



**CITY OF KELSO
NUTRIENT, INTEGRATED PEST MANAGEMENT,
and HERBICIDE PLAN**

Updated January 2015

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I. OBJECTIVE

The objective of this Nutrient, Integrated Pest Management, and Herbicide Plan (Plan) is to reduce pollutants in discharges from all lands owned and/or maintained by the City. The major goal is to minimize the entry of manmade chemicals into surface and groundwater resources by managing:

- The amount, method, timing, and source of fertilizer, herbicide, and pesticide applications; and
- Operation and maintenance activities that have a potential to release nutrients.

II. SCOPE

This Plan addresses City of Kelso (City) practices regarding fertilizers, pesticides, and herbicides including maintenance of vegetation in parks, rights-of-way, and other City properties.

III. BACKGROUND

The City Operations Division (Operations) has policies and practices for application of fertilizers, pesticides, and herbicides on City managed facilities. These facilities include road right-of-way, the Southwest Washington Regional Airport, reservoirs and pump stations, the water treatment plant, and parks. City park classifications include regional park, neighborhood park, neighborhood play lot, neighborhood open spaces, trails, and undeveloped open spaces. A description of these parks is listed below.

The City's Western Washington Phase II Municipal Stormwater Permit (Permit) requires that a nutrient management and an integrated pest management plan be developed. This document fulfills this requirement that is stated in Section S5.C.5.f of the Permit.

IV. QUALIFIED PERSONNEL

Operations has certified and highly experienced staff responsible for the use of herbicides and pesticides. Table 1 below shows the City's pesticide/structural pest inspector (SPI) license holders and their certifications. License holders are supervised by the Operations Superintendent, Randy Johnson, 577-3360. Other employees may also apply herbicides if within voice and visual contact of a licensed applicator and when this practice is allowed by the state (RCW 17.21.020(13)).

Table 1: City of Kelso pesticide SPI license holders and their certifications

<i>City of Kelso Resources</i>	<i>Certification</i>	<i>License</i>	<i>Phone</i>
Tim Mackin, Parks Superintendent	Ornamental Weeds	70232	577-7119
Roger Harper, Traffic/Facility Maintenance Lead	Ornamental Insect & Disease; Ornamental Weed; Rights-of-Way Weed	55681	577-3363
Brian Hogue, Street/Drainage Lead	Right-of-Way Weed	80866	423-5730

V. DESCRIPTION OF PROPERTIES (greater than ¼ acre)

- A. Tam O’Shanter Park: A multi-seasonal regional park, Tam O’Shanter is a 38-acre park south of Kelso High School and adjacent to the Coweeman River. Landscaped areas include a multi-purpose soccer field, three girls fast-pitch softball fields, one Babe Ruth field, four Bambino fields, and a children’s playground, as well as other grassed and vegetated areas.
- B. Catlin Spray Park: This 0.8-acre neighborhood park is located on the corner of Cowlitz Way and Main Street and includes a water spray play area, benches, picnic tables, the Senior Center, restrooms, and landscaping.
- C. Rotary Park: Rotary Park is four-acre neighborhood park and is located to the east of Interstate 5 off of Burcham Street. The park consists of a playground, a covered picnic area, restroom facilities, open field space, and a skateboard park.
- D. Manasco Park: This 1.9-acre neighborhood park has five youth soccer fields and two restrooms and is located at the 1800 block of South River Road.
- E. Lads & Lassies Park: Located at the corner of 8th Avenue and Elm Street, this fenced play lot has a playground, park benches, trash receptacles, picnic table, and a bike rack. The park is used year-round by the surrounding community.
- F. Scot Hollow Park: This three-quarter-acre open space is located at the intersection of 19th Avenue and Bates Street. The facility consists of a picnic table, park bench, and an open field for play. It is used mainly in the spring, summer and fall months for relaxation and play.
- G. Kelso Commons: This quarter- acre neighborhood open space is located in the business district on the corner of Pacific Avenue and Oak Street. The facility consists of picnic tables, park benches, trash receptacles, media building, drinking fountain, lawn and vegetation, and a memorial structure. The mini-park is intended for day use by people visiting the business district.

- H. Kiwanis Park: This one-third-acre neighborhood open space is located at 121 Allen Street just west of the Interstate 5. The bench and landscape area provide a quaint respite for pedestrians and travelers.
- I. Peter Crawford Home Site: The City maintains a one-acre neighborhood open space along the east bank of the Cowlitz River near the intersection of Crawford Street and 1st Avenue where the City's founder, Peter Crawford, once lived.
- J. Rhododendron Gardens: This quarter-acre neighborhood open space is located at Pacific Avenue North and Harris Street and is strictly for passive recreation. There is no development; the area consists of a rhododendron garden.
- K. Trails: Kelso's urban trail system is a combination of on and off-road trails that provides a network of recreation, transportation, and wildlife habitat viewing corridors around the City. The trails are located and designed to provide neighborhood links to commercial areas, schools, parks, employment centers, wildlife habitat areas, and promote green space. The Cowlitz River trail follows the Cowlitz River dike from Cowlitz Gardens to Mill Street. 1.5 miles of the trail is within Kelso and is paved and lighted. The Coweeman River trail is 3.7 miles within Kelso and it follows the Coweeman River dike from Talley Way to Tam O'Shanter Park, ending at the intersection of Allen Street and Corduroy Road. The trail is gravel with a series of park benches.
- L. Camilla Summers River Front Park: This undeveloped open space is five acres in size and is located on the Cowlitz River between the Allen Street Bridge and the old water treatment plant.
- M. Harts Lake Recreation Area: This 248-acre parcel of land was donated by the Department of Natural Resources and is located adjacent to the Aldercrest landslide area along the Coweeman River, east of Interstate-5. The parcel consists of timber, Coweeman River wetlands, and wildlife habitat. The Coweeman River flows through the northern portion of the site, creating a seasonal lake during the winter months. There is no public access to the lake at this time, other than from the Coweeman River.
- N. Aldercrest Open Space: An undeveloped open space 10 acres in size is located east of the intersection of Banyon Drive and Grimm Road. The site has limited access.
- O. Water Treatment Plant: The City water treatment plant is located at 703 South First Avenue. At the plant there are buildings, pavement, and lawns. The lawns are maintained by City staff.

- P. Water Reservoirs, Water and Sewer Pump Stations: At twenty-one locations in and around Kelso are water reservoirs, water pump stations, and sewer pump stations. Approximately half of these have landscaping that City staff maintains.
- Q. Rights-of-Way: The road and shoulder areas in the City of Kelso.

VI. BEST MANAGEMENT PRACTICES

The City has a minimalist approach to the application of nutrients, pesticides, and herbicides and applies these only when necessary and appropriate. General comments for nutrients, pesticides, and herbicides are stated below with more detailed best management practices for each facility noted in Table 2: Best Management Practices. The City's procedures for vegetation management are detailed in Preventative Maintenance Program Sheets that are found in Appendix B.

A. Nutrients

The City has a limited program on the use of fertilizers containing the nutrients nitrogen, phosphorus, and potassium (NPK). Fertilizers are applied at Tam O'Shanter Park, Kelso City Hall, and Manasco Park by representatives from local baseball leagues. Weed & Feed is commonly applied.

Mowing of City properties is performed to keep grasses and weeds down and to provide a clean and well-kept look. The City's practice is to allow clippings to remain on the surface to return to the soil as nutrients. Mowing also controls pests that flourish in taller vegetation.

B. Pesticides

The City does not use pesticides except for sporadic and isolated instances. For example, over-the-counter bug spray (pesticide) is used on bees that establish nests in telemetry control boxes for water reservoirs. When used, pesticides are applied according to label directions.

C. Herbicides

The license holders apply herbicides in a manner consistent with manufacturer's instructions that are based upon state guidelines. For example, herbicides are applied during dry weather with no wind and are not applied close to water such as at Tam O'Shanter Park. The airport, rights-of-way, Cowlitz River dike trail, and reservoirs are sprayed once a year during the spring.

Parks staff applies the following herbicides: SpeedZone broadleaf herbicide for turf; Crossbow low volatile weed and brush herbicide; Hi-Yield Killzall 2; and Casoron 4G dichlobenil weed and grass killer. The license holders and authorized staff apply the

following herbicides: Crossbow; Hi-Yield Killzall; Escort; Oust; and LI-700. Chemicals are stored in cabinets with safety placards.

Table 2: Best Management Practices

Best Management Practices		
Facility	Practice	Nutrients (N) Herbicides (H)
Tam O'Shanter Park	Fertilizer is applied only in the ball field areas, not soccer fields, two times per year. Weed & Feed is applied on grass by representatives from local baseball leagues. Herbicides are used to control weeds in areas not accessible by mowers and this includes fence lines, park tables, buildings, rocks and shrubbery. Types of vegetation include grasses, blackberries, horsetail and clover. Herbicides are applied 4-5 times per year from Spring through August/September. In the ball fields, the City picks up the grass clippings on the first mowing of the year, typically in March. Otherwise, clippings are left to supply nutrients to the soil.	N, H
Catlin Spray Park	Herbicide is applied around the building. Leaves are picked up in the fall.	H
Rotary Park	Herbicide is applied around the building and restroom. Grassy areas are mowed. Leaves are picked up in the fall.	H
Manasco Park	Weed & Feed is applied to the soccer field areas.	H, N
Lads and Lassies Park	Grassy areas are mowed.	
Scot Hollow Park	Grassy areas are mowed. Leaves are picked up once in the fall.	
Kelso Commons	Grassy areas are mowed. Leaves are picked up in the fall. Moss control is applied for safety on the sidewalks in January/February to minimize slipping and falling hazards.	H
Kiwanis Park	The Kiwanis club pulls weeds and installs bark mulch for weed control.	
Peter Crawford Home Site	A strip of grass next to the road is mowed.	
Rhododendron Gardens	Grasses are mowed and weed-eaters are used. Bark dust is applied for weed control and visual appeal. Leaves are picked up in the fall.	
Trails	The Coweeman River dike path is mowed by the City, paid for by CDID#3, and herbicide is used 3 feet on each side of the trail. The Cowlitz River dike path is sprayed one-foot off each side of the pavement.	H
Camilla Summers River Front Park	The City picks up litter in this park with the use of jail crews.	
Harts Lake Recreation Area	The City leaves this area to develop naturally.	
Aldercrest Open Space	The City leaves this area to develop naturally.	

Best Management Practices		
Facility	Practice	Nutrients (N) Herbicides (H)
Water Treatment Plant	The water treatment plant has a grounds maintenance program to ensure the grounds, which includes: lawns, are clean and well kept. During mowing, grass clippings will be left on the lawn. The program includes inspection for excessive thatch that creates a favorable environment for pests and disease and an unfavorable growing environment for grass roots. Lawn is fertilized once per year with Weed & Feed at a low dosage. Herbicide is used three to four times per year along the fence-line, buildings and at cracks in the pavement to control vegetation that is not accessible by mowers.	N, H
Water Reservoirs, Water & Sewer Pump Stations	Several of the water reservoirs and some of the pump stations have grasses and weeds. These are mowed/trimmed by mowers and weed eaters. Weeds are sprayed along fencelines and in some instances all areas around reservoirs.	H
Kelso City Hall	A small patch of lawn on the north side of the building is applied with Weed & Feed. This grassy area is mowed.	H, N
Kelso Regional Airport	The Kelso Regional Airport has large areas of grass that are mowed. Herbicides are applied in many locations for safety and ease of mowing. Significant locations for herbicide application include the perimeter fences, buildings, seg-circle and runway lights. A drawing (See Figure: Airport Herbicide Plan) shows locations for spraying.	H
Rights-of-Way	Herbicide is applied along the Academy St. guardrail and the Allen Street curb line. Kelso Drive and Old Highway 99 shoulders are sprayed to keep vegetation off of the driving surface.	H

D. Restriction of Nutrient Entry into Surface and Ground Waters

- 1) Do not apply fertilizer on saturated soils, storm drains, ditches, stormwater management facilities (swales, etc.), surface water, wetlands, or impervious surfaces [Note: Sweep up fertilizer inadvertently applied to pavement (sidewalks, etc.)].
- 2) Do not apply chemicals to frozen soils unless the chemicals are used to melt snow or ice on high traffic turf areas.
- 3) Take action to avoid drift of fertilizer into water bodies, such as when liquid fertilizers are applied repetitively or when granular fertilizer is applied without an unfertilized vegetative buffer strip surrounding the water body.

E. Vegetation Management

- 1) Keep storm drains clean and clear of grasses, weeds, leaves and debris.
- 2) Sweep-up and coordinate with the street sweeper if generating clippings or other vegetative wastes in the street (or City parking lots).
- 3) Do not sweep, blow, or rake vegetation to catch basins, manholes, ditches, stormwater management facilities (swales, etc.), rivers, ponds, or sloughs.
- 4) Herbicide use is limited to licensed applicators or as otherwise prescribed by state law.
- 5) The leaf maintenance program policy is to pick-up leaves in the City parks and facilities. The scheduled time is from mid-October through late November.

F. Operation and Maintenance

- 1) *Personal Protective Equipment (PPE)*. The applicator shall wear protective clothing appropriate to the material being handled as per the material's Material Safety Data Sheet (MSDS).
- 2) *Storage*. Protect stored fertilizer and other chemicals from the weather, and from accidental leakage or spillage. Refer to *City of Kelso Operations and Maintenance Program* for best management practices for storage of fertilizers and chemicals.
- 3) *Spill Prevention and Clean-up*. Use caution when transferring liquid fertilizers or chemicals from one container to another (e.g. backpack sprayer); avoid transferring liquids over impervious surfaces outdoors, such as parking lots and sidewalks, or use containment such as a drip pan. Carry spill kits in City vehicles. Refer to *City of Kelso IDDE Program* for standard operating procedures for spill clean-up.
- 4) *Mowing Height*. Ideal height varies with grass type. Frequent mowing will result in short clippings that can be left on the lawn. Ideally, cut no more than one-third of the height of the grass blades. Mowing blades should be kept sharp to prevent tearing.
- 5) *Irrigation*. Deep watering similar to a soaking rain is best. Use enough water to deliver the product without causing runoff (which carries unwanted nutrients, clippings, and animal feces to surface waters).
- 6) *Thatch Build-Up*. If thatch buildup occurs that interferes with the intended use of the turf (over 1/2 inch thick) it may be necessary to remediate with core aeration. Excessive thatch build-up may be a sign of overuse of fertilizer, increasing soil compaction, or poor root development.

G. Animal Waste

The City has installed five pet waste stations at Tam O'Shanter Park. Kelso Municipal Code 6.04.230 requires pet owners to remove and properly dispose of their pets' waste from public spaces and private property. Citizens are

encouraged to use the plastic bags dispensed at the pet waste stations to pick up after their pets.

VII. MANAGEMENT

A. Duty to Comply

This Plan for nutrient and integrated pest management is required under Section S5.C.5.f of the City's Phase II Municipal Stormwater Permit. It may be necessary for planners and field staff to take precautions beyond the minimums contained within the criteria to account for such concerns as site hydrology, turf quality, and the potential for nutrients to enter water bodies.

B. Training

All persons who manage, handle, use, and/or apply nutrients, pesticides, or herbicides on public property shall receive periodic training on the contents of this Plan, including for new products or strategies, plan updates, and personnel changes. Training shall be conducted by/with the qualified person(s) listed in the plan. Training records will be kept in the Engineering Department for inspection by Ecology.

C. Revision

The Plan shall be revised as needed by qualified persons to reflect changes in vegetation and/or management objectives.