

## COST SUMMARY WORK

Task description: \_\_\_\_\_

Site: Sprague Scraper Service Pit

Permit Action: 2024 Cost Estimate

Permit/Job#: M2005032

### PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 12/13/2024

County: Washington

Filename: M032-000

User: BEH

Agency or organization name: DRMS

### TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Replace Overburden and Topsoil	DOZER	1	119.17	\$26,018
002	Rip 2 Trails	RIPPER	1	0.82	\$190
003	Revegetate the Trails	REVEGE	1	1.00	\$433
004	Plant Temporary Crop	REVEGE	1	10.00	\$5,653
005	Mob/Demob of Reclamation Equipment	MOBILIZE	1	2.95	\$1,798
<b><u>SUBTOTALS:</u></b>				<b>133.94</b>	<b>\$34,092</b>

### INDIRECT COSTS

#### OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$689

Performance bond: 1.05

Total = \$358

Job superintendent: 0.00

Total = \$0

Profit: 10.00

Total = \$3,409

TOTAL O & P = \$4,456

CONTRACT AMOUNT (direct + O & P) = \$38,548

#### LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): \$0

Total = \$0

Engineering work and/or contract/bid preparation: 0.00

Total = \$0

Reclamation management and/or administration: 5.00

\$1,927

CONTINGENCY: 0.00

Total = \$0

TOTAL INDIRECT COST = \$6,383

**TOTAL BOND AMOUNT (direct + indirect) = \$40,475**

**BULLDOZER WORK**Task description: **Replace Overburden and Topsoil**Site: **Sprague Scraper Service Pit**Permit Action: 2024 Cost EstimatePermit/Job#: M2005032**PROJECT IDENTIFICATION**Task #: 001State: ColoradoAbbreviation: NoneDate: 12/13/2024County: WashingtonFilename: M032-001User: BEHAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D7R DS XR Series IIHorsepower: 240Blade Type: Semi-UniversalAttachment: 3-shank ripperShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	<u>\$90.24</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$78.95</u>	<u>100</u>
Ripper own. Cost/Hour:	<u>\$9.25</u>	<u>NA</u>
Ripper op. Cost/Hour:	<u>\$1.30</u>	<u>25</u>
Operator Cost/Hour:	<u>\$38.59</u>	<u>NA</u>

Total unit Cost/Hour: \$218.33Total Fleet Cost/Hour: **\$218.33****MATERIAL QUANTITIES**Initial Volume: 31,944Swell factor: 1.230Loose volume: **39,291 LCY**Source of estimated volume: Application (24" over 9.9 Acres)Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 200 feetUnadjusted hourly production: 410.8 LCY/hrMaterials consistency description: Partly consolidated stockpile 1.1Average push gradient: -5 %Average site altitude: 4,120 feetMaterial weight: 2,100 lbs/LCYWeight description: Earth - Loam**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	<u>0.750</u>	<u>(AVG.)</u>
Material consistency:	<u>1.100</u>	<u>(CAT HB)</u>
Dozing method:	<u>1.200</u>	<u>(SLOT)</u>
Visibility:	<u>1.000</u>	<u>(AVG.)</u>

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.115	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.095	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.8026

Adjusted unit production: 329.71 LCY/hr

Adjusted fleet production: **329.71 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$0.662/LCY

Total job time: **119.17 Hours**

Total job cost: **\$26,018**

## BULLDOZER RIPPING WORK

Task description: Rip 2 Trails

Site: Sprague Scraper Service Pit

Permit Action: 2024 Cost Estimate

Permit/Job#: M2005032

### PROJECT IDENTIFICATION

Task #: 002

State: Colorado

Abbreviation: None

Date: 12/13/2024

County: Washington

Filename: M032-002

User: BEH

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: Cat D7R DS XR Series II  
Ripper Attachment: 1-Shank Ripper

Horsepower: 240  
Shift Basis: 1 per day  
Data Source: (CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$90.24</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$78.95</u>	<u>100</u>
Ripper Ownership Cost/Hour:	<u>\$13.69</u>	<u>NA</u>
Ripper Operating Cost/Hour:	<u>\$9.24</u>	<u>100</u>
Operator Cost/Hour:	<u>\$38.59</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$230.71</u>	
Total Fleet Cost/Hour:	<u><b>\$230.71</b></u>	

### MATERIAL QUANTITIES

Selected estimating method: Area

#### Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA  
Area: 0.25 acres Rip Depth (ft): 1.50 Volume: 605 BCY or CCY

Source of estimated quantity: Inspection

### HOURLY PRODUCTION

#### Seismic:

Seismic Velocity: NA feet/second

#### Area:

Average Ripping Depth: 1.50 feet/pass  
Average Ripping Width: 3.68 feet/pass  
Average Ripping Length: 100.00 feet/pass  
Average Dozer Speed: 88.00 feet/minute  
Average Maneuver Time: 0.25 minutes/pass  
Production per unit area: 0.366 acres/hour

#### Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.366 Acres/hr  
Site Altitude: 4,120 feet  
Altitude Adj: 1.00 (CAT HB)  
Job Efficiency: 0.83 (1 shift/day)  
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.30 Acres/hr  
Adjusted Hourly Fleet Production: **0.30** Acres/hr

### JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: **0.82** Hours

Unit cost: \$760.246 Per acre Total job cost: **\$190**

**REVEGETATION WORK**Task description: Revegetate the TrailsSite: Sprague Scraper Service PitPermit Action: 2024 Cost EstimatePermit/Job#: M2005032**PROJECT IDENTIFICATION**Task #: 003  
Date: 12/13/2024  
User: BEHState: Colorado  
County: WashingtonAbbreviation: None  
Filename: M032-003Agency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$0.00</b>

**Application**

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$0.00</b>

**TILLING**

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$117.61
<b>Total Tilling Cost/Acre</b>	<b>\$117.61</b>

**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Blue Grama - Hachita	0.60	9.79	\$17.19
Switchgrass - Blackwell	1.00	8.93	\$13.22
Sand Bluestem - Garden Co.	3.20	8.30	\$77.53
Western Wheatgrass - Arriba	3.20	8.08	\$28.91
Prairie Sandreed - Goshen	1.40	8.77	\$23.84
<b>Totals Seed Mix</b>	<b>9.40</b>	<b>43.88</b>	<b>\$160.68</b>

**Application**

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Description	Cost /Acre
Broadcast seeding [DMG]	\$272.56
<b>Total Seed Application Cost/Acre</b>	<b>\$272.56</b>

**MULCHING and MISCELLANEOUS****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Hay, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$492.78	\$985.56
<b>Total Mulch Materials Cost/Acre</b>				<b>\$985.56</b>

**Application**

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$85.37
<b>Total Mulch Application Cost/Acre</b>	<b>\$85.37</b>

**NURSERY STOCK PLANTING**

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
<b>Totals Nursery Stock Cost / Acre</b>					<b>\$0.00</b>

**JOB TIME AND COST**

No. of Acres: 0.25                      Cost /Acre: \$1,621.78  
 Estimated Failure Rate: 25%                      Cost /Acre\*: \$433.24  
 \*Selected Replanting Work Items: SEEDING

Initial Job Cost: **\$405.45**  
 Reseeding Job Cost: **\$27.08**  
 Total Job Cost: **\$433**  
 Job Hours: **1.00**

REVEGETATION WORKTask description: Plant Temporary CropSite: Sprague Scraper Service PitPermit Action: 2024 Cost EstimatePermit/Job#: M2005032PROJECT IDENTIFICATIONTask #: 004  
Date: 12/13/2024  
User: BEHState: Colorado  
County: WashingtonAbbreviation: None  
Filename: M032-004Agency or organization name: DRMSFERTILIZINGMaterials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Ammonium nitrate, 33-0-0	121.00	pound	\$0.64	\$77.68
Triple superphosphate, 0-46-0	87.00	pound	\$0.92	\$79.75
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$157.43</b>

Application

Description	Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)	\$43.12
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$43.12</b>

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$117.61
<b>Total Tilling Cost/Acre</b>	<b>\$117.61</b>

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Wheat, Winter - Tam 107	30.00	27.55	\$16.22
<b>Totals Seed Mix</b>	<b>30.00</b>	<b>27.55</b>	<b>\$16.22</b>

Application

Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	\$236.64
<b>Total Seed Application Cost/Acre</b>	<b>\$236.64</b>

**MULCHING and MISCELLANEOUS****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
<b>Total Mulch Materials Cost/Acre</b>				<b>\$0.00</b>

**Application**

Description	Cost /Acre
	\$
<b>Total Mulch Application Cost/Acre</b>	<b>\$0.00</b>

**NURSERY STOCK PLANTING**

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
<b>Totals Nursery Stock Cost / Acre</b>					<b>\$0.00</b>

**JOB TIME AND COST**

No. of Acres:	9.9	Cost /Acre:	\$571.02
Estimated Failure Rate:	25%	Cost /Acre*:	\$0.00
*Selected Replanting Work Items:	NONE		
Initial Job Cost:	<b>\$5,653.10</b>		
Reseeding Job Cost:	<b>\$0.00</b>		
Total Job Cost:	<b>\$5,653</b>		
Job Hours:	<b>10.00</b>		



**EQUIPMENT MOBILIZATION/DEMOBILIZATION**Task description: **Mob/Demob of Reclamation Equipment**Site: **Sprague Scraper Service Pit**Permit Action: 2024 Cost EstimatePermit/Job#: M2005032**PROJECT IDENTIFICATION**Task #: 005State: ColoradoAbbreviation: NoneDate: 12/13/2024County: WashingtonFilename: M032-005User: BEHAgency or organization name: DRMS**EQUIPMENT TRANSPORT RIG COST**Shift basis: 1 per dayCost Data Source: CRG DataTruck Tractor Description: GENERIC ON-HIGHWAY TRUCK TRACTOR, 6X4, DIESEL POWERED,  
400 HP (2ND HALF, 2006)Truck Trailer Description: GENERIC FOLDING GOOSENECK, DROP DECK EQUIPMENT  
TRAILER (25T, 50T, AND 100T)**Cost Breakdown:**

<b>Available Rig Capacities</b>	<b>0-25 Tons</b>	<b>26-50 Tons</b>	<b>51+ Tons</b>
Ownership Cost/Hour:	\$10.44	\$22.18	\$23.94
Operating Cost/Hour:	\$26.48	\$54.55	\$55.65
Operator Cost/Hour:	\$22.52	\$22.52	\$22.52
Helper Cost/Hour:	\$0.00	\$23.53	\$23.53
Total Unit Cost/Hour:	\$59.44	\$122.78	\$125.64

**NON ROADABLE EQUIPMENT:**

Machine Description	Weight/ Unit (TONS)	Owner ship Cost/hr/ unit	Haul Rig Cost/hr/unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet	DOT Permit Cost/ fleet
Cat D7R DS XR Series II	32.01	\$90.24	\$122.78	1	\$213.02	\$122.78	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$41.02	\$59.44	1	\$100.46	\$59.44	\$250.00

Subtotals: **\$313.48** **\$182.22** **\$500.00****ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
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Subtotals: **\$0.00** **\$0.00**

**EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region: YUMA  
 Total one-way travel distance: 22.00 miles  
 Average Travel Speed: 45.00 mph

Total Non-Roadable Mob/Demob Cost \* \$1,798.16  
 \*\* two round trips with haul rig:  
 Total Roadable Mob/Demob Cost \*\* \$0.00  
 \*\* one round trip, no haul rig:

**Transportation Cycle Time:**

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.49	0.49
Return Time (Hours):	0.49	0.49
Loading Time (Hours):	0.25	NA
Unloading Time (Hours):	0.25	NA
Subtotals:	1.48	0.98

**JOB TIME AND COST**

Total job time: 2.96 Hours

Total job cost: \$1,798