



Guidelines for the Reclamation of Land Disturbed Due to Construction Activities

Glastonbury Administrative Office
Box 316, Emigrant, MT 59027
(406) 333-4914

COMMUNITY OF GLASTONBURY
Guidelines for the Reclamation of Land
Disturbed Due to Construction Activities

1.0 STATEMENT OF PURPOSE

The purpose of these guidelines is to establish minimum standards for the reclamation of land within the Community of Glastonbury which has been or will be disturbed by construction activities. The reclamation of all areas disturbed by construction is required in order to ensure that the land is restored to a stable landscaped condition that will preserve and enhance the natural beauty of the community, prevent soil erosion, excess runoff and the degradation of surface water quality, and control the growth of noxious and unsightly weeds.

2.0 MINIMUM RECLAMATION STANDARDS

Reclamation activities should be included in the initial planning of every project. The most important element in successfully restoring and landscaping a site disturbed by construction is having sufficient topsoil to support the growth of grass, shrubs and trees. Topsoil in this area is thin and extremely valuable because it is in such short supply. Nonorganic subsoils, or topsoils indiscriminately mixed with subsoils, will not usually support the growth of healthy and attractive vegetation. Property owners and their contractors are therefore responsible for removing and preserving the topsoil on areas of their property to be disturbed prior to the beginning of construction, replacing the topsoil after construction, and then seeding, mulching, irrigating and controlling runoff, erosion and weed growth until healthy vegetation is reestablished.

2.1 Surface Preparation, Replacement of Topsoil and Finish Grading

2.1.1 Topsoil should be stripped and stockpiled from the area intended to be disturbed by construction activity prior to commencing any excavation. The topsoil stockpile should be located out of the area to be disturbed by the construction activities and out of natural drainage swales or water courses. Property owners are advised to seed the topsoil pile with annual rye to reduce the growth of noxious and unsightly weeds and minimize wind erosion during the time that the topsoil remains stockpiled unless it is to be replaced immediately.

2.1.2 Property owners or contractors who are trenching for underground pipes or utilities should place topsoil to one side of the trench and subsoils to the other side. The

topsoil will then be available separate from the subsoils for restoring the surface during backfilling operations. Topsoil should not be used for bedding underground pipes or wires and should not be mixed with nonorganic subsoils.

2.1.3 All areas disturbed by construction activities should be reclaimed by replacing topsoil, reestablishing vegetative cover, eradicating or controlling the growth of noxious and unsightly weeds, and preventing soil erosion, excess runoff and the degradation of surface water quality.

2.1.4 After construction, the area to receive topsoil should be cleared of all debris, large rocks, roots, stumps and other material which would be foreign to the landscaped appearance that is desired. Waste organic material cleared from the site must be hauled to an approved landfill area, buried on-site in an excavated hole, or burned on-site. If material is buried or burned on-site, the disturbed area should be restored as part of the reclamation project.

2.1.5 If material is burned on-site, the property owner must obtain an outdoor burn permit from local authorities before commencing any burning activities and the burn area must be reclaimed in accordance with these guidelines. No hazardous or toxic materials may be burned. No burning should occur during excessively dry or windy periods and care must be taken not to allow fires to burn out of control or escape from the property owner's land. All burning shall be conducted in accordance with Section 5.02 of the Declaration of Covenants, part of which provides that a landowner "shall be liable to any damaged party for any negligently caused fires escaping from his parcel."

2.1.6 Piles of boulders, rock, rubble and excavated waste material may not be left unreclaimed in the aftermath of a construction project. These remains are unsightly and many in the community find them to be objectionable and a nuisance. In addition, they are prone to erosion and the propagation of weeds. Excess excavated material from construction must be graded, contoured, attractively landscaped and reclaimed with topsoil and new vegetation. However, property owners may elect to discreetly stockpile some boulders or rocks out of sight for use in future construction, attractive landscape design or drainage control, provided that it is not allowed to become a nuisance or eyesore.

2.1.7 Prior to the replacement of topsoil, the area should be graded, raked and contoured to the shape of the final landscape. The area should be rough graded to create the final landscaped contours with the subsoil to prevent the use of excessive quantities of topsoil to fill in depressions and form a smooth surface appearance. Smooth, gradual slopes

in the surface contours of the site should be provided around buildings, in naturally occurring drainage swales and over other areas of the site to enhance the movement of surface storm water runoff (such as rain water off the roofs of buildings) and to prevent the accumulation of water against building foundation walls. Rough grading work should not be undertaken when the native soil is excessively wet, muddy, or prone to clumping and rutting.

2.1.8 After the rough grading is completed topsoil should be spread and raked to a uniform thickness equal to the original conditions, or a minimum of at least 3 to 4 inches. As noted above for the rough grading, finish grading of the topsoil should not be done during rainy weather or when the soil is muddy.

2.1.9 Following the placement of topsoil, the area should be raked smooth and cleared of all rocks, sticks, roots and foreign debris which would inhibit the growth of grass or detract from the desired appearance of the site. Variations in a uniform slope that cause depressions in excess of 3 inches across 10 feet of grading will tend to hold surface water and become muddy patches.

2.1.10 Placement of additional topsoil may be required to repair areas where the subsoil has settled due to inadequate compaction of backfill deposited during construction activities, such as excavated trenches or around foundation walls. Where these repairs to the graded contours become necessary, the placement of subsoil backfill material should be considered to bring the ground surface to the desired elevation prior to the placement of additional topsoil.

2.2 Seeding, Mulching and Irrigating

2.2.1 Freshly graded areas should be seeded with the proper blend of grass seed at the recommended application rate (refer to Sections 3.1 and 3.2) to ensure adequate coverage of the area.

2.2.2 After the grass seed has been planted over the area (by broadcasting or drilling), straw mulch, jute or hemp mats or other suitable covering should be placed over the area to assist in holding in the moisture, preventing the wind from blowing the seeds and the birds from eating them, protecting the fresh topsoil from erosion by resisting the movement of surface water, and inhibiting the growth of weeds.

2.2.3 All seeded areas should receive irrigation water daily for a period of up to one month, or until the grass has reached a height of 3", whichever comes first. This is

necessary for proper germination of the seed and for the development of a healthy and stable root system.

2.3 Erosion Control and Prevention of Sediment Transport

2.3.1 For disturbed areas that have a ground slope greater than 4% (1 foot vertical drop in 25 feet horizontal run), any areas immediately above streams or active drainage courses, and other areas as may be required by the Glastonbury Project Review Committee, additional temporary erosion control measures will be required. These measures may include the placement of continuous lines of straw bales staked to the ground to ensure the protection of the down gradient streams and areas from runoff and sediment transport or other measures recommended by the Glastonbury Project Review Committee. These measures must remain in place until the root structure of the grass has developed adequately to stabilize the fresh topsoil (usually a minimum of one complete growing season).

2.3.2 Straw bales should be placed above the upper edge of a reclamation area in swales and natural drainages that run through the site and may be recommended in a continuous line along the upper edge of a disturbed area where the size of the drainage area and the steepness of the ground could cause significant erosion.

2.3.3 The locations of the lines of straw bales and other erosion control measures should be shown on site drawings for construction projects.

3.0 RECOMMENDED GRASS SEED MIXTURES AND APPLICATION RATES

3.1 It is recommended that irrigated areas be seeded at a rate of 1 lb. per 300 square feet (145 lbs. per acre) with a mixture that consists of a blend of the following grasses:

Park Kentucky Bluegrass	30%
Pennfine Perennial Rye Grass	30%
Creeping Red Fescue	20%
Kentucky Bluegrass	20%
TOTAL PERCENTAGE	100%

3.2 It is recommended that unirrigated areas be seeded at a rate of approximately 20 lbs. per acre with a mixture similar to a Native Prairie Mixture (available at local seed suppliers), which consists of a blend of the following grasses:

Fairway Crested Wheatgrass	35%
Slender Wheatgrass	10%
Dura Hard Fescue	10%
Side Oats Grama	10%
Western Wheatgrass	10%
Prairie Sand Reed	10%
Green Needle Grass	15%
TOTAL PERCENTAGE	100%

3.3 Season of Planting

Seeding is usually most successful if undertaken during the spring, generally during April/May when the soil is workable. The first year's germination and growth rate is generally slower than in succeeding years. Fall seeding may be successful if adequate measures are taken (such as extensive mulching) to protect the seeds from wind erosion, birds and runoff.

4.0 WEED CONTROL

4.1 Noxious weeds (principally spotted knapweed, leafy spurge and Canadian thistle) must be eradicated or controlled in the reclamation areas by spraying with herbicide, hand pulling the plants and their roots, grazing down with sheep or goats, and/or in some cases mowing.

4.2 Unsightly weeds such as tumbleweed, mustard, broad-leaf plants, etc. are most effectively controlled by establishing a healthy growth of natural grasses adapted to the

irrigated or unirrigated conditions, accompanied by grazing or mowing. After a few seasons, the natural grasses will become dominant and tend to suppress the growth of the weeds.

4.3 Consult with the Glastonbury Administrative Office and/or the Park County Weed Control Program for information and instructions concerning your specific circumstances.

5.0 CONTRACTORS

Contractors are required to follow these guidelines to the same extent as property owners. However, it is the responsibility of property owners to notify their contractors of the guidelines and to require in contracts that proper reclamation practices be followed in accordance with these guidelines.

6.0 LANDSCAPING ASSISTANCE

The Glastonbury Administrative Office is available to give assistance and recommendations on landscaping methods, trees, shrubs, windbreaks and irrigation systems that have been used in Glastonbury or are adapted to this area. Contact the Glastonbury Administrative Office at (406) 333-4914 for further information.