

**Town of Truro  
Municipal Landfill**

**Post Closure Maintenance and Monitoring Plan**

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Prepared For:

**The Town of Truro**

Prepared By:

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## **I. Introduction**

The Town of Truro is currently in the process of closing and capping the former Municipal Landfill as specified in the MaDEP approved CSA Report and Closure and Capping Design Plans. As part of the landfill closure process, a Post Closure Maintenance and Monitoring Plan (PCMMP) is required in order to ensure the capped landfill is maintained to operated as designed over the life of the cap (regulatory life is assumed at 30 years) and continues to protect human health and the environment during this period.

This Plan is designed to outline the requirements as specified in the MaDEP regulations (310 CMR 19.140) and the MaDEP Landfill Technical Guidance Manual.

## **II. Inspection and Maintenance Program:**

An inspection and maintenance program is required to be established in order to ensure the integrity of the capping system is maintained.

### Inspections:

The capped area of the landfill and its surficial components will be inspected jointly by the town engineer and the director of the Department of Public Works on a quarterly basis. An inspection report sheet will be prepared after the completion of each inspection and copies maintained by the DPW and the reporting engineer.

The inspection will consist of a joint walk over of the entire landfill area. Any evidence of settlement, erosion, slope stability, or damage to the surface of the landfill will be noted. Additionally, the condition of the pavements and road surfaces will be inspected for signs of degradation and settlement. Any other irregularities such as evidence of leachate breakout, rodent burrowing, or hazards will also be noted.

Upon completion of the inspection, the engineer will provide direction on the repairs required in order to remedy any problems identified. The DPW will also notify the engineer for a re-inspection of the repaired areas upon completion of the repairs.

On an annual basis, the engineer shall make measurements at specified benchmark areas within the capped landfill to check for gross settlement of the landfill. This information will be kept in a data base for comparison in the biennial reports.

### Maintenance Planning and Budgeting:

The Truro Department of Public Works will be responsible for completing all maintenance and repairs associated with the landfill cap. The materials potentially necessary for completion of maintenance will be budgeted for in the DPW annual budget and will be readily available through existing maintenance contracts for fill, loam, pavements, etc.

In any maintenance activity, the DPW will consult with the engineer to ensure the method of repair will not impact the integrity of the cap or any of the drainage structures.

### Routine Maintenance:

The vegetated area of the landfill cap will be mowed twice a year unless the engineer determines a different schedule is appropriate. The first mowing should occur in late June with the second mowing occurring at the end of October. The October mowing may not be necessary if the growth has been slow enough in the dryer summer months.

The drainage channel and retention basin shall be kept free of obstructions such as branches and leaves. Additionally, the channel and entrance into the retention basin shall be kept clear of silt build up.

These routine maintenance items are to be conducted as necessary on a reoccurring basis. These activities will occur regardless of the results of the quarterly inspections.

### Repair Maintenance from Inspections:

Any items identified during the quarterly inspections which require repairs will be completed by the DPW. The engineer will provide direction and specifications to the DPW for these repairs and will provide oversight during the work. For any repairs which are significant in nature, the engineer will provide figures and designs as necessary. A copy of the design and report prepared by the engineer upon completion will be maintained in the files and submitted with the biennial report to the MaDEP.

## III. Environmental Monitoring

As part of the long term monitoring of the effectiveness of the landfill capping system, environmental monitoring will be necessary. This section of the plan will provide the details on the environmental monitoring plans for the landfill.

### Ground Water Monitoring:

Several well clusters have been installed during the investigation phase of the closure. These points will be protected and preserved during the capping phase of the closure. The following wells will be sampled on a semi-annual basis:

TL-4S	TRU-2S
TL-4I	TRU-2I
TL-4D	TRU-2D

These wells have shown to be the best indicators of what is happening in the groundwater within the landfill and downgradient of the landfill. The following parameters will be monitored during each sampling round:

- VOCs via EPA 8260
- Nitrates
- Chlorides
- Sulfates
- Alkalinity
- Specific Conductance (field parameter)
- pH (field parameter)

This information will be kept on file and provided to the Truro Board of Health. This information will be presented in the biennial report to the MaDEP as well. As data is collected and trends are determined, modifications to the frequency and the parameter list may be recommended in the reports to MaDEP.

### Landfill Gas Monitoring:

Four landfill gas monitoring points were installed during the investigation phase of the landfill closure. The integrity of these monitoring points will be preserved during the cap construction. Based on the past sampling history of these points, it is recommended that a field parameter monitoring program be implemented for the long term monitoring of the site. All four monitoring points will be sampled on a semi-annual basis and the two facilities on site in which personnel frequent (swap shop and transfer station control building) will also be sampled. The following parameters will be monitored:

- %LEL (methane)
- Oxygen
- Hydrogen sulfide
- TVOC
- Barometric Pressure

This information will be collected and kept on file to be included in reports. If the levels of methane in the buildings exceed 10% of the LEL, the operator at the landfill will be

notified and remedial measures will be implemented. Additionally, the MaDEP will be notified via letter.

#### IV. Reporting

All information from monitoring and maintenance operations at the landfill will be maintained by the engineer. Copies of pertinent information will also be provided to the town to the affected department (i.e. board of health, or DPW).

A report will be prepared on a biennial basis which details all maintenance activities completed, results of the inspections, and the results of the monitoring program. Additionally, conclusions and recommendations for modifications to the maintenance and monitoring program will be included in the report. The report will be provided to the Town of Truro (2 copies) and the MaDEP.