

Scenario Worksheet

Practice and Scenario Description:	
Information Type	Data
Region	Mid Atlantic
State	New Jersey
Discipline Group	Engineering General
Practice Code/Name	521C - Pond Sealing or Lining, Bentonite Sealant
Scenario ID	1

Scenario Name	Bentonite Treatment - Uncovered
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Scenario Description	<p>Construction of a compacted soil liner, treated with bentonite, to reduce seepage from ponds or waste storage impoundment structures. Practice implementation includes incorporation of the bentonite with the soil under proper moisture conditions, compaction to the designed liner thickness. Practice implementation may require filter compatibility with the subgrade (graded filter or geotextile).</p> <p>Associated practices: Waste Storage Facility (313), Pond (378)</p>
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Before Practice Situation	In-place soils at site exhibit seepage rates in excess of acceptable limits. Soils are suitable for treatment with dispersants. If not lined soils will allow passage of nutrients and pathogens from the waste storage facility or pond negatively impacting water quality.
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After Practice Situation	The liner reduces or prevents seepage losses which reduces the delivery of nutrients and pathogens to surface water.
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Scenario Feature Measure	Volume of Liner Material
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Scenario Unit	Cubic Yard
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Scenario Typical Size	1613	Typical pond liner: 1 ft. thick x 1 acre in area
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Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	\$62,201.30	\$38.56
Equipment/Installation	\$6,863.40	\$4.26
Labor	\$387.12	\$0.24
Mobilization	\$394.14	\$0.24
Acquisition of Technical Knowledge	\$0.00	\$0.00
Foregone Income	\$0.00	\$0.00
Total	\$69,845.96	\$43.30

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Practice and Scenario Description:	
Information Type	Data
Region	Mid Atlantic
State	New Jersey
Discipline Group	Engineering General
Practice Code/Name	521C - Pond Sealing or Lining, Bentonite Sealant
Scenario ID	2
Scenario Name	Bentonite Treatment - Covered

Scenario Description	<p>Construction of a compacted soil liner, treated with bentonite, to reduce seepage from ponds or waste storage impoundment structures. Practice implementation includes incorporation of the bentonite with the soil under proper moisture conditions, compaction to the designed liner thickness, and placement of soil cover over the treated liner. Practice implementation may require filter compatibility with the subgrade (graded filter or geotextile).</p> <p>Associated practices: Waste Storage Facility (313), Pond (378)</p>	
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Before Practice Situation	In-place soils at site exhibit seepage rates in excess of acceptable limits. Soils are suitable for treatment with dispersants. If not lined soils will allow passage of nutrients and pathogens from the waste storage facility or pond negatively impacting water quality.	
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After Practice Situation	The liner reduces or prevents seepage losses which reduces the delivery of nutrients and pathogens to surface water. Payment is based on CY of material treated. The cost of putting the 1' of cover is included in the payment of the treatment material.	
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Scenario Feature Measure	Volume of Liner Material (includes 1 foot of soil cover over liner)	
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Scenario Unit	Cubic Yard	
Scenario Typical Size	1613	Typical pond liner: 1 ft. thick with 1 ft. soil cover x 1 acre in area

Cost Summary:		
Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	\$62,201.30	\$38.56
Equipment/Installation	\$13,448.52	\$8.34
Labor	\$387.12	\$0.24
Mobilization	\$394.14	\$0.24
Acquisition of Technical Knowledge	\$0.00	\$0.00
Foregone Income	\$0.00	\$0.00
Total	\$76,431.08	\$47.38

