STREAM/WETLAND CROSSING INSPECTION FORM

MONTANA STATE UNIVERSITY EXTENSION Forestry Program

Landowner_____ Date_____

Road Segment_____ Form No._____

Service Level ❑ High ❑ Medium ❑ Low

Stream Culvert Description

1. Style

❑ Round ❑ Rectangular ❑ Squash
❑ Bottomless Arch ❑ Log

2. Material

Corrugated:
❑ Aluminum
❑ Steel
❑ Plastic

OR

❑ Logs
❑ Concrete
❑ Smooth metal
Other _____

3. Physical Condition

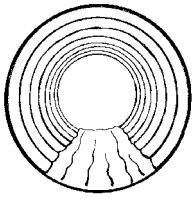
❑ Good - no obvious damage
❑ Poor- corrosion, holes, major dents, crushed

4. Cross-section/Diameter

If round: Diameter _____ inches
If squash or rectangular: Width _____ Height _____

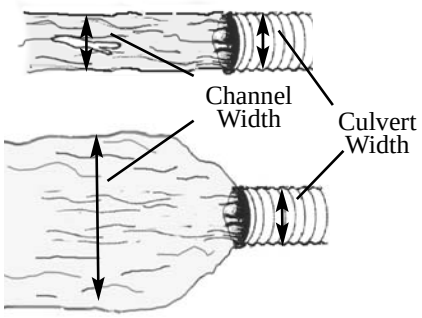
5. Culvert Obstructions

Is the culvert barrel clear?
Use flashlight to look inside culvert.
❑ Yes ❑ No
If no, indicate why:
❑ Sediment deposition ❑ Pipe damage ❑ Cutbank sloughing ❑ Organic debris at inlet or outlet ❑ Other



6. Culvert vs Stream Channel Width

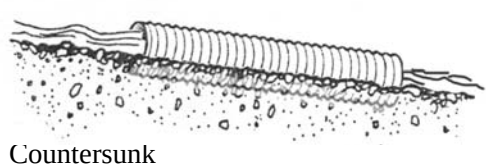
Is culvert width more than half stream channel width?



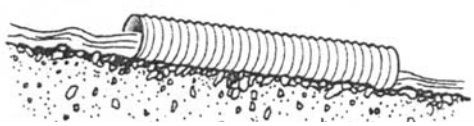
❑ Yes

❑ No
(high potential for plugging)

7. Culvert bottom



❑ Countersunk



❑ Level with the streambed

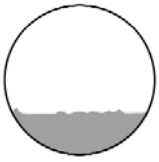
8. Water Depth at Low Flow

What is depth in culvert at low flow?
❑ dry ❑ <6 in.❑ >6in.

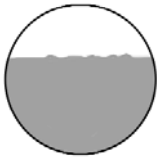
9. Water Depth at High Flow

Estimate % of culvert cross-section filled during a flood.

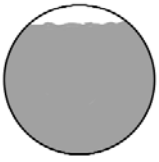
(Look for staining, washed gravel on inlet embankment or ponding at the inlet).



❑ <50%



❑ 50-75%



❑ >75%

101705

Stream Culvert Inlet

10. Erosion evident?

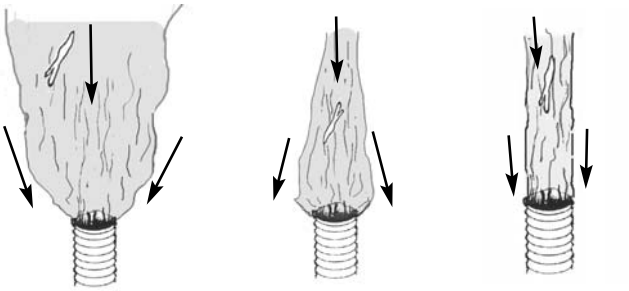
❑ Yes ❑ No

11. Armored?

❑ Yes ❑ No If yes, is it adequate? _____

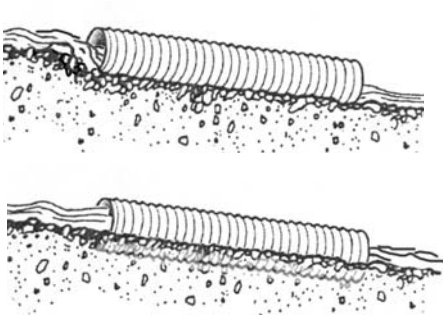
_____

12. Stream channel above inlet:



❑ narrows ❑ widens ❑ no change

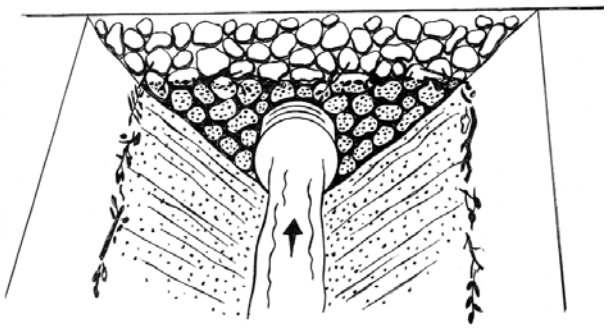
13. Terrace above inlet?



❑ Yes

❑ No

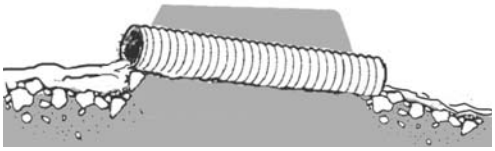
15. Evidence of ponding



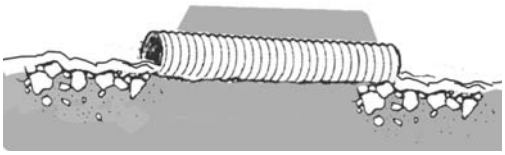
❑ Yes ❑ No

If yes, how much overtoping?_____feet

14. Raised/Perched



❑ Yes



❑ No

Stream Culvert Outlet

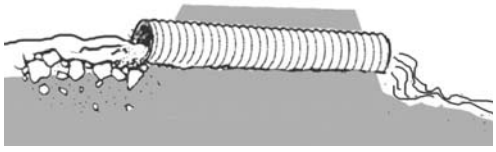
16. Armored?

❑ Yes ❑ No

If yes, is it adequate? _____

17. Raised?

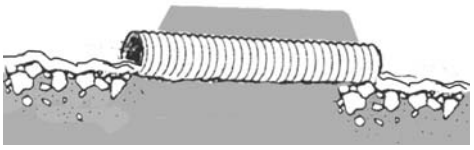
Perched greater than 6 inches? ❑ Yes ❑ No



❑ Yes

18. Is there a fish resting pool?

❑ Yes ❑ No



❑ No

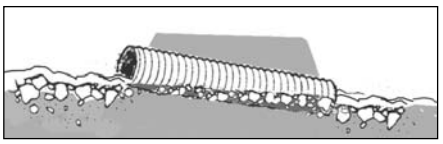
Stream Culvert Alignment

19. Aligned with stream channel?

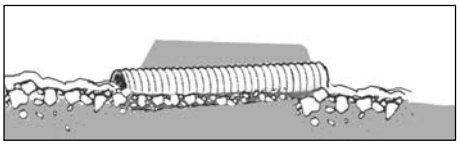
❑ Yes

❑ No

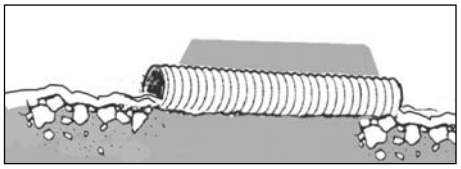
20. Is culvert slope



❑ Greater than stream grade



❑ Less than stream grade

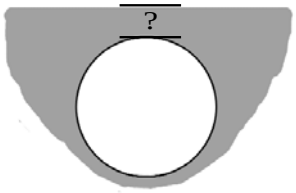


❑ Equal to stream grade

21. Cover

(Min. 1 foot or 1/3 the diameter for culverts >36 inches)

❑ Yes ❑ No



22. Length

❑ Good (extends beyond road fill slope)

❑ Poor (does not extend beyond road fill slope)

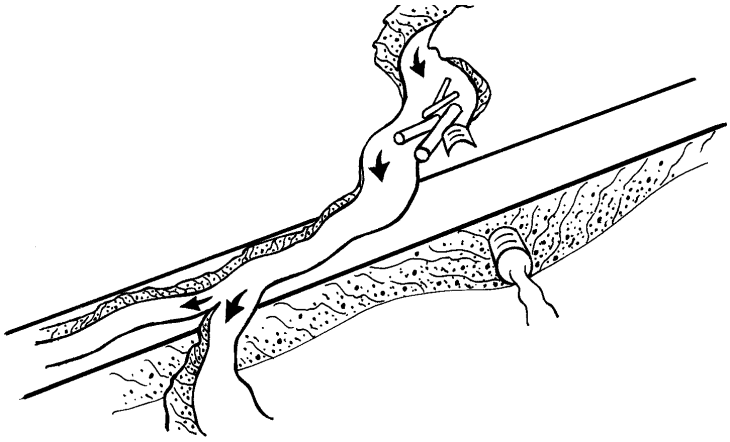
Stream Flood Damage Potential

How much damage could occur if water overtops the road at the culvert location?

23. Slope

Does road or ditch slope downward away from stream crossing? ❑ Yes ❑ No

If yes, how far will water flow down the road or ditch before it is diverted by a relief culvert, outslope shape, surface crossdrain or other diversion? _____ Feet



24. Where will diverted flood waters be directed?

❑ Directly back to stream channel
❑ Away from stream channel onto fill slope or hill slope

If diverted to fill slope, rate erosion potential based on fill height.

❑ High
❑ Medium
❑ Low

Ford Crossing

25. Season of Use

What part of the year is the ford crossing feasible?
❏ Fall ❏ Winter ❏ Spring ❏Summer

26. Ford Approaches

Is road surface drainage diverted into sediment filter prior to ford? ❏ Yes ❏ No
Are approaches surfaced with aggregate?
❏ Yes ❏ No
Is erosion evident on adjacent streambanks?
❏ Yes ❏ No

27. Ford Bottom

Is bottom material?

❏ Desirable (bedrock, concrete ties, clean angular rock, adequately sized gravel and/or cobbles)

❏ Undesirable (sand, silt, clay, inadequately sized gravel and/or cobbles, other)

Does ford bottom match natural level of stream bed? ❏ Yes ❏ No

Wetland Crossing

28. Restrict Flow?

Does road appear to restrict subsurface flow? Look for ponding upslope, reduced wetland area below road, saturated road fill. ❏ Yes ❏ No

29. Elevated Road Surface?

Is road surface elevated above ground line?

❏ Yes ❏ No

30. Aggregate Sinking?

Does road surface aggregate sink into road bed?

❏ Yes ❏ No

31. Rutting, Settling, Potholing?

Does the road surface suffer from chronic rutting, settling, potholing? ❏ Yes ❏ No

32. Relocate Road?

Could the road be relocated to avoid the wetland crossing? ❏ Yes ❏ No