

Irrigation System Checklist:

Drinking Water (Wellhead) Protection Areas

This checklist is a helpful guide only; it's not required as part of the submittal process.

Overwatering can lead to the leaching of highly soluble contaminants into groundwater. Therefore, irrigation system requirements are included in the City's Critical Areas Ordinance for Drinking Water (Wellhead) Protection Areas (DWPAs). The entire code is found in Olympia Municipal Code (OMC) 18.32.200 through 18.32.400. All new developments which fall within a DWPA are required to meet Minimum Mitigation Standards as described in OMC 18.32.235. These standards reduce pollution entering groundwater that could put City drinking water sources at risk.

The code requirement for irrigation systems in OMC 18.32.225 (item 2 c) states:

"Irrigation systems shall be designed and managed to maximize efficient use of water. Lawns will not be watered more than a depth of 1 inch per week over the area of turf. An irrigation consultation will be required at the time the irrigation system is installed to determine precipitation rates and uniformity of system. Consultations will be conducted by an Irrigation Association Certified Landscape Irrigation auditor."

Two items will be required for review by the City on projects that occur within DWPAs, 1) irrigation plans and specifications and 2) irrigation consultations. Follow the checklist provided below to ensure that your irrigation systems will meet the requirements prior to review and inspection.

1. IRRIGATION PLANS AND SPECIFICATIONS

The following documents should be submitted to the City in a standardized, digital format (Microsoft Excel or Word compatible):

- A chart identifying the location and planting type (lawn, annuals or shrubs/perennial groundcovers) for each zone; naming the equipment, design pressure, and manufacturers' estimate of precipitation rate.
- Identify on plans the specific equipment (sprinkler types, nozzles, pipe sizes) for the entire system.
- Flow calculations (gallons per minute) for each zone, to ensure adequately sized pipes and valves.
- Include a planting plan at the same scale as the irrigation plan.
- Include location, available flow, and pressure at the point of connection.
- Digital file of "as-built" drawings of irrigation system.

The City will review plans and specifications to evaluate the following:

- Zone layout conforms to planting types (separate zones for turf, shrub/groundcover, annuals/pots) and exposures (north/east sides of buildings separate from south/west sides or exposed slopes).
- Sprinklers and other equipment are appropriate for planting layout.
- Sprinkler heads are laid out on a square or triangulated grid per manufacturers' specifications.
- Estimated precipitation rates are correct for the layout and pressure.

2. IRRIGATION CONSULTATION

In order to facilitate a post-installation inspection/audit of the system, the owner or contractor should provide the auditor with current irrigation schedules and keys to all controllers. Ideally, a person from the installation or management contractor would accompany the auditor to answer questions and provide information as needed. The system inspection/audit will include:

A preliminary site review, which will include:

- Check meter for leaks with master valve on.
- Review the planting plan and irrigation schedule on the controller to see if it is correctly set and appropriate.
- Examine soil types and rooting depths in several spots.

Inspection of the irrigation system (including running each zone), which will note:

- Deviations from proper/approved layout or nozzling.
- Pipe leaks, broken heads, low or blocked heads, poor arc or radius adjustments.
- Estimated average precipitation rate in each zone based on equipment type, layout, and performance.
- Appropriateness of schedule for soil type, planting types and locations, root depth, and irrigation devices.

Test specified number of zones (5% of total, or a minimum of 2) representing each of type of irrigation equipment on site using catch cans to determine if:

- Lower Quarter Distribution Uniformity exceeds a minimum standard of 60% for sprays and 70% for rotors or pop-ups with "rotator nozzles".
- Precipitation rates are in accord with manufacturers ratings, or auditors' estimates based on site conditions.

Irrigation Consultation Report shall include:

A report prepared by the auditor shall be submitted to the City for review. The report will outline whether the system is installed as designed and performs to the minimum distribution uniformity standards.

- Digital file of chart listing all zones by number and location with estimated precipitation rate, any repairs or adjustments needed in each zone, and suggested schedules for establishment period and 3 years after planting.

Questions? Contact Liz Hoenig, Senior Program Specialist, Groundwater Protection Program, Public Works Water Resources at 360.753.8152, 360.753.8588, TTY 360.753.8270, or via email at publicworks@ci.olympia.wa.us.



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