Activity 121
Minor Culvert and Inlet Inspection and Cleaning

Description

Activity 121 involves the cleaning of soil, rock, and debris by hand or mechanical means, from minor drainage facilities to restore proper operation. It includes:

- Culverts and storm sewers less than 6 feet in diameter or width
- Box culverts less than 6 feet in width
- Siphons less than 6 feet in width
- Catch basins, manholes and inlets
- Maintaining sump pumps, including those at underpasses and lift stations
- Maintaining subsurface drainage, other than work done under Activity 128
- Visual or camera inspection of drainage facilities

It also involves loading, hauling, testing and disposing of excess material.

Refer to Activities 160 and 162 for:

- Maintenance of culverts, storm sewers, siphons, and box culverts that are 6 feet or greater in diameter or width.
- Maintenance of drains, catch basins, and inlets on bridges.
- Maintenance of overhead flumes.

General Information

Refer to discussion in the General Instructions section preceding Activity 120 in this section of the *Maintenance Guide* for additional information including environmental and traffic control recommendations and other important considerations.

If needed test material removed from ditches for substances that may be harmful to the environment. Ensure that waste or excess material is disposed of in an appropriate location. Seek guidance and assistance from the District Manager and the Region Environmental Coordinator.

Maintain the above listed drainage facilities in the condition necessary to accommodate their design capacity, including:

- Inspect each drainage facility, to ensure its proper operation, especially during periods of heavy rainfall or runoff. Inspect each drainage facility preferably at least annually. During inspections, identify damage to be repaired under Activity 123. Charge inspection to Activity 121.
- During inspections also look for any changes in drainage patterns that may affect the operation or capacity of the existing structure.
- Mark drainage facilities that may become hidden or may be damaged by other maintenance operations.
- Ensure that debris, vegetation, etc. does not or will not block the flow of water, especially during periods of heavy rainfall or runoff. Control or remove vegetation that may impair the operation of the structure.

- Remove soil, rock, and debris from drainage facilities as needed. A pressurized water apparatus, such as a vactor-jet rodder, can be used to open plugged facilities and remove unwanted material.
- If a drainage facility needs repair or replacement, refer to Activity 123.
- If pump or lift stations are part of the drainage system, schedule and perform needed maintenance to ensure proper operation.
- If catch basins, inlets, or manholes are designed to contain oil or other surface contaminants, the Transportation Maintenance Manager must be aware of the location of those facilities and must appropriately clean those facilities to prevent release of the oil or other surface contaminants into waterways.
- If the material in the drainage facility may contain material that is harmful to the environment, work with the District Manager and the Region Environmental Coordinator to properly test the material and determine the appropriate removal and disposal of the material.
- Condition of drainage facilities should be tracked using a drainage facility inventory database.

Work under this activity may involve areas that contain endangered species. Refer to the *RES/RAZ Maps* and comply with all restrictions for work in those areas. Seek assistance from the District Manager and the Region Environmental Coordinator as needed.

If the drainage facility nearly always carries water, if it contains or supports fish or fish resources, or if it supports fish passage, perform maintenance or repairs under Activity 124.

Maintain water quality features under Activity 125.

Equipment

Equipment may include:

- Water Truck.
- Truck to haul away material.
- Vactor jet rodder (for removing debris from structure interiors).
- Appropriate hand tools.
- Backhoe.

Materials

Materials include:

- Devices to control erosion and sedimentation.
- Material to sample and/or test potentially harmful material.

Work Method

1. Implement appropriate traffic control.
2. Implement appropriate methods of erosion, sediment control, or pollutants or contaminants control.
3. If harmful material is suspected, sample and test as needed before further disturbing or removing the suspect material.
4. Remove and dispose of debris from the drainage structure and adjacent area as needed.
5. Inspect the drainage structure for damage or needed repairs. As appropriate, schedule or arrange for needed repairs.
6. Remove traffic control.
7. To prevent environmental damage, clean tools and equipment using Best Management Practices.
8. Dispose of removed material in an appropriate location.

Measurement of Accomplishment, Expenditure Account, and Charge Activity

Measurement is number of installations serviced or inspected. Expenditure account type is Highway EA; use a sub job appropriate for the crew performing the work.

Use a sub job within the 800 series if the work involves bicycle path facilities. These sub jobs are assigned by the Maintenance Management System (MMS) Unit based on the type of work performed.

- Charge Activity 121 when cleaning drainage structures.