

**Practice:** 521D - Pond Sealing or Lining, Compacted Clay Treatment

**Scenario:** #1 - Compacted Earth Liner with Soil Cover

**Scenario Description:** Construction of a compacted soil liner, treated with compacted clay, to reduce seepage from ponds or waste storage impoundment structures. Practice implementation includes compaction of the soil liner under proper moisture conditions to the designed liner thickness, and soil cover to protect the finished liner. Scenario includes a 12" compacted clay liner with 6" of soil cover covering an area 1 acre in size. Material haul < 1 mile. Associated practices include PS378, PS313, & other waste water impoundments.

**Before Situation:** In-place soils at site exhibit seepage rates in excess of acceptable limits. An adequate quantity of soil suitable for constructing a clay liner without amendments is available at an economical haul distance. Material haul < 1 mile.

**After Situation:** Water conservation and environmental protection provided by limiting seepage losses from ponds or waste storage impoundments.

**Scenario Feature Measure:** Volume of Liner Material including soil cover over liner

**Scenario Unit:** Cubic Yard

**Scenario Typical Size:** 1613

**Total Scenario Cost:** \$15,367.73

**Scenario Cost/Unit:** \$9.53

**Cost Details**

Component Name	Id	Description	Unit	Cost	Qty	Total
----------------	----	-------------	------	------	-----	-------

**Equipment Installation**

Earthfill, Dumped and Spread	51	Earthfill, dumped and spread without compaction effort, includes equipment and labor	Cubic Yard	\$3.34	807	\$2,698.89
Earthfill, Roller Compacted	49	Earthfill, roller or machine compacted, includes equipment and labor	Cubic Yard	\$4.08	1613	\$6,574.47
Excavation, common earth, large equipment, 50 ft	1222	Bulk excavation of common earth including sand and gravel with dozer >100 HP with average push distance of 50 feet. Includes equipment and labor.	Cubic Yard	\$1.57	2420	\$3,795.31

**Labor**

Specialist Labor	235	Labor requiring a specialized skill set: Includes Agronomists, Foresters, Biologists, etc. to provide additional technical information during the planning and implementation of the practice. Does not include NRCS or TSP services.	Hour	\$104.47	15	\$1,567.01
------------------	-----	---	------	----------	----	------------

**Mobilization**

Mobilization, large equipment	1140	Equipment >150HP or typical weights greater than 30,000 pounds or loads requiring over width or over length permits.	Each	\$480.42	1	\$480.42
Mobilization, medium equipment	1139	Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds.	Each	\$251.62	1	\$251.62

**Practice:** 521D - Pond Sealing or Lining, Compacted Clay Treatment

**Scenario:** #2 - Compacted Earth Liner

**Scenario Description:** Construction of a compacted soil liner, treated with compacted clay, to reduce seepage from ponds or waste storage impoundment structures. Practice implementation includes compaction of the soil liner under proper moisture conditions to the designed liner thickness, and soil cover to protect the finished liner. Scenario includes a 12" compacted clay liner covering an area 1 acre in size. Material haul < 1 mile. Associated practices include PS378, PS313, & other waste water impoundments.

**Before Situation:** In-place soils at site exhibit seepage rates in excess of acceptable limits. An adequate quantity of soil suitable for constructing a clay liner without amendments is available at an economical haul distance. Material haul < 1 mile.

**After Situation:** Water conservation and environmental protection provided by limiting seepage losses from ponds or waste storage impoundments.

**Scenario Feature Measure:** Volume of Liner Material

**Scenario Unit:** Cubic Yard

**Scenario Typical Size:** 1613

**Total Scenario Cost:** \$11,403.21

**Scenario Cost/Unit:** \$7.07

**Cost Details**

Component Name	Id	Description	Unit	Cost	Qty	Total
----------------	----	-------------	------	------	-----	-------

**Equipment Installation**

Earthfill, Roller Compacted	49	Earthfill, roller or machine compacted, includes equipment and labor	Cubic Yard	\$4.08	1613	\$6,574.47
Excavation, common earth, large equipment, 50 ft	1222	Bulk excavation of common earth including sand and gravel with dozer >100 HP with average push distance of 50 feet. Includes equipment and labor.	Cubic Yard	\$1.57	1613	\$2,529.68

**Labor**

Specialist Labor	235	Labor requiring a specialized skill set: Includes Agronomists, Foresters, Biologists, etc. to provide additional technical information during the planning and implementation of the practice. Does not include NRCS or TSP services.	Hour	\$104.47	15	\$1,567.01
------------------	-----	---	------	----------	----	------------

**Mobilization**

Mobilization, large equipment	1140	Equipment >150HP or typical weights greater than 30,000 pounds or loads requiring over width or over length permits.	Each	\$480.42	1	\$480.42
Mobilization, medium equipment	1139	Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds.	Each	\$251.62	1	\$251.62