



## Landscape Business

### Make Clean Water a Part of Your Business

In Medford, the stormwater collection system and the wastewater collection system are not connected. Anything that flows or is washed into a storm drain ends up directly in our local waterways, untreated, where it can harm fish and wildlife and pollute drinking water sources. Water quality impacts from landscaping-related activities occur from poorly timed or excessive application of fertilizers and pesticides, improper disposal of unused fertilizers and pesticide products and containers, landscape designs that attract pests, require heavy fertilizing or encroach on stream habitat, improper disposal of plant waste, exposed soils without proper sediment controls, or storage of top soil, rock/stone, bark or any other landscaping materials in the streets or driveways.

### What's the Problem

The most common pollutants associated with landscaping activities are nutrients, toxins and oxygen-demanding substances (see page two). Sediment pollution (from erosion of exposed soils) may be a problem during landscape installation and before plants become established. Metals, oil and grease from lawnmowers or rototillers may also be a problem.

When it rains, when areas are irrigated, or when surfaces are hosed or washed off, pollutants may be washed off the site into storm drains, or gradually seep into groundwater. From there, they flow directly into waterways such as Beak Creek, Larson Creek, and other smaller waterways that empty into the Rogue River.

### Impacts from Landscaping Activities That May Harm Water Quality:

**Excess fertilizer, lime and pesticides** run off the land into local waterways or leach into groundwater supplies.

**Exposed soil** easily erodes, washes into streams, or plugs drainage systems.

**Decaying plant debris** dumped into streams or ditches steals oxygen needed by fish.

**Leaking oil and grease** from vehicles can add up to big problems in streams.

## **Landscaping Businesses: Potential Pollution Problems and How to Prevent Them**

### **Pollutant Problems and Solutions:**

#### **Problem:**

**Nutrients** from fertilizers, rotting vegetation and exposed soils can harm water quality when they over stimulate the growth of algae and other aquatic plants. This may cause unpleasant tastes, odors, and unsightly conditions and lowered dissolved oxygen levels.

#### **Solution and Prevention Practices:**

- Apply fertilizer sparingly and at a time specified on the package.
- Don't dump or compost plant debris near streams or other water bodies.
- Prevent erosion (see sediments below)
- Carefully choose plants and landscape features that are suited to the soil and climate which require less fertilizer and pesticides.

#### **Problem:**

**Toxins** from pesticides and gasoline can kill fish. Some toxins accumulate in the environment. Others concentrate in the food chain as one large organism eats several smaller ones.

#### **Solution and Prevention Practices:**

- Minimize pesticide use. Follow label directions and apply sparingly. Avoid routine spraying; use only targeted applications.
- Choose low-maintenance plants and landscape designs.
- Use an integrated pest management approach.
- Dispose of excess pesticides properly.
- Have a spill clean up kit available and use it.

#### **Problem:**

**Oxygen-demanding substances:** such as plant, animal and chemical wastes, along with plant debris from landscape areas use dissolve oxygen to decay. Without oxygen, aquatic animals may die.

#### **Solution and Prevention Practices:**

- Don't dump or compost plant debris near water bodies.
- Dispose of chemical waste properly.
- Clean up chemical spills immediately and dispose of waste properly.

**Problem:**

**Sediments from erosion** and stormwater runoff can affect nearby properties and clog storm drains. This causes flooding and higher maintenance costs. Other pollutants (bacteria, metals, and some nutrients and toxins) attach to sediments. When sediments enter water, they carry the pollutants along with them.

**Solutions and Prevention Practices:**

- Keep soils covered to prevent erosion.
- Cover stockpiles of mulch, bark, topsoil, etc.
- Design landscape features, to reduce runoff to paved surfaces.
- Do not clear in sensitive areas such as steep slopes and sites near streams without erosion prevention and control.

**Problem:**

**Oil and grease** from vehicles and equipment coat fish gills (making it hard for the fish to breathe) they also block oxygen from entering the water, and clog drainage facilities. This leads to increased maintenance costs and flooding problems.

**Solution and Prevention Practices:**

- Fix oil leaks on vehicles and equipment and keep equipment clean and free of oil and grease buildup.
- Use care when filling and draining containers.
- Cover stored solid waste.
- Dispose of oil and grease waste properly.
- Use a drip pan to catch spills from broken hydraulic lines and other leaks.

**Problem:**

**Metals** from vehicles, equipment, fuel and some pesticides attach to sediments and settle to the bottom of the waterway, harming bottom-dwelling organisms.

**Solution and Prevention Practices:**

- Keep vehicles and equipment engines tuned up.
- Use care when filling and draining containers.
- Dispose of waste properly.

## **How You Can Help Protect Medford's Water Quality**

### **Landscape Designs for Water Quality**

Plant selection and landscape design can significantly impact water quality by affecting water infiltration, stormwater runoff and maintenance needs. Designs which limit the volume or decrease the speed of stormwater runoff help water quality because less or slower runoff reduces the chance that soil will be eroded and pollutants washed into the drainage system. Low maintenance, pest-resistant plants and landscape designs reduce the need for potentially harmful pesticides and fertilizers.

- Design landscapes that minimize runoff.
- Design irrigation systems with separate zones.
- Specify plants that require low site maintenance.
- Incorporate vegetated swales in site design.
- Maintain required stream setbacks and follow other code requirements.

### **Landscape Installation and Maintenance**

Landscape installation and maintenance methods affect both the amount of runoff, which can wash pollutants into Medford's waterways as well as the pollutants potentially wash off.

- Deeply cultivated soils and add amendments so water can soak deep into the ground. Avoid planting on a thin topsoil layer over clay.
  - Maintain lawns and gardens to reduce runoff. Turn the soil in flowerbeds to reduce soil compaction.
  - Keep plants healthy so they can deter pests.
  - Use care when watering. Water the plants, not the driveway or sidewalks.
- Maintain irrigation systems to minimize runoff and potential leaching.
- Apply fertilizer at times and in amounts best used by plants, minimizing fertilizer lost to runoff.
  - Don't over-fertilize. Test the soil and apply only what is needed. Consider organic fertilizers, which work much more slowly than chemical fertilizers and provide nutrients to plants over a longer period of time. Don't fertilize on windy or rainy days. Keep fertilizer off sidewalks and driveways where rain-washes nutrients (and pollutants) into storm drains and then into waterways.
  - Use pesticides with care and only as a last resort.

## **Integrated Pest Management**

Integrated Pest Management (IPM) is an approach to pest control that accepts pests as a natural part of the system but seeks to keep them at a tolerable level. With respect to landscape maintenance, the IPM practitioner closely watches the landscape to promote optimum growing conditions for the desired plants (since healthy plants are less susceptible to pests) and to eliminate conditions favorable to the pests. IPM also seeks to maintain natural controls such as beneficial insects.

When pest controls are needed, the pest and its stage of development are identified and the least toxic control possible is used. Pesticides are used only as a last resort and only in ways that maximize effectiveness and minimize harm. IPM guidelines relative to landscape maintenance are listed below:

- Use pest-resistant plants.
- Match plants with growing conditions.
- Keep plants healthy.
- Time activities to reduce pest damage.
- Watch for signs of pests or disease.
- Establish acceptable damage levels.
- Use the least toxic treatment.
- Use chemical pesticides only as a last resort.
- Consider the site. If it is near a water body (including a drainage ditch), vegetable garden, children's play area or public place, select a pest management technique that minimizes harm to these sensitive areas.
- Evaluate your actions. Keep records of your observations, decisions made, actions taken and the results of those actions. Make adjustments as needed.

## Pick Up The Phone

### City of Medford Resources

→	Business License	774-2025
→	Stormwater Information	774-2600
→	Stormwater Rate/Billing Information	774-2100
→	Pollution Complaints/Stormwater Discharge Violations	774-2600
→	Stormwater System Maintenance	774-2600
→	Disposal to the Wastewater Collection System	774-2750

### Hazardous Waste/Disposal Alternatives

- *Emergency Spills:*  
City of Medford 9-1-1
- *Hazardous Waste:*  
See the Telephone Yellow Pages
- *Recycling Services:*  
See the Telephone Yellow Pages
- *Discharge Permits:*  
Oregon State Department of Environmental Quality 776-6010/X246  
Regional Wastewater Treatment Plant 774-2750
- *Storage Considerations:*  
City of Medford Fire Marshall's Office 774-2318
- *Technical Assistance:*  
Oregon Department of Environmental Quality 776-6010X246