

**Practice: 378 - Pond**

**Scenario # 1 Excavated Pit**

**Scenario Description:**

**Louisiana**

A low-hazard water impoundment structure on agricultural lands to improve water quality and to provide water for livestock, fish and wildlife, recreation, fire control, crop and orchard irrigation, and other related uses. Pond is created solely by excavation and impounds less than 3 feet against the embankment or spoil. Excavated material is spoiled, not placed in a designed embankment. Earthen spillway is constructed as needed. The resource concerns addressed include inadequate livestock water, excessive suspended sediment and turbidity in surface water, damage from sediment deposition, and reduced capacity of conveyances by sediment deposition.

**Before Practice Situation:**

Area exists where water could naturally pool or run off to create a pond for livestock, wildlife, fire control or irrigation. Failure of the pond will not result in loss of life; damage to homes, commercial or industrial buildings, main highways, or railroads; or in interruption of the use or service of public utilities.

**After Practice Situation:**

The typical pond is constructed by excavating 3100 cubic yards and spreading the spoil outside the pool area using a dozer or similar excavation equipment. Vegetation will be completed under critical area planting (342). Other associated practices include 382, 516, 521A, 533, 614, 587, 396.

**Scenario Feature Measure:**

Excavated Volume

<b>Scenario Typical Size:</b>	3100	Cubic Yard	Unit Cost	\$1.56
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Cost Category	Component Name	Quantity	Unit	Unit Cost	Cost
Equip./Install.	Dozer, 140 HP	40	Hour	\$90.94	\$3,637.60
Labor	Equipment Operators, Heavy	40	Hour	\$25.62	\$1,024.80
Mobilization	Mobilization, Heavy Equipment Operator	1	Hour	\$25.38	\$25.38
Mobilization	Mobilization, medium equipment	1	Each	\$133.51	\$133.51
				Total Cost:	\$4,821.29

**Practice: 378 - Pond**

**Scenario # 2 Embankment Pond without Pipe**

Louisiana

**Scenario Description:**

A water impoundment structure on agricultural land to improve water quality or to provide water for livestock, fish and wildlife, recreation, fire control, crop and orchard irrigation, and other related uses. An earthen embankment will be constructed with an earthen auxiliary spillway. The resource concerns addressed include inadequate livestock water, excessive suspended sediment and turbidity in surface water, damage from sediment deposition, and reduced capacity of conveyances by sediment deposition.

**Before Practice Situation:**

Area exists where water could naturally pool or run off to create a pond for livestock, wildlife, fire control or irrigation. Failure of the embankment will not result in loss of life or damages of any kind.

**After Practice Situation:**

The typical pond is constructed by excavating the pool area, constructing the auxiliary spillway, preparing the foundation as designed, and using 1500 cubic yards to create an embankment. The product of the storage times the effective height of the dam is less than 3,000. The effective height of the dam is 35 feet or less. The earthen auxiliary spillway will be constructed as designed. No principle spillway pipe will be used. Vegetation will be completed under critical area planting (342). Other associated practices include 382, 516, 521A, 533, 614, 587, 396.

**Scenario Feature Measure:**

Embankment Volume

<b>Scenario Typical Size:</b>	1500	Cubic Yard	Unit Cost	\$3.51
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Cost Category	Component Name	Quantity	Unit	Unit Cost	Cost
Equip./Install.	Earthfill, Roller Compacted	1500	Cubic yard	\$3.32	\$4,980.00
Labor	General Labor	8	Hour	\$18.57	\$148.56
Mobilization	Mobilization, medium equipment	1	Each	\$133.51	\$133.51
				Total Cost:	\$5,262.07

**Practice: 378 - Pond**

**Scenario # 3 Embankment Pond with Pipe**

**Scenario Description:**

**Louisiana**

A low-hazard water impoundment structure on agricultural land to improve water quality and to provide water for livestock, fish and wildlife, recreation, fire control, crop and orchard irrigation, and other related uses. An earthen embankment will be constructed with a principle spillway conduit and earthen auxiliary spillway, as designed. The resource concerns addressed include inadequate livestock water, excessive suspended sediment and turbidity in surface water, damage from sediment deposition, and reduced capacity of conveyances by sediment deposition.

**Before Practice Situation:**

Area exists where water could naturally pool or run off to create a pond for livestock, wildlife, fire control or irrigation. Failure of the embankment will not result in loss of life or damages of any kind.

**After Practice Situation:**

The typical low hazard pond is constructed by excavating the pool area, constructing the auxiliary spillway, preparing the foundation as designed, and using 2000 cubic yards to create an embankment. The product of the storage times the effective height of the dam is less than 3,000. The effective height of the dam is 35 feet or less. The principle spillway is installed using an approved conduit material. The earthen auxiliary spillway will be constructed as designed. Vegetation will be completed under critical area planting (342). Other associated practices include 382, 516, 521A, 533, 614, 587, 396.

**Scenario Feature Measure:**

Embankment Volume

<b>Scenario Typical Size:</b>	2000	Cubic Yard	Unit Cost	\$5.07
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Cost Category	Component Name	Quantity	Unit	Unit Cost	Cost
Materials	Aggregate, Sand, Graded, Washed	19.6	Cubic yard	\$23.31	\$456.88
Materials	Trash Guard, metal	40	Pound	\$2.19	\$87.60
Materials	Pipe, PVC, dia. < 18", weight priced	628	Pound	\$1.38	\$866.64
Equip./Install.	Excavation, Common Earth, side cast, small equipment	1.6	Cubic yard	\$1.80	\$2.88
Equip./Install.	Earthfill, Roller Compacted	2000	Cubic yard	\$3.32	\$6,640.00
Equip./Install.	Concrete, CIP, formed reinforced	3	Cubic yard	\$333.36	\$1,000.08
Labor	Skilled Labor	8	Hour	\$26.82	\$214.56
Labor	General Labor	40	Hour	\$18.57	\$742.80
Mobilization	Mobilization, medium equipment	1	Each	\$133.51	\$133.51
				Total Cost:	\$10,144.95

**Practice: 378 - Pond**

**Scenario # 4 Embankment Pond without Pipe Moisture Control**

**Scenario Description:**

**Louisiana**

A low-hazard water impoundment structure on agricultural land to improve water quality and to provide water for livestock, fish and wildlife, recreation, fire control, crop and orchard irrigation, and other related uses. An earthen embankment will be constructed with a principle spillway conduit and earthen auxiliary spillway, as designed. The proper moisture content of the compacted material is necessary to insure necessary compaction. The resource concerns addressed include inadequate livestock water, excessive suspended sediment and turbidity in surface water, damage from sediment deposition, and reduced capacity of conveyances by sediment deposition.

**Before Practice Situation:**

Area exists where water could naturally pool or run off to create a pond for livestock, wildlife, fire control or irrigation. Failure of the embankment will not result in loss of life or damages of any kind.

**After Practice Situation:**

The typical low hazard pond is constructed by excavating the pool area, constructing the auxiliary spillway, preparing the foundation as designed, and using 1500 cubic yards to create an embankment. Structure is stable due to the proper moisture content of soil during compaction. The product of the storage times the effective height of the dam is less than 3,000. The effective height of the dam is 35 feet or less. The principle spillway is installed using an approved conduit material. The earthen auxiliary spillway will be constructed as designed. Vegetation will be completed under critical area planting (342). Other associated practices include 382, 516, 521A, 533, 614, 587, 396.

**Scenario Feature Measure:**

Embankment Volume

<b>Scenario Typical Size:</b>	1500	Cubic Yard	Unit Cost	\$4.26
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Cost Category	Component Name	Quantity	Unit	Unit Cost	Cost
Labor	Equipment Operators, Heavy	3	Hour	\$25.62	\$76.86
Mobilization	Mobilization, large equipment	4	Each	\$249.71	\$998.84
Equip./Install.	Tractor, agricultural, 60 HP	3	Hour	\$19.28	\$57.84
Equip./Install.	Earthfill, Roller Compacted	1500	Cubic yard	\$3.32	\$4,980.00
Labor	General Labor	8	Hour	\$18.57	\$148.56
Mobilization	Mobilization, medium equipment	1	Each	\$133.51	\$133.51
				<b>Total Cost:</b>	<b>\$6,395.61</b>

**Practice: 378 - Pond**

**Scenario # 5 Embankment Pond with Pipe Moisture Control**

**Scenario Description:**

Louisiana

A low-hazard water impoundment structure on agricultural land to improve water quality and to provide water for livestock, fish and wildlife, recreation, fire control, crop and orchard irrigation, and other related uses. An earthen embankment will be constructed with a principle spillway conduit and earthen auxiliary spillway, as designed. The resource concerns addressed include inadequate livestock water, excessive suspended sediment and turbidity in surface water, damage from sediment deposition, and reduced capacity of conveyances by sediment deposition.

**Before Practice Situation:**

Area exists where water could naturally pool or run off to create a pond for livestock, wildlife, fire control or irrigation. Failure of the embankment will not result in loss of life or damages of any kind.

**After Practice Situation:**

The typical low hazard pond is constructed by excavating the pool area, constructing the auxiliary spillway, preparing the foundation as designed, and using 2000 cubic yards to create an embankment. The product of the storage times the effective height of the dam is less than 3,000. The effective height of the dam is 35 feet or less. The principle spillway is installed using an approved conduit material. The earthen auxiliary spillway will be constructed as designed. Vegetation will be completed under critical area planting (342). Other associated practices include 382, 516, 521A, 533, 614, 587, 396.

**Scenario Feature Measure:**

Embankment Volume

<b>Scenario Typical Size:</b>	2000	Cubic Yard	Unit Cost	\$5.64
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Cost Category	Component Name	Quantity	Unit	Unit Cost	Cost
Materials	Aggregate, Sand, Graded, Washed	19.6	Cubic yard	\$23.31	\$456.88
Materials	Trash Guard, metal	40	Pound	\$2.19	\$87.60
Materials	Pipe, PVC, dia. < 18", weight priced	628	Pound	\$1.38	\$866.64
Equip./Install.	Excavation, Common Earth, side cast, small equipment	1.6	Cubic yard	\$1.80	\$2.88
Equip./Install.	Earthfill, Roller Compacted	2000	Cubic yard	\$3.32	\$6,640.00
Equip./Install.	Concrete, CIP, formed reinforced	3	Cubic yard	\$333.36	\$1,000.08
Labor	Skilled Labor	8	Hour	\$26.82	\$214.56
Labor	General Labor	40	Hour	\$18.57	\$742.80
Mobilization	Mobilization, medium equipment	1	Each	\$133.51	\$133.51
Equip./Install.	Tractor, agricultural, 60 HP	3	Hour	\$19.28	\$57.84
Labor	Equipment Operators, Heavy	3	Hour	\$25.62	\$76.86
Mobilization	Mobilization, large equipment	4	Each	\$249.71	\$998.84
				<b>Total Cost:</b>	<b>\$11,278.49</b>