

# Landscape Manual Second Edition

Woodland Village Association Landscape Manual

Last updated June 6, 2004

This landscape guide was produced for Woodland Village in order to assist homeowners in creating imaginative, efficient, front yard landscapes, in compliance with Article 208 of the Washoe County Development Code.

The front yards of all residential lots within Woodland Village shall be landscaped by the homeowner or a qualified, licensed landscape contractor hired by the homeowner. In purchasing a home in Woodland Village the homeowner agrees to **completion of landscaping (except behind the fence) within one year of close of escrow. No extensions will be permitted.**

**Upon completion of landscaping (except behind the fence) within one year of close of escrow,** Lifestyle Homes will reimburse homeowners from \$500 to \$1,000, depending on their lot size and location. For example, a corner lot with a greater landscape area will receive a \$1,000 reimbursement, whereas a smaller “street” lot will receive \$500.

## II. WOODLAND VILLAGE ASSOCIATION (The “Association”)

The Association, as specified in the CC&R’s will enforce provisions that visible areas of a homeowner’s lot are landscaped and kept in a neat and attractive manner as described in this guidebook. The Association’s duties will include, but not be limited to, the following:

- Assure that front yards, side yards and RV parking areas are landscaped within the time period specified above, following individual plans approved in advance by the Woodland Village Design Committee. In very rare cases, we may grant an extension of the completion date.
- Assure that front yard landscaping is pleasing in appearance and reflects pride of ownership. The Association has the right to demand that landscaping contrary to the percentages described in this guidebook be corrected.
- Assure that once the landscaping is done it is properly maintained, including being kept free of weeds.
- Assure that the side yard on corner lots is landscaped and maintained.

If a homeowner fails to landscape their property, or to maintain the landscaping, the Association will use every available legal means to encourage them to do so. Enforcement could include, but not be limited to, letters, phone calls, fines, liens, arbitration, or legal proceedings that could result in substantial costs.

## III. PERMIT REQUIREMENTS

**Before installing any irrigation system, each homeowner shall obtain an irrigation permit from Washoe County for the backflow prevention device.**

**Pre-approval of landscape designs by the Woodland Village Design Committee is required, to ensure that the design complies with this manual. In the event that completed landscaping does not comply**

**with this manual, the homeowner may be required to pay a fine and/or remove and replace the landscaping.**

Many activities a homeowner may wish to undertake on their lot also require the approval of The Association's Design Review Committee.

## **IV. STREET TREES**

Woodland Village is designed to reflect the elements of a traditional neighborhood with sidewalks (one side only) and tree lined streets. Whenever possible Lifestyle Homes will install, depending on the lot size, one to three deciduous shade trees along the street in front of each home. Each street will have a thematic street tree consistent throughout each neighborhood.

The Association is responsible for pruning and maintaining all street trees installed by Lifestyle Homes. **It is the homeowner's responsibility to water the tree and remove any fallen leaves.**

Trees will be pruned by the Association to maintain a minimum clearance of 13.5 feet over roadways as required by Washoe County.

## **V. DESIGN**

### **Demonstration Gardens**

Demonstration gardens are helpful in obtaining gardening ideas and selecting plants. There is an Arboretum at Rancho San Rafael Park in Reno, and a demonstration garden at Sierra Pacific Power Company on Neil Road in Reno.

### **Landscape Requirements**

All front yard landscaping within Woodland Village is to emphasize climatic adaptive landscaping as required under Article 208 of the Washoe County Development Code for the North Valleys Area. This means that all plant material installed shall be adapted to the unique climatic conditions found within the Great Basin (i.e., drought tolerant, resistant to wind damage, etc.) and that installation and maintenance practices shall be conducive to achieving that goal (front yard landscaping includes the area from back of curb to home and fence line, excluding driveway and RV access). The following landscape requirements shall be met for all front yard landscaping installed within Woodland Village:

- Practical turf areas – install turf in areas where it will be utilized for such things as child's play. In other areas consider using a lawn substitute (see [plant list](#)) or rock mulch. Lawn areas shall be a minimum width of 5'. No more than **50%** turf is allowed on the porch side of the front yard.
- Utilize water-conserving plant material (see plant list).
- Group plants of similar water requirements.
- We recommend that all shrubs should be drip irrigated.
- We recommend that all irrigation systems should have an automatic controller mounted on the interior wall of the garage. Lifestyle homes provides an extra electrical outlet in the garage for that purpose.

- Only low angle heads shall be used on spray irrigated turf.
- Mulch all ground where plants are growing (no bare dirt).
- Control water robbing weeds around landscape plants. Weed barrier fabric shall be installed in all planting beds and rock beds prior to mulch placement.
- Incorporate soil amendments prior to planting.
- Landscaping shall be installed so as not to interfere with lot drainage. Drainage problems due to altered grading may void home warranties, may cause water to collect under a home, and delay reimbursements for materials. Lifestyle Homes is happy to answer any questions regarding landscaping and grading.

## Coverage Requirements

A variety of ground plane treatments such as 4" minus river rock, 1/2" crushed rock, bark mulch, live groundcover, and turf provides visual interest, whereas a sea of one ground plane type, such as gravel, etc., is monotonous and uninteresting. The following coverage requirements are intended to assure consistent, high quality landscape design throughout Woodland Village.

- Front yard landscapes shall achieve 100% coverage (i.e., no bare dirt shall remain).
- Planting beds shall be planted such that live vegetation achieves 90% coverage within three (3) years. All planting beds shall receive 2" depth mulch (bark or rock) over an approved weed barrier fabric (black plastic is not allowed).
- Impervious material such as concrete or brick shall not exceed 20% of the front yard landscape area (front yard landscape includes area from back of curb to home and fence line, excluding driveway and RV access). To be considered for reimbursement from Lifestyle Homes, the RV side must also be completed.
- Rock mulch or gravel shall be selected from the [approved list](#) and can be no smaller than 1/2" in size. Pea gravel, DG, and sand are not allowed because of their dirt-like appearance and their tendency to spill onto driveways and streets. **Rock smaller than 2" directly adjacent to sidewalks, driveways or curbs must be separated from those areas by a barrier that prevents spread of the rock onto the concrete.**
- Non-planted rock mulch or gravel shall not exceed 60% of front yard landscape. A minimum of 40% of the front yard area shall be living plant material. To provide visual interest year-round, a minimum of 30% of shrubs installed shall be evergreen.
- Lifestyle Homes encourages the limited use of turf grass. The Reno area is a high desert community where water is precious (especially during periods of drought) and water costs will only increase in the future. As such, turf grass shall not exceed 50% of the front yard landscape area.

## Approved Rock Mulch

Rock mulch shall be selected from the following list. Other types of rock mulch may be acceptable upon approval by the Design Committee. Any proposed substitute shall be submitted to the Design Committee

for approval prior to installation. Failure to receive prior approval may result in rejection of the mulch following placement. In such cases, the homeowner shall be required to remove the mulch and replace with an approved type.

Salt & Pepper	Dusty Rose	Arizona Red River	River Rock
Green Serpentine	California Gold	Dolomite	Red Cinder Rock
Black Lava Rock	White Lava	Ginger	Lodi
Nevada Gold	Lodi Cobble	3/4 to 1-1/2 Inch Crushed Rock	

All rock mulch listed is available locally.

## **Typical Front Yard Landscape Plans and Associated Installation Costs (See Appendix “A”)**

Lifestyle Homes has prepared five typical front yard landscape plans depicting water efficient, creative designs within the parameters of the landscape requirements for Woodland Village.

With minor modifications, elements of any of these designs can easily be adapted to the constraints of a particular lot.

Estimated Retail Cost and Contractor’s Costs are provided for each Typical Front Yard Landscape and Irrigation plan depicted in this guidebook. Retail Cost is an estimate of what the homeowner might pay to install a particular landscape by themselves. Contractor’s Cost is approximately what a contractor would charge to install the same landscaping. These estimates are based on past experience and are for reference only. Homeowners are ultimately responsible for obtaining their own cost data from retail stores and/or a qualified landscape contractor.

- ESTIMATED AVERAGE RETAIL COST: \$1,540
- ESTIMATED AVERAGE CONTRACTOR COST: \$2,995

## **Recommended Plant List**

Woodland Village is located about 16 miles north of Reno along US 395, and is higher in elevation than Reno. As a result, spring tends to come about two weeks later. Also, all plants that do well within Reno do not necessarily do as well in Woodland Village. The following plant list describes plants that tend to do well in Woodland Village. Homeowners must, however, always take into account the specifics of their particular lot when developing a plant list. Things such as micro-climates, soils, and watering regimes can have adverse affects on a plant that may do very well in another location on the same lot.

In order to see what plants do well in Woodland Village, it is a good idea to drive through Woodland Village and observe what plants seem to be doing particularly well, and which ones are not.

### ***Deciduous Shade Trees (give room to grow)***

- *Catalpa bignonioides* ” nana” Umbrella Catalpa
- *Celtis reticulata* Netleaf Hackberry
- *Crataegus spp.* Hawthorn
- *Elaeagnus augustifolia* Russian Olive
- *Fraxinus oxycarpa* ” raywood” Raywood Ash

- *Gleditsia triacanthos* "iermis" Honeylocust
- *Platanus acerifolia* London Planetree
- *Quercus rubra* Red Oak

### Flowering Trees

- *Koelreuteria paniculata* Goldenrain Tree
- *Malus spp.* Crabapple
- *Prunus cerasifera* "k.v. or "newport" Newport Flowering Plum
- *Pyrus Spp.* Flowering Pear

### Evergreen Trees

- *Cedrus atlantica* 'glauca' Blue Atlas Cedar
- *Cypressus glabra* Arizona Cypress
- *Pinus jefferyi* Jeffery Pine
- *Pinus nigra* Austrian Pine
- *Pinus ponderosa* Ponderosa Pine
- *Pinus sylvestris* Scotch Pine
- *Picea sp.* Spruce

### Native Shrubs

- *Atriplex caulescens* Four Wing Saltbush
- *Artemisia tridentata* Big Sage
- *Chrysothamnus nauseosus* Grey Rabbitbrush

### Ornamental Shrubs

- *Berberis thunbergii* Japanese Barberry
- *Berberis mentorensis* Mentor Barberry
- *Buddleia davidii* Butterfly Bush, Orange-eye
- *Chaenomeles speciosa* Flowering Quince
- *Cotoneaster spp.* Cotoneaster
- *Cotinus coggygria* Smoke Tree
- *Cornus stolonifera* Red-twig Dogwood (higher water requirement)
- *Crateagus monogyna* Singleseed Hawthorn
- *Cytisus spp.* Broom
- *Euonymus alata* Burning Bush
- *Forsythia ovata* Korean Forsythia
- *Genista lydia* Dwarf Broom
- *Hamamelis x intermedia* Witch Hazel
- *Juniperus spp.* Juniper
- *Lonicera japonica* "halliana" Hall's Honeysuckle
- *Mahonia aquifolium* Oregon Grape
- *Pinus mugo mugo* Mugho Pine
- *Potentilla verna* "nana" Dwarf Potentilla
- *Prunus cistena* Dwarf Red-leaf Plum
- *Pyracantha coccinea* Firethorn
- *Rhus spp.* Sumac
- *Rosa spp.* Rose

- *Spiraea spp.* Spiraea
- *Symphoricarpus albus* Snowberry
- *Syringa vulgaris* Common Lilac
- *Thuja spp.* Arborvitae
- *Viburnum spp.* Viburnum
- *Yucca filamentosa* Adamsneedle Yucca

### Ground Covers

- *Arctostaphylos* Bearberry
- *Artemisia schmidtiana* Silver Mound
- *Atriplex gardneri* Gardner Sage
- *Cerasteum tomentosum* Snow in Summer
- *Clematis jackmanii* Jackman Clematis
- *Clematis orientalis* Oriental Clematis
- *Cotoneaster "Lowfast"* Cotoneaster
- *Euonymus fortunei* Winter Creeper
- *Festuca ovina 'Glauca'* Blue Fescue
- *Juniperus spp.* Juniper
- *Lonicera japonica* Honeysuckle
- *Mahonia repens* Creeping Mahonia
- *Oenothera speciosa* Mexican Primrose
- *Parthenocissus quinquerolia* Virginia Creeper
- *Phlox subulata* Moss Pink
- *Polygonum aubertii* Silver Lace Vine
- *Santolina chamaecyparissus* Lavender Cotton
- *Thymus serpyllum* Thyme
- *Thymus vulgaris* Common Thyme
- *Vinca minor* Dwarf Periwinkle

### Turf Grass

- *Agropyron cristatum* Crested Wheatgrass
- *Festuca arundinacea* Tall Fescue
- *Lolium perenne* Perennial Ryegrass
- *Poa pratensis* Kentucky Bluegrass

### Turf Grass Substitutes

- *Arenaria* Sandwort
- *Chamaemlum nobile* Chamomile
- *Juniperus horizontalis 'Wiltonii'* Blue Carpet Juniper
- *Sagina subulata* Irish Moss

## VI. SOIL PREPARATION

Most native soils in the vicinity of Woodland Village area are mapped by the soil conservation service as bedell loamy sand, 2 to 4 percent slopes. This very deep, somewhat excessively drained soil is on alluvial fans. It formed an alluvian derived mainly from granitic rock. Elevation is 4,500 to 6,000 feet (Woodland Village is at about 5,100 feet). The average annual precipitation is about 8 to 12 inches, the average annual air temperature is 46 to 50 degrees F, and the average frost-free period is 100 to 110 days.

Typically, the surface layer is brown loamy coarse sand about 15 inches thick. The subsoil is yellowish brown loamy coarse sand.

Included in this area are Linhart soils on inset alluvial fans, Orr soils on higher terrace remnants, and Wedertz soils on toe slopes of alluvial fans. The unit is about 5 percent Linhart soils, 5 percent Orr soils, and 5 percent Wedertz soils.

Permeability of this Bedell soil is moderately rapid in the subsoil and rapid in the substratum. Available water capacity of the soil is low. Effective rooting depth is more than 60 inches. Runoff is slow, and the hazard of water erosion is slight.

The present undisturbed vegetation in most areas is mainly big sagebrush, antelope bitterbrush, Anderson peachbrush, and Indian ricegrass.

The nature of poorly drained soils is to smother plant roots due to lack of oxygen in the root zone. An ideal soil consistency is 25% air space, 25% water, 5% organic matter, and 45% mineral matter (nutrients, sand, clay, salts, etc.). Western soils generally contain less than 1% organic matter, which makes them low in nutrients, more prone to compaction, and poorly drained. Prior to landscape installation, homeowners should perform a soils test and amend the soil as recommended in the soil report. You are welcome to copies of soils tests ordered by Lifestyle Homes for a number of Woodland Village lots; results have been consistent over most of Woodland Village. Homeowners may also obtain a free soils test from the University of Nevada Cooperative Extension. Test results are usually available in 7-10 days.

Homeowners should perform a permeability test by digging a hole 3' deep. Fill the hole with water and leave it for 24 hours. After 24 hours add water to the top again, leave it an additional 24 hours. After 48 hours the hole shall have drained completely to qualify as a well drained soil. To aid in developing an appropriate watering schedule, note how many days it takes to drain completely. See the following chart for recommendations.

## Permeability Rating

### Depth Of Hole Depth Of Water

After 48 Hours	Total Days To Drain	Recommendations
2'6"	3	amend planting holes & water 2x/week
2'12"	4	raised planters/amend soil/monitor water
2'5'6"	3	amend planter beds & water 2x/week
2'5'12"	4	raised planters/amend soil/vertical mulch
3'6"	3	amend planting holes & water 2x/week
3'12"	4	raised planter/amend soil/vertical mulch
3'>12"	>4	raised planters/drainage system

To alter soil permeability, if needed, increase available air space through the addition of organic matter in the form of bark compost, sewage sludge, or composted manure to individual planting holes. Provide the yearly addition of 1 inch of organic matter as top dressing to planting beds to help maintain soil aeration.

## Soil Preparation for Non-Planted Areas (Rock Beds)

- Clear any and all weeds present (post emergent herbicide, hoe, etc.).
- Apply pre-emergent herbicide over entire area and then weed barrier fabric.
- Cover entire area with non-living mulch 2" deep (rock, gravel, bark).

- Add mulch as needed to maintain 2" depth over time.

Prior to proceeding with any soil prep or planting, a soils test should be conducted to include appropriate recommendations in preparation.

## **Soil Preparation for Plants**

- Conduct percolation test to check drainage.
- Install drainage pipe or french drains to drain planter areas if needed.
- Sprinkle pH adjusting element as recommended by the soil test over entire planting area.
- Rototill or spade amendments into soil to a depth of 6" – 8". This depth is critical for proper rooting and health of turf or annuals, and serves to prevent soil layers.
- Amend individual planting pits per the soils report and installation details.

## **VII. FERTILITY AND pH**

Plants require sixteen nutrients to maintain proper health and growth. The primary nutrients are nitrogen, which is used by the plant to form leaves and branches; phosphorus, which is used by the plant for flower, seed and fruit production; and potassium, which is used by the plant for root development and disease resistance. Secondary nutrients (elements required in greater than trace quantities) are; calcium, sulfur, and magnesium. Copper, iron, manganese, zinc, molybdenum and boron, are considered trace elements.

The soil test should include:

- pH – the relative acidity or alkalinity of the soil.
- EC – electroconductivity or the salt concentration of a soil.
- SAR- sodium absorption ratio, expresses activity level of sodium ions.
- Fertility – levels of Nitrogen, Potassium & Phosphorus in the soil.
- Trace – determines levels of specific trace elements (like Boron).
- Soil texture – determines predominance of sand, clay or loam (combination of both) in soil.
- Organic matter – gives a percentage of organic matter contained in the soil.

Organic matter is the major supplier of nitrogen and phosphorus in the soil, the two elements in largest demand by the plant material.

There is an optimum pH level at which nutrients are more readily available to plants. The primary and secondary nutrients are most available to plants at pH levels between 6.5 and 8.0. Just as there are optimum conditions for nutrient uptake, there are adverse conditions as well. Iron becomes unavailable at levels greater than 7.5 and can be added to planter beds in a dry form, or sprayed on the plant as a liquid. Generally, a pH of 6.5 to 7.5 is considered optimal for plant growth.



## **VIII. PLANTING**

The following is courtesy of Moana Nursery. Frequently, the term “Drought Tolerant” is thought of as being “dry” or “desert-like,” but this is an unfair description. Plants which are drought tolerant are just that... tolerant of drought conditions. They need not be limited to cactus varieties or other dry climate plants, but include a wide selection of lush, green plants that are attractive in any landscape.

Once established, these plants are able to withstand long periods of dryness without deterioration, going several weeks or, in some cases, an entire season, between deep waterings. Such plants reduce the impact on limited water supplies.

When planting drought tolerant species, it is necessary to water frequently and deeply for one or two seasons. Once the plant has become established, it can thrive on far less water than we are accustomed to providing. If plants are watered frequently, such as during lawn watering, they become shallow rooted and therefore dependent upon frequent irrigation. On the other hand, less frequent watering will promote deep rooting which makes for a healthier plant which also becomes established more quickly.

Trees, shrubs, and plants also require less water when proper gardening practices are followed. This includes proper soil preparation, selecting the right plant for the site, planting correctly, proper irrigation, the use of mulches, and controlling weeds. The final result is healthy plants and a more efficient use of water in this high desert climate.

### **Planting Season**

The average last frost date in the Truckee Meadows is May 15th, while the first frost is usually around September 15th, providing a growing season of about 115 days. As mentioned earlier, Woodland Village is usually about two weeks behind in the spring. Many deciduous trees benefit from being planted prior to bud break in the spring, between about March 22nd and April 15th. Any time the ground is thawed enough to dig, and plants are available, it is okay for spring planting of bareroot or containerized plant material. When considering fall planting, however, it should be noted that even though most trees can successfully root in soil temperatures as low as 45 degrees Fahrenheit, dry fall weather with inadequate moisture followed by a cold winter can be fatal to those new transplants.

### **Planting Methods**

- Dig holes equal to the depth of the plant container.
- Dig hole 2 times the width of the plant container (this is to encourage vigorous lateral rooting).
- Fill the holes with water and wait 12 hours to plant.
- If water does not drain, take measures to insure adequate drainage in the root zone.
- Mix two-thirds native soil from the hole with one-third amendment. Add a handful of bone meal or slow release fertilizer (at recommended rate).
- Place plant in hole to check for depth. The plant should sit level with the surrounding soil:
- If too deep, add soil (plants planted deep can rot in poorly drained soil).

- If higher than 1", dig the hole a bit deeper
- Remove the container, wire basket, burlap, etc. completely.
- Check the rootball of the plant. If the roots are coiled at the sides, bottom or surface, gently ease them away from the edges. If that is not possible, score the rootball a few times (to promote new root growth) and spread them out in the bottom of the hole.
- For trees, orient the tree with the trunk facing the same direction it was grown. This is usually denoted by flagging tape or a colored label with no writing on it, indicating the north side of the tree (it helps prevent sunburn and freeze damage).
- Backfill amended soil around the plant. Tamp the soil occasionally with a shovel handle to remove air pockets.
- Mound unused soil from the hole to create a basin around the plant.
- Fill the basin with water.
- If the plant has settled, add more soil to level up the plant with the grade. Do not bury the exposed stem of the plant in doing so.
- Wrap newly planted deciduous tree trunks with a light colored porous material to prevent sunburn the first season. Remove the wrap the next year.
- Stake trees. Do not cinch trees so tight that there is no movement within the stakes, this promotes weak trunks that cannot take wind. Trees should move slightly to build strength.>

## **IX. IRRIGATION**

Lifestyle Homes installs pressure reducing valves (PRV) on all homes, but only for the inside of the home. If water pressure at your home is 65 pounds or more, you should install a PRV on the sprinkler system so that the pipes inside your home will not rattle when the sprinklers are running. Lifestyle Home's plumbing contractor will inspect, but may not repair, pipes that rattle only when a properly installed sprinkler system is running.

Lifestyle Homes has provided a 3-inch plastic pipe under each driveway near the curb. The pipe is large enough to allow the passage of water pipes and electric control wires.

All plant material should be on a drip system. Drip irrigation provides the following benefits:

- Provides a controlled amount of water to each plant;
- Confines water to planted areas only, reducing (but in no way eliminating) weed production; and
- Reduces the tendency to waterlog poorly drained soils by an unattended sprinkler.

**Watering Frequency** – This table is for informational purposes only. Individual homeowners are responsible for establishing their own watering schedules based on current climatic conditions.

	Vines & Shrubs 2' - 3' High	Shrubs & Trees 4' - 5' High	Shrubs & Trees 5' - 10' High	Trees 10' - 20' High	Mature Trees <20' High	Vegetable Gardens, Grnd Cover Flowers	Containers
<b>Cool weather</b>	2 hrs.	2 hrs.	2 hrs.	2.5 hrs.	3 hrs.	2 hrs.	10 min
	1-2 days	1-2 days	1-2 days	1-2 days	1-2 days	1-2 days	1-2 days
<b>Warm weather</b>	2 hrs.	2 hrs.	2 hrs.	2.5 hrs.	3 hrs.	2 hrs.	20 min
	2 days	2 days	2 days	2 days	2 days	2 days	2 days
<b>Hot weather</b>	2 hrs.	2 hrs.	2 hrs.	2.5 hrs.	3 hrs.	3 hrs.	30 min
	2 days	2 days	2 days	3 days	3 days	3 days	3 days

**NOTE:** In the above table, the Hours represent the hours of each water and the Days represent the number of days per week. When plants with different watering duration requirements occur on the same irrigation zone, the watering regime described above can be maintained by providing varying numbers of emitters to each plant.

## **Turf Grass Average Water Requirements**

Average water requirements, per week, for northern Nevada turf grasses are depicted on the following graph. Though differing soils and grass species will cause variability in these needs, these values can serve as a general guideline. At 30 psi Rain Bird 1800 sprinklers with MPR nozzles put down about 1 to 2 inches of water per hour. Depending on the specific sprinkler used, precipitation rates may vary.

## **X. MAINTENANCE**

Plant materials shall be maintained in a healthy vigorous condition so that they will be best suited to fight off any chemical imbalance that would otherwise kill a weakened or stressed plant. The following maintenance practices should be undertaken on a yearly basis.

### **Plant Replacement**

Any dead or dying plant (excluding street trees) shall be promptly replaced by the homeowner.

### **Aerate Turf Areas**

Aerating is recommended once in spring and once in fall, to increase water and air exchange in the root zone. Any soil plugs removed during the aeration process should be at least 2" long. Plugs should remain on the grass surface. After a drying period, the plugs should be broken up and raked back into the turf area.

### **Thatch Turf Areas**

Thatch removal shall occur only if clippings at the soil level have built up greater than 1/2" deep. Thatch may be removed with a verticutter or by raking vigorously with a cavex rake. Thatch removal shall occur

prior to aeration in spring. It is important to remove thatch because it harbors insects and disease, and reduces the movement of water and air into the soil below.

## Application Timing

Product Type	# Of Applications	When To Apply
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Fertilizer	Not To Exceed Four Per Year	March 15-April 15 *
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		May 15-June 15
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		Sept. 1-Oct. 1st *
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Nov. 1-Dec. 1	<b>Organic Based Fertilizer</b>	Twice Yearly	May 1-June 1
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Oct. 15-Nov. 15	<b>Slow Release Fertilizer</b>	Once Per Year	Spring Or Fall
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\* Indicates recommended fertilizing dates

Method of application

Fertilizers may be applied as a liquid or spray, broadcast on the surface, or subsurface by digging in or injection in the root zone.

## Amounts To Apply

Grass species	#Of Actual N / Year / 1000 Sq. Ft.
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Tall Fescue	
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Meadow Grasses	<b>2 Pounds</b>
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	1 Pound
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	Pound
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## Amounts Needed Per Application

Since the table above gives a total amount required per year, the amount applied per application will depend on whether a product is applied once, twice, or four times per year. Although chemical (inorganic) fertilizers are cheaper, they do not last as long in the soil and must be applied more often. Organic fertilizers work more slowly, feeding more evenly over a longer period of time, usually lasting 2-3 times as long as chemical fertilizers.

## Type Of Fertilizer

All plant materials should be fertilized at least once per year with a slow release product. The product's release period should extend over a three month period, at a minimum. Products containing coated urea, polymer coated formulas, or organically based formulations are acceptable. Amounts to apply will vary by type. Refer to manufacturers recommendations. Fertilizer should be applied evenly under the drip line of all plant materials, and watered in by hand or by activation of the appropriate irrigation zone.

## **Street Tree Fertilization (By the Association)**

### **When To Apply**

All street trees shall be fertilized yearly in March, prior to bud break.

### **Amount To Apply**

The amount to apply shall be determined by measuring the caliper of the tree 4 1/2' above soil surface.

- Trees less than 6" caliper – 2 # actual N / 1000 sq. ft. under drip line/yr.
- Trees greater than 6" caliper – 4-5 # actual N/ 1000 sq. ft. under drip line/yr.

### **Method Of Application**

Trees can be fertilized by spraying a liquid fertilizer on the foliage, broadcast spreading a granular product under the entire canopy or dripline, or subsurface with a root feeder attached to a hose. Burying the fertilizer in equally spaced holes under the canopy is also acceptable.

### **Type Of Fertilizer**

Trees have such a large canopy of foliage to support that it is important to feed them with a fertilizer that has a larger percentage of Nitrogen than anything else. They also are growing over a long period of time so it is critical to feed them with a product that remains in the soil an equally long time. Products that contain urea, or are coated with a polymer are acceptable.

## **Street Tree Maintenance (By the Association)**

Individual homeowners shall maintain the streetscape, except for the trees, in front of their home. Street trees will be maintained by the Association as follows:

All trees within turf areas shall have the turf under the canopy removed to a minimum distance of 1 feet. These tree wells shall remain grass and weed free by using a combination of mulch in the well itself (to a depth not to exceed the height of the turf surrounding it) and pre or post emergent herbicide. Grass under trees compete for water and nutrients and since grass has a shallower root system, it wins to the detriment of the trees.

Ties around tree trunks shall be loosened after one year to prevent the ties from girdling or choking the trunk. Due to extreme winds, stakes may need to be moved further away from the trunk on a yearly basis until the trunk is strong enough to stand on its own. In order to promote this strengthening, ties must be loosened enough to allow the tree some movement within the stakes. When the tree is tied up too tight, the tree becomes weak and may break when the stakes are removed. Remove the stakes completely as soon as the tree can be pushed without giving more than an inch or two. This indicates it is well anchored.

## **Shrub Pruning**

The basic objective with shrubs is to plant the right plant in the right place so as to reduce or eliminate the need for annual pruning except to maintain vigor, natural appearance, and penetration of light to enhance flowering. In cases where plant materials are inappropriately placed, and until such a time as they can be moved elsewhere or replaced with a proper selection, the objectives are to maintain space limitations, eliminate any damaged branches and maintain tidiness.

- Pruning should occur once yearly prior to bud break, except for flowering shrubs that will be pruned after flowering in Spring (Forsythia, Wisteria, Lilac, etc.).
- Minor pruning to handle damage or space constraints may be done anytime during the season that temperatures do not exceed eighty-five degrees Fahrenheit. Do not prune more than 1/3 of the plant at any one time.

## **XI. Additional Resources**

**Sierra Pacific Power Co. *Plant Guide, Your Guide to Landscaping in the Truckee Meadows***

**Ortho Books. 1989 *Gardening in Dry Climates***

**University of Nevada Cooperative Extension. 1995. *Small Ranch Manual***

**Sunset Books Inc. 1995. *Western Garden Book***