

# FY 2024 EQIP and RCPP Guidelines for Natural Stream Channel Work

## *580 – Streambank and Shoreline Protection – Bioengineered Scenario*

This is the most common 580 scenario that will be contracted when grading and installing woody vegetation on stream banks. This scenario would include bank grading, matting, and woody vegetation establishment (live stakes, plugs, rooted material, potted material, etc.) so do not plan 342 – Critical Area Planting *below the top of bank grading*. Also, do not plan 484 – Mulching where 580 is implemented since the cost of matting is included in the Financial Assistance (FA) rate.

584 – Channel Bed Stabilization - Structural scenario will be commonly contracted for in-stream structures alongside 580 Bioengineered. The 580 Bioengineered scenario includes any of the following:

- ~~Benching/grading with Erosion Control Matting~~
- Tree Revetments
- Root Wads
- Vegetated Geogrids

The 580 Bioengineered scenario would not include the following:

- Structures in the channel (log or rock vanes, cross-vanes, wing deflectors, toe boulders, etc.).  
Contract 584 for in-stream structures.

This 580 Bioengineered scenario will be measured by the linear foot (LF) of bank treated. If both banks on a 100 LF reach of stream are treated then measure 200 LF of this practice. This can be applied on one or both banks.



## *580 – Streambank and Shoreline Protection – Structural Scenario*

This 580 scenario may be contracted when installing rock structures for bank protection that do not meet the requirements of NRCS Practice Standard 584 - Channel Bed Stabilization (do not alter channel dimension or profile). The 580 Structural scenario may include any of the following:

- Rock vanes
- Rock spurs
- Boulder toe
- Any structural bank protection measures that do not alter channel dimension or profile.

The 580 Structural scenario will be measured by the ton of rock installed, therefore wood structures are not measurable. This scenario can be applied on one or both banks. There is no conversion factor for FA quantities.

Do not apply 580 Structural on any section of stream where Practice 584 is planned. These two practices must not overlap.

Do not apply 580 Structural and 580 Bioengineered on the same linear footage of stream bank.



### *580- Streambank and Shoreline Protection – Wood Structures*

This 580 scenario may be contracted when installing toe wood or brush toe where dense woody material is installed and stabilized in the toe of a bank for enhanced roughness, bank protection, and habitat enhancement. This scenario may be planned, designed, and installed for banks in high shear stress locations such as the outside bank of meanders with lower radii of curvature. Payment for this scenario will not be made for low density wood installment where bare soil is exposed.

The 580 Wood Structure scenario will be measured by the linear feet of bank treated. This scenario cannot be planned along the same linear footage where any other 580 scenario is planned. 584 Channel Bed Stabilization may be planned in conjunction with this practice scenario.



Acceptable ↑



Not acceptable ↑

## 584 - Channel Bed Stabilization

### Structural - J-Hook, Cross-Vane, etc. Requiring Boulders Scenario

This practice may be used for installing rock or wood structures using natural stream channel design when the work meets NRCS Practice Standard 584 - Channel Bed Stabilization. To meet Practice Standard 584 channel dimension and profile will be altered in order to stabilize the system. This scenario does not include bank grading and woody vegetation establishment. Plan 580 Bioengineered or Wood Structure as described previously for bank grading, protection, matting, and vegetation establishment.

This scenario may only be contracted if the participant landowner owns both sides of the stream or if landowners of both banks of the stream are participating in NRCS programs.

The 584 Structural scenario may include any of the following boulder, log, or combination structures:

- J-Hooks
- Cross-vanes
- Step-pool sequences
- Wing Deflectors
- Brush runs
- Constructed riffle structures installed for the purpose of correcting dimension or profile

This scenario would not include bank grading and shaping, which is covered under 580 – Streambank and Shoreline Protection, therefore 580 may be planned according to this guidance document along the same footage of stream where 584 is applied.

This scenario will be measured by the linear foot of channel bed stabilized. Measurement will be from the upstream to downstream extent of the hydraulic effect of the structure(s) installed. Units are in stream length (do not double for both banks).

The length of 584 applied for a structure with up and/or downstream hydraulic influence and bank protection beyond grade control (J-Hook, Cross-Vane, Wing Deflector – downstream arm only, log vane, arch structure, some constructed runs, etc.) will be measured along the plan view as 1.5 times the length of the structure upstream and downstream plus the length of the structure itself along the bank. A series of structures may have overlapping effects and therefore will be measured from the upstream extent of the effect of the upstream structure to the downstream extent of the effect of the downstream structure. Constructed riffles (for the purpose of profile stabilization) and interlocking step-pool structures will be measured by the length of the actual structure with no upstream or downstream effect *no matter how far up or downstream the structure affects the water surface profile*.

FA is quantified by the cubic yard (CY). To convert from linear feet to cubic yards for this scenario, multiply the linear feet treated by 0.5 to get cubic yards. Example: 1,000 LF = 500 CY



### *395 – Stream Habitat Improvement – Rock and Wood Structures Scenario*

This practice may be planned where habitat enhancement features will be installed in the stream channel. The Rock and Wood Scenario would be the only scenario offered because the majority of this practice incorporates both materials.

395 may be contracted on the same linear feet of stream as 580 and 584 if the habitat enhancement features are *separate and distinct* from those features installed to stabilize the streambanks and channel bed. Habitat enhancement features shall be installed throughout the contracted reach with a minimum of one habitat enhancing feature in 50% of pools and/or riffles. Examples of habitat enhancement features include boulder clusters, cover logs, and other fish holding structures. Design report shall include applicable items found in current NRCS Conservation Practice Standard 395, PLANS AND SPECIFICATIONS section. Design drawings must show details and locations of planned enhancement features. Installation of habitat enhancement features may not be possible on smaller tributaries therefore should not be planned.

Payment will be calculated by the reach length x design riffle bankfull width. Reach length is defined from the most upstream enhancement structure to the most downstream enhancement structure if these structures are installed throughout the reach.

FA is quantified by the acre. To convert from linear feet to acres for this scenario, multiply the linear feet applied by the riffle bankfull width of the stream to get acres.



## *578 – Stream Crossing*

### *Low Water Crossing Scenario*

This 578 scenario should be planned where a standard cloth and gravel ford type crossing is needed, and is the preferred type of stream crossing for most projects. If the stream bed is coarse, cloth and gravel may not be needed in the stream bed portion of the crossing. If this is the case, do not count the square footage of the crossing in the stream bed toward the contract. This practice is measure by the square foot.

### *Culvert Installation Scenario*

This 578 scenario should be planned for any size and type of culvert unless the intent of the culvert is to meet the 396 Aquatic Organism Passage. If 396 is the goal please contact the Area Office staff for guidance. Quantity is based on diameter (inches) of the culvert x length (feet) of culvert; (ex. 30" culvert that is 40' long = 30 x 40 = 1200 in-ft.).

\* Note – Contact NRCS Area Office Staff if any barrier to aquatic organism movement exists (dam, perched culvert, etc.) to see if any practice scenario is applicable to remove the barrier.

## *572 – Spoil Spreading Scenario*

This practice may be planned when significant amounts of spoil are generated on projects with high banks. The practice is measured by the cubic yards of spoil generated from bank grading/benching that must be moved away from the stream corridor and stabilized. Do not plan this practice for any other earth moving activities other than bank excavation and spoil disposal. This practice is measured by the cubic yards of earth moved. Plan 342 Critical Area Planting along with this practice to stabilize the spoil.

Spoil spreading calculations must be presented to support payment quantities. Spoil quantities are excess spoil from bank grading that must be disposed of *on site*. Spoil material contracted may not be sold or hauled offsite.

## *342 – Critical Area Planting – Native and Introduced Vegetation – Moderate Grading Scenario*

This practice will be implemented to establish herbaceous cover over areas disturbed during construction activities. Do not plan this item below top of bank where 580 is applied. This practice is measured by the acre.

*612 – Tree/Shrub Establishment – Hand plant bare root hardwoods, no tubes Scenario*

This practice will be implemented to establish a woody vegetative buffer on the terrace/floodplain. Approximate planting spacing is 12'x12' grid. Do not plan this item below top of bank where 580 is applied. Use when a buffer with an average width of less than 35 feet will be established. This practice is measured by the acre.

*612 – Tree/Shrub Establishment – Hand plant bare root hardwoods, with tubes, 300 per acre Scenario*

This practice will be implemented to establish a woody vegetative buffer on the terrace/floodplain where wildlife or other concerns validate the need for tubes on the plantings. Approximate planting spacing is 12'x12' grid. Do not plan this item below top of bank where 580 is applied. Use when a buffer with an average width of less than 35 feet will be established. This practice is measured by the acre.

*391 – Riparian Forest Buffer – Bare root shrubs, 300 per acre, no tubes Scenario*

This practice will be implemented to establish a woody vegetative buffer on the terrace/floodplain where the **average width will be equal to or greater than 35 feet**. Approximate planting spacing is 12'x12' grid. Do not plan this item below top of bank where 580 is applied. This practice is measured by the acre.

*391 – Riparian Forest Buffer – Bare root hardwoods, 300 per acre, with tubes Scenario*

This practice will be implemented to establish a woody vegetative buffer on the terrace/floodplain where the **average width will be equal to or greater than 35 feet** and where wildlife or other concerns validate the need for tubes on the plantings. Approximate planting spacing is 12'x12' grid. Do not plan this item below top of bank where 580 is applied. This practice is measured by the acre.



### ***390 – Riparian Herbaceous Buffer – Pollinator Habitat***

This practice will be implemented to establish pollinator habitat enhancement as a component of the vegetated stream buffer. There is no minimum width unless this practice is implemented specifically to maintain or improve water quality (ex. filter from concentrated livestock area, excessive erosion from crop field, or other identified source of pollution). If the practice is installed primarily to maintain or improve water quality then minimum buffer width shall be increased to 2.5 times stream bank full width.

This practice is measured by the acre. Do not plan 342, 612, or 391 on the same acreage as this practice.

Additional requirements: A minimum of nine (9) species MUST be included in the planting specification. Only two (2) grasses may be included in the prescribed seeding mix. At least three (3) species shall have their primary blooming period during each of the following time frames: Period 1: April 1 – June 15; Period 2: June 15 – July 31; Period 3: August 1 – October 31. The Planting Specification Worksheet and Native Pollinator Seed List OR a list that has been developed by an appropriate experienced professional (e.g., wildlife biologist, biologist, WRC biologist, entomologist, etc.; if in question, please contact the NRCS State Biologist) can be utilized to identify appropriate species for the site.

### ***484 – Mulching – Erosion Control Blanket Scenario***

This practice may be planned with 612 – Tree/Shrub Establishment or 391 – Riparian Forest Buffer. This practice could be used to mulch around desirable trees planted after removal of invasive plants on a section of stream bank with stable cross-section dimensions. Do not plan this practice on the same footage where 580 is planned. Do not plan this practice for extensive matting installation on the floodplain. This practice is measure by the square footage of area treated.

***All NRCS practice standards and statements of work can be found on the [eFOTG](#).***