

# *Swan View Coalition* Nature and Human Nature on the Same Path



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## **A Review and Summary of Flathead National Forest's 2017 Survey Of Closed Roads in Bull Trout Watersheds**

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The Flathead N.F. on 2/6/18 provided me a spreadsheet of its 2017 survey of some of its closed roads in bull trout watersheds. These are Maintenance Level 1 National Forest System roads closed to motor vehicle travel and receiving minimal maintenance if any.

The 2017 survey provides data for 14 closed roads. All 46 culverts reported in the data are stream-aligned culverts. To provide a summary spreadsheet (attached) I extracted the data relevant to whether:

- a) Culvert inlets were blocked, a rust line >33% of the inlet height indicates the culvert is undersized to handle extreme flows, ponding or overflow indicates the culvert is undersized or incorrectly positioned, or the inlet is crushed.
- b) Floatable debris exists upstream with the potential to flow downstream and block the culvert inlet.

I found 27 of the 46 culverts (59%) were subject to one or more of the conditions described in "a" above.

Of the 46 culverts, 7 (15%) had blocked inlets at the time of inspection.

Concern was expressed about water flowing underneath two of the culverts (4%).

Three of the culverts (7%) were diverting water to roadside ditches.

Conversely, 3 of the 46 stream-bearing culverts (7%) were receiving water from road ditches or water channels flowing down the road and into the stream/culvert.

I found 6 of the 46 culverts (13%) were reported to have floatable debris upstream with the potential to flow downstream and block the culvert inlet.

| ID | Road ID | Inlet Blocked | Inlet Rust >33% | Ponding or Overflow | Culvert Damage   | Upstr Floatables | Notes                                                                   |
|----|---------|---------------|-----------------|---------------------|------------------|------------------|-------------------------------------------------------------------------|
| 1  | 114 Z   | No            | No              | No                  | No Damage        | Yes              | ponding at outlet possibility for water flow under, may be fish barrier |
| 2  | 10335   | No            | No              | Yes                 | No Damage        | No               |                                                                         |
| 3  | 10335   | No            | Yes             | No                  | No Damage        | Yes              |                                                                         |
| 4  | 10335   | No            | No              | No                  | No Damage        | No               |                                                                         |
| 5  | 10335   | No            | No              | Yes                 | Flow Around Pipe | No               |                                                                         |
| 6  | 10335   | Yes           | No              | No                  | No Damage        | No               | giant stinging-nettle patch =outlet inaccessible                        |
| 7  | 10335   | No            | No              | No                  | No Damage        | No               |                                                                         |
| 8  | 10335   | Yes           | No              | No                  | Other            | Yes              |                                                                         |
| 9  | 114z    | No            | Yes             | Yes                 | Rusted           | No               | large scoured pool at outlet, may be fish barrier                       |
| 10 | 1671    | Yes           | No              | No                  | No Damage        | No               |                                                                         |
| 11 | 1671    | No            | No              | No                  | No Damage        | No               |                                                                         |
| 12 | 1671    | No            | No              | No                  | No Damage        | No               | 2 ditch relief flowing into stream                                      |
| 14 | 9839    | No            | Yes             | No                  | No Damage        | No               | also recieves water from ditch                                          |
| 15 | 9839    | No            | No              | No                  | No Damage        | No               |                                                                         |
| 16 | 9839    | No            | Yes             | Yes                 | No Damage        | No               |                                                                         |
| 17 | 9839    | No            | Yes             | No                  | No Damage        | No               |                                                                         |
| 18 | 9839    | No            | No              | No                  | No Damage        | Yes              |                                                                         |
| 19 | 1685    | No            | No              | Yes                 | No Damage        | No               | inlet slightly above stream grade causing erosion                       |
| 20 | 1685    | No            | No              | Yes                 | No Damage        | No               | inlet above stream grade                                                |
| 21 | 1677    | No            | Yes             | Yes                 | No Damage        | No               | inlet slightly above stream grade                                       |
| 22 | 1681    | No            | No              | No                  | No Damage        | No               | No channel on downstream side                                           |
| 23 | 1681    | No            | No              | No                  | No Damage        | No               | 2 inlet channels                                                        |
| 24 | 1681    | No            | No              | No                  | No Damage        | No               | extra channel flowing down from road                                    |
| 25 | 1675    | No            | Yes             | No                  | No Damage        | No               |                                                                         |
| 32 | 1662    | No            | Yes             | Yes                 | No Damage        | Yes              | stable high energy                                                      |
| 33 | 1662    | No            | Yes             | Yes                 | No Damage        | Yes              |                                                                         |
| 34 | 1662    | Yes           | Yes             | Yes                 | No Damage        | No               | large seep complex needs additional drainage                            |
| 35 | 1662    | No            | No              | Yes                 | No Damage        | No               | sta 46+40 overflow to ditch                                             |
| 36 | 1662    | No            | Yes             | Yes                 | No Damage        | Yes              | undersized with div potential                                           |
| 47 | 589     | No            | Yes             | No                  | No Damage        | Yes              | dangerous bushwack nav difficult w/o gps, cmp left by fish biologist    |
| 66 | 1681    | No            | No              | No                  | Crushed Inlet    | No               | no safe way to outlet                                                   |
| 67 | 1681    | No            | No              | No                  | No Damage        | No               |                                                                         |
| 68 | 1681    | No            | No              | No                  | No Damage        | No               | could not find safe path to outlet                                      |
| 69 | 1681    | No            | Yes             | Yes                 | No Damage        | No               | st diverted down roadside ditch                                         |
| 70 | 1681    | No            | No              | No                  | No Damage        | No               | definitely fish habit                                                   |
| 71 | 1681    | No            | No              | No                  | No Damage        | Yes              |                                                                         |
| 72 | 1681    | Yes           | Yes             | No                  | Flow Around Pipe | No               | st diverted down roadside ~120'. no safe path to o                      |
| 0  | 9798    | No            | Yes             | Yes                 | Flow Around Pipe | Yes              | Water scouring under pipe.                                              |
| 1  | 9798    | No            | No              | Yes                 | Rusted           | No               | poor channel elk wallow                                                 |

| ID | Road ID | Inlet Blocked | Inlet Rust >33% | Ponding or Overflow | Culvert Damage | Upstr Floatables | Notes                                  |
|----|---------|---------------|-----------------|---------------------|----------------|------------------|----------------------------------------|
| 2  | 9798    | Yes           | Yes             | Yes                 | No Damage      | Yes              | Beaver filling culvert, part squashed. |
| 4  | 9589    | No            | Yes             | No                  | Rusted         | Yes              | Upstream not aligned                   |
| 5  | 9589    | No            | No              | No                  | No Damage      | No               |                                        |
| 6  | 9589    | No            | No              | No                  | No Damage      | Yes              |                                        |
| 7  | 9589    | No            | No              | No                  | No Damage      | No               |                                        |
| 8  | 90511   | No            | No              | No                  | No Damage      | Yes              |                                        |
| 0  | 91296   | No            | No              | No                  | No Damage      | Yes              |                                        |