

Scenario Worksheet

Practice and Scenario Description:

Information Type	Data
Region	New England
State	Connecticut
Discipline Group	Environmental Engineering
Practice Code/Name	360 - Waste Facility Closure
Scenario ID	3
Scenario Name	Demolition of Concrete Waste Storage Structure
Scenario Description	This practice scenario includes the demolition of a concrete waste storage structure. The purpose of the practice is to address resource concerns related to water quality degradation due to excess nutrient and pathogens in ground and/or surface waters and air quality impacts from greenhouse gases, particulate matter and associated precursors, and objectionable odors. Associated practices: Nutrient Management (590), Critical Area Planting (342)
Before Practice Situation	An existing concrete waste storage structure is no longer functioning correctly or is not being used for its intended purpose. It poses a safety hazard for humans and livestock and is a threat to environmentally sustainability by the potential for impacts to water and air quality.
After Practice Situation	This scenario assumes a concrete waste storage structure, with top dimensions of 60 ft x 60 ft with 10 ft vertical walls. The walls are 8 inches thick and the concrete floor is 5 inches thick. The total structural storage volume equals 36,000 cubic feet. The total volume of concrete to be demolished is 3,100 cubic feet ((2 X (60 ft X 60 ft) X 8 in /12 in/ft) + (60 ft X 60 ft X 5 in /12 in/ft)). The volume of waste to be removed approximately equals 50% of the structural volume (50% X 36,000 = 18,000 CF). The volume of earthwork (earthfill and/or excavation, final grading) required is approximately 50% of the structural volume. The concrete will be demolished and hauled off-site for recycling or disposal. Structural removal, as necessary, may include the sealing or removal and disposal of waste transfer components and other appurtenances associated with closure of the facility. Demolition of a concrete waste storage structure includes agitating, removing, and spreading the waste remaining in the structure. All waste material shall be land applied in accordance with Nutrient Management (590). Excavated areas will be filled in. The disturbed areas shall be vegetated in accordance with Critical Area Planting (342). Demolition of the concrete waste structure will address water quality degradation, air quality
Scenario Feature Measure	Cubic Feet of concrete to be demolished
Scenario Unit	Cubic Foot
Scenario Typical Size	3100

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	\$0.00	\$0.00
Equipment/Installation	\$5,720.31	\$1.85
Labor	\$478.48	\$0.15
Mobilization	\$1,610.42	\$0.52
Acquisition of Technical Knowledge	\$0.00	\$0.00
Foregone Income	\$0.00	\$0.00
Total	\$7,809.21	\$2.52

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Equipment/Installation	1615	Hauling, bulk, highway truck	Hauling of bulk earthfill, rockfill, waste or debris. One-way travel distance using fully loaded highway dump trucks (typically 16 CY or 20 TN capacity). Includes equipment and labor for truck only. Does not include cost for loading truck.	Cubic Yard Mile	\$0.28	1150	\$322.00
Equipment/Installation	1498	Demolition, concrete	Demolition and disposal of reinforced concrete structures including slabs and walls. Includes labor and equipment.	Cubic Yard	\$16.99	115	\$1,953.85
Equipment/Installation	956	Manure, compost, injection	Loading, hauling and injecting manure/compost by ground equipment. Includes equipment, power unit and labor costs.	Gallon	\$0.01	2406	\$24.06
Equipment/Installation	49	Earthfill, Roller Compacted	Earthfill, roller or machine compacted, includes equipment and labor	Cubic yard	\$4.00	667	\$2,668.00
Equipment/Installation	931	Hydraulic Excavator, 1 CY	Track mounted hydraulic excavator with bucket capacity range of 0.8 to 1.5 CY. Equipment and power unit costs. Labor not included.	Hour	\$94.05	8	\$752.40
Mobilization	1140	Mobilization, large equipment	Equipment >150HP or typical weights greater than 30,000 pounds or loads requiring over width or over length permits.	Each	\$513.10	1	\$513.10
Mobilization	1139	Mobilization, medium equipment	Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds.	Each	\$274.33	4	\$1,097.32
Labor	231	General Labor	Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	\$25.71	8	\$205.68
Labor	233	Equipment Operators, Heavy	Includes: Cranes, Hydraulic Excavators >=50 HP, Dozers, Paving Machines, Rock Trenchers, Trenchers >=12", Dump Trucks, Ag Equipment >=150 HP, Scrapers, Water Wagons.	Hour	\$34.10	8	\$272.80

Scenario Worksheet

Practice and Scenario Description:

Information Type	Data
Region	New England
State	Connecticut
Discipline Group	Environmental Engineering
Practice Code/Name	360 - Waste Facility Closure
Scenario ID	2
Scenario Name	Feedlot Closure
Scenario Description	This practice scenario includes the remediation of the soil on an abandoned feedlot previously used to feed animals on a bare earthen lot. The purpose of the practice is to address resource concerns related to water quality degradation due to excess nutrient and pathogens in ground and/or surface waters and air quality impacts from greenhouse gases, particulate matter and associated precursors, and objectionable odors. Associated practices: Nutrient Management (590), Critical Area Planting (342).
Before Practice Situation	The feedlot is abandoned. Vegetation has not been reestablished. The high level of nutrients in the soil is preventing volunteer establishment of native vegetation. Rainfall and nutrients on the bare earth feedlot pose a risk to surface water from contaminated runoff or to ground water from seepage into the underlying soils.
After Practice Situation	This scenario is based on a 3 acre feedlot. Surveys and testing have determined the manure pack averages 8 inches in depth and the level of nutrients in the 4 inches of soil below the manure pack is too high to treat insitu with vegetation. Payment under this scenario includes only activities associated with the soil remediation. Soil remediation activities in this scenario include removing the nutrient enriched manure pack and soil, an average of 12 inches below the existing surface (130,680 CF). The excavated surface will be vegetated with a mix of salt tolerant plants in conformance with Critical Area Planting, Code 342. Nutrient level testing and field application of the removed soil shall be performed according to nutrient planning in conformance with Nutrient Management, Code 590. Shaping and crowning of the soil material on the disturbed area and critical area seeding will be done to provide drainage, complete the site remediation and establish vegetation. Operation and maintenance of the site will include nutrient testing the following year to determine if the soil has been remediated and surface and ground water resource concerns have been addressed. In this scenario, samples at four (4) locations will be taken at 6, 12, 18 and 24 inches at the end of Year 1.
Scenario Feature Measure	Cubic feet of soil remediated
Scenario Unit	Cubic Foot
Scenario Typical Size	130680

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	\$152.48	\$0.00
Equipment/Installation	\$30,877.53	\$0.24
Labor	\$136.40	\$0.00
Mobilization	\$548.66	\$0.00
Acquisition of Technical Knowledge	\$0.00	\$0.00
Foregone Income	\$0.00	\$0.00
Total	\$31,715.07	\$0.24

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Materials	299	Test, Soil Test, Standard	Includes materials, labor, and equipment costs.	Each	\$9.53	16	\$152.48
Equipment/Installation	955	Manure, compost, application	Loading, hauling and spreading manure/compost by ground equipment. Includes equipment, power unit and labor costs.	Hour	\$113.43	268.9	\$30,501.33
Equipment/Installation	931	Hydraulic Excavator, 1 CY	Track mounted hydraulic excavator with bucket capacity range of 0.8 to 1.5 CY. Equipment and power unit costs. Labor not included.	Hour	\$94.05	4	\$376.20
Mobilization	1139	Mobilization, medium equipment	Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds.	Each	\$274.33	2	\$548.66
Labor	233	Equipment Operators, Heavy	Includes: Cranes, Hydraulic Excavators >=50 HP, Dozers, Paving Machines, Rock Trenchers, Trenchers >=12", Dump Trucks, Ag Equipment >=150 HP, Scrapers, Water Wagons.	Hour	\$34.10	4	\$136.40

Scenario Worksheet

Practice and Scenario Description:

Information Type	Data
Region	New England
State	Connecticut
Discipline Group	Environmental Engineering
Practice Code/Name	360 - Waste Facility Closure
Scenario ID	11
Scenario Name	Liquid Waste Impoundment Conversion to Fresh Water Storage with 0% Liquids and 100% Solids
Scenario Description	This practice scenario includes the conversion of an earthen liquid waste impoundment (embankment or excavated type) to fresh water storage where the estimated volume of waste to be removed is approximately 0% liquid/slurry waste and 100% sludge/solid waste of the structural storage capacity of the structure. The purpose of the practice is to address resource concerns related to water quality degradation due to excess nutrient and pathogens in ground and/or surface waters and air quality impacts from greenhouse gases, particulate matter and associated precursors, and objectionable odors. Associated practices: Nutrient Management (590), Critical Area Planting (342)
Before Practice Situation	An existing lagoon or waste storage pond is no longer functioning correctly or is not being used for its intended purpose. It poses a safety hazard for humans and livestock and is a threat to environmentally sustainability by the potential for impacts to water and air quality.
After Practice Situation	This scenario assumes a waste storage pond, with top dimensions of 110 ft x 110 ft, 8 ft total depth with 2:1 side slopes. The total structural storage volume equals 63,851 cubic feet. The volume of liquid waste to be pumped approximately equals 0% of the structural volume. The volume of solid waste to be removed approximately equals 100% of the structural volume (47,888 CF). The volume of earthwork (earthfill and/or excavation) required to meet current NRCS standards and perform final grading and shaping of the site is approximately 5% of the structural volume. Structural removal, as necessary, may include the sealing or removal and disposal of waste transfer components and other appurtenances associated with closure of the facility. Conversion of a liquid waste storage impoundment for fresh water storage includes agitating, removing, and spreading liquid/slurry waste material, removing solid/sludge waste remaining in the bottom. All waste material shall be land applied in accordance with Nutrient Management (590). All inflow devices and associated appurtenances will be removed and properly disposed of. The embankment will be brought up to current NRCS standards for its intended purpose. The disturbed areas shall be vegetated in accordance with Critical Area Planting
Scenario Feature Measure	Cubic feet of structural storage
Scenario Unit	Cubic Foot
Scenario Typical Size	63851

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	\$0.00	\$0.00
Equipment/Installation	\$19,102.68	\$0.30
Labor	\$478.48	\$0.01
Mobilization	\$1,336.09	\$0.02
Acquisition of Technical Knowledge	\$0.00	\$0.00
Foregone Income	\$0.00	\$0.00
Total	\$20,917.25	\$0.33

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Equipment/Installation	1633	Spreading, manure sludge	Loading, hauling and spreading manure solids/sludge by ground equipment on nearby fields. Includes equipment, power unit and labor costs.	Cubic Foot	\$0.28	63851	\$17,878.28
Equipment/Installation	49	Earthfill, Roller Compacted	Earthfill, roller or machine compacted, includes equipment and labor	Cubic yard	\$4.00	118	\$472.00
Equipment/Installation	931	Hydraulic Excavator, 1 CY	Track mounted hydraulic excavator with bucket capacity range of 0.8 to 1.5 CY. Equipment and power unit costs. Labor not included.	Hour	\$94.05	8	\$752.40
Mobilization	1140	Mobilization, large equipment	Equipment >150HP or typical weights greater than 30,000 pounds or loads requiring over width or over length permits.	Each	\$513.10	1	\$513.10
Mobilization	1139	Mobilization, medium equipment	Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds.	Each	\$274.33	3	\$822.99
Labor	231	General Labor	Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	\$25.71	8	\$205.68
Labor	233	Equipment Operators, Heavy	Includes: Cranes, Hydraulic Excavators >=50 HP, Dozers, Paving Machines, Rock Trenchers, Trenchers >=12", Dump Trucks, Ag Equipment >=150 HP, Scrapers, Water Wagons.	Hour	\$34.10	8	\$272.80

Scenario Worksheet

Practice and Scenario Description:

Information Type	Data
Region	New England
State	Connecticut
Discipline Group	Environmental Engineering
Practice Code/Name	360 - Waste Facility Closure
Scenario ID	10
Scenario Name	Liquid Waste Impoundment Conversion to Fresh Water Storage with 25% Liquids and 75% Solids
Scenario Description	This practice scenario includes the conversion of an earthen liquid waste impoundment (embankment or excavated type) to fresh water storage where the estimated volume of waste to be removed is approximately 25% liquid/slurry waste and 75% sludge/solid waste of the structural storage capacity of the structure. The purpose of the practice is to address resource concerns related to water quality degradation due to excess nutrient and pathogens in ground and/or surface waters and air quality impacts from greenhouse gases, particulate matter and associated precursors, and objectionable odors. Associated practices: Nutrient Management (590), Critical Area Planting (342)
Before Practice Situation	An existing lagoon or waste storage pond is no longer functioning correctly or is not being used for its intended purpose. It poses a safety hazard for humans and livestock and is a threat to environmentally sustainability by the potential for impacts to water and air quality.
After Practice Situation	This scenario assumes a waste storage pond, with top dimensions of 110 ft x 110 ft, 8 ft total depth with 2:1 side slopes. The total structural storage volume equals 63,851 cubic feet. The volume of liquid waste to be pumped approximately equals 25% of the structural volume (25% X 63,851 CF = 15,963 CF). The volume of solid waste to be removed approximately equals 75% of the structural volume (75% X 63,851 = 47,888 CF). The volume of earthwork (earthfill and/or excavation) required to meet current NRCS standards and perform final grading and shaping of the site is approximately 5% of the structural volume. Structural removal, as necessary, may include the sealing or removal and disposal of waste transfer components and other appurtenances associated with closure of the facility. Conversion of a liquid waste storage impoundment for fresh water storage includes agitating, removing, and spreading liquid/slurry waste material, removing solid/sludge waste remaining in the bottom. All waste material shall be land applied in accordance with Nutrient Management (590). All inflow devices and associated appurtenances will be removed and properly disposed of. The embankment will be brought up to current NRCS standards for its intended purpose. The disturbed areas shall be vegetated in
Scenario Feature Measure	Cubic feet of structural storage
Scenario Unit	Cubic Foot
Scenario Typical Size	63851

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	\$0.00	\$0.00
Equipment/Installation	\$15,827.05	\$0.25
Labor	\$478.48	\$0.01
Mobilization	\$1,610.42	\$0.03
Acquisition of Technical Knowledge	\$0.00	\$0.00
Foregone Income	\$0.00	\$0.00
Total	\$17,915.95	\$0.28

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Equipment/Installation	956	Manure, compost, injection	Loading, hauling and injecting manure/compost by ground equipment. Includes equipment, power unit and labor costs.	Gallon	\$0.01	119401	\$1,194.01
Equipment/Installation	1633	Spreading, manure sludge	Loading, hauling and spreading manure solids/sludge by ground equipment on nearby fields. Includes equipment, power unit and labor costs.	Cubic Foot	\$0.28	47888	\$13,408.64
Equipment/Installation	49	Earthfill, Roller Compacted	Earthfill, roller or machine compacted, includes equipment and labor	Cubic yard	\$4.00	118	\$472.00
Equipment/Installation	931	Hydraulic Excavator, 1 CY	Track mounted hydraulic excavator with bucket capacity range of 0.8 to 1.5 CY. Equipment and power unit costs. Labor not included.	Hour	\$94.05	8	\$752.40
Mobilization	1140	Mobilization, large equipment	Equipment >150HP or typical weights greater than 30,000 pounds or loads requiring over width or over length permits.	Each	\$513.10	1	\$513.10
Mobilization	1139	Mobilization, medium equipment	Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds.	Each	\$274.33	4	\$1,097.32
Labor	231	General Labor	Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	\$25.71	8	\$205.68
Labor	233	Equipment Operators, Heavy	Includes: Cranes, Hydraulic Excavators >=50 HP, Dozers, Paving Machines, Rock Trenchers, Trenchers >=12", Dump Trucks, Ag Equipment >=150 HP, Scrapers, Water Wagons.	Hour	\$34.10	8	\$272.80

Scenario Worksheet

Practice and Scenario Description:

Information Type	Data
Region	New England
State	Connecticut
Discipline Group	Environmental Engineering
Practice Code/Name	360 - Waste Facility Closure
Scenario ID	9
Scenario Name	Liquid Waste Impoundment Conversion to Fresh Water Storage with 50% Liquids and 50% Solids
Scenario Description	This practice scenario includes the conversion of an earthen liquid waste impoundment (embankment or excavated type) to fresh water storage where the estimated volume of waste to be removed is approximately 50% liquid/slurry waste and 50% sludge/solid waste of the structural storage capacity of the structure. The purpose of the practice is to address resource concerns related to water quality degradation due to excess nutrient and pathogens in ground and/or surface waters and air quality impacts from greenhouse gases, particulate matter and associated precursors, and objectionable odors. Associated practices: Nutrient Management (590), Critical Area Planting (342)
Before Practice Situation	An existing lagoon or waste storage pond is no longer functioning correctly or is not being used for its intended purpose. It poses a safety hazard for humans and livestock and is a threat to environmentally sustainability by the potential for impacts to water and air quality.
After Practice Situation	This scenario assumes a waste storage pond, with top dimensions of 110 ft x 110 ft, 8 ft total depth with 2:1 side slopes. The total structural storage volume equals 63,851 cubic feet. The volume of liquid waste to be pumped approximately equals 50% of the structural volume (50% X 63,851 CF = 31,925 CF). The volume of solid waste to be removed approximately equals 50% of the structural volume (50% X 63,851 = 31,925 CF). The volume of earthwork (earthfill and/or excavation) required to meet current NRCS standards and perform final grading and shaping of the site is approximately 5% of the structural volume. Structural removal, as necessary, may include the sealing or removal and disposal of waste transfer components and other appurtenances associated with closure of the facility. Conversion of a liquid waste storage impoundment for fresh water storage includes agitating, removing, and spreading liquid/slurry waste material, removing solid/sludge waste remaining in the bottom. All waste material shall be land applied in accordance with Nutrient Management (590). All inflow devices and associated appurtenances will be removed and properly disposed of. The embankment will be brought up to current NRCS standards for its intended purpose. The disturbed areas shall be vegetated in
Scenario Feature Measure	Cubic feet of structural storage
Scenario Unit	Cubic Foot
Scenario Typical Size	63851

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	\$0.00	\$0.00
Equipment/Installation	\$12,551.43	\$0.20
Labor	\$478.48	\$0.01
Mobilization	\$1,610.42	\$0.03
Acquisition of Technical Knowledge	\$0.00	\$0.00
Foregone Income	\$0.00	\$0.00
Total	\$14,640.33	\$0.23

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Equipment/Installation	956	Manure, compost, injection	Loading, hauling and injecting manure/compost by ground equipment. Includes equipment, power unit and labor costs.	Gallon	\$0.01	238803	\$2,388.03
Equipment/Installation	1633	Spreading, manure sludge	Loading, hauling and spreading manure solids/sludge by ground equipment on nearby fields. Includes equipment, power unit and labor costs.	Cubic Foot	\$0.28	31925	\$8,939.00
Equipment/Installation	49	Earthfill, Roller Compacted	Earthfill, roller or machine compacted, includes equipment and labor	Cubic yard	\$4.00	118	\$472.00
Equipment/Installation	931	Hydraulic Excavator, 1 CY	Track mounted hydraulic excavator with bucket capacity range of 0.8 to 1.5 CY. Equipment and power unit costs. Labor not included.	Hour	\$94.05	8	\$752.40
Mobilization	1140	Mobilization, large equipment	Equipment >150HP or typical weights greater than 30,000 pounds or loads requiring over width or over length permits.	Each	\$513.10	1	\$513.10
Mobilization	1139	Mobilization, medium equipment	Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds.	Each	\$274.33	4	\$1,097.32
Labor	231	General Labor	Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	\$25.71	8	\$205.68
Labor	233	Equipment Operators, Heavy	Includes: Cranes, Hydraulic Excavators >=50 HP, Dozers, Paving Machines, Rock Trenchers, Trenchers >=12", Dump Trucks, Ag Equipment >=150 HP, Scrapers, Water Wagons.	Hour	\$34.10	8	\$272.80

Scenario Worksheet

Practice and Scenario Description:

Information Type	Data
Region	New England
State	Connecticut
Discipline Group	Environmental Engineering
Practice Code/Name	360 - Waste Facility Closure
Scenario ID	8
Scenario Name	Liquid Waste Impoundment Conversion to Fresh Water Storage with 75% Liquids and 25% Solids
Scenario Description	This practice scenario includes the conversion of an earthen liquid waste impoundment (embankment or excavated type) to fresh water storage where the estimated volume of waste to be removed is approximately 75% liquid/slurry waste and 25% sludge/solid waste of the structural storage capacity of the structure. The purpose of the practice is to address resource concerns related to water quality degradation due to excess nutrient and pathogens in ground and/or surface waters and air quality impacts from greenhouse gases, particulate matter and associated precursors, and objectionable odors. Associated practices: Nutrient Management (590), Critical Area Planting (342)
Before Practice Situation	An existing lagoon or waste storage pond is no longer functioning correctly or is not being used for its intended purpose. It poses a safety hazard for humans and livestock and is a threat to environmentally sustainability by the potential for impacts to water and air quality.
After Practice Situation	This scenario assumes a waste storage pond, with top dimensions of 110 ft x 110 ft, 8 ft total depth with 2:1 side slopes. The total structural storage volume equals 63,851 cubic feet. The volume of liquid waste to be pumped approximately equals 75% of the structural volume (75% X 63,851 CF = 47,888 CF). The volume of solid waste to be removed approximately equals 25% of the structural volume (25% X 63,851 = 15,963 CF). The volume of earthwork (earthfill and/or excavation) required to meet current NRCS standards and perform final grading and shaping of the site is approximately 5% of the structural volume. Structural removal, as necessary, may include the sealing or removal and disposal of waste transfer components and other appurtenances associated with closure of the facility. Conversion of a liquid waste storage impoundment for fresh water storage includes agitating, removing, and spreading liquid/slurry waste material, removing solid/sludge waste remaining in the bottom. All waste material shall be land applied in accordance with Nutrient Management (590). All inflow devices and associated appurtenances will be removed and properly disposed of. The embankment will be brought up to current NRCS standards for its intended purpose. The disturbed areas shall be vegetated in
Scenario Feature Measure	Cubic feet of structural storage
Scenario Unit	Cubic Foot
Scenario Typical Size	63851

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	\$0.00	\$0.00
Equipment/Installation	\$9,276.08	\$0.15
Labor	\$478.48	\$0.01
Mobilization	\$1,610.42	\$0.03
Acquisition of Technical Knowledge	\$0.00	\$0.00
Foregone Income	\$0.00	\$0.00
Total	\$11,364.98	\$0.18

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Equipment/Installation	956	Manure, compost, injection	Loading, hauling and injecting manure/compost by ground equipment. Includes equipment, power unit and labor costs.	Gallon	\$0.01	358204	\$3,582.04
Equipment/Installation	1633	Spreading, manure sludge	Loading, hauling and spreading manure solids/sludge by ground equipment on nearby fields. Includes equipment, power unit and labor costs.	Cubic Foot	\$0.28	15963	\$4,469.64
Equipment/Installation	49	Earthfill, Roller Compacted	Earthfill, roller or machine compacted, includes equipment and labor	Cubic yard	\$4.00	118	\$472.00
Equipment/Installation	931	Hydraulic Excavator, 1 CY	Track mounted hydraulic excavator with bucket capacity range of 0.8 to 1.5 CY. Equipment and power unit costs. Labor not included.	Hour	\$94.05	8	\$752.40
Mobilization	1140	Mobilization, large equipment	Equipment >150HP or typical weights greater than 30,000 pounds or loads requiring over width or over length permits.	Each	\$513.10	1	\$513.10
Mobilization	1139	Mobilization, medium equipment	Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds.	Each	\$274.33	4	\$1,097.32
Labor	231	General Labor	Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	\$25.71	8	\$205.68
Labor	233	Equipment Operators, Heavy	Includes: Cranes, Hydraulic Excavators >=50 HP, Dozers, Paving Machines, Rock Trenchers, Trenchers >=12", Dump Trucks, Ag Equipment >=150 HP, Scrapers, Water Wagons.	Hour	\$34.10	8	\$272.80

Scenario Worksheet

Practice and Scenario Description:

Information Type	Data
Region	New England
State	Connecticut
Discipline Group	Environmental Engineering
Practice Code/Name	360 - Waste Facility Closure
Scenario ID	7
Scenario Name	Liquid Waste Impoundment Closure with 0% Liquids and 100% Solids
Scenario Description	This practice scenario includes the decommissioning of an earthen liquid waste impoundment (embankment or excavated type) where the estimated volume of waste to be removed is approximately 0% liquid/slurry waste and 100% sludge/solid waste of the structural storage capacity of the structure. The purpose of the practice is to address resource concerns related to water quality degradation due to excess nutrient and pathogens in ground and/or surface waters and air quality impacts from greenhouse gases, particulate matter and associated precursors, and objectionable odors. Associated practices: Nutrient Management (590), Critical Area Planting (342)
Before Practice Situation	An existing lagoon or waste storage pond is no longer functioning correctly or is not being used for its intended purpose. It poses a safety hazard for humans and livestock and is a threat to environmentally sustainability by the potential for impacts to water and air quality.
After Practice Situation	This scenario assumes a waste storage pond, with top dimensions of 110 ft x 110 ft, 8 ft total depth with 2:1 side slopes. The total structural storage volume equals 63,851 cubic feet. The volume of liquid waste to be pumped approximately equals 0% of the structural volume. The volume of solid waste to be removed approximately equals 100% of the structural volume (63,851 CF). The volume of earthwork (earthfill and excavation) required to breach the embankment and/or fill in the impoundment and perform final grading of the site is approximately 50% of the structural volume. The volume of earthwork will include 60% as excavation and 40% as compacted earthfill. Structural removal, as necessary, may include the removal and disposal of the synthetic liner, sealing or removal and disposal of waste transfer components and other appurtenances associated with closure of the facility. Decommissioning of a liquid waste storage impoundment includes agitating, removing, and spreading liquid/slurry waste material, removing solid/sludge waste remaining in the bottom. All waste material shall be land applied in accordance with Nutrient Management (590). If present, the synthetic liner will be removed and properly disposed of. All inflow devices and associated appurtenances will be
Scenario Feature Measure	Cubic feet of structural storage
Scenario Unit	Cubic Foot
Scenario Typical Size	63851

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	\$0.00	\$0.00
Equipment/Installation	\$22,430.32	\$0.35
Labor	\$717.72	\$0.01
Mobilization	\$1,336.09	\$0.02
Acquisition of Technical Knowledge	\$0.00	\$0.00
Foregone Income	\$0.00	\$0.00
Total	\$24,484.13	\$0.38

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Equipment/Installation	1633	Spreading, manure sludge	Loading, hauling and spreading manure solids/sludge by ground equipment on nearby fields. Includes equipment, power unit and labor costs.	Cubic Foot	\$0.28	63851	\$17,878.28
Equipment/Installation	48	Excavation, Common Earth, side cast, small equipment	Bulk excavation and side casting of common earth with hydraulic excavator with less than 1 CY capacity. Includes equipment and labor.	Cubic yard	\$2.16	709	\$1,531.44
Equipment/Installation	49	Earthfill, Roller Compacted	Earthfill, roller or machine compacted, includes equipment and labor	Cubic yard	\$4.00	473	\$1,892.00
Equipment/Installation	931	Hydraulic Excavator, 1 CY	Track mounted hydraulic excavator with bucket capacity range of 0.8 to 1.5 CY. Equipment and power unit costs. Labor not included.	Hour	\$94.05	12	\$1,128.60
Mobilization	1140	Mobilization, large equipment	Equipment >150HP or typical weights greater than 30,000 pounds or loads requiring over width or over length permits.	Each	\$513.10	1	\$513.10
Mobilization	1139	Mobilization, medium equipment	Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds.	Each	\$274.33	3	\$822.99
Labor	231	General Labor	Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	\$25.71	12	\$308.52
Labor	233	Equipment Operators, Heavy	Includes: Cranes, Hydraulic Excavators >=50 HP, Dozers, Paving Machines, Rock Trenchers, Trenchers >=12", Dump Trucks, Ag Equipment >=150 HP, Scrapers, Water Wagons.	Hour	\$34.10	12	\$409.20

Scenario Worksheet

Practice and Scenario Description:

Information Type	Data
Region	New England
State	Connecticut
Discipline Group	Environmental Engineering
Practice Code/Name	360 - Waste Facility Closure
Scenario ID	6
Scenario Name	Liquid Waste Impoundment Closure with 25% Liquids and 75% Solids
Scenario Description	This practice scenario includes the decommissioning of an earthen liquid waste impoundment (embankment or excavated type) where the estimated volume of waste to be removed is approximately 25% liquid/slurry waste and 75% sludge/solid waste of the structural storage capacity of the structure. The purpose of the practice is to address resource concerns related to water quality degradation due to excess nutrient and pathogens in ground and/or surface waters and air quality impacts from greenhouse gases, particulate matter and associated precursors, and objectionable odors. Associated practices: Nutrient Management (590), Critical Area Planting (342)
Before Practice Situation	An existing lagoon or waste storage pond is no longer functioning correctly or is not being used for its intended purpose. It poses a safety hazard for humans and livestock and is a threat to environmental sustainability by the potential for impacts to water and air quality.
After Practice Situation	This scenario assumes a waste storage pond, with top dimensions of 110 ft X 110 ft, 8 ft total depth with 2:1 side slopes. The total structural storage volume equals 63,851 cubic feet. The volume of liquid waste to be pumped approximately equals 25% of the structural volume (25% X 63,851 CF = 15,963 CF). The volume of solid waste to be removed approximately equals 75% of the structural volume (75% X 63,851 = 47,888 CF). The volume of earthwork (earthfill and excavation) required to breach the embankment and/or fill in the impoundment and perform final grading of the site is approximately 50% of the structural volume. The volume of earthwork will include 60% as excavation and 40% as compacted earthfill. Structural removal, as necessary, may include the removal and disposal of the synthetic liner, sealing or removal and disposal of waste transfer components and other appurtenances associated with closure of the facility. Decommissioning of a liquid waste storage impoundment includes agitating, removing, and spreading liquid/slurry waste material, removing solid/sludge waste remaining in the bottom. All waste material shall be land applied in accordance with Nutrient Management (590). If present, the synthetic liner will be removed and properly disposed of. All inflow devices and associated appurtenances will be removed and properly disposed of. The embankment will be breached and the excavation filled in with the
Scenario Feature Measure	Cubic feet of structural storage
Scenario Unit	Cubic Foot
Scenario Typical Size	63851

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	\$0.00	\$0.00
Equipment/Installation	\$19,154.69	\$0.30
Labor	\$717.72	\$0.01
Mobilization	\$1,610.42	\$0.03
Acquisition of Technical Knowledge	\$0.00	\$0.00
Foregone Income	\$0.00	\$0.00
Total	\$21,482.83	\$0.34

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Equipment/Installation	956	Manure, compost, injection	Loading, hauling and injecting manure/compost by ground equipment. Includes equipment, power unit and labor costs.	Gallon	\$0.01	119401	\$1,194.01
Equipment/Installation	1633	Spreading, manure sludge	Loading, hauling and spreading manure solids/sludge by ground equipment on nearby fields. Includes equipment, power unit and labor costs.	Cubic Foot	\$0.28	47888	\$13,408.64
Equipment/Installation	48	Excavation, Common Earth, side cast, small equipment	Bulk excavation and side casting of common earth with hydraulic excavator with less than 1 CY capacity. Includes equipment and labor.	Cubic yard	\$2.16	709	\$1,531.44
Equipment/Installation	49	Earthfill, Roller Compacted	Earthfill, roller or machine compacted, includes equipment and labor	Cubic yard	\$4.00	473	\$1,892.00
Equipment/Installation	931	Hydraulic Excavator, 1 CY	Track mounted hydraulic excavator with bucket capacity range of 0.8 to 1.5 CY. Equipment and power unit costs. Labor not included.	Hour	\$94.05	12	\$1,128.60
Mobilization	1140	Mobilization, large equipment	Equipment >150HP or typical weights greater than 30,000 pounds or loads requiring over width or over length permits.	Each	\$513.10	1	\$513.10
Mobilization	1139	Mobilization, medium equipment	Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds.	Each	\$274.33	4	\$1,097.32
Labor	231	General Labor	Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	\$25.71	12	\$308.52
Labor	233	Equipment Operators, Heavy	Includes: Cranes, Hydraulic Excavators >=50 HP, Dozers, Paving Machines, Rock Trenchers, Trenchers >=12", Dump Trucks, Ag Equipment >=150 HP, Scrapers, Water Wagons.	Hour	\$34.10	12	\$409.20

Scenario Worksheet

Practice and Scenario Description:

Information Type	Data
Region	New England
State	Connecticut
Discipline Group	Environmental Engineering
Practice Code/Name	360 - Waste Facility Closure
Scenario ID	5
Scenario Name	Liquid Waste Impoundment Closure with 50% Liquids and 50% Solids
Scenario Description	This practice scenario includes the decommissioning of an earthen liquid waste impoundment (embankment or excavated type) where the estimated volume of waste to be removed is approximately 50% liquid/slurry waste and 50% sludge/solid waste of the structural storage capacity of the structure. The purpose of the practice is to address resource concerns related to water quality degradation due to excess nutrient and pathogens in ground and/or surface waters and air quality impacts from greenhouse gases, particulate matter and associated precursors, and objectionable odors. Associated practices: Nutrient Management (590), Critical Area Planting (342)
Before Practice Situation	An existing lagoon or waste storage pond is no longer functioning correctly or is not being used for its intended purpose. It poses a safety hazard for humans and livestock and is a threat to environmental sustainability by the potential for impacts to water and air quality.
After Practice Situation	This scenario assumes a waste storage pond, with top dimensions of 110 ft X 110 ft, 8 ft total depth with 2:1 side slopes. The total structural storage volume equals 63,851 cubic feet. The volume of liquid waste to be pumped approximately equals 50% of the structural volume (50% X 63,851 CF = 31,925 CF). The volume of solid waste to be removed approximately equals 50% of the structural volume (50% X 63,851 = 31,925 CF). The volume of earthwork (earthfill and excavation) required to breach the embankment and/or fill in the impoundment and perform final grading of the site is approximately 50% of the structural volume. The volume of earthwork will include 60% as excavation and 40% as compacted earthfill. Structural removal, as necessary, may include the removal and disposal of the synthetic liner, sealing or removal and disposal of waste transfer components and other appurtenances associated with closure of the facility. Decommissioning of a liquid waste storage impoundment includes agitating, removing, and spreading liquid/slurry waste material, removing solid/sludge waste remaining in the bottom. All waste material shall be land applied in accordance with Nutrient Management (590). If present, the synthetic liner will be removed and properly disposed of. All inflow devices and associated appurtenances will be removed and properly disposed of. The embankment will be breached and the excavation filled in with the
Scenario Feature Measure	Cubic feet of structural storage
Scenario Unit	Cubic Foot
Scenario Typical Size	63851

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	\$0.00	\$0.00
Equipment/Installation	\$15,879.07	\$0.25
Labor	\$717.72	\$0.01
Mobilization	\$1,610.42	\$0.03
Acquisition of Technical Knowledge	\$0.00	\$0.00
Foregone Income	\$0.00	\$0.00
Total	\$18,207.21	\$0.29

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Equipment/Installation	956	Manure, compost, injection	Loading, hauling and injecting manure/compost by ground equipment. Includes equipment, power unit and labor costs.	Gallon	\$0.01	238803	\$2,388.03
Equipment/Installation	1633	Spreading, manure sludge	Loading, hauling and spreading manure solids/sludge by ground equipment on nearby fields. Includes equipment, power unit and labor costs.	Cubic Foot	\$0.28	31925	\$8,939.00
Equipment/Installation	48	Excavation, Common Earth, side cast, small equipment	Bulk excavation and side casting of common earth with hydraulic excavator with less than 1 CY capacity. Includes equipment and labor.	Cubic yard	\$2.16	709	\$1,531.44
Equipment/Installation	49	Earthfill, Roller Compacted	Earthfill, roller or machine compacted, includes equipment and labor	Cubic yard	\$4.00	473	\$1,892.00
Equipment/Installation	931	Hydraulic Excavator, 1 CY	Track mounted hydraulic excavator with bucket capacity range of 0.8 to 1.5 CY. Equipment and power unit costs. Labor not included.	Hour	\$94.05	12	\$1,128.60
Mobilization	1140	Mobilization, large equipment	Equipment >150HP or typical weights greater than 30,000 pounds or loads requiring over width or over length permits.	Each	\$513.10	1	\$513.10
Mobilization	1139	Mobilization, medium equipment	Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds.	Each	\$274.33	4	\$1,097.32
Labor	231	General Labor	Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	\$25.71	12	\$308.52
Labor	233	Equipment Operators, Heavy	Includes: Cranes, Hydraulic Excavators >=50 HP, Dozers, Paving Machines, Rock Trenchers, Trenchers >=12", Dump Trucks, Ag Equipment >=150 HP, Scrapers, Water Wagons.	Hour	\$34.10	12	\$409.20

Scenario Worksheet

Practice and Scenario Description:

Information Type	Data
Region	New England
State	Connecticut
Discipline Group	Environmental Engineering
Practice Code/Name	360 - Waste Facility Closure
Scenario ID	4
Scenario Name	Liquid Waste Impoundment Closure with 75% Liquids and 25% Solids
Scenario Description	This practice scenario includes the decommissioning of an earthen liquid waste impoundment (embankment or excavated type) where the estimated volume of waste to be removed is approximately 75% liquid/slurry waste and 25% sludge/solid waste of the structural storage capacity of the structure. The purpose of the practice is to address resource concerns related to water quality degradation due to excess nutrient and pathogens in ground and/or surface waters and air quality impacts from greenhouse gases, particulate matter and associated precursors, and objectionable odors. Associated practices: Nutrient Management (590), Critical Area Planting (342)
Before Practice Situation	An existing lagoon or waste storage pond is no longer functioning correctly or is not being used for its intended purpose. It poses a safety hazard for humans and livestock and is a threat to environmental sustainability by the potential for impacts to water and air quality.
After Practice Situation	This scenario assumes a waste storage pond, with top dimensions of 110 ft X 110 ft, 8 ft total depth with 2:1 side slopes. The total structural storage volume equals 63,851 cubic feet. The volume of liquid waste to be pumped approximately equals 75% of the structural volume (75% X 63,851 CF = 47,888 CF). The volume of solid waste to be removed approximately equals 25% of the structural volume (25% X 63,851 = 15,963 CF). The volume of earthwork (earthfill and excavation) required to breach the embankment and/or fill in the impoundment and perform final grading of the site is approximately 50% of the structural volume. The volume of earthwork will include 60% as excavation and 40% as compacted earthfill. Structural removal, as necessary, may include the removal and disposal of the synthetic liner, sealing or removal and disposal of waste transfer components and other appurtenances associated with closure of the facility. Decommissioning of a liquid waste storage impoundment includes agitating, removing, and spreading liquid/slurry waste material, removing solid/sludge waste remaining in the bottom. All waste material shall be land applied in accordance with Nutrient Management (590). If present, the synthetic liner will be removed and properly disposed of. All inflow devices and associated appurtenances will be removed and properly disposed of. The embankment will be breached and the excavation filled in with the
Scenario Feature Measure	Cubic feet of structural storage
Scenario Unit	Cubic Foot
Scenario Typical Size	63851

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	\$0.00	\$0.00
Equipment/Installation	\$12,603.72	\$0.20
Labor	\$717.72	\$0.01
Mobilization	\$1,610.42	\$0.03
Acquisition of Technical Knowledge	\$0.00	\$0.00
Foregone Income	\$0.00	\$0.00
Total	\$14,931.86	\$0.23

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Equipment/Installation	956	Manure, compost, injection	Loading, hauling and injecting manure/compost by ground equipment. Includes equipment, power unit and labor costs.	Gallon	\$0.01	358204	\$3,582.04
Equipment/Installation	1633	Spreading, manure sludge	Loading, hauling and spreading manure solids/sludge by ground equipment on nearby fields. Includes equipment, power unit and labor costs.	Cubic Foot	\$0.28	15963	\$4,469.64
Equipment/Installation	48	Excavation, Common Earth, side cast, small equipment	Bulk excavation and side casting of common earth with hydraulic excavator with less than 1 CY capacity. Includes equipment and labor.	Cubic yard	\$2.16	709	\$1,531.44
Equipment/Installation	49	Earthfill, Roller Compacted	Earthfill, roller or machine compacted, includes equipment and labor	Cubic yard	\$4.00	473	\$1,892.00
Equipment/Installation	931	Hydraulic Excavator, 1 CY	Track mounted hydraulic excavator with bucket capacity range of 0.8 to 1.5 CY. Equipment and power unit costs. Labor not included.	Hour	\$94.05	12	\$1,128.60
Mobilization	1140	Mobilization, large equipment	Equipment >150HP or typical weights greater than 30,000 pounds or loads requiring over width or over length permits.	Each	\$513.10	1	\$513.10
Mobilization	1139	Mobilization, medium equipment	Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds.	Each	\$274.33	4	\$1,097.32
Labor	231	General Labor	Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	\$25.71	12	\$308.52
Labor	233	Equipment Operators, Heavy	Includes: Cranes, Hydraulic Excavators >=50 HP, Dozers, Paving Machines, Rock Trenchers, Trenchers >=12", Dump Trucks, Ag Equipment >=150 HP, Scrapers, Water Wagons.	Hour	\$34.10	12	\$409.20

Scenario Worksheet

Practice and Scenario Description:

Information Type	Data
Region	New England
State	Connecticut
Discipline Group	Environmental Engineering
Practice Code/Name	360 - Waste Facility Closure
Scenario ID	1
Scenario Name	Poultry House Soil Remediation
Scenario Description	This practice scenario includes the remediation of the soil in an abandoned poultry structures previously used to store poultry waste (litter) on an earthen floor. The purpose of the practice is to address resource concerns related to water quality degradation due to excess nutrient and pathogens in ground and/or surface waters and air quality impacts from greenhouse gases, particulate matter and associated precursors, and objectionable odors. Associated practices: Nutrient Management (590), Critical Area Planting (342).
Before Practice Situation	The abandoned poultry house has a damaged roof exposing the earthen floor of the structure to rainfall. Rainfall and nutrients on the floor of the house pose a risk to surface water from contaminated runoff or to ground water from seepage into the underlying soils.
After Practice Situation	This scenario is based on a 40' wide x 400' long poultry house with 1 foot depth of nutrient laden soil to remediate (16,000 CF). Payment under this scenario includes only activities associated with the soil remediation. Soil remediation activities in this scenario include removing the nutrient enriched soil found in the first 7 inches of soil beneath the litter floor and mixing wood chips with the remaining 5 inches of soil. Nutrient level testing and field application of the removed soil shall be performed according to nutrient planning in conformance with Nutrient Management, Code 590. The remaining 5 inches of soil will be remediated in-situ by mixing in wood chips, at a rate of 33% of the volume of remaining soil, for the purpose of nitrogen sequestration. Additional soil will be hauled in (estimated at 110% of the soil volume that was removed for field application) to backfill the depression. Shaping and crowning of the soil material on the disturbed area and critical area seeding will be done to provide drainage, complete the site remediation and establish vegetation. Operation and maintenance of the site will include nutrient testing the following year to determine if the nutrients in the mixed soil have been remediated and surface and ground water resource concerns have been addressed. In this
Scenario Feature Measure	Cubic feet of soil remediated
Scenario Unit	Cubic Foot
Scenario Typical Size	16000

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	\$152.48	\$0.01
Equipment/Installation	\$8,515.98	\$0.53
Labor	\$1,081.00	\$0.07
Mobilization	\$1,849.19	\$0.12
Acquisition of Technical Knowledge	\$0.00	\$0.00
Foregone Income	\$0.00	\$0.00
Total	\$11,598.65	\$0.72

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Materials	299	Test, Soil Test, Standard	Includes materials, labor, and equipment costs.	Each	\$9.53	16	\$152.48
Equipment/Installation	1619	Front End Loader, 185 HP	Wheeled front end loader with horsepower range of 160 to 210. Equipment and power unit costs. Labor not included.	Hour	\$84.43	6	\$506.58
Equipment/Installation	1098	Aggregate, Wood Chips	Includes materials, equipment and labor	Cubic yard	\$20.11	82	\$1,649.02
Equipment/Installation	962	Tractor, agricultural, 120 HP	Agricultural tractor with horsepower range of 90 to 140. Equipment and power unit costs. Labor not included.	Hour	\$47.06	1	\$47.06
Equipment/Installation	51	Earthfill, Dumped and Spread	Earthfill, dumped and spread without compaction effort, includes equipment and labor	Cubic yard	\$3.27	380	\$1,242.60
Equipment/Installation	955	Manure, compost, application	Loading, hauling and spreading manure/compost by ground equipment. Includes equipment, power unit and labor costs.	Hour	\$113.43	19	\$2,155.17
Equipment/Installation	931	Hydraulic Excavator, 1 CY	Track mounted hydraulic excavator with bucket capacity range of 0.8 to 1.5 CY. Equipment and power unit costs. Labor not included.	Hour	\$94.05	31	\$2,915.55
Mobilization	1140	Mobilization, large equipment	Equipment >150HP or typical weights greater than 30,000 pounds or loads requiring over width or over length permits.	Each	\$513.10	2	\$1,026.20
Mobilization	1139	Mobilization, medium equipment	Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds.	Each	\$274.33	3	\$822.99
Labor	232	Equipment Operators, Light	Includes: Skid Steer Loaders, Hydraulic Excavators <50 HP, Trenchers <12", Ag Equipment <150 HP, Pickup Trucks, Forklifts, Mulchers	Hour	\$23.90	1	\$23.90
Labor	233	Equipment Operators, Heavy	Includes: Cranes, Hydraulic Excavators >=50 HP, Dozers, Paving Machines, Rock Trenchers, Trenchers >=12", Dump Trucks, Ag Equipment >=150 HP, Scrapers, Water Wagons.	Hour	\$34.10	31	\$1,057.10