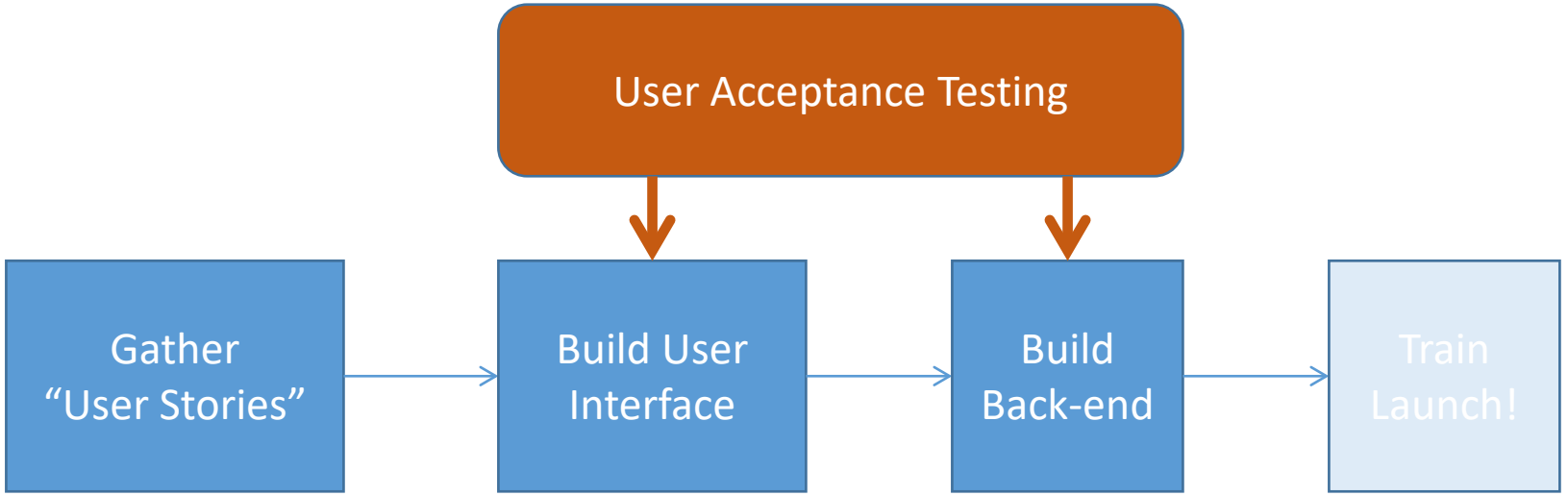
How Pre-dataset Collection Workflow Smooths Post Data Management

Colette Coiner and Stacy Schumacher, CTUIR

Tribal Data Workshop

April 13, 2022

Dataset Build is an Iterative Process with each User Group

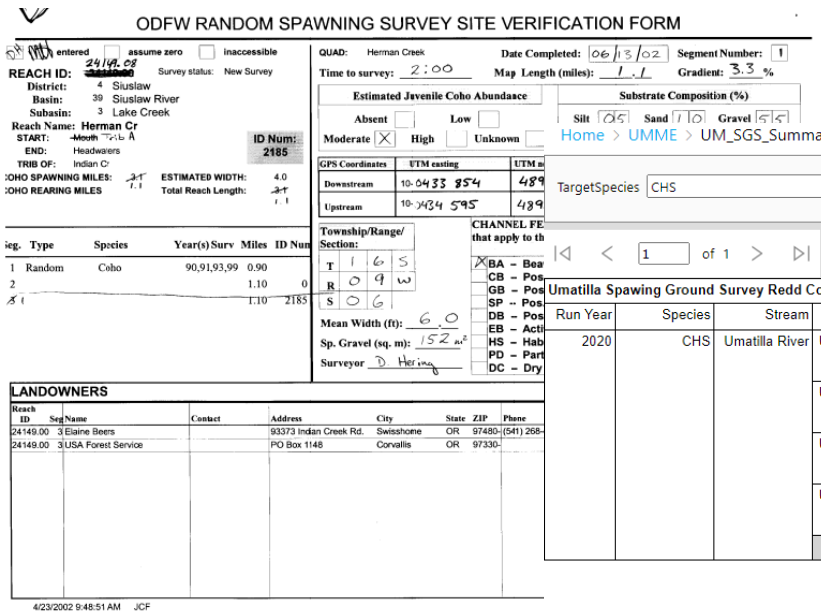


Story Gathering to Build the Ideal Workflow Solution

New or Legacy Dataset

New Datasets

1. What is the objective of the data collection effort
2. Identify the attributes of the dataset, build the metadata
3. Look at examples from other entities
4. Identify the reporting needs



ODFW RANDOM SPAWNING SURVEY SITE VERIFICATION FORM

REACH ID: 24149.08 | Survey status: New Survey
District: 4 Siuslaw
Basin: 39 Siuslaw River
Subasin: 3 Lake Creek
Reach Name: Herman Cr
START: Mouth
END: Headwaters
TRIB OF: Indian Cr
ID Num: 2185
COHO SPAWNING MILES: 1.1 ESTIMATED WIDTH: 4.0
COHO REARING MILES: 1.1 Total Reach Length: 1.1

QUAD: Herman Creek | Date Completed: 06/13/02 | Segment Number: 1
Time to survey: 2:00 | Map Length (miles): 1.1 | Gradient: 3.3 %

Estimated Juvenile Coho Abundance: Absent, Low, Moderate X, High, Unknown
Substrate Composition (%): Silt 05, Sand 10, Gravel 55

GPS Coordinates	UTM easting	UTM n
Downstream	10 0433 854	489
Upstream	10 0434 595	489

Seg.	Type	Species	Year(s) Surv	Miles	ID Num
1	Random	Coho	90,91,93,99	0.90	
2				1.10	0
				1.10	2185

Township/Range/Section: T 16S, R 09W, S 06
Mean Width (ft): 6.0
Sp. Gravel (sq. m): 152 m²
Surveyor: D. Hering

CHANNEL FE... that apply to th...
BA – Bea...
CB – Pos...
GB – Pos...
SP – Pos...
DB – Pos...
EB – Acti...
HS – Hab...
PD – Part...
DC – Dry...

LANDOWNERS

Reach ID	Seg	Name	Contact	Address	City	State	ZIP	Phone
24149.00	3	Elaine Beers		93373 Indian Creek Rd.	Swisshome	OR	97480-	(541) 268-
24149.00	3	USA Forest Service		PO Box 1148	Corvallis	OR	97330-	

4/23/2002 9:48:51 AM JCF

Home > UMME > UM_SGS_Summary

TargetSpecies: CHS | RunYear: 2020 | Stream: Umatilla River

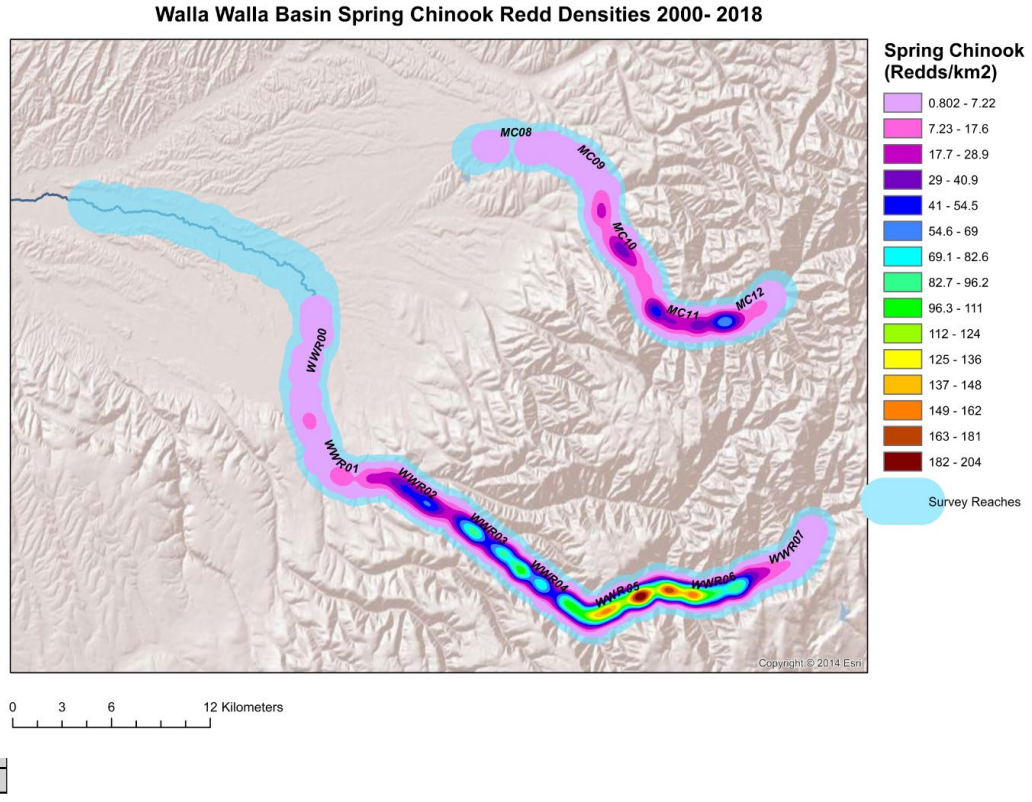
1 of 1 | 100%

Umatilla Spawing Ground Survey Redd Counts

Run Year	Species	Stream	Reach	Month	Surveys Conducted	Redd Habitat GL	Redd Habitat RI
2020	CHS	Umatilla River	Umatilla River 22	September	1	0	1
				Reach Total	1	0	1
			Umatilla River 23	September	1	0	0
				Reach Total	1	0	0
			Umatilla River 25	September	2	3	3
				Reach Total	2	3	3
			Umatilla River 26	September	1	0	1
				Reach Total	1	0	1
				Stream Total	5	3	5

Umatilla Spawing Ground Survey Carcass Counts

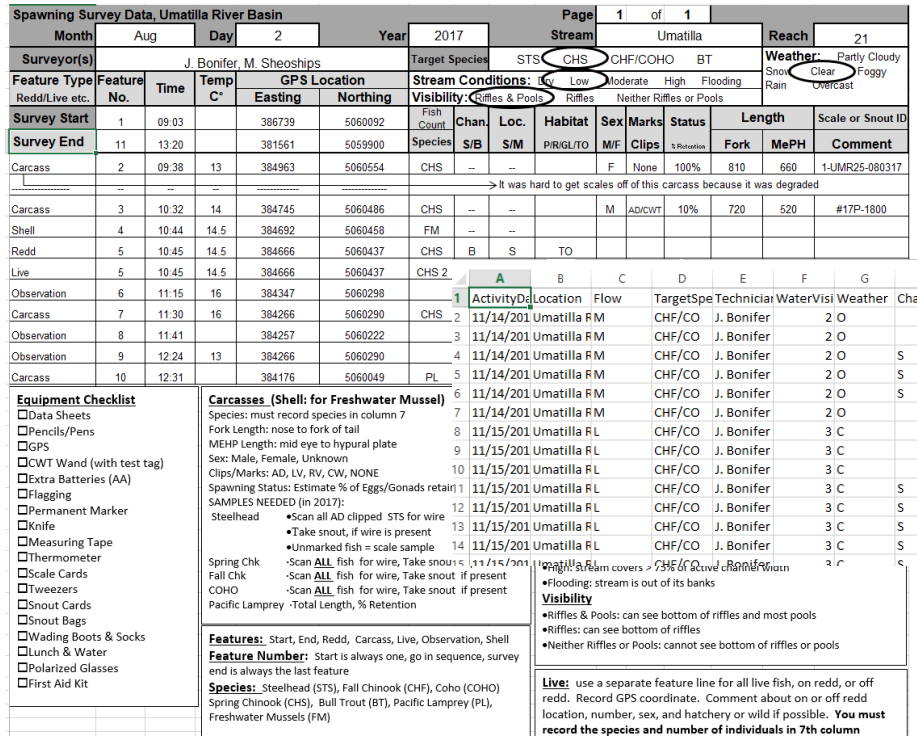
Run Year	Species	Stream	Reach	Month	Origin HAT Male	PreSpawn Mortality Male (>50% Retained)	PreSpawn Mortality Female (>10% Retained)	Unkn... Morta...
2020	CHS	Umatilla River	Umatilla River 23	September	0	1	0	0
				Reach Total	0	1	0	0
				Stream Total	0	1	0	0



Story Gathering to Build the Ideal Workflow Solution

Legacy

1. Identify all the projects collecting the same types of data, bring those users together into the working group
2. Observe the field collection procedures
    1. This gives a lot of insight into what is happening in the field
    2. Allow for exploration of digital collection opportunity
3. Gather previous spreadsheets and reports



Spawning Survey Data, Umatilla River Basin — Page 1 of 1

Month	Aug	Day	2	Year	2017	Stream	Umatilla	Reach	21
Surveyor(s)	J. Bonifer, M. Sheoships			Target Species	STS CHS CHF/COHO BT	Weather:	Partly Cloudy, Clear, Foggy, Rain, Snow, Overcast		
Stream Conditions:	Low / Low / Moderate / High / Flooding								
Visibility:	Riffles & Pools / Riffles / Neither Riffles or Pools								

Feature Type Redd/Live etc.	Feature No.	Time	Temp C°	GPS Location Easting	GPS Location Northing	Species	Chan. S/B	Loc. S/M	Habitat P/R/GL/TO	Sex M/F	Marks Clips	Status % Retention	Length Fork	Length MePH	Scale or Snout ID Comment
Survey Start	1	09:03		386739	5060092	Fish Count									
Survey End	11	13:20		381561	5059900										
Carcass	2	09:38	13	384963	5060554	CHS	--	--		F	None	100%	810	660	1-UMR25-080317
						→ It was hard to get scales off of this carcass because it was degraded									
Carcass	3	10:32	14	384745	5060486	CHS	--	--		M	AD/CWT	10%	720	520	#17P-1800
Shell	4	10:44	14.5	384692	5060458	FM	--	--							
Redd	5	10:45	14.5	384666	5060437	CHS	B	S	TO						
Live	5	10:45	14.5	384666	5060437	CHS 2									
Observation	6	11:15	16	384347	5060298										
Carcass	7	11:30	16	384266	5060290	CHS									
Observation	8	11:41		384257	5060222										
Observation	9	12:24	13	384266	5060290										
Carcass	10	12:31		384176	5060049	PL									

Equipment Checklist
- ☐Data Sheets
- ☐Pencils/Pens
- ☐GPS
- ☐CWT Wand (with test tag)
- ☐Extra Batteries (AA)
- ☐Flagging
- ☐Permanent Marker
- ☐Knife
- ☐Measuring Tape
- ☐Thermometer
- ☐Scale Cards
- ☐Tweezers
- ☐Snout Cards
- ☐Snout Bags
- ☐Wading Boots & Socks
- ☐Lunch & Water
- ☐Polarized Glasses
- ☐First Aid Kit

Carcasses (Shell: for Freshwater Mussel)
Species: must record species in column 7
Fork Length: nose to fork of tail
MEHP Length: mid eye to hypural plate
Sex: Male, Female, Unknown
Clips/Marks: AD, LV, RV, CW, NONE
Spawning Status: Estimate % of Eggs/Gonads retain
SAMPLES NEEDED (in 2017):
Steelhead — •Scan all AD clipped STS for wire; •Take snout, if wire is present; •Unmarked fish = scale sample
Spring Chk — ·Scan **ALL** fish for wire, Take snout if present
Fall Chk — ·Scan **ALL** fish for wire, Take snout if present
COHO — ·Scan **ALL** fish for wire, Take snout if present
Pacific Lamprey ·Total Length, % Retention

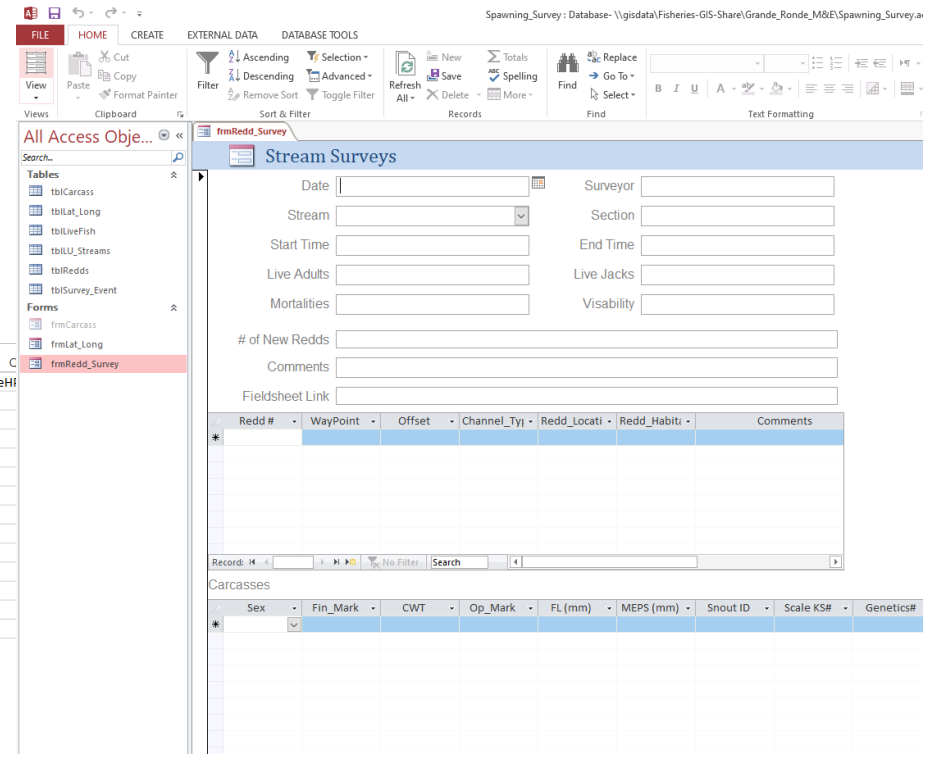
Features: Start, End, Redd, Carcass, Live, Observation, Shell
Feature Number: Start is always one, go in sequence, survey end is always the last feature
Species: Steelhead (STS), Fall Chinook (CHF), Coho (COHO) Spring Chinook (CHS), Bull Trout (BT), Pacific Lamprey (PL), Freshwater Mussels (FM)

•High: stream covers > 75% of active channel width
•Flooding: stream is out of its banks

Visibility
•Riffles & Pools: can see bottom of riffles and most pools
•Riffles: can see bottom of riffles
•Neither Riffles or Pools: cannot see bottom of riffles or pools

Live: use a separate feature line for all live fish, on redd, or off redd. Record GPS coordinate. Comment about on or off redd location, number, sex, and hatchery or wild if possible. **You must record the species and number of individuals in 7th column**

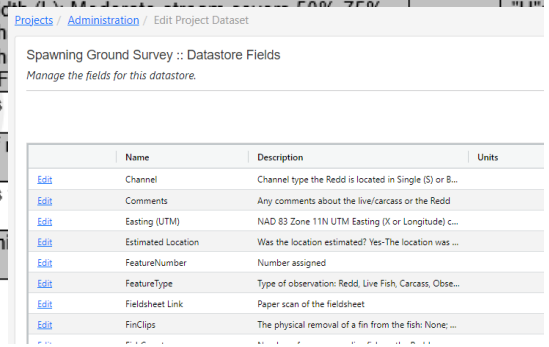
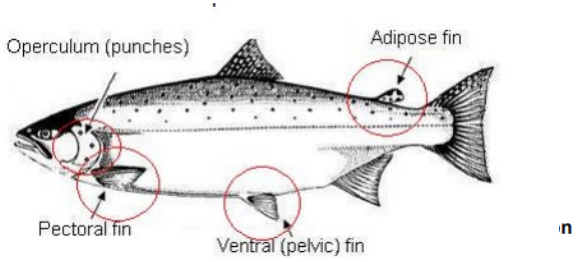
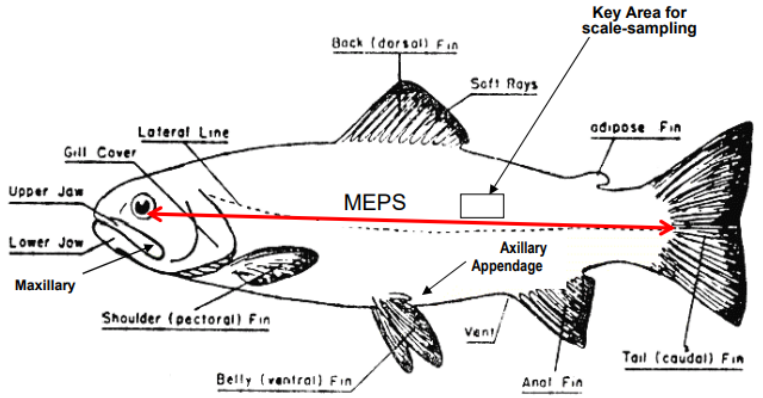
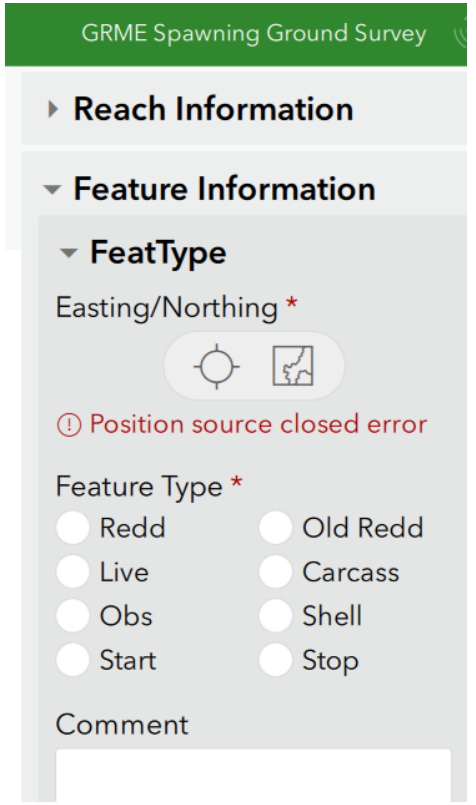
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	ActivityDa	Location	Flow	TargetSpe	Technicia	WaterVisi	Weather	Channel	Comment	Easting	Northing	FeatureNa	FeatureTy	FinClips	FishCount	ForkLengt	MeHP
2	11/14/201	Umatilla R	M	CHF/CO	J. Bonifer	2	O			362956	5059381	1	Start				
3	11/14/201	Umatilla R	M	CHF/CO	J. Bonifer	2	O			362928	5059412	2	Carcass	AD		710	
4	11/14/201	Umatilla R	M	CHF/CO	J. Bonifer	2	O	S		362553	5059766	3	Redd				
5	11/14/201	Umatilla R	M	CHF/CO	J. Bonifer	2	O	S		361339	5059634	4	Redd				
6	11/14/201	Umatilla R	M	CHF/CO	J. Bonifer	2	O	S		361251	5059623	5	Redd				
7	11/14/201	Umatilla R	M	CHF/CO	J. Bonifer	2	O			358462	5058569	6	Stop				
8	11/15/201	Umatilla R	L	CHF/CO	J. Bonifer	3	C			353759	5057721	1	Start				
9	11/15/201	Umatilla R	L	CHF/CO	J. Bonifer	3	C			349594	5057051	2	Stop				
10	11/15/201	Umatilla R	L	CHF/CO	J. Bonifer	3	C			343715	5060095	1	Start				
11	11/15/201	Umatilla R	L	CHF/CO	J. Bonifer	3	C	S		343215	5058979	2	Redd				
12	11/15/201	Umatilla R	L	CHF/CO	J. Bonifer	3	C	S		343215	5058979	3	Redd				
13	11/15/201	Umatilla R	L	CHF/CO	J. Bonifer	3	C	S		342551	5060061	5	Redd				
14	11/15/201	Umatilla R	L	CHF/CO	J. Bonifer	3	C	S		342551	5060061	6	Redd				
	11/15/201	Umatilla R	L	CHF/CO	J. Bonifer	3	C	S		342551	5060061	7	Redd				



Story Gathering to Build the Ideal Workflow Solution

1. Create a draft of the Data Standards, Metadata, and Reports
2. Review the drafts with the working group to discuss the data and workflow solution.
3. Clearly define what we will be delivering to them
4. Generate Test Datasets and Reports – coordinate with the Web Programmer and Database Developer
5. User Testing
6. Finalize and present to Committee
7. Committee Sign Off

DATASET HEADER FIELDS

These are the fields that appear on the header of an activity sheet and for the whole day of collection activity.

Column Name	Attribute Label	Attribute Description	Type
FieldsheetLink	Fieldsheet Link	Paper scan of the fieldsheet	string
FlaggedRedds	Flagged Redds	Number of old Redds that were already flagged	int
Flow	Flow	Condition of the stream at the time of the Spawning survey. Dry- no flow (D); Low-stream covers <50% of active channel wid… (L); Moderate-stream covers 50%-75% of active ch… of active ch… its banks (F…	string
HeaderComments	Survey Comments	Comments	
NewRedds	New Redds	Number of … Survey	
StrandingComments	Stranding Comments	Comments	
StrandingIssues	Stranding Issues	Need Defini…