



**1.0 Purpose**

To reduce the amount of water applied to the DFC Grounds in order to conserve water.

**2.0 Activity/Department**

The On-site Landscape Contractor  
GSA Team 6

**3.0 Forms Used**

Contractor's Daily Quality Control Inspection Form  
Surveillance Activity Checklist

**4.0 References**

Denver Water Department Mandatory Watering Restrictions  
Denver Water Department Xeriscape Seminars

**5.0 Acronyms, Abbreviations, and Definitions**

*Xeriscape*: The word "Xeriscape" was coined by the Denver Water Department in 1981 to help make water conserving landscaping an easily recognized concept. The word is a combination of "landscape" and the Greek word "xeros," which means 'dry.' The concept of Xeriscape is based on seven principles: planning & design, limiting turf areas, selecting and zoning plants appropriately, improving the soil, using mulches, irrigating efficiently, and doing appropriate maintenance.

*Improved Lawn Areas*: This defines grass areas that are regularly maintained and watered using an automated underground irrigation system.

*QAP*: Quality Assurance Person

*COR*: Contracting Officer's Representative

**6.0 Exclusions**

Drip watering systems are excluded from monitoring requirements.



## **7.0 Procedure**

### **7.1 Design**

- 7.1.1 The GSA is committed to installing xeriscape in all new areas that are landscaped and/or renovated. The new designs shall include many xeric plants and the reduction of lawn areas, where applicable.
- 7.1.2 The GSA landscape designer requires that all new planting beds are installed with a drip-watering system.
- 7.1.3 Trees throughout the DFC should have a wood mulch ring to help retain moisture.

### **7.2 Monitoring**

- 7.2.1 The Contractor's Daily Quality Control Inspection Form is used to report irrigation operation and maintenance findings and is given to the COR for review.
- 7.2.2 The Government Quality Assurance Person (QAP) will make periodic inspections to ensure contractor's performance of objectives has been completed. Inspections will be made as tasks are completed and documented on the Quality Assurance Plan.
- 7.2.3 Monitoring Automatic and Manual Irrigation Systems:
- The COR shall consult with the Denver Water Department to verify the current watering restrictions and ensure the Contractor understands and follows the watering schedule.
  - The watering process shall include monitoring of both automatic and manual systems while they are in operation to check for possible breaks, leaks, or any damage not caused by the Contractor. During periodic inspections, the COR documents any discrepancies using the Surveillance Activity Checklist.
  - The Contractor shall be responsible for the complete understanding and operation of all controllers and irrigation systems.
  - The Contractor shall ensure that the irrigation systems are in good working order. During periodic inspections, the COR documents any discrepancies using the Surveillance Activity Checklist.
  - The Contractor must flag or repair problems found and submit that list



to the COR so repairs can be made.

- Periodic systems checks shall be made for all irrigation systems to detect problems not found during the normal watering process, and a list submitted to the COR.
- The Contractor must flag each area or sprinkler head where a problem is found so they can be easily identified.
- It is recommended that these inspections are made by the Contractor on a weekly basis.

### **7.3 Maintenance**

7.3.1 The Contractor shall water improved lawn areas. Watering shall be performed as necessary to ensure the development of deep root systems, healthy vigorous growth, and a uniform green appearance without browning or barren areas resulting from lack of water. The Contractor shall insure that no area is over-watered, and that only the minimum amount of water required maintaining the aforementioned condition is used. Water running off along curbs and into the gutters, as well as ponding, are a good indicator that the lawn is over-watered. The Contractor may make recommendations to the COR for nozzle or other fittings and hardware changes in order to promote water conservation.

7.3.2 The Contractor shall be responsible for watering any tree or shrub within all areas, including lawn areas, open areas, and field areas, on an as needed basis, due to drought or other stressed conditions. Newly planted trees (up to 5 years old) and shrubs (2 years old or less) not receiving water from an irrigation system shall be watered regularly throughout the growing season. A deep, thorough watering shall be made to each tree or shrub to ensure sufficient moisture is given them to encourage growth and development of the trees. Whenever established trees are in need of water they must also be included in the watering schedule. The Contractor utilizes a deep-feed watering system for all trees, instead of top watering them.

7.3.3 The Contractor shall thoroughly water in all new plantings, followed by a weekly deep watering throughout the first growing season and more frequently during hot weather. The Contractor shall insure that adequate water is provided during the winter months to avoid freezing dehydration.

7.3.4 The Snow Removal Contractor should dump snow piles in areas where the melt-off will be beneficial to the existing vegetation (trees, shrubs, flower & plant beds.)



7.3.5 The Contractor should increase the length at which the DFC lawns are cut to decrease the frequency of watering.

7.3.6 Sprinkler Head/ System Maintenance:

- Turf shall be cut away from the sprinkler heads as necessary to ensure better water coverage; to improve water conservation and to prevent flooding or excessive water loss onto streets, parking areas, or sidewalks.
- The Contractor shall clean out sprinkler heads and nozzles when plugged with debris.
- The Contractor may be required to flush out sprinkler lines with water to remove the accumulation of debris as a result of water line breaks.
- Pressure regulators have been installed on all irrigation systems to prevent misting and evaporation.

7.3.7 Additional Water Sources:

- The Contractor shall not, under any circumstances, connect to any fire hydrant for lawn irrigation purposes. There is a domestic hydrant located near Building 76 that is fitted with a reduced pressure backflow preventer that can be used to fill a watering truck or water tank. The Contractor may connect to existing building hose bibs or specific connections on existing lawn irrigation systems.
- The Contractor can utilize the 500,000 gallon storage water tank adjacent to Building 49A to fill their water truck to water.

7.3.8 When not faced with drought conditions and required to follow the Denver Water Department's restrictions, the GSA may use the moisture sensors that were installed in most of the DFC's irrigation systems in 2000 by Johnson Controls. These moisture sensors were abandoned in 2002 when mandatory water restrictions were implemented.

## **8.0 Records**

Contractor's Daily Quality Control Inspection Form  
Surveillance Activity Checklist



### SURVEILLANCE ACTIVITY CHECKLIST

(To be performed (Daily) (Monthly) (Weekly), etc.)

DELIVERY ORDER # P-08-02-JA-0008 Grounds Maintenance

<b>Contract Performance Objective Requirement</b>	<b>Contract Paragraph Number</b>	<b>Method Of Surveillance</b>	<b>Date Inspected</b>	<b>Where Inspected</b>	<b>Was Standard Met?</b>	<b>Date Expected Corrective Action to be Completed</b>