

Volume 2, Chapter 12 - Revegetation

Users' Guidance:

If a UDFCD *Section* number in this chapter is **skipped**:

It was adopted as is; please refer to that *Section* in the **corresponding UDFCD Manual**, Volume, Chapter and *Section*.

If a UDFCD *Section* number in this chapter is **amended** or a new COFC *Section* in this **Chapter is added**:

It is **listed below**; please refer to it in **this document**.

If a UDFCD *Section* in this chapter is **deleted then** it was **not** adopted by the City of Fort Collins; The deleted UDFCD *Section* number will be **identified as deleted in the text below**.

- (1) A new *Section 3.1.1* is added, to read as follows:

3.1.1 Cattail Plantings

Cattail plantings are generally not recommended for use as wetland plantings in the city of Fort Collins. These may be allowed as part of an overall wetlands mitigation plan, when they are part of a more diversified ecological system upon review and approval by the City.

- (2) *Section 3.3* is amended to read as follows:

3.3 Seeding and Planting

- (a) Seed mixtures must be sown at the proper time of year specified for the mixture.
- (b) Recommended seeding rates specified as “pounds pure live seed per acre” (lbs PLS/acre) should be used.
- (c) Seed should be drill seeded, whenever possible.
- (d) Broadcast seeding or hydro-seeding may be substituted on slopes steeper than 3(H):1(V) or on other areas not practical to drill seed.
- (e) Seeding rates must be doubled for broadcast seeding or increased by 50% if using a Brillion drill or hydro-seeding.
- (f) Broadcast seed must be lightly hand raked into the soil.
- (g) Seed depth must be $\frac{1}{3}$ to $\frac{1}{2}$ inch for most mixtures.
- (h) All seeded areas must be mulched, and the mulch should be adequately crimped and or tackified.
- (i) If hydro-seeding is conducted, mulching must be conducted as a separate, second operation.

- (j) All containerized nursery stock must be kept in a live and healthy condition prior to installation.
- (k) Containerized trees and shrubs must be installed according to the planting details provided in Section 4.4 of this chapter.
- (l) Live stakes, poles and willow bundles must be installed when dormant (late winter and early spring) according to the planting details in Section 4.7.
- (m) Beaver protection must be provided for trees and shrubs for species known to be attractive to beavers if beavers are known to be in the area (see Figure RV-6).

(3) *Section 3.4* is amended to read as follows:

3.4 Maintenance

- (a) Sites must be routinely inspected following planting to implement follow-up measures to increase success. Immediate attention to a problem (e.g., weed infestation, failure of seed to germinate) can prevent total failure later.
- (b) Areas that have been planted or seeded must be monitored at least one spring and one fall season to ensure that physical evidence of growth has been adequately established. Physical evidence of growth shall include no more than 6 inches of bare spots and a minimum of seventy percent of vegetative cover over the entire seeded or planted area. If these minimums are not attained after one fall and one spring season, planted areas shall be re-seeded appropriately as soon as practical.
- (c) Access to and grazing on recently re-vegetated areas should be limited with temporary fencing and signage while plants are becoming established (normally the first year).
- (d) Weed infestations should be managed using appropriate physical, chemical, or biological methods as soon as possible. See Vol. 2, Ch. 12, Sec. 6.0, "References" for more detail on weed management options.)
- (e) Stakes and guy wires for trees should be maintained and dead or damaged growth should be pruned.
- (f) Beaver protection cages should be used around tree plantings.
- (g) Mulch should be maintained by adding additional mulch and redistributing mulch, as necessary.
- (h) Areas of excessive erosion should be repaired and stabilized.
- (i) Planted trees and shrubs should be watered monthly or as needed from April through September until established.

(4) *Section 4.2* is amended to read as follows:

4.2 Soil Amendments

Soil amendments must comply with all requirements set forth in sections 12-130, 12-131 and 12-132 of the City Code as well as Section 3.8.21 of the City Land Use Code or other related provisions.

When soil is amended the following provisions must be complied with:

- (a) The soil in such areas must be thoroughly loosened to a depth of not less than eight (8) inches.
- (b) Soil amendments must be thoroughly incorporated into the soil of such areas to a depth of at least six (6) inches by tilling, disking or other suitable method, at a rate of at least three (3) cubic yards of soil amendment per one thousand (1,000) square feet of area to be planted, unless at least four (4) inches of loose top soil has been placed on the area after completion of construction activity on top of not less than four (4) inches of loosened sub grade soils.

(5) *Section 4.5* is amended to read as follows:

4.5 Mulching

All planted areas must be mulched within twenty-four (24) hours after planting. Mulch conserves water and reduces erosion. The most common type of mulch used is hay or grass that is crimped into the soil to hold it. However, crimping may not be practical on slopes steeper than three to one (3H: 1V).

The following guidelines must be followed when mulching:

- (a) Only weed-free and seed-free straw mulch may be used (grass hay often contains weedy exotic species). Mulch should be applied at two (2) tons per acre and adequately secured by crimping, tackifier, netting, or blankets.
- (b) Crimping is appropriate on slopes of three to one (3H : 1V) or flatter and must be done so as to tuck mulch fibers into the soil three to four inches deep.
- (c) Tackifier or netting and blankets anchored with staples must be used on slopes steeper than three to one (3H : 1V)
- (d) Hydraulic mulching may also be used on steep slopes or where access is limited. In these circumstances, wood cellulose fibers mixed with water at two thousands (2,000) to two thousands five hundred (2500) pounds per acre and organic tackifier at one hundred (100) pounds per acre to four hundred (400) pounds per acre, depending on slope, must be applied with a hydraulic mulcher.
- (e) Wood chip mulch must be applied to planted trees and shrubs, as shown in Figures RV-2 and RV-3.

Additional details on mulching can be found in Volume 3 of this Manual.

(6) *Table RV-1* is adopted with the following modification:

All references to wildflowers are deleted.

(7) *Table RV-2* is adopted with the following modification:

All references to wildflowers are deleted.

(8) *Table RV-3* is adopted with the following modification:

All references to wildflowers are deleted.

(9) *Table RV-4* is adopted with the following modification:

All references to wildflowers are deleted.

(10) *Table RV-5* is adopted with the following modification:

All references to wildflowers are deleted.

(11) *Table RV-6* is adopted with the following modification:

All references to wildflowers are deleted.

(12) *Table RV-7* is deleted in its entirety.

(13) A new *Section 5.1* is added, to read as follows:

5.1 Land Disturbing Activity and Security

- (a) No land disturbing activity subject to this Stormwater Criteria Manual is permitted to commence until an Erosion Control Plan has been approved by the City and the responsible party has provided security designated to ensure the rehabilitation of the disturbed land. Land disturbing activity refers to any activity that results in a change in the existing soil cover (both vegetative and non-vegetative) and/or the existing soil topography including but not limited to, clearing, grading, excavation, demolition, installation of new or improved haul roads and access roads, staging areas, stockpiling of fill materials, and borrow areas. It does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of the facility. A performance bond, irrevocable letter of credit, or cash escrow, acceptable to the Utilities Executive Director, and naming the City as the protected party, is required. Such performance bond, irrevocable letter of credit, or cash escrow shall further guarantee the continued maintenance and replacement of any installed erosion control measures shown on the approved plan.
- (b) The amount of the security must be based on one and one-half times the estimate of the cost to install the approved measures, or one and one-half times the cost to re-vegetate the disturbed land to dry land grasses based upon unit cost determined by the City's Annual Revegetation and Stabilization Bid, whichever is greater. In no instance, will the amount of security be less than one thousand five hundred dollars (\$1,500) for residential development or three thousand dollars (\$3,000) for commercial development.
- (c) If the requirements of an approved Erosion Control Plan are not be complied with, the City may apply such portion of the security deposit(s) as may be necessary to pay all costs incurred by the City in undertaking the administration, construction, and, or the installation of the erosion control measures required by any plan and these criteria. In addition, the City shall have the option to pursue any other legal remedy available to it under any development agreement or as it deems necessary in order to ensure that the required erosion control measures are implemented.
- (d) In the event that the City exercises its rights under the security or pursues any other legal remedy, the City is not thereafter obligated to routinely administer the construction of the measures shown on the Erosion Control or SWMP Plan. However, the City reserves the right to enter upon the land and take whatever actions are necessary to stabilize and re-vegetate all disturbed areas, or to have the plan constructed and to make repairs as necessary.
- (e) Upon acceptance by the City of the initial installation of all erosion control and sediment transport measures, the security may, at the request

of the owner, be reduced to twenty-five percent (25%) of the original amount. This remaining amount will be retained by the City until erosion control and sediment transport measures on the project are no longer necessary (when all permanent erosion control measures are complete and/or all required re-vegetation measures installed and established through two growing seasons). If the City determines after completion of the Close-Out Inspection as defined in *Section 6.12, Volume 1, Chapter 1*, that the responsible party has met all of the applicable requirements and the security will be released.

(14) A new *Section 5.2* is added, to read as follows:

5.2 Warranty

- (a) The responsible party must warrant that the measures shown on the approved Erosion Control Plan are properly constructed, installed, and are free from defective materials and/or workmanship, with said warranty to continue for the terms set forth below.
- (b) The responsible party must warrant and maintain all vegetative measures for two growing seasons after installation or until seventy percent (70%) vegetative cover has been established. Any acceptance of installed measures shall not be construed to relieve the responsible party of the duty to warrant and maintain the installed vegetative measures as aforesaid.