

United States Department of Agriculture
 Natural Resources Conservation Service
 Arizona

Operation and Maintenance Plan For Your Steambank And Shoreline Protection

Cooperator

Date

Address

Location: Section

Twn

Range

Field No.

NRCS Field Office

County

This conservation practice is an asset to your farm or ranch. This practice will need periodic operation and maintenance to maintain satisfactory performance. The life of this practice or system is at least 10 years. The life of this practice can be assured or extended by thorough and timely operation and maintenance. Here are some recommendations to help you develop a good operation and maintenance program.

GENERAL RECOMMENDATIONS

Inspect annually and after every major storm. Check for any signs or failure.

Maintain vigorous growth of desirable vegetative coverings. This includes irrigation, reseeding, fertilization, and controlled application of herbicides, when necessary.

Protect plantings by controlling rodents, beavers, livestock, fire, and human access until plantings are well established.

If fences are installed, they shall be maintained to prevent unauthorized human or livestock entry.

Immediately repair any damage from vandalism, vehicles, or livestock.

Remove trees, brush, debris, sediment, or other obstacles from the channel that might obstruct or divert flows and damage the bank protection.

Contact your local Natural Resources Conservation Service for any additional technical assistance that you might need for implementation of this operation and maintenance plan for your structure.

KELLNER JACKS AND SPIDER JACKS

Steel legged Kellner Jacks and Spider Jacks are relatively maintenance free. Usually, the greatest need for maintenance is for the vegetation within the jetty field. However, vandals can remove steel angle iron, cable, poles, and fasteners. Impact from massive floating debris can bend or break jack legs and break wires.

Inspect individual jacks for bent legs or broken lacing wires. Replace wires as necessary.

Inspect for broken cables or dislodged anchors . Repair cables, reset anchors, or install new jetty lines as necessary.

Inspect the riverbank, particularly at the upstream end of the line and at all anchors, to determine if the jetty line is in danger of becoming ineffective from bank erosion or if anchors are in danger of being washed out. Take corrective action as required.

ROCK RIPRAP

Remove tree or brush vegetation growing through the rock riprap. Only grass-like vegetation is to be allowed to thrive and spread.

Replace or reposition rock as needed to maintain slopes and cover over base materials. Replacement rock should be similar to original rock.

Check overland flow and side drainages to insure that floodwaters from the sides will not damage the riprap. Divert or otherwise handle overland and side flows away from the rock riprap.

Check rock for cracking, delamination, and disintegration.

SOIL CEMENT

Inspect for excessive scour and cracking. Repair major damage by replacing soil cement to its full thickness and compacting to design grade and specification.

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GABIONS

Gabion structures are flexible and will bend or shape themselves as a result of natural settlement but there are limits as to how much a gabion can move without failure. A critical item is to maintain support at the toe. Check for scour at the toe or scour that might advance to the toe.

Wire mesh is subject to damage from floating debris, water pollution, corrosion, wear from high velocity sediments, vandalism, etc. Repair broken wires and damaged baskets. Replace rock. After settlement has occurred, it might be necessary to place a concrete cap on some sections.

BANK SLOPING

Check for dead, stressed, or damaged trees and replace.

All settlement or cracks in the soil should be investigated to determine the cause and immediately repaired.

Remove debris that may accumulate in the channel adjacent to upstream or downstream from this installation.

Control livestock access on unfenced areas.

Control all rodents or burrowing animals. Immediately repair any damage caused by their activity.

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Specific Recommendations For Your Installation

Contact your local Natural Resources Conservation Service for any additional technical assistance that you might need for implementation of this operation and maintenance plan for your structure.