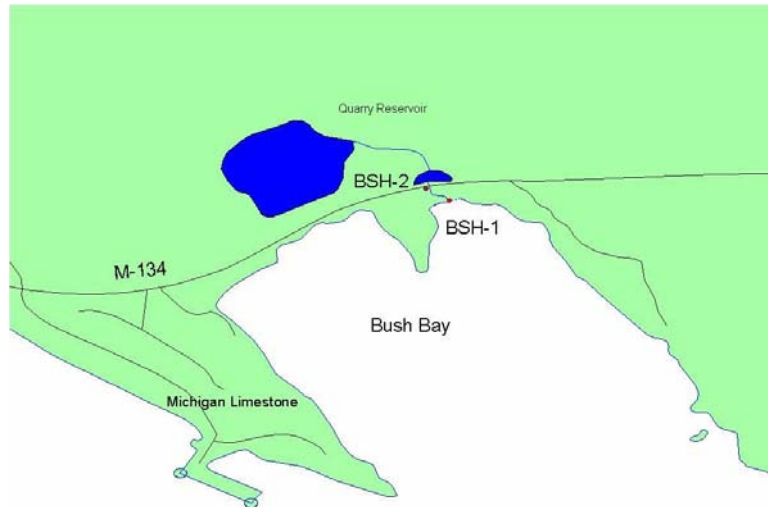


Bush Drain

at M-134
BSH-2



Upstream



Downstream



Bush Drain

at M-134
BSH-2

Bush Drain at M-134

Site I.D.: BSH-2

GPS Coordinates: N 45.99158
W 84.26928

Township: Clark

County: Mackinac

Adjacent Landowners: Private

Road Information

Jurisdiction: MDOT

Surface: Paved

Width at Crossing: 42 feet

Maintenance: Year around

Low point: At stream

Drainage Control Features: None

Approach Length: Left: 0.5 mile
Right: 0.5 mile

Slope: Left: 1-5 percent
Right: 1-5 percent

Ditch/shoulder vegetation: Left: Heavy
Right: Heavy

Average Width of Grade: 70 feet

Runoff Path: Ditch

Stream Characteristics

Average Width: Upstream: 3 feet
Downstream: 11 feet

Average Depth: Upstream: 24 inches
Downstream: 24 inches

Average Current: Upstream: Fast
Downstream: Fast

Substrate Type: Upstream: Clay/sand
Downstream: Clay/Sand

Adjacent Wetlands:

Yes

Visible Down Cutting:

Yes

Culvert Information

Culvert Type: Single

Length: 70 feet

Diameter: 30 inches

Material: Concrete

Condition: Good

Culvert Flow: Clear

Fish Passage Problem: No

Fill Depth: Inlet: 5 feet
Outlet: 5 feet

Embankment Slopes: Inlet: >2:1
Outlet: >2:1

Bush Drain

at M-134
BSH-2

Conditions and Treatment

Erosion Conditions

- Embankment erosion
- Culvert outlet erosion

Recommended Treatment

- Replace culvert with larger culvert
- Stabilize embankment
- Install rip-rap

Erosion Severity Rating: Moderate (21)

Overall Condition Rating: Minor

Cost: See BMP Cost Tables

Comments: The embankment at this road crossing needs to be stabilized around the concrete face of the culvert. The public uses this site to observe and fish for salmon during the fall spawning run. Foot traffic is stripping the grass from around the culvert. Rip-rap should be installed around these areas to stabilize the banks and prevent further erosion. 10 ft long x 3 ft wide x .01 ft/yr. x .055 tons/cu. ft. = .0165 tons/yr.

