

ITEM 615.03020111 - WATERING VEGETATION - (FIXED PRICE)

DESCRIPTION

This work includes watering all newly sodded areas, all newly planted plants (trees, shrubs, groundcovers, ferns, grasses, vines, herbaceous perennials, annuals) and all newly seeded areas, including turfgrass, native grass, and wildflowers as required by the contract documents or as directed by the Regional Landscape Architect and the Engineer in Charge. This work also includes watering existing vegetation as required by the contract documents, the Regional Landscape Architect or the Engineer.

MATERIALS

Water shall meet the requirements of N.Y.S.D.O.T. Standard Specification subsection 712-01, Water.

CONSTRUCTION DETAILS

When this specification is used with §610 - *Turf And Wildflower Establishment*, §611 - *Planting* or §612 - *Sodding*, then watering shall be performed as per the following:

Water shall be supplied under this item following planting, laying of sod, or seeding throughout the construction period including any period of establishment in accordance with the guidelines included in this specification. Water may also be supplied to existing vegetation if required by the contract documents or the Engineer. Watering under this item will usually be required between April 1 and November 15, and shall be supplied in accordance with the conditions described below, and as approved by the Engineer:

1. Water shall not be supplied when the soil within the root zone of the plants or seeds is saturated from recent heavy rains or snow melt.
2. Water shall be supplied as necessary to prevent the soil surface of seeded areas from drying out. This means that watering will be required more frequently during hot or dry weather than during cool, damp weather.
3. Water shall be supplied as necessary to prevent soil deeper than 25 mm below the surface of planted areas from drying out. This means that watering will be required more frequently during hot or dry weather than during cool, damp weather.
4. The volume of water to be applied at each watering is described in the paragraphs below. Water shall be applied in such a manner that the required volume of water will be provided without damage to seed beds, sod, plant saucers, mulch, plants, stakes, or other areas to be watered. Damage resulting from watering operations shall be repaired at the Contractor's expense.

Widely Spaced Plants (greater than 1m on center). Each widely spaced plant shall receive a 75mm deep (minimum) watering within its saucer at each watering. This watering depth is equal to 75 liters / m² of plant pit / watering. Frequency of watering shall be as necessary to keep the soil 25 mm below the surface evenly moist for a full growing season following planting.

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Each plant saucer shall be carefully filled with water in a manner which does not erode the soil or the plant saucer. Soaker bags may be used if their capacity is large enough to provide the quantity of water required at each watering. Watering shall not cause uprooting or exposure of plant roots to the air. Watering method to be used shall be approved by the Regional Landscape Architect.

Closely Spaced Plants (less than or equal to 1m on center) and Sod. Closely spaced plants and sod shall receive a 25 mm deep (minimum) watering evenly distributed over the entire planting bed or sodded area at each watering. Several containers with vertical sides shall be placed throughout the area to be watered to aid in determining when 25mm of water has been applied. Assuming even distribution of water, 25 mm of water will have been supplied when water in these containers reaches 25 mm deep. This watering depth is equal to 25 liters / m² of planting bed / watering. Frequency of watering shall be as necessary to keep the soil 25mm below the surface evenly moist for a full growing season following planting.

A light sprinkling or light spray technique which does not damage the sod or erode the soil or the plant saucers shall be used to water all sod and closely spaced plants in planting beds. Watering shall not cause uprooting or exposure of plant roots to the air. Watering method to be used shall be approved by the Regional Landscape Architect.

Seeded Wildflowers and Native Grasses. The soil surface of seeded wildflower and native grass areas shall be kept constantly and evenly moist during a six (6) week (minimum) germination period following late summer seeding of perennial and biennial species and during a three (3) week (minimum) germination period following spring seeding of annuals. Each watering during these germination periods shall be 6 mm deep and shall be evenly distributed over the entire seeded area. Several containers with vertical sides shall be placed throughout the area to be watered to aid in determining when 6 mm of water has been supplied. Assuming even distribution of water, 6 mm of water will have been supplied when water in these containers reaches 6 mm deep. This watering depth is equal to 6 liters / m² / watering.

Following the germination period(s), wildflowers and native grasses shall receive a 25 mm deep (minimum) watering evenly distributed over the entire seeded area at each watering. Frequency of these waterings shall be as necessary to keep the soil 25 mm below the surface evenly moist for a full growing season following germination. Several containers with vertical sides shall be placed throughout the area to be watered to aid in determining when 25mm of water has been supplied. Assuming even distribution of water, 25 mm of water will have been supplied when water in these containers reaches 25 mm deep. This watering depth is equal to 25 liters / m² of planting bed / watering.

A light sprinkling or light spray technique which does not erode the soil or wash away the seed shall be used to water all wildflower areas. Watering method to be used shall be approved by the Regional Landscape Architect.

Turf. The soil surface of seeded turf establishment and restoration areas shall be kept constantly and evenly moist for a four (4) week (minimum) germination period immediately following seeding.

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Each watering during the first two weeks (minimum) of the germination period shall be 6 mm deep and shall be evenly distributed over the entire seeded area. Several containers with vertical sides shall be placed throughout the area to be watered to aid in determining when 6 mm of water has been supplied. Assuming even distribution of water, 6 mm of water will have been supplied when water in these containers reaches 6 mm deep. This watering depth is equal to 6 liters / m² / watering.

Each watering during the next two weeks of the germination period shall be 12 mm deep and shall be evenly distributed over the entire seeded area. Several containers with vertical sides shall be placed throughout the area to be watered to aid in determining when 12 mm of water has been supplied. Assuming even distribution of water, 12 mm of water will have been supplied when water in these containers reaches 12 mm deep. This watering depth is equal to 12 liters / m² / watering.

Following the germination period, turf areas shall receive a 25 mm deep (minimum) watering evenly distributed over the entire seeded area at each watering. Frequency of these waterings shall be as necessary to keep the soil 25 mm below the surface evenly moist for a full growing season following germination. Several containers with vertical sides shall be placed throughout the area to be watered to aid in determining when 25 mm of water has been supplied. Assuming even distribution of water, 25 mm of water will have been supplied when water in these containers reaches 25 mm deep. This watering depth is equal to 25 liters / m² of planting bed / watering.

A light sprinkling or light spray technique which does not erode the soil or wash away the seed shall be used to water all turf areas. Watering method to be used shall be approved by the Regional Landscape Architect.

METHOD OF MEASUREMENT

This work will be measured as the number of kiloliters of water applied. The quantity applied will be determined from approved flow meters or by measurement in tanks or tank trucks of predetermined capacity. The Contractor shall furnish the Engineer's representative with measurements and capacities to provide a complete and accurate record of the quantity of water furnished and applied.

BASIS OF PAYMENT

The fixed price shown in the Proposal includes the cost of furnishing and applying water, all labor, equipment and incidentals necessary to satisfactorily complete the work except that initial waterings as described under §611-3.03A, and §612-3.05 shall be included in their respective items. No compensation will be allowed for water improperly dispensed or excess watering as determined by the Engineer.

The fixed price shown in the proposal shall not to be altered in any manner by the bidder. Should the amount shown be altered, the new figure will be disregarded and the original price will be used to determine the total amount bid for the Contract.