

TRPA Revegetation Plan Template

Soil restoration and revegetation activities required as part of a Project's permitted conditions must submit a complete TRPA Revegetation Plan:

A. SITE DESCRIPTION

Information needed includes location, land capability, site conditions such as soil type and infiltration rate, vegetation types, extent of sun and shade, presence of sensitive areas such as stream environment zones or backshore, and relevant site characteristics such as rock outcroppings.

Project Address:

Assessor's Parcel Number (APN):

NRCS Soil Map Unit: Max depth of Install: Ksat (in/hr):

Land Capability:

TRPA Permit Number:

Detailed Site Description:

B. PROJECT DESCRIPTION, GOALS, AND OBJECTIVES

This section describes the reasons why the revegetation project is being undertaken and what the project will achieve. Project goals and objectives should directly relate to the problem the project is intended to address, and depict issues that will continue or result if the project is not implemented. These goals will guide the selection of success criteria. While the BMP handbook generally focuses on revegetation for the purposes of erosion control, other project goals and objectives include restoring vegetative diversity, creating wildlife habitat, fulfilling scenic screening requirements, and providing water quality treatment.

C. PROJECT SCHEDULE

Provide a detailed schedule for each element of the plan. The schedule will depend on the complexity and scale of the project, but at a minimum will typically include dates for temporary BMP installation, pre-grade inspection, topsoil salvage, soil loosening and amendments, seeding, planting, irrigation, weeding, removal of irrigation system, final inspection, etc.

D. SELECTION OF PLANT MATERIALS

Use the description of common Revegetation Site Types, Site Type Recommended Species List, Site Type Recommended Seed Mixes, and TRPA Approved Plant Species Attributes Table to guide the plant selection process for any Lake Tahoe Region revegetation project. Once selected, list plant materials in the plant materials table. Plant materials selected must be robust, free of disease and insect infestation, and have vigorous foliage and wood. Plants should be from a reputable nursery and grown locally or in a similar climate. Seeds should be approved for purity, germination, and be weed free.

PLANT MATERIALS						
Species (Botanical Name)	Species (Common name)	Transplant	Container Size	Quantity	Planting Density / Spacing	Seed – pounds of pure live seed per acre
Total Pounds of Pure Live Seed Per Acre						

E. PROJECT INSTALLATION

1. Contractor Requirements

List any contractor requirements or qualifications such as licenses, references, bonding, written guarantees, or submittals. List any specialized experiences required or desired, such as a landscaping background or experience establishing native plants in challenging conditions including steep slopes or poor soils.

2. Measures to Avoid or Minimize Project Impacts

This section describes measures that will avoid or minimize impacts of this revegetation project on the physical environment. These measures include conserving native soil, protecting existing vegetation, minimizing soil disturbance during revegetation treatments, and preventing the introduction or spread of invasive, nonnative plant species.

3. Site Preparation

Specific treatments will likely be necessary to prepare the site before attempting to establish vegetation. Information provided for this section should include the approach and schedule for site preparation and details on these treatments as applicable:

(a) SALVAGE EXISTING NATIVE PLANTS FOR TRANSPLANTING

Identify any vegetation on-site being salvaged for transplant, including cuttings, and describe specific measures taken, such as storage and care, to ensure survival.

(b) REMOVAL AND STORAGE OF TOPSOIL AND DUFF

Salvage topsoil and duff for use later in the project. This also preserves native seed stock in the existing topsoil to enhance revegetation success.

(c) GRADING AND SLOPE SHAPING

Describe what grading or earth moving activities are required for the revegetation project. Land alteration activities involving more than 3 cubic yards must be permitted through TRPA. Soil preparation on slopes may require physical modification or surface roughening.

(d) SOIL LOOSENING

Describe physical activities required to restore soil infiltration capacity and aeration to compacted soil areas. To reduce soil compaction, first remove topsoil. Then loosen subgrade of compacted soil areas to an average depth of 12-inches. Soil loosening may be performed with hand tools (such as a pick mattock or Pulaski) or a mini excavator equipped with backhoe bucket. Soil should be loosened but not turned or inverted. Soil loosening should also be uneven in depth by at least 1-2 inches to reduce the chance of soil slumping. Avoid existing plants and tree roots.

(e) SOIL AMENDMENTS/FERTILIZER

Describe the type, quantity, and application rate of any soil amendments or fertilizers used to improve physical, chemical, or biological properties of the soil. Summarize soil testing results, including nutrients (e.g. phosphorus and nitrogen), with soil concentrations specified in the results and, if applicable, in the fertilizer management plan.

(f) WEED CONTROL

Describe measures necessary to eradicate and/or prevent the spread of weeds on-site. Provisions should include the method, frequency, and extent of weed control activities. List noxious weeds potentially susceptible for the project area and train staff to identify and remove them before they can produce viable seed. More information on weed identification and prevention can be found at the Lake Tahoe Basin Weed Coordinating Group website: www.tahoeinvasiveweeds.org.

4. Installation of Plant Materials

Describe installation methods and provide a plan to scale depicting density, arrangement, and locations of plant materials used. Proper handling and storage of plant materials should also be addressed here. Plant materials may include transplants of existing plants salvaged during the site preparation process, cuttings, containers of trees, shrubs, and herbaceous plants, as well as seed selected from the Site Type Recommended Species List, Site Type Recommended Seed Mixes, and TRPA Approved Plant Species Attributes Table.

5. Irrigation

Describe the irrigation methods necessary for vegetation establishment. Methods range from hand watering to drip, bubbler, and spray irrigation systems. Include where the irrigation water will come from. Outline system components, timing (including timing of removal, if applicable), application rates, and any maintenance needs to ensure systems are operational and effective.

6. Soil Stabilization

Describe soil stabilization practices, which may include reapplication of salvaged duff material collected and stored during the site preparation process, bare soil protection using inorganic and organic mulch, biotechnical treatments, and any use of tackifiers and soil binders.

F. REVEGETATION MAINTENANCE

List maintenance requirements necessary for vegetation establishment, such as weeding, pruning, watering, replacing dead plant material, and removing trash and debris. Include any adjustments needed to the irrigation system during the maintenance period as well as a process to “wean” plants off of irrigation by the end of the maintenance period. Provisions should include reapplication of mulches and amendments as needed. Incorporate any long-term soil and vegetation maintenance activities into the BMP Inspection and Maintenance Plan, described in Chapter 6 – Inspection, Maintenance, and Monitoring.

Provide a timeframe for the maintenance period (typically 2-3 years) and relate this to the revegetation performance requirements or success criteria.

G. SUCCESS CRITERIA AND PROJECT CONCLUSION

This section describes the vegetation that would result from successful project implementation and includes a description of a reference plant community or other standard used and the rationale for choosing this reference community or standard. Success criteria must reflect project goals and objectives and state the desired condition of the revegetated site. Criteria may include attributes such as percent vegetative cover, soil surface cover, plant survival, soil penetrability, and absence of any visual signs of rills or erosion. If success criteria are not met, causal factors should be determined and remediation actions taken. This section must describe those remediation actions to be taken should the revegetation not meet the success criteria.

Additional items needed to conclude the project may include as-built drawings, clean up provisions, and scheduling final inspections to evaluate performance standards.

During the final inspection, inspectors will use the criteria listed in the approved Revegetation Plan in addition to visual assessments of vegetation establishment to determine project success. Please note that establishment of vegetation generally takes between two and three complete (May – September) growing seasons.