

# Emergency Watershed Protection Program

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Draft Visual Key for Initial  
Determination of Site  
Eligibility and Classification

# Risk Factors for Channels with Bridges

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1. Soil Material
2. Height of Erosion
3. Bank Shape
4. Bridge Foundation Exposure
  - a. Abutments
  - b. Piers

# Risk Factors for Adjacent to Bridges

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1. Soil Material
2. Height of Erosion
3. Bank Shape
4. Erosion at junction of road and bridge
5. Erosion of road approaching bridge

Erosion should be active and not healing over (which would imply stability).

# Bridge: Potentially Eligible, Non-Exigent

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Bank erosion is threatening the abutment of the bridge and therefore is eligible for the program. It is not exigent due to low risk of collapse from another event.

# Bridge: Eligible, Potentially Exigent

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Stream bank erosion is affecting bridge abutment and therefore is eligible for the program. It is potentially exigent due to risk of collapse from another event. This site will need to be reviewed by an engineer to assess potential failure risk.

# Bridge: Eligible, Potentially Exigent

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Stream bank erosion is affecting bridge abutment and therefore is eligible for the program. It is potentially exigent due to risk of collapse from another event. This site will need to be reviewed by an engineer to assess potential failure risk.

# Bridge: Not Eligible

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Here the erosion from the event has damaged the property to a point that it needs to be rebuilt. EWP funds cannot be used to rebuild property, therefore it is not eligible.

# Risk Factors for Roads

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1. Soil Material
2. Height of Erosion
3. Bank Shape
4. Encroachment of erosion on road
5. Is erosion active at site?
6. Is damage from overtopping of road?
  - a. What storm event?
  - b. What about O&M?

# Road Protection: Potentially Eligible, Exigent

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Bank erosion is threatening to damage the road and looks imminent (beginning to erode into the road) thus eligible. The encroachment on the road creates an immediate need for protection, thus it is exigent.

# Road Protection: Potentially Eligible, Non- Exigent

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Bank erosion is threatening to damage the road. A site like this should be reviewed by the DSR team even though it may not look like an imminent threat. A final determination will use the present erosion damage plus depth of channel and type of soil material to assess risk of failure.

# Road Protection: Not Eligible

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Bank erosion is undermining the road and looks imminent (beginning to erode into the road). However, if the eroded area makes the site unusable (closes the road) then we have nothing to protect and therefore ineligible. Remember we cannot repair the road or other infrastructure. Road should be condemned.

# Road Protection: Potentially Eligible, Exigent

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Bank erosion is undermining the road and looks imminent (beginning to erode into the road) thus eligible. The site is potentially exigent due to the immediate threat to life or property. The damage may not look severe, but life and property would be at risk passing along this site.

# Road Protection: Potentially Eligible, Exigent

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Bank erosion is undermining the road. The depth of the erosion is not bad, but may still cause threat to life or property. Here an automobile could lose control if it has a tire drop-off along the road edge.

# Risk Factors for Channels

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1. Soil Material
2. Height of Erosion
3. Bank Shape
4. Encroachment of erosion on road
5. Is erosion active at site?
6. Is damage from overtopping of road?
  - a. What storm event?
  - b. What about O&M?

# Personal Property: Not Eligible

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The stream bank erosion has gone so far that there is nothing to protect. The structure should be condemned and thus no remaining benefits for the work.

# Channel Other: Not Eligible

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The site has definite bank erosion, but the protection would be only cropland. We cannot repair a site if the sole purpose is for agricultural production. If the site was part of the area necessary for protection of a bridge then it would be incidentally protected.

# Risk Factors Road Crossing (Culvert)

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1. Is culvert properly sized for drainage area?
2. Is culvert of sufficient length (too short increases O&M)?
3. Height of culvert placement in road embankment
4. What storm event caused the damage?

# Road Crossing (Culvert)- Potentially Eligible, Not Exigent

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The erosion around the culvert does not appear to be an O&M only problem and thus, potentially eligible.

# Road Crossing (Culvert)-Not Eligible

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The drainage area was too large for the size of culvert utilized. The culvert invert was set too high in the embankment. Finally, the culverts were too short. Each of these concerns leads to the site being an O&M problem. If the storm event was a greater than 10 year event, it could still be eligible (contact TSO Engineer).

# Risk Factors for Debris at Bridge

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1. Distance of debris from bridge
2. Percent of bridge cross-section blocked
3. Length of debris (log) jam
4. Type of material

# Debris-Bridge: Potentially Eligible, Exigent

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The debris that is deposited will continue to cause erosion with additional rains so it is eligible. The occlusion of the bridge may be a potential exigency if additional rain is expected to cause bridge overtopping with flood water that could threaten life or property.

# Risk Factors for Debris in open channels

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1. Distance of debris from housing or other structures
2. Percent of channel cross-section blocked
3. Length of debris jam
4. Type of material (will material increase disease risk)

# Debris-Channel: Potentially Eligible, Non- Exigent

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The debris in and around the channel will have an erosion effect. The debris here may cause a risk to life from increased disease and vector. This risk is from large areas of damage of this nature not isolated spots.

# Debris-Other: Not Eligible

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The debris in and around the site does cause erosion, but little effect was associated with the downstream crossings. In discussions with NHQ, the risk of flying debris near the turn pike (**bridge circled in red**) did not meet qualifications.