## Bridge Maintenance

**Description:** Activity includes cleaning and maintenance of bridges, and roadways over large diameter culverts. Maintenance and replacement of structures includes washing, sealing, scraping, replacing, and patching of curbs, walkways, decks, rails, deck joints, and weeps, on wood, concrete, and metal bridge components. Cleaning of drain holes and weeps may occur at any time during the year to restore and maintain drainage off the structure. High pressure air or water may be used.

**Goal:** To maintain and repair the structural integrity of bridges and culverts within City of Salem jurisdiction in a manner that minimizes impacts to natural resources.

### Bridge Cleaning and Maintenance

**Minimization Measures, Avoidance Measures, and BMPs:**

* Bridge washing over wetted waterways should occur during a time where they are actively flowing to minimize water quality impacts. Bridge washing over dry waterways may occur at any time.
* Temporarily block deck drains, and weeps, prior to commencing work.
* Mechanically remove debris from bridge decks, railings, walkways, and curb in a manner that minimizes material entering waterbodies. Remove debris from adjacent rails, curbs, and sidewalks to the bridge deck to allow mechanical removal by a sweeper.
* Pressure wash remaining debris taking care not to cause debris to enter waterbodies to the maximum extent feasible.
* Implement adequate measures to ensure paint and other hazardous material does not enter adjacent water bodies.

### Bridge Vegetation

**Description:** Activity includes vegetation management around existing structures. The primary

purpose of bridge vegetation management is to maintain sight distance and maintain pedestrian accessibility. Bridge vegetation management must also maintain access to the structure for structure maintenance, fire safety, access for inspection, and to maintain the integrity of the structure.

**Goal:** To manage the vegetation that may limit sight distance or impact the structural integrity

of bridges and culverts on city streets in a manner that minimizes impacts to natural

resources.

**Minimization Measures, Avoidance Measures, and BMPs:**

* Bridge vegetation removal over wetted waterways should occur during a time where they are actively flowing to minimize water quality impacts. Bridge vegetation removal over dry waterways may occur at any time.
* Temporarily block deck drains, and weeps, prior to commencing work.
* Mechanically remove vegetation from bridge decks, railings, walkways, and curb in a manner that minimizes material entering waterbodies. Remove debris from adjacent rails, curbs, and sidewalks to the bridge deck to allow mechanical removal by a sweeper.
* Pressure wash remaining debris taking care not to cause debris to enter waterbodies to the maximum extent feasible.
* Implement adequate measures to ensure paint and other hazardous material does not enter adjacent water bodies.

## Bridge Repair

**Description:** Activity includes repair of bridges and adjacent features. Bridges may be constructed of steel, wood, or concrete. Maintenance typically replaces structural elements in kind.

**Goal:** To maintain and repair the structural integrity of bridges and culverts along city streets in a manner that minimizes impacts to natural and cultural resources.

**Minimization Measures, Avoidance Measures, and BMPs:**

* Historic Bridge BMPs:
  + Historic review and approval is not required for the following activities, regardless of the historic status of the bridge:
    - Deck surface work (e.g. striping, paving, joints, epoxy overlay, patching, and deck seals).
    - Scour repair.
    - Perform work with in-kind material if possible. If not possible, coordinate with the Historic Preservation Manager
* Remove and dispose of repair material and debris appropriately.
* Ensure green concrete does not come into contact with waterbodies.
* Use a stable, appropriate concrete truck chute clean-out area to keep material from being deposited in riparian corridors, wetlands, or in an area where it can be washed into a stream or wetland.
* Use cofferdams for structural repairs as appropriate.
* If treated wood needs to be cut, contain saw chips from treated wood where feasible.
* Use foam or other quickset material designed for use in water to plug the void prior to using concrete, if the void is connected to a waterbody. The intent of the plug is to prevent concrete from entering a waterbody.
* Use good housekeeping practices including erosion control and spill containment as appropriate.