

## **Stream Reach Editor User Manual**

Mobrand Biometrics, Inc.

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## **Stream Reach Editor User Manual**

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## Introduction

The first major task in subbasin assessment using EDT Online is defining (or profiling) the environment for the area you are analyzing. This task is currently accomplished through the use of the offline Stream Reach Editor tool, downloaded from the EDT Online Web site.

## Who will use the Stream Reach Editor

This User Manual provides step-by-step instructions for working with the Stream Reach Editor and is written for the following groups:

- General public
- Subbasin work groups
- Subbasin administrators

EDT Online allows users with varying levels of permission to edit/view stream reach data. All user groups may download the Stream Reach Editor, User Manual, and datasets — and thus may use the editor to create new datasets. However, only authorized subbasin work group members and subbasin administrators may upload new datasets to EDT Online.

## What you should know

This manual assumes a familiarity with basic operating system functionality, such as copying, saving, and deleting files and installing applications; familiarity with various utilities, such as unzipping files; and familiarity with Web-based activities, such as navigation and filling in forms.

## What software and hardware you will need

The offline Stream Reach Editor requires a PC with Windows 98, NT4, or later operating system and MS Access 2000 installed. It is also necessary to have file expansion software, such as Winzip or Aladdin Stuffit, and Acrobat Reader for viewing the documentation.

The Stream Reach Editor is a component of the EDT Online Web site, which may be accessed from a variety of operating systems, through various Browsers, and across a range of Internet connections (T-1, DSL line, cable modem, or dial-up modem). Your Internet connection will



affect the various file download times – the larger files may take several minutes with a dialup modem.

## **Before You Begin**

Before you can begin to use the Stream Reach Editor to define strea reaches and rate habitat attributes, you must download the tool and data from the EDT Online Web site and get it set up offline. This section describes these procedures.

## Downloading the Stream Reach Editor, Documentation, and Data

This section describes how to download the Stream Reach Editor User Manual, the Stream Reach Editor offline tool, and a stream reach dataset from the EDT Online Web site.

### To download the User Guide and Stream Reach Editor:

- 1. Go to the EDT Online Web site (<u>http://www.mobrand.com/edt</u>).
- 2. Click on the desired Sponsor Logo (e.g., the Northwest Power and Conservation Council).
- 3. Select your area (province) and click on "Go."
- 4. Log in -or-

register as a public user.

- 5. Select your subbasin from the drop-down list in the center of the page and click on "Go." The EDT Main Menu appears.
- 6. Click on "Stream Reach Editor" from the EDT Main Menu page. The Stream Reach Editor Main Menu appears.



5550 /		
EDIUnline	I Main Menu   Subbasins   Stream Heaches   Populations   Soenarios   Hepoirs   Manuals   Accounts   LogUuc 	
	Subbasin: Entiat	
	STREAM REACH EDITOR MAIN MENU	
	•	
	<ul> <li>Download Editor and User Manual Download the offline Stream Reach Editor and create your own subbasin datasets. File size for the Editor is 2.6 MB. You must have a Windows operating system with <u>MS Access</u> installed on your hard drive to use the Editor. File size for the User Manual is 2.17 MB. The Manual is in Adobe Acrobat format.</li> <li>Download Data Download baseline reach definitions and habitat attribute profiles to use with the Stream Reach Editor.</li> <li>Upload Draft Data Once you have edited the data offline, come back here to upload your new draft data to our online database.</li> <li>Delete Draft Data Permanently remove draft data from our database.</li> <li>Register Draft Data Register your draft as the "official" data for your subbasin.</li> </ul>	Describe the environment with the Stream Reach Editor by following the steps to the laft: (1) download the Editor and Manual and (2) download Data. Edit the data on your computer to create your subbasin dataset. When finished, come back to EDT Online to upload and register your dataset for use with the Fish Population Editor, Scenario Builder, and Report Generator.

#### Figure 1: Stream Reach Editor Main Menu screen from EDT Online

- Note: If you are a public user, you will not see all of the options listed on this main menu page you will not be able to upload revised datasets. Subbasin work group members, with permissions from the subbasin administrator, will see more menu options and will be able to upload revised datasets, run reports on them, and delete their own draft datasets.
  - 7. Click on "Download Editor and User Manual." The Download the Stream Reach Editor and User Manual screen appears.

📕 Download Editor	
Download Data	STREAM REACH EDITOR
	Download the Stream Reach Editor and User Manual
	This is a four-step process:
	<ul> <li>First, check the list of Requirements below.</li> <li>Second, download the Editor to your computer.</li> <li>Third, download the User Manual.</li> <li>Last, return to the Editor main menu and select "Download Data" to download a dataset to use with the Editor.</li> </ul>
	Requirements
	<ul> <li>To use the Stream Reach Editor, you must have a Windows operating system with <u>MS Access 2000</u> installed on your hard drive.</li> <li>Both the Editor and the Datasets have been compressed for faster dowinloading. If you don't already have file expansion software, you may <u>download Aladdin Stuffit</u> free of charge (opens in a new window).</li> <li>The Stream Reach Editor User Manual is in Adobe Acrobat format. If you don't already have it, you may <u>download the Adobe Acrobat</u> <u>Reader</u> free of charge (opens in a new window).</li> </ul>
	Download Editor: File size: 2.6 MB. This make take up to 5 minutes to download with a dial-up modern connection.
	few minutes if you are on a dial-up connection).

Figure 2: Download the Stream Reach Editor and User Manual screen from EDT Online



- 8. Click on "Download User Manual" at the bottom of the page to either view the User Manual as a .pdf file or to save it to your computer for printing.
- 9. Click on "Download Editor" at the bottom of the page. The Download File dialog box appears.

File Dow	nload	×
?	You are downloading the file: Reach_Editor.zip from www.mobrand.com	
	Would you like to open the file or save it to your computer?	
	Open         Save         Cancel         More Info           Image: Always ask before opening this type of file         Image: Always ask before opening the structure opening the	J

#### Figure 3: Download file dialog box

10. Click on "Save." The Save As dialog box appears.

Save As			? X
Save in:	🗹 Desktop	- 🖬 📩 🖬 -	
History Desktop My Documents	My Documents My Computer aug 28 Scenario Demo Session_9-12-03 ScenarioBuilderSep12_03 ScenBuilder_Sept_15_03 ScenBuilder_Sept_16_03 SRE-TodaysDate TestSep20 webworkongoing	Twobrand_Entiat_1064352750	909_RH.zir
My Computer	•		►
	File name: Reach_Editor.zip	•	Save
My Network P	Save as type: WinZip File	V	Cancel

#### Figure 4: Save As dialog box

- 11. Create a directory for the Stream Reach Editor files, and click "Save."
- 12. Navigate with Windows Explorer to the newly created directory, and double-click on the downloaded file, Reach\_Editor.zip.



(in the second s	inZip - S	tream R	each Ed	itor.zip								_ []	×
File	Actions	Options	Help										
*			C	) 💡		1	2		6	a 2	*		
N	ew	Open	Favori	tes	Add	Extra	act	View	Check	Out W	izard		
Name	9			Modified				Size	Ratio	Packed	CRC	Attrib	T
TT VE	zipperDll	.exe		4/3/200	2 4:38 PM			101,888	11%	91,032	c7411715	А	
2) St	ream Rea	ich Editor.	mdb	7/14/20	02 5:19 PM			12,476,416	76%	2,942,	476ef071	A	
•													Þ
Select	ed 1 file,	12,184KB				Tot	al 2 I	files, 12,284	(B			- 🔾 🥥	11.

#### Figure 5: Contents of downloaded zip file

- NOTE: The .zip files contains two files: an executable DLL file utility (VbzipperDll.exe) and an MS Access database file (Stream Reach Editor.mdb), as shown below:
  - 13. Extract these files into the same directory that you created for the downloaded .zip file.
- NOTE: These two files must be saved in the same directory or the application will not function properly.

Now that you have downloaded the Stream Reach Editor and documentation, you are ready to download a stream reach dataset.

#### To download the stream reach data:

1. Click on the "Download Data" button from the Stream Reach Editor Main Menu. The Download Stream Reach Dataset screen appears.

STREAM REACH EDITOR	
Download A Stream Reach Dataset Copy	
The downloadable datasets consist of Reach Definition and Habitat Attribute data that can used in the offline editor.	
A downloaded dataset can serve as a baseline starting point for your <b>new</b> data. You may edit the baseline datasets with the Stream Reach Editor to build your own subbasin dataset and then upload this edited dataset as a <b>new</b> draft.	
Important: The offline Editor uses a <b>copy</b> of the selected online dataset for viewing/editing purposes. When you make edits in the offline Editor, you are <b>not changing</b> the online data.	
When you upload a dataset, you are <b>not replacing</b> any existing datasets; you are creating a new draft dataset that uses the original dataset as a baseline starting point.	
Select a dataset you would like to use with the Editor from the drop-down list below, and then click "Proceed."	
Select Dataset to Download 💌	

Figure 6: Download Stream Reach Dataset Copy screen from EDT Online



2. Select a dataset from the drop-down list at the bottom of the page.

Select a dataset you would like to use with the Editor from the drop-down list below, and then click "Proceed."
Entiat 4-30-02(registered)
Please be patient after clicking the proceed button, below. It may take a minute or two to prepare your dataset for download. Once the dataset is prepared, you will be forwarded to the next screen and provided a download link to click. <b>Proceed</b>

#### Figure 7: Dataset drop-down list

- NOTE: Public users will see on the registered dataset for the subbasin in the list; users with assigned permissions will see other datasets.
  - 3. Click on the "Proceed" button. This brings up the Download Datasets screen.

STREAM REACH EDITOR
Download Datasets
Click the button below to complete your dataset download.
Download Datasets
When the download is complete you may:
Return to Stream Reach Main Menu Log Out

#### Figure 8: Download Datasets screen from EDT Online

4. Click "Download Datasets." The File Download dialog box appears.

File Dowr	nload	x
?	You are downloading the file: ntiat_1064357499133_RH.zip from www.mobrand.com	
	Would you like to open the file or save it to your computer?	
	Open Save Cancel More Info	
	$\checkmark$ Always ask before opening this type of file	

#### Figure 9: File Download dialog box

5. Click on "Save." The Save As dialog box appears.



Save As						<u>?</u> ×
Save in:	SRE-Todays	Date	•	(† 🔁 🖶		
History History Desktop My Documents						
Mu Network P	File name:	kmobrand_Entiat_1	064357499133_	RH.zip 💌	Sa	ve
My Network P	Save as type:	WinZip File		•	Car	ncel

Figure 10: File Save As dialog box

6. Save the file to the same directory where you placed the Stream Reach Editor files.

Now that you have downloaded the Stream Reach Editor, User Guide, and dataset, you are ready to log off from the EDT Online Web site and get the Stream Reach Editor set up and ready for use.

## Getting the Stream Reach Editor set up

This section describes getting the Stream Reach Editor tool ready for defining reaches and rating habitat attributes. There are three steps involved in this process (1) launching the Stream Reach Editor application, (2) unzipping the datafiles, and (3) importing the data files into the Stream Reach Editor

#### To launch the Stream Reach Editor

- 1. Navigate to the directory where you downloaded and extracted the Stream Reach Editor database application.
- 2. Double-click on the .mdb file (Stream Reach Editor.mdb). The MS Access application and database file will open, as shown in the following screen.





#### Figure 11: Stream Reach Editor Welcome screen

3. Click on "Begin" at the bottom of the screen. The Stream Reach Editor Main Menu screen appears.



#### Figure 12: Stream Reach Editor Main Menu screen

NOTE: This screen describes the functionality of the menu buttons that are located across the top of the page. It does NOT represent the order in which the steps will be taken when using the offline Stream Reach Editor.

Now that you have launched the Stream Reach Editor, you are ready to to unzip the dataset that you downloaded from EDT Online.



#### Extracting the data files:

 Click on the "Import Stream Reach Data" button on the left end of the navigation bar on the Stream Reach Editor Main Menu page. The Step 1 – Extract Data Files screen appears.

Import Stream Reach Data	
Imoort Stream Reach Data Export Stream Reach Data Reach Editor Attribute Editor Exit	
Step 1 - Extract Data Files From Zip Download	
This process will import the stream reach dataset that was downloaded from ED	T Online.
Data import requires the following four steps:	
<ol> <li>Extract all text files from the zip file downloaded from EDT Online (this will require these files)</li> </ol>	uire software to unzip
2) Set path to local zip file directory	
<ol> <li>Begin import after confirming that all files were successfully found on the local files)</li> </ol>	directory (total of nine
4) Confirm successful data import	
Proceed	
	Mabrand Biometrics . Inc @ 2002

#### Figure 13: Extract Data Files screen

2. Navigate with Windows Explorer to the directory where you downloaded your stream reach dataset file and double-click on it. The contents of the .zip file are shown below.

🗐 WinZip - Jane_Doe103515759178: File Actions Options <u>H</u> elp	9_RH.zip					<u>- 0 ×</u>
🌮 🛃 🔇 🐔	à 🕋	😞 奯	2			
New Open Favorites Ad	d Extract	View CheckOut	Wizard			
Name	Туре	Modified 💊	Size	Ratio	Packed	Path
1_Attribute_Data.txt	Text Document	10/20/02 4:46 PM	122,869	81%	23,922	
1_Attribute_Data_Documentation.txt	Text Document	10/20/02 4:46 PM	182,780	93%	12,205	
1_Hatchery_Program_Data.txt	Text Document	10/20/02 4:46 PM	0	0%	2	
1_Obstruction_Attribute_Data.txt	Text Document	10/20/02 4:46 PM	0	0%	2	
2_Pattern_Data.txt	Text Document	10/20/02 4:46 PM	2,763	85%	422	
2_Pattern_Data_Documentation.txt	Text Document	10/20/02 4:46 PM	2,688	85%	396	
3_Reference_Sources.txt	Text Document	10/20/02 4:46 PM	0	0%	2	
5_Basin_Hydrography.txt	Text Document	10/20/02 4:46 PM	4,618	80%	903	
🗒 6_Reach_Data.txt	Text Document	10/20/02 4:46 PM	8,970	85%	1,310	
HARD_info.txt	Text Document	10/20/02 4:46 PM	101	25%	76	
<[						Þ
Selected 0 files, 0 bytes		Total 10 files, 318KB				<b>)</b> ()

#### Figure 14: Data files within the downloaded dataset .zip file

NOTE: The file contains ten .txt files – nine data files and one HARD\_info.text file.

- 3. Extract these ten files into the same directory where you placed the downloaded .zip file and the Stream Reach Editor files.
- Return to the Extract Data Files screen and click "Proceed." The Step 2

   Locate Data Files screen appears.



Import Stream Reach Data	
Insort: Stream Reach Data Excort: Stream Reach Data Reach Editor Attribute Editor Ex	t.
Step 2 - Locate Data Files	
Set paths - you will be asked to locate the local directory and file named HARD_I same directory that the text files were extracted into in Step 1.	nfo.txt. This is the
Set Paths	
	Wabrand Biometrics, Inc © 200

#### Figure 15: Locate Data Files screen

- NOTE: In this step, you will be asked to set the path to the directory where the dataset files were downloaded and unzipped. The Editor is looking for a file called HARD\_info.txt.
  - 5. Click on "Set Paths" at the bottom of the screen. The Select Import File dialog box appears.

Select Import	File				? ×
Look jn: 🔂	Stream Reach Editor	• 🗈	<u></u>	Ċ	
HARD_inf	D				
File <u>n</u> ame:	HARD_info				<u>O</u> pen
Files of type:	Text		•		Cancel
	C Open as read-only				

#### Figure 16: Select Import File dialog box

6. Click on "Open." The Step 3 – Import Data Files screen appears.



Import Stream Reach Data	
Import Stream Reach Data Export Stream Reach Data Reach Editor Attribute Editor Ex	it
Step 3 - Import Data Files Before clicking on the Begin Import button - first verify that all text files were succ missing files will be highlighted and noted as missing. Importing may take severa	cessfully located. Any al minutes.
Text Files in Directory: HARD_Info txt 1_Attribute_Data.txt 1_Attribute_Data_Documentation.txt 1_Hatchery_Program_Data.txt 2_Pattern_Data.txt 2_Pattern_Data.txt 2_Pattern_Data.txt 3_Reference_Sources.txt 5_Basin_Hydrography.txt 6_Reach_Data.txt Data files are ready to import into Stream Reach Editor	
Begin Import	
	Matrand Bismetikas, Inc. 60200

#### Figure 17: Step 3 – Import Data Files screen

- NOTE: You should see the two files that were in the downloaded .zip file. If any files were not successfully located, they will be highlighted and noted as missing.
  - 7. Click on "Begin Import" at the bottom of the screen. When complete, the Step 4 Confirm Successful Import Screen appears.
- NOTE: Importing may take several minutes.



#### Figure 18: Step 4 – Confirm Successful Import screen

8. Click on "Proceed" at the bottom of the screen to return to the Stream Reach Editor Main Menu.



Now that you have the Stream Reach Editor launched and loaded with data, you are ready to proceed to the heart of the process: defining your reach structure.

## **Defining the Reach Structure**

This section describes the process of defining, or profiling, your reach structure with the offline Stream Reach Editor. You will start with the stream reach dataset that you downloaded from the EDT Online Web site and imported into the Editor.

NOTE: You may also use the process described in this section for editing reaches to simply review your dataset before making any revisions, additions, or deletions.

This section will address, separately, the procedures followed for editing existing reaches and for creating new reaches.

In working with the many forms described in this section, it is useful to use a "filter" function to find specific entries or to display a group of similar entries.

#### To use the filter function:

- 1. Select the cell containing the entry of interest.
- 2. Right click in that cell, bringing up the "filter" sub-menu.
- 3. Select "Filter by Selection," which refreshes the screen to show only those entries that share the same information as displayed in the selected cell

-or-

selection the "Filter on: " and type in the name of the specific record that has that name in the selected cell

4. Right-click in any cell to bring up the filter sub-menu and select "Remove Filter/Sort" to return to the regular view with all data showing.

## **Editing Existing Reaches**

To begin editing reaches, click on the "Reach Editor" button on the navigation bar of the Stream Reach Editor Main Menu. The following screen appears.



Reach Editor	
Import Stream Reach Data Export Stream Reach Data Reach Editor Attribute Editor	Exit
Create New Reaches for Subbasin Add new streams/reaches to the dataset. This is the first step prior to entering habitat attributes Edit Reaches for Subbasin Edit reach information/split existing reaches. Edits are reach routing, length, reach hierarchy, etc	General help information for using the Reach Editor Functions User will be working with an existing set of Subbasin data. First step will be to review these reaches. After review then begin to add streams/reaches and/or edit the existing reaches. The edit screen can also be used to split an existing reach into two reaches.
	Nobrand 8 bmetrics, h c © 2002

Figure 19: Create or Edit Reaches for Subbasin screen

Click on "Edit Reaches for Subbasin" to bring up the following screen:

Edit Reach	nes for Subbas	in		ECO	
oord Stream Reach Data	Excort Stream Reach Data	Reach Editor	Attribute Editor.	Ext	ptions: Edit Reach Sequence, Name, and Description Edit Reach Length Edit Reach Hierarchy/Structure Edit Reach Routing Split an Existing Reach into an Upper and Lower Reach Delete Reach (caution - deletes reach and all associated data) Exit to Main Reach Menu
					Robert of Provider to a \$1777

Figure 20: Edit Reaches screen.

The procedures for each of the six menu options shown above will be described separately here.

To edit reach sequence, name and description:

1. Click on the first button on the Edit Reaches for Subbasin menu. The Edit Reach Name and Description screen appears.



Edit Read	ch Name and Description	
Import Stream Reach Data	Export Stream Reach Data Reach Editor Attribute Editor	Exit
SeqNo Reach Name 1 Entist-1 2 Entist-1 3 Entist-3 3 Entist-3 4 Roaring-1 5 Entist-4 6 Entist-4 6 Entist-5 7 Mad-1 8 Tilicum-1 9 Mad-2 10 Mad-3 11 Entist-6 12 Mud-1 13 Entist-7 14 Entist-8 15 Potsto-1 16 Entist-9	Pescription     Entiat-1: From Columbia River to End of slack water, Length (mi): 2.6 Entiat-2: From Slack water to Fire Station Bridge; Length (mi): 2.6 Entiat-3: From Fire Station Bridge to Roaring Creek, Length (mi): 3 Roaring Creek Entiat-4: From Roaring Creek to J/S Bridge; Length (mi): 2.6 Entiat-5: From J/S Bridge to Mad River; Length (mi): 1.8 Mad River Mouth to Tillicum Creek Tillicum Creek Tillicum Creek to Jins Bridge, Length (mi): 1.2 Mud Creek Entiat-7: From Mad River to Mud Creek; Length (mi): 1.2 Mud Creek Entiat-8: From Mad River to Mud Creek; Length (mi): 1.2 Potato Creek Entiat-9: From Nod Creek to Potato Oreek, Length (mi): 1.2 Refresh Screen	Menu Options: Edit Reach Sequence, Name, and Description Edit Reach Length Edit Reach Hierarchy/Structure Edit Reach Routing Split an Existing Reach into an Upper and Lower Reach Delete Reach (caution - deletes reach and all associated data) Exit to Main Reach Menu
		Nobraud B bmetrics, No 69 2002

Figure 21: Edit Reach Name and Description screen

- NOTE: When you make changes to data on this screen, your changes will be written immediately to the database there is no "save" function associated with this screen. Therefore, make changes cautiously.
  - 2. Click on a cell in the first column (the sequence number column) to enter a new number if desired.
- NOTE: The reach sequence number (SeqNo), for example, determines the order in which the reaches will be displayed. Typically, SeqNo increases from mouth to headwaters. SeqNo is not critical to the function of the model but can be helpful for navigation.
  - 3. Click on a cell in the second column (reach name) to make any desired changes to the text.
- NOTE: Choose names carefully. The numerical "suffix" should increase from mouth to headwater. Obstruction reaches should be clearly identified e.g., Rock Cr-1B (dam) or Rock Cr-1B (culvert).
  - 4. Click on a cell in the third column (reach description) to make any desired changes to the text.
- NOTE: The reach description should clearly indicate upstream and downstream end points. A very concise summary of the salient characteristics of the reach e.g., "from Columbia confluence to end of slack water" will enhance the usefulness of the reach structure.
  - 5. After making your edits, click the "Refresh Screen" button at the bottom of the page to view any changes in routing as a result of editing the sequence numbers.

#### To edit reach length:

1. Click on the "Edit Reach Length" button under Menu Options. The Edit Reach Length screen appears.



	Edit Read	ch Leng	th				ECOSY	
Import	Stream Reach Data	Export Stre	am Reach Data	Reach Editor	Attribute Editor	Exit	t I	
SeqNo 1 3 4 5 6 7 7 8 9 10 11 11 12 13 14 4 15	Reach Name Entiat-1 Entiat-2 Entiat-3 Rearing-1 Entiat-5 Mad-1 Tillicum-1 Mad-2 Mad-3 Entiat-6 Mud-1 Entiat-7 Entiat-7 Entiat-8 Potato-1	Template Length 0.6 0.6 0.3 4.34 2.6 1.2 0.3 0.2 1.2 0.4 0.4 0.4 0.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1	Patient Length 0.6 2.6 3 4.34 2.3 2.39 2.21 5.67 1.2 0.4 2.2 1.2 1.2 5.4VE					tions: Edit Reach Sequence, Name, and Description Edit Reach Length Edit Reach Routing Split an Existing Reach into an Upper and Lower Reach Delete Reach (caution - deletes reach and all associated data) Exit to Main Reach Menu
								Mobrand 8 bmetrics , in c © 2002

#### Figure 22: Edit Reach Length screen

- NOTE: You may make edits only in the two reach length columns (Template Length and Patient Length). The other three columns are locked against entries. Sequence number and reach name are handled through the Edit Reach Sequence, Name, and Description screen discussed previously.
  - 2. Review reach lengths carefully.
- NOTE: One of the most common and significant sources of error in an EDT analysis is incorrect lengths and/or widths for reaches (lengths tend to err on the short side).
  - 3. Click in any cell in either of the reach length columns (template or patient) to make desired changes.
  - 4. When finished making edits, click on the "Save" button at the bottom of the screen to save your changes to the database.
- NOTE: Entries do NOT get written immediately to the database you must use the Save button.

#### To edit reach hierarchy/structure:

1. Click on the third button under Option Menu, "Edit Reach Hierarchy/Structure." The screen shown below will appear.



Ed su	it Reach	Hierarchy				
Import Stream	n Reach Data	Export Stream Reach D	ata Reach Ed	tor Attribute Edito	r Exit	
Reach Name Entiat-1 Entiat-2 Entiat-3 Roaring-1 Entiat-4 Entiat-5 Mad-1 Tillicum-1 Mad-2 Mad-3 Entiat-6 Mud-1 Entiat-6 Mud-1 Entiat-7 Entiat-8 Potato-1 I I I I I I I I I I I I I I I I I I I	Geographic Area Lower Entiat-1 = Lower Entiat-2 Lower Entiat-2 Lower Entiat-2 Kaaring Creek × Lower Entiat-4 Lower Entiat-4 Mad Creek × Kint: Vew a specific subs	Watershed Up Columbia-Entiat. V • Up Columbia-Entiat. V Up Columbia-Entiat. V	Vatershed Code 17020010 17020010 17020010 17020010 17020010 17020010 17020010 17020010 17020010 17020010 17020010 17020010 17020010 17020010 17020010 Containing the entry	Sub-Wetershed Entiat blw Roaring C Entiat blw Roaring C Entiat blw Roaring C Roaring Creek Entiat blw Mad Entiat blw Mad Entiat blw Mad Mad Rileum Mid Mad River Intat/Potato Entiat/Potato Entiat/Potato Entiat/Potato Entiat/Potato Entiat/Potato Entiat/Potato Entiat/Potato Entiat/Potato Entiat/Potato Entiat/Potato Entiat/Potato Entiat/Potato Entiat/Potato	Men Y Y Y Y Y Y Y Y Y Y Y Y Y	u Options: Edit Reach Sequence, Name, and Description Edit Reach Length Edit Reach Hierarchy/Structure Edit Reach Routing Split an Existing Reach into an Upper and Lower Reach Delete Reach (caution - deletes reach and all associated data) Exit to Main Reach Menu
"Filte men	er by Selection" from u. To return to the v	n the sub-menu that appe whole data view, exit to M	ars. You can alternat lain Reach Menu and	ively type a specific text then reselect Reach Hiel	string in the "F rarchy.	ilter for" box in the sub-
						Nobrai d 8 binetrics , in c © 2002

#### Figure 23: Edit Reach Hierarchy screen

- IMPORTANT: Changes are written immediately to the database there is no "save" function associated with this screen. Therefore, make changes cautiously.
- NOTE: You must use both horizontal and vertical scroll bars to see all of the data. If there is no information in the Geographic Area drop-down list, you will need to enter new data. Your new entries will appear in the drop-down list for use with other reaches.
  - 2. Make desired edits by selecting entries from the drop-down lists in all but the first column.
- NOTE: It is important to indicate the correct 6<sup>th</sup> field HUC ("sub-watershed") for each reach.

#### To edit reach routing:

1. Click on the fourth button under Menu Options, "Edit Reach Routing," which brings up the following screen:



Figure 24: Edit Reach Routing Screen



NOTE: This function allows you to change routing data.

- IMPORTANT: Edits made through this screen are written directly to the database there is no "save" feature for this screen. Therefore, make edits with caution.
  - Select a reach to route by scrolling through the navigation buttons in the lower portion of the screen -or-

right clicking in the "Reach Name" box to bring up the filter sub-menu and type an entry in the "Filter for: " field.

- 3. Select reaches from each of the three drop-down boxes: Upstream Tributary, Upstream, and Downstream.
- 4. Continue selecting and routing reaches until you are finished.
- 5. Click on the "Test Routing" button in the center of the screen to verify that the reaches are routed correctly.
- NOTE: During export to the web, the Stream Reach Editor checks for valid reach routing. If routing is incorrect, the data can still be uploaded to others to access, however, the dataset cannot be used to run reports or create populations.
  - 6. If the reaches are not properly routed, an error message appears.
    Route Error Testing



#### Figure 25: Route Error Testing Message

7. Click "OK." The Edit Reach Routing screen appears. The "View/Edit Route Error" option is now available (highlighted in yellow).



Edit Reach Routing	ECOSYSTEM DIAGNOSIS & TREATMENT
Imoort Stream Reach Data Export Stream Reach Data Reach Editor Attribute Editor	Exit
Upstream Tributary Reach       Reach Description         Upstream Reach       Upstream Reach         Entiat-1       Down Reach Name         Downstream reach is global reach;       This reach routes to a global reach;         entiat-1       This reach leaves subbasin         Reach Description       Image: Comparison of the subbasin         Entiat-1: From Columbia River to End of slack water; Length       Test Routing         Entiat-1: From Columbia River to End of slack water; Length       New Edit Route Errors         Image: Reach:       1 of 119	Edit Reach Sequence, Name, and Description Edit Reach Length Edit Reach Hierarchy/Structure Edit Reach Routing Edit Reach Routing Split an Existing Reach into an Upper and Lower Reach Delete Reach (caution - deletes reach and all associated data) Exit to Main Reach Menu
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# Figure 26: Edit Reach Routing Screen with View/Edit Route Errors Option Available

8. Click "View/Edit Route Errors" to review and correct routing errors. The Reach Routing Editor appears.

Reach Routin	g Ealtor:							
Reach	Description	Downstr	eam Reac	1	Upstream Reach		Upstream Tributary F	Reach 🔺
Nooksack2	Lummi River (RM 4.5) to Tenmile Creek Confluence (RM 6.9)	Nooks	sack2	-	Nooksack3	•	Tenmile2	-
Nooksack3	Tenmile Creek Confluence (RM 6.9) to Wiser Lake Creek confluence (RM 10.2)	Nooks	sack2	-	Nooksack4A	•		<b>-</b>
Nooksack4A	Wiser Lake Creek confluence (RM 10.2) to Bertrand Creek confluence	Nooks	sack3	<b>•</b>	Nooksack4B	•		-
Nooksack4B	Bertrand Creek confluence (RM 12.6) to Fishtrap Creek confluence (RM 13.2)	Nooks	ack4A	-	Nooksack5	•		-
Nooksack5	Fishtrap Creek confluence (RM 13.2) to Kamm Ditch/Stickney Slough	Nooks	ack4B	-	Nooksack6	•	ScottDitch1	-
Nooksack6	Kamm Ditch/Stickney Slough (RM 18.1)	Nooks	sack5	-	Nooksack7A	-		
Route Error T	Mainstem Nooksack to just below Sandy Lane Route Errors table identifies those reaches that an error was discovered in the routing table. You can correct this in the previous Route Editing form or in the upper table. The upper table is useful to see multiple reaches and correct routing for multiple reaches.						ed in the in the ect routing	
Reach			Error De	scriptio	חו			
Nooksack2 Please confirm the reach route for this reach. This reach is not routing correctly, however unable to locate route problem.								
		CLOSE						
							Mobrand B bretric	≾,hc© 200

#### Figure 27: Reach Routing Editor

9. Review the reach and error description in the Route Error Table at the bottom of the screen.



- 10. Locate each reach named in the Error Table by scrolling through the Reach Routing Editing table at the top of the screen.
- 11. Locate the downstream and upstream reaches for that reach in the drop-down lists.
- 12. Carefully check the routing for that reach as well as those reaches above and below.
- 13. Repeat for each reach that appears in the Error Table.
- 14. When finished click "Close" to return to the Edit Reach Routing screen.
- 15. Click "Test Routing" again to verify that the reaches are routed correctly.
- 16. If a routing error appears, repeat steps 7 13 above. Otherwise, select another option from the side menu.

#### To split existing reaches:

1. Click on the fifth button under Menu Options, "Split an Existing Reach into an Upper and Lower Reach," to bring up the screen shown:

Split Existing Reaches	
Imoort Stream Reach Data Export Stream Reach Data Reach Editor Attribute Editor	Exit
Reach Name       Upstream Reach Name         Entiat-1       Downstream Reach Name         Reach:       1 of 24         Original Reach Description       Split Reach for tributary confluence         Entiat-1: From Columbia River to End of slack: water, Length (mi): 0.6       Split Reach insert Obstruction Reach	Menu Options:         Edit Reach Sequence, Harne, and Description         Edit Reach Length         Edit Reach Hierarchy/Structure         Edit Reach Routing         Split an Existing Reach into an Upper and Lower Reach         Delete Reach (caution - deletes reach and all associated data)         Exit to Main Reach Menu
	Nobrand 8 bmetrics, Inc @ 2002

#### Figure 28: Split Existing Reaches screen

- NOTE: This feature is typically utilized when there is a need to add additional small tributaries or obstructions, such as a culvert, into the database.
  - 2. Select a reach using the navigation buttons at the left of the screen or right-clicking on the shaded Reach Name box and using the filter submenu.
- NOTE: You cannot input data to this screen directly; you must select the tributary confluence or obstruction reach option in order to access the actual data input data screen.



#### To split reaches to add tributaries:

1. Click on the "Split Reach for tributary confluences" button to add a tributary that enters in the middle of a reach, for example. The following screen appears:



#### Figure 29: Split reach for tributary confluence form

- IMPORTANT: When you are using the "Split Reach for Tributary Confluence" feature, your inputs are not being saved automatically to the database. Be sure to save your work by clicking on the "Save" button at the center bottom of the screen.
  - 2. Enter a unique name for each reach in the "Upstream Reach Name" and "Downstream Reach Name" fields, unless you choose to accept the default reach names that appear in the Upstream and Downstream Reach Name boxes.
- NOTE: Using these defaults will ensure a consistent naming protocol for each split.
  - 3. Provide a description for each new reach.
  - 4. Click on the "Save" button at the bottom of the form.
  - 5. Continue splitting reaches and saving, as desired.
- NOTE: It is useful to adopt the convention of including beginning and ending river miles in the Reach Description field. For example, for Entiat-1A, describe the reach as "Entiat River from mouth to unnamed RB tributary (RM 0.0 to 1.8)."
- NOTE: The Editor does not ADD a tributary during this reach splitting procedure it simply splits the original reach into two new segments: one below and one above the previously omitted tributary that you now wish to add. To actually add the tributary, you must use the "Create New Reaches" function.

#### To split reaches to add obstructions:

1. Click on the "Split Reach to Insert Obstructions Reach" button to bring up the following form:



	Upstream Reach Name	Upstream Reach Description
Reach Name Entiat-5	Obstruction Reach Name Entiat-5_Obstr_B	Obstruction Reach Description
Reach: 8 of 26	Downstream Reach Name Entiat-5_A	Downstream Reach Description
Original Reach Description Entiat-5: From J/S Bridge to	Mad River; Length (mi): 1.8	Split Reach for tributary confluence
		Split Reach insert Obstruction Reach
		Save

#### Figure 30: Split reach for obstruction form

- IMPORTANT: When you are using the "Split Reach for Obstructions" feature, your inputs are not being saved automatically to the database. Be sure to save your work by clicking on the "Save" button at the center bottom of the screen.
  - 2. Enter a unique name for each reach in the "Upstream Reach Name," "Obstruction Reach," and "Downstream Reach Name" fields (unless you choose to accept the default reach names that appear in those fields).
- NOTE: Using these defaults will ensure a consistent naming protocol for each split.
  - 3. Provide a description for each new reach.
- NOTE: It is useful to adopt the convention of including beginning and ending river miles in the Reach Description field. For example, for Entiat-1A, describe the reach as "Entiat River from mouth to unnamed RB tributary (RM 0.0 to 1.8)."
- NOTE: The split reach feature uses the length for the reach being split as the default length for the two new reaches. To change the reach lengths for the two new reaches, use the Edit Reach Length button described previously. Obstruction reaches always have a length of zero, and, therefore, you will not enter a length value.
  - 4. Click on the "Save" button near the bottom of the screen.
  - 5. Continue splitting reaches for obstructions, as desired.

#### To delete reaches:

1. To delete reaches from your dataset, click on the sixth button under Menu Options, "Delete Reaches" to bring up the following screen:



Delete Re Subbasin: Entiat	each from Database	EC	
Import Stream Reach Data	Export Stream Reach Data Reach Editor Attribute Editor	Exit	]
Reach Name	Description No Description No Description	<u>Menu (</u>	Dptions:
Entiat-2 Entiat-3 Roaring-1 Entiat-4_A Entiat-4_B Entiat-5 Mad-1	No Description Entist-2: From Slack water to Fire Station Bridge; Length (mi): 2.6 Entist-3: From Fire Station Bridge to Roaring Creek; Length (mi): 3 Roaring Creek No Description Entist-5: From J/S Bridge to Mad River; Length (mi): 1.8 Mad River Mouth to Tillicum Creek		euit React Sequence, Haine, and Description Edit Reach Length Edit Reach Hierarchy/Structure Edit Reach Routing Split an Existing Reach into an
Tillicum-1 Mad-2 Mad-3 Entiat-6 Mud-1	Tillicum Creek Tillicum Creek to Pine Flat Pine Flat to Camp 9 Entiat-6: From Mad River to Mud Creek; Length (mi): 1.2 Mud Creek Delete Reaches Delete Reaches		Upper and Lower Reach Delete Reach (caution - delete reach and all associated data) Exit to Main Reach Menu

#### Figure 31: Delete Reach from Database screen

2. Click each reach that you wish to delete from the database.

NOTE: You will need to scroll vertically to see all of the reaches.

3. Click the "Delete Reaches" button at the bottom of the screen.

Now that you have edited existing reaches, you are ready to begin adding new reaches your reach structure.

#### **Creating New Reaches**

This section describes the procedure for adding new reaches to your reach structure.

Click on the "Creating New Reaches for Subbasin" button on the Reach Editor main menu screen. The "Creating New Reaches for Subbasin" form that appears is divided into two sections: the Reach Definition input form and the Reach Routing input form. These two sections will be discussed separately.

#### To define new reaches:

1. Click on the "Create New Reaches for Subbasin" button on the Reach Editor Main Menu screen. The Create New Reaches for Subbasin screen appears, containing the Reach Definition form shown below:



Reach Definition (Reach r	name, descrip	tion, length and organization within sub	basin)
Reach Name (must be unique for Subbasin): This is an obstruction reach (culvert, falls, dam, etc)	Reach Descriptio	on:	Gen Edito User Subl reac
Reach Length (miles): Patient: Template:	Geographic Area	a for Diagnostic Summaries:	Afte and/
Watershed Name:	•	Watershed Code (optional):	The exist
Sub-Watershed Name:	•	Sub-Watershed Code (optional):	
Stream Name:	•	Stream Code (optional):	

#### Figure 32: Reach definition form

- 2. Enter a unique name in the Reach Name field (you can use numbers, letters, dashes, etc.)
- NOTE: We suggest that you name reaches starting at the mouth and working your way to the headwaters of the stream.
  - 3. Provide a description of this reach in the Reach Description field that clearly denotes where the reach starts and ends.
  - 4. Enter the length of this reach for both the Patient and Template conditions in the Reach Length fields (enter the length in miles).
  - 5. Check the "This is an obstruction reach" box if the reach you are describing is an obstruction to either juvenile or adult migrants (e.g., dams, culverts, or waterfalls).
- NOTE: If you check this box, the Reach Length box grays out. In EDT, obstruction reaches are given zero length so that survival past this point can be rated as an instantaneous value (e.g., 95% survival through a turbine).
  - 6. Provide the name of your watershed in the Watershed Name field.
  - 7. Provide a subwatershed name for your dataset in the Sub-Watershed Name field.
  - 8. Provide the USGS 4<sup>th</sup> HUC code for this reach in the Watershed Code field (required).
  - 9. Provide the USGS 6<sup>th</sup> Field HUC Code for this reach in the Sub-Watershed Code field (required).
  - 10. Enter another type of stream classification code in the Stream Code <u>(optional)</u>.

Now that you have defined a new reach, you are ready to move to the bottom of the screen to the reach routing portion to route the new reach.

#### To route new reaches:

1. Use the bottom of the screen to input reach routing data.



Reach Routing (Select from list	t the downstream reach, upstream reach, and upstream tributary rea	ch)
Reach Name (must be unique for Subbasin): 	Reach Routing:       Upstream Tributary Reach:       Image: Constraint of the second s	ches er ro traje
	SAVE	

#### Figure 33: Reach routing form

NOTE: Use the fields in this input form to hydraulically link stream reaches.

- 2. Enter a unique name in the Reach Name field.
- 3. Select the name of the stream reach directly upstream of this reach from the drop-down list in the Upstream Reach field.
- 4. Select the name of the stream reach directly downstream of this reach from the drop-down list in the Downstream Reach field.
- 5. Select the name of the tributary that enters the reach at the top of the reach from the drop-down list in the Upstream Tributary Reach field.
- 6. Click the box labeled "This Reach Leaves Subbasin (enters mainstem)" if this reach is the first in the basin.

## **Rating Habitat Attributes**

Once you have defined your reach structure with the "Reach Editor" function of the offline Stream Reach Editor, you are ready to create your dataset of environmental attributes with the "Attribute Editor" function.

The subbasin data that you downloaded from the EDT Online Web site and imported into the Stream Reach Editor may have data for some of the environmental attributes already entered. Therefore, the way to proceed with the Habitat Editor is to view the existing data and then either edit the existing data or, where no data exist, enter new data.

Before beginning, it is important to know how the attributes are arranged within the offline Stream Reach Editor. Attributes are oganized into four major categories and 12 sub-categories.

- 1. Hydrologic Characteristics
- 1.1. Flow variation
- 1.2. Hydrologoc regime



- 2. Stream Corridor Structure
- 2.1. Channel morphometry
- 2.2. Confinement
- 2.3. Habitat type
- 2.4. Obstructions
- 2.5. Riparian & channel integrity
- 2.6. Sediment type
- 3. Water Quality
- 3.1. Chemistry
- 3.2. Temperature variation
- 4. <u>Biological Community</u>
- 4.1. Community effects
- 4.2. Macroinvertebrates

This section will describe the procedure that you will use in working with the habitat editor to rate the above attributes.

### To rate habitat attributes:

1. Click on the Attribute Editor button of the navigation bar on the Stream Reach Editor Main Menu page. The Habitat Attribute Editor screen appears.

Habitat At	tribute Editor			
Import Stream Reach Data	Export Stream Reach Data	Reach Editor	Attribute Editor	Exit
Habitat Attribute (Se	elect attribute from list, the	n review defini	tion and rating rule)	
Select Category: 1 Hydrologic C	Characteristics 💌 Select Sub-Ca	ategory:	•	

#### Figure 34: Habitat Attribute Editor main screen (top portion)

- Note: To illustrate the process, we will use the category, Hydrologic Characteristics, and the sub-category, "Flow variation."
  - 2. Select the category, Hydrologic Characteristics and the sub-category, "Flow Variation" from the two drop-down boxes at the top of the screen.





## Figure 35: Habitat Attribute screen with category and sub-category selected

- NOTE: When the category and subcategory are selected, you will see the individual attributes that are assigned to this category displayed across the top of the page as buttons, as shown below:
  - 3. Click on a specific attribute to begin rating (e.g., FlwHigh).

The next sections describe in detail how you use the Habitat Attribute Editor to work with the attributes. They will be discussed by major category.

## Hydrologic Characteristics

Hydrologic Characteristics is the first major category of attributes. We will provide an overview the attributes in this category and a data input example. There is also a section describing the Hydrologic Regime attributes.

## **Overview of Attributes**

As outlined above, the Hydrologic Characteristics category is divided into two sub-categories, Flow Variation and Hydrologic Regime.

Flow Variation is composed of the following attributes:

- Flow High (FlwHigh)
- Flow Low (FlwLow)
- Flow Diel Variation (FlwDielVar)
- Flow Intra-annual Variation (FlwIntraAnn).

<u>Hydrologic Regime</u> includes these attributes:

- Regime Natural (Regime Nat)
- Regime Regulated (Regime Reg)



## **Data Input Example**

We will use FlwHigh as the example to describe how data for the Hydrologic Characteristic Attributes are entered.

Ha Back	Habitat Attribute Editor Subbasin: Entiat																				
Import Stream	n Rea	ch Dati	я	Expo	t Stream	n Read	ch D	ata		Rea	ach B	Editor	·	Attribu	te Editor	E	Exit				
Habitat A	ttrib	ute	(Sel	ect att	ribute <sup>·</sup>	from	lis	t. th	en	revi	ew	def	initi	on and	rating	rule)					
Select Categor	Select Category: 1 Hydrologic Characteristics • Select Sub-Category: 1.1 Flow variation •																				
FlwHigh	FlwHigh FlwLow FlwDielVar FlwIntraAnn																				
Flow - change The extent of re to an undisturb topography, an state). Evidence sufficiently long (such as TQme corresponding discharge here	e <b>in in</b> elative ed wa d geog e of cl g data an, se to wa is bas	terani chang tershe graphy hange series se Koni tershe sed on	nual va le in av d of co (or as in peak exists rad [20 d devel changu	riability erage po mparabl would h flow ca , can be 00]), or i opment. es in the	y in high eak annu e size, g iave exis n be em based o nferred Relative peak an	a flow all dis jeolog sted in pirical pirical n indi from p chan nual 1	rs chai y, oi the twh cato cato ge ir flow	rge co rienta pristi ere r metr erns n peal expe	ompa tion, ine rics k an cteo	ared , nual 1 on			Rat	ing 0: Pe Irei Ige I <sup>pri ar Ise Ia Irei Ifo –</sup>	eak annu lative to eology, o istine sta nd <100% eries (~40 watersho gulated l ww.regula	ual flows e an undistu rientation, te for the 6 decreasu 9 yrs or lon ed develop 10w levels 10w levels 10w or wa	xpected inbed wa topogra watersh e in Q2y iger with oment st . This co iter dive	I to be stri atershed ( pphy, and ed of inte r based o at least ( ate) or as ondition is rsion proje	ongly rec of similar geograp rest); OF n a long 20 yrs pe known associa ects.	luced size, hy (or the >40% time rtaining to by ted with	
Habitat A	ttrib	ute	Ratir	ngs (E	dit rat	ing a	assi	ump	tior	ı, fo	cus	mo	nth,	and da	ata pre	cision)					
	Sea	Rati	ngs	Revised	Rating	Foc	us M	lon (N	lo)	Dat	ta Pr	ecisi	on	Sha	ape Morr	thly Patter	n	Ent	er Ratin	g Comme	nts 🔺
Reach Name	No	Т	С	Т	С	Т		Ċ	_	T		C Template Current Template Current —									
Entiat-1	1	2.0	2.6			6	-	6	-	1	-	2	-	74 -	Edit	74 -	Edit	¥	Edit		Edit
Entiat-2	2	2.0	2.5			6	÷	6	÷	1	-	2	-	74 -	Edit	74 -	Edit	403 -	Edit	368 -	Edit
Roaring-1	4	2.0	2.0			5	÷	5	÷	1	÷	2	÷	74 -	Edit	74 -	Edit	1432	Edit	1392 -	Edit
Entiat-4	5	2.0	2.6			6	Ŧ	6	Ŧ	1	Ŧ	2	-	74 -	Edit	74 -	Edit	514 -	Edit	474 -	Edit
Entiat-5	6	2.0	2.5			6	-	6	-	1	-	2	-	74 🔻	Edit	74 👻	Edit	596 🗸	Edit	554 🗸	Edit
Mad-1	7	2.0	2.5			5	-	5	-	1	-	2	-	76 💌	Edit	76 💌	Edit	1023 🝷	Edit	984 🝷	Edit
Tillicum-1	8	2.0	2.6			5	-	5	-	1	٠	2	-	76 🔻	Edit	76 💌	Edit	1596 🝷	Edit	1552 🝷	Edit
Mad-2	9	2.0	2.4			5	-	5	-	1	-	2	*	76 🔻	Edit	76 💌	Edit	1102 💌	Edit	1063 🝷	Edit
Mad-3	10	2.0	2.4			5	Ψ.	5	-	1		2	•	76 💌	Edit	76 💌	Edit	1182 💌	Edit	1142 🔻	Edit
Entiat-6	11	2.0	2.5			6	-	6	-	1	-	2	-	74 🔻	Edit	74 👻	Edit	684 💌	Edit	640 🔻	Edit
Mud-1	12	2.0	3.0			4	*	4	-	1	-	2	*	74 🔻	Edit	74 👻	Edit	1263 💌	Edit	1221 🔻	Edit
Entiat-7	13	2.0	2.4			6	+	6	-	1	-	2	+	74 🔻	Edit	74 💌	Edit	772 💌	Edit	728 🔻	Edit
Entiat-8	ntiat-8 12 2.0 2.4 6 • 6 • 1 • 2 • 74 • Edit 74 • Edit 857 • Edit 815 • Edit • Edit •																				
Version 2.7 - April,	2004			Sa	ve Chan	iqes			C	lose				Сору		Send Inse	l Data to ert from	Excel	Mobra	nci Biometric	s, he <b>0</b> 2002

Figure 36: Habitat Attribute screen with flow high

Select Hyrologic Characteristics from the "Select Category" drop-down list, select Flow Variation from the "Select Sub-Category" drop-down list, and click on the "FlwHigh" button. The FlwHigh data screen will appear, as shown below:

The upper left portion of the screen provides a description of the attribute, FlwHigh. Directly to the right of the attribute definition, a text box displays the definitions of the ratings from 0 through 4. Note that you must use the vertical scroll bar to view all five rating definitions in the box.

The Habitat Attribute Ratings portion of the screen is where you will enter or edit the data. Note that you will not be able to edit reach name,



sequence number, the first two ratings fields, or any fields that are grayed out (not required). Depending upon the attribute, you should be able to edit all, or a portion, of the fields described below.

<u>Revised Ratings</u>: Change the existing ratings for the Template (T) or Current (C) condition.

<u>Focus Mon (No)</u>: Select the focus month from ths drop-down list (see discussion on Shape Monthly Pattern below for details on how to identify your focus month).

<u>Data Precision</u>: Enter 1 if the data entered is Categorical or 2 if Non-Categorical. Note that if this field is shaded (gray), then data precision is always non-categorical.

Categorical ratings may be either continuous or discrete and are coded simply as the integers 0 through 4. For attributes categorized in terms of a range of values, a categorical rating is modeled as the mean of the attribute values that define the range.

For example, Fine Sediment is categorized by five ranges of percent fines in the substrate. A rating of 3 is associated with the range 18% to 30% fines and is modeled as the mean of this range, or 24%. Approximate categorical ratings of this kind are entirely appropriate when knowledge of the atual conditions in a particular reach is incomplete.

Sometimes, however, our knowledge of local conditions for a particular attribute is much greater. In such cases, and especially when the attribute is expected to have a significant impact on production, the use of *non*-categorical ratings might be more appropriate.

Non-categorical ratings are expressed as decimals between 0 and 4. To indicate that an attribute should be modeled as the upper value of a rating range, the rating should be entered as a "0.5" value. Thus, if a fine sediment rating of 3 is modeled as the mean of 18% and 30%, a 3.5 would be modeled as 30%.

Similarly, a categorical fine sediment rating of 2 will be modeled as the mean of the range 11% to 18% (14.5%), whereas a rating of 2.5 will be modeled as 18%. When warranted by the precision of environmental information and the probable importance of the attribute, finer non-categorical interpolations may be made. In such cases, the planner should



assume a linear relationship between attribute values at the upper end of a category range and the ratings that define these end points.

<u>Shape Monthly Pattern</u>: Assign a monthly pattern to all four Flow Variation attributes for both patient and temp. Note, however, that flow patterns are not needed for the two Hyrologic Regime attributes, Regime Reg and Regime Nat.

Several seasonally variable attributes require monthly shaping patterns, as shown below:

- Change in variability/magnitude of high flows
- Change in variability/magnitude of low flows
- Channel width
- Bed scour
- Icing
- Turbidity
- Dissolved oxygen
- Water temperature
- Predation risk

📰 Edit Pattern Multpli	iers for Attril	oute									×
Stream Reach	Editor Pa	attern	Edito	r							
Use to create/edit a mo	onthly pattern f	for a part	icular attr	ribute.							
Pattern ID: Pattern Name: Flow Rating:	74 High-P1 2.0			Patte	ern Desc erns crea	ription: ted for Ei	ntiat by w	ork team	- 2001		]
Focus Month:	Jun										]
Month: Jan F	eb Mar	Арг	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Mult:		0.1	0.3	1	0.25						
Create Ne	W		Save	Change	s		Close				

Figure 37: Stream Reach Editor Pattern Editor

To assign a monthly pattern to FlwHigh, click on the "Edit" button to produce the Stream Reach Pattern Editor Screen shown below:

Use this screen to create/edit flow patterns and assign attribute ratings by month. To begin, simply place a 1 in the month(s) where you want the full effect of the rating to be expressed. Note that you should define at least one of these months in the Focus Month field. Next, shape the pattern so that it expresses how the effect changes by month. Be sure to



click on the "Save Changes" button to have your changes be written to the database. If you click on the "Close" button before saving, you will be prompted to save.

The example shown in the screen capture above indicates high flows have the largest effect on this reach in June, followed by May (only 33% of the effect assigned to June), July (25%), and April (10%). Because values have not been entered for the remaining months, the model assumes that high flow is not an issue for these months.

Some key points to remember in shaping a monthly flow pattern:

- Use values from 0 to 1 otherwise the function does not work properly.
- Assign a value of 1 for both the Focus Month and any other months where you want the model to assign the full effect of the rating. If you want 50% of the effect to be modeled, use a 0.5, if 25%, assign a value of 0.25, etc.

After you have created a pattern, it is automatically assigned a pattern number and is added to the list of patterns, so that you can assign this same pattern to additional reaches if desired.

<u>Enter Rating Comments</u>: Enter comments to support your rationale, for the attribute rating or the flow pattern used or, more likely, both. The database keeps a running list of all comments entered so that you can assign the same comment or data source to multiple reaches or attributes.

## Additional Comments about Hydrologic Regime Attributes

Selecting the category, Hydrologic Characteristics, and the sub-category, Hydrologic Regime, displays the attributes "Regime Nat" (natural hydrologic regime) and "Regime Reg" (regulated hydrologic regime).

The attribute Regime Nat is used to indicate which of five distinct patterns best characterizes the seasonal pattern of flow over a year. The particular natural hydrologic regime indicated here affects the opeartion of various rules – e.g., the impact of fine sediment on incubating eggs will be less in reaches with a groundwater-dominated hydrologic regime than in reaches with a rainfall-dominated pattern. Importantly, the natural hydrologic regime selected here will NOT generate a default pattern for other hyrologic attributes. That is to say, selecting a rainfall-dominated natural hydrologic regime for Regime Nat will not cause the patterns that shape



FlwHigh or FlwLow to chage to the default pattern for rainfall-dominated areas.

The attribute RegimeRegis largely an artifact of an earlier model. The planner should ignore the rating definiations for this attribute. Instead, Regime Reg should be used mainly a a mnemonic device for the planner. If a value is entered for Regime Reg for a particular reach, it should be used as a reminder to the planner that a natural hydrologic regime has been distorted in the reach. In turn, this reminder should lead to a revision of one or more patterns for other hydrologic characteristics.

An example of a situation where revising one or more patterns for a hydrologic characteristic may be needed would be a reach below a major irrigation diversion. The pattern for low flow would likely be altered in this reach, especially if the timing of maximum withdrawal did not conincide with the natural period of minimum flow.

## Stream Corridor Structure

Stream Corridor Structure is the next major category of attributes. We will provide an overview the attributes in this category and a data input example.

## **Overview of Attributes**

As outlined above, the Stream Corridor Structure category is divided into six sub-categories: Channel Morphometry, Confinement, Habitat Type, Obstructions, Riparian & Channel Integrity, and Sediment Type.

<u>Channel Morphometry</u> includes the following attributes:

- Channel Length (ChLngth)
- Width Maximum (WidthMx)
- Width Minimum (WidthMn)
- Gradient (Grad)

<u>Confinement</u> is composed of these attributes:

- Natural stream confinement (Confine)
- Confinement Hydro (ConfineHydro)



<u>Habitat Type</u> includes these attributes:

- Back-water Pools (HbBckPls)
- Beaver Ponds (HbBvrPnds)
- Glides (HbGlide)
- Large Cobble (HbLrgCbl)
- Small Cobble (HbSmlCbl)
- Pool Tail-outs (HbPlTails)
- Pools (HbPls)
- Off-channel habitat factor (HbOfChFctr)

<u>Obstructions</u> is composed of the following attributes:

- Obstructions (Obstr) such as waterfalls, culverts, and dams
- Water Withdrawals (Wdrwl)

<u>Riparian and Channel Integrity</u> includes these attributes:

- Channel Bed Scour (BdScour)
- Icing (Icing)
- Riparian Function (Rip Func)
- Large Woody Debris (WdDeb)

<u>Sediment Type</u> includes the following attributes:

- Stream channel substrate Embeddedness (Emb)
- Fine Sediment (FnSedi)
- Turbidity (Turb)

## **Data Input Example**

We will use Width Maximum (WidthMx) as the example to describe how data for the Stream Corridor Structure attributes are entered.



Import Streem Reach Date       Export Streem Reach Date       Reach Edtor       Attribute Editor       Exit         Habitat Attribute       (Select attribute from list, then review definition and rating rule)       Select Category:       2 Streem Corridor Structure       Select Sub-Category:       2 Streem Corridor Structure       Image:	Ha s	ubba	tat sin: <i>Er</i>	Att tiat	rib	ute	Ed	it	or								ECOS	YSTEM I	DIAGNOS	EI	
Habitat Attribute (Select attribute from list, then review definition and rating rule)         Select Category:       2 Stream Corridor Structure       Select Sub-Category:       2.1 Channel morphometry         Changh       WidthMx       WidthM       Orad         Change       Change       Select Sub-Category:       2.1 Channel morphometry       ▼         Average width of the wetted channel during peak flow month (average monthy conditions). If the stream is braided or contains multiple channels, then the width would represent the sum of the wetted widths along a transect that extends across all channels. Note: Categories are not to be used for calculation of wetted surface area; categories here are used to designate relative stream size.       Rating 8: Width values are entered as point values in ft.         Habitat Attribute Ratings       (Edit rating assumption, focus month, and data precision)       Shape Monthly Pattern       Enter Rating Comments         Reach Name       No       T       C       T       C       T       C       T       C       T enter Rating Comments         Fridat-1       800       900       6       6       2       2       2       800 × Edit       801 × Edit       804 × Edit       807 × Edit       804 × Edit         Reach Name       No       T       C       T       C       T       C       T       C       T       Edit	Import Stream	n Rea	ch Dat	a	Expo	rt Stream	n Read	sh D	ata	Rea	ch E	ditor	Attrik	oute	Editor	E	=×it				
Select Category:       2 Stream Corridor Structure       ▼       Select Sub-Category:       2.1 Channel morphometry         Chungth       WdathMx       WdathMn       Grad         Channel month Maximum width (ft)       Average width of the wetted channel during peak flow month (average monthly conditions). If the stream is braided or contains multiple channels, then the width would represent the sun of the wetted widths along a transect that extends across all channels. Note: Categories are not to be used for calculation of wetted suffice area; categories here are used to designate relative stream size.       Image: Categories area (attracting assumption, focus month, and data precision)         Habitat Attribute Ratings (Edit rating assumption, focus month, and data precision)       See Ratings Revised Rating Focus Mon (No)       Data Precision       Shape Monthly Pattern       Enter Rating Comments         Reach Name       No       T       C       T       C       T       C       Template       Current         Entiat-3       08.00       08.0       6       6       2       2       80       Edit	Habitat A	Habitat Attribute (Select attribute from list, then review definition and rating rule)																			
Chungh       WidthMx       WidthMn       Grad         Chungh       WidthMx       WidthMn       Grad         Average width of the wetted channel during peak flow month (average monthly conditions). If the stream is braided or contains multiple channels, then the width would represent the sum of the wetted widths along a transect that extends across all channels. Note: Categories are not to be used for calculation of wetted surface area, categories here are used to designate relative stream size.       Rating D: Width values are entered as point values in R.         Habitat Attribute Ratings (Edit rating assumption, focus month, and data precision)       Template       Current         Entiat-1       800,100.0       6       6       2       2       80       Edit       80       Edit       394       Edit         Entiat-1       800,100.0       6       6       2       2       80       Edit       80       Edit       394       Edit         Entiat-2       800,100.0       6       6       2       2       2       80       Edit       80       Edit       73       Edit         Entiat-2       800,100.0       6       6       2       2       2       80       Edit       80       Edit       73       Edit         Ratinge       5       5       2       2       2	Select Categor	Select Category: 2 Stream Corridor Structure 💉 Select Sub-Category: 2.1 Channel morphometry 🔹																			
Changet volume	Chi acth	Select Category, 2 Stream common structure      Select Sub-Category, 2.1 Channel morphometry       ChLngth     WidthMx     WidthMn																			
Channel month Maximum width (ft)         Average width of the wetted channel during peak flow month (average monthly conditions). If the stream is braided or contains multiple channels, then the width would represent the sum of the wetted widths along a transect that extends across all channels. Note: Categories are not to be used for calculation of wetted surface area; categories here are used to designate relative stream size.       Image: Content of the wetted surface area; categories here are used to designate relative stream size.         Habitat Attribute Ratings (Edit rating assumption, focus month, and data precision)         Stage Revised Rating Focus Mon (No)         Other Note: Categories are not to be used to categories here are used to designate relative stream size.         Habitat Attribute Ratings (Edit rating assumption, focus month, and data precision)         Shape Monthly Pattern         Enter Rating Comments         Enter Name         No       T         Cose Mon (No)         Other Precision         Shape Monthly Pattern       Enter Rating Comments         Enter All data precision         No       T         Cose Mon (No)       Data Precision         Shape Monthly Pattern       Enter Rating Comments         Enter Al	Chungun																				
Habitat Attribute Ratings (Edit rating assumption, focus month, and data precision)         Seq       Ratings       Revised Rating       Focus Mon (No)       Data Precision       Shape Monthly Pattern       Enter Rating Comments         Entiat-1       80.0       100.0       6       *       6       2       7       2       *       80       Edit       0       Edit       *       Edit       #       Edit<	Channel mont Average width monthly condition then the width v transect that ex- used for calcula designate relativ	th Ma of the ns). I vould tends tion o re str	timu wette f the s repre acros of wett eam si	m widt d chan tream is sent the s all ch ed surf ze.	th (ft) nel durir s braided s sum of annels. face are	ng peak f d or cont the wet Note: Ca a; catego	flow n ains n ted w tegori ories l	nonti nultij ridth ies a here	h (averag ble chann s along a are not to are use	ge hels, be d to		Ra	ting 0: <sup> </sup>           	Widt	lth valu	es are en	tered as	point va	lues in ft		
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Entiat-2       600       600       6       6       2       2       2       60       Eat       60       6       Eat       60       Eat       465       Eat       1423       Eat       1423       Eat         Entiat-4       80.0       96.0       6       6       2       7       2       7       80       Eat       80       Eat       50       2       7       2       7       80       Eat       80       Eat       50       2       7       2       7       80       Eat       80       Eat       50       2       7       2       7       82       Eat       80       1014       Eat       1014	Entiat-1	1	80.0	100.0			6	-	6 -	2	7	2 -	80	-	Edit	80 -	Edit	407	Edit	204	Edit
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Mud-1       12       9.0       11.0       4       4       2       2       2       81       Edit       81       Edit       1297       Edit       1255       • Edit         Entiat-7       13       85.0       95.0       6       • 6       2       ?       2       *       80       • Edit       • Edit <th>Entiat-6</th> <td>11</td> <td>80.0</td> <td>96.0</td> <td></td> <td></td> <td>6</td> <td>4</td> <td>6 🔹</td> <td>2</td> <td>Ψ.</td> <td>2 🔻</td> <td>80</td> <td>•</td> <td>Edit</td> <td>80 🔻</td> <td>Edit</td> <td>719</td> <td>Edit</td> <td>675 🔹</td> <td>Edit</td>	Entiat-6	11	80.0	96.0			6	4	6 🔹	2	Ψ.	2 🔻	80	•	Edit	80 🔻	Edit	719	Edit	675 🔹	Edit
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Entiat-8         84.0         94.0         6         6         2         2         2         80         Edit         80         Edit         891         Edit         848         Edit         T           Save Changes         Close         Copy         Send Data to Excel	Entiat-7	13	85.0	95.0			6	-	6 💌	2	Ψ.	2 🔻	80	•	Edit	80 💌	Edit	806	Edit	763 🔹	Edit
Save Changes Close Copy Send Data to Excel Insert from Excel	Entiat-8	14	84.0	94.0			6	-	6 🔹	2	Ψ.	2 🔻	80	•	Edit	80 🔻	Edit	891	Edit	848 🔹	Edit 💌
Assist 2.7 Asil 2004	thering 27 Arri	2004			Sa	ave Chan	iqes			Close			Сор	v		Seno Inse	l Data to ert from	Excel		and Discovering	

Figure 38: Habitat Attribute screen with channel width

Select Stream Corridor Structure from the "Select Category" drop-down list, select Channel morphometry from the "Sub-Category" drop-down list, and click on the "WidthMx" button. The following screen will appear:

The upper left portion of the screen provides a description of the attribute, WidthMx. Directly to the right of the attribute definition, a text box displays the definitions of the ratings from 0 through 4. Note that you must use the vertical scroll bar to view all five rating definitions in the box. Also note that categorical values are no longer used for width—you enter widths in feet.

The Habitat Attribute Ratings portion of the screen is where you will enter or edit the data. Note that you will not be able to edit reach name, sequence number, the first two ratings fields, or any fields that are grayed out (not required). Depending upon the attribute, you should be able to edit all, or a portion, of the fields described below.



<u>Revised Ratings</u>: Change the existing ratings for the Template (T) or Current (C) condition.

<u>Focus Mon (No)</u>: Select the focus month from the drop-down list (see discussion on Shape Monthly Pattern for details on how to identify your focus month).

<u>Data Precision</u>: Enter 1 if the data entered is Categorical or 2 if Non-Categorical. Note that if this field is shaded (gray), then data precision is always non-categorical (see discussion on page 34 regarding categorical and non-categorical ratings).

<u>Shape Monthly Pattern</u>: Assign a monthly pattern to all attributes requiring a pattern. Refer to page 35 for a list of seasonal variables that require monthly pattern.



Figure 39: Stream Reach Editor Pattern Editor

To assign a monthly pattern to WidthMx, click on the "Edit" button to bring up the screen shown below:

Use this screen to create/edit the width patterns and thus assign widths by month. Simply place the actual stream width for each month in its corresponding box. Use the same pattern for both the WidthMx and WidthMin attributes.

Alternatively, these widths could be scaled to the 0 to 1 range used in the other patterns, in which 1 represents the maximum width and amsller numbers represent the ratio of the expected width to the maximum width.

Remember to click on the "Save Changes" button to have your changes written to the database. If you click on the "Close" button before savign, you will be prompted to save.



After you have created a pattern, it is automatically assigned a pattern number and is added to the list of patterns. You can use the pull-down feature to assign the same pattern to additional reaches, if desired.

<u>Enter Rating Comments</u>: Enter comments to support your rationale, for the attribute rating or the pattern used or, more likely, both. The database keeps a running list of all comments entered so that you will be able to assign the same comment or data source to multiple reaches or attributes.

## **Exceptions in Data Input**

The description of the fields and corresponding instructions given above apply, for the most part, to all attributes. Exceptions are presented below.

## Habitat Type

To work with Habitat Type attributes, select Stream Corridor Structure from the "Select Category" drop-down list and Habitat Type from the "Select Sub-Category" drop-down list. For the eight habitat attributes that comprise this sub-category, you may enter either a value from 0 to 4 or an actual percent value for each reach. Percent values may be entered as 10% or 0.1.

## **Obstructions**

To work with Obstructions (e.g., culverts, dams, waterfalls), select Stream Corridor Structure from the "Select Category" drop-down list and Obstructions from the "Select Sub-Category" drop-down list. Click on the "Obstructions" button to bring up the screen below:



	itat asin: <i>E</i>	: Attrik	oute Ed	itor			
Import Stream Re	ach Da	ita Ex	port Stream Read	sh Data	Reach Editor	Attribute Editor Exit	
Habitat Attril	bute	(Select a	attribute from	list, then	review defini	tion and rating rule)	
Select Category: 2 Obstr W	! Strea /drvvl	m Corridor Str	ructure 💌 Se	elect Sub-Cate	egory: 2.4 Obstr	uctions	
Obstructions to fi Obstructions to fish channels or hindera oxygen).	<b>sh mi</b> passa nces ti	gration ge by physica o migration ca	al barriers (not de used by pollutar	ewatered ts or lack of	R	ating 0: None documented or inferred.	4   
Habitat Attril	bute	Ratings	(Edit rating a	assumption	n, focus mont	h, and data precision)	
Reach Name Entiat-1 Entiat-2 Entiat-2 Entiat-3 Roaring-1 Entiat-4 Entiat-5 Mad-1 Tillicum-1 Mad-2 Mad-3 Entiat-6 Mud-1 Entiat-7	Seq No 2 3 4 5 6 7 7 8 9 9 10 11 11 12 13	Obstruction Reach	Obstruction Reach?	Obstructio Template Edit Edit Edit Edit Edit Edit Edit Edit	n Assumption: A Current Edit Edit Edit Edit Edit Edit Edit Edi	General help information for using the Obstruction Edi Obstructions (culverts, dams, waterfalls, etc) are the The EDT model treats these as 0 length stream featur describe partial or complete barriers to fish migration sources of mortality associated with in-stream struct due to predation, impingement on screens, trauma, etc Culverts or falls with a significant length should be de reaches: 1) the feature as an obstruction to fish pass using this form), and 2) the feature as a reach with a associated environmental features (quality and quant How to use this form: Idenfity obstruction reaches wi (template and current condition). Then click on EDT for scenario. Obstructions need to be described for spec- and % effective passage (survival through the featur mortality associated with the obstruction should be in	tor Functions ir own reaches. is of they and other ures (mortality p). scribed as two age (described length and ity descriptions). th a rating 1 or the appropriate iss, life stages e). Delayed cluded in this
			Save Changes		Close		
Version 2.7 - April, 2004						Mobraid	Biometrics, Inc © 2002

Figure 40: Habitat Attribute editor with obstructions

Obstructions are their own reaches; the EDT model treats them as zero-length (0-ft) stream features.

They describe partial or complete barriers to fish migration and other sources of mortality associated with in-stream structures. These mortality sources could include such factors as predation in a tailrace of a dam, screen impingement, turbine mortality, or other physical or mechanical injuries.

Culverts or falls with significant length should be described as two reaches: 1) the feature as an obstruction to fish passage (described using this form), and 2) the feature as a reach with a length and associated environmental features (attributes).



🗉 Edit Obstruction Assumptions
Stream Reach Editor Obstructions
Use to create/edit reach obstruction assumptions.
General Documention (Common name for obstuction, description, type, etc)
Obstruction Name:
Description:
Comments:
Obstruction type:
Enter Passage Assumptions (Passage is specific for species, life stage, and migration direction)
Select a Species:    Select a Life Stage:   Migration Direction:
Focus Month:
% Effective Passage in Focus Month:
Month: Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Note: Blank entries assume 100% passage (no effect)
Species-Lifestage Record: 1 of 1
Create New Save Changes Close

Figure 41: Stream Reach Editor Obstructions screen

To use this form, you must first identify the Obstruction by assigning a value of 1 to either or both of the Template and Current condition fields (Revised Rating). Next, click on the "Edit" button to the right of this field, which brings up the following screen:

Use the scroll bar to view all of the data fields or expand your window to see the entire screen.

The top portion of the screen is used to provide general documentation about the obstruction, as follows:

- Obstruction name
- Description
- Comments (optional)
- Select the obstruction type from the drop-down list

The lower portion of the screen is for entering passage assumptions, by making selection from the following drop-down lists:

- Species
- Life-stage



- Migration direction (denotes whether the survival data entered in the month boxes applies to upstream or downstream migrants)
- Focus month (denotes the month with the highest survival)

Also enter data for:

- Percent effective passage in focus month (percent survival for this month, for the target life-stage and species)
- Percent survival by month (percent survival (e.g. 0.95 or 95%) for all months for the target life-stage and species note that if you leave this field blank, the model assumes that survival is 100%)

Once you have filled in all of the fields, you must save your work (Save Changes) before adding another record (e.g., species or life-stage).

To add another record, click on the "Create New" button at the bottom of the screen. A screen will appear alerting you to the fact that you will need to use the arrow keys in the lower right hand corner to move to the correct record. The correct record will not have any data in any of the boxes in the lower portion of the screen (species, life-stage, etc.). You must repeat this process for all life-stages and species affected by the obstruction.

## **Withdrawals**

To work with Withdrawals, select Stream Corridor Structure from the "Select Category" drop-down list and Obstructions from the "Select Sub-Category" drop-down list. Click on the "Withdrawals" button to bring up the screen below:



Ha Bax Ha	a <b>bit</b> a Subbasir	at :: Ent	Att <sup>tiat</sup>	rib	ute	Ed	it	or								ECOS	YSTEM	DIAGNO		D	MENT
Import Stream	n Reach	Data	a	Expo	rt Strear	n Read	sh D	ata	Rea	ich B	Editor		Attribute	e Editor	E	xit					
Habitat A	ttribu	te	(Sel	ect att	ribute	from	lis	t. then	revi	ew	defi	initi	on and i	rating	rule)						
Select Categor	v: 2 St	ream	Corrid	or Struc	ture 👻	Se	lect	Sub-Cate	aory:	2	4 Ohs	struc	tions	5	•						
Obstr	VVdrv	w	1						. <u>.</u>												
Water withdra The number and	awals d relative	e size	e of wa	ater with	ndravvals	s in th	e str	eam reac	:h.			Rat	ing 0: <sup>1</sup> No 1 1 1 1	withdra	awals.						
																					+ +
Habitat A	ttribu	te F	Ratir	ngs (E	dit rat	ing a	assi	umptio	n, fo	cus	; mo	nth,	, and da	ta pre	cision)						
	See	Retin	ane	Reviser	d Retina	Enci	ue M	Ion (No)	Det	o Dr	ecisio	20	Sha	ne Mont	thly Dattar	n	F	inter Ret	na Com	nente	
Reach Name	No	T	C	T	C	T	10 10	C	T		C C	511	Templ	ate	Curre	ent	Te	mplate		urrer	nt
Entiat-1	1	0.0	1.0			8	-	8 -	1	•	1	-	56 💌	Edit	57 🕶	Edit		- Edit		-	Edit
Entiat-2	2	0.0	1.0			8	-	8 🔻	1	٠	1	*	56 💌	Edit	57 🔻	Edit	435	- Edit	392	-	Edit
Entiat-3	3						4	-		4		٠	+	Edit	۲	Edit		▼ Edit		•	Edit
Roaring-1	-4						•	-		•		-	*	Edit	*	Edit		- Edit		•	Edit
Entiat-4	5						•	-		•		-	•	Edit	-	Edit		▼ Edit		•	Edit
Entiat-5	6						-	-		•		-	+	Edit	+	Edit		▼ Edit		•	Edit
Mad-1	7						-	-		-		•	-	Edit	•	Edit		▼ Edit		-	Edit
Tillicum-1	8						-	-		-		•	-	Edit	•	Edit		▼ Edit		-	Edit
Mad-2	9						-	-		-		-	-	Edit	-	Edit		▼ Edit		-	Edit
Mad-3	10						-	-		•		-	-	Edit	+	Edit		▼ Edit		-	Edit
Entiat-6	11						*	-		*		Ψ.	-	Edit	-	Edit		<ul> <li>Edit</li> </ul>		-	Edit
Mud-1	12						*	-		*		*	-	Edit	•	Edit		- Edit		-	Edit
Entiat-7	13						-	-		*		*	-	Edit	•	Edit		- Edit		-	Edit
Entiat-8	14						Ψ.	•		•		•	•	Edit	-	Edit		- Edit		•	Edit
				Sa	ave Char	iqes	l		Close				Сору		Send Inse	Data to rt from I	Excel				
Version 2.7 - April,	2004																	Mo	orand Biome	tiles, I	lic 🖸 2002

Figure 42: Habitat Attribute Editor screen with water withdrawals

With this screen you can rate the Withdrawals attribute (number and relative size of water withdrawals in a reach). This attribute identifies the risk of fish being entrained or injured by screening or other structures associated with water withdrawals from streams. Generally, you would use this attribute to account for smaller diversions such as single-housing or small hobby farm type pumping or diversion systems. Large water withdrawals associated with cities are better captured with the Obstruction button.

This screen works the same as those that have been described for other habitat attributes. Ratings are entered in the Revised Rating cells, and the proposed pattern is entered using the "Edit" button under Shape Monthly Pattern. If you click this button, you will see the pattern screen below:



🖼 Edit Pattern Multpliers for	Attribute									×
Stream Reach Edite	or Pattern	Edito	r							
Use to create/edit a monthly pa	attern for a part	icular attr	ibute.							
Pattern ID: 57			Patte	ern Desci	ription:					.
Pattern Name: With-P2			Patte	erns crea	ted for En	tiat by wo	ork team ·	2001		
Rating: 1.0										
Focus Month: Aug										1
Month: Jan Feb	Mar Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Mult:		1	1	1	1	1	1			
Create New		Save	Change	s		Close				
					_					

Figure 43: Stream Reach Editor Pattern Editor

Use this screen to create/edit withdrawal patterns and assign attribute ratings by month. To begin, simply place a 1 in the month(s) where you want the full effect of the rating to be expressed. Note that you should define at least one of these months in the Focus Month field. Next, shape the pattern so that it expresses how the effect changes by month. Be sure to click on the "Save Changes button to have your changes written to the database. If you click on the "Close" button before saving, you will be prompted to save.

The example shown in the screen capture above indicates withdrawals have the largest effect on this reach from May through October. Because values have not been entered for November and December, the model assumes that withdrawals have no effect (this also holds true for months where a zero appears).

Some key points to remember in shaping a monthly pattern:

- <u>Use values from 0 to 1 otherwise the function does not work</u> <u>properly</u>.
- Assign a value of 1 for both the Focus Month and any other months where you want the model to assign the full effect of the rating. If you want 50% of the effect to be modeled, use a 0.5, if 25%, assign a value of 0.25, etc.

After you have created a pattern, it is automatically assigned a pattern number and is added to the list of patterns, so that you can assign the same pattern to additional reaches if desired.

<u>Enter Rating Comments</u>: Enter comments to support your rationale, for the attribute rating or flow pattern used or, more likely, both. The database keeps a running list of all comments entered so that you will be



able to assign the same comment or data source to multiple reaches or attributes.

## Water Quality

Water Quality is the next major category of attributes. We will provide an overview the attributes in this category and a data input example.

## **Overview of Attributes**

The Water Quality category is divided into two sub-categories, hemistry and Temperature Variation.

<u>Chemistry</u> is composed of the following attributes:

- Alkalinity (Alk)
- Dissolved Oxygen (DisOxy)
- Metals In The Water Column (MetWatCal)
- Metals/Pollutants In Sediment/Soils
- Miscellaneous Toxic Pollutants In Water Column (MscToxWat)
- Nutrient Enrichment (NutEnrch).

Temperature Variation includes these attributes:

- Maximum Temperature (TempMx)
- Minimum Temperature (TempMn)
- Temperature Spatial Variation (TmpSptVar).

## Data Input Example

We will use Minimum Temperature (TempMn) as the example to describe how data for the Water Quality attributes are entered.

Select Water Quality from the "Select Category" drop-down list, select Temperature Variation from the "Sub-Category" drop-down list, and click on the "TempMn" button. The following screen will appear:

The upper left portion of the screen provides a description of the attribute, TempMn. Directly to the right of the attribute definition, a text box displays the definitions of the ratings from 0 through 4. Note that you



must use the vertical scroll bar to view all five rating definitions in the box.

Ha	Habitat Attribute Editor Subbasin: Entiat																			
Import Stream	Import Stream Reach Data Export Stream Reach Data Reach Editor Attribute Editor Exit																			
Habitat A	Habitat Attributa (Salact attribute from list then review definition and rating rule)																			
		ate	(36)		Induce				IGAL	ew	uem			anny	ruiej					
Select Categor	y: 31	/vater /	Juainty		•	Se	elect	Sub-Cate	egory:	3.	2 Tem	per	ature variat	ion	•					
TempMx	len	прмп	Im	osptvar																
Temperatura	dail	u mini		(by poo	otb)							D -t	ing <b>O</b> : Cok	dent das	u SALC					
Minimum water	tempe	rature	s withi	the str	eam rea	ch du	iring	a month.			1	nac	l I	uost daj	,,,,C					
													1							
													- i -							
													1							<b>-</b>
	ttrib	uto	Datir				_					- 41-			-1-1					
Habitat A	unio	ule	Nalii	ເບຣູເ	an rai	ing	ass	umpuo	n, Io	cus	mo	nun	, and dai	a pre	cision)					
	Seq	Ratir	ngs	Revise	d Rating	Foc	us N	ton (No)	Dat	a Pr	ecisio	n	Shap	e Mont	hly Patteri	n	Ente	er Rating	Comme	nts 🔺
Reach Name	No	T 2.0	C 2.0	T	С	1	r 	C 1 -	1 1	-	1 1	-	Templa	ate Esta Í	Curre	ent Calle	Temp	late	Curi	ent
Entiat-2	2	3.0	4.0			1	- -	1 -	1	÷	1	÷	66 -	Edit	66 -	Edit	430 -	Edit	1886 -	Edit
Entiat-3	3	3.0	4.0			1	+	1 -	1	+	1	-	66 -	Edit	66 -	Edit	459 -	Edit	1887 👻	Edit
Roaring-1	- 4 -	3.0	4.0			1	*	1 🔻	1	*	1	+	67 💌	Edit	67 💌	Edit	1457 💌	Edit	1888 🝷	Edit
Entiat-4	5	3.0	4.0			1	*	1 -	1	+	1	-	66 🗸	Edit	66 💌	Edit	539 💌	Edit	1889 💌	Edit
Entiat-5	6	3.0	4.0			1	-	1 -	1	-	1	-	67 -	Edit	67 -	Edit	625 -	Edit	1890 -	Edit
Mad-1 Tillioum 1	6	4.0	4.0			1	-	1 -	1	-	1	-	67 -	Edit	67 -	Edit	1048 -	Edit	1008 -	Edit
Mad-2	9	4.0	4.0			1	Ť	1 -	1	÷	1	÷	67 -	Edit	67 -	Edit	1127 -	Edit	1087 -	Edit
Mad-3	10	4.0	4.0			1	+	1 -	1	+	1	-	67 -	Edit	67 -	Edit	1207 -	Edit	1167 👻	Edit
Entiat-6	11	3.0	4.0			1	+	1 🔻	1	+	1	•	67 💌	Edit	67 💌	Edit	713 🝷	Edit	1891 🔻	Edit
Mud-1	12	4.0	4.0			1	*	1 💌	1	•	1	•	67 💌	Edit	67 💌	Edit	1291 💌	Edit	1249 💌	Edit
Entiat-7	13	4.0	4.0			1	-	1 -	1	•	1	-	67 -	Edit	67 🔻	Edit	800 -	Edit	757 🗸	Edit
Entiat-8	14	4.0	4.0			1	-	1 🔻	1	-	1	•	6/ 🔻	Edit	6/ 💌	Edit	886 💌	Edit	843 🔻	Edit 💌
															Send	Data to	Excel			
				Sa	ive Chan	ides		(	Jose				Сору		Inse	rt from	Excel			
Version 2.7 - April,	rsion 2.7 - April, 2004 Nobrand Elemetrics, iso © 2002																			

Figure 44: Habitat Attribute Editor with temperature – daily minimum

The Habitat Attribute Ratings portion of the screen is where you will enter or edit the data. Note that you will not be able to edit reach name, sequence number, Ratings data/fields, or any fields that are grayed out (not required). Depending upon the attribute being edited, you should be able to edit all, or a portion, of the fields described below.

<u>Revised Ratings</u>: Change the existing ratings for the Template (T) or Current (C) condition.

<u>Focus Mon (No)</u>: Select the focus month from ths drop-down list (see discussion on Shape Monthly Pattern below for details on how to identify your focus month).

<u>Data Precision</u>: Enter 1 if the data entered is Categorical or 2 if Non-Categorical. Note that if this field is shaded (gray), then data precision is always non-categorical. See discussion on page 35 for more information on categorical and non-categorical ratings.



<u>Shape Monthly Pattern</u>: Assign monthly pattern to all Flow Variation attributes. The pattern screen for the Temperature Minimum attribute is shown below:

Use this screen to create/edit patterns and assign attribute ratings by month. To begin, simply place a 1 in the month(s) where you want the full effect of the rating to be expressed. Note that you defined at least one of these months in the Focus Month field. Next, shape the pattern so that it expresses how the effect changes by month.

😫 Edit Pattern Multpliers for Attribute	x							
Stream Reach Editor Pattern Editor								
Use to create/edit a monthly pattern for a particular attribute.								
Pattern ID: 66	Pattern ID: 66 Pattern Description:							
Pattern Name: TempMin-P1 Patterns created for Entiat by work team - 2001								
Reting 40								
Focus Month: Jan								
Month: Jan Feb Mar Apr	May Jun Jul Aug Sep Oct Nov Dec							
Mult: 1 1 0.75 0.25	0.25 1 1							
Consta Nam	Cours Chargers Class							
Lreate New Save Lhanges Close								

Figure 45: Stream Reach Editor Pattern Editor

The example shown in the screen capture above indicates that minimum temperature has the largest effect on this reach in November-February, as a value of 1 is provided for these months. The effect in May is only 75% that of February, and the effect in April and October is only 25%. Because values are not entered for the remaining months, the model assumes that minimum temperature is not an issue for these months.

Some key points to remember in shaping a monthly pattern:

- <u>Use values from 0 to 1 otherwise the function does not work</u> <u>properly</u>.
- Assign a value of 1 for both the Focus Month and any other months where you want the model to assign the full effect of the rating. If you want 50% of the effect to be modeled, use a 0.5, if 25%, assign a value of 0.25, etc.

After you have created a pattern, it is automatically assigned a pattern number and is added to the list of patterns, so that you can assign the same pattern to additional reaches if desired.



<u>Enter Rating Comments</u>: Enter comments to support your rationale, for the attribute rating or flow pattern used or, more likely, both. The database keeps a running list of all comments entered so that you will be able to assign the same comment or data source to multiple reaches or attributes.

## **Biological Community**

Biological Community is the next major category of attributes. We will provide an overview the attributes in this category and a data input example.

## **Overview of Attributes**

The Biological Community category is divided into two sub-categories, Community Effects and Macroinvertebrates.

<u>Community Effects</u> includes the following attributes:

- Fish Community Richness (FshComRch)
- Fish Pathogens (FshPath)
- Fish Species Introductions (FspIntro)
- Harassment (Harass)
- Hatchery Fish Outplants (HatFOutP)
- Predation Risk (PredRisk)
- Salmon Caracasses (SalmCarcass)

Macroinvertebrates includes only one attribute:

• Benthic Community Richness (BnComRch)

## Data Input Example

We will use Predation Risk (PredRisk) as the example to describe how data for the Biological Community attributes are entered.

Select Biological Community from the "Select Category" drop-down list, select Community Effects from the "Sub-Category" drop-down list, and click on the "PredRisk" button. The following screen will appear:



The upper left portion of the screen provides a description of the attribute, PredRisk. Directly to the right of the attribute definition, a text box displays the definitions of the ratings from 0 through 4. Note that you must use the vertical scroll bar to view all five rating definitions in the box.

The Habitat Attribute Ratings portion of the screen is where you will enter or edit the data. Note that you will not be able to edit reach name, sequence number, Ratings data/fields, or any fields that are grayed out (not required). Depending upon the attribute being edited, you should be able to edit all, or a portion, of the fields described below.



Figure 46: Habitat Attribute Editor with Predation

<u>Revised Ratings</u>: Change the existing ratings for the Template (T) or Current (C) condition.

<u>Focus Mon (No)</u>: Select the focus month from ths drop-down list (see discussion on Shape Monthly Pattern below for details on how to identify your focus month).



<u>Data Precision</u>: Enter 1 if the data entered is Categorical or 2 if Non-Categorical. Note that if this field is shaded (gray), then data precision is always non-categorical. See discussion on page 35 for more information on categorical and non-categorical ratings.

<u>Shape Monthly Pattern</u>: This field allows you to assign a monthly pattern to all attributes requiring a pattern. For this set of attributes, only Predation Risk requires a monthly pattern. This pattern screen is shown below:

🗉 Edit Pattern Multpliers for Attribute 🛛 🗶								
Stream Reach Editor Pattern Editor								
Use to create/edit a monthly pattern f	or a particular attribu	ute.						
Pattern ID: 54		Pattern Des	cription:					
Pattern Name: Pred-P2		Patterns crea	ated for Entiat by wor	k team - 2001				
Rating: 2.0								
Focus Month: Aug								
Month: Jan Feb Mar	Apr May	Jun Jul	Aug Sep	Oct Nov Dec				
Mult: 1 1 1	1 1	1 1	1 1	1 1	1			
Create Ne <del>w</del>	Save	Changes	Close					

Figure 47: Stream Reach Editor Pattern Editor

You can use this screen to create/edit patterns and assign attribute ratings by month. To begin, simply place a 1 in the month(s) where you want the full effect of the rating to be expressed. Note that you defined at least one of these months in the Focus Month field. Next, shape the pattern so that it expresses how the effect changes by month. The example shown in the screen capture above indicates that Predation Risk is equal for all months.

Some key points to remember in shaping a monthly pattern:

- <u>Use values from 0 to 1 otherwise the function does not work</u> <u>properly</u>.
- Assign a value of 1 for both the Focus Month and any other months where you want the model to assign the full effect of the rating. If you want 50% of the effect to be modeled, use a 0.5, if 25%, assign a value of 0.25, etc.

After you have created a pattern, it is automatically assigned a pattern number and is added to the list of patterns, so that you can assign the same pattern to additional reaches if desired.



<u>Enter Rating Comments</u>: Enter comments to support your rationale, for the attribute rating or flow pattern used or, more likely, both. The database keeps a running list of all comments entered so that you will be able to assign the same comment or data source to multiple reaches or attributes.

## Copying Habitat Data from One Reach to Another

Once you have input habitat attributes for a reach, you can copy those same attributes to other reaches.

#### To copy habitat data from one reach to another:

- 1. Select the Habitat Attribute that you wish to copy.
- 2. Insert your cursor at the reach that you wish to copy.
- 3. Click "Copy" at the bottom of the screen.

	Save Changes	Close	Сору	Send Data to Excel	
Jersion 2.7 - April, 2004					Mobraid Biometrics, Inc © 2

#### Figure 48: Copy, Save, and Export options for the Habitat Data Screen

4. The Select Copy Options page appears. On the left side of the screen, select the attributes you wish to copy. On the right side of the screen, select the reaches to which these attributes should be copied.



Select Copy Options						
Copy Data from this Reach: Entiat-1	Identify Reaches for Copy					
and this attribute:	Select Reaches from List					
FlwHigh	Fotiat_1					
Copy Options:	Entiat-2					
Original Dating	Entiat-3					
2 Conv T Reting	Roaring-1					
	Entiat-4					
2.6 Copy C Rating	Entiat-5					
<u>Revis</u> ed Ratings	Mad-1					
Copy T Revised Rating	Tillicum-1					
Copy C Revised Rating	Mad-2					
Easue Month	Mad-3					
Focus Month	Entiat-6					
	Mud-1					
6 Copy C Focus Month	Entiat-7					
Data Precision	Entiat-8					
1 Copy T Data Precision	Potato-1					
2 Copy C Data Precsion	Entiat-9					
Barrette Data an	Entiat-10					
74 Convert Dottorn	Stormy-1					
	Entiat-11					
74 Copy C Pattern ID	Entiat-12					
Data Comment	Entiat-13					
Copy T Data Comment						
Copy C Data Comment	Select all reaches for co					
Instructions: Data shown is for the reach cursor location. If you wish to copy data from a different reach then close this form and move your cursor to the correct reach. Options for copying data are original ratings, revised ratings, focus month, data precision, and data comment id. After selecting copy options then identify reaches to copy data. Close form when complete. You will see new ratings in the revised ratings column of the Editor (even if copying the original ratings). IMPORTANT: You must save the data to make these changes permanent.						
Сору D а	ata Close					

Figure 49: Select Copy Options Screen

5. Select "Copy Data." The data will be copied to the reaches selected. Click "Close" to return you to the Habitat Attributes screen. The new ratings will be visible.

## Using Excel to View and Enter Habitat Data

The Stream Reach Editor allows you to export habitat attribute data into Microsoft Excel so you can edit the data and then import it back into the Stream Reach Editor to complete your analysis. This is particularly useful if you wish to plot your data using Excel features.

When exported, the Excel file will be protected against any formatting changes. If you change the format in any way, the data cannot be imported back into the Stream Reach Editor.

#### To export habitat data into Microsoft Excel:

- 1. Select the Habitat Attribute that you wish to export.
- 2. Click "Send Data to Excel."

	Save Changes	Close	Сору	Send Data to Excel	
Version 2.7 - Aoril, 2004					Mobrard Biometrics, Inc 🛱 2002





3. Microsoft Excel will launch, displaying your data. Plot or edit your data as desired, being careful not to change the formatting.

	9 FlwHigh-21-200405031255;xls										
	B	C	D	E	F	G	Н	1	J	K	
1	FlwHigh		Original Ratings		Original Precision		Revised Ratings		Revised Precision		
2	Reach Name	Attribute Code	Templata	Current	Templata	Current	Templete	Current	Templata	Current	
3	Entist_1	FlwHigh	2.0	2.6	1 1	2	rempiare	Current	rempiare	Current	
	Entiat-?	ElwHigh	2.0	2.0	1	2					
5	Entiat-3	ElwHigh	2.0	2.6	1	2					
6	Roaring-1	ElwHigh	2.0	2.5	1	2					
7	Entiat-4	FlwHigh	2.0	2.6	1	2					
8	Entiat-5	FlwHigh	2.0	2.5	1	2					
9	Mad-1	FlwHigh	2.0	2.5	1	2					
10	Tillicum-1	FlwHigh	2.0	2.6	1	2					
11	Mad-2	FlwHigh	2.0	2.4	1	2					
12	Mad-3	FlwHigh	2.0	2.4	1	2					
13	Entiat-6	FlwHigh	2.0	2.5	1	2					
14	Mud-1	FlwHigh	2.0	3.0	1	2					
15	Entiat-7	FlwHigh	2.0	2.4	1	2					
16	Entiat-8	FlwHigh	2.0	2.4	1	2					
17	Potato-1	FlwHigh	2.0	3.0	1	2					
18	Entiat-9	FlwHigh	2.0	2.4	1	2					
19	Entiat-10	FlwHigh	2.0	2.3	1	2					
20	Stormy-1	FlwHigh	2.0	2.5	1	2					
21	Entiat-11	FlwHigh	2.0	2.3	1	2					
22	Entiat-12	FlwHigh	2.0	2.3	1	2					
23	Entiat-13	FlwHigh	2.0	2.2	1	2					
24	Entiat-15	FlwHigh	2.0	2.1	1	2					
25	Entiat-16	FlwHigh	2.0	2.1	1	2					

#### Figure 51: Habitat Attribute Data exported into Excel

4. Plot or edit your data as desired, being careful not to change the formatting.

#### To import habitat data from Microsoft Excel:

- 1. Select the Habitat Attribute for which you have an Excel file to import.
- 2. Click "Insert Data from Excel."



#### Figure 52: Copy, Save, and Export options for the Habitat Data Screen

- 3. Navigate to and select the Excel file that you previously exported. Click "Open." The data will be imported into the Stream Reach Editor.
- 4. Click "Save Changes" to save the newly imported data.
- 5. Save the Excel file.
- 6. Click "Close" to return to the Main Stream Reach Editor menu.

## **Exporting and Uploading your New Stream Reach Dataset**

Once you have defined your stream reach structure and rated your habitat attributes, you are ready to export your dataset for upload to EDT Online.



This section describes how you export your stream reach dataset and upload it to EDT Online.

#### To export your dataset:

1. Click on the "Export Stream Reach Data" button on the navigation bar on the main menu page of the Stream Reach Editor. The Export Stream Reach Data (Step 1 – Begin Data Export) screen appears.

EDT Stream Reach Editor
Export Stream Reach Data
Import Stream Reach Data Excort Stream Reach Data Reach Editor Attribute Editor Exit
Step 1 - Begin Data Export
This process will extract the data tables as text files and create a zip file for uploading to EDT Online.
Data export requires three steps:
<ol> <li>First you will create a local directory for your stream reach data by clicking button below (you will need to note location and file name)</li> </ol>
2) Export data file to directory
3) Confirm successful data export
Create Export Directory
Habrand Bismetrices, Inc. G

#### Figure 53: Export Stream Reach Data screen

2. Click on the "Create Export Directory" button at the bottom of the page.

Step 2 - Export Data to Zip File					
Review local directory and file name					
Please make note of the directory location and file name as you will be asked for this location and name later.					
During the upload process in EDT Online you will again be asked for this information.					
Hint: The root file directory is your default directory in Access; this can be changed by going to Tools/Options/General					
Export Directory: E:\Katie\Export StreamData 20030924335\ Export File Name: Stream Data Entiat 20030924335 RD					
Export Data to File					

#### Figure 54: Step 2 – Export Data to Zip File screen

3. Click on the "Export Data to File" button, found at the bottom of the screen. Processing may take a few moments. The Confirm Successful Data Export screen appears.



Step 3 - Confirm Successful Data Export
Congratulations - data export is complete!
Exit Stream Reach Editor and log on to EDT Online to upload data.
Finished table export - tables zipped into file: E:\Katie\Export_StreamData_20030924335\Stream_Data_Entiat_20030924335_ RD
Proceed

Figure 55: Step 3 – Confirm Successful Data Export screen

- NOTE: Make note of the export directory path and name. You will be asked for this information again when you are uploading to the EDT Online Web site. Note that this is the directory into which you extracted the downloaded files for importing into the Stream Reach Editor.
  - 4. After completing the Export Data file step, click on the "Proceed" button at the bottom of the screen, which returns you to the Stream Reach Editor main menu.
  - 5. Return to EDT Online and follow the steps outlined for Uploading Draft Data to the EDT Web application.
  - 6. Select "Upload Draft Data" from the Stream Reach Main Menu page of EDT Online. The Upload Draft Data screen appears.

STREAM REACH EDITOR
Upload Data
If you made changes to our Datasets with the offline Editor, you may import them to our database for use with other EDT Online features.
Enter Dataset Name: KM-Entiat-9-24-03 Enter Dataset Description: Test dataset Select a file from your hard drive: E:\Katie\Export_StreamD Browse
Please be patient after clicking the upload button, below. It may take a minute or two to upload your dataset. Upload

Figure 56: Upload Stream Reach Data screen from EDT Online



7. Click "Upload" at the bottom of the screen. An Upload Progress screen will appear.

Area/Province: Columbia C	ascade Subbasin: Entiat				
Screen Reach Editor					
Dataset Upload In Progress					
Your draft Data Please be patie large.	aset is being uploaded and saved to the online system. ent. This may take a while especially if the dataset is				
Processing Time:	0:31				
Status Log:	Start Time: 09/24/03 03:46:22 A Current Time: 09/24/03 03:46:56 Processing				

Figure 57: Dataset Upload in Progress screen

NOTE: Processing time may take a few minutes.



Area/Province: Columbia Cascade Subbasin: Entiat
STREAM REACH EDITOR
Dataset Was Uploaded Successfully
Your draft Dataset has been saved to the online system and is now available for online use.
You may use the <u>Population Editor</u> to define fish populations for the subbasin then run <u>Reports</u> on the dataset.
You may <u>Register</u> your draft as the "official" dataset for your subbasin.

Figure 58: Successful Upload message

At this point, your dataset is uploaded to EDT Online, and you can use the Population Editor on EDT Online Web site to create a population, and then run reports on the dataset.