

APPENDIX A: PROJECT DESCRIPTION

Fubar Creek Phase II

Stream Reach:	Fubar Creek
Project Area:	Harris
Feature Dimension:	2,900 feet
Priority:	High

Location Description:

Fubar Creek is located in the northern headwaters of the Harris River watershed. The Fubar Creek Phase II project area consists of the lower 2,900 feet of the stream (from confluence of Harris River Mainstem, upstream 2,900 feet).

Reach Overview:

This reach of Fubar Creek has been directly affected by upstream landslide events and rehabilitation efforts. Sedimentation, bank instability, low large wood component, very low recruitment potential are the issues of concern.

Treatment Description:

Work mainly involves protecting riparian vegetation, stabilizing eroding banks, and improving aquatic habitat. Minor channel reconstruction along 2 short reaches is planned to improve sediment transport and improve aquatic habitat in those sections. Work consists of the placement and construction of engineered log jams and large woody debris at strategic locations along the channel to stabilize of bank and habitat improvement. Large woody debris (LWD) would be placed on the floodplains adding roughness and protecting riparian vegetation that help maintain a stable stream corridor. Two short stream reaches would be reconstructed (~600ft total) by increasing the existing channel length and adding or reinforcing existing meander bends with engineered log jams.

Materials for log jams would be collected on Forest Roads 2026000 & 2025000, 2024050 (east), 2024300, and 2016000. Approximately 150 trees will be required for the project. Borrow material for the project would utilize material from existing quarries and materials on from the same road systems above.

Project access would be along an existing legacy Forest Road 2024050 (east) that runs along the Fubar Creek corridor. Approximately 1,500 feet of temporary access road would be constructed to move trees and boulders to the work sites. The existing Forest Road surface would be cleared of vegetation and temporary drainage structures would be added as required to maintain water quality and aquatic passage, and a surfacing of course quarry rock would be placed to provide a stable surface. After completion of the project, temporary access roads would be removed and re-vegetated. The reconstructed Forest Road 2024050 (east) would be left heavy equipment accessible access until the Fubar Creek Phase II and Harris River mainstem projects are complete. Once work along the Harris River is completed the road would be placed into storage and improved for trail conversion and interpretation.

2024050 (South) Decommission/Trail Designation & Improvement

Stream Reach: Fubar Creek
 Project Area: Fubar
 Feature Dimension: 3,700 feet
 Priority: High

Location Description:

Fubar Creek is located in the northern headwaters of the Harris River watershed. The Fubar Creek Phase II project area consists of the lower 2,900 feet of the stream (from confluence of Harris River Mainstem, upstream 2,900 feet).

Reach Overview:

Old road bench of the 2024050 (South) remains mostly intact with drainage structures removed. Fubar Phase II would reopen road for heavy equipment.

Treatment Description:

Utilizing heavy equipment on-site during Fubar Phase II close-out, improve road surface and construct drainage structures for pedestrian traffic. Create and install interpretive sites that explain instream rehabilitation and watershed processes.

2026000 Decommission

Road Number_Reach: 2026000_RR1

Project Area: Upper Harris

Feature Dimension: 0.68 miles

Priority: High

Location Description:

This road reach is specific to the last third of the 2026000 road. It begins at the junction with 2026200 and extends 0.68 miles to the end of the road.

Reach Overview:

All of road 2026000 is closed to public traffic by a gate at the junction with the Klawock-Hollis Highway. The road reach existing conditions include cutslope erosion along most of the inboard side of road, culvert damage and/or plugging, cracking, sliding/slumping of outboard fill. The road reach is experiencing multiple mass fill failure. Near road end, road has captured a shallow debris slide which fills road surface. Deep scarps (slope failure headwalls) prevent vehicle passage not far beyond first landing (see site descriptions). The failing outboard edge (OBE) results in hazardous drivability. This section of the road is actively eroding and lies along a steep side slope.

Treatment Description:

Decommission road and change management objective to represent change in status. Pull all CMP's (see exception in site descriptions); relocate landslide material to stable location; pull OBF of road end landing; and pull back unstable road fill material as indicated. Seed entire road length and bare soil cutbanks; 20'W X 3587'L=71740ft²=1.7ac. Stockpile spoils against stable cutbanks. Some spoil may need to be end hauled to local landing, not more than 1,000'. Outslope last 2,112' of road reach, site 0670 to 0681.

Remove CMP: 8

Install waterbar: 11

Install cross road drain: 9

Total fill removed: 3,467 CY
 Outslope: 2,112'

Notes:

- * Stockpile no fill or debris along OBF.
- * Directional orientation downslope.

Abbreviations:

DRC=ditch relief culver; OBF=outboard fill; IBD=inboard ditch;
 CB=cutbank; WB=waterbar; CY=cubic yards; XRD=cross road drain; CMP=corrugated metal pipe

2026200 Road Storage

Road Number Reach: 2026200_RR1

Project Area: Upper Harris

Feature Dimension: 1.37 miles

Priority: High

Location Description:

This road begins at the junction with 2026000 and extends approximately 1.2 miles.

Reach Overview:

Road 2026200 was built along a steep side slope. The first section climbs up a steep gradient, then the road levels off. The road is drivable; all culverts are still in place. The current conditions of the road include sediment accumulation in some culverts, fill slump or slide failure, and missing structures. Due to the unstable steep slopes that the road cuts across, this road has high road failure potential.

Treatment Description:

Store road by removing all structures and pulling back fill from OBE (along approximately 60% of road). Place waterbars/cross road drains where needed. Stockpile spoils locally, spread against cutbanks (no excavated material on road surface). One crossing would require a temporary rebuild of deep crossing to access end of road.

- remove CMP: 24
- install waterbar: 13
- install cross road drain: 23
- total fill removed: 526 CY
- total landing fill removed: 160 CY
- total channel re-establishment: 70'

2000220 Road Storage

Road Number Reach: 2000220_RR1

Project Area: Harris

Feature Dimension: 0.61 miles

Priority: Med

Location Description:

Road 2000220 is located in the Harris River watershed just north of one-duck pond in the Fubar Creek Headwaters. The road length is 0.61 miles.

Reach Overview:

This is an objective maintenance level (OBML) I road. The road was built for a timber harvest in the upper Fubar Creek sub-basin. Most of the road is drivable. Vegetation is overgrown onto road prism. The concerns on this road include failure of outboard fill failure, stream water diverting down road prism, ditch plugging, and landslide and fill failure at terminal of road. The beginning of the road cuts through a low gradient muskeg area and enters into steep unstable side slopes that overlook Fubar Creek. A landslide has occurred at the very end of the road. Proper storage measures should be taken to avoid potential landslide activity elsewhere along the road.

Treatment Description:

Properly store road. Remove all culverts and construct waterbars/cross road drains. Stabilize cutbanks and fillslopes. Hand seed along cutslope banks.

- remove 5 culverts
- install 5 Waterbars
- install 9 cross road drains
- ground seed 4,120 cu ft cutbank

2024110 Decommission and Hydrologic Connectivity Restoration

Road Number_Reach: 2024110_RR1

Project Area: Harris

Feature Dimension: 1.54 miles

Priority: Med-High

Location Description:

Road 2024110 intersects with road 2024100 on State land. Most of the 1.5 mile road is on National Forest land and runs along the right footslope to the Harris River.

Reach Overview:

Road 2024110 lies at the footslope of the floodplain area of the Harris River. Runoff from the adjacent slopes is causing pooling in ditches and on the road surface. The road cuts across a steep slope and displays much deterioration with several areas of road cracking and sliding downslope. Road has many stream diversions and failed drainage structures. Water is ponding and is saturating the road fill. Although the road is significantly affecting the hydrology of the hillside runoff, road bench remains mostly intact with a few minor outboard fill (OBF) failures. Trees blown down on or near the road are uprooting road surface in places. Several landslides occur on the road surface, and one large landslide has blown through road. No heavy equipment accessible to site.

Treatment Description:

Pull back outboard fill along the road (heavy equipment treatment only). Install cross road drains and waterbars along entire road reach as specified. Remove wooden/log culverts and replace with waterbars. Install waterbars at all stream crossings. Use blasting techniques for excavation of material at cross-road drain and waterbar sites. Use hand crews to dress blast sites. Slumping fill site would not be able to be treated without heavy equipment.

-20 total waterbars blasted. This includes 8 log culverts and 1 log bridge structure. Remaining waterbar blasting sites are fill or original drainage structure is beyond detection.

2024050 (North) Harris River Trail Upgrade/Stream Rehabilitation**Road Number_Reach:** 2024050_RR1**Project Area:** Harris**Feature Dimension:** 1.42 miles**Priority:** High**Location Description:**

Road 2024050 is located in the Harris River drainage. It begins at the junction with the Craig-Hollis highway and extends along the Harris River ending at the junction with the Hydaburg highway.

Reach Overview:

Harris River Trail: Classified road 2024050 is a non-drivable haul road that was constructed down onto the floodplain of the Harris River. The road has subsequently been closed and converted to a trail. As the trail nears the floodplain, interaction with a steep ephemeral stream has caused significant erosion of the road fillslope until the road captures the streamflow that sends the stream braiding down and across the road and alluvial fan. The road surface is deeply eroded and continues to degrade. Once down to the mainstem, the trail fords what is now a large back channel of the Harris River and continues down the length of a mid-channel island until reaching the mainstem proper (the back channel was once mainstem). This section has had most drainage structures removed. The one remaining structure has failed and is collapsing as the mainstem erodes the adjacent bank. The trail is badly damaged and is interacting with natural processes causing resource damage. The trail needs further review to evaluate recreational, fisheries, and hydrologic needs to determine a more detailed plan of action.

Treatment Description: Stabilize class I stream upstream of diversion by incorporating stable LWD, willow stakes in raw banks, and large rock to protect trail adjacent to bank erosion sites. Establish stable channel across trail and to left of trail while providing access to floodplain. Construct small footbridge across new channel and reconstruct trail to island crossing. Install rip rap at island bank erosion site to protect bank and trail while allowing through flow. Install trail markers at stream crossings and island end. Install Forest Service bulletin board, sign-in, and trail map at beginning of trail. Install bank stabilization LWD structure at head of island for 80 feet and install grade control structures at backchannel inlet to allow sub-bankfull flow to enter channel. Trailhead and parking area located on paved highway will be improved by State highway projects.

- Multiple LWD structures: Jams & grade control structures
- 155 linear feet of rip rap
- One 20 foot footbride/interpretive platform
- One 100 foot footbridge

2025100 Road Storage**Road Number_Reach:** 2025100_RR1**Project Area:** Harris**Feature Dimension:** 0.84 miles**Priority:** High**Location Description:**

From Harris River campground, east 0.3 mile, head North on 20-mile road (2025000) for 1.8

miles. Road ends at trailhead. From trailhead, cross footbridge for 0.2 mile. Junction with 2025100 on left (east).

Reach Overview:

Road 2025100 is a 0.82 long objective maintenance level one road that is accessed from the 20 Mile trail almost 0.2 mi from trailhead. Footbridge at trailhead crosses class 1 stream. The 2025100 road accesses two 1995 harvest units. Road has all culverts in place apart except for one deep fill stream crossing at milepost 0.59. This crossing would have to be rebuilt to access remaining road that includes 8' diameter pipe stream crossing. Blow down is dispersed in pockets along road. Road is mostly intact, but some structures are plugging with potential for diversion. YCC hand crew cleared plugged pipes inlets in 2006.

Treatment Description:

Store 0.82 miles of road by removing undersize CMP's, installing waterbars, and stabilizing fill material.

- Mobilize across class 1 stream: one entry, one exit
- Buck and remove/sidecast blow- down across road
- Excavate and remove up to 14 culverts, including large fill crossing
970+
CY 8' diam on valley mainstem channel
- Install approximately 18 waterbars
- Install 2 cross drains
- Install temp 36" pipe
- Clean 1 cmp
- Clear inboard ditch, 50'

2025000 RR1 Maintenance and Hydrologic Connectivity Restoration

Road Number_Reach: 2025000_RR1

Project Area: Harris

Feature Dimension: 1.84 miles

Priority: Low-Med

Location Description:

Mainline road 2025000 is accessed at mile post 20 along the Klawock-Hollis Hwy. The road reach begins at the junction with the Klawock-Hollis Hwy and extends 1.84 miles along the upper Harris River through forested wetlands and muskegs.

Reach Overview:

This road provides access from the main highway to 20 Mile Trail trailhead in the upper Harris River. The road was originally constructed in the early 1960's for logging purposes. The current conditions include stream diversions down road prism, plugged and failed culverts, and sediment accumulating in inboard ditch. Due to the easy accessibility and frequent use of road system, and its proximity to the Harris River, these conditions are causing increased risk of public safety from failed structures and contribute to altered hydrologic connectivity.

Treatment Description:

Road 2025000 RR1 is in need of basic road maintenance and drainage structure upgrades. Upgrade wood culvert, replace damaged, undersized, or rusted out drainage structures, and regrade surface. Install new drainage structures at all diverted stream crossings.

2025000 RR2 Trail & Stream Bank Stabilization

Road Number_Reach: 2025000_RR2

Project Area: Harris

Feature Dimension: 2.80 miles

Priority: Med

Location Description:

This road reach includes the upper (non-drivable) section of the 2025000 classified road system. It extends 2.8 miles along the upper Harris River.

Reach Overview:

Road 2025000_RR2 is an old logging road constructed in the early 1960's, later converted into a Forest Service trail. Timber harvested along and adjacent to the riparian zone of the upper Harris watershed was harvested throughout the 1960's. A footbridge was built at the near the trailhead, permitting hikers to cross a class 1 stream. Small wooden structures have been placed over most removed culvert sites.

A bridge has been removed from a class 2 stream crossing. The upper most section of the road is washed out in several places due to changing course of the Harris River. Current conditions include water pooling in the ditchline, stream diversions running down road prism, and scoured out sections of road system. These conditions have resulted in stream channel alterations and degraded fish habitat downstream.

Treatment Description:

Trail system maintenance from the footbridge (2025000 MP 1.82) to MP 3.0. The stream crossings are functioning but wood structures over waterbars need replacement. Two log culverts need removal and replacement with waterbars/wooden foot bridges. Waterbar placement is needed where water is routed onto road and diverting down the prism. A small section of the road prism needs fill stabilization along the outboard edge. Beyond MP 3.098, the Harris River intercepts the trail in several places. The trail is not maintained after this point (A sign may be needed to tell visitors that trail is no longer in use or maintained).

Most treatment sites and descriptions are based on RCS data. Individual treatments sites should be revisited to confirm problem and course of action. Treatments listed are minimum actions needed.

Upper and Lower Harris River Mainstem Large Wood/Bank Stability and Sediment

Routing

Project Area: Harris

Project Dimension: 5.0 miles

Priority: High

Location Description:

Lower Harris River sub-basin and are focused on mainstem attributes.

Reach Overview:

Many reaches of the Upper and Lower Harris River are characterized by sedimentation processes. Long homogeneous reaches with increasing width to depth ratio are destabilizing banks and are causing channel avulsions across the floodplain. Most of the mainstem riparian

area was harvested in the mid-1960's, leaving little in the way of floodplain roughness, bank root strength, and recruitable instream large wood. Gravel extraction has also taken place along the floodplain as part of the original road construction. These gravel borrow ponds have captured the Harris river in several locations. The result of these processes is a decrease in instream habitat and complexity subject to frequent bedload shifts, braiding, algal blooms, and increased sensitivity to high water temperatures.

Treatment Description:

Treatment would include embedded LWD revetments designed to protect stream banks from erosion forces in areas of channel widening in order to encourage stream velocities to transport existing bedload and increase average depth and pool formation over time. Mainstem treatments would be focused on banks and floodplains. Similar LWD projects nature typically require 300 LWD pieces per mile. Depending on the reach being rehabilitated this number may be more or less.

Harris River Tributary Large Wood Structure and Sediment Routing

Project Area: Harris
Project Dimension: 2.0 miles
Priority: High

Location Description:

Upper and Lower Harris River sub-basin.

Reach Overview:

Harvested tributaries in the Harris River have been depleted of habitat forming, sediment storing, and sediment routing large wood. Unrestrained sediment produce from hillslope processes have resulted in fast homogenous tributary reaches that increase average slope, coarsening distribution, and develop alluvial fans as they approach the floodplain of the Harris River and cause braiding and channel avulsions.

Treatment Description:

Treatment would mostly utilize hand equipment to add mobile large wood and construct large wood structures to add roughness elements to over steepened stream reaches for sediment storage and habitat forming structure. Large wood would be used to increase roughness to floodplains at risk of channel avulsion and to diversion channels. Large wood would also be used on the alluvial fan to assisting in the storage and routing of sediment. Material to be used for instream large wood would be taken from adjacent riparian areas with minimal manipulation. Manipulation of large wood would utilize hand equipment only.

Harris River Riparian and Wildlife Thinning

Project Area: Harris
Priority: High

Location Description:

Upper and lower Harris River.

Project Area Overview:

Heavy timber extraction in the Harris River riparian areas has replaced large conifers with alder stands. In addition to deciduous dominated canopy, recruitment for large wood for instream processes and floodplain roughening is mostly non-existent. Conifer regeneration is

slowed in part from the competition for light in the deciduous dominated canopy. Physical damage may also occur to young conifers from alder sway as they reach and attempt to penetrate the alder canopy. In other conifer dominated stands, trees grow close together and are in stem exclusion stage that shade out forbs that some wildlife species rely upon.

Treatment Description:

Untreated riparian stands would be treated for conifer release such that increased conifer productivity results. Treatments would also increase floodplain roughness through riparian thinning project that would increase floodplain resistance to channel avulsions and increase the rate of riparian conifer stand recovery. Wildlife thinning plots would target areas that would best respond to forbs generation and wildlife travel corridors.

2024185 Road Storage

Road Number_Reach: 2024185_RR1

Project Area: Lower Harris

Feature Dimension: 2.21 miles

Priority: Med

Location Description:

Road 2024185 begins at the Hollis HWY (30.7 routed milepost) and ends at a massive landslide.

Reach Overview:

Road 2024185 is an OBML1 road that is not drivable and not maintained for its entire length. Drainage structures have been mostly removed. A Road Condition Survey has been completed. The upper half of road is heavily covered in vegetation with drainage structures removed and water-bars installed. Outboard fill is cracking along many reaches. Below the switchback, the road is steep with multiple stream diversions running down road prisms and one crossing completely blown out.

The lower 1,500 foot length, beginning at Hollis Hwy, is owned by the State of Alaska. This road reach is steep and has diverted runoff running down road surface. A road initiated landslide from switchback above is mostly resting on road surface about 3,000 feet up the road. At a switchback 4,050 feet up the road, a short unclassified spur road runs out to a failing landing. Beyond the switchback, the road follows the contour as it ascends the slope. In this section to end, at 1.7 miles, inadequate waterbars, 2 log culverts, 2 log stringer bridges, and large sections of outboard fill are failing. Major rebuild would be required at site 0874 to access remaining road.

Treatment Description:

Treatment recommendation for the 2024185 road is to properly store road. Pull unstable outboard fill and stack against cutbank or endhaul to switchback. Remove all log structures and install new waterbar or reconstruct existing waterbars where appropriate.

- Install approximately 14 waterbars & 3 cross road drains
- Remove 3 log culverts
- Excavate 1,042 CY terminal landing fill, stockpile locally
- Excavate 14,392 CY unstable road fill, stockpile locally
- Re-establish 20' stream channel

2024060 0.48L Road Decommissioning**Road Number_Reach:** 2024060_0.48L_RR1**Project Area:** Harris**Feature Dimension:** 1.64 miles**Priority:** Med**Location Description:** This lower Harris spur road leads down from the mainline 2024060 to the Harris River and becomes non-drivable at pulled bridge crossing. Road Reach 1 (RR1) runs from road end to pulled bridge**Reach Overview:** Road 2024060_0.48L_RR1 is a closed shot rock non-system road. Road reach begins at road end and ends at the Harris River Stream crossing, site of pulled bridge. Lower portion of road runs across Harris River floodplain and onto the footslope at a shallow gradient. At this point, beaver are using road bench to assist in damming upslope runoff into several ponds and a waterbar. Water saturating road surface and diverting across road. All drainage structures have been removed and waterbars installed. However, ponding at inboard ditch (IBD) and diversion across road is common for entire length with minor erosion concerns.**Treatment Description:** No access for heavy equipment. Hydrologic connectivity can be re-established. Waterbar treatments only possible through blasting. Hand crews needed to dress waterbars.

-Blast 5 waterbars.

-Blast 1 cross-road drain

2024080 Harris Peak Road Storage**Road Number_Reach:** 2024080_Harris Peak**Project Area:** Harris**Feature Dimension:** 1.36 miles**Priority:** Med-High**Location Description:**

2024080 intersects with the main highway at milepost ~25.8 and crosses valley slope for 1.36 miles at a steep gradient. The lower ~0.3 mile of road is State owned

Reach Overview:

The road cuts through state land for the first ~1,580 feet (~0.30 mi); most of 2024080 is on National Forest land. The road runs across a steep valley side slope. Hillslope and road fill material are unstable. Landslide activity has occurred along this slope in a few places. Potential for mass movement along this road is high as determined by Forest Service scientists. Water is ponding in IBD and on road surface. The first 1/2 of road is steeper and of greater concern while hydrologic connectivity remains an issue for the latter half. Road has thick vegetation growing from its surface. Minor erosion is occurring at several locations with several road section where the road has captured and diverted streamflow. Three major landslides have occurred along the road. Harvest units have been thinned above and below road, but additional wildlife thinning opportunities exist at other locations above and below the road. Multiple fill failures exist. Road is very open at the lower end then becomes overgrown. Several log culverts remains in place near the end of the road. Many class 4 streams that never received a drainage structure and are now diverted across the road. The RCS has identified that over half of the 19 resource sites have a high urgency rating. Treatment will require

cooperation with State for access and potential treatment of there section of road.

Treatment Description:

All stream crossings either need to have the waterbar rebuilt or a new waterbar constructed. Inboard ditches either need to be filled or blocked. Landslide material needs to be stabilized. Unstable outboard fill material needs to be excavated and stored against cutbank. Equipment would need to rebuild road across 3 landslides to access remainder of road.

- Install 21 waterbars
- Remove 2 log culverts
- Remove 1 log bridge structure
- Install 18 cross road drains
- Pull and stockpile ~380 CY outboard fill material
- Rebuild ~320 ft of road across 3 landslide sites.
- Re-establish 20 ft of stream channel

2024080 0.06R&RA State Road Decommission

Road Number_Reach: 2024080_0.06R&RA

Project Area: Harris

Feature Dimension: 0.30 miles

Priority: High

Location Description: 2024080_0.06R_RR1 intersects the 2024080 approx. 200' above Craig/ Hollis Hwy.

Reach Overview: 2024080_0.06R_RR1 intersects the 2024080 approx. 200' above Craig/ Hollis Hwy. State ownership. Road leads to Dolison Mine claim. High potential for goods-for-services along road. Road was constructed up steep hillside and ends at a large fill and rock landing where a mine site is presumed. Discarded mining equipment remains on site. A large landslide has overtaken the road just prior to the landing and very minimal drainage structure has been installed resulting in concentrated flow in the IBD. A short spur road (0.07 mi) is included for this site.

Treatment Description: Decommission road and improve drainage around landslide stockpiling material up on landing. Note drainage from upper portion of road drains to RA spur below.

- Remove 1 culvert
- Install 4 waterbar
- Install 5 cross road drains
- Excavate and stockpile 200 CY landslide material.

2024100 RR1 State Trail Improvement

Road Number_Reach: 2024100_RR1

Project Area: Lower Harris

Feature Dimension: 0.97 miles

Priority: High

Location Description:

2024100_RR1 Trail is located on state lands and runs from end of road near Harris estuary to

listing footbridge over the Harris. "Indian Creek" road (trail).

Reach Overview:

The road reach from road end to footbridge at Harris River is utilized as a trail w/moderate use. Unclassified spur road at milepost ~1.5 continues forward and eventually wraps back toward the Harris River the trail/rd and becomes overgrown. Spur treatment sites are incorporated in this report. Main road turns right at this point and serves as a continuation of the trail to access the estuaries of the Harris and Indian basins. The road is bordered by dense 2nd growth. Several minor stream diversions onto trail and areas of ponding are evident. Road located in valley bottom. Footbridge is listing and deteriorating. Trailhead at footbridge is heavily utilized by anglers. Trail accesses premier fishing and hunting opportunities on the Harris and Harris/Indian Cr. Estuaries. RCS has also detected a red pipe along this road reach. Hydrologic connectivity, foot traffic, and footbridge are resources of concern.

Treatment Description:

Good conifer thinning opportunity. Correct stream diversions. Replace footbridge. Clear trail of surface debris. If no other treatment done, footbridge and red pipe issues need to be addressed.

Harris River Red Pipe Correction

Project Area: Harris
Project Dimension: 6 Sites
Priority: Med

Location Description: Upper and Lower Harris River sub-basin.

RTE_NO	Mile Post	Channel Type	% Inlet Blocked or Damaged	Pipe Width, in	Pipe Length, ft	Habitat Length, ft	Site Description
2000240	0.057	MM_MM	0	24	30	71	Class 2_2 stream crossing with a 24" perched plastic pipe. Site is located in the Harris River campground and will need to be addressed as an individual project. No immediate treatment is recommended due to limited upstream habitat.
2024100	0.976	PA5_PA5	99	--	2	560	Class 1_1 stream crossing with a log culvert located on State land and is part of the Indian Creek Trail in the lower Harris basin across the Harris River footbridge. Beaver activity up and downstream. Culvert is packed with sediment and debris. Coho found downstream. Assess for hand crew removal of sediment and debris as heavy equipment is not an option. Only other option will be to blast and construct a bridge.
2025000	1.7		100	30	24	413	Class 2_2 stream crossing with a 30" wood culvert. Site is located on drivable portion of access road to the Twentymile Trailhead. Beaver activity upstream. Moderate to intensive hand labor can correct problem, but may be addressed as general road improvement project. Debris blocks fish passage. Install 48 inch pipe and clear pipe inlet area.
2025000	1.86	MM_MM	0	24	--	60	Class 2_2 stream crossing with a 24 inch CMP on Twentymile Trail at intersection with the 2025100 road. Sixty feet of upstream habitat is the inboard ditch of road/trail. No immediate treatment is recommended , but may be addressed in either trail improvement or 2025100 road storage projects.
2025000	3.187	PA5_PA5	90	9	--	409	Class 2_2 stream crossing on the Twentymile Trail. Drainage structure has been removed, however, beaver activity upstream and downstream have dammed the crossing and backwatered the stream onto road surface. Treatment of the site may be addressed as part of the Twentymile Trail improvement project.
2026000	0.23	HC_HC	100	18	29	125	Class 2_2 stream crossing with an 18" CMP on the "Summit" Road in the Upper Harris River. <u>The upstream 125 feet of habitat is the inboard ditch.</u> No fish found upstream. Water is piping through road prism. Habitat upstream and downstream is marginal. No immediate treatment is recommended.

924 25.94R State Road Stormproofing

Road Number_Reach: 924_25.94R_RR1

Project Area: Harris - Dollison Mine

Feature Dimension: 0.21 miles

Priority: High

Location Description: Accessible from the Hollis Highway at route milepost ~25.9.

Reach Overview: State road 924_25.94R (2024086 unofficial designation) is a drivable road that leads to an open mine shaft. Road is accessible from the Hollis Highway at route milepost 25.9. Road skirts two large rock pits. All drainage structures are in place. Some structures are completely plugged with water running across and diverted down road. Road access mine shaft that is open and flooded during high precipitation. The open mine is a public safety hazard.

Treatment Description: Block road entrance for closure. Either improve drainage structures or remove and waterbar. Secure mine shaft entrance.

Maintain & Upgrade Treatment

- Install 1 – 36” cmp
- Clean 3 cmp inlets
- Re-establish 20’ channel above pipe inlet

Closure Treatment

- Excavate 3 cmp's -Install 4 waterbars.