |  | All location codes are standardized within a given State or Province, and coordinated by the State/Province |
|  |  |  |  |  | **Must exactly match the location\_code of location\_type ’2’ in the PSC Location file** |
|  |  |  |  |  | Trailing Blanks should not be included |
|  |  |  |  |  |  |
| 11 | **Harvest** | 1 | Yes | Lookup | Type of harvest; Must match one of the following: |
|  | harvest |  | C, E | ’1’ | =Commercial |
|  | (see note, end of chapter) |  |  | ’2’ | =Recreational – unspecified |
|  |  |  |  | ’3’ | =Recreational – charter |
|  |  |  |  | ’4’ | =Recreational – noncharter |
|  |  |  |  | ’5’ | =Subsistence, ceremonial, or personal use |
|  |  |  |  | ’U’ | =Unknown |
|  |  |  |  |  | Catch or effort from codes 2+3+4 equals total known recreational value |
|  |  |  |  |  |  |
| 12 | **Fisher** | 1 | Yes | Lookup | Native and/or treaty status of fish harvester; Must match one of the following: |
|  | fisher |  | C, E | ’1’ | =Native – treaty |
|  | (see note, end of chapter) |  |  | ’2’ | =Native – nontreaty |
|  |  |  |  | ’3’ | =Native – unspecified |
|  |  |  |  | ’4’ | =Non-native |
|  |  |  |  | ’9’ | =Unspecified |
|  |  |  |  | ’U’ | =Unknown |
|  |  |  |  |  | The sum of codes 1+2+3 equals total known native catch or effort |
|  |  |  |  |  |  |
| 13 | **Catch Gear Group** | 2 | Yes | Lookup | Collection of agency gears into major types |
|  | catch\_gear\_group |  | C, E |  | **Must match a code in the ‘Catch Gear Group’ column from Chapter 10** |
|  |  |  |  |  |  |
| 14 | **Catch Gear** | 2 | Yes | Lookup | Catch & Effort ‘Catch Gear’ code: specific to reporting agency |
|  | catch\_gear |  | C, E |  | **Must match a code in the ‘Catch Gear’ column from Chapter 10** |
|  | (see note, end of chapter) |  |  |  |  |
|  |  |  |  |  |  |
| 15 | **Species** | 2 | Yes | Lookup | Code indicating species of this catch group; If present, must match one of the following: |
|  | species |  | C | ’1’ | =Chinook |
|  |  |  |  | ’2’ | =Coho |
|  |  |  |  | ’3’ | =Steelhead |
|  |  |  |  | ’4’ | =Sockeye |
|  |  |  |  | ’5’ | =Chum |
|  |  |  |  | ’6’ | =Pink |
|  |  |  |  | ’7’ | =Masu |
|  |  |  |  | ’8’ | =Cutthroat |
|  |  |  |  | ’9’ | =Atlantic Salmon |
|  |  |  |  |  | **Must be absent if record\_code is ‘E’** |
|  |  |  |  |  |  |
| 16 | **Grade** | 1 | No | Lookup | Size or flesh-color of Chinook: If present, must match one of the following: |
|  | grade |  | C | ’S’ | =Small (1 - 3.6 kilograms) |
|  |  |  |  | ’M’ | =Medium (3.7 - 5.6 kilograms) |
|  |  |  |  | ’L’ | =Large (more than 5.6 kilograms) |
|  |  |  |  | ’J’ | =Jack |
|  |  |  |  | ’W’ | =White Chinook |
|  |  |  |  | ’9’ | =Unspecified |
|  |  |  |  |  | **Required if record\_code is ‘C’ and species is ‘1’** |
|  |  |  |  |  | **Must be absent if record\_code is ‘E’** |
|  |  |  |  |  |  |
| 17 | **Number Tickets** | 6 | No | Numeric | Number of tickets is absent if catch or effort data is not derived from the reporting agency’s master fish ticket file. |
|  | number\_tickets |  | C, E |  | For catch records, this is the count of tickets used to derive the catch data in this record. For effort records, |
|  |  |  |  |  | this is the count of tickets used to derive the effort data in this record |
|  |  |  |  |  | If present, must be numeric in the range: ’0’ through ’999999’ |
|  |  |  |  |  |  |
| 18 | **Catch Weight** | 9 | No | Numeric | Total round weight in kilograms. |
|  | catch\_weight |  | C |  | If present, must be numeric in the range ’1’ through ’999999999’ |
|  |  |  |  |  | **Required if record\_code is ‘C’ and harvest is ‘1’** |
|  |  |  |  |  | **Must be absent if record\_code is ‘E’** |
|  |  |  |  |  | catch\_weight or number\_caught must be greater than zero in each catch record |
|  |  |  |  |  |  |
| 19 | **Number Caught** | 8 | No | Numeric | Number of fish harvested; |
|  | number\_caught |  | C |  | If present, must be numeric in the range ’1’ through ’99999999’ |
|  |  |  |  |  | **Must be absent if record\_code is ‘E’** |
|  |  |  |  |  |  |
| 20 | **Effort Type** | 1 | No | Lookup | Type of effort corresponding to effort\_quantity. If present, must match one of the following: |
|  | effort\_type |  | E | ’A’ | =Angler days |
|  |  |  |  | ’B’ | =Boat days or permit days |
|  |  |  |  | ’C’ | =Boats (no. of distinct boats participating) |
|  |  |  |  | ’D’ | =Fishers (no. of distinct persons participating) |
|  |  |  |  | ’E’ | =Net days |
|  |  |  |  | ’F’ | =Boat trips |
|  |  |  |  |  | **Required if record\_code is ‘E’ and effort\_quantity is greater than zero;** |
|  |  |  |  |  | **Must be absent if record\_code is ‘C’** |
|  |  |  |  |  |  |
| 21 | **Effort Quantity** | 6 | Yes | Numeric | Number of effort units as defined by effort\_type |
|  | effort\_quantity |  | E |  | If present, Must be numeric in the range: ’0’ through ’999999’ |
|  |  |  |  |  | **Must be absent if record\_code is ‘C’** |
|  |  |  |  |  |  |
| **22** | **Adclip Selective Fishery** | 1 | No | Lookup | Flag to indicate whether this record came from a fishery where only adipose clipped fish were allowed to be harvested |
|  | Adclip\_selective\_fishery |  |  |  | **Required if Catch Year (field 8) > 2007** |
|  |  |  |  |  | Must match one of the following: |
|  |  |  |  | ‘S’ | =Yes /adclip selective fishery |
|  |  |  |  | ‘M’ | =Yes /mixed selective fishery (ad-clipped plus unclipped fish); see note below |
|  |  |  |  | ‘N’ | = Not selective |
|  |  |  |  |  | **Must have the value ‘S’ or ‘M’ if fishery is selective for ad-clips** |
|  |  |  |  |  |  |
| NOTE for adclip\_selective\_fishery ‘M’: Hatchery plus wild catch. For example: a bag limit of 1 unclipped fish and multiple clipped fish | | | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |
| Chapter NOTES:  For every catch stratum, a corresponding effort record is submitted, even if the optional effort statistics fields are missing. A catch stratum consists of the following fields: catch\_year, period\_type, period, landing\_status, catch\_location\_code, harvest, fisher and catch\_gear. | | | | | |

CHAPTER 6

Location Data

| PSC | PSC Common Name | Max | Reqd | Format / Use | **Description & Validation Rules.......................................................................................................................................** |
| --- | --- | --- | --- | --- | --- |
| Fld # | and Data Field Name | Cols |  |  |  |
| 1 | **Record Code** | 1 | Yes | Lookup | Code to indicate the CWT data file classification (class) of this individual record. Must have the value ’L’: |
|  | record\_code |  |  | ‘L’ | =Location record |
|  |  |  |  |  |  |
| 2 | **Format Version** | 4 | Yes | ’4.1’ | Format version used to report data |
|  | format\_version |  |  |  | **Must have the value: ’4.1’** |
|  |  |  |  |  |  |
| 3 | **Submission Date** | 8 | Yes | YYYYMMDD | Date of submission for this set of records. Date should be close to actual date when this row is sent to the Mark Center |
|  | submission\_date |  |  |  | **Must have the same value for all records in this data submission** |
|  |  |  |  |  | **Must match the submission\_date in corresponding Description file** |
|  |  |  |  |  |  |
| 4 | **Reporting Agency** | 10 | Yes | Lookup | Abbreviation for reporting agency of this dataset for this data exchange |
|  | reporting\_agency |  |  |  | **Must contain an agency code defined in chapter 8** |
|  |  |  |  |  | **Must be the same for all records** |
|  |  |  |  |  |  |
| 5 | **Location Code** | 19 | Yes | Primary Lookup | 19 – character code used to identify hatchery, release location, recovery site, catch area, or stock |
|  | location\_code |  |  |  | Coding based on hierarchical scheme to give multiple levels of resolution (see notes to follow) |
|  |  |  |  |  | All location codes are standardized within a given State or Province, and coordinated by the State/Province |
|  | see notes to follow |  |  |  | **Must be unique within a given location\_type** |
|  |  |  |  |  | Trailing Blanks should not be included |
|  |  |  |  |  |  |
|  | a. Level 0 | (1) |  |  | The first character must match one of the following: |
|  | State or Province |  |  | ’1’ | =Alaska |
|  |  |  |  | ’2’ | =British Columbia / Yukon |
|  |  |  |  | ’3’ | =Washington |
|  |  |  |  | ’4’ | =Idaho |
|  |  |  |  | ’5’ | =Oregon |
|  |  |  |  | ’6’ | =California |
|  |  |  |  | ’7’ | =High Seas |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |
|  | b. Level 1; Water Type | (1) |  |  | The second character must match one of the following: |
|  |  |  |  | ’M’ | =Marine |
|  |  |  |  | ’F’ | =Freshwater |
|  |  |  |  |  |  |
|  | c. Level 2; Sector | (1) |  | Alpha-Numeric | The third character (Sector) can be agency defined alpha-numeric text (Special case: use of asterisk; see note 3 to follow) |
|  |  |  |  |  |  |
|  | d. Level 3; Region | (2) |  | Alpha-Numeric | Characters 4 and 5 (Region) are agency defined alpha-numeric text |
|  |  |  |  |  |  |
|  | e. Level 4; Area | (4) |  | Alpha-Numeric | Characters 6 through 9 (Area) are agency defined alpha-numeric text |
|  |  |  |  |  |  |
|  | f. Level 5; Location | (7) |  | Alpha-Numeric | Characters 10 through 16 (Location) are agency defined alpha-numeric text |
|  |  |  |  |  |  |
|  | g. Level 6; Sub-Location | (3) |  | Alpha-Numeric | Characters 17 through 19 (Sub-Location) are agency defined alpha-numeric text |
|  |  |  |  |  |  |
| Notes for location\_code:  1) General usage of location codes - Standardized location codes are maintained for a State or Province by the State/Province fisheries agency. **These codes must be used by all other agencies within that jurisdiction.**  2) Reporting of location codes - When reporting a Location data set, report only those Location Codes for which your reporting agency is responsible. **Do not report codes maintained by another reporting agency.**  3) Usage of asterisk (’\*’) in character 3 (Sector) of location code  Use of the asterisk (’\*’) is restricted to only these situations:  a) If a code from the external State/Province cannot be provided due to sampling or timing problems;  b) If the location is in a foreign (i.e. non-North American) country—thus cannot be provided.  Wherever possible, use those codes already provided by the external State/Province.  **If an asterisk is used, then characters 1 and 2 of Description (field 13) must contain a state, province, high seas (HS), or foreign country (FO) code. See also Description (field 13) below.** | | | | | |
|  |  |  |  |  |  |
| 6 | **Location Type** | 1 | Yes | Primary Lookup | Type of geographic location referred to by location file reporting agency; Must match one of the following: |
|  | location\_type |  |  | ’1’ | =Recovery site |
|  |  |  |  | ’2’ | =Catch area or Effort area (code must match Recovery Site code at Estimation Level) |
|  |  |  |  | ’3’ | =Release facility (i.e., Hatchery, etc.) |
|  |  |  |  | ’4’ | =Release Location |
|  |  |  |  | ’5’ | =Stock |
|  |  |  |  |  |  |
| 7 | **Name** | 25 | Yes | Alpha-Numeric | Concise description of the location |
|  | name |  |  |  | Must be unique within: |
|  |  |  |  |  | 1) State or Province (i.e. level 0) of location\_code. |
|  |  |  |  |  | 2) location\_type |
|  |  |  |  |  |  |
| 8 | **Latitude** | 8 | No | Numeric | Decimal global latitude of the location\_code |
|  | latitude |  |  |  | These fields must both have values or must both be absent: |
|  |  |  |  |  | Latitude |
|  |  |  |  |  | Longitude |
|  |  |  |  |  | If present, must be numeric decimal in the range: ’0’ through ’90’ |
|  |  |  |  |  | No implied decimal. Decimal optional with up to 4 digits after the decimal point |
|  |  |  |  |  |  |
| 9 | **Longitude** | 9 | No | Numeric | Decimal global longitude of the location\_code |
|  | longitude |  |  |  | Use ’-’ to identify Western hemisphere. (Ex. ‘-123.557’) |
|  |  |  |  |  | These fields must both have values or must both be absent: |
|  |  |  |  |  | Latitude |
|  |  |  |  |  | Longitude |
|  |  |  |  |  | If present, must be numeric decimal in the range: ’-179.9999’ through ’180’ |
|  |  |  |  |  | No implied decimal. Decimal optional with up to 4 digits after the decimal point |
|  |  |  |  |  |  |
| 10 | **PSC Basin** | 5 | No | Lookup | The geographic basin or district corresponding to at least one sub-division within the given psc\_region which encompasses the |
|  | psc\_basin |  |  |  | location given by location\_code (see note to follow) |
|  |  |  |  |  | If present, must contain a code defined in chapter 13 |
|  |  |  |  |  |  |
| 11 | **PSC Region** | 5 | No | Lookup | The geographic region or area corresponding to a major river, coastal area, or passage within the State or Province |
|  | psc\_region |  |  |  | which encompasses the location given by location\_code (see note to follow) |
|  |  |  |  |  | If present, must contain a code defined in chapter 13 |
|  |  |  |  |  |  |
| Note for psc\_basin and psc\_region:  PSC Region Code and PSC Basin Code are currently specified only for Hatcheries, Release Locations, and Stocks (i.e. where location\_type is ’3’, ’4’, ’5’). PSC Region Code and PSC Basin Code are defined in chapter 13. | | | | | |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| 12 | **EPA Reach** | 18 | No | Alpha-Numeric | For USA Territories (see note to follow); |
|  | epa\_reach |  |  |  | **Must not contain embedded blanks** |
|  |  |  |  |  |  |
| Note for epa\_reach:  EPA Reach pertains to any location\_codes of any location\_type which can be associated with a freshwater transport or shoreline EPA Reach Number. When provided, epa\_reach should be assigned either the complete (17-character) EPA Reach Number or the most specific portion of the EPA Reach Number possible to describe the location. See explanation in chapter 13. | | | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |
| 13 | **Description** | 100 | Yes | Alpha-Numeric | Name of location plus appropriate description as needed |
|  | description |  |  |  | If level 2 (column 3) of location\_code contains an asterisk (’\*’), then this |
|  |  |  |  |  | description must begin with one of the following 2-character abbreviations indicating actual origin. In such cases, this State or Province must be different than that coded in level 0 of the Location Code |
|  |  |  |  | ’AK’ | = Alaska |
|  |  |  |  | ’BC’ | = British Columbia |
|  |  |  |  | ’CA’ | = California |
|  |  |  |  | ’CO’ | = Colorado |
|  |  |  |  | ’FO’ | = Foreign |
|  |  |  |  | ’HS’ | = High Seas |
|  |  |  |  | ’ID’ | = Idaho |
|  |  |  |  | ’OR’ | = Oregon |
|  |  |  |  | ’WA’ | = Washington |
|  |  |  |  | ’MN’ | = Minnesota |
|  |  |  |  | ’MT’ | = Montana |
|  |  |  |  | ’ND’ | = North Dakota |
|  |  |  |  | ’NE’ | = Nebraska |
|  |  |  |  | ’WI’ | = Wisconsin |
|  |  |  |  | ’WY’ | = Wyoming |
|  |  |  |  |  |  |

CHAPTER 7

Description Data

| PSC | PSC Common Name | Max | Reqd | | Format / Use | **Description & Validation Rules.......................................................................................................................................** |
| --- | --- | --- | --- | --- | --- | --- |
| Fld # | and Data Field Name | Cols |  | |  |  |
| 1 | **Record Code** | 1 | Yes | | Lookup | Code to indicate the CWT data file classification (class) of this individual record. Must have the value ‘D’: |
|  | record\_code |  |  | | ’D’ | =Description record |
|  |  |  |  | |  |  |
| 2 | **Format Version** | 4 | Yes | | ’4.1’ | Format version used to report data |
|  | format\_version |  |  | |  | **Must have the value: ’4.1’** |
|  |  |  |  | |  |  |
| 3 | **Submission Date** | 8 | Yes | | YYYYMMDD | Refers to the date the Reporting Agency submitted the corresponding (or attached) data file or set of records indicated in file\_type |
|  | submission\_date |  |  | |  | **Must have the same value for all rows corresponding to the same file\_type** |
|  |  |  |  | |  | **Must be greater than submission\_date of previously submitted Description file for the given file\_type** |
|  |  |  |  | |  | **Must not be greater than today** |
|  |  |  |  | |  |  |
| 4 | **Reporting Agency** | 10 | Yes | | Lookup | Abbreviation for reporting agency of this dataset for this data exchange |
|  | reporting\_agency |  |  | |  | **Must contain an agency code defined in chapter 8** |
|  |  |  |  | |  | **Must be the same for all records** |
|  |  |  |  | |  |  |
| 5 | **Submission Status** | 1 | Yes | | Lookup | Must match one of the following |
|  | submission\_status |  |  | | ‘N’ | =New data file |
|  |  |  |  | | ‘R’ | =Resubmitted data file |
|  |  |  |  | |  |  |
| 6 | **File Type** | 2 | Yes | | Primary | Type of data file to which description pertains; Must match one of the following: |
|  | file\_type |  |  | | Lookup |  |
|  |  |  |  | | ’RL’ | =Release (tagged and/or untagged) |
|  |  |  |  | | ’RC’ | =Recovery |
|  |  |  |  | | ’CE’ | =Catch & Effort |
|  |  |  |  | | ’CS’ | =Catch/Sample |
|  |  |  |  | | ’LC’ | =Location |
|  |  |  |  | |  |  |
| 7 | **File Status** | 1 | Yes | | Lookup | Must match one of the following |
|  | file\_status |  |  | | ‘I’ | =Incomplete data file |
|  |  |  |  | | ‘C’ | =Complete data file |
|  |  |  |  | |  |  |
| 8 | **First Year** | 4 | No | | YYYY | If file\_type is ’RC’, ’CE’ or ’CS’, then this field can be used to specify the first year in a range of file years so that one |
|  | first\_year |  |  | |  | description can be repeated for several years |
|  |  |  |  | |  | **Required if File Type Code is ’RC’, ’CE’ or ’CS’** |
|  |  |  |  | |  | YYYY must contain run\_year if File Type is ’RC’ |
|  |  |  |  | |  | or catch\_year if File Type is ’CS’ |
|  |  |  |  | |  | or catch\_effort\_year if File Type is ’CE’ |
|  |  |  |  | |  | **Must be absent if file\_type is ’LC’ or ’RL’** |
|  |  |  |  | |  |  |
| 9 | **Last Year** | 4 | No | | YYYY | If file type is ’RC’, ’CE’ or ‘CS’, then this field can be used to specify the last year in a range of file years so that one |
|  | last\_year |  |  | |  | description can be repeated for several years (see note to follow) |
|  |  |  |  | |  | Used only if: |
|  |  |  |  | |  | 1) file\_type is ‘RC’, ’CE’ or ‘CS’ |
|  |  |  |  | |  | AND 2) Multiple and consecutive file years are reported with the same description |
|  |  |  |  | |  | Use same format as first\_year |
|  |  |  |  | |  | **Must be absent if file\_type is ’LC’ or ’RL’** |
|  |  |  |  | |  |  |
| Note for file\_end\_year:  In order to submit one description pertaining to multiple file years, the file years must be consecutive. If there are any gaps in file years then a new Data Description {set of rows of the given file\_type} must be submitted for every non-consecutive file year. | | | | | | |
|  |  |  |  |  | |  |
| 10 | **Description** | 2,000 | Yes | Alpha-Numeric | | Textual description to further explain meaning of data for a file\_type and one consecutive span of file years |
|  | description |  |  |  | | May contain up to 2,000 characters |
|  |  |  |  |  | |  |

CHAPTER 8

AGENCY CODING

1. Release Agency

Field: Release Agency

File: Releases

Current as of: June, 2014

Authorized: PSC Working Group on Data Standards

Release Agency must match one of these:

AAC American Aquaculture Corporation (AK)

AAI Alaska Aquaculture, Inc

ADFG Alaska Department of Fish and Game

AFSP Aboriginal Fishery Strategy Program (BC)

AKI Armstrong Keta, Inc. (AK)

ANAD Anadromous Inc. (OR)

ASLC Alaska SeaLife Center

BCFW British Columbia Fish and Wildlife

BHSR Burnt Hill Salmon Ranch (now OPSR) (OR)

BURR Burro Creek Hatchery

CDFO Department of Fisheries and Oceans, Canada

CDFR Department of Fisheries and Oceans, Canada - Research

CDFW California Department of Fish and Wildlife

CDFWKT California Department of Fish and Wildlife Klamath/Trinity

CDWR California Department of Water Resources

CEDC Clatsop Economic Development Council (OR)

CERA Ceratodus Fisheries (OR)

CHEH Chehalis Tribe (WA)

CIAA Cook Inlet Aquaculture Association (AK)

COLV Colville Tribe (WA)

COOP Washington Department of Fisheries – Cooperative

CRFC Columbia River Inter-Tribal Fish Commission

CTWS Confederated Tribes of Warm Springs of Oregon (OR)

CVTC Chickaloon Village Trad Council (AK)

DIPC Douglas Island Pink and Chum, Inc. (AK)

DOMS Domsea Farms, Inc. (OR-WA)

EBMUD East Bay Municipal Utilities District (CA)

EDUC Educational Facility (excluding UW) (WA)

ELWA Lower Elwha Klallam Tribe (WA)

ESRP Eel River Salmon Restoration Project (CA)

FWS U.S. Fish and Wildlife Service

H&H Harris & Hugie Company (OR)

HECK C.W. Heckard Company (OR)

HFAC Humbolt Fish Action Council (CA)

HOH Hoh Tribe (WA)

HSU Humboldt State University (CA)

HVT Hoopa Valley Tribe (CA)

IDFG Idaho Department of Fish and Game

JAME Jamestown S’Klallam Tribe (WA)

KAKE Kake Non-Profit Fisheries Corp. (AK)

KETA Keta Company (OR)

KRAA Kodiak Regional Aquaculture Association (AK)

KRHI Klawock River Hatchery, Inc. (AK)

KRUK Karuk Tribe (CA)

KTHC Ketchikan Tribal Hatchery Corporation (AK)

LUMM Lummi Tribe (WA)

MAKA Makah Tribe (WA)

MIC Metlakatla Indian Community (AK)

MTSG Mattole Salmon Group (CA)

MUCK Muckleshoot Tribe (WA)

NBS National Biological Survey

NERK Nerka Incorporated (AK)

NEZP Nez Perce Tribe (ID)

NFA Nome Fishermen’s Association

NISQ Nisqually Tribe (WA)

NLNS Nehalem Land & Salmon (OR)

NMFS National Marine Fisheries Service (AK)

NOOK Nooksack Tribe (WA)

NSED Norton sound Development Corp (AK)

NSRA Northern Southeast Regional Aquaculture Assn. (AK)

OAF Oregon Aquafoods, Inc.

ODFW Oregon Department of Fish and Wildlife

OPSR Oregon-Pacific Salmon Ranch (formerly BHSR)

OSU Oregon State University

PGAM Port Gamble S'Klallam Tribe (WA)

PGHC Port Graham Hatchery Corporation (AK)

PLCO Pacific Lumber Company (CA)

PNPT Point No Point Treaty Council (WA)

PPWR Puget Power (WA)

PSE Puget Sound Energy (WA)

PUYA Puyallup Tribe (WA)

PWHA Prince of Wales Hatchery Association (AK)

PWSA Prince William Sound Aquaculture Corporation (AK)

QDNR Quinault Department of Natural Resources (WA)

QUIL Quileute Tribe (WA)

RMPC Regional Mark Processing Center

ROWH Rowdy Cr. Hatchery (CA)

SHOL Shoalwater Tribe (WA)

SIUF Siuslaw Fisheries (OR)

SJ Sheldon Jackson College (AK)

SJRG San Joaquin River Group (CA)

SKOK Skokomish Tribe (WA)

SOF Silverking Oceanic Farms (CA)

SPOK Spokane Tribe (WA)

SQAX Squaxin Island Tribe (WA)

SRKC Smith River Kiwanis Club

SSC Skagit System Cooperative (WA)

SSRA Southern Southeast Regional Aquaculture Assn. (AK)

SSSC Sitka sound Science Center (AK)

STIL Stillaguamish Tribe (WA)

SUQ Suquamish Tribe (WA)

SYCL South Yuba River Citizens League (CA)

THCC Tlingit-Haida Central Council (AK)

TULA Tulalip Tribe (WA)

TYEE Tyee Foundation (CA)

UA University of Alaska

UI University of Idaho

UPSK Upper Skagit Tribe

USACE U.S. Army Corps of Engineers

USFS U.S. Forest Service

UW College of Fisheries, University of Washington

VFDA Valdez Fisheries Development Association (AK)

WDFW Washington Department of Fish and Wildlife

WREG Washington Regional Enhancement Groups

YAKA Yakama Nation (WA)

1. Reporting Agency

Field: Reporting Agency

Files: Releases, Recoveries & Catch/Sample

Current as of: June, 2014

Authorized: PSC Working Group on Data Standards

Reporting Agency must match one of these:

ADFG Alaska Department of Fish and Game

CDFO Department of Fisheries and Oceans, Canada

CDFW California Department of Fish and Wildlife

CDFWKT California Department of Fish and Wildlife Klamath/Trinity

COLV Colville Tribe (WA)

CRFC Columbia River Inter-Tribal Fish Commission

FWS U.S. Fish and Wildlife Service

IDFG Idaho Department of Fish and Game

NEZP Nez Perce Tribe (ID)

NIFC Northwest Indian Fisheries Commission

NMFS National Marine Fisheries Service (AK)

NMFSNWR National Marine Fisheries Service NW Region (OR, WA)

ODFW Oregon Department of Fish and Wildlife

QDNR Quinault Department of Natural Resources (WA)

QUIL Quileute Tribe (WA)

RMPC Regional Mark Processing Center

STIL Stillaguamish Tribe (WA)

WDFW Washington Department of Fish and Wildlife

YAKA Yakama Nation (WA)

YTFP Yurok Tribe Fisheries Program (CA)

1. Sampling Agency

Field: Sampling Agency

Files: Recoveries & Catch/Sample

Current as of: June, 2014

Authorized: PSC Working Group on Data Standards

Sampling Agency must match one of these:

ADFG Alaska Department of Fish and Game

AFSC Alaska Fisheries Science Center – NMFS (WA, AK)

BCFW British Columbia Fish and Wildlife

CDFO Department of Fisheries and Oceans, Canada

CDFW California Department of Fish and Wildlife

CDFWKT California Department of Fish and Wildlife Klamath/Trinity

CDWR California Department of Water Resources

COLV Colville Tribe (WA)

EBMUD East Bay Municipal Utilities District (CA)

ELWA Lower Elwha Klallam Tribe (WA)

FWS U.S. Fish and Wildlife Service

HOH Hoh Tribe (WA)

HVT Hoopa Valley Tribe (CA)

IDFG Idaho Department of Fish and Game

LUMM Lummi Tribe (WA)

MAKA Makah Tribe (WA)

MUCK Muckleshoot Tribe (WA)

NEZP Nez Perce Tribe (ID)

NIFC Northwest Indian Fisheries Commission

NISQ Nisqually Tribe (WA)

NMFS National Marine Fisheries Service (AK)

NMFSNWR National Marine Fisheries Service NW Region (OR, WA)

NWFSC NMFS NW Fisheries Science Center (WA)

NWR NMFS NW Region (OR)

ODFW Oregon Department of Fish and Wildlife

PGAM Port Gamble S'Klallam Tribe (WA)

PNPT Point No Point Treaty Council (WA)

PUYA Puyallup Tribe (WA)

QDNR Quinault Department of Natural Resources (WA)

QUIL Quileute Tribe (WA)

RMPC Regional Mark Processing Center

SBT Shoshone Bannock Tribes (ID)

SHOL Shoalwater Tribe (WA)

SKOK Skokomish Tribe (WA)

SPOK Spokane Tribe (WA)

SQAX Squaxin Island Tribe (WA)

SSC Skagit System Cooperative (WA)

SSSC Sitka Sound Science Center (AK)

STIL Stillaguamish Tribe (WA)

SUQ Suquamish Tribe (WA)

TULA Tulalip Tribe (WA)

UW College of Fisheries, University of Washington

WDFW Washington Department of Fish and Wildlife

YAKA Yakama Nation (WA)

YCWA Yuba County Water Agency (CA)

YTFP Yurok Tribe Fisheries Program (CA)

CHAPTER 9

FISHERY CODING

1. Overview

Fishery Groups Gear

10-19 Troll

20-29 Net and Seine

30-39 Aboriginal

40-49 Sport

50-59 Escapement

60-69 Test Fisheries

70-79 Juvenile Sampling

80-89 High Seas

90-99 Miscellaneous

1. Detailed Coding

’10’ Series: Troll

Fishery Fishery Name Agency Fishery or Gear Fishery or Gear Name

10 Ocean Troll (Non-treaty) ADFG 11\_5 Traditional Troll

CDFW 00 Commercial Troll

CDFO 30 Troll General

1. Troll – Freezer Boat
2. Troll – Day Boat
3. Troll – Ice Boat

ODFW 10 Ocean Troll

WDFW 41 Troll (Non-treaty)

11 Ocean Troll - Day Boat ADFG 13\_5 Spring Troll Fishery

CDFO 32 Troll - Day Boat

WDFW 41 Troll (Non-treaty)

12 Ocean Troll - Trip WDFW 41 Troll (Non-treaty)

13 Ocean Troll - Freezer Boat CDFO 31 Troll – Freezer Boat

14 Ocean Troll - Ice Boat CDFO 33 Troll – Ice Boat

15 Treaty Troll WDFW 10 Hook & Line

40 Treaty Troll

16 Terminal Troll ADFG 12\_5 Terminal Area Troll

NMFS (AK) 73 Terminal Troll

17 Non-treaty / Treaty Troll WDFW 40 Treaty Troll

41 Troll (Non-treaty)

18 Aboriginal Troll ADFG 17\_5 M.I.C. Troll

CDFO 30 Troll – General

31 Troll – Freezer Boat

32 Troll – Day Boat

33 Troll – Ice Boat

19 Other

’20’ Series: Net and Seine

Fishery Fishery Name Agency Fishery or Gear Fishery or Gear Name

20 Ocean Gillnet (Non-treaty) ADFG 11\_3 Traditional Drift Gillnet

CDFO 10 Gillnet

13 Drift Net

15 Mixed Net

21 Columbia River Gillnet ODFW 13 Columbia River Gillnet

WDFW 11 Dip Bag Net

14 Non-treaty Drift Gillnet

16 Set Gillnet

17 Treaty Drift Gillnet

49 Mixed Gillnet

22 Coastal Gillnet ADFG 12\_3 Terminal Area Drift Gillnet FWS 16 Coastal Net

QDNR 16 Coastal Net

WDFW 14 Non-treaty Drift Gillnet

16 Set Gillnet

17 Treaty Drift Gillnet

49 Mixed Gillnet

23 Mixed Net and Seine ADFG 11\_2 Traditional Beach Seine

CDFO 10 Gillnet

11 Set Net

12 Dip Net

13 Drift Net

1. Mixed Net

20 Seine

70 Beach Seine

ODFW 38 Columbia Commercial Beach Seine

WDFW 10 Hook & Line

11 Dip Bag Net

12 Beach Seine

1. Non-treaty Drift Gillnet
2. Round Haul Net

16 Set Gillnet

17 Treaty Drift Gillnet

19 Non-treaty Purse Seine

20 Reef Net

29 Treaty Purse Seine

49 Mixed Gillnet

51 Treaty Trap

52 Mixed Net

24 Freshwater Net ADFG 11\_8 Traditional Fish Wheel

CDFO 45 Freshwater Net (mixed)

NIFC 16 Set Gillnet

QUIL 16 Set Gillnet

QUIL 24 Freshwater Net (mixed)

WDFW 10 Hook & Line

11 Dip Bag Net

12 Beach Seine

14 Non-treaty Drift Gillnet

16 Set Gillnet

17 Treaty Drift Gillnet

19 Non-treaty Purse Seine

29 Treaty Purse Seine

52 Mixed Net

YTFP YS Yurok Set Net

25 Commercial Seine ADFG 11\_1 Traditional Purse Seine

CDFO 20 Seine

NMFS 11\_1 Traditional Purse Seine

26 Terminal Seine ADFG 12\_1 Terminal Area Purse Seine

NMFS (AK) 77 Terminal Seine

27 Freshwater Seine ODFW 36 River Seine (non-Columbia)

28 Other Net ADFG 11\_4 Traditional Set Gillnet

29 Other Seine ODFW 29 Willamette Falls Fishway Jack Sampling

’30’ Series: Aboriginal

Fishery Fishery Name Agency Fishery or Gear Fishery or Gear Name

30 Aboriginal Seine ADFG 17\_1 M.I.C. Purse Seine

31 Aboriginal Gillnet ADFG 17\_3 M.I.C. Drift Gillnet

CDFO 10 Gillnet

32 Aboriginal Mixed Net CDFO 00 Unspecified Net

10 Gillnet

11 Set Net

13 Drift Net

15 Mixed Net

70 Beach Seine

33 Aboriginal Subsistence Net    YTFP YD Yurok Drift Gillnet

YP Yurok Dip Net

YS Yurok Set Net

34 Aboriginal Angler YTFP YA Yurok Angler

39 Other Aboriginal CDFO 00 Unspecified Gear

07 Rod and Reel

10 Gillnet

11 Set Net

70 Beach Seine

85 Spear

YTFP YA Yurok Angler

YTFP YD Yurok Drift Gillnet

YTFP YO Yurok Other/Unknown

YTFP YP Yurok Dip Net

YTFP YS Yurok Set Net

’40’ Series: Sport

Fishery Fishery Name Agency Fishery or Gear Fishery or Gear Name

40 Ocean Sport ADFG S1\_N Marine Sport (DE,DT,MB,MR,MS)

CDFO 07 Rod and Reel

CDFW 03 Sport

NMFS S1\_N Marine Sport

ODFW 11 Ocean Sport

WDFW 95 Marine Sport

41 Sport (Charter) CDFW 01 Sport - Charter

WDFW 95 Marine Sport

42 Sport (Private) CDFW 02 Sport - Skiff

WDFW 95 Marine Sport

43 Sport (Jetty) WDFW 95 Marine Sport

44 Columbia River Sport ODFW 12 Columbia River Sport

45 Estuary Sport ODFW 32 Estuary Sport

WDFW 95 Marine Sport

46 Freshwater Sport ADFG S2\_N Freshwater Sport (FF)

CDFO 07 Rod and Reel

47 Freshwater Sport

FWS 51 Creel Survey

ODFW 14 Spring Sport

26 Deschutes River Sport

27 Freshwater Sport

1. Mid-Columbia River Sport
2. Salmon River Sport

44 Multnomah Channel Sport

47 Elk River Sport

48 Chetco River Sport

49 Siuslaw River Sport

WDFW 96 Freshwater Sport

47 Freshwater Sport Snag WDFW 97 Freshwater Sport Snagging

48 Terminal Sport ADFG S3\_N Terminal Sport (TF)

NMFS (AK) 76 Terminal Sport

49 Other ADFG P\_N Personal Use

’50’ Series: Escapement

Fishery Fishery Name Agency Fishery or Gear Fishery or Gear Name

50 Hatchery ADFG H\_N Hatchery Returns

R\_N Rack Returns

CDFO 40 Hatchery Rack

CDFW 50 Hatchery

FWS 50 Hatchery Returns

NEZP 50 Escapement

NIFC 50 Escapement

NMFS 50 Hatchery Returns

ODFW 21 ODFW Hatcheries

22 Other Oregon Hatcheries

23 Oregon Private hatcheries

WDFW 01 Hatchery

04 Fish Trap

51 Fish Screens CDFG 51 Fish Screen

52 Fish Trap (Freshwater) CDFO 42 Trap

CDFW 52 Fish Trap

NIFC 52 Fish Trap

NMFS 52 Fish Trap

ODFW 24 Fish Trap

WDFW 03 Spawning Ground

04 Fish Trap

53 Wild Broodstock Collection (formerly Gaff) CDFO 43 Wild Broodstock Collection

NIFC 53 Brood Stocking

QUIL 53 Brood Stocking

STIL 53 Brood Stocking

WDFW 02 Wild Broodstock Collection

54 Spawning Ground ADFG E\_N Escapement Survey

CDFO 41 Spawning Ground

CDFW 54 Spawning Ground

FWS 54 Spawning Ground

NEZP 54 Spawning Ground

NIFC 54 Spawning Ground

NMFS 54 Spawning Ground

ODFW 18 Spawning Ground Survey

QUIL 54 Spawning Ground

STIL 54 Spawning Ground

WDFW 02 Wild Broodstock Collection

03 Spawning Ground

04 Fish Trap

55 Treaty Ceremonial ODFW 16 Ceremonial

STIL 55 Treaty Drift Gillnet

56 Treaty Subsistence ADFG U\_N Subsistence

ODFW 20 Subsistence

WDFW 17 Treaty Drift Gillnet

57 Mixed Wild Broodstock and Hatchery Returns WDFW 02 Wild Broodstock Collection

59 Other ODFW 39 Salmon River Combined Escapement

’60’ Series: Test Fisheries

Fishery Fishery Name Agency Fishery or Gear Fishery or Gear Name

60 Test Fishery Troll

61 Test Fishery Net ODFW 15 Columbia River Test

WDFW 14 Non-treaty Drift Gillnet

WDFW 16 Set Gillnet

62 Test Fishery Seine WDFW 19 Non-treaty Purse Seine

29 Treaty Purse Seine

63 Test Fishery Trap

64 Test Fishery Unknown Multiple Gear ADFG 41\_N Test Fish Run Strength

42\_N Test Fish Special Study

43\_N Test Fish Long Term Assessment

ODFW 45 Test Fishery Unknown

65 Dead Fish Survey ODFW 46 Dead Fish Survey (Lower Willamette Spawn)

65 Dead Fish Survey

69 Other ODFW 37 Test Fishery Recreational Bay

’70’ Series: Juvenile Sampling

Fishery Fishery Name Agency Fishery or Gear Fishery or Gear Name

70 Juvenile Sampling - Troll (Marine) NMFS (AK) 05 Juvenile Sampling - Troll

71 Juvenile Sampling - Gillnet (Marine) NMFS (AK) 04 Juvenile Sampling - Gillnet

72 Juvenile Sampling - Seine (Marine) NMFS (AK) 12 Juvenile Sampling - Seine

NMFS (CR) O Out-migrant Sampling - Ocean

ODFW 19 OSU Experimental Ocean Purse Seine

WDFW 12 Juvenile Sampling - Seine

73 Juvenile Sampling - Seine (Freshwater) NMFS (CR) C Out-migrant Sampling - Columbia River

S Out-migrant Sampling - Snake river

ODFW 28 Juvenile Sampling – Freshwater

74 Juvenile Sampling –Trawl (Marine) NMFS (AK) 74 Juvenile Sampling – Trawl

79 Other ADFG J\_N Juvenile

WDFW 32 Otter Trawl

’80’ Series: High Seas

Fishery Fishery Name Agency Fishery or Gear Fishery or Gear Name

80 Hake Trawl Fishery, At Sea component NMFS (AK) 802 At Sea Midwater Trawl Bycatch

(CA/OR/WA) ODFW 34 NMFS High Seas Trawl Bycatch

800 Hake Trawl Fishery, Shoreside component NMFS 800 Shoreside Midwater Trawl Bycatch

(OR/WA)

802 Limited-Entry Rockfish Trawl (CA/OR/WA) NMFS (AK) 802 At-Sea Midwater Trawl Bycatch

1. Limited-Entry Non-Hake Groundfish Trawl NMFS (AK) 803 At-Sea Bottom Trawl Bycatch

(CA/OR/WA)

804 Limited-Entry Sablefish Fixed Gear (CA/OR/WA) NMFS (AK) 804 Sablefish Fixed Gear Bycatch

805 State-Permitted Nearshore Groundfish Fishery NMFS (AK) 805 Nearshore Groundfish Fixed Gear Bycatch

(CA/OR) 806 Nearshore Groundfish Trawl Bycatch

81 Groundfish Observer (Gulf of Alaska) NMFS (AK) 801 Trawl Bycatch

813 Salmon Excluder Device Trawl Bycatch

812 Rockfish Fishery (Gulf of Alaska) NMFS (AK) 801 Trawl Bycatch

82 Groundfish Observer (Bering Sea/Aleutians) NMFS (AK) 801 At-Sea Trawl Bycatch

83 Foreign Research Vessels NMFS (AK) 831 Research Gillnet

1. Research Longline
2. Research Trawl
3. Research Squid Driftnet
4. Research Squid Gillnet

84 Foreign Mothership Vessels NMFS (AK) 841 Salmon Gillnet

842 Research Gillnet

85 Ocean Trawl By-Catch ODFW 30 Ocean Trawl Bycatch

33 Pacific High Seas

34 Pacific Hake Bycatch

WDFW 32 Ocean Trawl

87 Squid Gillnet By-Catch NMFS (AK) 87 Squid Gillnet Bycatch

88 Juvenile Sampling NMFS (AK) 74 Juvenile Sampling - Trawl

89 Other

’90’ Series: Miscellaneous

Fishery Fishery Name Agency Fishery or Gear Fishery or Gear Name

90 Multiple Gear ADFG 1\_N Multiple Fisheries

1\_1 Multiple Fisheries Seine

1\_3 Multiple Fisheries Gillnet

1\_5 Multiple Fisheries Troll

3\_N Miscellaneous Multiple Fisheries

4\_N Test Fishery

11\_N Traditional Multiple/Unknown Gear

12\_N Terminal Area Multiple/Unknown Gear

17\_N Aboriginal Multiple/Unknown Gear

CDFO 15 Mixed Net

30 Troll

33 Troll – Ice Boat

91 PNP Cost Recovery ADFG 2\_N Hatchery Miscellaneous

21\_N PNP Hatchery Cost Recovery

22\_N PNP Hatchery Carcasses

23\_N State Hatchery Cost Recovery

24\_N State Hatchery Carcasses

27\_N PNP Hatchery Donated

28\_N State Hatchery Donated

NMFS 21\_N Hatchery Miscellaneous

92 Columbia River Shad ODFW 17 Columbia River Shad

93 Set-Line (Sturgeon) ODFW 31 Columbia River Set Line (Sturgeon)

94 Fish Trap (Marine) ADFG 11\_0 Traditional Trap

17\_0 M.I.C. Trap

95 Confiscated ADFG 18\_1 Confiscated Purse Seine

18\_3 Confiscated Drift Gillnet

18\_4 Confiscated Set Gillnet

18\_5 Confiscated Troll

18\_8 Confiscated Fish Wheel

99 Other ADFG 31\_N Derby Sale

33\_N Discarded Catch

34\_N Oil Spill Victim

35\_N Education Permit

36\_N NMFS Foodbank

37\_N Donated Catch

O\_N Other

CDFO 07 Sport

CHAPTER 10

CATCH EFFORT GEAR CODES

Catch Gear Group Catch Gear Group Name Agency Catch Gear Catch Gear Name

10 Troll ADFG 05 Hand Troll

CDFO 30 Salmon Troll

31 Salmon Troll Freezer

NMFS (AK) 73 Terminal Troll

ODFW 12 Ocean Troll

WDFW 10 Hook & Line (Juan de Fuca only)

41 Troll

20 Gill Net ADFG 03 Drift Gill Net

04 Set Gill Net

CDFO 10 Gill Net

11 Other Net

13 Drift Net

ODFW 21 Columbia River Gill Net

23 Columbia River Set Net

WDFW 14 Drift Gill Net

16 Set Gill Net

25 Seine ADFG 01 Purse Seine

02 Beach Seine

CDFO 20 Purse Seine

70 Beach Seine

NMFS (AK) 77 Terminal Seine

WDFW 12 Beach Seine

19 Purse Seine

28 Other Net ADFG 13 Dip Net

CDFO 14 Drag Net/Bag Net (Indian)

16 Mixed or Unspecified

ODFW 24 Dip Net

WDFW 05 Pole Net

11 Dip Bag Net

15 Round Haul Net

20 Reef Net

40 Sport ADFG 20 Sport

CDFO 07 Ocean Sport

47 Freshwater Sport

NMFS (AK) 76 Terminal Sport

ODFW 11 Ocean Sport

27 Freshwater Sport (for recreational catch)

32 Estuary Sport

WDFW 95 Marine Sport

96 Freshwater Sport

97 Freshwater Sport Snag

85 Trawl NMFS (AK) 80 Groundfish Observer (CA/OR/WA)

81 Groundfish Observer (Gulf of Alaska)

82 Groundfish Observer (Bering Sea/Aleutians)

86 Land Based Salmon

87 Squid Gill Net By-Catch

90 Japanese Research Vessel

91 Japanese Mother Ship

ODFW 30 Ocean Trawl By-Catch

33 Pacific High Seas

WDFW 32 Otter Trawl

34 Midwater Trawl

94 Trap ADFG 00 Trap

WDFW 51 Treaty Trap

95 Hand Held ADFG 12 Hand Picked/Diving

CDFO 41 Jigging (Indian)

83 Gaff

85 Spear/Arrow/Harpoon

ODFW 27 Hook & Line

WDFW 02 Gaff

10 Hook & Line (Outside Juan de Fuca)

42 Handline

99 Other ADFG 99 Unknown

CDFO 00 Unknown

CHAPTER 11

MARK CODING

Mark Codes for Special Cases

0000 No Adclip + No other external marks

0009 No Adclip + Unknown or unspecified other marks

5000 Adclip + No other external marks

5009 Adclip + Unknown or unspecified other marks

9000 Adipose Clip Unknown + No other external marks

9009 Adipose Clip Unknown + Totally Unknown other external marks

9205 Adipose Clip Unknown + Elastomer Injection Left Eye Red

9nnn Adipose Clip Unknown but other external marks present

(nnn – appropriate 3 digit code indicating other marks)

Non-Adipose Adipose

Mark Code Mark Description Mark Code Mark Description

0001 No Adclip + Left Ventral 5001 Adclip + Left Ventral

0002 No Adclip + Right Ventral 5002 Adclip + Right Ventral

0050 No Adclip + Left Ventral Right Ventral 5050 Adclip + Left Ventral Right Ventral

0051 No Adclip + Left Ventral Left Pectoral 5051 Adclip + Left Ventral Left Pectoral

0052 No Adclip + Left Ventral Right Pectoral 5052 Adclip + Left Ventral Right Pectoral

0053 No Adclip + Left Ventral Left Maxillary 5053 Adclip + Left Ventral Left Maxillary

0054 No Adclip + Left Ventral Right Ventral Left Maxillary 5054 Adclip + Left Ventral Right Ventral Left Maxillary

0055 No Adclip + Left Ventral Right Ventral Right Maxillary 5055 Adclip + Left Ventral Right Ventral Right Maxillary

0056 No Adclip + Left Ventral Right Maxillary 5056 Adclip + Left Ventral Right Maxillary

0057 No Adclip + Left Ventral Dorsal 5057 Adclip + Left Ventral Dorsal

0058 No Adclip + Left Ventral Anal 5058 Adclip + Left Ventral Anal

0059 No Adclip + Left Ventral Caudal 5059 Adclip + Left Ventral Caudal

0060 No Adclip + Left Ventral Freeze Brand 5060 Adclip + Left Ventral Freeze Brand

0061 No Adclip + Left Ventral + Elastomer Injection Left Eye 5061 Adclip + Left Ventral + Elastomer Injection Left Eye

0070 No Adclip + Right Ventral Left Pectoral 5070 Adclip + Right Ventral Left Pectoral

0071 No Adclip + Right Ventral Right Pectoral 5071 Adclip + Right Ventral Right Pectoral

0072 No Adclip + Right Ventral Left Maxillary 5072 Adclip + Right Ventral Left Maxillary

0073 No Adclip + Right Ventral Right Maxillary 5073 Adclip + Right Ventral Right Maxillary

0074 No Adclip + Right Ventral Dorsal 5074 Adclip + Right Ventral Dorsal

0075 No Adclip + Right Ventral Anal 5075 Adclip + Right Ventral Anal

0076 No Adclip + Right Ventral Caudal 5076 Adclip + Right Ventral Caudal

0077 No Adclip + Right Ventral Freeze Brand 5077 Adclip + Right Ventral Freeze Brand

0090 No Adclip + Left Pectoral 5090 Adclip + Left Pectoral

0091 No Adclip + Left Pectoral Left Maxillary 5091 Adclip + Left Pectoral Left Maxillary

0092 No Adclip + Left Pectoral Right Maxillary 5092 Adclip + Left Pectoral Right Maxillary

0093 No Adclip + Left Pectoral Right Maxillary Anal 5093 Adclip + Left Pectoral Right Maxillary Anal

0094 No Adclip + Left Pectoral Dorsal 5094 Adclip + Left Pectoral Dorsal

0095 No Adclip + Left Pectoral Anal 5095 Adclip + Left Pectoral Anal

0100 No Adclip + Right Pectoral 5100 Adclip + Right Pectoral

0101 No Adclip + Right Pectoral Left Maxillary 5101 Adclip + Right Pectoral Left Maxillary

0102 No Adclip + Right Pectoral Right Maxillary 5102 Adclip + Right Pectoral Right Maxillary

0103 No Adclip + Right Pectoral Right Maxillary Anal 5103 Adclip + Right Pectoral Right Maxillary Anal

0104 No Adclip + Right Pectoral Dorsal 5104 Adclip + Right Pectoral Dorsal

0105 No Adclip + Right Pectoral Anal 5105 Adclip + Right Pectoral Anal

0110 No Adclip + Left Maxillary 5110 Adclip + Left Maxillary

0111 No Adclip + Left Maxillary Right Maxillary 5111 Adclip + Left Maxillary Right Maxillary

0112 No Adclip + Left Maxillary Dorsal 5112 Adclip + Left Maxillary Dorsal

0113 No Adclip + Left Maxillary Anal 5113 Adclip + Left Maxillary Anal

0120 No Adclip + Right Maxillary 5120 Adclip + Right Maxillary

0121 No Adclip + Right Maxillary Dorsal 5121 Adclip + Right Maxillary Dorsal

0122 No Adclip + Right Maxillary Anal 5122 Adclip + Right Maxillary Anal

0130 No Adclip + Dorsal 5130 Adclip + Dorsal

0132 No Adclip + Dorsal + Elastomer Injection Right Eye Green 5132 Adclip + Dorsal + Elastomer Injection Right Eye Green

0140 No Adclip + Anal 5140 Adclip + Anal

0150 No Adclip + Caudal 5150 Adclip + Caudal

0151 No Adclip + Caudal + Elastomer Injection Left Eye Red 5151 Adclip + Caudal + Elastomer Injection Left Eye Red

0152 No Adclip + Caudal + Elastomer Injection Right Eye Red 5152 Adclip + Caudal + Elastomer Injection Right Eye Red

0190 No Adclip + Jet 5190 Adclip + Jet

0200 No Adclip + Visual Implant Alpha-numeric 5200 Adclip + Visual Implant Alpha-numeric

0201 No Adclip + Visual Implant Elastomer Injection 5201 Adclip + Visual Implant Elastomer Injection

0202 No Adclip + Visual Implant Fluorescent Filament 5202 Adclip + Visual Implant Fluorescent Filament

0203 No Adclip + Elastomer Injection Left Eye Blue 5203 Adclip + Elastomer Injection Left Eye Blue

0204 No Adclip + Elastomer Injection Right Eye Blue 5204 Adclip + Elastomer Injection Right Eye Blue

0205 No Adclip + Elastomer Injection Left Eye Red 5205 Adclip + Elastomer Injection Left Eye Red

0206 No Adclip + Elastomer Injection Right Eye Red 5206 Adclip + Elastomer Injection Right Eye Red

0207 No Adclip + Elastomer Injection Left Eye Green 5207 Adclip + Elastomer Injection Left Eye Green

0208 No Adclip + Elastomer Injection Right Eye Green 5208 Adclip + Elastomer Injection Right Eye Green

0209 No Adclip + Elastomer Injection Left Eye Orange 5209 Adclip + Elastomer Injection Left Eye Orange

0210 No Adclip + Elastomer Injection Right Eye Orange 5210 Adclip + Elastomer Injection Right Eye Orange

0211 No Adclip + Jet Left Ventral 5211 Adclip + Jet Left Ventral

0212 No Adclip + Jet Left Pectoral 5212 Adclip + Jet Left Pectoral

0213 No Adclip + Jet Anal 5213 Adclip + Jet Anal

0214 No Adclip + Elastomer Injection Left Eye Yellow 5214 Adclip + Elastomer Injection Left Eye Yellow

0215 No Adclip + Elastomer Injection Right Eye Yellow 5215 Adclip + Elastomer Injection Right Eye Yellow

0216 No Adclip + Elastomer Injection Left Jaw Green 5216 Adclip + Elastomer Injection Left Jaw Green

0218 No Adclip + Elastomer Injection Left Eye Pink 5218 Adclip + Elastomer Injection Left Eye Pink

0219 No Adclip + Elastomer Injection Right Eye Pink 5219 Adclip + Elastomer Injection Right Eye Pink

0300 No Adclip + Freeze Brand 5300 Adclip + Freeze Brand

0350 No Adclip + PIT Tag 5350 Adclip + PIT Tag

5351 Adclip + Left Ventral + PIT Tag

0400 No Adclip + Floy Tag 5400 Adclip + Floy Tag

0500 No Adclip + Otolith 5500 Adclip + Otolith

0501 No Adclip + Otolith + Left Ventral 5501 Adclip + Otolith + Left Ventral

0502 No Adclip + Otolith + Right Ventral 5502 Adclip + Otolith + Right Ventral

0520 No Adclip + Otolith + Right Maxillary 5520 Adclip + Otolith + Right Maxillary

0600 No Adclip + Wire Tag in Area Other Than Snout 5600 Adclip + Wire Tag in Area Other Than Snout

CHAPTER 12

CODING FOR ESCAPEMENT EST METHOD

1. Overview

Codes Method

10-19 Passage Counts

20-29 Live Counts

30-39 Carcass Counts

40-49 Live and Dead Counts Combined

50-59 Redd Counts

60-69 Mark-Recapture Counts

70-79 Electronic Counts

* 1. Miscellaneous

1. Detailed Coding

’10’ Series: Passage Counts

Code Method

10 Total direct count of run passed through weir/trap/ladder

11 Partial direct count of run with extrapolation for unsampled periods

12 Partial direct count of run with no extrapolation for unsampled periods

13 Total count past dam with passage adjustments (e.g. boat locks, fall-backs)

14 Extrapolation from differences in counts between dams (minus other escapement and harvest)

’20’ Series: Live Counts (fish on spawning grounds)

Code Method

20 Counts with extrapolation for entire period (e.g. ’area under the curve’ derived from fish days/stream life)

21 Peak count

22 Index area peak count with expansion factors from a baseline year study

23 Index area peak count with expansion factors from another index stream or baseline year

’30’ Series: Carcass Counts

Code Method

30 Cumulative count

31 Peak count

32 Index area peak count with expansion factors from a baseline year study

33 Index area peak count with expansion factors from another index stream

’40’ Series: Live and Dead Counts

Code Method

40 Cumulative count (cumulative carcasses plus live fish from last survey)

41 Peak count

42 Index area peak count with expansion factors from a baseline year study

43 Index area peak count with expansion factors from another index stream

’50’ Series: Redd Counts

Code Method

50 Cumulative redd count for entire area

51 Index area cumulative counts with supplemental area counts

52 Index area cumulative counts with supplemental areas and expansions for unsurveyed areas

53 Counts of visible redds with extrapolation for entire period (e.g. ’area under the curve’ derived from total redd days/visible redd life)

54 Counts of visible redds/date with expansion factors from a baseline year study

’60’ Series: Mark/Recapture Estimates

Code Method

60 Lower river marking with upstream recapture

61 Carcass mark/recapture

’70’ Series: Electronic Counts

Code Method

70 Conductivity sensing counter

71 Sonar counter

72 Radar counter

73 Hydroacoustic estimate

’90’ Series: Miscellaneous

Code Method

90 Estimate based on past hatchery/natural escapement rations

91 Estimate based on hatchery/natural ratio from harvest or test fishery

92 Estimate based on estimated harvest rate in a terminal fishery

99 Other (method not described by codes)

CHAPTER 13

GEOGRAPHIC CODING

1. Overview

Domains for Region Code and Basin Code

1 Alaska AK within the state of Alaska and jurisdictional waters

2 Yukon River YR within the drainage of the Yukon River consisting of the jurisdictions:

* Yukon Territory
* State of Alaska

3 British Columbia BC within the province of British Columbia and jurisdictional waters

4 Washington WA within the state of Washington and jurisdictional waters

5 Columbia River CR all Columbia River drainages consisting of the jurisdictions:

* province of British Columbia (upper tribs and headwaters)
* state of Washington (mainstem, tribs, and estuary)
* state of Idaho (upper Snake R and tribs)
* state of Oregon (mainstem, tribs, and estuary)

6 Oregon OR within the state of Oregon and jurisdictional waters

7 California CA within the state of California and jurisdictional waters

8 Transboundary Rivers TR river systems that cross international boundary between the U.S.A. (Alaska) and Canada

1. Domain/ Region/ Basin Coding
2. Domain AK: Alaska

| Region Code | Region Name | Basin Code | Basin Name |
| --- | --- | --- | --- |
| SEAK | Southeastern Alaska | SEAK | Alaska, Southeast (excluding transboundary rivers) |
|  |  | SENE | Alaska, Southeast; Northeastern quadrant |
|  |  | SENW | Alaska, Southeast; Northwestern quadrant |
|  |  | SESE | Alaska, Southeast; Southeastern quadrant |
|  |  | SESW | Alaska, Southeast; Southwestern quadrant |
|  |  | SEYA | Alaska, Southeast; Cross Sound to Cape Suckling |
|  |  | SEAKG | SEAK general basin: unmapped locations (general, combined, or unknown) |
|  |  |  |  |
| NOAK | Northern Alaska | ARC | Arctic Ocean; including rivers and shoreline |
|  |  | KOTZ | Kotzebue Sound |
|  |  | KUSK | Kuskokwim River |
|  |  | NORT | Norton Sound |
|  |  | NOAKG | NOAK general basin: unmapped locations (general, combined, or unknown) |
|  |  |  |  |
| CEAK | Central Alaska | BRIS | Bristol Bay |
|  |  | COPR | Copper River |
|  |  | LCI | Lower Cook Inlet; S of Anchor Bay/Lat 59.779; S shore Kenai Peninsula to Cape Fairfield |
|  |  | PWS | Prince William Sound |
|  |  | UCI | Upper Cook Inlet; areas North of Anchor Bay/ Lat 59.779 |
|  |  | CEAKG | CNAK general basin: unmapped locations (general, combined, or unknown) |
|  |  |  |  |
| WEAK | Western Alaska | ALEU | Aleutian Islands; Alaska Peninsula to Kilokak Rocks on South shore |
|  |  | BERI | Bering Sea |
|  |  | KODI | Kodiak Island; Alaska Peninsula / Sheilkof strait from Kilokak Rocks to Cook Inlet |
|  |  | WEAKG | WEAK general basin: unmapped locations (general, combined, or unknown) |
|  |  |  |  |
| AKGN | AK general region | AKGNG | AKGN general basin: unmapped locations (general, combined, or unknown) |

1. Domain YR: Yukon River

| Region Code | Region Name | Basin Code | Basin Name |
| --- | --- | --- | --- |
| LOYR | Lower Yukon River (mouth to international boundary) | LOYRG | Lower Yukon River; general |
| UPYR | Upper Yukon River (above the international boundary) | UPYRG | Upper Yukon River; general |
| YRGN | Yukon General Region | YRGNG | YRGN general basin: unmapped locations (general, combined, or unknown) |

1. Domain TR: Transboundary Rivers

| Region Code | Region Name | Basin Code | Basin Name |
| --- | --- | --- | --- |
| ALSR | Alsek River | ALSRG | Alsek River; general |
| CHIL | Chilkat River | CHILG | Chilkat River; general |
| STUN | Stikine River - Unuk River | STUNG | Stikine River - Unuk River; general |
| TAWH | Taku River – Whiting River | TAWHG | Taku River – Whiting River; general |
| TRGN | Transboundary Rivers, general | TRGNG | TRGN general basin: unmapped locations (general, combined, or unknown) |

1. Domain BC: British Columbia

| Region Code | Region Name | Basin Code | Basin Name |
| --- | --- | --- | --- |
| FRTH | Fraser River – Thompson River | LWFR | Lower Fraser River (below Hope + tributaries) |
|  |  | UPFR | Upper Fraser River (above Hope + tribs; excluding Thompson R) |
|  |  | TOMM | Thompson River Mainstem |
|  |  | TOMF | Thompson River (North & South forks) |
|  |  | FRTHG | FRTH general basin: unmapped locations (general, combined, or unknown) |
|  |  |  |  |
| NASK | Nass River – Skeena River | SKNA | Skeena River |
|  |  | NASS | Nass River |
|  |  | NASKG | NASK general basin: unmapped locations (general, combined, or unknown) |
|  |  |  |  |
| GST | Georgia Strait | GSVI | Georgia Strait – Vancouver Island |
|  |  | GSMN | Georgia Strait – Mainland North |
|  |  | GSMS | Georgia Strait – Mainland South |
|  |  | GSTG | GST general basin: unmapped locations (general, combined, or unknown) |
|  |  |  |  |
| WCVI | Western Vancouver Island | SWVI | SW Vancouver Island |
|  |  | NWVI | NW Vancouver Island |
|  |  | WCVIG | WCVI general basin: unmapped locations (general, combined, or unknown) |
|  |  |  |  |
| JNST | Johnstone Strait | JNSTG | JNST general basin: unmapped locations (general, combined, or unknown) |
|  |  |  |  |
| COBC | Coastal British Columbia | RIVR | Rivers & Smith Inlets |
|  |  | CCST | Coastal British Columbia; Central |
|  |  | NCST | Coastal British Columbia; North |
|  |  | COBCG | COBC general basin: unmapped locations (general, combined, or unknown) |
|  |  |  |  |
| QCI | Queen Charlotte Islands | QCIG | QCIG general basin: unmapped locations (general, combined, or unknown) |
|  |  |  |  |
| TRAN | Transboundary Rivers in Canada | ALSE | Alsek River / BC, Yukon |
|  |  | CHIL | Chilkat River / BC |
|  |  | STIK | Stikine River / BC |
|  |  | TAKU | Taku River / BC |
|  |  | UNUK | Unuk River / BC |
|  |  | WHIT | Whiting River / BC |
|  |  | TRANG | TRAN general basin: unmapped locations (general, combined, or unknown) |
|  |  |  |  |
| BCGN | British Columbia General Region | BCGNG | BCGN general basin: unmapped locations (general, combined, or unknown) |

1. Domain WA: Washington

| Region Code | Region Name | Basin Code | Basin Name |
| --- | --- | --- | --- |
| GRAY | Grays Harbor | GHLC | Grays Harbor, Lower Chehalis River |
|  |  | UPCH | Upper Chehalis River |
|  |  | GRAYG | GRAY general basin: unmapped locations (general, combined, or unknown) |
|  |  |  |  |
| HOOD | Hood Canal | LUDA | Port Ludlow; Dabob Bay; shoreline: Snake Rock – mouth Dosewallips River |
|  |  | SKDO | Skokomish River, Dosewallips River, Great Bend |
|  |  | WKIT | Western Kitsap Peninsula |
|  |  | HOODG | HOOD general basin: unmapped locations (general, combined, or unknown) |
|  |  |  |  |
| JUAN | Strait of Juan De Fuca | ELDU | Elwha River, Dungeness River, Discovery Bay; shoreline: Elwha River delta – Mats Mats Bay |
|  |  | LYHO | Neah Bay, Hoko River, Lyre River, Coville Creek; shoreline: Flattery Creek – Elwha River |
|  |  | JUANG | JUAN general basin: unmapped locations (general, combined, or unknown) |
|  |  |  |  |
| MPS | Mid Puget Sound | DUWA | Duwamish River, Green River; shoreline: West Point / Seattle - Adelaide |
|  |  | EKPN | Eastern Kitsap Peninsula, North of Narrows; Bainbridge Is, Blake Is, Vashon Is |
|  |  | LAKW | Lake Washington – greater area; shoreline: Elliot Point – West Point / Seattle |
|  |  | PUYA | Puyallup River; shoreline: Adelaide – Point Defiance |
|  |  | MPSG | MPS general basin: unmapped locations (general, combined, or unknown) |
|  |  |  |  |
| NOWA | Northern Washington | NOOK | Nooksack River; Point Roberts; Drayton Harbor; Birch Bay; California Bay |
|  |  | BESA | Bellingham Bay; Samish River; Padilla Bay; Lummi, Guemes, Cypress, Sinclair Islands |
|  |  | SJUA | San Juan Islands |
|  |  | NOWAG | NOWA general basin: unmapped locations (general, combined, or unknown) |
|  |  |  |  |
| NWC | Northern Washington Coast | QEQU | Queets River; Quinault River; shoreline: Kalalock Creek – Oyhut State Park |
|  |  | QUHO | Sooes River; Quillayute River; Hoh River; shoreline: Flattery Creek – Kalalock Creek |
|  |  | NWCG | NWC general basin: unmapped locations (general, combined, or unknown) |
|  |  |  |  |
| SKAG | Skagit River | LOSK | Lower Skagit River below Mill Creek; Skagit Bay |
|  |  | UPSK | Upper Skagit River above Mill Creek |
|  |  | SKAGG | SKAG general basin: unmapped locations (general, combined, or unknown) |
|  |  |  |  |
| SPS | Southern Puget Sound | CHAM | Chambers Creek; Ketron Island; shoreline: Point Defiance – breakwater at Old Fort Lake |
|  |  | DES | Deschutes River; Woodland Creek; Budd Inlet; shoreline: Nisqually Head – McLane Creek |
|  |  | EKPS | Eastern Kitsap Peninsula, south of the Narrows; Squaxin, Anderson, McNeil, Fox Islands |
|  |  | KENN | Kennedy Creek; Goldsborough Creek; Skookum Creek; Perry Creek |
|  |  | NISQ | Nisqually River |
|  |  | SPSG | SPS general basin: unmapped locations (general, combined, or unknown) |
|  |  |  |  |
| NPS | Northern Puget Sound | STIL | Stillaguamish River |
|  |  | SNOH | Snohomish River; Tulalip Bay; shoreline: McKees Beach – Elliot Point |
|  |  | WICI | Whidbey Island; Camano Islands |
|  |  | NPSG | NPS general basin: unmapped locations (general, combined, or unknown) |
|  |  |  |  |
| WILP | Willapa Bay | NASE | Naselle River; Palix River; Bear River |
|  |  | NOSM | North River; Smith Creek |
|  |  | WILR | Willapa River |
|  |  | WILPG | WILP general basin: unmapped locations (general, combined, or unknown) |
|  |  |  |  |
| WAGN | Washington General Region | CWG | Coastal Washington basin: unmapped locations (general, combined, or unknown) |
|  |  | PSG | Puget Sound basin: unmapped locations (general, combined, or unknown) |
|  |  | WAGNG | WAGN general basin: unmapped locations (general, combined, or unknown) |

Domain CR: Columbia River

| Region Code | Region Name | Basin Code | Basin Name |
| --- | --- | --- | --- |
| LOCR | Lower Columbia River (mouth to Bonneville Dam) | GREL | Grays River; Elokomin River; Baker Bay; estuary / WA |
|  |  | COWL | Cowlitz River / WA |
|  |  | LEWI | Lewis River; Kalama River / WA |
|  |  | SAWA | Salmon River; Washougal River; Lake River; Hamilton Creek / WA |
|  |  | WILL | Willamette River; Multnomah Channel; Milton Creek / OR |
|  |  | YOCL | Youngs Bay; Clatskanie River; Multnomah Channel to estuary / OR |
|  |  | SAND | Sandy River; Tanner Creek; Sandy River to Bonneville Dam / OR |
|  |  | LOCRG | LOCR general basin: unmapped locations (general, combined, or unknown) |
|  |  |  |  |
| CECR | Central Columbia River (Bonneville Dam to McNary Dam) | WIND | Wind River; White Salmon River; Major Creek / WA |
|  |  | KLIC | Klickitat River; includes below John Day Dam / WA |
|  |  | ROCK | Rock Creek; Glade Creek, Alder Creek; includes below McNary Dam / WA |
|  |  | HOO | Hood River; Fifteenmile Creek; Eagle Creek / OR |
|  |  | DESC | Deschutes River; includes below John Day Dam / OR |
|  |  | JOHN | John Day River; includes above John Day Dam; Willow Creek / OR |
|  |  | UMAT | Umatilla River; includes above confluence Glade Creek/WA to below McNary Dam / OR |
|  |  | CECRG | CECR general basin: unmapped locations (general, combined, or unknown) |
|  |  |  |  |
| UPCR | Upper Columbia R (above McNary Dam; excludes Snake River) | MNPR | McNary Dam to Priest Rapids Dam; Walla Walla River / OR, WA |
|  |  | YAKI | Yakima River / WA |
|  |  | PRGC | Priest Rapids Dam to Grand Coulee; Lower Crab Creek; Banks Lake / WA |
|  |  | WECH | Wenatchee River; Lake Chelan / WA |
|  |  | MEOK | Methow River; Okanogan River / WA |
|  |  | HEAD | Headwaters above Grand Coulee / WA, BC, ID |
|  |  | UPCRG | UPCR general basin: unmapped locations (general, combined, or unknown) |
|  |  |  |  |
| SNAK | Snake River | LOSN | Lower Snake River / WA, ID; below conf. Clearwater River; Palouse River; Tucannon River |
|  |  | CLEA | Clearwater River (only) / ID |
|  |  | GRIA | Grande Ronde River; Imnaha River; Asotin Creek / OR, WA |
|  |  | SALM | Salmon River (only) / ID |
|  |  | UPSN | Headwaters above the Clearwater River; excluding the Salmon R / ID |
|  |  | SNAKG | SNAK general basin: unmapped locations (general, combined, or unknown) |
|  |  |  |  |
| CRGN | Columbia River General Region | CRGNG | CRGN general basin: unmapped locations (general, combined, or unknown) |

Domain OR: Oregon

| Region Code | Region Name | Basin Code | Basin Name |
| --- | --- | --- | --- |
| NOOR | Northern Oregon Coast | NEHA | Nehalem River; Necanicum River; including shoreline |
|  |  | TILN | Tillamook Bay; Nestucca R; including shoreline |
|  |  | SIYA | Salmon River; Siletz River; Yaquina River; including shoreline |
|  |  | ALSE | Alsea River; Beaver Creek; Yachats River; including shoreline to Cape Perpetua |
|  |  | SIUS | Siuslaw River; Siltcoos River; Tahkenitch Creek; including shoreline to Cape Perpetua |
|  |  | NOORG | NOOR general basin: unmapped locations (general, combined, or unknown) |
|  |  |  |  |
| SOOR | Southern Oregon Coast | umpq | Umpqua River |
|  |  | COOS | Coos River; Coos Bay; includes shoreline from South Jetty Umpqua River to Fivemile Point |
|  |  | Coqu | Coquille River; includes shoreline from Fivemile Point to Coquille River |
|  |  | sixe | Sixes River; Elk R; Floras Creek; including shoreline |
|  |  | rogu | Rogue River |
|  |  | CHET | Pistol River; Chetco River; Winchuck River |
|  |  | soorg | SOOR general basin: unmapped locations (general, combined, or unknown) |
|  |  |  |  |
| ORGN | Oregon General Region | orgng | ORGN general basin: unmapped locations (general, combined, or unknown) |

Domain CA: California

| Region Code | Region Name | Basin Code | Basin Name |
| --- | --- | --- | --- |
| noca | Northern California Coast | mael | Mad River, Eel River, Mattole River; incl. shoreline: from Klamath River estuary to Whale Gulch |
|  |  | smit | Smith River; Incl shoreline: Camel Rock, OR to Klamath River estuary |
|  |  | nocag | NOCA general basin: unmapped locations (general, combined, or unknown) |
|  |  |  |  |
| ceca | Central California Coast | NORU | Noyo River, Russian River; Drakes Bay; incl shoreline: from Whale gulch to Pt. Bonita |
|  |  | SFBA | San Pablo Bay, San Francisco Bay; incl shoreline: from Golden Gate to Butano Creek |
|  |  | SAMO | Salinas River, Monterey Bay; incl shoreline: Pescadero Pt. to Oso Flaco Creek |
|  |  | cecag | CECA general basin: unmapped locations (general, combined, or unknown) |
|  |  |  |  |
| soca | Southern California Coast | socag | SOCA general basin: unmapped locations (general, combined, or unknown) |
|  |  |  |  |
| klTR | Klamath River – Trinity River | klam | Klamath River |
|  |  | TRin | Trinity River |
|  |  | klTRg | KLTR general basin: unmapped locations (general, combined, or unknown) |
|  |  |  |  |
| saFA | Sacramento River | saCR | Sacramento River |
|  |  | fea | Feather River |
|  |  | amer | American River |
|  |  | saFAg | SACR general basin: unmapped locations (general, combined, or unknown) |
|  |  |  |  |
| sjoa | San Joaquin River | sjR | San Joaquin River |
|  |  | merc | Merced River |
|  |  | tust | Tuolomne River; Stanislaus River |
|  |  | moke | Mokelumne River |
|  |  | sjoag | SJOA general basin: unmapped locations (general, combined, or unknown) |
|  |  |  |  |
| cagn | California General Region | cagng | CAGN general basin: unmapped locations (general, combined, or unknown) |

Domain IN: Other / International

|  |  |  |  |
| --- | --- | --- | --- |
| Region Code | Region Name | Basin Code | Basin Name |
| japn | Japan | HOKK | Hokkaido Island, Japan |
|  |  | japng | JAPN general basin: unmapped locations (general, combined, or unknown) |
|  |  |  |  |
| cisr | Commonwealth of Independent States / Russia | sahk | Sahkalin, Russia |
|  |  | cisrg | CISR general basin: unmapped locations (general, combined, or unknown) |
|  |  |  |  |
| ingn | Other / International General Region | ingnG | INGN general basin: unmapped locations (general, combined, or unknown) |

1. EPA Reach Coding (USA Only)

The EPA Reach Number refers to the U.S. Environmental Protection Agency’s “reach file,” a national data base of surface water features. The full EPA Reach Number is 17 characters in length. It is based on the U.S. Geological Survey’s (USGS) nationwide system of 8 digit Hydrologic-Unit Codes (HUC)s and can be used to identify stream reaches. These reaches can identify locations down to the level of stream intervals and coastal shoreline intervals. EPA Reach is provided to facilitate the mapping of Location Codes pertaining to freshwater and shoreline locations. Mapping of most marine locations may not be possible at this time.

To assist with mapping these locations, the following items are available on request from the Mark Center:

Document: EPA Reach File Manual

Maps: USGS Hydrologic Unit Maps (by State)

Maps: EPA River Reach File Hydrologic Segment Plots (by State)

The parts (components) of the EPA Reach Number that are permissible in the EPA Reach field are as follows (**See Figures 1 & 2 below**):

1. Full EPA Reach Number (17 - char)

If possible, place the entire EPA Reach Number into the EPA Reach field. This will be possible only for certain types of locations that refer to point locations such as hatchery / facilities, or known release locations. Specific values can be obtained by referring to the maps: EPA River Reach File Hydrologic Segment Plots (by State).

2. Hydrologic Unit Code (HUC) portion only (8 - char)

In many cases it will not be possible to map a CWT Location Code to a 17-character EPA Reach Number. This situation arises when the Location Code refers to an entire river, bay, lake, or other general area. For example, the release location Newaukum R [3F21802 230882 R ] encompasses many stream reaches within the EPA Reach-coded HUC: [17100103]. In these cases, the solution is to use only part of the EPA Reach Number in the Reach field—the 8 character HUC. HUC values may be obtained by referring to either of these maps: USGS Hydrologic Unit Maps (by State); EPA River Reach File Hydrologic Segment Plots (by State).

3. Accounting Unit Code portion only (6 - char)

If the Location Code encompasses more than one HUC, then use the Accounting Unit Code portion of the HUC. Accounting Unit Code values may be obtained by refer­ring to either of these maps: USGS Hydrologic Unit Maps (by State); EPA River Reach File Hydrologic Segment Plots (by State).

4. Sub-region Unit Code portion only (4 - char)

If the Location Code encompasses more than one Accounting Unit Code, then use the Sub-region Unit Code portion of the Accounting Unit Code. All permissible val­ues are listed here. (for assistance, refer to the either of these maps: USGS Hydrologic Unit Maps (by State); EPA River Reach File Hydrologic Segment Plots (by State).) EPA Reach must contain one of these:

1701 Kootenai / Pend Oreille / Spokane sub-region

1702 Upper Columbia sub-region

1703 Yakima sub-region

1704 Upper Snake sub-region

1705 Middle Snake sub-region

1706 Lower Snake sub-region

1707 Middle Columbia sub-region

1708 Lower Columbia sub-region

1709 Willamette sub-region

1710 Oregon-Washington Coastal sub-region

1711 Puget sub-region

1712 Oregon-Closed Basins sub-region

1801 Klamath-North California Coast sub-region

1802 Sacramento sub-region

1901 Alaska-Southeast sub-region

1902 Alaska-Central sub-region

1903 Alaska-Kuskokwim sub-region

1904 Alaska-Yukon sub-region

1905 Alaska-Northwestern sub-region

1906 Alaska-Arctic sub-region

5. Region Unit Code portion only (2 - char)

If the Location Code encompasses more than one Sub-region Unit Code, then use the Region Unit Code portion of the Sub-region Unit Code. All permissible values are listed here. (for assistance, refer to the either of these maps: USGS Hydrologic Unit Maps (by State); EPA River Reach File Hydrologic Segment Plots (by State).) EPA Reach must contain one of these:

17 Pacific Northwest region

18 California region

19 Alaska region

**Figure 1**: Illustration of EPA Reach Number for mapping of CWT Location Codes into EPA Reach





**Figure 2**: Map of EPA Reach Numbers corresponding to illustration in Figure 1 (i.e. Umatilla, N Fk, Headwaters Reach)



CHAPTER 14

MARK (Adclip) SAMPLING

1. Mark (Adclip) Sampling - General

The method to mark sample to calculate an unbiased mark (adclip) rate will depend upon whether the tag detection method is visual or electronic.

* + 1. When the tag detection method is **visual**, all fish in the sample are examined for an adipose clip. All adipose-clipped fish are presumed to have a cwt and are included in the recovery file. Mark sampling occurs as part of the process of cwt sampling. (See Figure 1 below).
    2. When the tag detection method is **electronic**, all fish in the sample are electronically wanded or tubed. All positive-signal ('beep') fish are presumed to have a cwt and are included in the recovery file. Mark sampling can occur as follows:
       1. Mark sampling can be **dependent** on the electronic signal. The sample is divided into a 'signal' partition and a 'no-signal' partition. All fish in each partition, all fish in one partition and a random sub-sample of all fish in the other partition, or a random sub-sample of all fish in each partition must be examined for an adipose clip. (see Figure 2 below). Typically, the 'Signal' partition is not sub-sampled since all fish will be processed as cwt recoveries.

An unbiased mark rate can only be calculated if both partitions are examined for adclips. For example, if the 'signal' partition is examined for adclips but the 'no-signal' partition is not examined for adclips, a mark rate for the SAMPLE cannot be calculated, even though it is possible to calculate a mark rate for the 'signal' partition.

* + - 1. Mark sampling can be **independent** of the electronic signal. All fish in the sample or a random sub-sample of all fish in the sample must be examined for an adipose clip (see Figure 3 below).

If a sample is examined for adclips apart from electronic detection or as fish are wanded, the mark sampling is **independent** of the electronic detection. If fish are separated into two partitions as a result of the electronic wand or tube signal, and each partition is examined for adclips, the mark sampling is **dependent** on the electronic signal.

Whether or not mark sampling is dependent or independent of the electronic detection, as in Figures 2 and 3, any subsampling of fish in each partition or in the sample will affect the usefulness of the mark rate and should be examined to ensure the subsampling adequately represents the fish in the partition or sample. The mark rate calculation assumes that the subsampling is random and adequately representative of all fish. For example, if all fish in the 'signal' partition are examined for adclips, but only 2 out of 500 fish in the 'no-signal' partition are examined, it is possible to calculate a mark rate for the SAMPLE using the formula but its usefulness should be questioned since 2 fish out of 500 does not adequately represent the 'no-signal' fish in the sample.

|  |  |  |
| --- | --- | --- |
| **Figure 1**: Illustration of Mark Sampling when Tag Detection Method is **Visual** | **Figure 2**: Illustration of Mark Sampling **Dependent** on Electronic Signal, when Tag Detection Method is **Electronic** | **Figure 3**: Illustration of Mark Sampling **Independent** of Electronic Signal, when Tag Detection Method is **Electronic** |
| MarkSamplingVisual | MarkSamplingElectronicDependent | MarkSamplingElectronicIndependent |

1. Mark (Adclip) Sampling - PSC Catch/Sample Fields used for Data Exchange

The usage of the PSC Catch Sample fields depends upon the tag detection method and whether mark sampling was dependent upon electronic partitioning or is independent of the electronic signal.

* + 1. When the tag detection method is **visual**, only the 1st set of 'mr\_' fields (mr\_1st\_xxx) should be used. The 2nd set of mr\_ fields (mr\_2nd\_xxx) must be absent. (See Figure 4 below).
    2. When the tag detection method is **electronic**, the usage of the 1st set of 'mr\_' fields (mr\_1st\_xxx) and the 2nd set of mr\_ fields (mr\_2nd\_xxx) depends upon whether mark sampling is dependent or independent of the electronic signal.
       1. When the tag detection method is **electronic** and mark sampling is **dependent** on the electronic partitioning, both sets of mr\_ fields should be used. The first set (mr\_1st\_xxx) represents the 'Signal' partition. The second set (mr\_2nd\_xxx) represents the 'No Signal' partition. (See Figure 5,6 and 7 below).
       2. When the tag detection method is **electronic** and mark sampling is **independent** of the electronic signal, only the 1st set of mr\_ fields (mr\_1st\_xxx) should be used. The 2nd set of mr\_ fields (mr\_2nd\_xxx) must be absent. (see Figure 8 and 9 below).

**Figure 4:** Illustration of PSC data fields used when tag detection method is **visual**

|  |  |
| --- | --- |
| MarkSamplingVisualFields | All fish in the sample are treated as one partition so P1 = number of fish in the sample  Sample is not subsampled so S1=number of fish in the sample  Since all fish in Sample were visually sampled, all fish in Sample have 'determinable and therefore known' adclip status so K1=number of fish in the sample  All recoveries have adclips so A1 = number of fish in the sample with an adclip = total fish in corresponding recovery file |
| mr\_1st\_partition\_size (P1) | P1 = num\_sampled |
| mr\_1st\_sample\_size (S1) | S1 = num\_sampled |
| mr\_1st\_sample\_known\_ad\_status (K1) | K1 = num\_sampled |
| mr\_1st\_sample\_obs\_adclips (A1) | A1 = number\_recovered\_decoded + number\_recovered\_no\_cwts + number\_recovered\_lost\_cwts + number\_recovered\_unreadable + number\_recovered\_unresolved + number\_recovered\_not\_processed + number\_recovered\_pseudotags |
| mark\_rate (MR) | MR = A1/K1 |

**Figure 5: Illustration** of PSC data fields used when tag detection method is **electronic**, mark sampling is **dependent** on electronic signal, and all fish in each partition are examined for adipose clips.

|  |  |
| --- | --- |
| MarkSamplingElectronicDependentSampleFields | * P1 = number of fish in the SIGNAL partition of the sample = number of fish in the sample with a 'positive' signal = total fish in corresponding recovery file * SIGNAL partition is not subsampled so S1 = number of fish in the SIGNAL partition * P2 = number of fish in the NO SIGNAL partition of the sample = number of fish in the sample with a 'negative' signal = number of fish in the sample - (minus) total fish in corresponding recovery file * NO SIGNAL partition is not subsampled so S2 = number of fish in the NO SIGNAL partition |
| mr\_1st\_partition\_size (P1) | P1 = number\_recovered\_decoded + number\_recovered\_no\_cwts + number\_recovered\_lost\_cwts + number\_recovered\_unreadable + number\_recovered\_unresolved + number\_recovered\_not\_processed + number\_recovered\_pseudotags |
| mr\_1st\_sample\_size (S1) | S1 = P1 |
| mr\_1st\_sample\_known\_ad\_status (K1) | K1 = Number of fish in P1 which were found to have an adipose clip or no adipose clip (does not include fish which were found to have an 'undeterminable and therefore unknown' adipose clip) |
| mr\_1st\_sample\_obs\_adclips (A1) | A1 = Number of fish in P1 which were found to have an adipose clip |
| mr\_2nd\_partition\_size (P2) | P2 = number\_sampled - P1 |
| mr\_2nd \_sample\_size (S2) | S2 = P2 |
| mr\_2nd \_sample\_known\_ad\_status (K2) | K2 = Number of fish in P2 which were found to have an adipose clip or no adipose clip (does not include fish which were found to have an 'undeterminable and therefore unknown' adipose clip) |
| mr\_2nd \_sample\_obs\_adclips (A2) | A2 = Number of fish in P2 which were found to have an adipose clip |
| mark\_rate (MR) | MR = [estimated marks in P1 + estimated marks in P2] / (total fish in P1 and P2)  = [(P1 \* A1/K1) + (P2 \* A2/K2)] / (P1 + P2)  If K1 or K2 is ‘0’ absent, then mark\_rate cannot be calculated and must remain blank. |

**Figure 6:** Illustration of PSC data fields used when tag detection method is **electronic**, mark sampling is **dependent** on electronic signal, all fish in the 'Signal' partition are sampled for adipose clips, and a random sub-sample of all fish in the 'No Signal' partition is examined for adipose clips.

|  |  |
| --- | --- |
| MarkSamplingElectronicDependentSubSample1Fields | * P1 = number of fish in the SIGNAL partition of the sample = number of fish in the sample with a 'positive' signal = total fish in corresponding recovery file * SIGNAL partition is not subsampled so S1 = number of fish in the SIGNAL partition * P2 = number of fish in the NO SIGNAL partition of the sample = number of fish in the sample with a 'negative' signal = number of fish in the sample - (minus) total fish in corresponding recovery file * NO SIGNAL partition is subsampled |
| mr\_1st\_partition\_size (P1) | P1 = number\_recovered\_decoded + number\_recovered\_no\_cwts + number\_recovered\_lost\_cwts + number\_recovered\_unreadable + number\_recovered\_unresolved + number\_recovered\_not\_processed + number\_recovered\_pseudotags |
| mr\_1st\_sample\_size (S1) | S1 = P1 |
| mr\_1st\_sample\_known\_ad\_status (K1) | K1 = Number of fish in P1 which were found to have an adipose clip or no adipose clip (does not include fish which were found to have an 'undeterminable and therefore unknown' adipose clip) |
| mr\_1st\_sample\_obs\_adclips (A1) | A1 = Number of fish in P1 which were found to have an adipose clip |
| mr\_2nd\_partition\_size (P2) | P2 = number\_sampled - P1 |
| mr\_2nd \_sample\_size (S2) | S2 = Number of fish in P2 which were visually sampled for adipose clips |
| mr\_2nd \_sample\_known\_ad\_status (K2) | K2 = Number of fish in S2 which were found to have an adipose clip or no adipose clip (does not include fish which were found to have an 'undeterminable and therefore unknown' adipose clip) |
| mr\_2nd \_sample\_obs\_adclips (A2) | A2 = Number of fish in S2 which were found to have an adipose clip |
| mark\_rate (MR) | MR = [estimated marks in P1 + estimated marks in P2] / (total fish in P1 and P2)  = [(P1 \* A1/K1) + (P2 \* A2/K2)] / (P1 + P2)  If K1 or K2 is ‘0’ or absent, then mark\_rate cannot be calculated and must remain blank.  The usefulness of mark\_rate is dependent upon S2 adequately representing P2 |

**Figure 7:** Illustration of PSC data fields used when tag detection method is **electronic**, Mark Sampling is **dependent** on electronic signal, and a random sub-sample of all fish in each partition is examined for adipose clips.

|  |  |
| --- | --- |
| MarkSamplingElectronicDependentSubSampleFields | * P1 = number of fish in the SIGNAL partition of the sample = number of fish in the sample with an adclip = total fish in corresponding recovery file * SIGNAL partition is subsampled * P2 = number of fish in the NO SIGNAL partition of the sample = number of fish in the sample with a 'negative' signal = number of fish in the sample - (minus) total fish in corresponding recovery file * NO SIGNAL partition is subsampled |
| mr\_1st\_partition\_size (P1) | P1 = number\_recovered\_decoded + number\_recovered\_no\_cwts + number\_recovered\_lost\_cwts + number\_recovered\_unreadable + number\_recovered\_unresolved + number\_recovered\_not\_processed + number\_recovered\_pseudotags |
| mr\_1st\_sample\_size (S1) | S1 = Number of fish in P1 which were visually sampled for adipose clips |
| mr\_1st\_sample\_known\_ad\_status (K1) | K1 = Number of fish in S1 which were found to have an adipose clip or no adipose clip (does not include fish which were found to have an 'undeterminable and therefore unknown' adipose clip) |
| mr\_1st\_sample\_obs\_adclips (A1) | A1 = Number of fish in S1 which were found to have an adipose clip |
| mr\_2nd\_partition\_size (P2) | P2 = number\_sampled - P1 |
| mr\_2nd \_sample\_size (S2) | S2 = Number of fish in P2 which were visually sampled for adipose clips |
| mr\_2nd \_sample\_known\_ad\_status (K2) | K2 = Number of fish in S2 which were found to have an adipose clip or no adipose clip (does not include fish which were found to have an 'undeterminable and therefore unknown' adipose clip) |
| mr\_2nd \_sample\_obs\_adclips (A2) | A2 = Number of fish in S2 which were visually sampled for adipose clips which were found to have an adipose clip |
| mark\_rate (MR) | MR = [estimated marks in P1 + estimated marks in P2] / (total fish in P1 and P2)  = [(P1 \* A1/K1) + (P2 \* A2/K2)] / (P1 + P2)  If K1 or K2 is ‘0’ or absent, then mark\_rate cannot be calculated and must remain blank.  The usefulness of mark\_rate is dependent upon S1 adequately representing P1, and S2 adequately representing P2 |

**Figure 8:** Illustration of PSC data fields used when tag detection method is **electronic**, mark sampling is **independent** of electronic signal, and all fish in Sample are examined for adipose clips.

|  |  |
| --- | --- |
| MarkSamplingElectronicIndependentSampleFields | * All fish in the sample are treated as one partition so P1 = number of fish in the sample * Sample is not subsampled so S1=number of fish in the sample |
| mr\_1st\_partition\_size (P1) | P1 = number\_sampled |
| mr\_1st\_sample\_size (S1) | S1 = number\_sampled |
| mr\_1st\_sample\_known\_ad\_status (K1) | K1 = Number of fish in P1 which were found to have an adipose clip or no adipose clip (does not include fish which were found to have an 'undeterminable and therefore unknown' adipose clip) |
| mr\_1st\_sample\_obs\_adclips (A1) | A1 = Number of fish in P1 which were found to have an adipose clip |
| mark\_rate (MR) | MR = A1/K1 |

**Figure 9:** Illustration of PSC data fields used when tag detection method is **electronic**, mark sampling is **independent** of electronic signal, and a subsample of fish in Sample is examined for adipose clips.

|  |  |
| --- | --- |
| MarkSamplingElectronicIndependentSubSampleFields | * All fish in the sample are treated as one partition so P1 = number of fish in the sample * Sample is subsampled |
| mr\_1st\_partition\_size (P1) | P1 = number\_sampled |
| mr\_1st\_sample\_size (S1) | S1 = number of fish in P1 which were visually sampled for adipose clips |
| mr\_1st\_sample\_known\_ad\_status (K1) | K1 = Number of fish in S1 which were found to have an adipose clip or no adipose clip (does not include fish which were found to have an 'undeterminable and therefore unknown' adipose clip) |
| mr\_1st\_sample\_obs\_adclips (A1) | A1 = Number of fish in S1 which were found to have an adipose clip |
| mark\_rate (MR) | MR = A1/K1  The usefulness of mark\_rate is dependent upon S1 adequately representing P1. |

CHAPTER 15

Release Count and Mark Code Fields

1. Version 4.1 Release Count and Mark Code Fields

The intention of the version 4.1 count and mark code fields is to provide a physical view of release counts and marks. Changes to the method of reporting release counts and marks were necessary due to the desequestering of the adipose clip to indicate a coded-wire tagged fish. The changes enable the user to calculate the number of adipose clipped fish in a release group, whether or not they are coded-wire tagged. The changes also permit the reporting of up to two different marks for CWT or Non-CWT (fish that do not contain a CWT) fish in a release.

Each Reporting Agency may have a different usage for each release count and mark code field. The agency may determine the particular order of usage of count and mark code fields; therefore no information is implied by the ordering of values in count and mark code fields.

Under version 4.1 specifications, the following fields are used to report release counts and mark codes (Figure 1):

**Figure 1:** Illustration of Version 4.1 Mark & Count Fields

|  |  |  |  |
| --- | --- | --- | --- |
| **Field No.** | **PSC Common Name** | **Description** | |
| **CWT Release Group** | **Unassociated Release Group** |
| F28 | CWT 1st Mark | Mark(s) on CWT fish corresponding to count value in CWT 1st Mark Count (F29) | not applicable |
| F29 | CWT 1st Mark Count | Number of CWT fish corrected for tag loss and mortality with CWT 1st Mark (F28) | not applicable |
| F30 | CWT 2nd Mark | Mark(s) on CWT fish corresponding to count value in CWT 2nd Mark Count (F31)  (only used if CWT tagged fish have 2 different mark codes) | not applicable |
| F31 | CWT 2nd Mark Count | Number of CWT fish corrected for tag loss and mortality with CWT 2nd Mark (F30)  (only used if CWT tagged fish have 2 different mark codes) | not applicable |
| F32 | Non-CWT 1st Mark | Mark(s) on non-CWT fish corresponding to count value in Non CWT 1st Mark Count (F33) | Mark(s) on fish corresponding to count value in Non CWT 1st Mark Count (F33) |
| F33 | Non-CWT 1st Mark Count | Number of fish with No CWT with Non-CWT 1st Mark (F32) | Number of fish with Non-CWT 1st Mark (F32) |
| F34 | Non-CWT 2nd Mark | Mark(s) on non-CWT fish corresponding to count value in Non CWT 2nd Mark Count (F35)  (only used if fish with No CWT have 2 different mark codes) | Mark(s) on fish corresponding to count value in Non CWT 2nd Mark Count (F35)  (only used if fish with No CWT have 2 different mark codes) |
| F35 | Non-CWT 2nd Mark Count | Number of fish with No CWT with Non-CWT 2nd Mark (F34)  (only used if fish with No CWT have 2 different mark codes) | Number of fish with Non-CWT 2nd Mark (F34)  (only used if fish with No CWT have 2 different mark codes) |
| F37 | Tag Loss Rate | Proportion of fish which shed the CWT from the tag loss sample (expressed as a decimal percentage) | not applicable |
| figure2_v4 | | | |

The use of the release mark and count fields depends upon whether the release group is reported as a **CWT release group** (Record\_Code [Field 1] = 'T' -- release group contains any number of coded wire tagged fish) or a **Unassociated (to CWTs) release group** (Record\_Code [Field 11] = 'N' -- release group contains no coded wire tagged fish).

* + 1. For **CWT Release Records**, CWT 1st Mark (F28), CWT 2nd Mark (F30), Non-CWT 1st Mark (F32), and Non-CWT 2nd Mark (F34) are used to report marks. CWT 1st Mark Count (F29), CWT 2nd Mark Count (F31), Non-CWT 1st Mark Count (F33) and Non-CWT 2nd Mark Count (F35) are used to report counts. Tag Loss Rate (F37) is used to report the rate of CWT loss.

If cwt fish all have the same mark, only CWT 1st Mark (F28) and CWT 1st Mark Count (F29) are used. If cwt fish have 2 different marks, CWT 1st Mark (F28), CWT 1st Mark Count (F29), CWT 2nd Mark (F30), and CWT 2nd Mark Count (F31) are used. **No specific information** is implied by using the 1st or 2nd set of CWT mark/count fields, when both sets of fields are used.

If fish that did not contain a CWT when released (including fish that were tagged and shed cwt) all have the same mark, only Non-CWT 1st Mark (F32) and non-CWT 1st Mark Count (F33) are used.

If fish that did not contain a CWT when released have 2 different marks, Non-CWT 1st Mark (F32), Non-CWT 1st Mark Count (F33), Non-CWT 2nd Mark (F34) and Non-CWT 2nd Mark Count (F35) are used. **No specific information** is implied by using the 1st or 2nd set of Non-CWT mark/count fields when both sets of fields are used. (i.e. The number of fish that were tagged and shed CWT may be reported in the 1st set of Non-CWT mark/count fields or the 2nd set of Non-CWT mark/count fields.)

The **number of fish released with a CWT** is the sum of CWT 1st Mark Count (F29) + CWT 2nd Mark Count (F31).

The **number of fish released without a CWT** is the sum of Non-CWT 1st Mark Count (F33) + Non-CWT 2nd Mark Count (F35).

The **number of fish released** **with an adipose clip** is the sum of the Mark Counts where the related mark begins with a '5'.

The **number of fish released** **without an adipose clip** is the sum of the Mark Counts where the related Mark begins with a '0'.

The **number of CWT fish released** **with an adipose clip** is the sum of the CWT Mark Counts where the related CWT Mark begins with a '5'.

The **number of CWT fish released** **without an adipose clip** is the sum of the CWT Mark Counts where the related CWT Mark begins with a '0'.

The **number of Non-CWT fish released** **with an adipose clip** is the sum of the Non-CWT Mark Counts where the related CWT Mark begins with a '5'.

The **number of Non-CWT fish released** **without an adipose clip** is the sum of the Non-CWT Mark Counts where the related CWT Mark begins with a '0'. The **total** **number of fish released** can be calculated by summing the Mark Counts (1st Mark Count (F29) + CWT 2nd Mark Count (F31) + Non-CWT 1st Mark Count (F33) + Non-CWT 2nd Mark Count (F35)).

The **number of fish that were tagged and shed CWT** must be calculated from the Tag Loss Rate (F37) and the **number of fish released with a CWT** (CWT 1st Mark Count (F29) + CWT 2nd Mark Count (F31) ). The formula is:

= Tag Loss Rate (F37) \* (CWT 1st Mark Count (F29) + CWT 2nd Mark Count (F31) / (1 - Tag Loss Rate (F37))

* + 1. For **Unassociated Release Records**, Non-CWT 1st Mark (F32) and Non-CWT 2nd Mark (F34) are used to report the marks. Non-CWT 1st Mark Count and Non-CWT 2nd Mark Count are used to report the counts. Other fields (CWT 1st Mark (F28), CWT 1st Mark Count (F29), CWT 2nd Mark (F30), CWT 2nd Mark Count (F31), Tag Loss Rate (F37)) are required to be blank for unassociated releases.

If all fish have the same mark, only Non-CWT 1st Mark (F32) and Non-CWT 1st Mark Count (F33) are used. If fish have 2 different marks, Non-CWT 1st Mark (F32), Non-CWT 1st Mark Count (F33), Non-CWT 2nd Mark (F34) and Non-CWT 2nd Mark Count (F35) are used. **No specific information** is implied by using the 1st or 2nd set of Non-CWT mark/count fields when both sets of fields are used.

The **number of fish released** **with an adipose clip** is the sum of the Mark Counts where the related Mark begins with a '5'.

The **number of fish released** **without an adipose clip** is the sum of the Mark Counts where the related Mark begins with a '0'.

The **total** **number of fish released** can be calculated by summing the Mark Counts.

1. Version 4.1 Mark and Count Fields - Examples

**Table 1:** Examples of Version 4.1 Release Mark & Count Fields

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| # | Example | CWT 1st Mark | CWT 1st Mark Count | CWT 2nd Mark | CWT 2nd Mark Count | Non-CWT 1st Mark | Non-CWT 1st Mark Count | Non-CWT 2nd Mark | Non-CWT 2nd Mark Count | Tag Loss Rate | Calculated Number Shed CWT |
|  |  | **(F28)** | **(F29)** | **(F30)** | **(F31)** | **(F32)** | **(F33)** | **(F34)** | **(F35)** | **(F37)** | **= (F29 + F30) \* F37 / (1 - F37)** |
| 1 | Typical (pre mass-marking) CWT Release where CWT fish have ADclip, Shed CWT fish have ADclip, and Associated fish are not marked.  e.g., 1,000 CWT fish with ADclip, 90,000 associated (Non-CWT) fish with no mark, and 25 Shed CWT (Non-CWT) fish with ADclip. | 5000 | 1,000 |  |  | 0000 | 90,000 | 5000 | 25 | 0.0244 | = 1000 \* 0.0244 / (1-.0244)  = 25 |
| 2 | Typical (pre mass-marking) CWT Release as above but 50 of the 1000 CWT fish have bad Adclips. | 5000 | 950 | 0000 | 50 | 0000 | 90,000 | 5000 | 25 | 0.0244 | = (950+50) \* 0.0244 / (1-.0244)  = 25 |
| 3 | Double Index Tagging / Mass Marking where all fish have Adclip.  e.g., 1,000 CWT fish with ADclip, 90,025 Non-CWT fish with ADclip (25 shed CWT fish + 90,000 associated fish). | 5000 | 1,000 |  |  | 5000 | 90,025 |  |  | 0.0244 | = 1000 \* 0.0244 / (1-.0244)  = 25 |
| 4 | Double Index Tagging where no fish have ADclip:  e.g., 1,000 CWT fish with no mark, 90,025 Non-CWT fish with no mark (25 shed CWT fish + 90,000 associated fish). | 0000 | 1,000 |  |  | 0000 | 90,025 |  |  | 0.0244 | = 1000 \* 0.0244 / (1-.0244)  = 25 |
| 5 | Unassociated Release where all fish have one mark code. e.g., 90,000 LV. | not applicable | not applicable | not applicable | not applicable | 0001 | 90,000 |  |  | not applicable | not  applicable |
| 6 | Unassociated Release where fish have two mark codes. e.g., 60,000 LV, 30,000 no mark. | not applicable | not applicable | not applicable | not applicable | 0001 | 60,000 | 0000 | 30,000 | not applicable | not  applicable |

CHAPTER 16

Pseudo Tags (Blank or Agency-Only Wire)

Blank wire tags and agency-only wire tags are not coded wire tags (CWTs). They physically look like CWTs, are injected in the same manner as CWTs and have similar magnetic properties enabling them to trigger automatic diversion gates and electronic CWT detectors; However, blank wire and agency-only wire tags do not possess a specific etched binary or decimal code and, upon recovery, cannot be resolved to a specific tag code. Throughout this document, the term "pseudo tag" is used for blank wire tags and agency-only wire tags.

Pseudo tags placed in the head or snout region must be reported due to the desequestering of the adipose clip and the advent of electronic tag detection. Body-placed pseudo tags have not been reported before version 4.1 but may now be reported.

1. How to report Pseudo Tag Releases

All release groups possessing pseudo tags must be tagged entirely with the same type of wire. Mixing of blank wire and agency-only wire, pseudo tags and CWTs, or pseudo tags and non-tagged fish in the same release group is not permitted.

A release group containing pseudo tags is reported as a **non-associated release record** (Figure 1). It is not a CWT release group. All CWT release fields (CWT 1st Mark Count, CWT 1st Mark, CWT 2nd Mark Count, CWT 2nd Mark, Tag Loss Rate, Tag Loss Days, Tag Loss Sample Size, Tag Reused) must be blank.

**Figure 1:** Version 4.1 Release Fields Used to Report Pseudo Tags

|  |  |  |  |
| --- | --- | --- | --- |
| **Field No.** | **PSC Format Name** | **Description** | **Required Value** |
| F1 | Record Code | Code to indicate the CWT data file classification (class) of the individual record. | 'N' - non-associated release record |
| F7 | Tag Code or Release ID | Unique Release ID to identify the release group. | Column 1 must be '!'  Columns 2 and 3 must match one of the valid coordinator codes for the Releases Coordinator field |
| F8 | Tag Type | Code to indicate type of tag used for release group | '16' - Pseudo tag, blank wire |
| F32 | Non-CWT 1st Mark | Mark(s) on fish corresponding to count value in Non CWT 1st Mark Count (F33) |  |
| F33 | Non-CWT 1st Mark Count | Number of fish with Non-CWT 1st Mark (F32) |  |
| F34 | Non-CWT 2nd Mark | Mark(s) on fish corresponding to count value in Non CWT 2nd Mark Count (F35) | (only used if fish have 2 different mark codes) |
| F35 | Non-CWT 2nd Mark Count | Number of fish with Non-CWT 2nd Mark (F34) | (only used if fish have two different mark codes) |

**Table 1:** Examples of Version 4.1 Release Fields Used to Report Pseudo Tags

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Example | Record Code | Tag Code or Release ID | Tag Type | Non-CWT 1st Mark | Non-CWT 1st Mark Count | Non-CWT 2nd Mark | Non-CWT 2nd Mark Count |
|  | **(F1)** | **(F7)** | **(F8)** | **(F32)** | **(F33)** | **(F34)** | **(F35)** |
| All fish in release group are tagged with blank wire and have one mark.  e.g., 9000 fish tagged with blank wire and LV marked. | N | !ccxxxxxxxxx, where 'cc' is a valid coordinator code and 'xxxxxxxxx' is unique,  e.g., !040001, for WDFW blank wire release | 16 | 0001 | 9,000 |  |  |
| All fish in release group are tagged with agency-only wire and have one mark.  e.g., 9000 fish tagged with agency-only wire and LV marked. | N | !ccxxxxxxxxx,  e.g., !040002, for WDFW blank wire release | 16 | 0001 | 9,000 |  |  |
| All fish in release group are tagged with blank wire. Fish have two mark codes.  e.g., All fish tagged with blank wire: 6000 LV, 3000 no mark. | N | !ccxxxxxxxxx,  e.g., !040003, for WDFW agency-only wire | 16 | 5001 | 6,000 | 0000 | 3,000 |
| All fish in release group are tagged with agency-only wire. Fish have two mark codes.  e.g., All fish tagged with blank wire: 6000 LV, 3000 no mark. | N | !ccxxxxxxxxx,  e.g., !040004, for WDFW agency-only wire | 16 | 5001 | 6,000 | 0000 | 3,000 |
| Fish in release group are tagged with agency-only wire and blank wire. | This cannot be reported in one release record -- The release group must be separated into two non-associated release records. The relationship can be reported using the Related Group Type (F11) and Related Group ID (F12) fields. | | | | | | |
| Fish in release group are tagged with pseudo tags and CWTs | This cannot be reported in one release record -- The release group must be separated into a CWT release record and a non-associated release record. The relationship can be reported using the Related Group Type (F11) and Related Group ID (F12) fields. | | | | | | |
| Some fish in release group are tagged with pseudo tags. Other fish are not tagged. | This cannot be reported in one release record -- The release group must be separated into two non-associated release records. The relationship can be reported using the Related Group Type (F11) and Related Group ID (F12) fields. | | | | | | |

1. How to Report Pseudo Tag Recoveries

Pseudo tag recoveries are reported using three **Recovery** fields (Figure 2).

**Figure 2:** Version 4.1 Recovery Fields Used to Report Pseudo Tags

|  |  |  |  |
| --- | --- | --- | --- |
| **Field No.** | **PSC Format Name** | **Description** | **Required Value** |
| F28 | Tag Status | Code to indicate status of the tag recovery | '9' - Pseudo tag, blank wire |
| F29 | Tag Code | Identifier coded on a tag to denote a release group | 'BLANK' - for blank wire tag  'D1BLANK', where 'D1' is the numeric agency wire prefix (i.e. Data 1) - for agency-only wire tag |
| F30 | Tag Type | Code to indicate type of tag wire found in the recovery snout | '16' - Pseudo tag, blank wire |

**Table 2:** Examples of Version 4.1 Recovery Fields Used to Report Pseudo Tags

|  |  |  |  |
| --- | --- | --- | --- |
| Example | Tag Status | Tag Code | Tag Type |
|  | **(F28)** | **(F29)** | **(F30)** |
| Blank wire recovery | 9 | BLANK | 16 |
| Agency only wire recovery | 9 | D1BLANK, where 'D1' is the numeric agency wire prefix (i.e. Data 1)  e.g., 63BLANK, for WDFW agency-only wire | 16 |

Pseudo tag recoveries in sampled fisheries are reported using only one **Catch Sample** field (Figure 3).

**Figure 3:** Version 4.1 Catch Sample Fields Used to Report Pseudo Tags

|  |  |  |
| --- | --- | --- |
| **Field No.** | **PSC Format Name** | **Description** |
| F34 | Number Recovered Pseudo Tags | Number of pseudo tag recoveries in sampling stratum ( # of recoveries in sample with tag\_status = '9' ) |

ADDENDUM A

CHANGE LOG

Note: Referenced page numbers are valid only for the version with the corresponding date of the changes or additions listed below because page numbers change among updated versions.

10-16-09 Updated names and descriptions of the Regions and Basins in the California Domain, Chapter 13 – Geographic Coding, pages 74 and 75.

1-4-10 Added *Required if study\_integrity is not ‘D’* to Release Data field #18, Chapter 2 – Release Data, page 11. Added new ODFW gear codes: Fishery 29, Gear 29; Fishery 46, Gears 44, 48, 49; Fishery 59, Gear 39; Fishery 64, Gear 45; Fishery 69, Gear 37, Chapter 9 – Fishery Coding, pages 52, 53 and 55.

3-1-10 Added clarification language to section B.2.f, “Description”, Chapter 1 – Introduction, Definitions and Rules, page 2. Added new section H. “Methods of Removing Records of Data (for one Reporting Agency)”, Chapter 1– Introduction, Definitions and Rules, page 7. Added sampling agencies AFSC, NWFSC and NWR, Chapter 8, pages 48 and 49. Added new CDFO Gear codes: Fishery 31, Gears 10, 13, 15; added new NMFS Fishery and Gear codes: Fishery 800, Gear 800, Chapter 9 – Fishery Gear Coding, pages 53 and 57.

3-1-11 Added section D.10. Chapter 1 – Introduction, Definitions and Rules, page 3. Added new Coordinator Code ‘16’ Chapter 2 – Release Data, page 9. Added clarification language to Field 41, Estimated Number, Chapter 3 – Recovery Data, page 25. Added new mark codes, Chapter 11 – Mark coding, page 63. Edited geographic codings for Alaska, Yukon and Transboundary domains, Chapter 13 – Geographic Coding, pages 70 and 71.

3-1-12 Added new Coordinator values ’17’ and ‘18’ to Data field #6, Chapter 2 – Release Data, page 9.

Renamed Release Agency Code EBMD to EBMUD, Chapter 8–Agency Coding, page 45

Added Sampling Agency EBMUD; SBT, YCWA, Chapter 8–Agency Coding, page 49

Added new WDFW Gear code: Fishery 24 Gear 29; added new CDFO Gear codes: Fishery 32, Gears 00, 11, 70, Fishery 39, Gears 00, 07, 85; changed Gear definition: Fishery codes 40 & 46, Gear 07; added NMFS Gear code: Fishery 40, Gear S1\_N, Chapter 9 – Fishery Gear Coding, pages 53, 54 and 55.

7-1-13 Deleted Agency Code “SSLC – Seward Sealife Center, Chapter 8 – Agency Coding, page 47.

Added new Reporting Agency and Sampling Agency: NMFSNWR – National Marine Fisheries Service NW Region (OR, WA), Chapter 8 – Agency Coding, pages 48 & 49.

Added new Gear Codes: Fishery Code 18, CDFO Gears 30, 31, 32, 33; Fishery 20, CDFO Gear 13; Fishery 24, WDFW Gears 10 and 19; Fishery 39, CDFO Gears 10 and 11; Fishery 53, STIL Gear 53; Fishery 54, STIL Gear 54; Fishery 55, STIL Gear 55; Fishery 90, CDFO Gears 15, 30, 33, Chapter 9 – Fishery Coding.

7-1-14 Added new Releasing Agency Code “SSSC Sitka Sound Science Center (AK)” Chapter 8-Agency Coding, page 47.

Added new Reporting Agency Code COLC Colville Tribe (WA) Chapter 8-Agency Coding, page 48.

Deleted Sampling Agency Code “MIC Metlakatla Indian Community”, Chapter 8-Agency Coding, page 49.

Added new Sampling Agency Code “HVT Hoopa Valley Trive (CA), Chapter 8-Agency Coding, page 49.

Added new Fishery Code 812 Rockfish Fishery (Gulf of Alaska), Chapter 9-Fishery Coding, page 51.

Added new Gear Codes: Fishery 20, Gear Code 15; Fishery 23, Gear Code 38; Fishery 24, Gear Codes 14, 24; Fishery 50, Gear Code H\_N; Fishery 54, Gear Code 54; Fishery 81, Gear Code 813 and Fishery 812, Gear Code 801, Fishery 90 Gear Code 3\_N, Chapter 9-Fishery Coding, page 51.

Changed ‘CDFG’ to ‘CDFW’ and ‘California Department of Fish and Game’ was changed to ‘California Department of Fish and Wildlife’ throughout the document.