

DRAFT
Oregon Watershed Enhancement Board
Oregon Watershed Restoration Inventory Project Metadata
June 21, 2007

The Oregon Watershed Enhancement Board (OWEB) has been acquiring watershed restoration information since 1997 to track on-the-ground efforts to restore aquatic habitat and water quality conditions in Oregon. The specific objectives of the Oregon Watershed Restoration Inventory (OWRI) are as follows:

- synthesize and evaluate the types of restoration activities implemented within watersheds and statewide;
- document voluntary efforts in the public and private sectors to restore watershed conditions;
- provide information (in database and GIS formats) to watershed councils and other local groups to support watershed assessments and future restoration planning and prioritization;
- estimate the proportion of restoration activities meeting state habitat restoration guidelines; and
- provide information to support effectiveness monitoring of regional and statewide restoration activities.

Restoration practitioners submit project data to the Oregon Watershed Restoration Inventory office upon completion of restoration projects. Data is submitted using a standardized reporting form and project location maps. Once acquired, data sheets and maps are assigned a unique project identification number. This number links spatial project data with tabular project data, which are stored in a relational database using Microsoft Access software. Currently, data predominantly represent restoration practices on non-federal lands in Western Oregon (i.e., west of the Cascade Range) implemented between 1995 and the present.

Dataset Description: Spatial Data

OWRI spatial data includes point, line, and polygon and arc features mapped from hard copy project location maps are stored in a geodatabase. Spatial data metadata are stored in ArcCatalog with the geodatabase and can be provided upon request.

Access Constraints: None.

Source Information and Attribute Accuracy:

All project locations were derived from maps of varying scales, type, and quality provided by restoration practitioners. The accuracy of project locations is unknown, as none of the restoration project locations indicated on submitted maps have been ground-truthed by the OWRI project.

Point of Contact for OWRI Spatial Data

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Dataset Description: Relational Database

The OWRI has developed a standardized reporting form for project documentation. Once restoration practitioners submit the reporting form, the project data are compiled into a relational database using Microsoft Access software. Unique project identification numbers (PROJNUM) link the relational tables. These are the same numbers entered into the attribute tables of the GIS coverages (Id or PROJNUM).

The Access database tables and attribute descriptions are listed below.

This database is in transition and will be migrated to SQL in the future. As the new look-up table links are established, certain data fields will be removed from tables. These fields are highlighted in yellow. We plan to add foreign key links to the database as the data conversion continues.

ProjectInfo Table (Main project information table - Note: Every project has one record in this table)

Field Name	Data Type	Size	Field Description
PROJNUM	Number (Long)	4	Unique identifier, database record number
Basin	Text	75	Basin that was reported
Subbasin	Text	75	Subbasin that was reported
Year	Number (Long)	4	Primary Project Year (since 2004, we have been using the project completion year)
BasinName	Text	50	3rd field hydrologic unit name ("multiple" indicates multi-basin projects)
SubbasinName	Text	75	4th field hydrologic unit name (^ in front indicates multi-subbasin projects)
HUC4thField	Text	8	4 th field hydrologic units (11111111 indicates projects where HUCs could not be identified)
ReportBasin	Text	50	Basin designations for the Oregon Plan Biennial Progress Report (partly based on 3rd field hydrologic units)
StreamName	Text	80	Stream Name
TributaryOf	Text	40	Tributary of
ReportDate	Date	8	Date reporting form was filled out
T	Text	15	Township
R	Text	15	Range
SEC	Text	26	Section
County	Text	50	County
ProjName	Text	75	Project name
OwebNum	Text	10	OWEB Grant Number (if project was funded by OWEB)
RandENum	Text	10	ODFW R & E Grant Number (if project was funded by R & E)
IsUpdate	Yes/No	1	This is an UPDATE of a project reported earlier. See PROJLINK for project number of original project.
ProjLink	Text	20	This project is linked by either ISUPDATE or HASUPDATE to another project number
HasUpdate	Yes/No	1	This project has an update in the database. See PROJLINK for project number of updated project.
StartMonth	Text	2	Project start month
StartYear	Text	4	Project start year

ProjectInfo Table (cont.)

CompleteMonth	Text	2	Project completion month
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CompleteYear	Text	4	Project completion year
TotalCash	Currency	8	Total cash cost of project
TotalInKind	Currency	8	Projected cost of donated or in-kind services, materials, labor, etc.
TotalCost	Currency	8	Total Expenditure (TotalCash + TotalInKind) for project
SpeciesBenefit	Text	1	Text answer to question: Does project intend to benefit specific fish or wildlife species? yes, no, or unknown. If yes, go to SPECIES table for Species information.
Monitor	Text	50	Will the EFFECTIVENESS of the restoration project be MONITORED? yes, no, or unknown. If YES, go to Monitor table for Monitor information
ODFMonProg	Text	50	Text answer to question: Is this project participating in the ODF Monitoring Program? yes, no, or unknown.
MapStatus	Text	50	Choices: Adequate map attached; Map provided but not adequate; No map attached; Adequate map received after follow-up
PROJDESC	Memo		Brief description of project activities –this is not completed by the respondent. It is populated after data entry and QA/QC as time permits.

Participant Table (Each project may have several participant records)

Field Name	Data Type	Size	Field Description
PROJNUM	Number (Long)	4	Unique identifier, database record number
Type	Text	8	see table “ParticipantTypeCodes”
Participant	Text	150	Participant name: organization name or granting agency
ProgramName	Text	50	Program name or grant program
GrantNum	Text	10	Grant number (Grant ID#) for grant programs such as OWEB, ODFW R & E, USFWS, etc.
NameExtraInfo	Text	50	Participant name – additional information
Contact	Text	28	Contact name
Phone	Text	15	Participant or participant contact’s phone number
Cash	Currency	8	Participant’s cash contribution
InKind	Currency	8	Participant’s inkind contribution
TotalContribution	Currency	8	Participant's total contribution to project (Cash+Inkind)

ParticipantRole Table (Each participant may have several participant role records)

Field Name	Data Type	Size	Field Description
ParticipantRoleID	Number (Long)	4	Unique identifier for participant role record
ParticipantID	Number (Long)	4	Participant record ID link
ParticipantRoleLUID	Number (Long)	4	ParticipantRole LUID from Lookup table: ParticipantRoleLU

ParticipantRoleLU Table (Lookup table for ParticipantRole in ParticipantRole table)

ParticipantRoleLUID	ParticipantRole
1	Respondent (person who reported the project information)
2	Land owner
3	Funder
4	Primary project coordinator
5	Provided technical assistance or products
99	Unknown

ActivityType Table (Each project may have several activity type records)

Field Name	Data Type	Size	Field Description
PROJNUM	Number (Long)	4	Unique identifier, database record number
ActivityTypeLUID	Number (Long)	4	ActivityType LUID from Lookup table: ActivityTypeLU

ActivityTypeLU Table (Lookup table for ActivityType used in several tables)

ActivityTypeLUID	ActivityType	Comments
1	Instream	
2	Riparian	
3	Fish Passage	
4	Road	
5	Upland	
6	Wetland	
7	Estuary	Not currently separating wetland from estuary, so estuary projects may be found under Wetland
8	Combined	May be used in ActivityCost table and ProjType field in GIS, but not ActivityType table
9	Urban	
99	Unknown	Not used at this time.

ActivityCost Table (Each project may have several activity cost records)

Field Name	Data Type	Size	Field Description
PROJNUM	Number (Long)	4	Unique identifier, database record number
ActivityTypeLUID	Number (Long)	4	ActivityType LUID from Lookup table: ActivityTypeLU
Cash	Currency	8	Activity cash cost
InKind	Currency	8	Activity inkind cost
TotalCost	Currency	8	Total activity cost (Cash + InKind)
NoCostReported	Yes/No	1	An activity was reported, but not a cost.

Comment Table (Each project may have zero-several comment records)

Field Name	Data Type	Size	Field Description
PROJNUM	Number (Long)	4	Unique identifier, database record number
CommentTypeLUID	Number (Long)	4	OWRI comment type. CommentTypeLUID from Lookup table: CommentTypeLU
CommentSubTypeLUID	Number (Long)	4	OWRI comment subtype. CommentSubTypeLUID from Lookup table: CommentSubTypeLU
Comment	Text	250	Additional information or comments
AddUpdate	Date/Time		Date stamped: Now()
Originator	Text	25	Origin of Comments if generated by OWRI staff (Last name)

CommentSubTypeLU Table (Lookup table for CommentSubType in Comment table)

CommentSubTypeLUID	CommentSubType	Description
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CommentSubTypeLUID	CommentSubType	Description
1	Attachment	Comment about a non-map item attached to the data form.
2	Cost	Comment about cost: could be project level (total cost), participant funding, or activity cost.
3	FishPassage	Comment about fish passage activity.
4	FWQuestion	Comment about project level fish & wildlife species to benefit question on cover page of data form.
5	Goal	Comment about goal.
6	Instream	Comment about instream activity.
7	Location	Comment about restoration project location information on cover page of data form.
8	Map	Comment about project map.
9	Monitor	Comment about monitor questions.
10	Participant	Comment about participant.
11	PermitNumber	Comment about permit number.
12	Project	Comment about project (project level or cover page comments)
13	Riparian	Comment about riparian activity.
14	Road	Comment about road activity.
15	SpatialDataReview	Comment about mapped projects that may need to be re-mapped.
16	Species	Comment about species data.
17	Upland	Comment about upland activity.
18	Wetland	Comment about wetland activity.
19	Year	Comment about primary project year determination.

CommentTypeLU Table (Lookup table for CommentType in Comment table)

CommentTypeLUID	CommentType
1	Flag
2	DataEntry
3	Modification
4	Respondent
5	Follow-upCommunication
6	QA / QC
7	MapStatus
8	Private

Goal Table

(Each project may have several goal records)

Field Name	Data Type	Size	Field Description
PROJNUM	Number (Long)	4	Unique identifier, database record number
GoalLUID	Number (Long)	4	OWRI habitat restoration projects goal. GoalLUID from Lookup table:
OtherGoal	Text	100	Other goal specified

GoalLU Table

(Lookup table for Goal in Goal table)

GoalLUID	Goal
1	Improve/increase stream structure & complexity
2	Improve/increase stream interaction with floodplain
3	Improve/increase stream flow
4	Improve/increase stream gravel recruitment
5	Improve/increase fish passage
6	Improve/increase stream spawning habitat
7	Improve/increase stream rearing habitat
8	Improve/increase stream pools
9	Improve/increase stream off-channel habitat
10	Improve/increase stream over-winter habitat
11	Improve/increase stream summer habitat
13	Improve/increase stream cool water habitat
14	Improve/increase stream slow water habitat
15	Improve/increase stream refuge cover
16	Increase future LWD recruitment to stream
17	Increase future stream shading/increase vegetation to provide shade
18	Increase streambank stabilization/protection
19	Increase nutrient input to stream (e.g. plant material, salmon carcasses)
20	Decrease erosion/stream sedimentation
21	Decrease run-off contaminant input
22	Decrease stream temperature
23	Increase wildlife habitat (vegetation for food, cover, or nesting)
24	Increase upslope stability (soil, road)
25	Increase road/upslope drainage
28	Decrease road access
29	Decrease road density
30	Decrease livestock access to stream
31	Increase storage capacity of wetland
32	Increase wetland vegetation for flood control
33	Increase net area of wetland
34	Increase the number of wetland types at site
35	Increase wetland connection to adjacent natural area
36	Increase native plant species composition
37	Increase upland water storage capacity
38	Decrease washout/diversion potential at stream crossings
39	Improve flood/slide repair
40	Education
97	Other
99	Unknown

LandUse Table (Each project may have several land use records)

Field Name	Data Type	Size	Field Description
PROJNUM	Number (Long)	4	Unique identifier, database record number
LandUseLUID	Number (Long)	4	OWRI habitat restoration projects land use. LandUseLUID from Lookup table: LandUseLU
OtherLandUse	Text	100	Other land use specified

LandUseLU Table (Lookup table for LandUse in LandUse table)

LandUseLUID	LandUse
1	Forest
2	Range/pasture
3	Ungrazed grasslands
4	Shrub
5	Cropland
6	Urban industrial/commercial
7	Urban residential
8	Rural residential
9	Recreation
10	Wetland
11	Barren
97	Other
99	Unknown

PermitNumber Table (Each project may have several permit records)

Field Name	Data Type	Size	Field Description
PROJNUM	Number (Long)	4	Unique identifier, database record number
ActivityTypeLUID	Number (Long)	4	ActivityType LUID from Lookup table: ActivityTypeLU
PermitType	Text	10	Permit type: DSL, ODF
PermitNumber	Text	50	Permit number
PermitDescriptor	Text	10	DSL prefix or suffix reported
Comments	Text	50	

Result Table (Each project may have several result records)

Field Name	Data Type	Size	Field Description
ResultID	AutoNumber	4	Unique result record identifier
PROJNUM	Number (Long)	4	Unique identifier, database record number
ActivityTypeLUID	Number (Long)	4	ActivityType LUID from Lookup table: ActivityTypeLU
ResultLUID	Number (Long)	4	OWRI habitat restoration projects result. ResultLUID from Lookup table: ResultLU
Quantity	Number (Single)	4	Quantity or measure of result identified in the ResultLUID field.
QuantityDetails	Text	100	Quantity details: List values: reported, estimated (based on multiple riparian treatment lengths), quantity not reported
UnitLUID	Number (Long)	4	Unit of measure for quantity field. UnitLUID from Lookup table: UnitLU

ResultLU Table (Lookup table for Result in Result table)

ResultLUID	Result
1	Total number of road/stream crossings improved for fish passage
2	Total miles of fish habitat made accessible
3	Miles of habitat opened- previously inaccessible for both adults and juveniles
4	Miles of habitat opened- previously inaccessible for juveniles, accessible for adults
5	Miles of habitat previously accessible for adults and juveniles- access improved
6	Miles of stream opened for fish use (1997 reporting form)
7	Total miles of stream treated (instream activities)
8	Total linear stream miles treated (riparian activities)
9	Total acres treated (riparian activities)
10	Total acres treated (upland activities)
11	Opened access to acres of habitat that were previously inaccessible to both adults and juveniles
12	Total number of stream crossings improved for peak flow passage
13	Total number of non-stream crossings improved for surface drainage
14	Total number of stations improved by rocking for surface drainage
15	Total acres treated (wetland activities)

Treatment Table (Each project may have several treatment records)

Field Name	Data Type	Size	Field Description
PROJNUM	Number (Long)	4	Unique identifier, database record number
RIPNUM	Text	5	Secondary identifier for riparian data (if necessary) This links landowner & spatial information to treatment
TreatmentID	AutoNumber	4	Unique treatment record identifier links to TreatmentMetrics and TreatmentDescription tables
ActivityTypeLUID	Number (Long)	4	ActivityType LUID from Lookup table: ActivityTypeLU
ActivityLUID	Number (Long)	100	Activity LUID from Lookup table: ActivityLU
ActivitySpecified	Text	100	Activity specified
TreatmentLUID	Number (Long)	100	Treatment lookup ID
Description	Memo		Description of treatment

ActivityLU table

(Lookup table for Activity in Treatment table)

ActivityLUID	Activity
1	Culvert improvement
2	Non-culvert improvement
3	Animal species removal
4	Bank stabilization
5	Beaver introduction
6	Channel alteration
7	Engineered structures
8	Instream habitat (anchored): Structure placement
9	Instream habitat (not anchored): Boulder placement
10	Instream habitat (not anchored): Large wood placement
11	Instream habitat (not anchored): Other placement
12	Instream habitat (unknown whether anchored): Boulder placement
13	Instream habitat (unknown whether anchored): Other placement
14	Instream habitat placement: unknown type
15	Instream water right transfers/leases
16	Off-channel habitat
17	Other instream activity
18	Salmon carcass placement
19	Bank stabilization
20	Beaver management
21	Changes in harvest/land management practices
22	Conservation easement
23	Erosion control
24	Grazing management
25	Riparian invasive plant control
26	Livestock stream access/crossing created or improved
27	Nurse log placement
28	Nutrient management
29	Other riparian activity
30	Riparian fencing
31	Riparian tree planting
32	Riparian vegetation management
33	Riparian vegetation planting
34	Voluntary riparian tree retention
35	Water gap development
36	Riparian conifer restoration (hardwood conversion)
37	Grass seeding
38	Other road activity
39	Peak flow passage improvement
40	Road closure
41	Road decommission
42	Road reconstruction

ActivityLUID	Activity
43	Road relocation
44	Road stabilization
45	Road survey
46	Surface drainage improvement
47	Conservation Buffers
48	Erosion control
49	Grazing management
50	Upland invasive plant control
51	Irrigation system improvement
52	Livestock stream access/crossing created or improved
53	No-till agriculture
54	Nutrient management
55	Off-channel livestock watering
56	Other upland activity
57	Terracing
58	Upland fencing
59	Upland tree planting
60	Upland vegetation management
61	Upland vegetation planting
62	Voluntary upland tree retention
63	Water/sediment control basins
64	Bioswales
65	Catch basin cleaning
66	Detention facility
67	Urban invasive plant control
68	Other urban activity
69	Pesticide use reduction
70	Storm & sanitary sewer separation
71	Street sweeping
72	Other wetland activity
73	Voluntary wetland tree retention
74	Wetland creation
75	Wetland improvement
76	Wetland restoration
77	Wetland invasive plant control
78	Off-channel flood storage
79	Wet detention facility

TreatmentLU table

(Lookup table for Treatment in Treatment table)

TreatmentLUID	Treatment
1	Alcoves created
2	Alcoves created with tributary/spring input
3	Alcoves created without tributary/spring input

TreatmentLUID	Treatment
4	Alcoves enhanced
5	Alcoves reconnected or access improved
6	Alcoves: treatment not specified
7	Anchored habitat structures placed
8	Animal species removal
9	Beaver introduction
10	Beaver management
11	Bioswales
12	Boulders placed
13	Brush bundles placed
14	Changes in harvest/land management practices
15	Conservation buffers
16	Conservation easement
17	Culverts added at locations other than above stream crossings
18	Culverts with rock or log weirs installed below outlet
19	Culverts/structures installed to allow side channel access
20	Culverts/structures removed and not replaced
21	Culverts/structures repaired
22	Culverts/structures replaced with bridge
23	Culverts/structures replaced with culverts placed embedded or flat
24	Culverts/structures replaced with open bottom arch culverts
25	Culverts/structures replaced with weir/baffle culverts
26	Culverts/structures retrofitted with baffles or weirs (adding roughness into existing culverts)
27	Dam removed
28	Dam repaired
29	Detention facility
30	Drainage diverted away from cracks (pre-1999 form)
31	Existing culverts with outlet erosion protection added
32	Existing wetland improved
33	Fish ladders improved
34	Fish ladders installed
35	Flow deflector installed: log
36	Flow deflector installed: log and rock/boulder
37	Flow deflector installed: rock/boulder
38	Flow deflector installed: unknown type
39	Grass seeding and mulching
40	Grazing management
41	Grazing management: livestock exclusion
42	Grazing management: livestock removal
43	Grazing management: livestock rotation
44	Habitat structures placed: rootwads & boulders
45	Habitat structures placed: rootwads & brush bundles
46	Habitat structures placed: unknown type

TreatmentLUID	Treatment
47	Instream water right transferred / leased
48	Invasive plant control
49	Irrigation diversions with fish screens installed
50	Irrigation system improved
51	Irrigation system improved: converted from dirt ditch to pipeline delivery
52	Irrigation system improved: converted from flood irrigation to gated pipe
53	Irrigation system improved: converted from flood to sprinkler irrigation
54	Irrigation system improved: tailwater collection system improved
55	Irrigation system improved: water measurement devices installed
56	Large landslides stabilized
57	Large wood placed
58	Livestock stream access/crossing created or improved
59	Main stream channel modified / created
60	No-till agriculture
61	Nurse logs placed
62	Nutrient management
63	Off-channel habitat: treatment not specified
64	Off-channel livestock watering sites developed
65	Off-channel ponds created
66	Off-channel ponds created with tributary/spring input
67	Off-channel ponds created without tributary/spring input
68	Off-channel ponds enhanced
69	Off-channel ponds: treatment not specified
70	Other diversions modified
71	Permanent cross-drains added above stream crossings
72	Pool created (unknown method)
73	Pool excavated or blasted
74	Previously filled or drained wetland restored
75	Push-up dams permanently removed
76	Repair/maintenance of existing restoration project structure (non-dam)
77	Riparian conifer restoration (hardwood conversion)
78	Riparian erosion control
79	Riparian fencing
80	Riparian tree planting: conifer
81	Riparian tree planting: conifer and hardwood
82	Riparian tree planting: hardwood
83	Riparian tree planting: unknown type
84	Riparian vegetation management
85	Riparian vegetation planting
86	Road down-cutting ditch rocking
87	Road durable rocking or quality hard road rocking prior to haul
88	Road effectively closed to public use
89	Road obliterated, decommissioned, or vacated

TreatmentLUID	Treatment
90	Road pulled back and stabilized
91	Road relocated outside RMA or stream banks
92	Road relocated to reduce washout potential
93	Road surveyed
94	Road upgraded/improved (Legacy Road Reconstruction)
95	Rock gabion installed
96	Rootwads placed
97	Other treatment
98	Salmon carcasses placed
99	Unknown
100	Side channels created / excavated
101	Side channels protected
102	Side channels reconnected to stream or access improved
103	Side channels: treatment not specified
104	Spawning gravel placed
105	Stream bank stabilized
106	Stream bank stabilized: bank resloped
107	Stream bank stabilized: bank resloped and rock revetment installed
108	Stream bank stabilized: bioengineering
109	Stream bank stabilized: log and rock revetment installed
110	Stream bank stabilized: log revetment installed
111	Stream bank stabilized: riprap (rock revetment) installed
112	Stream bank stabilized: rock revetment installed
113	Stream bank stabilized: unknown method
114	Stream crossings modified to reduce washout/diversion (pre-1999 form)
115	Structures modified by improving inlet condition
116	Structures replaced to meet 50+ year flow requirements
117	Tidegate replaced or modified
118	Upland erosion control
119	Upland fencing
120	Upland planted/reseeded with upland plant species
121	Upland terraces installed
122	Upland treated for juniper by clearing, burning, thinning, or removal
123	Upland treated for non-native or noxious plant species
124	Upland treated for non-native or noxious plant species that was also planted/reseeded with natives
125	Upland tree planting
126	Upland vegetation management
127	Upland vegetation planting
128	V structure installed: concrete weirs
129	V structure installed: log
130	V structure installed: log and rock/boulder
131	V structure installed: rock/boulder
132	V structure installed: unknown type

TreatmentLUID	Treatment
133	Voluntary riparian tree retention
134	Voluntary upland tree retention
135	Water gap constructed
136	Water/sediment control basins installed
137	Weir installed (not below culvert): log
138	Weir installed (not below culvert): log and rock/boulder
139	Weir installed (not below culvert): rock/boulder
140	Weir installed (not below culvert): unknown type
141	Wetland created
142	Wetland vegetation planting
143	Wildlife watering facility developed
144	Voluntary wetland tree retention
145	Tidegate removed and not replaced
146	Off channel flood storage
147	Wet detention facility
148	Storm & sanitary sewer separation
149	Street sweeping
150	Catch basin cleaning
151	Pesticide use reduction
152	Previously filled or drained wetland returned to grass/herb meadow wetland
153	Previously filled or drained wetland returned to shrub or forest wetland
154	Previously filled or drained wetland returned to open water wetland (>6 ft. deep)
155	Non-wetland created into grass/herb meadow wetland
156	Non-wetland created into shrub or forest wetland
157	Non-wetland created into open water wetland (>6 ft. deep)
158	Existing grass/herb meadow wetland improved
159	Existing shrub or forest wetland improved
160	Existing open water wetland (>6 ft. deep) improved
161	Invasive plant control in grass/herb meadow wetland
162	Invasive plant control in shrub or forest wetland
163	Invasive plant control in open water wetland (>6 ft. deep)

ActivityTypeLUXActivityLUXTreatmentLU table

(Associative table between ActivityType, Activity, and Treatment lookup tables)

ActivityTypeLUID	ActivityLUID	TreatmentLUID
1	3	8
1	4	106
1	4	107
1	4	108
1	4	109
1	4	110
1	4	111
1	4	113
1	6	59
1	6	72
1	6	73
1	6	104
1	7	35
1	7	36
1	7	37
1	7	38
1	7	72
1	7	95
1	7	128
1	7	129
1	7	130
1	7	131
1	7	132
1	7	137
1	7	138
1	7	139
1	7	140
1	8	7
1	9	12
1	10	57
1	11	13
1	11	44
1	11	45
1	11	96
1	12	12
1	13	13
1	13	44
1	13	45
1	13	96
1	14	46
1	15	47

ActivityTypeLUID	ActivityLUID	TreatmentLUID
1	16	1
1	16	2
1	16	3
1	16	4
1	16	5
1	16	6
1	16	63
1	16	65
1	16	66
1	16	67
1	16	68
1	16	69
1	16	100
1	16	101
1	16	102
1	16	103
1	17	27
1	17	76
1	17	97
1	18	98
2	19	105
2	19	106
2	19	108
2	19	110
2	19	112
2	20	10
2	21	14
2	22	16
2	23	78
2	24	43
2	25	48
2	26	58
2	27	61
2	28	62
2	29	97
2	29	142
2	30	79
2	31	80
2	31	81
2	31	82
2	31	83
2	32	84
2	33	85

ActivityTypeLUID	ActivityLUID	TreatmentLUID
2	34	133
2	35	135
2	36	77
3	1	18
3	1	19
3	1	20
3	1	21
3	1	22
3	1	23
3	1	24
3	1	25
3	1	26
3	2	27
3	2	28
3	2	33
3	2	34
3	2	49
3	2	70
3	2	75
3	2	97
3	2	117
3	2	145
4	37	39
4	38	97
4	39	20
4	39	114
4	39	115
4	39	116
4	40	88
4	41	89
4	42	94
4	42	97
4	43	91
4	43	92
4	44	30
4	44	56
4	44	90
4	44	97
4	45	93
4	46	17
4	46	31
4	46	71
4	46	86

ActivityTypeLUID	ActivityLUID	TreatmentLUID
4	46	87
4	46	97
5	47	15
5	48	118
5	49	40
5	49	41
5	49	42
5	49	43
5	50	123
5	50	124
5	51	50
5	51	51
5	51	52
5	51	53
5	51	54
5	51	55
5	52	58
5	53	60
5	54	62
5	55	64
5	56	97
5	56	143
5	57	121
5	58	119
5	59	125
5	60	122
5	60	126
5	61	120
5	61	127
5	62	134
5	63	136
6	3	8
6	72	97
6	72	99
6	73	144
6	74	141
6	74	155
6	74	156
6	74	157
6	75	32
6	75	158
6	75	159
6	75	160

ActivityTypeLUID	ActivityLUID	TreatmentLUID
6	76	74
6	76	152
6	76	153
6	76	154
6	77	48
6	77	161
6	77	162
6	77	163
9	64	11
9	65	150
9	66	29
9	67	48
9	68	97
9	69	151
9	70	148
9	71	149
9	78	146
9	79	147

TreatmentMetric Table (Each treatment may have several treatment metric records)

Field Name	Data Type	Size	Field Description
TreatmentMetricID	AutoNumber	4	Unique treatment metric record ID links to Treatment table
PROJNUM	Number (Long)	4	Unique identifier, database record number
RIPNUM	Text	5	Secondary identifier for riparian data (if necessary) This links landowner & spatial information to treatment
TreatmentID	Number (Long)	4	Treatment record ID link
TreatmentMetric	Text	100	What is being measured or tracked as a quantity? number (count), length, width, area
TreatmentMetricLUID	Number (Long)	4	TreatmentMetric Lookup ID
Quantity	Number (Single)	4	Quantity or measure of treatment identified in the DetailID field.
QuantityDetails	Text	100	Quantity details: List values: reported, estimated (based on multiple riparian treatment lengths), quantity not reported
UnitLUID	Number (Long)	4	Unit of measure for quantity field. UnitLUID from Lookup table: UnitLU

TreatmentMetricLU table

(Lookup table for TreatmentMetric in TreatmentMetric table)

TreatmentMetricLUID	TreatmentMetric
1	area of treatment
4	cubic yards of spawning gravel
5	length of treatment
14	number
15	number of alcoves
16	number of barrels
17	number of batteries
18	number of bioswales
19	number of boulders
20	number of brush bundles
21	number of cars
22	number of crossings
23	number of culverts
24	number of dams
25	number of diversions
26	number of fish ladders
27	number of irrigation diversions
28	number of key pieces
29	number of landslides
30	number of logs
31	number of off-channel habitat
32	number of off-channel ponds
33	number of pools
34	number of push-up dams
35	number of rootwads
36	number of salmon carcasses
37	number of side channels
38	number of sides
39	number of sites
40	number of structures
41	number of terraces
42	number of tidegates
43	number of tires
44	number of water/sediment control basins (WASCBs)
45	number of watergaps
46	number of watering locations
47	percent urban area affected
48	percent watershed area affected
49	number of wet detention facilities
50	number of catch basins
51	number of detention facilities
52	number of main channels

UnitLU table

(Lookup table for Unit in Result and TreatmentMetric tables)

UnitLUID	Unit
1	acre
2	boulder
3	crossing
4	cubic yard
5	culvert
6	dam
7	each
8	feet
9	log
10	mile
11	pool
12	side
13	site
14	station
15	structure
16	percent

TreatmentLUXTreatmentMetricLUXUnitLU table

(Associative table between Treatment, TreatmentMetric, and Unit lookup tables)

TreatmentLUID	TreatmentMetricLUID	UnitLUID
1	15	7
2	15	7
3	15	7
4	15	7
5	15	7
6	15	7
7	40	15
8	1	1
8	14	7
10		0
11	1	1
11	18	7
11	47	16
12	19	2
13	20	7
14	5	10
15	1	1
15	5	10
16	1	1
16	5	10
16	38	12

TreatmentLUID	TreatmentMetricLUID	UnitLUID
17	23	5
18	23	5
19	23	5
20	23	5
20	40	15
21	40	15
22	23	5
23	23	5
24	23	5
25	23	5
26	23	5
27	24	6
28	24	6
29	1	1
29	48	16
29	51	7
30	5	14
31	23	5
32	1	1
33	26	7
34	26	7
35	40	15
36	40	15
37	40	15
38	40	15
39	5	10
40	1	1
41	1	1
42	1	1
43	1	1
44	40	15
45	40	15
46	40	15
47		0
48	1	1
48	5	10
48	38	12
49	27	7
50	1	1
51	1	1
52	1	1
53	1	1
54	1	1

TreatmentLUID	TreatmentMetricLUID	UnitLUID
55	1	1
56	29	7
57	28	9
57	30	9
57	40	15
58	22	3
59	5	8
59	52	7
60	1	1
61	30	9
62	1	1
62	40	15
63	31	7
64	46	13
65	32	7
66	32	7
67	32	7
68	32	7
69	32	7
70	25	7
71	40	15
72	33	11
73	33	11
74	1	1
75	34	7
76	40	15
78	5	10
79	1	1
79	5	10
79	38	12
80	1	1
80	5	10
80	38	12
81	1	1
81	5	10
81	38	12
82	1	1
82	5	10
82	38	12
83	1	1
83	5	10
83	38	12
84	1	1

TreatmentLUID	TreatmentMetricLUID	UnitLUID
84	5	10
84	38	12
85	1	1
85	5	10
85	38	12
86	5	14
87	5	14
88	5	14
89	5	14
90	5	14
91	5	14
92	5	14
93	5	10
94	5	14
95	40	15
96	35	7
97		0
97	1	1
97	5	8
97	5	10
97	5	14
97	14	7
97	16	7
97	17	7
97	21	7
97	22	3
97	23	5
97	30	9
97	38	12
97	39	13
97	40	15
97	43	7
98	5	10
98	36	7
98	39	13
99	1	1
100	5	8
100	37	7
101	5	8
101	37	7
102	5	8
102	37	7
103	37	7

TreatmentLUID	TreatmentMetricLUID	UnitLUID
104	4	4
105	5	10
106	5	10
107	5	10
108	5	10
108	38	12
109	5	10
110	5	10
111	5	10
112	5	10
113	5	10
114	22	3
115	40	15
116	40	15
117	42	7
118	1	1
118	5	10
119	1	1
119	5	8
120	1	1
121	1	1
121	5	8
121	41	7
122	1	1
123	1	1
124	1	1
125	1	1
126	1	1
127	1	1
128	40	15
129	40	15
130	40	15
131	40	15
132	40	15
133	1	1
133	5	10
133	38	12
134	1	1
135	1	1
135	45	7
136	1	1
136	44	7
137	40	15

TreatmentLUID	TreatmentMetricLUID	UnitLUID
138	40	15
139	40	15
140	40	15
141	1	1
142	1	1
142	5	10
142	38	12
143	46	13
144	1	1
145	42	7
146	48	16
147	47	16
147	49	7
148	5	8
148	47	16
149	5	10
149	47	16
150	47	16
150	50	7
151	1	1
151	47	16
152	1	1
153	1	1
154	1	1
155	1	1
156	1	1
157	1	1
158	1	1
159	1	1
160	1	1
161	1	1
162	1	1
163	1	1

TreatmentDetail Table

[Details for instream large wood placements (LWD), instream natural boulder placements(BLD), instream anchored structure placements, urban impact reduction projects, and stream characteristics at LWD, BLD, and riparian fencing sites]

Field Name	Data Type	Size	Field Description
TreatmentID	Number (Long)	4	Treatment record ID link
PROJNUM	Number (Long)	4	Unique identifier, database record number
ForestOp	Yes/No	1	Associated with a forestry operation? Basal area credit?
BfwType	Text	50	Where the Bfw data came from or how question was asked on the form
BfwLow	Number (Long)	4	Lower stream bankfull width in feet
BfwUp	Number (Long)	4	Upper stream bankfull width in feet
BfwAvg	Number (Long)	4	Average bankfull width (average of low and high bankfull width values)
GradientType	Text	50	Where the gradient data came from or how question was asked on the form
Gradient	Text	10	Stream gradient at treatment site was ____ %
Bfd	Text	10	Stream bankfull depth where logs or boulders were placed was ____ ft
BhLow	Number (Long)	4	Lower bank height in feet
BhUp	Number (Long)	4	Upper bank height in feet
LogLnth	Text	10	Log length in feet (could be an average of a range of sizes)
LogDiam	Text	10	Log diameter in inches (could be an average of a range of sizes)
UpLnth	Number (Long)	4	Upper size log length in feet
UpDiam	Number (Long)	4	Upper size log diameter in inches
AvgKey	Number (Long)	4	Average # of key pieces per structure
NumberKeySize	Number (Long)	1	Number of key pieces that were at least 33 feet long and 24" in diameter
ConiferUsed	Text	50	Conifer
HardwoodUsed	Text	50	Hardwood
RtwIntact	Text	50	Rootwads intact?
BranchesIntact	Text	50	Branches intact?
AddRtw	Text	1	Placed with additional rootwads? Or, smaller materials placed with key pieces?
Source	Text	50	Source of logs or source of naturally placed boulders
Method	Text	75	Method of placement (backhoe, excavator, helicopter, etc.)
Placement	Text	50	"Natural" or "Natural and Anchored" placement
PlacementDetails	Text	50	For natural placement, details are for whether logs were allowed to set up naturally or wedged against bank or riparian trees. List values: natural, wedged, natural and wedged, unknown
BldrSize	Text	50	Average size of naturally placed boulders in cubic yards
LogsUsed	Yes/No	1	Anchored structure materials: logs
RtwUsed	Yes/No	1	Anchored structure materials: rootwads
BldrUsed	Yes/No	1	Anchored structure materials: boulders
OtherUsed	Yes/No	1	Anchored structure materials: other
OtherUsedSpecifie	Text	50	Other anchored structure materials specified
AncBldrs	Yes/No	1	Anchored with boulders?
AncCable	Yes/No	1	Anchored with cable?
AncRebar	Yes/No	1	Anchored with rebar?
AncOther	Yes/No	1	Anchored with "other"
AncOtherSpecifie	Text	50	Other anchor type specified
UrbanTreatmentCashCost	Currency	8	Urban treatment Cash cost
UrbanTreatmentInkindCost	Currency	8	Urban treatment Inkind cost

FishPassageHistUse Table (Each fish passage project should have an entry in this table)

Field Name	Data Type	Size	Field Description
PROJNUM	Number (Long)	4	Unique identifier, database record number
HistUse	Text	50	Text answer to question: Have the target fish species historically inhabited the area upstream of the barrier? List values: yes, no, or unknown

InstreamRgp Table (Details for instream RGP)

Field Name	Data Type	Size	Field Description
PROJNUM	Number (Long)	4	Unique identifier, database record number
RGP	Text	50	List values: yes, no, unknown, not applicable

InstreamIwr Table (Details for instream water right transfers/leases)

Field Name	Data Type	Size	Field Description
PROJNUM	Number (Long)	4	Unique identifier, database record number
PriorityDate	Text	10	Priority Date
Rate	Text	10	Rate (cfs)
AcqType	Text	50	Type of Acquisition
ReachPoint	Text	25	Stream Reach/Point
Term	Text	25	Term (years)

InstreamIwrRenewals Table (Details for instream water right transfers/leases)

Field Name	Data Type	Size	Field Description
PROJNUM	Number (Long)	4	Unique identifier, database record number
Landowner	Text	50	Landowner
StatusYear	Number (Long)	4	Year that renewal was reported
PriorityDate	Text	10	Priority Date
Rate	Text	10	Rate (cfs)
AcqType	Text	50	Type of Acquisition
RenewalTerm	Text	25	Term (years)
ReachPoint	Text	25	Stream Reach/Point
Term	Text	25	Term (years)

RiparianVtrRcrTable

(Each project may have several records in this table)

Field Name	Data Type	Size	Field Description
TreatmentID	Number (Long)	4	Treatment record ID link
PROJNUM	Number (Long)	4	Unique identifier, database record number
Area	Text	1	Which treatment area is this record describing? 1, 2, 3, 4, etc.
ODF62	Yes/No	1	ODF Harvest Measure 62
ODF19	Yes/No	1	ODF Harvest Measure 19
ODF20	Yes/No	1	ODF Harvest Measure 20
ODF22	Yes/No	1	ODF Harvest Measure 22
22a	Yes/No	1	ODF Harvest Measure 22a
22b	Yes/No	1	ODF Harvest Measure 22b
22c	Yes/No	1	ODF Harvest Measure 22c
Miles	Number (Single)	4	trees retained along ____ miles of stream
Width	Number (Long)	4	width of leave tree area in feet
Acres	Number (Single)	4	leave tree area in acres (reported)
AcresEst	Number (Single)	4	leave tree area in acres (estimated based on L x W info)
BestAcres	Number (Single)	4	Best acreage number (Acres first, AcresEst second)
StreamSidesTreated	Text	50	Stream sides treated: List values: one, two, unknown
BestWidth	Number (Long)	4	1) W 2) RMA_width + SideA_W in feet
RMAWidth	Number (Long)	4	RMA width determined by stream size in FPA rules
N	Yes/No	1	stream type N
F	Yes/No	1	stream type F
D	Yes/No	1	stream type D
sm	Yes/No	1	stream size small
med	Yes/No	1	stream size medium
large	Yes/No	1	stream size large
Description	Text	125	Description

WetlandProtection Table

(Each wetland project should have one record in this table)

Field Name	Data Type	Size	Field Description
PROJNUM	Number (Long)	4	Unique identifier, database record number
ConsEase	Text	50	Is project site protected by a CONSERVATION EASEMENT? yes, no, or unknown

WetlandConnection Table

(Each wetland project should have one or several records in this table)

Field Name	Data Type	Size	Field Description
PROJNUM	Number (Long)	4	Unique identifier, database record number
ActivityTypeLUID	Number (Long)	4	ActivityTypeLUID from Lookup table: ActivityTypeLU
ConnectionLUID	Number (Long)	4	ConnectionLUID from Lookup table: WetlandConnectionLU

WetlandConnectionLU Table

(Lookup table for WetlandConnection in WetlandConnection table)

ConnectionLUID	Connection
1	stream or river
2	lake or reservoir
3	other fresh waters

ConnectionLUID	Connection
4	ocean or estuary
5	no other water body
97	other
99	unknown

WetlandConditionBefore Table (Each wetland project should have one or several records in this table)

Field Name	Data Type	Size	Field Description
PROJNUM	Number (Long)	4	Unique identifier, database record number
ActivityTypeLUID	Number (Long)	4	ActivityTypeLUID from Lookup table: ActivityTypeLU
ConditionLUID	Number (Long)	4	Condition before treatment = ConditionLUID from Lookup table: WetlandConditionLU

WetlandConditionAfter Table (Each wetland activity should have one or several records in this table)

Field Name	Data Type	Size	Field Description
PROJNUM	Number (Long)	4	Unique identifier, database record number
ActivityTypeLUID	Number (Long)	4	ActivityTypeLUID from Lookup table: ActivityTypeLU
ActivityLUID	Number (Long)	4	Activity LUID from Lookup table: ActivityLU
ConditionLUID	Number (Long)	4	Condition after treatment = ConditionLUID from Lookup table: WetlandConditionLU

WetlandConditionLU Table (Lookup table for WetlandCondition in WetlandCondition table)

ConditionLUID	Condition
1	non-wetland
2	agricultural wetland
3	grass/herb meadow wetland
4	shrub or forest wetland
5	open water wetland (>6ft. deep)
6	palustrine emergent marsh
97	other
99	unknown

SpatialDataStatus Table (Each project has one record in this table)

Note: Some projects may have more than one feature class (points, lines, polygons) as projects can have multiple sites or multiple activity types.

Field Name	Data Type	Size	Description
PROJNUM	Number (Long)	4	Unique identifier, database record number
status	Text	50	map status (for "cannot map", projects were either road surveys or the landowner refused to provide a map)
OwriPoints	Yes/No	1	project mapped in point file
OwriLines	Yes/No	1	project mapped in line file
OwriPolygons	Yes/No	1	project mapped in polygon file

Species Table (If SpeciesBenefit = yes, there should be one or more records in this table)

Field Name	Data Type	Size	Description
PROJNUM	Number (Long)	4	Unique identifier, database record number
SpeciesID	AutoNumber	4	Unique identifier for Species record
SpeciesLUID	Number (Long)	4	Species Look-up ID from SpeciesLU table
RunName	Text	50	
Comments	Text	200	
ActivityTypeLUID	Number (Long)	4	Null = project level (fish or wildlife species to benefit), 3 = fish passage (target fish species question answered under fish passage information)

SpeciesLU Table (Lookup table for Species in Species table - Note: This table is based on data received, which are predominately fish species. We anticipate that we will be expanding this species lookup list to include more bird and mammal species that may currently be found in the SpeciesName entries: “Bird (other)” and “Mammal (other)”; with the species name recorded in “OtherSpeciesName” data field in the Species table)

SpeciesLUID	SpeciesName	ActivityTypeLUID	SpeciesTypeLUID
1	Coho Salmon	3	1
2	Steelhead	3	1
3	Chinook Salmon	3	1
4	Cutthroat Trout	3	1
5	Rainbow Trout	3	1
6	Chum Salmon	3	1
7	Beaver		3
8	Fish species (unspecified)	3	1
9	Lamprey (unspecified)	3	1
10	Redband Trout	3	1
11	Bull Trout	3	1
12	Salmon (unspecified)	3	1
13	Trout (unspecified)	3	1
14	All salmonid species present (unspecified)	3	1
15	Wildlife species (unspecified)		99
16	All species		99
17	Amphibian species (unspecified)		4
18	Anadromous fish (unspecified)	3	1
19	Bird species (unspecified)		2
20	Bald Eagle		2
21	Columbian White-tailed Deer		3
22	deer		3
23	Dunn’s Salamander		4
24	elk		3
25	Reptile species (unspecified)		5
26	Macroinvertebrates (unspecified)		99
27	Mule Deer		3
28	Northern Pike Minnow (Squaw)		1
29	Northern Spotted Owl		2

SpeciesLUID	SpeciesName	ActivityTypeLUID	SpeciesTypeLUID
30	Oregon Chub		1
31	osprey		2
32	Pacific Giant Salamander		4
33	Pronghorn Antelope		3
34	Red-legged Frogs		4
35	Rocky Mountain Elk		3
36	Mountain Whitefish		1
37	Sculpin (unspecified)	3	1
38	Goose Lake Sucker		1
39	sturgeon		1
40	Sucker (unspecified)		1
41	Jenny Creek Sucker		1
42	waterfowl		2
43	Western Pond Turtle		5
44	Roosevelt Elk		3
45	Neotropical birds		2
46	Lost River Sucker	3	1
47	Shortnose Sucker	3	1
48	Warner Sucker		1
49	Brown Trout		1
50	Kokanee Salmon (Land-locked Sockeye)		1
51	Pacific Lamprey	3	1
52	Brook Lamprey	3	1
53	Mammal species (unspecified)		3
54	White Breasted Nuthatch		2
55	Western Bluebird		2
56	Fish species (other)	3	1
57	Bird species (other)		2
58	Mammal species (other)	3	3
59	Amphibian species (other)		4
60	Reptile species (other)		5
61	Insect species (other)		99
62	Macroinvertebrates (other)		99
63	Longnose Sucker		1
97	other	3	99
99	unknown	3	99

SpeciesTypeLU Table

(Lookup table for SpeciesType in Species table)

SpeciesTypeLUID	SpeciesType
1	Fish
2	Bird
3	Mammal
4	Amphibian
5	Reptile
99	other

Tables not yet converted (see old table formats below):

SiteSelection

MONITOR

MONITOR_ACT

SiteSelection Table

(Every project has one record in this table – Note: not all of the check boxes have been populated from the “HowChosen” text field data)

Field Name	Data Type	Size	Description
PROJNUM	Number (Long)	4	Unique identifier, database record number
HOWCHOSEN	Text	255	How was the project site and activity chosen?
WA	Yes/No	1	Did Project result from a Watershed Assessment/Action Plan?
NOWA	Yes/No	1	Project did not result from a Watershed Assessment/Action Plan
WANAME	Text	125	Watershed Assessment Name
WACONDUCT	Text	125	Watershed Assessment conducted by whom?
WAYEAR	Text	10	Year of Watershed Assessment
OTHER	Yes/No	1	
NOTREPORTE	Yes/No	1	
OLDFORM	Yes/No	1	
Consultation	Yes/No	1	in consultation with/knowledge or opinion of ODFW biologist, ODF forester,
LOCAL	Yes/No	1	local or landowner knowledge of problem or how problem identified was not
LOWILLING	Yes/No	1	landowner willingness to participate
AQINV	Yes/No	1	need identified by ODFW Aquatic Habitat Survey or another habitat survey
OTHERSURVE	Yes/No	1	need identified by other survey data
FISH	Yes/No	1	reach known for good fish production/ fish use
ACCESS	Yes/No	1	good accessibilty to the site
HARVEST	Yes/No	1	associated with an active harvest operation
ROAD	Yes/No	1	associated with active road operation
Maintenance	Yes/No	1	maintenance of a previously implemented project
CRITICALHAB	Yes/No	1	identified as critical habitat for salmonids
ESH	Yes/No	1	identified by DSL/ODFW as Essential Salmonid Habitat
303(d)	Yes/No	1	stream is on the 303 (d) list
GUIDE	Yes/No	1	Habitat Restoration Guides
WORKOFF	Yes/No	1	project working off of other projects in the watershed
EROSION	Yes/No	1	to decrease erosion sedimetnaton problems in the watershed
PASSAGE	Yes/No	1	identified fish passage problem
LEGACY	Yes/No	1	upgrading a legacy road
FPSURVEY	Yes/No	1	identified by culvert/fish passage assessment

ROADSURVEY	Yes/No	1	identified by road survey
ROADGUIDE	Yes/No	1	road maintenance guidelines
COMP MGT	Yes/No	1	resulted from a comprehensive management plan
OPPORTUNIT	Yes/No	1	availability of resources (materials, personnel, etc.), opportunity for
POST-FLOOD	Yes/No	1	response to post-flood damages and other '96 flood related issues
IS SURVEY	Yes/No	1	project is a road or culvert survey, not an on the ground project

MONITOR Table (If project effectiveness will be monitored, there is a record in this table)

Field Name	Data Type	Size	Description
PROJNUM	Number (Long)	4	Unique identifier, database record number
OBJECTIVES	Text	255	Monitoring objectives
MON_BY	Text	100	Monitoring implemented by whom
MON_ORG	Text	50	Monitoring implemented by what organization
MON_CONTA	Text	50	Best Contact for Monitoring Information
MON_Funding	Text	50	Monitoring funded by whom
COST/YR	Currency	8	Monitoring cost per year
SPENT	Currency	8	Amount spent to date
Physical	Yes/No	1	Physical Measures [record (s) can be found in MONITOR_ACT table]
Biological	Yes/No	1	Biological Measures [record (s) can be found in MONITOR_ACT table]
Water Quality	Yes/No	1	Water Quality Measures [record (s) can be found in MONITOR_ACT table]
Other	Yes/No	1	Other Measures [record (s) can be found in MONITOR_ACT table]
RESULTS	Memo		Results

MONITOR_ACT Table (Contains one to many records with effectiveness monitoring details)

Field Name	Data Type	Size	Description
PROJNUM	Number (Long)	4	Unique identifier, database record number
Category	Text	50	physical, biological, water quality, or other measures
Type	Text	50	Monitoring Type
Type_notes	Text	50	Additional type information
CM	Yes/No	1	Channel Morphology (type of instream habitat monitoring)
SB	Yes/No	1	Substrate (type of instream habitat monitoring)
WD	Yes/No	1	Woody Debris (type of instream habitat monitoring)
OH	Yes/No	1	Other instream habitat monitoring type
Method	Text	100	Monitoring Method
PreFre	Text	20	Pre-Treatment Frequency
PreDur	Text	20	Pre-Treatment Duration
PostFre	Text	20	Post-Treatment Frequency
PostDur	Text	20	Post-Treatment Duration

Additional look-up tables to create:

ParticipantLU