FLH CULVERT ASSESSMENT FORM

Overall Rating
Good
(Fair)
Poor
Critical
Unknown
Performance Problems

Notes by: PB/Bravo Date: 5/18-19/11 Project: Hurricane Ridge Road
Measurements by: PB/Bravo Time: _____

Site Information:

Facility Location: Olympic National Park Lat/Long N/A
Milepost: N/A Project Station: 346+12 GPS Road CL Waypoint No. N/A
Named waterway: N/A Direction of Flow: R to L

Culvert Information:

No. of Barrels: 1 Barrel Length (approx): 70' Barrel Slope: (Mild) / Steep / 4%
Skew (0 degrees = perpendicular to road): 8 Approx Cover: Upstream 10 Downstream 15
Barrel Shape (circle one) (Circular) Box Elliptical Pipe Arch Arch
Diameter: 18 / Span _____ x Rise _____
Pipe Material (circle one): (Metal) - Concrete / RCP - Corrugated Plastic - Smooth Plastic - Timber – Masonry
Appurtenances (circle one):
Upstream : Projecting / Mitered / Headwall / Headwall & Wingwalls / (Flared End Section) / _____
Downstream : Projecting / Mitered / Headwall / Headwall & Wingwalls / (Flared End Section) / _____
Flowing or standing water? N / (Y) Depth: 0.25 (ft) Est. Flow Velocity: 3 (ft/s) Possible AOP/fish passage? Y / (N)
Utilities Present (list)? Y / N UG-Elec. Possible historic features? Y / N Unkown Open Bottom? Y / (N)

Culvert Condition and Performance (circle / check all that apply and provide appropriate explanations below)

Category	Rating					
Invert deterioration	Good	Fair	(Poor)	Crit	Unk	N/A
Joints & Seams	Good	(Fair)	Poor	Crit	Unk	N/A
Corrosion / Chemical	Good	Fair	Poor	Crit	Unk	(N/A)
Cross-Section Deform	Good	Fair	(Poor)	Crit	Unk	N/A
Cracking	Good	Fair	Poor	Crit	Unk	(N/A)
Liner / Wall	Good	Fair	(Poor)	Crit	Unk	N/A
Mortar and Masonry	Good	Fair	Poor	Crit	Unk	(N/A)
Rot and Marine Borers	Good	Fair	Poor	Crit	Unk	(N/A)
Headwall/Wingwall	Good	Fair	Poor	Crit	Unk	(N/A)
Apron	Good	Fair	Poor	Crit	Unk	(N/A)
Flared End Section	Good	(Fair)	Poor	Crit	Unk	N/A
Pipe End	Good	(Fair)	Poor	Crit	Unk	N/A
Scour Protection	Good	Fair	(Poor)	Crit	Unk	N/A

Performance Problems Requiring Level 1 Action

- Debris/Veg Blockage > 1/3 of rise at inlet or outlet □
- Sediment Blockage 1/3 to 3/4 of rise at inlet/outlet □
- Buoyancy or Crushing-Related Inlet Failure □
- Poor Channel Alignment □
- Previous and/or Frequent Overtopping □
- Local Outlet Scour □

Performance Problems Requiring Level 2 Action

- Embankment Piping □
- Channel Degradation / Headcut *(circle one)* □
- Embankment Slope Instability □
- Sediment Blockage > 3/4 Rise at Inlet or Outlet □
- Sediment Blockage > 1/3 Rise Throughout Barrel □

Other Problems Requiring Level 2 Action

- No Access / Ends Totally Buried / Submerged □
- Aggressive Abrasion/Corrosion/Chemical *(circle)* □
- Exposed Footing (Open-Bottom Culvert Only) □

Photos (number): ___ Inlet ___ Outlet ___ Roadway (ahead) ___ Roadway (back) ___ View downstream
___ View upstream Others: Video Record - See Written Summary Attached

Notes / Recommendations:

Infiltration, rust in flow way.

*Some data obtained from culvert inspection report 2003 - WA PRA-OLYM 12-1

□ Additional notes / Sketches on back of form

Bravo Environmental
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Kenmore, Wa 98028
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Inspection Report / Inspection: 1

Date	P/O. No.	Weather	Surveyor's Name	Pipe Segment Reference	Section No.
5/18/2011		**Dry**	**jOEL vASEY**		**3**
Certificate No.	**Survey Customer**	**System Owner**	**Date Cleaned**	**Pre-Cleaning**	**Sewer Category**
u-304-1198				**No Pre-Cleaning**	

Street	**346+13**	Use of Sewer	**Stormwater**	Upstream MH	**INLET-W**
City	**Port Angeles**	Drainage Area		Dowstream MH	**OUTLET**
Loc. details		Flow Control		Dir. of Survey	**Downstream**
Location Code		Length surveyed	**69.92 ft**	Section Length	**69.92 ft**

Purpose of Survey	**Maintenance Related**	Joint Length	
Year Laid		Dia./Height	**18 inch**
Year Rehabilitated		Material	**Corrugated Metal Pipe**
Tape / Media No.	**1**	Lining Method	

Add. Information :

1:180	Position		Observation	MPEG	Photo
INLET-W	0.00		End of Pipe / INLET-W	00:00:00	
	0.00	S1	Deposits Settled Gravel, 30 %of cross sectional area, from 04 to 08 o'clock, , within 8 inches of joint: YES, Start	00:00:44	
	11.59		Infiltration Stain, at 03 o'clock, within 8 inches of joint: YES	00:04:33	
	27.05		Deformed, 10 % / DENT@7:00	00:08:19	
	31.01	F1	Deposits Settled Gravel, 30 %of cross sectional area, from 04 to 08 o'clock, , within 8 inches of joint: YES, Finish	00:09:37	
	47.66		Infiltration Stain, from 05 to 07 o'clock, within 8 inches of joint: YES	00:14:35	
	57.41	S2	Deposits Settled Gravel, 5 %of cross sectional area, from 05 to 07 o'clock, , within 8 inches of joint: YES, Start	00:16:20	
	69.92	F2	Deposits Settled Gravel, 5 %of cross sectional area, from 05 to 07 o'clock, , within 8 inches of joint: YES, Finish	00:18:42	
OUTLET	69.92		End of Pipe / OUTLET	00:18:49	

QSR	QMR	SPR	MPR	OPR	SPRI	MPRI	OPRI
4100	**4623**	**4**	**30**	**34**	**4**	**3.33**	**3.4**