



Las Campanas Water Cooperative

SANTA FE, NEW MEXICO

Steps to Successful Revegetation

Tracy Neal, 2023

When native vegetation is damaged by construction-related activities in Las Campanas, homeowners are required to revegetate the damaged areas. Native grasses are the primary component of the revegetation process in the areas outside courtyard walls and private areas, but native wildflowers, shrubs and trees are also used to create a complete environment. Good revegetation serves a number of functions. It helps rebuild damaged soils, lessens the potential for erosion, and provides visual enhancement.

Successful revegetation involves taking into consideration a number of factors that include:

1. Timing—Native grasses used in revegetation are predominantly warm-season grasses, meaning they will neither germinate nor grow until there is sufficient and consistent soil warmth. In Las Campanas this typically means a mid-May time frame. If seeding is done too early, the un-germinated seed may blow away or be eaten by animals.

Warm-season grasses start to go dormant with the first hard frost. Since it can take 8-10 weeks for grasses to get rooted well enough to survive a dry winter, it's best not to sow seed after mid-August. Best results are usually achieved by sowing seed from mid-May to mid-August.

2. Soil preparation—Grasses and wildflowers need a good seedbed to get off to a good start. If the soil is not too compacted from trucks and heavy equipment, simply raking it to break up the crust may be all that is needed to prepare it for successful seeding. If the soil is very compacted (especially if it has been driven on while wet), more than raking will be required. Breaking up the soil to a depth of 12-15 inches leads to the best long-term growth, but even loosening the soil to a depth of 4-6 inches with a rototiller will help the plants get growing.

Though native grasses will grow in the natural soil around Las Campanas, mixing some good compost into the top six inches of soil helps substantially with germination and early growth. Keep in mind that there are always weed seeds in the soil and your revegetation efforts will stimulate the weeds to grow. In soils that are tilled, a lot of weed seeds are brought to the surface. In such situations, watering enough to germinate the first crop of weeds and then removing these before you seed with native grasses greatly reduces weed problems.

3. Seeding rate—Though it is often recommended to sow native grasses at a rate of 1 pound per 500 square feet in order to create a “natural look,” you may want to seed more heavily in areas around the house and on slopes. Seeding at rates of 1 pound per 100-200 square feet will give a much denser cover the first year and help control erosion better. This grass cover will thin out over time to a more natural look when it is not irrigated.

4. Mulch and binder—Keeping the seed in place and keeping it moist enough to germinate can be a real challenge with our winds and high summer temperatures. A naturally-derived binder sprinkled over the seed or mixed in with it acts like glue to help keep the seed in place.

Covering the seed with a good mulch is important to help keep it from drying out during the critical early establishment phase. A mixture of fine compost and coarse sand (e.g., playground sand) spread over the seed to a depth of one-fourth to one-half inch creates a good mulch, as will many other materials. The basic purpose of any mulch is to keep the seed covered and moist, allowing water to penetrate and seedling grasses to come up through it once they sprout.

5. Watering—The primary cause of failure in most revegetation work is a lack of sufficient water throughout the establishment period. Using enough water to keep the seed moist and get new grasses and wildflowers well established often means going over the annual water allocation for a lot, which results in higher water rates the first year. This should be factored in as a cost of construction. The long-term goal is to develop a permanent, drought-tolerant native groundcover that requires little to no supplemental water in subsequent years.

The top half inch of soil needs to stay moist in order for seeds to germinate well. This may require watering up to three times a day during the germination phase, which typically lasts two to three weeks. Keeping the top of the soil moist requires watering for short periods frequently. Sometimes nature helps out by bringing us summer showers, but these

usually come after the hottest, driest period from late May to July; an occasional sprinkle doesn't obviate the need for consistent irrigation.

After the seed has germinated, it is important to maintain moisture in the top inch of soil, which keeps new roots growing well. This usually means watering twice a day in most areas. This schedule should be maintained for another two to four weeks, to insure good rooting-in. After that, the frequency can usually be reduced to once every day or two for another month, followed by watering every five to seven days until the end of the season. Once seedlings have rooted in and the irrigation frequency has been reduced, watering for longer periods helps develop a deeper, more drought-tolerant root system.

6. Seed Selection—An optimal outcome begins with correct seed selection. Blue grama grass is the dominant native grass here and works well by itself in some applications. It can be purchased locally at the following nurseries: Agua Fria, Newman's, Payne's, and Plants of the Southwest. These nurseries also carry buffalograss seed, which is often used in mixtures but doesn't tend to make a good cover by itself because it germinates over a span of several seasons.

A good mixture of native grasses called Santa Fe Trail Native Grass Mix may be offered at Agua Fria and Payne's nurseries. Plants of the Southwest has a popular mixture called Dryland Blend, as well as many native grasses sold individually. A site-specific mixture of grasses can be created from these individual native grass seeds. Adding seed for local wildflowers and shrubs will create a more complete revegetation mix that has greater environmental benefits than grasses alone. No matter where you buy seed, ensure that you use only seed for plants listed on the Las Campanas Natural Area Approved Plants List (see "Natural Area Approved Plant List" document).

Tracy Neal has worked in the field of horticulture for over fifty years. He moved to Santa Fe in 1986 to work as the nursery manager at Santa Fe Greenhouses. Since 1995 he has worked as a landscape consultant, designer, and teacher. He became a Certified Arborist in 2000 and is a member of the City of Santa Fe Municipal Tree Board. He currently works as the landscape consultant for the Design Review Committee of the Las Campanas Master Association.