COMMUNITY MAPPING NETWORK
FISHERIES INFORMATION SUMMARY SYSTEM
(CMN FISS)

DATA ENTRY TOOL
USER MANUAL

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1.0 Purpose

The purpose of this manual is to introduce users to the procedures and standards required for data entry into the Community Mapping Network (CMN) Fisheries Information Summary System (FISS) Data Entry Tool.

2.0 Introduction

This manual describes the CMN FISS Data Entry Tool, and how to use the application. CMN and FISS are two separate projects. Each project will be described below.

2.1 What is FISS?

The Fisheries Information Summary System (FISS) is a geo-referenced database of summary level fish and fish habitat, macro-reach and lake classification data. FISS is a joint project between Fisheries and Oceans Canada (DFO) and BC Ministry of Environment (MOE) which focuses on four business functions: planning, project reviews, requests for information, and research. FISS provides information for users from the government, First Nations, the private sector, and the public. FISS presently consists of fish and fish habitat, macro-reach and lake classification databases, overlaid on a 1:50,000 digital stream network of British Columbia. “Information is accessible through queries on the Web. Standardized hard copy maps and reports are also produced.”

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1 Province of British Columbia. 2007.
2 ibid.
3 ibid.
4 ibid.
The following summary level lake and stream fish and fish habitat theme data are included in FISS:

- Water Quality Stations
- Enhancement/Management Activities
- Sensitivity Comments
- Resource Use
- Obstructions
- Fisheries Potential/Constraints
- Value Comments
- Species/Stock Information
- Fish Distribution
- Life History

“FISS will be continually updated as new reports and surveys are received. The long-term goal is to automate the process so that detailed 1:20,000 Reconnaissance Level Reports will be submitted digitally. Summary routines will be run that will extract the points and information and add it to the FISS database. Historical reports will continue to be compiled manually as they are collected and received.”

2.2 What is CMN?

The Community Mapping Network (CMN) is a network of partners comprised of community groups, organizations and individuals that collect and map natural resource information. An advisory committee responsible for managing CMN includes representatives from the BC Conservation Foundation, Fisheries and Oceans Canada, Environment Canada (Canadian Wildlife Service), B.C. Ministry of Agriculture, Food and Fisheries, B.C. Ministry of Environment, Fraser Valley

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5 ibid.
Regional District, Greater Vancouver Regional District, local governments, and community groups. CMN was created to integrate data from government and non-government organizations and make it accessible through a mapping system. CMN allows for organizations to see what other organizations have done.

2.3 The Community Mapping Network (CMN) and Fisheries Information Summary System (FISS)

DFO and MOE have decided to use CMN to allow for data to be entered spatially and textually into the CMN FISS database. CMN FISS does not attempt to show all information that is in the full Oracle version of FISS. At this time, it is designed to be a subset of the Oracle FISS database. The Ministry of Environment is the custodian of the Oracle FISS data set which is the full official version. CMN FISS and Oracle FISS are two separate applications. CMN is a Microsoft Access driven database while FISS is an Oracle driven database. A load routine has been developed to enable periodic uploading of CMN FISS information to the official Oracle FISS database.

ibid.
3.0 Getting Started with CMN FISS Data Entry Tool

This section will help the user get set-up for data entry in CMN FISS. It is recommended that Microsoft Internet Explorer 6.x or older is used.

3.1 Access

In order to access the data entry tool, a UserID and password must be requested. Please contact Gord Oliphant regarding permissions (See Appendix 1 “General Inquiries”).

3.2 MapGuide Plug-in

In order to view maps on the Community Mapping Network, a plug-in called Autodesk Mapguide Viewer 6.5 must be installed on the user’s computer. This product is produced by AutoDesk and can be downloaded at http://www.mapguide.com/Downloads/

3.3 Launching CMN FISS Data Entry Tool

To launch the CMN FISS Data Entry Tool:

1. Start your Internet Browser. It is recommended that users use Internet Explorer as the application was developed for Internet Explorer and some of the functions might not work with other browsers.
2. Enter the URL: http://www.shim.bc.ca/
3. There are two ways of accessing the CMN FISS Data Entry Tool from the CMN website.
   a. Click on “DFO FISS Data Entry Tool” under “Atlas Gallery” in the scroll box;
   b. Or alternatively click on “Atlas Gallery” and scroll down the page and find the “DFO FISS Data Entry Tool”.
3.4 Setting Preferences

The user should set preferences to metric distance and UTM coordinates.

To set preferences:

1. Right click on the map to open the options menu.
2. Highlight “About” then click on “Preferences”.
3. The Preferences Window will look like Figure 1.

![Preferences Window]

Figure 1. Example of Preferences

4. Change the “Map Units” to “Metric”.
5. Change the “Selection Mode” to “Intersection”.
6. Make sure all the options under “Status Bar” are checked.
7. Change “Units” to “Mapping Coordinate System”.

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4.0 Checking for the presence of a Report

Before entering a report in CMN FISS, users must check for the presence of the report in both CMN FISS and Oracle FISS. The order of checking reports is not significant.

4.1 Checking for the presence of a Report in Oracle FISS

Before entering a report, please check and make sure that the report is not already in the FISS Oracle database. Not checking can result in redundant data.

Checking for the presence of a report in Oracle FISS can be done two ways:

a. Users can query the Oracle FISS database directly from the CMN FISS Data Entry Tool by using the report server. This can be done two ways:
   - By double clicking on the waterbody which opens up the Oracle FISS Report Server
   - Or by highlighting the waterbody, opening the Mapping Tools, then clicking on the “View a Report” button.

b. A FISS reference can be searched for by entering in the following URL into an Internet Browser: http://a100.gov.bc.ca/pub/fidq/references.do
   - Enter any known information into the appropriate fields such as Gazetted Name/Alias, Watershed Code, or Waterbody Identifier.
   - The Reference Number is most likely unknown when searching for a FISS reference, as this is a key clue that it is in FISS.
4.2 Checking for the presence of a Report in CMN FISS

New references are being entered in CMN FISS all the time, and they may not be loaded into the FISS Oracle database yet.

To check for the presence of a report in CMN FISS:

1. Click on the “Mapping Tools” button in the top right-hand corner.
2. Click on the Add/Edit References button.
3. Click on the “Search a reference to edit” button.
4. A new window appears called the FISS Reference Search which is shown in Figure 2.

![FISS Reference Search](image)

**Figure 2. FISS Reference Search**

5. Using the FISS Reference Search is described in the following points:
   a. Searches using the keywords from the Abstract, Title, and Author can be entered which is shown in Figure 2. The Reference Title is the preferred first choice for searches.
   b. Searches for Reference Numbers can be entered but exact characters in order must be used or the application will not return any results.
   c. The search does not have the ability to search by different categories at the same time. Try one category first, and if you do not find what you are looking for, another category can be tried.
d. Wildcard searches can be done by using “%” as the wildcard character.

**Note:** Wildcards cannot be used when searching for a Reference Number.
5.0 Adding, and Editing a Reference

For the purposes of CMN FISS a reference refers to the report that the FISS data has been extracted from.

**Note:** If a reference in Oracle FISS needs to have changes made to it, contact: Gordon Oliphant (See Appendix 1 “General Inquiries”).

5.1 Adding Reference Information to CMN FISS

After ensuring that the reference is not in either CMN FISS or Oracle FISS, a reference can be added to CMN FISS.

To add Reference Information to CMN FISS:

1. Click on the Add/Edit References button.

2. Click on the “Add a new reference” button.

3. The reference form will look similar to Figure 3 - Example of a completed Reference Form.
4. Fill-out appropriate fields for the report.

5. For the Reference No. small blocks of pre-approved numbers will be assigned. Arrangements for this can be made with the database administrator when accounts are established.

6. Select the appropriate Reference Type from the drop-down list shown in Figure 4.
7. The Location of the reference refers to who owns the report and where it is located. For example for Ministry of Environment reports, please put “MOE, Victoria HQ”. Even if the report is in offsite storage, the client must go through the Victoria Headquarters in order to gain access to the report. If the report is in more than one place, list the locations with a semi-colon “;” in-between. For example: If the report is at the MOE, Victoria Headquarters and in EcoCat the location would be filled out “MOE, Victoria HQ; EcoCat”. This is example is shown in the Location field in the middle of Figure 3. Note that EcoCat can only be listed as a location for reports if the report is in “Public EcoCat”. If the report is in EcoCat and not viewable to the public EcoCat should not be listed.
8. For the URL, check to see if the report is in Public EcoCat. If the report is in public EcoCat, copy and paste the following link to EcoCat in the URL Field at the bottom of Figure 3: http://www.env.gov.bc.ca/ecocat/.

9. Descriptions and Abstracts can be taken from EcoCat if the report is already in EcoCat. The Description has a character limit of 250 characters. The Abstract has a character limit of 2000 characters.

5.2 Editing Reference Information in CMN FISS

To edit Reference Information in CMN FISS:

1. Click on the Add/Edit References button.

2. Click on the “Search a reference to edit” button.

3. Fill in the appropriate information into the FISS Reference Search (see Figure 2. Example of the FISS Reference Search), then click “Search”.

4. The “FISS Search Result” window displays the results of the search similar to the example in Figure 5 below.
5. Click on the “Edit” hypertext link left-hand of the reference you wish to edit to open the Reference Form.

6. Make the desired changes to the reference.

7. Click “Submit” to save the new information to the database.

8. When successful a message will display informing the user that the “Data committed to the database” (see Figure 6).

Figure 5. Example of FISS Search Results window

Figure 6. Successful submission message
6.0 Searching for a waterbody

In order to digitize a point for a waterbody, the waterbody must be located on the map. There are several ways to search for the waterbody including Searching using the UTM Coordinates (Section 6.1) and searching using the Zoom Goto Tool (Section 6.2).

6.1 Searching with UTM Coordinates

This feature is useful for searching for a waterbody by using the UTM coordinates available in the B.C. Watershed Atlas. This is helpful for searching for a waterbody which has not been digitized in CMN FISS yet.

To search for a location using UTM coordinates:

1. Select the UTM zone from the dropdown list in the UTM Locator shown in Figure 7.

2. Type the Easting into the Easting box. This will always be a 6 digit number.

3. Type the Northing into the Northing box. This will always be a 7 digit number.

4. Select a point type from the drop-down “Select a Point to digitize” list. It does not matter what type of point is selected, as the point will not be digitized. The UTM Search will not work without a point selected.

5. Click the button.

6. When the map is zoomed click reject.
6.2 Searching using the Zoom Goto tool

The Zoom Goto Tool is useful for zooming into a location. The most common use of the Zoom Goto Tool is to search for a FISS Point or a Waterbody.

To search using the Zoom Goto tool:

1. This feature can be accessed in two ways:
   a. Click on the magnified glass with the arrow beside it, on the top left-hand corner of the map menu, or
   b. Or right click on the map and click on “Zoom” → “Goto…” which is shown in Figure 8.

![Figure 8. Zoom Goto Menu](image)

2. The “Zoom Goto” window opens similar to Figure 9.
3. A project can be searched a number of ways by selecting the appropriate “Category” and entering the corresponding information in the “Location” field.
4. The “Zoom to Width” should be specified. A five kilometre “Zoom to width” is a good guideline to use for zooming the map in close enough to add a point after the waterbody is selected.
6. The map will refresh with the "Goto" location centred.
7.0 Digitizing a Point in CMN FISS

There are three basic point types in FISS which are described in the following section. Points can be digitized in CMN FISS three ways: by selecting a waterbody on a map, by using UTM Coordinates for the waterbody, and by selecting the waterbody from a list. The recommended method of digitizing a point is by selecting the waterbody on the map.

7.1 Point Types

There are three basic point types in FISS: a “W” point, a “P” point, and a zone. The “W” point represents a whole waterbody which is used for lakes, streams and reservoirs, as data attached to this “W” point can often apply to the whole watershed or waterbody and not specifically to the location of the point. The “P” point represents a point with data tied to the specific location. An example would be fish observed in a pool at a given location. The “S”, “U” and “D” points all correspond to a zone. The “U” point represents an upper limit on a main channel. The “S” point represents an upper limit on a side channel. The “D” point is the downstream point on either a main or side channel. A “D” point cannot be digitized in FISS without first having a “U” or an “S” point. The point types and what they represent are laid out in Table 1 below.

Table 1. What each point type represents.

<table>
<thead>
<tr>
<th>Point Type</th>
<th>Point(s) represent:</th>
</tr>
</thead>
<tbody>
<tr>
<td>W</td>
<td>Whole watershed or waterbody</td>
</tr>
<tr>
<td>P</td>
<td>Data point tied to specific location</td>
</tr>
<tr>
<td>U</td>
<td>Upper limit on a main channel corresponding to a zone</td>
</tr>
<tr>
<td>S</td>
<td>Upper limit on a side channel corresponding to a zone.</td>
</tr>
<tr>
<td>D</td>
<td>Downstream limit on main channel or side channel corresponding to a zone. If a “D” point is not specified, FISS assumes that the “D” point is at the mouth of the channel.</td>
</tr>
</tbody>
</table>
When placing a point at a stream mouth the user must place the point approximately 50 metres from the stream mouth so as not to confuse the point on a tributary for a point on a parent stream. The user must be zoomed in as close as possible to place a point most accurately, so that the point appears on the stream line when zoomed in to a large scale. Measuring the distance can be done using the Distance Tool discussed in Section 10.3.

In cases where the information entered applies to the entire length of the stream downstream from the “U” all the way to the stream mouth, it is not necessary to enter a downstream point. The application will default to the mouth in this case and the UTM coordinates from the B.C. Watershed Atlas are used.

In cases of side channels where the information entered applies to the entire side channel from the “S” point to where the side channel re-enters the parent stream, it is not necessary to enter a downstream point. The application will default to where the side channel re-enters the parent stream.

**7.2 Standardized approach for placing W Points**

A standardized approach has been created to assist users in placing W Points on Lakes (Section 7.2.1) and Streams (Section 7.2.2). There should only be one W Point placed for each waterbody. The W Point can be used again by other users to attach information associated to the whole waterbody. It is important to always check that the point is associated with the correct waterbody.
7.2.1 Standardized approach for placing W Points on a lake

When placing a W Point on a lake, it should be placed approximately 50 metres from the lake outlet. The distance tool (Section 10.3) can be used for an approximate measurement. It is critical that users check the W Point to ensure that it is on the lake and not on an adjacent waterbody. This can be done by double clicking on the point and opening up the “Point Reference Report”.

7.2.2 Standardized approach for placing W Points on a stream

W Points on streams must be placed 50 metres upstream from the stream mouth so as not to confuse the point on a tributary for a point on a parent stream. The distance tool (Section 10.3) can be used for an approximate measurement. It is critical that users check their point to ensure that it is on the correct stream. This can be done by double clicking on the point and opening up the “Point Reference Report”.

7.3 Digitizing a point by selecting a waterbody on a map

To digitize a point by selecting a waterbody on the map:

1. If you are not already in Mapping Tools, click on "Mapping Tools".
2. Make sure that the map is zoomed as close as possible when placing a point. The larger scale helps ensure accuracy when placing a point.
3. Click on the Arrow button in the Autodesk menu.
4. With the mouse select a waterbody that you want to create the point for.
5. In “Mapping Tools”, click on the “Select Waterbody” drop-down menu shown in Figure 10.

**Figure 10. Select Waterbody drop-down menu**
6. Select “Use the waterbody selected on map”.
7. Click on the drop-down menu “Select a point to digitize”.
8. A new window appears called “Waterbody Form” which will appear similar to Figure 11.

![Water Body Form](image)

**Figure 11. Example of Waterbody Form**

9. The Watershed Code and UTM coordinates are already filled in (see top of Figure 10). Make sure that they are correct before proceeding. If incorrect close window without clicking submit and repeat the previous steps.

10. If the watershed code and the UTM coordinates are correct, fill out the required information which includes the Collector’s name, which is the name of the data entry person, and the Date Collected, which is the day that the information is being entered into CMN FISS.

11. If a point has not been previously digitized on the Waterbody, the user will have to select the “Waterbody Type”. The options for the “Waterbody Type” are:
   - L - Lake
   - S - Stream
   - W - Wetland
12. Fill in any other information if it is known, then click submit.

**Note:** “Stream/Lake Name” should only be filled in if the name of the waterbody is gazetted, otherwise the name should be typed into the Alias field.

13. Select a type of point from the drop-down list which is outlined in a red box in Figure 12 below. To decide what type of point to use, see Section 7.1.

![Figure 12. “Select a point to digitize” drop-down menu list is outlined in a red box](image)

14. Click on the point button and place the point on your waterbody. For rules for placing W Points, see Section 7.2.

15. A new form opens called “Digitize Point” form. Make sure that the information is correct, then type in a “Point No.” The point number can be related to the FISS reference number but the point number must be numerical and unique.

16. Click “Submit”, then “Close”.

17. The point should now appear on the map.

18. Check to make sure point information is associated with the correct waterbody by double clicking the point.
7.4 Digitizing a Point on a waterbody that is mapped at a 1:20,000 TRIM scale

To digitize a point by selecting a waterbody on the map:

1. If you are not already in Mapping Tools, click on "Mapping Tools".
2. The UTM Locator (Section 6.1) or the Zoom Goto function (Section 6.2) can be used to zoom in to the location of the waterbody. Make sure that the map is zoomed in as close as possible. The larger scale helps ensure accuracy when placing a point.
3. On the left-hand side of the map is the Layers Panel which includes many Layer Groups. Click the box beside “TRIM 1:20K” so that the box is checked.
   **Note:** If the “TRIM 1:20K” Layer Group is not showing, the map needs to be zoomed in closer.
4. Double click on “TRIM 1:20K” to open the Layer Group.
5. Check the boxes beside each layer that is needed to add them to the map (i.e. Rivers, and Lakes). The map refreshes automatically.
6. From this point, a waterbody can be selected and a point can be digitized following Section 7.3, Steps 3-18.

7.5 Digitizing a point by selecting a waterbody from a list

To digitize a point by selecting a waterbody on the map:

1. If you are not already in Mapping Tools, click on "Mapping Tools".
2. In “Mapping Tools” click on the “Select Waterbody” drop-down menu
3. Highlight “Select a Waterbody from a list”.
4. A new window pops up called “Waterbody - Select Form” similar to the example in Figure 15.
5. The waterbody list shown in Figure 13 is in order by watershed code. For a quicker search, users should check the watershed code for the waterbody in the B.C. Watershed Atlas <http://a100.gov.bc.ca/pub/fidq/main.do>.

6. Scroll down the form and look for the waterbody you wish to use and click on the hypertext link.

Note: Many waterbodies are not in this form yet, as a point for the waterbodies must be digitized first to appear in this form. It may be necessary to use the “Digitizing a point by selecting a waterbody on a map” method instead of “Digitizing a point by selecting a waterbody from a list”
7. A new window pops-up with the reference information for the waterbody similar to Figure 16.

You have selected the following waterbody:  
If this is correct, press the Proceed button and start digitizing the data associated to that waterbody. 
Remember to come back to this form when you want to change waterbody otherwise all the data will be associated to the same waterbody.

<table>
<thead>
<tr>
<th>Watershed Code: 180-374000-95200-99500-9190-0000-0000-0000-0000-0000-0000-0000-0000-0000-0000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stream/Lake Name: Unnamed Lake</td>
</tr>
<tr>
<td>Alias 1:  Unnamed Lake</td>
</tr>
<tr>
<td>Alias 2:  Sara Ellis</td>
</tr>
<tr>
<td>Collector: Sara Ellis</td>
</tr>
<tr>
<td>Date Collected: 20/Nov/06</td>
</tr>
<tr>
<td>Confluence/Outlet Info</td>
</tr>
<tr>
<td>Map No 093103</td>
</tr>
<tr>
<td>ID 120 Zone 93 620540 Nortthing 598547</td>
</tr>
<tr>
<td>Provincial Fisheries Management Objectives</td>
</tr>
<tr>
<td>Habitat Type: NA</td>
</tr>
<tr>
<td>Mgt Obj 1: NA</td>
</tr>
<tr>
<td>Mgt Obj 2: NA</td>
</tr>
</tbody>
</table>

Figure 14. Example of the Waterbody Reference Information Form

8. Click proceed to begin to digitize the data.  
   Note: Map does not zoom to location of the waterbody. It is possible to zoom to the location of the waterbody by using the “Zoom Goto” function which is described in the Section 6.2.

9. Your current selection will appear in the top left hand corner of the webpage.
8.0 Adding, Editing and Deleting Data to a Selected Point

There are several types of FISS Themed data that can be attached to a selected point. The FISS Theme data provide basic data about the waterbody. It is not necessary to complete all of the theme data forms for the point. The FISS Theme data categories are described in Table 2. Each FISS Theme data form has a series of codes which are specific to the type of theme data (see Appendix 3).

Table 2. What each FISS Theme Represents

<table>
<thead>
<tr>
<th>FISS Theme</th>
<th>Representation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Quality Stations</td>
<td>Contains information for only permanent sites used to access water quality including System for Environmental Assessment and Management (SEAM) and Environmental Monitoring (EMS) sites.</td>
</tr>
<tr>
<td>Enhancement/Management Activities</td>
<td>Provides information about the activities taken to enhance and manage fish habitats or stocks.</td>
</tr>
<tr>
<td>Sensitivity Comments</td>
<td>Provides information on the sensitivity of the fish habitats/stocks.</td>
</tr>
<tr>
<td>Resource Use</td>
<td>Provides information about how the fisheries resource is used (i.e. Commercial use, Domestic Use, Fishing Lodge, Native, Recreation and Viewing).</td>
</tr>
<tr>
<td>Obstructions</td>
<td>Provides information about obstructions in the waterbody which affect fish passage, and lists the fish species which are affected.</td>
</tr>
<tr>
<td>Fisheries Potential/Constraints</td>
<td>Provides information about activities which affect fisheries production.</td>
</tr>
<tr>
<td>Value Comments</td>
<td>Provides information about the type of value placed on the stream and the sensitivity of fish habitat/stocks of the waterbody. This information helps to flag significant attributes of waterbodies such as potential for angling, recreation and aesthetic considerations.</td>
</tr>
<tr>
<td>Species/Stock Information</td>
<td>Identifies the species and stock related to Fish Distribution and Life History Themes.</td>
</tr>
<tr>
<td>Fish Distribution</td>
<td>Provides information about where the fish stocks are located. The Fish distribution indicates the presence of a fish species and describes the main activities of those fish.</td>
</tr>
<tr>
<td>Life History</td>
<td>This record indicates the life history activities occurring for each fish species.</td>
</tr>
</tbody>
</table>

---

8 Desrochers, B. 1997.
8.1 Adding New Data to a Selected Point

To add new data to a point:

1. Select the point you wish to add information to with the arrow button.

2. If you are not already in Mapping Tools, click on "Mapping Tools" then click on the “Insert new information to the selected point” button.

3. Select the type of FISS theme data that you want to attach to the point from the list provided under the “Data Entry Menu”.

4. For each type of FISS Theme data, reference information must be attached.

5. To attach a reference to a FISS Theme, check the reference to see if it is in the database first.

6. If the reference is in the database, you can click the “Select” hyperlink beside the reference. This will attach the reference information to the data.

7. If the reference is not in the database, you may wish to add the reference. Close the “Database Search Engine Window”, and go back to the “FISS Water Body Form” in your selected theme data form and click on the “Add” button beside Reference box.

8. A FISS Reference Form window will open. Fill in the appropriate information and click the “Submit” button.

9. A message will appear confirming that the data will be committed to the database. Click the “Close” button.

10. A reference can also be added by clicking the add/edit reference button on the Map Toolbar. 

Note: To add Fish Distributions or Life History themes, a Species/Stock record must be created first. After creating the Species/Stock record, click on the Species/Stock theme for the option to add a Fish Distribution or a Life History theme.
8.2 Editing Data

To edit data associated with a point:

1. With the arrow mouse select the point you wish to add information to.
2. Click on the “Edit Data” button.
3. Select the type of FISS theme data that you edit from the list provided under the “Data Entry Menu”.
4. When the existing data comes up, there will be two options: Edit or Delete which are shown in Figure 17.

![Edit Delete]

Figure 15. Edit or Delete options in Edit Menu

5. Select the Edit option. After making preferred changes click the submit button.
   You will get a message “Data committed to the database”.
6. Click the “Proceed” button to resume editing.

8.3 Deleting Data

To delete data associated with a point:

1. Select the point you wish to add information to with the arrow button.
2. Click on the “Edit Data” button.
3. Select the type of FISS theme data that you edit from the list provided under the “Data Entry Menu”.
   When the existing data comes up, there will be two options: Edit or Delete (see Figure 15).
4. Click on the Delete button.
5. A message will appear “The record has been deleted”.
6. Click the “Proceed” button to continue.
9.0 Viewing a Report for a Point

Viewing a report is used to view data that is attached to a point and is a mandatory step to verify the data entered. It is important to check the “Point Reference Report” in order to verify that the point is attached to the correct waterbody and that theme information attached to the point is correct.

There are two methods to view a report:

a. Double click on a point and the report will open;

b. Or highlight a point by selecting it, then click on the “View a report” button in the Mapping Toolbar.
10.0 Additional Features and Options

This section contains information about additional features and options in the CMN FISS Data Entry Tool.

10.1 To Print a Map

To print, you must right click on the map and click “Print ▶” then “Print…”

Note: If you press print from your browser toolbar or from the file menu, you will just get a blank page, or a print out of the map toolbar.

10.2 Copying a Map to another application

Copying a Map to another application is useful for saving and editing the map that is shown in the Internet Browser.

To copy a map to another application:

1. Right click on the map, and click “Copy ▶” then “Copy”.
2. Open a graphics editing program such as Paint.
3. Within the graphic editing program, click on the “Edit” menu, then “Paste” or on the keyboard press “Ctrl + V”.
4. The map will be pasted into the canvas of the graphic editing program, and can be edited and saved at this point.
10.3 Distance Tool

The Distance Tool is used to measure distance. An example of its use would be to measure 1.5 km from the stream mouth.

To use the Distance Tool:

1. Right click on the map.
2. Click on "View ➔" then on "Distance".
3. Click on the map on at the place you want to start measuring from.
4. Click as many times as necessary to create segments to get the distance of all the curves in the waterbody.
5. A Tool Tip will tell you how long each segment is and the total distance from the first point which is demonstrated in Figure 18.

![Distance Tool Usage Example]

**Figure 16. Measuring with the Distance Tool**

10.4 Identifying a waterbody on a zoomed in map with Tool Tips

Identifying a waterbody can be easily done using Tool Tips. Tool Tips are when the user hovers the mouse over a waterbody without clicking on it, and a yellow box appears with the Waterbody name (if available), the Watershed Code, and the Internal ID Number.
To identify a waterbody on a map with Tool Tips:

1. The map needs to be zoomed in at least to 1:132,000 scale which can be quickly done using the “Goto” Zoom tool (Section 6.2).
2. Hover mouse over the waterbody you wish to identify.
3. The watershed code will appear in a box with the name if the waterbody is named.
4. Caution should be taken with this. If the wrong watershed code keeps popping up, one should zoom in more as the mouse may be picking up adjacent waterbodies.

10.5 Bookmarks

Bookmarks are a way to mark a screen view, similar to “Favorites” menu in Internet Explorer. They are very useful for marking a screen view so that they can be revisited at a later date. When a bookmark is revisited, it brings up the exact image at the same zoom which is seen on the screen at the time the bookmark was created. Bookmarks can be added and deleted so they do not have to be permanent.

10.5.1 Adding a Bookmark

To add a bookmark:

1. Right click on the map where you would like to place a bookmark.
2. Click on “Bookmarks→” then “Add Bookmark…”
3. The “Add Bookmark” window opens which is shown in Figure 19. Type what you would like to name the bookmark.
4. Click “OK”.
5. The Bookmark has been added.

10.5.2 Viewing a Bookmark

To view a bookmark:
1. Right click anywhere on the map.
2. Click on “BookmarksÆ”.
3. Click on the name of the Bookmark you wish to visit.

10.5.3 Deleting a Bookmark

To delete a bookmark:
1. Right click on the map then click on “BookmarksÆ” then “Delete Bookmark…”
2. The “Delete Bookmarks” window opens, similar to the one shown in Figure 20.
3. Select the bookmark you wish to delete.
4. When you are finished deleting the bookmarks, press the “OK” button.
5. If you accidentally delete a bookmark you wish to keep, click cancel, and the bookmark will still be there. Then you can go back and delete the bookmark you want to.

10.6 Selecting Map Objects

The “Select Map Objects” function selects features on the map. When the map is zoomed in, the user only has options to select map objects that are visible on the current map view. When zoomed out to the whole province, the “Select Map Objects” function can select any object on the map. This is useful for users to see all the existing Point ID’s so that users can see what Point ID’s have been used to help determine new unique point numbers.

To use the “Select Map Objects” function:

1. Right click on the map and click on “Select” → “Map Objects…” which is shown in Figure 21.
2. A Window called "Select Map Features" similar to Figure 22 opens up.

3. The user can then select the feature selecting the “Map layers” then selecting the “Map features”.

4. Multiple features can be selected by using the Control and Shift keys on the Keyboard.
References


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</tr>
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<td>Appendix 4B</td>
<td>B.C. Fish Species Codes: Alphabetical by Common Names</td>
</tr>
<tr>
<td>Appendix 4C</td>
<td>B.C. Fish Species Codes: Alphabetical by Code</td>
</tr>
</tbody>
</table>
General Inquiries

- Gordon Oliphant  
  FISS Project Manager - Ministry of Environment  
  Ecosystems Information Section  

  Phone: (250) 356-9938  
  Fax: (250) 356-1202  
  Email: Gord.Oliphant@gov.bc.ca

Mailing Address:  
PO Box 9358 STN PROV GOVT  
Victoria, BC  V8W 9M2
Reference Numbers

- Contact Gordon Oliphant at the Ministry of Environment for pre-approved FISS reference numbers (see “General Inquiries”).

Changes to Oracle FISS

- If a reference in Oracle FISS needs to be changed, contact Gordon Oliphant at the Ministry of Environment (see “General Inquiries”).

Useful Links

- **CMN FISS Data Entry Tool**
  The direct link in the Data Entry Tool.
  [http://www.shim.bc.ca/atlases/fiss/login_screen.cfm?atlas=fiss](http://www.shim.bc.ca/atlases/fiss/login_screen.cfm?atlas=fiss)

- **Watershed Dictionary**
  The Watershed Dictionary is useful for searching Watershed Codes and UTM coordinates.
  [http://a100.gov.bc.ca/pub/fidq/main.do](http://a100.gov.bc.ca/pub/fidq/main.do)

- **EcoCat**
  The Ministry of Environment Ecological Reports Catalogue stores actual reports and projects. Many of the reports that are referenced in FISS are stored in EcoCat.

- **WAVES**
  Fisheries and Oceans Canada’s Virtual Library Catalogue
  [http://inter01.dfo-mpo.gc.ca/waves2/index2.html?_LANG=en](http://inter01.dfo-mpo.gc.ca/waves2/index2.html?_LANG=en)
Appendix 2 - CMN FISS Buttons
### Table A1 Buttons in Map Toolbar

<table>
<thead>
<tr>
<th>Button</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Back" /></td>
<td>Back button: exits mapping tools</td>
</tr>
<tr>
<td><img src="image" alt="Digitize" /></td>
<td>Digitize a point button: click on the map where point is to be placed</td>
</tr>
<tr>
<td><img src="image" alt="Insert" /></td>
<td>Insert new data: attaches new data to a point</td>
</tr>
<tr>
<td><img src="image" alt="Edit" /></td>
<td>Edit data: edits or deletes data attached to a point</td>
</tr>
<tr>
<td><img src="image" alt="Add/Edit Reference" /></td>
<td>Add/Edit Reference: add, edit and search for references</td>
</tr>
<tr>
<td><img src="image" alt="Delete" /></td>
<td>Delete Data: deletes a selected point</td>
</tr>
<tr>
<td><img src="image" alt="View" /></td>
<td>View a Report: view a report of a selected point</td>
</tr>
<tr>
<td><img src="image" alt="Print" /></td>
<td>Print: prints map</td>
</tr>
<tr>
<td><img src="image" alt="SHIM Homepage" /></td>
<td>SHIM Homepage: link to the SHIM homepage</td>
</tr>
<tr>
<td><img src="image" alt="Help" /></td>
<td>Help: link to Autodesk MapGuide® Viewer Help</td>
</tr>
</tbody>
</table>

### Table A2 Buttons in Autodesk Toolbar

<table>
<thead>
<tr>
<th>Button</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Copy" /></td>
<td>Copy: copies map that can be pasted in a graphics application</td>
</tr>
<tr>
<td><img src="image" alt="Select" /></td>
<td>Select: Arrow mouse selects objects in the map screen</td>
</tr>
<tr>
<td><img src="image" alt="Pan" /></td>
<td>Pan: Hand mouse pans the map screen</td>
</tr>
<tr>
<td><img src="image" alt="Zoom In" /></td>
<td>Zoom In: Zooms in to a selected part of the map</td>
</tr>
<tr>
<td><img src="image" alt="Zoom Out" /></td>
<td>Zoom Out: Zooms out from a part of the map</td>
</tr>
<tr>
<td><img src="image" alt="Zoom Previous" /></td>
<td>Zoom Previous: Reverts the map to the previous zoom view</td>
</tr>
<tr>
<td><img src="image" alt="Zoom Goto" /></td>
<td>Zoom Goto: Zooms to a specific location on the map (see Section 9.3).</td>
</tr>
<tr>
<td><img src="image" alt="Unzoom" /></td>
<td>Unzoom: Unzooms map to whole of British Columbia</td>
</tr>
<tr>
<td><img src="image" alt="View Report" /></td>
<td>View Report: Opens report for a selected point containing reference information</td>
</tr>
<tr>
<td><img src="image" alt="Stop" /></td>
<td>Stop: Only available when CMN FISS is processing a function. When clicked on, stops the process.</td>
</tr>
<tr>
<td><img src="image" alt="Help" /></td>
<td>Help: link to Autodesk MapGuide® Viewer Help</td>
</tr>
</tbody>
</table>
### Table A3 Other Buttons

<table>
<thead>
<tr>
<th>Button</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Search" /></td>
<td>Reference Search: Opens Reference Search window.</td>
</tr>
<tr>
<td><img src="image" alt="Add" /></td>
<td>Add Reference: Opens Add Reference form</td>
</tr>
<tr>
<td><img src="image" alt="Edit" /></td>
<td>Edit Data: Opens information for a selected FISS Attribute Data</td>
</tr>
<tr>
<td><img src="image" alt="Delete" /></td>
<td>Delete Data: Deletes selected FISS Attribute Data</td>
</tr>
</tbody>
</table>
## FISS Codes: Alphabetical

<table>
<thead>
<tr>
<th>CODES</th>
<th>ACTIVITY</th>
<th>“SECTION”</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>Accessible by Road</td>
<td>Lake Info.</td>
</tr>
<tr>
<td>A</td>
<td>Angler Use</td>
<td>Management Objective 1</td>
</tr>
<tr>
<td>A</td>
<td>Augmented</td>
<td>Management Objective 2; Species/Stock ID</td>
</tr>
<tr>
<td>A</td>
<td>Winter</td>
<td>Season</td>
</tr>
<tr>
<td>AD</td>
<td>Adfluvial</td>
<td>Species/Stock ID</td>
</tr>
<tr>
<td>AG</td>
<td>Agriculture</td>
<td>Land Use</td>
</tr>
<tr>
<td>AGU</td>
<td>Guides</td>
<td>Resource Use Info.; Harvest and Use</td>
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<tr>
<td>AH</td>
<td>Angler Use High</td>
<td>Management Objective 1</td>
</tr>
<tr>
<td>AL</td>
<td>Angler Use Low</td>
<td>Management Objective 1</td>
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<td>AM</td>
<td>Angler Use Medium</td>
<td>Management Objective 1</td>
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<tr>
<td>AN</td>
<td>Anadromous</td>
<td>Species/Stock ID</td>
</tr>
<tr>
<td>ANG</td>
<td>Angling Sites</td>
<td>Value and Sensitivity</td>
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<td>Anadromous River</td>
<td>Habitat Type</td>
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<td>AR</td>
<td>Restricted/Controlled Access</td>
<td>Lake Info.</td>
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<tr>
<td>AW</td>
<td>Road to Near Lake, then Walk</td>
<td>Lake Info.</td>
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<tr>
<td>B</td>
<td>Biotic Interactions</td>
<td>Fish Production Constraint or General Info.</td>
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<tr>
<td>B</td>
<td>Spring</td>
<td>Season</td>
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<tr>
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<td>Parasitized Stocks</td>
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<td>Cascade</td>
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<td>Constraint</td>
<td>Fish Production Potential Constraint</td>
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<td>Summer</td>
<td>Season</td>
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<td>Code</td>
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<td>Notes</td>
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<td>--------------------------------------------------</td>
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<td>CV</td>
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<td>Fall Season</td>
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<td>Fish Barrier; international</td>
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<td>Exclusion Fencing</td>
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<td>Invertebrate Introduction</td>
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<td>Hatchery</td>
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<td>Off Channel Ponds</td>
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<td>Rearing Pens</td>
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<td>Seminatural Production</td>
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<td>Hatchery Broodstock</td>
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<td>Japanese Hatchery</td>
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<td>Incubation Box</td>
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<td>ECS</td>
<td>Colonization/Stocking</td>
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<td>ECSC</td>
<td>Colonization; species not present</td>
<td></td>
</tr>
<tr>
<td>ECSJ</td>
<td>Juvenile Outplant; species present</td>
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</tr>
<tr>
<td>ECSP</td>
<td>Transplant</td>
<td></td>
</tr>
<tr>
<td>ECST</td>
<td>Trap/Truck</td>
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</tr>
<tr>
<td>EF</td>
<td>Water Volume/Flow Regime</td>
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<td>EHBFR</td>
<td>Rip Rap/Rock Work</td>
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<tr>
<td>EHC</td>
<td>Stream Cleaning</td>
<td></td>
</tr>
<tr>
<td>EHF</td>
<td>Fertilization</td>
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*CMN FISS Data Entry Tool User Manual* 51
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Appendix 4A - B.C. Fish Species Codes: Taxonomic Groupings
### B.C. Fish Species Codes: Taxonomic Groupings

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**Sturgeon**

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**Cod**

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**Whitefish**

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<td>Lake Whitefish, Common Whitefish, Humpback Whitefish</td>
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**Lampeys**

| L   | Lampreys (General)                                         | Lampetra spp. |
| AL  | Arctic Lamprey                                             | Lampetra japonica |
| RL  | River Lamprey, Western Lamprey                             | Lampetra ayresi |
| LL  | Lake Lamprey, Cowichan Lamprey                             | Lampetra macrostomata |
| BL  | Western Brook Lamprey                                      | Lampetra richardsoni |
| MCL | Morrison Creek Lamprey                                     | Lampetra richardsoni marifaga |
| PL  | Pacific Lamprey, Sea Lamprey                               | Lampetra tridentata |

**Grayling**

| GR  | Arctic Grayling                                           | Thymallus arcticus |

**Goldeyes**

| GE  | Goldeye                                                   | Hiodon alosoides |

**Herrings**

| SH  | American Shad                                             | Alosa sapidissima |

**Minnows**

<p>| C   | Minnows (General)                                         | many, all cyprinids |
| CP  | Carp                                                      | Cyprinus carpio |
| GC  | Goldfish                                                  | Carassius auratus |
| TC  | Tench                                                     | Tinca tinca |
| ESC | Emerald Shiner                                            | Notropis atherinoides |
| STC | Spottail Shiner                                           | Notropis hudsonius |
| RSC | Redside Shiner                                            | Richardsonius balteatus |</p>
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBC</td>
<td>Chub, General</td>
</tr>
<tr>
<td>FHC</td>
<td>Flathead Chub</td>
</tr>
<tr>
<td>LKC</td>
<td>Lake Chub</td>
</tr>
<tr>
<td>PCC</td>
<td>Peamouth Chub, Peamouth</td>
</tr>
<tr>
<td>NSC</td>
<td>Northern Squawfish</td>
</tr>
<tr>
<td>CMC</td>
<td>Chiselmouth</td>
</tr>
<tr>
<td>BMC</td>
<td>Brassy Minnow</td>
</tr>
<tr>
<td>DC</td>
<td>Dace, General</td>
</tr>
<tr>
<td>NDC</td>
<td>Nooksack Dace, Nooky Dace</td>
</tr>
<tr>
<td>LNC</td>
<td>Longnose Dace</td>
</tr>
<tr>
<td>LDC</td>
<td>Leopard Dace</td>
</tr>
<tr>
<td>SDC</td>
<td>Speckled Dace</td>
</tr>
<tr>
<td>UDC</td>
<td>Umatilla Dace</td>
</tr>
<tr>
<td>FDC</td>
<td>Finescale Dace</td>
</tr>
<tr>
<td>RDC</td>
<td>Northern Redbelly Dace</td>
</tr>
<tr>
<td>XDC</td>
<td>Northern Redbelly Dace x Finescale Dace</td>
</tr>
<tr>
<td>PDC</td>
<td>Pearl Dace, Northern Pearl Dace</td>
</tr>
<tr>
<td>FM</td>
<td>Fathead Minnow</td>
</tr>
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</table>

**Suckers**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>SU</td>
<td>Suckers, General</td>
</tr>
<tr>
<td>SSU</td>
<td>Salish Sucker</td>
</tr>
<tr>
<td>LSU</td>
<td>Longnose Sucker, Fine-scaled Sucker, Northern Sucker</td>
</tr>
<tr>
<td>BSU</td>
<td>Bridgelip Sucker, Columbia Small-scaled Sucker</td>
</tr>
<tr>
<td>WSU</td>
<td>White Sucker</td>
</tr>
<tr>
<td>CSU</td>
<td>Largescale Sucker, Coarsescale Sucker</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>SU</td>
<td>Catostomus sp.</td>
</tr>
<tr>
<td>SSU</td>
<td>Catostomus sp.</td>
</tr>
<tr>
<td>LSU</td>
<td>Catostomus catostomus</td>
</tr>
<tr>
<td>BSU</td>
<td>Catostomus columbianus</td>
</tr>
<tr>
<td>WSU</td>
<td>Catostomus commersoni</td>
</tr>
<tr>
<td>CSU</td>
<td>Catostomus macrocheilus</td>
</tr>
<tr>
<td>Code</td>
<td>Common Name</td>
</tr>
<tr>
<td>------</td>
<td>-------------------------------------------------</td>
</tr>
<tr>
<td>MSU</td>
<td>Mountain Sucker, Northern/Plains Mountain Sucker</td>
</tr>
</tbody>
</table>

**Catfish**

<table>
<thead>
<tr>
<th>Code</th>
<th>Common Name</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>BH</td>
<td>Catfish, General (pref.), Bullheads</td>
<td><em>Ameiurus nebulosus</em> (formerly <em>Ictalurus nebulosus</em>)</td>
</tr>
<tr>
<td>BNH</td>
<td>Brown Bullhead, Brown Catfish</td>
<td><em>Ameiurus melas</em> (formerly <em>Ictalurus melas</em>)</td>
</tr>
</tbody>
</table>

**Pike**

<table>
<thead>
<tr>
<th>Code</th>
<th>Common Name</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>NP</td>
<td>Northern Pike, Jackfish, Jack</td>
<td><em>Esox lucius</em></td>
</tr>
</tbody>
</table>

**Smelts**

<table>
<thead>
<tr>
<th>Code</th>
<th>Common Name</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>SM</td>
<td>Smelts, General</td>
<td><em>Osmerus mordax</em></td>
</tr>
<tr>
<td>RSM</td>
<td>Rainbow Smelt</td>
<td><em>Thaleichthys pacificus</em></td>
</tr>
<tr>
<td>EU</td>
<td>Eulachon, Candlefish</td>
<td><em>Spirinchus spp.</em></td>
</tr>
<tr>
<td>PLS</td>
<td>Pygmy Longfin Smelt</td>
<td><em>Hypomesus pretiosus</em></td>
</tr>
</tbody>
</table>

**Sticklebacks**

<table>
<thead>
<tr>
<th>Code</th>
<th>Common Name</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>SB</td>
<td>Sticklebacks, General</td>
<td><em>Gasterosteus sp.</em></td>
</tr>
<tr>
<td>CSB</td>
<td>Unarmoured Stickleback</td>
<td><em>Gasterosteus sp.</em></td>
</tr>
<tr>
<td>SB3</td>
<td>Charlotte Unarmoured Stickleback</td>
<td><em>Gasterosteus sp.</em></td>
</tr>
<tr>
<td>SB11</td>
<td>Lake Sticklebacks</td>
<td><em>Gasterosteus sp.</em></td>
</tr>
<tr>
<td>SB1</td>
<td>Balkwill Lake Benthic Stickleback</td>
<td><em>Gasterosteus sp.</em></td>
</tr>
<tr>
<td>SB2</td>
<td>Balkwill Lake Limnetic Sticleback</td>
<td><em>Gasterosteus sp.</em></td>
</tr>
<tr>
<td>SB4</td>
<td>Emily Lake Benthic Stickleback</td>
<td><em>Gasterosteus sp.</em></td>
</tr>
<tr>
<td>SB5</td>
<td>Emily Lake Limnetic Stickleback</td>
<td><em>Gasterosteus sp.</em></td>
</tr>
<tr>
<td>SB6</td>
<td>Enos Lake Benthic Stickleback</td>
<td><em>Gasterosteus sp.</em></td>
</tr>
<tr>
<td>SB7</td>
<td>Enos Lake Limnetic Stickleback</td>
<td><em>Gasterosteus sp.</em></td>
</tr>
<tr>
<td>SB9</td>
<td>Hadley Lake Benthic Stickleback</td>
<td><em>Gasterosteus sp.</em></td>
</tr>
<tr>
<td>SB10</td>
<td>Hadley Lake Limnetic Stickleback</td>
<td><em>Gasterosteus sp.</em></td>
</tr>
<tr>
<td>SB12</td>
<td>Paxton Lake Benthic Stickleback</td>
<td><em>Gasterosteus sp.</em></td>
</tr>
</tbody>
</table>
SB13  Paxton Lake Limnetic Stickleback  *Gasterosteus* sp.
SBB  Priest Lake Benthic Stickleback  *Gasterosteus* sp.
SBP  Priest Lake Limnetic Stickleback  *Gasterosteus* sp.
GSB  Giant Black  *Gasterosteus* sp.
SB8  Giant Stickleback  *Gasterosteus* sp.
TSB  Threespine Stickleback  *Gasterosteus aculeatus*
BSB  Brook Stickleback  *Culea inconstans*
NSB  Ninespine Stickleback  *Pungitius pungitius*

**Sculpins**

<table>
<thead>
<tr>
<th>Code</th>
<th>Name</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC</td>
<td>Sculpins, General (pref.), Bullheads</td>
<td>Primarily <em>Cottus</em> spp.</td>
</tr>
<tr>
<td>CCA</td>
<td>Sharpnose Sculpin</td>
<td><em>Clinocottus acuticeps</em></td>
</tr>
<tr>
<td>COM</td>
<td>Tidepool Sculpin</td>
<td><em>Oligocottus maculosus</em></td>
</tr>
<tr>
<td>CLA</td>
<td>Pacific Staghorn Sculpin, Staghorn Sculpin</td>
<td><em>Leptocottus armatus</em></td>
</tr>
<tr>
<td>CMT</td>
<td>Deepwater Sculpin</td>
<td><em>Myxocephalus quadricornis</em></td>
</tr>
<tr>
<td>CCL</td>
<td>Cultus Lake Sculpin</td>
<td><em>Cottus</em> sp.</td>
</tr>
<tr>
<td>CAL</td>
<td>Coastrange Sculpin, Aleutian Sculpin</td>
<td><em>Cottus aleuticus</em></td>
</tr>
<tr>
<td>CAS</td>
<td>Prickly Sculpin</td>
<td><em>Cottus asper</em></td>
</tr>
<tr>
<td>CBA</td>
<td>Mottled Sculpin</td>
<td><em>Cottus bairdi</em></td>
</tr>
<tr>
<td>CCG</td>
<td>Slimy Sculpin</td>
<td><em>Cottus cognatus</em></td>
</tr>
<tr>
<td>CCN</td>
<td>Shorthead Sculpin</td>
<td><em>Cottus confusus</em></td>
</tr>
<tr>
<td>CRH</td>
<td>Torrent Sculpin</td>
<td><em>Cottus rhotheus</em></td>
</tr>
<tr>
<td>CRI</td>
<td>Spoonhead Sculpin, Spoonhead Muddler</td>
<td><em>Cottus ricei</em></td>
</tr>
</tbody>
</table>

**Sunfish/Bass**

<table>
<thead>
<tr>
<th>Code</th>
<th>Name</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>BS</td>
<td>Bass / Sunfish, General</td>
<td><em>Micropterus</em> spp., <em>Lepomis</em> sp., <em>Pomoxis</em> sp.</td>
</tr>
<tr>
<td>SMB</td>
<td>Smallmouth Bass, Smallmouth Black Bass</td>
<td><em>Micropterus dolomieui</em></td>
</tr>
<tr>
<td>LMB</td>
<td>Largemouth Bass, Largemouth Black Bass</td>
<td><em>Micropterus salmoides</em></td>
</tr>
<tr>
<td>Label</td>
<td>Species</td>
<td>Scientific Name</td>
</tr>
<tr>
<td>-------</td>
<td>---------</td>
<td>-----------------</td>
</tr>
<tr>
<td>PMB</td>
<td>Pumpkinseed, Sunfish, Pumpkinseed Sunfish</td>
<td><em>Lepomis gibbosus</em></td>
</tr>
<tr>
<td>BCB</td>
<td>Black Crappie, Calico Bass</td>
<td><em>Pomoxis nigromaculatus</em></td>
</tr>
<tr>
<td></td>
<td><strong>Perches</strong></td>
<td></td>
</tr>
<tr>
<td>P</td>
<td>Perch, General</td>
<td><em>Perca sp.</em>, <em>Stizostedion sp.</em></td>
</tr>
<tr>
<td>WP</td>
<td>Walleye, Pike-perch, Pickerel, Dore, many others</td>
<td><em>Stizostedion vitreum</em></td>
</tr>
<tr>
<td>YP</td>
<td>Yellow Perch, American Yellow Perch, many others</td>
<td><em>Perca flavescens</em></td>
</tr>
<tr>
<td></td>
<td><strong>Flounders</strong></td>
<td></td>
</tr>
<tr>
<td>SFL</td>
<td>Starry Flounder</td>
<td><em>Platichthys stellatus</em></td>
</tr>
<tr>
<td></td>
<td><strong>Troutperch</strong></td>
<td></td>
</tr>
<tr>
<td>TP</td>
<td>Troutperch</td>
<td><em>Percopis omiscomaycus</em></td>
</tr>
<tr>
<td></td>
<td><strong>Mosquitofish</strong></td>
<td></td>
</tr>
<tr>
<td>GAM</td>
<td>Mosquitofish, Gambusia</td>
<td><em>Gambusia sp.</em></td>
</tr>
</tbody>
</table>
Appendix 4B - B.C. Fish Species Codes: Alphabetical by Common Names
# B.C. Fish Species Codes: Alphabetical by Common Names

<table>
<thead>
<tr>
<th>CODE</th>
<th>COMMON NAME</th>
<th>LATIN NAME</th>
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<tbody>
<tr>
<td>AD</td>
<td>All Anadromous Species</td>
<td></td>
</tr>
<tr>
<td>AO</td>
<td>All Salmon</td>
<td>Oncorhynchus spp., Salmo salar</td>
</tr>
<tr>
<td>AF</td>
<td>All Species</td>
<td></td>
</tr>
<tr>
<td>SH</td>
<td>American Shad</td>
<td>Alosa sapidissima</td>
</tr>
<tr>
<td>AGB</td>
<td>Anadromous Brown Trout, Anadromous German Brown Trout</td>
<td>Salmo trutta</td>
</tr>
<tr>
<td>ACT</td>
<td>Anadromous Cutthroat Trout</td>
<td>Oncorhynchus clarki (formerly Salmo clarki)</td>
</tr>
<tr>
<td>ADV</td>
<td>Anadromous Dolly Varden, Anadromous Dolly Varden Char</td>
<td>Salvelinus malma</td>
</tr>
<tr>
<td>AEB</td>
<td>Anadromous Eastern Brook Trout</td>
<td>Salvelinus fontinalis</td>
</tr>
<tr>
<td>AC</td>
<td>Arctic Char</td>
<td>Salvelinus alpinus</td>
</tr>
<tr>
<td>CA</td>
<td>Arctic Cisco</td>
<td>Coregonus autumnalis</td>
</tr>
<tr>
<td>GR</td>
<td>Arctic Grayling</td>
<td>Thymallus arcticus</td>
</tr>
<tr>
<td>AL</td>
<td>Arctic Lamprey</td>
<td>Lampetra japonica</td>
</tr>
<tr>
<td>AS</td>
<td>Atlantic Salmon</td>
<td>Salmo salar</td>
</tr>
<tr>
<td>SB1</td>
<td>Balkwill Lake Benthic Stickleback</td>
<td>Gasterosteus sp.</td>
</tr>
<tr>
<td>SB2</td>
<td>Balkwill Lake Limnetic Sticleback</td>
<td>Gasterosteus sp.</td>
</tr>
<tr>
<td>BS</td>
<td>Bass / Sunfish, General</td>
<td>Micropterus spp., Lepomis sp., Pomoxis sp.</td>
</tr>
<tr>
<td>CB</td>
<td>Bering Cisco</td>
<td>Coregonus laurettae</td>
</tr>
<tr>
<td>BKH</td>
<td>Black Bullhead, Black Catfish</td>
<td>Ameiurus melas (formerly Ictalurus melas)</td>
</tr>
<tr>
<td>BCB</td>
<td>Black Crappie, Calico Bass</td>
<td>Pomoxis nigromaculatus</td>
</tr>
<tr>
<td>BMC</td>
<td>Brassy Minnow</td>
<td>Hybognathus hankinsoni</td>
</tr>
<tr>
<td>BSU</td>
<td>Bridgelip Sucker, Columbia Small-scaled Sucker</td>
<td>Catostomus columbianus</td>
</tr>
<tr>
<td>BW</td>
<td>Broad Whitefish, Round-nosed Whitefish, Sheep-nose Whitefish</td>
<td>Coregonus nasus</td>
</tr>
<tr>
<td>BSB</td>
<td>Brook Stickleback</td>
<td>Culea inconstans</td>
</tr>
<tr>
<td>EB</td>
<td>Brook Trout, Eastern Brook Trout</td>
<td>Salvelinus fontinalis</td>
</tr>
<tr>
<td>Code</td>
<td>Description</td>
<td>Scientific Name</td>
</tr>
<tr>
<td>------</td>
<td>----------------------------------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>BNH</td>
<td>Brown Bullhead, Brown Catfish</td>
<td><em>Ameiurus nebulosus</em> (formerly <em>Ictalurus nebulosus</em>)</td>
</tr>
<tr>
<td>GB</td>
<td>Brown Trout, German Brown Trout</td>
<td><em>Salmo trutta</em></td>
</tr>
<tr>
<td>BT</td>
<td>Bull Trout</td>
<td><em>Salvelinus confluentus</em></td>
</tr>
<tr>
<td>BB</td>
<td>Burbot, Freshwater Ling Cod, Ling, Loche, Lawyer</td>
<td><em>Lota lota</em></td>
</tr>
<tr>
<td>CP</td>
<td>Carp</td>
<td><em>Cyprinus carpio</em></td>
</tr>
<tr>
<td>BH</td>
<td>Catfish, General (pref.), Bullheads</td>
<td></td>
</tr>
<tr>
<td>SB3</td>
<td>Charlotte Unarmoured Stickleback</td>
<td><em>Gasterosteus</em> sp.</td>
</tr>
<tr>
<td>CH</td>
<td>Chinook Salmon, Spring Salmon, King Salmon, Tyee</td>
<td><em>Oncorhynchus tshawytscha</em></td>
</tr>
<tr>
<td>CMC</td>
<td>Chiselmouth</td>
<td><em>Acrocheilus alutaceus</em></td>
</tr>
<tr>
<td>CBC</td>
<td>Chub, General</td>
<td></td>
</tr>
<tr>
<td>CM</td>
<td>Chum Salmon, Dog Salmon</td>
<td><em>Oncorhynchus keta</em></td>
</tr>
<tr>
<td>CCT</td>
<td>Coastal Cutthroat Trout</td>
<td><em>Oncorhynchus clarki clarki</em> (formerly <em>Salmo clarki clarki</em>)</td>
</tr>
<tr>
<td>CAL</td>
<td>Coastrange Sculpin, Aleutian Sculpin</td>
<td><em>Cottus aleuticus</em></td>
</tr>
<tr>
<td>CO</td>
<td>Coho Salmon</td>
<td><em>Oncorhynchus kisutch</em></td>
</tr>
<tr>
<td>CCL</td>
<td>Cultus Lake Sculpin</td>
<td><em>Cottus</em> sp.</td>
</tr>
<tr>
<td>CT</td>
<td>Cutthroat Trout (General)</td>
<td><em>Oncorhynchus clarki</em> (formerly <em>Salmo clarki</em>)</td>
</tr>
<tr>
<td>DC</td>
<td>Dace, General</td>
<td><em>Rhinichthys</em> spp., <em>Phoxinus</em> spp.</td>
</tr>
<tr>
<td>CMT</td>
<td>Deepwater Sculpin</td>
<td><em>Myoxocephalus quadricornis</em></td>
</tr>
<tr>
<td>DV</td>
<td>Dolly Varden, Dolly Varden Char</td>
<td><em>Salvelinus malma</em></td>
</tr>
<tr>
<td>DLW</td>
<td>Dragon Lake Whitefish</td>
<td><em>Coregonus</em> Sp.</td>
</tr>
<tr>
<td>ESC</td>
<td>Emerald Shiner</td>
<td><em>Notropis atherinoides</em></td>
</tr>
<tr>
<td>SB4</td>
<td>Emily Lake Benthic Stickleback</td>
<td><em>Gasterosteus</em> sp.</td>
</tr>
<tr>
<td>SB5</td>
<td>Emily Lake Limnetic Stickleback</td>
<td><em>Gasterosteus</em> sp.</td>
</tr>
<tr>
<td>SB6</td>
<td>Enos Lake Benthic Stickleback</td>
<td><em>Gasterosteus</em> sp.</td>
</tr>
<tr>
<td>SB7</td>
<td>Enos Lake Limnetic Stickleback</td>
<td><em>Gasterosteus</em> sp.</td>
</tr>
<tr>
<td>EU</td>
<td>Eulachon, Candlefish</td>
<td><em>Thaleichthys pacificus</em></td>
</tr>
<tr>
<td>FM</td>
<td>Fathead Minnow</td>
<td><em>Pimephales promelas</em></td>
</tr>
<tr>
<td>Code</td>
<td>Common Name</td>
<td>Scientific Name</td>
</tr>
<tr>
<td>------</td>
<td>-------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>FDC</td>
<td>Finescale Dace</td>
<td><em>Phoxinus neogaeus</em> (formerly <em>Pfrille neogaea</em> and <em>Chrosomus neogaeus</em>)</td>
</tr>
<tr>
<td>FHC</td>
<td>Flathead Chub</td>
<td><em>Platygobio gracilis</em></td>
</tr>
<tr>
<td>GSB</td>
<td>Giant Black</td>
<td><em>Gasterosteus</em> sp.</td>
</tr>
<tr>
<td>GPW</td>
<td>Giant Pygmy Whitefish</td>
<td><em>Prosopium</em> sp., poss. subspecies of <em>Prosopium coulteri</em></td>
</tr>
<tr>
<td>SB8</td>
<td>Giant Stickleback</td>
<td><em>Gasterosteus</em> sp.</td>
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<td>GE</td>
<td>Goldeye</td>
<td><em>Hiodon alosoides</em></td>
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<td>GC</td>
<td>Goldfish</td>
<td><em>Carassius auratus</em></td>
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<td>GSG</td>
<td>Green Sturgeon</td>
<td><em>Acipenser medirostris</em></td>
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<td>SB9</td>
<td>Hadley Lake Benthic Stickleback</td>
<td><em>Gasterosteus</em> sp.</td>
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<td>SB10</td>
<td>Hadley Lake Limnetic Stickleback</td>
<td><em>Gasterosteus</em> sp.</td>
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<tr>
<td>IN</td>
<td>Inconnu, Sheefish, &quot;Conny&quot;</td>
<td><em>Stenodus leucichthys</em></td>
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<tr>
<td>KO</td>
<td>Kokanee</td>
<td><em>Oncorhynchus nerka</em></td>
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<tr>
<td>LKC</td>
<td>Lake Chub</td>
<td><em>Couesius plumbeus</em></td>
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<tr>
<td>CL</td>
<td>Lake Cisco</td>
<td><em>Coregonus artedii</em></td>
</tr>
<tr>
<td>LL</td>
<td>Lake Lamprey, Cowichan Lamprey</td>
<td><em>Lampetra macrostoma</em></td>
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<td>SB11</td>
<td>Lake Sticklebacks</td>
<td><em>Gasterosteus</em> sp.</td>
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<tr>
<td>LT</td>
<td>Lake Trout, Lake Char</td>
<td><em>Salvelinus namaycush</em></td>
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<tr>
<td>LW</td>
<td>Lake Whitefish, Common Whitefish, Humpback Whitefish</td>
<td><em>Coregonus clupeaformis</em></td>
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<tr>
<td>L</td>
<td>Lampreys (General)</td>
<td><em>Lampetra</em> spp.</td>
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<tr>
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<td>Largemouth Bass, Largemouth Black Bass</td>
<td><em>Micropterus salmoides</em></td>
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<tr>
<td>CSU</td>
<td>Largescale Sucker, Coarsescale Sucker</td>
<td><em>Catostomus macrocheilus</em></td>
</tr>
<tr>
<td>CS</td>
<td>Least Cisco</td>
<td><em>Coregonus sardinella</em></td>
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<td>LDC</td>
<td>Leopard Dace</td>
<td><em>Rhinichthys falcatus</em></td>
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<td>LSM</td>
<td>Longfin Smelt</td>
<td><em>Spirinchus thaleichthys</em></td>
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<td>LNC</td>
<td>Longnose Dace</td>
<td><em>Rhinichthys cataractae</em></td>
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<tr>
<td>LSU</td>
<td>Longnose Sucker, Fine-scaled Sucker, Northern Sucker</td>
<td><em>Catostomus catostomus</em></td>
</tr>
<tr>
<td>C</td>
<td>Minnows (General)</td>
<td>many, all cyprinids</td>
</tr>
<tr>
<td>Acronym</td>
<td>Common Name</td>
<td>Scientific Name</td>
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<td>MCL</td>
<td>Morrison Creek Lamprey</td>
<td><em>Lampetra richardsoni marifaga</em></td>
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<tr>
<td>GAM</td>
<td>Mosquitofish, Gambusia</td>
<td><em>Gambusia sp.</em></td>
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<tr>
<td>CBA</td>
<td>Mottled Sculpin</td>
<td><em>Cottus bairdi</em></td>
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<tr>
<td>MSU</td>
<td>Mountain Sucker, Northern/Plains Mountain Sucker</td>
<td><em>Catostomus platyrhyncus</em> (formerly <em>Pantosteus jordani</em>)</td>
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<tr>
<td>MW</td>
<td>Mountain Whitefish, Rocky Mountain Whitefish</td>
<td><em>Prosopium williamsoni</em></td>
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<tr>
<td>NSB</td>
<td>Ninespine Stickleback</td>
<td><em>Pungitius pungitius</em></td>
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<tr>
<td>NFP</td>
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<td></td>
</tr>
<tr>
<td>NDC</td>
<td>Nooksack Dace, Nooky Dace</td>
<td><em>Rhinichthys sp.</em></td>
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<tr>
<td>NP</td>
<td>Northern Pike, Jackfish, Jack</td>
<td><em>Esox lucius</em></td>
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<tr>
<td>RDC</td>
<td>Northern Redbelly Dace</td>
<td><em>Phoxinus eos</em> (formerly <em>Chrosomus eos</em>)</td>
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<tr>
<td>XDC</td>
<td>Northern Redbelly Dace x Finescale Dace</td>
<td><em>Phoxinus eos</em> (Cope) x <em>Phoxinus neogaeus</em> (Cope)</td>
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<tr>
<td>NSC</td>
<td>Northern Squawfish</td>
<td><em>Ptycheilus oregonensis</em></td>
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<tr>
<td>PL</td>
<td>Pacific Lamprey, Sea Lamprey</td>
<td><em>Lampetra tridentata</em></td>
</tr>
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<td>CLA</td>
<td>Pacific Staghorn Sculpin, Staghorn Sculpin</td>
<td><em>Leptocottus armatus</em></td>
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<td>SB12</td>
<td>Paxton Lake Benthic Stickleback</td>
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<td>SB13</td>
<td>Paxton Lake Limnetic Stickleback</td>
<td><em>Gasterosteus sp.</em></td>
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<td>PCC</td>
<td>Peamouth Chub, Peamouth</td>
<td><em>Mylocheilus caurinus</em></td>
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<td>PDC</td>
<td>Pearl Dace, Northern Pearl Dace</td>
<td><em>Margariscus margarita</em> (formerly <em>Semotilus margarita</em>)</td>
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<td>P</td>
<td>Perch, General</td>
<td><em>Perca sp.</em>, <em>Stizostedion sp.</em></td>
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<tr>
<td>PK</td>
<td>Pink Salmon, Humpback Salmon</td>
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<td>CAS</td>
<td>Prickly Sculpin</td>
<td><em>Cottus asper</em></td>
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<td>Priest Lake Benthic Stickleback</td>
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<td>Priest Lake Limnetic Stickleback</td>
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<td>PMB</td>
<td>Pumpkinseed, Sunfish, Pumpkinseed Sunfish</td>
<td><em>Lepomis gibbosus</em></td>
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<td>PLS</td>
<td>Pygmy Longfin Smelt</td>
<td><em>Spirinchus spp.</em></td>
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<tr>
<td>PW</td>
<td>Pygmy Whitefish, Coulter's Whitefish</td>
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<td>Rainbow Smelt</td>
<td><em>Osmerus mordax</em></td>
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<td>Species Name</td>
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<td>RB</td>
<td>Rainbow Trout, Kamloops Trout</td>
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<td>Redside Shiner</td>
<td>Richardsonius balteatus</td>
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<td>River Lamprey, Western Lamprey</td>
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<td>Round Whitefish</td>
<td>Prospium cylindraceum</td>
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<td>Oncorhynchus spp., Salmo salar</td>
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<td>Primarily Cottus spp.</td>
</tr>
<tr>
<td>CCA</td>
<td>Sharpnose Sculpin</td>
<td>Clinocottus acuticeps</td>
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<td>Shorthead Sculpin</td>
<td>Cottus confusus</td>
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<td>CCG</td>
<td>Slimy Sculpin</td>
<td>Cottus cognatus</td>
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<td>SMB</td>
<td>Smallmouth Bass, Smallmouth Black Bass</td>
<td>Micropterus dolomieu</td>
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<td>SM</td>
<td>Smelts, General</td>
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<td>SK</td>
<td>Sockeye Salmon</td>
<td>Oncorhynchus nerka</td>
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<td>SP</td>
<td>Species Present, not identified</td>
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<td>Rhinichthys osculus</td>
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<td>SPK</td>
<td>Splake</td>
<td>Salvelinus fontinalis x Salvelinus namaycush</td>
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<td>CRI</td>
<td>Spoonhead Sculpin, Spoonhead Muddler</td>
<td>Cottus ricei</td>
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<tr>
<td>STC</td>
<td>Spottail Shiner</td>
<td>Notropis hudsonius</td>
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<td>SQ</td>
<td>Squanga</td>
<td>Coregonus sp.</td>
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<td>Starry Flounder</td>
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<td>Steelhead</td>
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<td>Steelhead (Summer-run)</td>
<td>Oncorhynchus mykiss</td>
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<tr>
<td>WST</td>
<td>Steelhead (Winter-run)</td>
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<tr>
<td>SB</td>
<td>Sticklebacks, General</td>
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<td>Sturgeons (General)</td>
<td>Acipenser spp.</td>
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<td>Suckers, General</td>
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<td>Tench</td>
<td>Tinca tinca</td>
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<td>COM</td>
<td>Tidepool Sculpin</td>
<td>Oligocottus maculosus</td>
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<td>Common Name</td>
<td>Scientific Name</td>
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<td>CRH</td>
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<td><em>Cottus rhotheus</em></td>
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<td>TR</td>
<td>Trout (General)</td>
<td><em>Oncorhynchus sp</em></td>
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<td>Troutperch</td>
<td><em>Percops omiscomaycus</em></td>
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<td>Umatilla Dace</td>
<td><em>Rhinichthys umatilla</em></td>
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<tr>
<td>CSB</td>
<td>Unarmoured Stickleback</td>
<td><em>Gasterosteus sp.</em></td>
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<tr>
<td>WP</td>
<td>Walleye, Pike-perch, Pickerel, Dore, many others</td>
<td><em>Stizostedion vitreum</em></td>
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<tr>
<td>BL</td>
<td>Western Brook Lamprey</td>
<td><em>Lampetra richardsoni</em></td>
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<td>WCT</td>
<td>Westslope Cutthroat Trout (preferred)</td>
<td><em>Oncorhynchus clarki lewisi</em> (formerly <em>Salmo clarki lewisi</em>)</td>
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<td><em>Prosopium spp.</em>, <em>Coregonus spp.</em>, <em>Stenodus sp.</em></td>
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<td><em>Acipenser transmontanus</em></td>
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<td>WSU</td>
<td>White Sucker</td>
<td><em>Catostomus commersoni</em></td>
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<td>YP</td>
<td>Yellow Perch, american</td>
<td><em>Perca flavescens</em></td>
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Appendix 4C - B.C. Fish Species Codes:
Alphabetical by Codes
### B.C. Fish Species Codes: Alphabetical by Codes

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<thead>
<tr>
<th>CODE</th>
<th>COMMON NAME</th>
<th>LATIN NAME</th>
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<tr>
<td>AC</td>
<td>Arctic Char</td>
<td>Salvelinus alpinus</td>
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<td>ACT</td>
<td>Anadromous Cutthroat Trout</td>
<td>Oncorhynchus clarki (formerly Salmo clarki)</td>
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<td>AD</td>
<td>All Anadromous Species</td>
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<td>AEB</td>
<td>Anadromous Eastern Brook Trout</td>
<td>Salvelinus fontinalis</td>
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<td>Lampetra japonica</td>
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<td>All Salmon</td>
<td>Oncorhynchus spp., Salmo salar</td>
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<td>AS</td>
<td>Atlantic Salmon</td>
<td>Salmo salar</td>
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<td>BB</td>
<td>Burbot, Freshwater Ling Cod, Ling, Loche, Lawyer</td>
<td>Lota lota</td>
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<td>BCB</td>
<td>Black Crappie, Calico Bass</td>
<td>Pomoxis nigromaculatus</td>
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<tr>
<td>BH</td>
<td>Catfish, General (pref.), Bullheads</td>
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<td>BKH</td>
<td>Black Bullhead, Black Catfish</td>
<td>Ameiurus melas (formerly Ictalurus melas)</td>
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<td>Lampetra richardsoni</td>
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<td>BMC</td>
<td>Brassy Minnow</td>
<td>Hybognathus hankinsoni</td>
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<td>Brown Bullhead, Brown Catfish</td>
<td>Ameiurus nebulosus (formerly Ictalurus nebulosus)</td>
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<td>Bridgelip Sucker, Columbia Small-scaled Sucker</td>
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<td>Bull Trout</td>
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<td>Broad Whitefish, Round-nosed Whitefish, Sheep-nose Whitefish</td>
<td>Coregonus nasus</td>
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<td>Description</td>
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<tr>
<td>C</td>
<td>Minnows (General)</td>
<td>many, all cyprinids</td>
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<td>Arctic Cisco</td>
<td><em>Coregonus autumnalis</em></td>
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<tr>
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<td><em>Cottus asper</em></td>
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<td>CBC</td>
<td>Chub, General</td>
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<tr>
<td>CC</td>
<td>Sculpins, General (pref.), Bullheads</td>
<td>Primarily <em>Cottus</em> spp.</td>
</tr>
<tr>
<td>CCA</td>
<td>Sharpnose Sculpin</td>
<td><em>Clinocottus acuticeps</em></td>
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<tr>
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<td>Slimy Sculpin</td>
<td><em>Cottus cognatus</em></td>
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<td><em>Cottus</em> sp.</td>
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<td>Shorthead Sculpin</td>
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<td>CCT</td>
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<tr>
<td>CH</td>
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<td><em>Oncorhynchus tshawytscha</em></td>
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<td>CL</td>
<td>Lake Cisco</td>
<td><em>Coregonus artedii</em></td>
</tr>
<tr>
<td>CLA</td>
<td>Pacific Staghorn Sculpin, Staghorn Sculpin</td>
<td><em>Leptocottus armatus</em></td>
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<td>Chum Salmon, Dog Salmon</td>
<td><em>Oncorhynchus keta</em></td>
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<td>Coho Salmon</td>
<td><em>Oncorhynchus kisutch</em></td>
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<td>COM</td>
<td>Tidepool Sculpin</td>
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<td>Carp</td>
<td><em>Cyprinus carpio</em></td>
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<td>Torrent Sculpin</td>
<td><em>Cottus rhotheus</em></td>
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<tr>
<td>CRI</td>
<td>Spoonhead Sculpin, Spoonhead Muddler</td>
<td><em>Cottus ricei</em></td>
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<tr>
<td>CS</td>
<td>Least Cisco</td>
<td><em>Coregonus sardinella</em></td>
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<td>CSB</td>
<td>Unarmoured Stickleback</td>
<td><em>Gasterosteus</em> sp.</td>
</tr>
<tr>
<td>CSU</td>
<td>Largescale Sucker, Coarsescale Sucker</td>
<td><em>Catostomus macrocheilus</em></td>
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<tr>
<td>CT</td>
<td>Cutthroat Trout (General)</td>
<td><em>Oncorhynchus clarki</em> (formerly <em>Salmo clarki</em>)</td>
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<td>DC</td>
<td>Dace, General</td>
<td><em>Rhinichthys</em> spp., <em>Phoxinus</em> spp.</td>
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<tr>
<td>Code</td>
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<td>Brook Trout, Eastern Brook Trout</td>
<td>Salvelinus fontinalis</td>
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<td>ESC</td>
<td>Emerald Shiner</td>
<td>Notropis atherinoides</td>
</tr>
<tr>
<td>EU</td>
<td>Eulachon, Candlefish</td>
<td>Thaleichthys pacificus</td>
</tr>
<tr>
<td>FDC</td>
<td>Finescale Dace</td>
<td>Phoxinus neogaeus (formerly Ptille neogae and Chrosomus neogae)</td>
</tr>
<tr>
<td>FHC</td>
<td>Flathead Chub</td>
<td>Platygobio gracilis</td>
</tr>
<tr>
<td>FM</td>
<td>Fathead Minnow</td>
<td>Pimephales promelas</td>
</tr>
<tr>
<td>GAM</td>
<td>Mosquitofish, Gambusia</td>
<td>Gambusia sp.</td>
</tr>
<tr>
<td>GB</td>
<td>Brown Trout, German Brown Trout</td>
<td>Salmo trutta</td>
</tr>
<tr>
<td>GC</td>
<td>Goldfish</td>
<td>Carassius auratus</td>
</tr>
<tr>
<td>GE</td>
<td>Goldeye</td>
<td>Hiodon alosoides</td>
</tr>
<tr>
<td>GPW</td>
<td>Giant Pygmy Whitefish</td>
<td>Prosopium sp., poss. subspecies of Prosopium coulter</td>
</tr>
<tr>
<td>GR</td>
<td>Arctic Grayling</td>
<td>Thymallus arcticus</td>
</tr>
<tr>
<td>GSB</td>
<td>Giant Black</td>
<td>Gasterosteus sp.</td>
</tr>
<tr>
<td>GSG</td>
<td>Green Sturgeon</td>
<td>Acipenser medirostris</td>
</tr>
<tr>
<td>IN</td>
<td>Inconnu, Sheefish, “Conny”</td>
<td>Stenodus leucichthys</td>
</tr>
<tr>
<td>KO</td>
<td>Kokanee</td>
<td>Oncorhynchus nerka</td>
</tr>
<tr>
<td>L</td>
<td>Lampreys (General)</td>
<td>Lampetra spp.</td>
</tr>
<tr>
<td>LDC</td>
<td>Leopard Dace</td>
<td>Rhinichthys falcatus</td>
</tr>
<tr>
<td>LKC</td>
<td>Lake Chub</td>
<td>Couesius plumbeus</td>
</tr>
<tr>
<td>LL</td>
<td>Lake Lamprey, Cowichan Lamprey</td>
<td>Lampetra macrostoma</td>
</tr>
<tr>
<td>LMB</td>
<td>Largemouth Bass, Largemouth Black Bass</td>
<td>Micropterus salmoides</td>
</tr>
<tr>
<td>LNC</td>
<td>Longnose Dace</td>
<td>Rhinichthys cataractae</td>
</tr>
<tr>
<td>LSM</td>
<td>Longfin Smelt</td>
<td>Spirinchthys thaleichthys</td>
</tr>
<tr>
<td>LSU</td>
<td>Longnose Sucker, Fine-scaled Sucker, Northern Sucker</td>
<td>Catostomus catostomus</td>
</tr>
<tr>
<td>LT</td>
<td>Lake Trout, Lake Char</td>
<td>Salvelinus namaycush</td>
</tr>
<tr>
<td>Code</td>
<td>Species Name</td>
<td>Scientific Name</td>
</tr>
<tr>
<td>------</td>
<td>--------------------------------------------------</td>
<td>------------------------------------------</td>
</tr>
<tr>
<td>LW</td>
<td>Lake Whitefish, Common Whitefish, Humpback Whitefish</td>
<td><em>Coregonus clupeaformis</em></td>
</tr>
<tr>
<td>MCL</td>
<td>Morrison Creek Lamprey</td>
<td><em>Lampetra richardsoni marifaga</em></td>
</tr>
<tr>
<td>MSU</td>
<td>Mountain Sucker, Northern/Plains Mountain Sucker</td>
<td><em>Catostomus platyrhyncus</em> (formerly <em>Pantosteus jordani</em>)</td>
</tr>
<tr>
<td>MW</td>
<td>Mountain Whitefish, Rocky Mountain Whitefish</td>
<td><em>Prosopium williamsoni</em></td>
</tr>
<tr>
<td>NDC</td>
<td>Nooksack Dace, Nooky Dace</td>
<td><em>Rhinichthys sp.</em></td>
</tr>
<tr>
<td>NFP</td>
<td>No Fish Present</td>
<td></td>
</tr>
<tr>
<td>NP</td>
<td>Northern Pike, Jackfish, Jack</td>
<td><em>Esox lucius</em></td>
</tr>
<tr>
<td>NSB</td>
<td>Ninespine Stickback</td>
<td><em>Pungitius pungitius</em></td>
</tr>
<tr>
<td>NSC</td>
<td>Northern Squawfish</td>
<td><em>Ptycheilus oregonensis</em></td>
</tr>
<tr>
<td>P</td>
<td>Perch, General</td>
<td><em>Perca sp., Stizostedion sp.</em></td>
</tr>
<tr>
<td>PCC</td>
<td>Peamouth Chub, Peamouth</td>
<td><em>Mylocheilus caurinus</em></td>
</tr>
<tr>
<td>PDC</td>
<td>Pearl Dace, Northern Pearl Dace</td>
<td><em>Margariscus margarita</em> (formerly <em>Semotilus margarita</em>)</td>
</tr>
<tr>
<td>PK</td>
<td>Pink Salmon, Humpback Salmon</td>
<td><em>Oncorhynchus gorbuscha</em></td>
</tr>
<tr>
<td>PL</td>
<td>Pacific Lamprey, Sea Lamprey</td>
<td><em>Lampetra tridentata</em></td>
</tr>
<tr>
<td>PLS</td>
<td>Pygmy Longfin Smelt</td>
<td><em>Spirinchus spp.</em></td>
</tr>
<tr>
<td>PMB</td>
<td>Pumpkinseed, Sunfish, Pumpkinseed Sunfish</td>
<td><em>Lepomis gibbosus</em></td>
</tr>
<tr>
<td>PW</td>
<td>Pygmy Whitefish, Coulter's Whitefish</td>
<td><em>Prosopium coulteri</em></td>
</tr>
<tr>
<td>RB</td>
<td>Rainbow Trout, Kamloops Trout</td>
<td><em>Oncorhynchus mykiss</em> (formerly <em>Salmo gairdneri</em>)</td>
</tr>
<tr>
<td>RDC</td>
<td>Northern Redbelly Dace</td>
<td><em>Phoxinus eos</em> (formerly <em>Chrosomus eos</em>)</td>
</tr>
<tr>
<td>RL</td>
<td>River Lamprey, Western Lamprey</td>
<td><em>Lampetra ayresi</em></td>
</tr>
<tr>
<td>RSC</td>
<td>Redside Shiner</td>
<td><em>Richardsonius balteatus</em></td>
</tr>
<tr>
<td>RSM</td>
<td>Rainbow Smelt</td>
<td><em>Osmerus mordax</em></td>
</tr>
<tr>
<td>RW</td>
<td>Round Whitefish</td>
<td><em>Prosopium cylindraceum</em></td>
</tr>
<tr>
<td>SA</td>
<td>Salmon (General)</td>
<td><em>Oncorhynchus spp., Salmo salar</em></td>
</tr>
<tr>
<td>SB</td>
<td>Sticklebacks, General</td>
<td></td>
</tr>
<tr>
<td>SB1</td>
<td>Balkwill Lake Benthic Stickleback</td>
<td><em>Gasterosteus sp.</em></td>
</tr>
<tr>
<td>SB2</td>
<td>Balkwill Lake Limnetic Sticleback</td>
<td><em>Gasterosteus sp.</em></td>
</tr>
<tr>
<td>Code</td>
<td>Species Name</td>
<td>Scientific Name</td>
</tr>
<tr>
<td>------</td>
<td>----------------------------------------------</td>
<td>---------------------------------------</td>
</tr>
<tr>
<td>SB3</td>
<td>Charlotte Unarmoured Stickleback</td>
<td><em>Gasterosteus sp.</em></td>
</tr>
<tr>
<td>SB4</td>
<td>Emily Lake Benthic Stickleback</td>
<td><em>Gasterosteus sp.</em></td>
</tr>
<tr>
<td>SB5</td>
<td>Emily Lake Limnetic Stickleback</td>
<td><em>Gasterosteus sp.</em></td>
</tr>
<tr>
<td>SB6</td>
<td>Enos Lake Benthic Stickleback</td>
<td><em>Gasterosteus sp.</em></td>
</tr>
<tr>
<td>SB7</td>
<td>Enos Lake Limnetic Stickleback</td>
<td><em>Gasterosteus sp.</em></td>
</tr>
<tr>
<td>SB8</td>
<td>Giant Stickleback</td>
<td><em>Gasterosteus sp.</em></td>
</tr>
<tr>
<td>SB9</td>
<td>Hadley Lake Benthic Stickleback</td>
<td><em>Gasterosteus sp.</em></td>
</tr>
<tr>
<td>SB10</td>
<td>Hadley Lake Limnetic Stickleback</td>
<td><em>Gasterosteus sp.</em></td>
</tr>
<tr>
<td>SB11</td>
<td>Lake Sticklebacks</td>
<td><em>Gasterosteus sp.</em></td>
</tr>
<tr>
<td>SB12</td>
<td>Paxton Lake Benthic Stickleback</td>
<td><em>Gasterosteus sp.</em></td>
</tr>
<tr>
<td>SB13</td>
<td>Paxton Lake Limnetic Stickleback</td>
<td><em>Gasterosteus sp.</em></td>
</tr>
<tr>
<td>SBB</td>
<td>Priest Lake Benthic Stickleback</td>
<td><em>Gasterosteus sp.</em></td>
</tr>
<tr>
<td>SBP</td>
<td>Priest Lake Limnetic Stickleback</td>
<td><em>Gasterosteus sp.</em></td>
</tr>
<tr>
<td>SDC</td>
<td>Speckled Dace</td>
<td><em>Rhinichthys osculus</em></td>
</tr>
<tr>
<td>SFL</td>
<td>Starry Flounder</td>
<td><em>Platichthys stellatus</em></td>
</tr>
<tr>
<td>SG</td>
<td>Sturgeons (General)</td>
<td><em>Acipenser spp.</em></td>
</tr>
<tr>
<td>SH</td>
<td>American Shad</td>
<td><em>Alosa sapidissima</em></td>
</tr>
<tr>
<td>SK</td>
<td>Sockeye Salmon</td>
<td><em>Oncorhynchus nerka</em></td>
</tr>
<tr>
<td>SM</td>
<td>Smelts, General</td>
<td></td>
</tr>
<tr>
<td>SMB</td>
<td>Smallmouth Bass, Smallmouth Black Bass</td>
<td><em>Micropterus dolomieui</em></td>
</tr>
<tr>
<td>SP</td>
<td>Species Present, not identified</td>
<td></td>
</tr>
<tr>
<td>SPK</td>
<td>Splake</td>
<td><em>Salvelinus fontinalis x Salvelinus namaycush</em></td>
</tr>
<tr>
<td>SQ</td>
<td>Squanga</td>
<td><em>Coregonus sp.</em></td>
</tr>
<tr>
<td>SSM</td>
<td>Surf Smelt</td>
<td><em>Hypomesus pretiosus</em></td>
</tr>
<tr>
<td>SST</td>
<td>Steelhead (Summer-run)</td>
<td><em>Oncorhynchus mykiss</em></td>
</tr>
<tr>
<td>SSU</td>
<td>Salish Sucker</td>
<td><em>Catostomus sp.</em></td>
</tr>
<tr>
<td>ST</td>
<td>Steelhead</td>
<td><em>Oncorhynchus mykiss (formerly Salmo gairdneri)</em></td>
</tr>
<tr>
<td>STC</td>
<td>Spottail Shiner</td>
<td><em>Notropis hudsonius</em></td>
</tr>
<tr>
<td>SU</td>
<td>Suckers, General</td>
<td><em>Catostomus sp.</em></td>
</tr>
<tr>
<td>TC</td>
<td>Tench</td>
<td><em>Tinca tinca</em></td>
</tr>
<tr>
<td>TP</td>
<td>Troutperch</td>
<td><em>Percopis omiscomaycus</em></td>
</tr>
<tr>
<td>Code</td>
<td>Species Name</td>
<td>Scientific Name</td>
</tr>
<tr>
<td>------</td>
<td>--------------------------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>TR</td>
<td>Trout (General)</td>
<td><em>Oncorhynchus sp</em></td>
</tr>
<tr>
<td>TSB</td>
<td>Threespine Stickleback</td>
<td><em>Gasterosteus aculeatus</em></td>
</tr>
<tr>
<td>UDC</td>
<td>Umatilla Dace</td>
<td><em>Rhinichthys umatilla</em></td>
</tr>
<tr>
<td>WCT</td>
<td>Westslope Cutthroat Trout (preferred)</td>
<td><em>Oncorhynchus clarki lewisi</em></td>
</tr>
<tr>
<td></td>
<td>Yellowstone Cutthroat Trout</td>
<td>(formerly <em>Salmo clarki lewisi</em>)</td>
</tr>
<tr>
<td>WF</td>
<td>Whitefish (General)</td>
<td><em>Prosopium spp.</em>, <em>Coregonus spp.</em>, <em>Stenodus sp.</em></td>
</tr>
<tr>
<td>WP</td>
<td>Walleye, Pike-perch, Pickerel, Dore, many others</td>
<td><em>Stizostedion vitreum</em></td>
</tr>
<tr>
<td>WSG</td>
<td>White Sturgeon</td>
<td><em>Acipenser transmontanus</em></td>
</tr>
<tr>
<td>WSK</td>
<td>White Sturgeon (Kootenay River Pop)</td>
<td><em>Acipenser transmontanus Pop 1</em></td>
</tr>
<tr>
<td>WST</td>
<td>Steelhead (Winter-run)</td>
<td><em>Oncorhynchus mykiss</em></td>
</tr>
<tr>
<td>WSU</td>
<td>White Sucker</td>
<td><em>Catostomus commersoni</em></td>
</tr>
<tr>
<td>XDC</td>
<td>Northern Redbelly Dace x Finescale Dace</td>
<td><em>Phoxinus eos</em> (Cope) <em>Phoxinus neogaeus</em> (Cope)</td>
</tr>
<tr>
<td>YP</td>
<td>Yellow Perch, american</td>
<td><em>Perca flavescens</em></td>
</tr>
</tbody>
</table>