



LANDSCAPE MANAGEMENT PLAN

COLLEGE PLACE ELEMENTARY & MIDDLE SCHOOL
REPLACEMENT PROJECT

LANDSCAPE MANAGEMENT SCHEDULE

See Section C-E for definitions and specific practices recommended by this landscape management plan.

Winter:

- Site is dormant awaiting spring, and dry season.
- Pruning and site clean up
- Sweep driveways and areas around catch basins.
- Snow and ice melt – apply only as needed, no broadcast applications. Only use snow and ice melt provided by ESD custodial and maintenance staff.
- Fertilizer stakes – NPK for plants
- Minimally weed landscape beds – crew dependent
- Inspect stormwater wells, biofiltration gardens and oil-water separator. Refer to the Stormwater Well Operation and Maintenance Manual.

Spring:

- Mulch mow all turf areas once a week, if needed.
- Flush out irrigation systems as needed, run and check for proper operation of each valve zone. Test rain sensors.
- Remove and clean WYE filter screens.
- Clean or replace plugged sprinkler nozzles.
- Replace irrigation controller program back-up batteries.
- Weed landscape beds.
- Fertilize all landscape planting beds using phosphorus free fertilizer with 100-0 on the label. Purchased by ESD Maintenance Department.

Summer:

- Mulch mow all turf areas weekly.
- Weed landscape beds and gravel areas.
- Maintain irrigation system
- Annual inspection of double check water system. Inspect stormwater wells, biofiltration gardens and oil-water separator. Refer to the Stormwater Well Operation and Maintenance Manual.

Fall:

- Mulch mow all turf areas weekly or as needed.
- Have backflow preventer (on irrigation water supply) tested annually by approved plumbing technician.
- Turn off and prepare irrigation system for winter. Make sure backflow preventer is well-insulated or drained prior to first freeze. Blow out

pipes using compressed air in area where freezing could result in breakage.

- Prune any tree branches that interfere with public safety. Prune all parking lot and street trees yearly as needed to remove dead and crossing branches and to encourage spreading and upward growth that fits the available space. Do not top trees.

LANDSCAPE MANAGEMENT AREAS

Grounds Maintenance – all outdoor areas

Clean-up:

- Remove biodegradable landscape debris to a yard waste recycling facility, including cedar tree debris falling in parking areas, and including turf clippings (limited to only those times when mulch mowing is not possible), leaves, branches, annuals, dead plant material, potting soil, etc. Acceptable facilities include composting facilities, topsoil producing facilities or other facilities which utilize yard waste for landscape purposes. No biodegradable material should be disposed of in garbage to land fill sites.
- All trash and sticks are to be picked up from lawn strips and bed areas prior to mowing.
- Debris deposited by typical weather occurrences will be cleaned up.

Fall Leaf Removal – September through January:

- On a periodic basis remove leaves from lawn areas to prevent build-up and damage to turf by smothering. A single layer of leaves may be mulch-mowed into the turf. Thicker accumulations should be removed.
- Leaves may be raked or shredded by mower. Heavy accumulations of leaves will be raked and/or blown from plants, high maintenance bed areas and collected and removed from property and disposed of off-site.

Pruning – Trees

Trees:

- Prune in accordance with generally accepted standards for proper pruning.
- Trees shall be maintained in a healthy, vigorous growing condition, free from disease and large concentrations of pests.
- Prune trees to remove dead, diseased, broken, dangerous, or crossing branches, and as required below.
- Discard all tree trimmings off-site using a legal method.

- Any tree found to be dead or missing shall be replaced with plant material of identical species.
- Remove tree stakes from trees after two growing seasons. Check tree ties to adjust and loosen as needed after the first growing season. Remove stakes from site and dispose of by a legal method. Recycle used stakes if possible.
- Once a year, prune all trees to encourage a high-branching structure. Remove all non-structural branches between the ground and a point half the tree's total height (for tall trees don't remove branches higher than 20' [6m] above the ground).
- All sucker growth from trunk and base of trees shall be removed monthly or as required up to twelve feet (12') from the ground to maintain a clean appearance.
- The cutting blades on pruning shears, clippers, blades, saws, etc. shall be sterilized after pruning each tree to minimize the possibility of spreading disease. When pruning trees known or suspected to be diseased, cutting blades shall be sterilized (with 10% bleach solution or other approved) after each cut.
- A vertical clearance of 114 inches is required above all parking spaces. A vertical clearance of 80 inches is required above all walkways. Trim trees to remove all limbs within these areas.

Mulch Layer – Trees

- Maintaining a deep layer of mulch greatly reduces the labor and materials needed to control weeds, reduces water use, and helps the plants stay healthy.
- Add additional mulch regularly to maintain a layer of no less than 2 inches (5cm) deep at all times in shrub planters, tree wells, and beds where plants have not yet closed in over soil surface. Decomposition of organic mulch is considered normal wear and tear, and replacement of decomposed mulch is required seasonally. Any mulch found outside planter areas shall be returned to the planter on a weekly basis.
- Mulch shall be uniform in color and appearance, and free of sticks or trash. Mulch may be compost, shredded fall leaves or chipped or shredded wood, such as arborist chips, hog fuel, or play chips. Bark is less preferable, because it does not feed the soil as readily, may seal the surface preventing water entry, and may inhibit some plants' growth. When replacing existing mulch, use a mulch product that is similar in appearance to that already at the site.

Turf Care

Mowing – Turf

- Mowing schedule: Mow weekly during active growth periods (April-October while site is occupied) and once per month during winter, if needed and as conditions allow. Keep mower blades sharp.
- Clippings should always be left on lawn areas (“mulch-mowing” or “grass cycling”), except if this will create a large surface buildup, for instance if saturated soft soils have prevented mowing for several weeks in spring and the grass is very tall. Grass cycling returns about 2 lb. nitrogen per 1000 s.f. per year, and improves resistance to drought damage and weed invasion. If large surface buildup occurs disperse with blower or rake for turf health.
- Modern “mulching” mowers are preferred because they chop clippings finely and blow the resulting mulch down to ground level, leaving a clean surface which is preferable, especially around building entrances where track-in can be a problem. Effective mulching requires about 20% more engine power and it may be necessary to slow down in heavy areas or wet weather to get the best mulching results. For these reasons, equipment that converts easily from mulching to side-throw (leaving clippings on surface) is the most adaptable to varying conditions and mowing schedules.
- Mowing height: 2 to 2.5 inches high.
- Mowing frequency: to cause the least stress on the grass plant, mow often enough to remove only one-third of the blade length (e.g., when the grass is 3” high mow down to 2”). Also, mow un-irrigated summer-dormant turf regularly enough to remove weed seed heads before they mature. Start mowing in late winter as soon as grass begins to grow. On most lawn areas these practices will result in mowing every 5-7 days through the height of the spring growth spurt, tapering to weekly on irrigated summer lawn or 10 days to 2 weeks on dormant lawn, weekly through the fall growth spurt, and once a month during winter. Avoiding over-fertilization and soluble “quick release” fertilizers is key to reducing mowing frequency.

Fertilization – Turf

- Mid to late fall applications are the key to building carbohydrate reserves in the grass root system over the winter. Early spring applications should be avoided because they promote rapid top growth (requiring more mowing) and can exhaust stored nutrient reserves. If spring applications are desired, they should be in late spring.

Aeration and De-thatching – Turf

- While aeration is most important on high-use areas (such as playfields and building entrance areas) any lawn area should be considered for annual or more frequent aeration if it shows signs of thin turf, weed invasion, poor irrigation penetration, or soil compaction.
- Thatch buildup beyond the ½ inch is usually a sign of over-fertilization, over use of broadcast pesticides, over-watering, soil compaction, or other causes of diminished soil biota to break down thatch. Excess thatch prevents water penetration and promotes shallow rooting. Good maintenance practices will generally prevent thatch buildup, but where present it should be reduced by regular aeration or a vertical mowing (de-thatching), followed by adjusting cultural practices to prevent recurrence.

Overseeding – Turf

- In addition to aeration, spring or fall lawn renovations should include overseeding of thin or weed infested areas, or entire areas subject to heavy wear. This is a key weed control practice.
- Select certified seed appropriate for the site (rye and fescue blends: contact the Cooperative Extension Service for site-adapted varieties, or buy from a reputable local supplier).
- Generally over-seeding is practiced after aeration and before topdressing. A slice-seeding machine allows seed to be placed in the ground at the end of the dry season to await fall rains, and greatly improves seed germination and survival.

Topdressing – Turf

- After aeration and over-seeding, high-use or worn lawn areas should be topdressed in spring or fall for greatest improvement.
- General lawn should be topdressed with pure compost or a compost-sand mixture, ¼ to ½ inch thick, to improve both drainage and soil fertility. Use a weed-free mature compost from a reputable supplier, screened to 3/8 inch minus particle size. Dragging or ranking after application can help get compost down into the aeration holes and break up aeration cores and compost clumps.
- Take soil plugs annually to verify that the compost is being incorporated into the soil profile below the aeration depth by earthworms and other soil biota, rather than accumulating on the surface where it could limit water infiltration. (This is a possible problem in cases of low soil biota due to overuse of fertilizers or pesticides, poor drainage, or conditions of acidic or compacted soils. Correct these problems to improve compost incorporation.)

INTERGRATED PEST (WEED AND DISEASE) MANAGEMENT

Weed Control for General Plantings

- General: **Herbicides and Pesticides shall not be used at water quality plantings or where surface runoff could drain directly into the storm system.**
- Weeds in planted areas, sidewalks, curbs, gutters, or pavement shall be removed or killed as the weeds emerge. Weeds shall be removed (not just killed) if they are larger than 2 inches (5cm) in height or diameter. Dispose of weeds off-site.
- Pre-emergent herbicides and glyphosate are not allowed – maintaining a thick mulch layer combined with mechanical weeding is as effective. District is strongly encouraged to use Integrated Pest Management (IPM) techniques for controlling weeds. Techniques include mulching, pulling, allowing plantings to grow densely and shade ground, heat and hot water controls

Weed and Disease Control for Turf

- Weed invasion can be effectively prevented or reversed by growing dense lawn, through the above recommended practices. Tolerate some broad-leaved plants in lawn areas. Identify problem (invasive) weeds and target only those species.
- Control weeds in turf by removal where practical (long-handled weed-pullers do this quickly), and remove them regularly before they go to seed.
- No broadcast herbicide or “weed-and-feed” products may be applied.
- Before applying any fertilizer, test the soil to determine if it is necessary. 10-0-0 fertilizer formula is acceptable to use only after soil testing indicates its necessary. Moderately fertilized turf on well drained organic-rich soils rarely has serious disease problems. Correcting poor soil conditions or cultural practices (like over-watering or over-fertilization) will prevent diseases.

General IPM Steps and Methods

IPM Steps Include:

- Prevention first: plant vigorous, pest-resistant, site-adapted varieties. Plan cultural practices to minimize pest (watering, mulching, pruning, etc.).
- Identify / know the pest (weed, etc.) life cycle.
- Set action thresholds – tolerate some damage.
- Monitor regularly (keep records of monitoring).

Weed Control Methods – General Guidelines:

- Accept a few weeds – target the problem ones.
- Mulch beds in fall, winter, or early spring.
- Control weeds before they go to seed.
- Hoe, pull, mow, or till (mulch makes hoeing easier).
- Use flame or radiant heat weeding over pavement, cracks, fence-lines, and building edges, or over mulch on rainy days (use fire precautions as per equipment labeling).
- Use barriers: newspaper or cardboard covered with mulch, root barriers for spreading plants. Landscape fabric can create problems as weeds grow through it – paper or cardboard is better.
- Don't over-fertilize – it promotes weeds and pests.
- Spot apply the least-toxic chemical (e.g. soap and vinegar-based killers) to minimize weed impacts.
- If a pesticide must be used, post signs for at least 48 hours stating: area affected; date/time applied; specific pesticide used; re-entry cautions (from label); and phone number to call with questions. Always follow label for application and protection. Professional applicators (including users of low-risk herbicides like vinegar) must be licensed by State law, see <http://agr.wa.gov.PestFert/Pesticides/>.

IRRIGATION

All Areas:

- Monitor the moisture levels around all ornamental plants including, but not limited to trees and lawn. Report problems (including brown spots or saturated areas) to on-site management during normal maintenance visits.
- Fix irrigation system leaks and broken or misdirected heads as needed on every site visit.

Spring Start-up:

- Open the main valve(s), inspect and adjust all sprinkler heads, re-program and check battery backup in controller, and troubleshoot the entire system.
- Test sensors and zone coverage while running.
- Set ET-based, seasonal, or weather-based manual or automatic programs. Post spring/summer/fall schedules (runtimes x days / zone) and train staff as needed to monitor through season.

Checks and Repairs:

- Once per month inspect entire irrigation system. Irrigation inspections shall include the following:
 1. Activation of each zone to inspect for valve function, lateral breaks, damaged heads, coverage or anything else that would indicate any malfunction of the irrigation system.
 2. Adjust irrigation heads for proper coverage.
 3. Adjust automatic controller to establish frequency and length of watering periods for seasonal requirements and water restrictions.
 4. Eliminate runoff of water from irrigation systems into or onto streets, sidewalks, stairs, or other hard surfaces. Immediately shut down irrigation system and make adjustments, repairs, or replacements as soon as possible to correct the source of the runoff.
- Do not over-water plantings. Use multiple-start times and short run times to prevent runoff.
- Maintain the irrigation system, including cleaning of filter screens yearly or more often as needed, and flushing pipes.

System Repair:

- Regardless of the cause of damage, take immediate action to prevent further damage by shutting off the damaged part of the irrigation system and commencing with hand watering as needed. The following items are considered to be minor repairs: damaged or clogged sprinkler nozzles, adjustment of sprinkler patterns or arcs, adjustment of sprinkler position (reorient; raise, lower, or straighten sprinkler head). Any replacement of irrigation system components shall be made with materials of the same manufacturer and model as the original equipment.
- For safety, do not install sprinklers on risers above the ground level, even if the risers are flexible. Always use spring-operated, pop-up style, sprinkler heads.
- Annually submit recommendations for changes to system that would improve water efficiency while meeting the plants' needs.

Winterization:

- Completely drain the sprinkler system (blowout) to prevent freeze damage to underground pipes and sprinkler heads. Close all valves and shut down the controller(s) for the winter.