

# Stream Crossing Data Sheet

Site ID: \_\_\_\_\_

## General Information

Name of

Observer(s): \_\_\_\_\_ Date: \_\_\_\_\_

GPS  
Lat/Long: \_\_\_\_\_

GPS Waypoint: \_\_\_\_\_

Additional Location

Comments: \_\_\_\_\_

## Road Information

Road Name/Number: \_\_\_\_\_

Road Type: Federal State County Town Tribal Private Other: \_\_\_\_\_

Road Surface: Paved Gravel Sand Native Surface Other: \_\_\_\_\_

Road Width (ft): \_\_\_\_\_ Fill Depth (ft): \_\_\_\_\_

## Crossing Information

Structure Type: Culvert(s) no.: \_\_\_\_\_ Bridge Ford Dam Other: \_\_\_\_\_ Structure ID: \_\_\_\_\_

| Structure Shape              | Structure Material | Substrate in Structure | Structure Condition                          |
|------------------------------|--------------------|------------------------|----------------------------------------------|
| Round                        | Metal              | None Sand              | <b>General Condition:</b> New Good Fair Poor |
| Square/Rectangle             | Concrete           | Gravel Rock            | <b>Plugged:</b> ___ % Inlet Outlet In Pipe   |
| Open Bottom Square/Rectangle | Plastic            | Mixture                | <b>Crushed:</b> ___ % Inlet Outlet In Pipe   |
| Pipe Arch                    | Wood               |                        | <b>Rusted Through?</b> Yes No                |

| Structure Interior | Inlet Type                | Outlet Type          |
|--------------------|---------------------------|----------------------|
| Open Bottom Arch   | Projecting Mitered        | At stream grade      |
| Ellipse            | Headwall Apron            | Cascade over riprap  |
|                    | Wingwall 10-30° or 30-70° | Freefall into pool.  |
|                    | Trashrack                 | Freefall onto riprap |
|                    | Other                     | Outlet apron         |
|                    |                           | Other                |

Structure Water Velocity (ft/sec):<sup>1</sup> \_\_\_\_\_

Structure Water Depth (ft):<sup>1</sup> inlet \_\_\_\_\_ outlet \_\_\_\_\_

Structure Length (ft):<sup>1</sup> \_\_\_\_\_

Structure Width (ft):<sup>1</sup> \_\_\_\_\_ Structure Height (ft):<sup>1</sup> \_\_\_\_\_

Perch Height (ft):<sup>1,2</sup> \_\_\_\_\_ Height of Head (ft):<sup>1,2</sup> \_\_\_\_\_

Buried Depth of Structure (ft):<sup>1</sup> inlet \_\_\_\_\_ outlet \_\_\_\_\_

## Stream Information

Stream Name: \_\_\_\_\_ Stream Water Velocity (in riffle) (ft/sec): \_\_\_\_\_

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

Water Depth (in riffle) (ft): \_\_\_\_\_ Bankfull Width (in riffle) (ft): \_\_\_\_\_ Stream Width (in riffle) ft: \_\_\_\_\_

Scour Pool Length, Width & Depth (ft):<sup>2</sup> \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ Upstream Pond Length & Width (ft):<sup>2</sup> \_\_\_\_\_

## Fish Passage Information

|                                                             |     |    |                                                                      |     |    |
|-------------------------------------------------------------|-----|----|----------------------------------------------------------------------|-----|----|
| Is the structure perched?                                   | Yes | No | Is there ponding upstream?                                           | Yes | No |
| Is there a scour pool at the outlet?                        | Yes | No | Is the structure fully backwatered?                                  | Yes | No |
| Is there substrate through the structure's entire length?   | Yes | No | Is there a change in head from the upstream side to downstream side? | Yes | No |
| Does the structure substrate match the stream substrate?    | Yes | No | Is the structure narrower than the bankfull stream width?            | Yes | No |
| Is water in the structure moving faster than in the stream? | Yes | No | Is there debris blocking the inlet?                                  | Yes | No |
| Is water in the structure shallower than in the stream?     | Yes | No | Is there evidence of overtopping or wash-outs?                       | Yes | No |

## Multiple Culverts

Number multiple cells from left to right facing downstream. Include a diagram below indicating which culvert is culvert #1.

| Culvert # | Width (ft) | Height (ft) | Length (ft) |
|-----------|------------|-------------|-------------|
| 2         |            |             |             |
| 3         |            |             |             |

| Culvert # | Width (ft) | Height (ft) | Length (ft) |
|-----------|------------|-------------|-------------|
| 4         |            |             |             |
| 5         |            |             |             |

### Photos

- |                                               |                                                |                                 |
|-----------------------------------------------|------------------------------------------------|---------------------------------|
| <input type="checkbox"/> Site ID              | <input type="checkbox"/> Inlet                 | <input type="checkbox"/> Outlet |
| <input type="checkbox"/> Road Approach – Left | <input type="checkbox"/> Road Approach – Right | <input type="checkbox"/>        |
| <input type="checkbox"/> Upstream Conditions  | <input type="checkbox"/> Downstream Conditions | <input type="checkbox"/>        |

## Fish Passage Determination

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. <input type="checkbox"/> The structure is longer than 30 feet and has natural substrate through its entire length, or      | Yes | No |
| <input type="checkbox"/> The structure is shorter than 30 feet and has natural substrate through its entire length, or        |     |    |
| <input type="checkbox"/> The structure is shorter than 30 feet and does not have natural substrate through its entire length. |     |    |

### Additional Comments

Culvert diagram, erosion, channel condition, evidence of wash-out, beaver, local testimony of frequency of overtopping...

<sup>1</sup> Fill out for primary culvert (culvert #1). If multiple culverts are used, see reverse.

<sup>2</sup> Fill out, if present.