Stream Crossing Data Sheet

Site ID: _____

General Information

Stream Name: _____ **Road Name:** _____

Name of Observer(s): _____ **Date:** _____

GPS Waypoint: _____ **GPS Lat/Long:** _____

County: _____ **Township:** _____ **Range:** _____ **Sec:** _____

Adjacent Landowner Information: _____ **Additional Comments:** _____

Crossing Information

Crossing Type: Culvert(s) no.: _____ Bridge Ford Dam Other: _____

Structure Shape: Round Square/Rectangle Open Bottom Square/Rectangle Pipe Arch Open Bottom Arch Ellipse

Inlet Type: Projecting Mitered Headwall Apron Wingwall 10-30° or 30-70° Trash Rack Other

Outlet Type: At Stream Grade Cascade over Riprap Freefall into Pool Freefall onto Riprap Outlet Apron Other

Structure Material: Metal Concrete Plastic Wood

Substrate in Structure: None Sand Gravel Rock Mixture

General Condition: New Good Fair Poor

Plugged: _____ % Inlet Outlet In Pipe

Crushed: _____ % Inlet Outlet In Pipe

Rusted Through? Yes No **Structure Interior:** Smooth Corrugated

Multiple Culverts/Spans

Number the culverts/spans left to right, facing downstream. Include #s in site sketch on back page

Culvert/ Span #	Width (ft)	Length (ft)	Height (ft)	Material

Structure Length (ft): [1] _____ **Structure Width (ft):** [1] _____ **Structure Height (ft):** [1] _____

Structure Water Depth (ft): [1] **inlet** _____ **outlet** _____ **Perch Height (ft):** [1] _____ or NA

Embedded Depth of Structure (ft): [1] **inlet** _____ **outlet** _____

Structure Water Velocity (ft/sec): [1] **inlet** _____ **outlet** _____

Structure Water Velocity Measured: At Surface or _____ **ft Below Surface** **Measured With:** Meter or Float Test

Stream Information

Stream Flow: None < ½ Bankfull < Bankfull = Bankfull > Bankfull

Scour Pool (if present) **Length:** _____ **Width:** _____ **Depth:** _____ **Upstream Pond (if present)** **Length:** _____ **Width:** _____

Riffle Information (measured in a riffle outside of zone of influence of crossing)

Water Depth (ft): _____ **Bankfull Width (ft):** _____ **Wetted Width (ft):** _____ **Water Velocity (ft/sec):** _____

Dominant Substrate: Cobble Gravel Sand Organics Clay Bedrock Silt **Measured With:** Meter or Float Test

Road Information

Type: Federal State County Town Tribal Private Other:

Road Surface: Paved Gravel Sand Native Surface **Condition:** Good Fair Poor

Road Width at Culvert (ft): _____ **Location of Low Point:** At Stream Other **Runoff Path:** Roadway Ditch

Embankment: **Upstream** **Fill Depth (ft):** _____ **Slope:** Vertical 1:1.5 1:2 >1:2

Downstream **Fill Depth (ft):** _____ **Slope:** Vertical 1:1.5 1:2 >1:2

Left Approach: **Length (ft):** _____ **Slope:** 0% 1-5% 6-10% >10% **Ditch Vegetation:** None Partial Heavy

Right Approach: **Length (ft):** _____ **Slope:** 0% 1-5% 6-10% >10% **Ditch Vegetation:** None Partial Heavy

[1] - Fill out for primary culvert (culvert #1). If multiple culverts are used, number each and use embedded table.

Form Date: February 28, 2011

Erosion Information

Use a new row for each distinct gully/erosion location. Note prominent streambank erosion within 50 feet of crossing.

Location of Erosion Ditch, approach, or streambank Left or right facing downstream	**Erosion Dimensions (ft)**			**Eroded Material Reaching Stream?**		**Material Eroded** Sand, Silt, Clay, Gravel, Loam, Sandy Loam or Gravelly Loam.
	Length	**Width**	**Depth**			
				Yes	**No**	
				Yes	**No**	
				Yes	**No**	
				Yes	**No**	
				Yes	**No**	

If there is erosion occurring, can corrective actions, such as road drainage measures, be installed to address the problem? **Y** **N**

Extent of Erosion: Minor Moderate Severe Stabilized

Erosion Notes:

Photos – enter photo number in blank corresponding to location

❑ Site ID _____ ❑ Upstream Conditions _____ ❑ Downstream Conditions _____

❑ Inlet _____ ❑ Outlet _____ ❑ Road Approach – Left _____ ❑ Road Approach – Right _____

Summary Information

Would you consider this a priority site? Fish Passage Erosion Why?

Would you recommend a future visit to this site? Yes No **Why?**

Were any non-native invasive species observed at the site? Yes No **If yes, what species were observed?**

Site Sketch

Draw an overhead sketch of crossing. Be sure to mark North on the map and to indicate the direction of flow. Include major features documented on form, such as erosion sites, multiple culverts, scour pool, impounded water, etc.

Fish Passage Determination

Site ID: _____

Follow these guidelines to determine "passability" for a range of fish species. Thresholds may need to be modified if the objective is to evaluate passage for a particular species. Answer all questions.

Passability = 0 — **Most species and life stages cannot pass at most flows.**

If any of the following questions can be answered "yes", then the crossing barrier score = 0.

1. The outlet of the structure is perched.	**Yes**	**No**
2. The structure water velocity is greater than 3 feet/second during baseflow.	**Yes**	**No**
3. The ratio of the structure water depth to stream water depth is less than 0.1.	**Yes**	**No**

Structure water depth: _____ Stream water depth: _____ Depth Ratio: _____

Passability = 0.5 — **Some species and/or life stages cannot pass at most flows.**

If any of the following questions can be answered "yes", then the crossing barrier score = 0.5.

1. The water depth in the structure is less than 0.2 feet.	**Yes**	**No**
2. The structure water velocity is 2-3 feet/second during baseflow.	**Yes**	**No**
3. The structure is longer than 30 feet and does not have natural substrate through its entire length.	**Yes**	**No**

Passability = 0.9 — **Barrier at high flows.**

If any of the following questions can be answered "yes", then the crossing barrier score = 0.9.

1. There is a scour pool below the structure.	**Yes**	**No**
2. The ratio of the structure width to stream bankfull width is less than 0.5.	**Yes**	**No**

Structure width: _____ Stream bankfull width: _____ Constriction Ratio: _____

Passability = 1 — **Not a barrier.**

If all of the following questions can be answered "yes", then the crossing barrier score = 1.

1. The outlet of the structure is not perched.	**Yes**	**No**
2. The structure water velocity is less than 2 feet/second during baseflow.	**Yes**	**No**
3. The ratio of the structure water depth to stream water depth is greater than 0.1.	**Yes**	**No**
4. The water depth in the structure is greater than 0.2 feet.	**Yes**	**No**
5. There is not a scour pool below the structure.	**Yes**	**No**
6. The ratio of the structure width to stream bankfull width is greater than 0.5.	**Yes**	**No**
7. ❑ The structure is longer than 30 feet and has natural substrate through its entire length, or ❑ The structure is shorter than 30 feet and has natural substrate through its entire length, or ❑ The structure is shorter than 30 feet and does not have natural substrate through its entire length.	**Yes**	**No**

Additional Comments