



# Cost Estimate Form for the Closure of a Lined Landfill

Submit to:  
 Waste Management Division, SWMB  
 PO Box 95, Concord, NH 03302-0095  
 (603) 271-2925 or [solidwasteinfo@des.nh.gov](mailto:solidwasteinfo@des.nh.gov)  
<https://www.des.nh.gov>



RSA 149-M/Env-Sw 1400

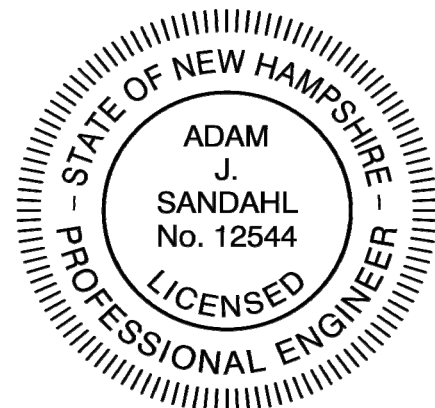
<b>Facility Name:</b> North Country Environmental Services Landfill	
<b>Facility Address:</b> 581 Trudeau Road, Bethlehem, NH 03574	
<b>NHDES Permit #:</b> DES-SW-SP-03-002	
<b>Owner:</b> North Country Environmental Services, Inc.	
<b>Phase:</b> Stage I through Stage VI	<b>Acreage:</b> 51.90 total, 47.79 acres require closure

Task	Unit	Unit Cost	Quantity	Total Cost
<b>I Design of Final Closure Plans</b>				
Engineering Cost	LS	\$125,000.00	1	\$125,000.00
Plans	LS	\$9,000.00	1	\$9,000.00
Modification/Closure Plan Review Fees	LS	\$13,900.00	1	\$13,900.00
<b>II Mobilization, Demobilization &amp; Insurance</b>				
Total Cost	LS	\$250,000.00	1	\$250,000.00
Other - Health and Safety Plan	LS	\$6,000.00	1	\$6,000.00
<b>III Erosion Control</b>				
Silt Fence	LF	\$2.91	2,500	\$7,275.00
Erosion Matting/ Blanket	LS	\$5,000.00	1	\$5,000.00
Hay Bale Sediment Barrier				\$0.00
Hay Mulch Cover				\$0.00
Check Dams	EA	\$50.00	50	\$2,500.00
Other	LS	\$10,000.00	1	\$10,000.00
<b>IV Waste Relocation</b>				
Test Pits (to define limits of refuse and/or groundwater to refuse contact)				
Clearing & Grubbing				
Waste Regrading (Refuse Excavation/Relocation & Compaction)				
Other				
<b>V Capping</b>				
<b>A Cap (Material and Installation)</b>				
Geomembrane	SF	\$1.00	2,082,000	\$2,082,000.00
Soil				
Testing				
Anchor Trench	LS	\$20.00	5,800	\$116,000.00
Other - Drainage Geocomposite	SF	\$1.00	2,082,000	\$2,082,000.00
<b>B Gas Vents Devices</b>				
Gas Vents/Wells	EA	\$300.00	125	\$37,500.00
Other				
<b>C Layers</b>				
Drainage Layer - Free Draining Sand - 12" thick	CY	\$10.50	77,100	\$809,550.00
Intermediate Cover Placement				\$0.00
Sand - Protective Gas Venting Layer - 6" thick	CY	\$10.50	38,600	\$405,300.00
Topsoil/Loam or Manufactured Soil - 4"	CY	\$11.50	25,400	\$292,100.00
Other - Screened Till (6" bedding & 6" moisture retention layers)	CY	\$11.50	77,100	\$886,650.00
<b>VI Stabilization, Run-off Control</b>				
Seed & Mulch (Include Lime, Fertilizer, Seed & Hay Mulch)	AC	\$2,800.00	47.8	\$133,812.00
Surface Water Diversion Swales	LF	\$40.00	20,000	\$800,000.00
Stone Rip-Rap	CY	\$58.00	1,000	\$58,000.00
Catch Basins, Manholes & Drop Inlets				
Toe Drain	LF	\$50.00	5,800	\$290,000.00
Detention Pond and Associated Outlet Devices				
Other				
<b>VII Monitoring Devices</b>				
Settlement Monuments/Plates				
Groundwater Monitoring Wells				
Gas Monitoring Probes				
Other				

Signature of Preparer: \_\_\_\_\_ Date: 03/17/2023  
(Must be a Professional Engineer)

This form provides a basis for estimating closure costs for a lined landfill. This form is not inclusive of all costs that may be associated with the landfill closure.

The cost estimate must include all items needed to comply with all NHDES permits. Please use the spaces provided above noted as "Other" or attach an additional sheet if necessary.





RSA 149-M/Env-Sw 1400

# Cost Estimate Form for Post-Closure of a Landfill

(lined or unlined)

Submit to:

Waste Management Division, SWMB

PO Box 95, Concord, NH 03302-0095

(603) 271-2925 or [solidwasteinfo@des.nh.gov](mailto:solidwasteinfo@des.nh.gov)<https://www.des.nh.gov>

<b>Facility Name:</b> North Country Environmental Services Landfill				
<b>Facility Address:</b> 581 Trudeau Road, Bethlehem, NH				
<b>NHDES Permit #:</b> DES-SW-SP-03-002				
<b>Owner:</b> North Country Environmental Services, Inc.				
<b>Phase:</b> Stage I through VI		<b>Acreage:</b> 51.9		
Task	Unit	Unit Cost	Quantity	Total Cost
<b>I Water Monitoring</b>				
Surface Water Sampling & Analysis				
Other (Permit Requirement) _____				
Ground Water Sampling & Analysis	LS	\$45,000.00	1	\$45,000.00
Other (Permit Requirement) _____				
Other - Repair of Wells	LS	\$500.00	1	\$500.00
<b>II Gas Monitoring</b>				
Landfill Gas Migration Monitoring	LS	\$10,000.00	1	\$10,000.00
Operation and Maintenance of Gas Collection System	LS	\$154,110.00	1	\$154,110.00
Replacing 20% of the Active Gas Collection System	LS	\$15,900.00	1	\$15,900.00
Other				
<b>III Settlement Monitoring</b>				
Field Survey	LS	\$3,000.00	1	\$3,000.00
Data Tabulation				
Other				
<b>IV Leachate Collection/Monitoring</b>				
Sewer Charges	LS	\$230,200.00	1	\$230,200.00
Water Monitoring				
Electricity				
Maintenance of Collection System				
Sampling & Analysis	LS	\$4,800.00	1	\$4,800.00
Other - Pump Station O&M	LS	\$25,300.00	1	\$25,300.00
<b>V Clean Air Act Requirements</b>				
Monitoring & Analysis	LS	\$ 35,300.00	1	\$35,300.00
Emissions Fees	LS	\$ 90,000.00	1	\$90,000.00
<b>VI Repair &amp; Site Maintenance Costs</b>				
Snow Removal	LS	\$500.00	1	\$500.00
Roadway Maintenance				
Mowing	AC	\$100.00	51.9	\$5,190.00
Soil Cover Maintenance and Planting	LS	\$3,100.00	1	\$3,100.00
Maintenance of Gas Venting System				
Subsidence Repair	LS	\$2,000.00	1	\$2,000.00
Stormwater Maintenance	LS	\$2,000.00	1	\$2,000.00
Other				
<b>VII Inspections</b>				
Annual Report	LS	\$6,250.00	1	\$6,250.00
Annual Site Inspections	LS	\$6,250.00	1	\$6,250.00
Other				
<b>VIII Other</b>				
Qualified Professional Oversight of all Activities				
<b>Sub-total</b>				\$639,400.00
<b>Contingency (10 % minimum)</b>				\$64,000.00
<b>Total Yearly Cost</b>				\$703,400.00
<b>Total 30-Year Cost (2023 Dollars)</b>				\$ 9,516,269.00

Signature of Preparer: \_\_\_\_\_

(Must be a Professional Engineer)

Date: 03/17/2023

This form provides a basis for estimating post-closure costs for a lined or unlined landfill. This form is not inclusive of all costs that may be associated with the landfill's post-closure monitoring and maintenance requirements. The cost estimate must include all expenses associated with compliance of all NHDES permits. Please use the spaces provided above noted as "Other" or attach additional sheets if necessary.

Table 1  
Estimated Post-Closure Monitoring/Maintenance Costs  
North Country Environmental Services, Inc.  
Mar-23

Task		Annual Cost Years 1-5	Annual Cost Years 6-10	Annual Cost Years 11-20	Annual Cost Years 21-30
I-a	Water Quality Monitoring	\$ 45,000.00	\$ 36,000.00	\$ 26,000.00	\$ 26,000.00
I-b	Repair of Monitoring Wells	\$ 500.00	\$ 500.00	\$ 500.00	\$ 500.00
II-a	Landfill Gas Migration Monitoring	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00
II-b	Landfill Gas Collection System O&M	\$ 154,110.00	\$ 91,810.00	\$ 44,810.00	\$ 30,810.00
II-c	Replacing 20% of the Active Gas Collection System	\$ 15,900.00	\$ 15,900.00	\$ 15,900.00	\$ 15,900.00
III	Settlement Monitoring	\$ 3,000.00	\$ 3,000.00	\$ 3,000.00	\$ 700.00
IV-a	Leachate/Condensate Disposal	\$ 230,200.00	\$ 159,100.00	\$ 107,300.00	\$ 87,200.00
IV-b	Leachate Monitoring	\$ 4,800.00	\$ 4,800.00	\$ 3,200.00	\$ 3,200.00
IV-c	Leachate Pump Station O&M	\$ 25,300.00	\$ 18,100.00	\$ 15,700.00	\$ 14,100.00
V	Air Quality Monitoring	\$ 125,300.00	\$ 63,000.00	\$ 33,000.00	\$ 18,000.00
VI	Repair & Site Maintenance Costs	\$ 12,800.00	\$ 11,000.00	\$ 7,750.00	\$ 6,000.00
VII	Inspections	\$ 12,500.00	\$ 8,500.00	\$ 8,500.00	\$ 8,500.00
VIII	Other	\$ -	\$ -	\$ -	\$ -
IX	10% Contingency	\$ 64,000.00	\$ 42,200.00	\$ 27,600.00	\$ 22,100.00
<b>TOTAL</b>		<b>\$ 703,410.00</b>	<b>\$ 463,910.00</b>	<b>\$ 303,260.00</b>	<b>\$ 243,010.00</b>

Notes:

A summary of the assumptions made in developing the estimate is attached

Costs presented are in 2023 dollars

Costs are based on our experience and data and information provided by NCES. Actual costs may vary.

Table 2  
Present Value of Post-Closure Monitoring/Maintenance Costs  
North Country Environmental Services, Inc.  
Mar-23

**Assumptions:**

<b>Discount Rate (ir)</b>	<b>2.60%</b>
<b>Inflation Rate (j1)*</b>	<b>3.00%</b>
<b>Inflation Rate (j2)*</b>	<b>1.00%</b>

Years After Closure	Annual Post Closure Cost	Annual Present Value Cost
1	\$ 703,410.00	\$ 706,789.00
2	\$ 703,410.00	\$ 710,184.00
3	\$ 703,410.00	\$ 672,246.00
4	\$ 703,410.00	\$ 662,168.00
5	\$ 703,410.00	\$ 652,241.00
6	\$ 463,910.00	\$ 423,714.00
7	\$ 463,910.00	\$ 417,362.00
8	\$ 463,910.00	\$ 411,105.00
9	\$ 463,910.00	\$ 404,942.00
10	\$ 463,910.00	\$ 398,871.00
11	\$ 303,260.00	\$ 256,835.00
12	\$ 303,260.00	\$ 252,985.00
13	\$ 303,260.00	\$ 249,192.00
14	\$ 303,260.00	\$ 245,456.00
15	\$ 303,260.00	\$ 241,776.00
16	\$ 303,260.00	\$ 238,152.00
17	\$ 303,260.00	\$ 234,581.00
18	\$ 303,260.00	\$ 231,064.00
19	\$ 303,260.00	\$ 227,600.00
20	\$ 303,260.00	\$ 224,188.00
21	\$ 243,010.00	\$ 176,955.00
22	\$ 243,010.00	\$ 174,302.00
23	\$ 243,010.00	\$ 171,689.00
24	\$ 243,010.00	\$ 169,115.00
25	\$ 243,010.00	\$ 166,579.00
26	\$ 243,010.00	\$ 164,082.00
27	\$ 243,010.00	\$ 161,622.00
28	\$ 243,010.00	\$ 159,199.00
29	\$ 243,010.00	\$ 156,813.00
30	\$ 243,010.00	\$ 154,462.00

**Total Cost in 2023 \$ \$ 11,299,300.00**

**Total Present Value Cost \$ 9,516,269.00**

**Notes:**

Annual present value cost calculated by multiplying the annual post closure cost by a discount factor (DF) calculated as follows:

$$DF = (1 + ir - j - ir^*j)^{-t}$$

where:

ir = 2.6% per OMB Circular A-94 for a 30 year period (2022 version [<https://www.whitehouse.gov/wp-content/uploads/2022/05/Appendix-C.pdf>])

j = Inflation rates are taken from CPI Tables Northeast, All Urban Consumers

t = years since closure

Annual present value cost is rounded up to the nearest dollar

\*Interest rates over the past 2 years have averaged 5.6% per year per the CPI tables referenced above. In the 7 years prior, interest rates averaged 1%. Assume that interest rates will remain elevated at 3% for the next 2 years before retuning to 1% thereafter.

## **Supporting Documentation for 2023 Post-Closure Costs**

March 2023

The following assumptions were made in developing the post-closure cost estimate. The estimated initial annual cost is summarized in the NHDES Post-Closure Cost Estimate form and the estimated annual costs for the entire 30-year post-closure period are summarized in Table 1 with the present value for the annual costs presented in Table 2. The costs were developed based on information provided by North Country Environmental Services, previous cost estimates developed for the facility, and our experience.

### **Item Ia – Water Quality Monitoring**

#### **Years 1 – 5**

- Annual Costs for sampling and reporting were estimated to be **\$45,000**. These costs will remain unchanged in the first five years of the post-closure monitoring program.

#### **Years 6 - 10**

- We have assumed that after the first five years of monitoring, that a reduction from tri-annual to bi-annual sampling will be allowed by NHDES, based on our experience at many unlined landfill closure sites. This will reduce the annual costs by approximately \$9,000 to an annual cost of **\$37,000**.

#### **Years 11 – 30**

- We have assumed that after ten years of monitoring that a further reduction in sampling parameters or locations will be allowed by NHDES. This will reduce the annual sampling costs to an estimated **\$27,000**

### **Item Ib – Repair of Monitoring Wells**

#### **Years 1 - 30**

- Carry an annual cost of \$500, which provides additional funds for minor repairs.

### **Item IIa - Landfill Gas Migration Monitoring**

- The annual costs of **\$10,000** for the quarterly monitoring of landfill gas migration will be required to be completed throughout the post-closure monitoring period. It is possible that NHDES may permit some reductions to the frequency and locations, after several years of monitoring and data gathering, but this is not relied upon in the estimate.

## **Item IIb – Landfill Gas Collection System Operation and Maintenance**

### *Maintenance Costs*

#### **Years 1 - 5**

- Routine maintenance of control system and flare, monthly monitoring of collection system and balancing. Assumed 4 hours per week for weekly tasks and 10 hours per month for monthly tasks. Estimated labor costs at \$70/hr are \$2,450/month, or approximately **\$29,400** per year.

#### Years 6 – 10

- With reduction in landfill gas generation following closure, the routine maintenance of control system and flare, and regular monitoring of collection system and balancing is anticipated to be reduced. Assumed 12 hours per month with estimated labor costs at \$70/hr are \$840/month, or approximately **\$10,100** per year.

#### Years 11 -30

- With further reduction in landfill gas generation following closure, the routine maintenance of control system and flare, and monitoring of collection system and balancing is anticipated to be reduced. Assumed 6 hours per month with estimated labor costs at \$70/hr are \$420/month, or approximately **\$5,100** per year.

#### Years 1 - 30

- Semi-annual maintenance of blower bearings, testing automated devices, gas canister maintenance/refill, and coordinating any unscheduled maintenance. Assuming 4 hours per event, \$280 per event or **\$560** per year.
- Annual calibration and maintenance of GEM field instrument are estimated to be **\$1,650** per year.
- Replacement of condensate knockout pump every 10-years. Assuming a cost of \$5,000 installed an annual cost of **\$500** has been included.
- Assuming unscheduled responses to alarm conditions occurs 4 times per year. At 6 hours per event, and 24 hours per year, **\$2,000** has been included in the annual cost for alarm conditions.
- Included **\$4,000** per year for replacement parts for blower/flare/controls etc.

**Therefore, the annual costs for years 1 through 5 shall include \$38,100 per year, Years 6-10 shall include \$18,110 and years 11-30 shall include \$13,810.**

## *Operational Costs*

### Years 1 – 5

Landfill gas wells will tend to accumulate liquid over time. Based on the existing operational experience, we have assumed that the purchase and installation of 2 pneumatic pumps for insertion in the landfill gas extraction wells will be required by year 5. These 2 pumps can then be rotated between remaining wells as needed to remove accumulated liquid from the wells. Assume the pumps discharge through a short hose to the LFG lateral pipe. Assume the pumps cost about \$10,000 each, installed. The total pump cost will be **\$20,000**.

The pumps require a compressed air delivery system, including a compressor and air drying equipment. The cost of a typical air compressor of sufficient capacity with an 80-gallon receiver tank is about \$4,000, and air drying equipment, including a refrigerated dryer and a desiccant dryer, costs about \$3,500. The equipment has to be sheltered from the elements. Therefore, assume \$5,000 for a shelter and installation of the equipment. The total assumed cost of the compressed air system is **\$12,500**.

Assume that a compressed air distribution system has to be constructed to deliver air to the pneumatic pumps at the LFG wells. Assume 2,000 linear feet of pipe is required for initial construction with an average burial depth of 1-foot installed with a "Ditch Witch" type of pipe installation. Based on an assumed pipe cost of \$4.50 per linear foot and an installation cost of approximately \$5.00 per linear foot, plus \$3,500 of fittings and detail work at the terminations, the cost is **\$22,500**.

Therefore, the cost of the pumps and compressed air delivery system is about \$55,000, or **\$11,000 per year to be added to the routine annual costs in years 1 through 5**.

Assume that quarterly surface scans will be required for the first five years of the post-closure period, along with 20 hours per quarter of labor and equipment associated with addressing methane emission exceedances. Assume that the cost of a surface scan, excluding reporting, is about \$3,000, and the labor and equipment cost associated with correcting exceedances is about \$5,750 per quarter. Therefore, **the annual cost for surface scans and repair is about \$35,000 in years 1 through 5**.

### Years 6 - 30

Assume that annual surface scans are required for years 6 through 30, with no repair of cap associated with exceedances required through the period. Assume the same \$3,000 per surface scan cost. Therefore, **the annual cost for surface scans is \$3,000 for years 6 through 30**.

## *Electricity Costs*

### Years 1 - 10

Based on historical information, the annual electricity cost to operate the LFG system in the current configuration is estimated to be approximately **\$70,000 per year**.



#### Years 11 - 20

Assume that starting in year 11, the LFG collection system operates on one blower and one flare. Assume the electricity cost, in 2023 dollars, would be 40 percent of the current total electricity cost, or about **\$28,000 per year for 10 years.**

#### Years 20 - 30

Assume that the one blower and one flare operate on a part-time basis with a 50 percent duty cycle. Therefore, the annual electricity cost would be about **\$14,000 per year for the last 10 years of the period.**

#### **Item IIc – Replacing 20% of the Active Gas Collection System**

This item is to replace 20% of the active landfill gas system per Env-Sw 1403.02(g)(7) within the footprint of the landfill through Stage VI. This cost is presented as an annual value with the full replacement cost spread out over 30 years. **The annual cost for replacement of 20% of the landfill gas system is \$15,900 for years 1 through 30.**

#### **Item III – Settlement Monitoring**

##### Years 1 - 30

- Assume settlement survey costs will average about \$3,000 per year for years 1 through 20. Years 20 through 30 will not require instrument survey and only a visual inspection at an estimated cost of \$700 per year.

#### **Item IV-a – Leachate/Condensate Disposal**

Leachate generated at NCES is hauled to an off-site disposal facility. Based on information provided by NCES, the average transportation and disposal cost is \$0.115 per gallon of leachate.

##### Years 1 - 5

- Assume 2.7 acres of the West Side cap and 1.4 acres of the Eastern Slope cap remains and will have been in place for at least 6 years at the time of closure and that the leachate flow rate will average 55 gallons per acre per day (gpad), which would produce about 226 gallons per day (gpd).
- Assume 47.8 acres of cap are constructed in Year 1 and that leachate is produced in this area at the rate of 110 gpad or 5,258 gpd.
- **Therefore, the annual cost for years 1 through 5 is approximately \$230,200.**

#### Years 6 - 10

- Assume flow rate of 50 gpad over 4.1 acres, or 205 gpd.
- Assume a flow rate of 75 gpad for the remaining 47.8 acres, or 3,585 gpd.
- **Therefore, the annual cost for years 6 through 10 is approximately \$159,100.**

#### Years 11 - 20

- Assume a flow rate of 40 gpad over 4.1 acres, or 164 gpd.
- Assume a flow rate of 50 gpad over 47.8 acres, or 2,390 gpd.
- **Therefore, the annual cost for years 11 through 20 is approximately \$107,300.**

#### Years 21 - 30

- Assume flow rate of 40 gpad over the entire 51.90 acres, or 2,067 gpd.

**Therefore, the annual cost for years 21 through 30 is approximately \$87,200.**

#### Item IV-b - Leachate Monitoring

##### Years 1 - 10

- Assume leachate is collected for analysis for the parameters required by the Solid Waste Rules three times per year from all Stages.
- Based on current costs for analytical testing, the annual laboratory cost is \$2,400.
- Assume labor and expenses total \$800 per round or \$2,400 annually.
- **Therefore, the annual cost for years 1 through 10 is \$4,800.**

##### Years 11 - 30

- Assume based on diminishing flows and stabilization of the leachate that the frequency of sampling may be cut by one-third so that the cost of monitoring is two-thirds of the initial cost. During years 11-20 following closure, sampling will be conducted twice per year. With stabilization, it is likely that the parameters for which analyses are required could also be reduced resulting in a further reduction in the monitoring cost, which is not reflected here.
- **Therefore, the annual cost for years 11 through 30 is about \$3,200.**

#### **Item IV-c Leachate Pump Station Operation & Maintenance**

##### **Years 1 - 30**

- Assume routine inspections coincide with gas system maintenance under Item 2 at a cost of **\$3,600** per year.
- Assume replacement parts and repairs for system components cost approximately **\$3,100** per year.
- Assume pipes are cleaned every two years at a cost of \$5,200 (annualized cost of **\$2,600**).
- **Therefore, the annual maintenance cost for years 1 through 30 is about \$9,300.**

##### **Electricity Costs**

##### **Years 1 - 5**

- Assume the annual electricity cost for years 1 through 5 is about **\$16,000**.

##### **Years 6 -10**

- Assume the leachate flow rates drops to about 55 percent of flow at closure on average over the 5 year period due to the cap so that the annual electricity cost for years 6 through 10 is about **\$8,800**.

##### **Years 11 - 20**

- Assume the leachate flow rates drop to about 40 percent of the flow at closure on average over the 10 year period so that the annual electricity cost for years 11 through 15 is about **\$6,400**.

##### **Years 21 - 30**

- Assume the leachate flow rates drop to about 30 percent of the flow at closure on average over the 10 year period so that the annual electricity cost for years 21 through 30 is about **\$4,800**.

## **Item V – Air Quality Monitoring**

### **Surface Scans**

#### **Years 1 - 5**

Assume that quarterly surface scans will be required for the first five years of the post-closure period, along with 20 hours per quarter of labor and equipment associated with addressing methane emission exceedances. Assume that the cost of a surface scan, excluding reporting, is about \$3,000, and the labor and equipment cost associated with correcting exceedances is about \$5,825 per quarter. Therefore, **the annual cost for surface scans and repair is about \$35,300 in years 1 through 5.**

#### **Years 6 - 30**

Assume that annual surface scans are required for years 6 through 30, with no repair of cap associated with exceedances required through the period. Assume the same \$3,000 per surface scan cost. Therefore, **the annual cost for surface scans is \$3,000 for years 6 through 30.**

### **Emission Fees**

Assume that NHDES Emissions Fees will remain constant for the first five years of the post-closure period at **\$90,000** per year. Assume the fee drops to **\$60,000** in years 6-10, **\$30,000** in years 11-20 and **\$15,000**, by year 21.

## **Item VI – Repair and Site Maintenance Costs**

#### **Years 1 - 5**

- Assume snow removal of **\$500** per year.
- Assume mowing costs will be approximately \$100/acre or **\$5,300** per year.
- Assume costs for repair of minor erosion of the final capping system will involve a day for an excavator, truck and laborer every two years at a cost of \$6,000 (annualized cost of **\$3,000**).
- Assume costs for repair of capping system settlement at a cost of \$10,000 every five years (annualized cost of **\$2,000**).
- Assume stormwater maintenance including removal of sediments which collect in ponds and swales will be required on a yearly basis. Costs assumed to be **\$2,000** per year.
- **Therefore the annual cost for years 1 through 5 is approximately \$12,800.**

#### **Years 6 - 10**

- Snow removal and mowing costs remain the same. Stabilization of the capping system and slowing of settlement results in a reduction in the repair work required.

- **An annual cost of \$11,000 is estimated.**

#### Years 11 - 20

- Further stabilization of the capping system and the annualized cost is reduced to **\$7,750** per year.

#### Years 21 - 30

- Further stabilization of the capping system and the annualized cost is reduced to **\$6,000** per year, and primarily includes mowing costs.

### **Item VII - Inspections**

#### Years 1 - 5

- Assume semi-annual site inspections and reporting for the first 5 years of the post-closure period to be **\$12,500** per year. Work includes groundwater reporting, site inspection reporting, settlement reporting and reporting on the landfill gas collection system.

#### Years 6 - 30

- Site inspections continue to be conducted semi-annually, assume the reporting becomes more straightforward over time. Assume that annual inspection and reporting costs are **\$8,500** per year.