



Solid Waste Management Facility Siting Study

Solid Waste Advisory Committee (SWAC) Meeting

June 17, 2025





Public Comments

3 minutes per person, tentatively, depending on the number of people wishing to comment

Written comments can also be sent to:
managethefuture@deschutescounty.gov



Agenda

1. Introductions/Welcome
2. Review/Approve May Meeting Minutes
3. Public Comment
4. Property Acquisition Updates
5. Public Outreach Updates
6. Supplemental Site Screening – Preliminary Results
7. SWAC Discussion
8. Next Steps
9. Adjourn



Introductions / Welcome



SWAC Members

City Representatives (Primary / Alternate):

- **Bend:** Cassie Lacy / Chris Ogren (*new as alternate, former at-large*)
- **Redmond:** John Nielsen (*new appointment*)
- **Sisters:** Jackson Dumach / Paul Bertagna (*continuing*)
- **La Pine:** Brent Bybee (*new appointment*)

Franchise Haulers:

- **Cascade Disposal:** Erwin Swetnam / Michael Grove (*new alternate*)
- **Republic Services:** Erica Haitsma / Courtney Voss (*new alternate*)

Citizen Members:

- **Technical:** Timm Schimke (*new appointment, replacing Jared Black*)
- **Financial:** Luke Dynes (*continuing*)
- **At-Large:** Keith Kessar & Robin Vora (*continuing*)
- **The Environmental Center:** Neil Baunsgard (*new appointment, replacing Mike Riley*)



Project Team Members

Deschutes County

- **Tim Brownell** – Solid Waste Department Director
- **Jeff Merwin** – Solid Waste Infrastructure & Compliance Manager
- **Sue Monette** – Management Analyst
- **Angie Heffner** – Administrative Support
- **Stephanie Marshall** – County Legal Counsel
- **Kristie Bollinger** – County Property Manager

Parametrix (Consultant):

- **Dwight Miller, PE** - Project Principal
- **Ryan Rudnick, PE** - Project Manager



Property Acquisition Updates

Horse Ridge Site

- Met with Horse Ridge Pit, LLC owner on 4/17. Discussions continuing.
- Met with Hap Taylor & Sons, LLC pit owner (Knife River Corporation) onsite 4/22.
- Met with ODOT last week regarding 20-acre aggregate pit.

Dodds Rd Site

- Response received from property owner, Central Oregon Irrigation District (COID)
- COID indicated initial preference for land lease agreement, over lump sum purchase
- COID Staff meeting with District Board of Directors on 6/10 to discuss potential interest in consideration

Roth Sites

- Motivated seller, offering all Roth property holdings at reduced price. Ready to negotiate.

Golden Basin West Site

- Multiple attempts to contact property owners, but no response
- Removed from further consideration due to owner unresponsiveness



Public Outreach Updates

- **Tribal Engagement**

Outreach to Confederated Tribes of Warm Springs with site maps and KMZ files to gather input on cultural and historical considerations

- **Recreation Stakeholder Coordination**

Contacted Central Oregon Trail Alliance (COTA) regarding mountain bike and hiking trails near Horse Ridge Site

- **Regional Solutions Team Briefing**

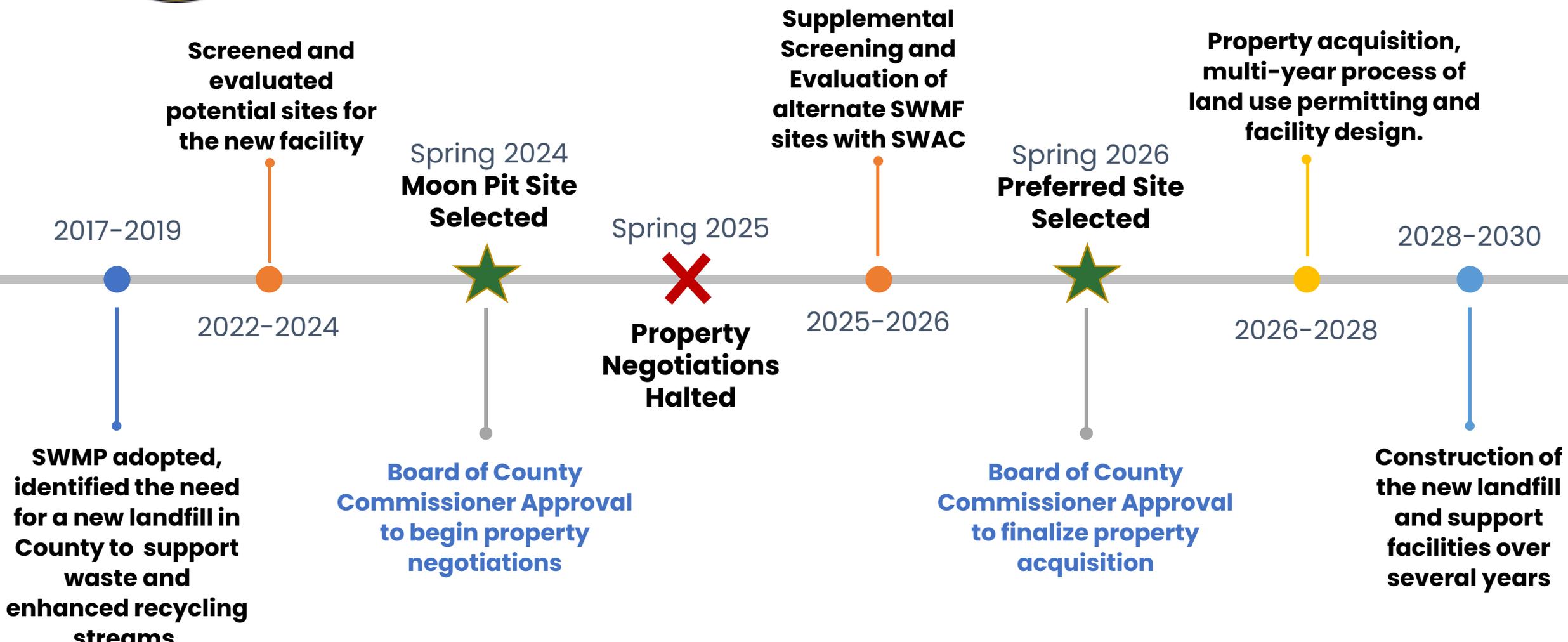
Updates shared with Oregon's Regional Solutions Team; offer extended to present at upcoming meeting

- **Environmental Advocacy Notification**

Letter sent to Central Oregon Conservation Network (COCN) with project overview and GIS data to inform and invite feedback



Roadmap to Opening in 2031





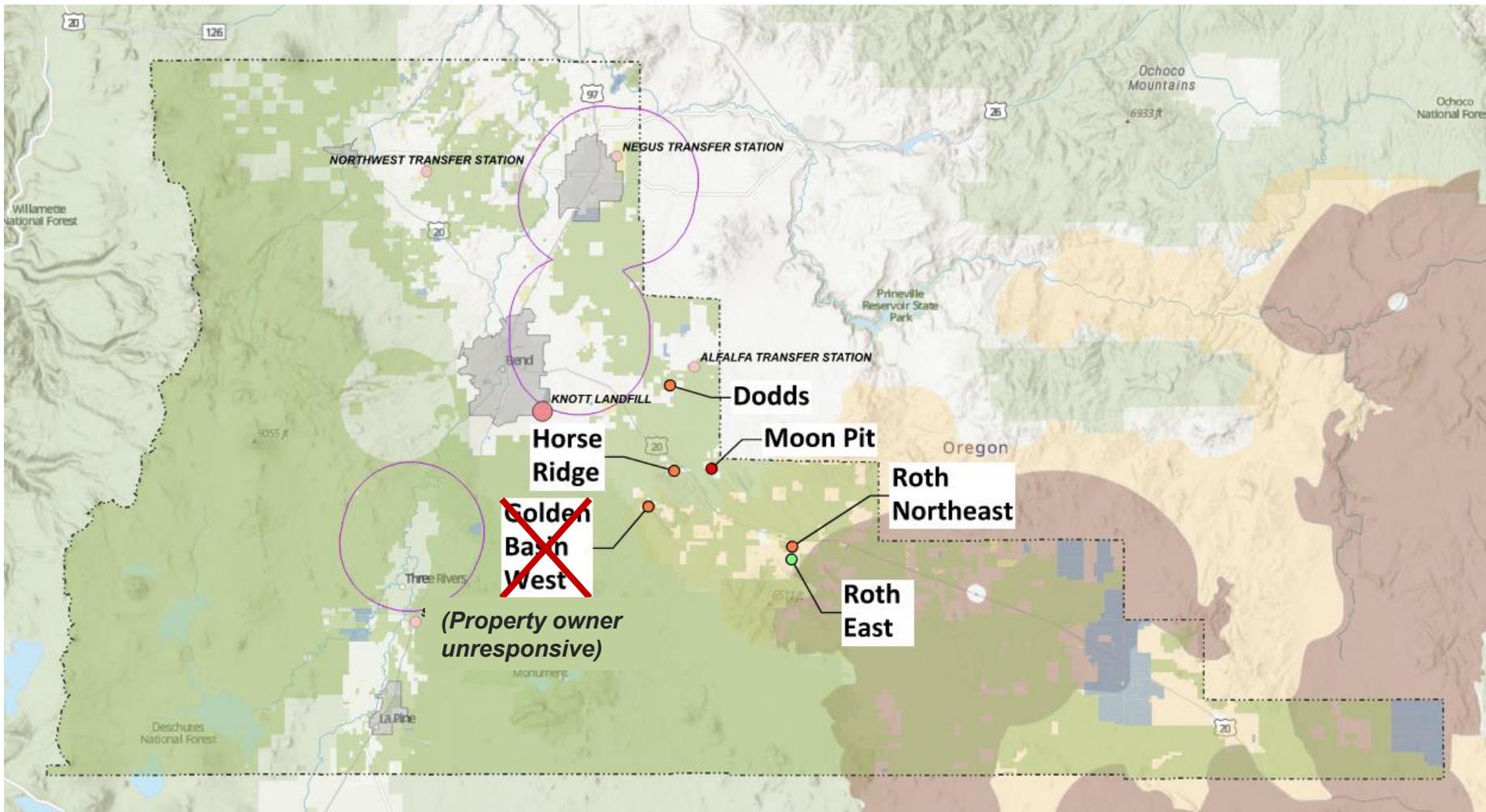
Supplemental Site Screening Preliminary Results



Alternate SWMF Sites

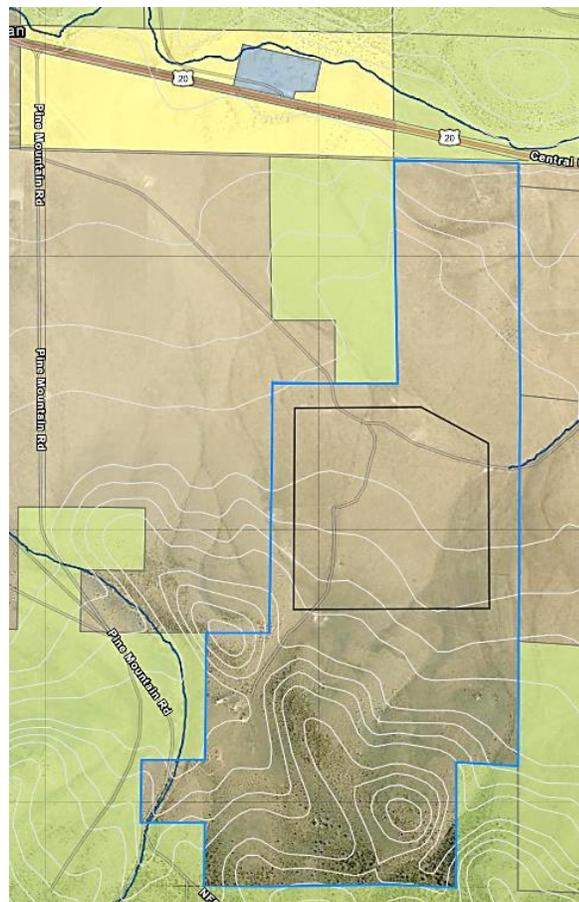
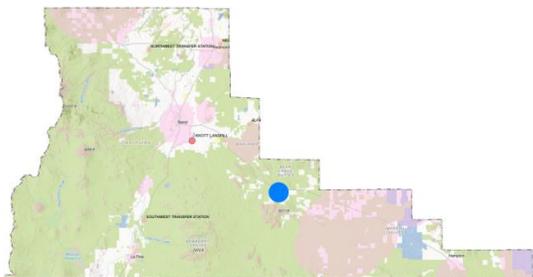
Alternate Site Selection:

- Sites previously eliminated due to size
- Sites positively affected by Sage Grouse Habitat Map changes
- Sites with apparent changes to property owner willingness to sell





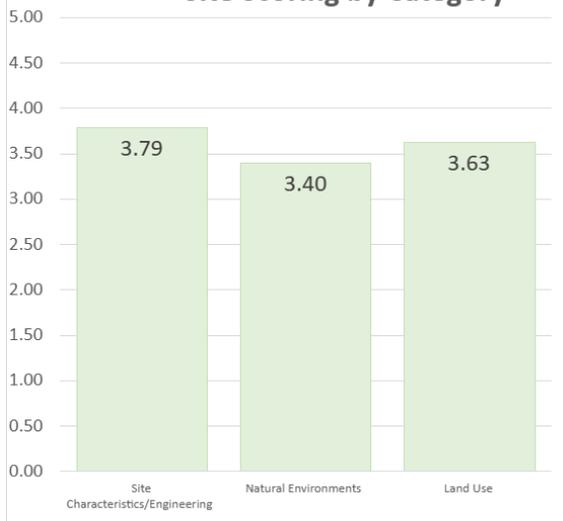
Roth East



Considerations:

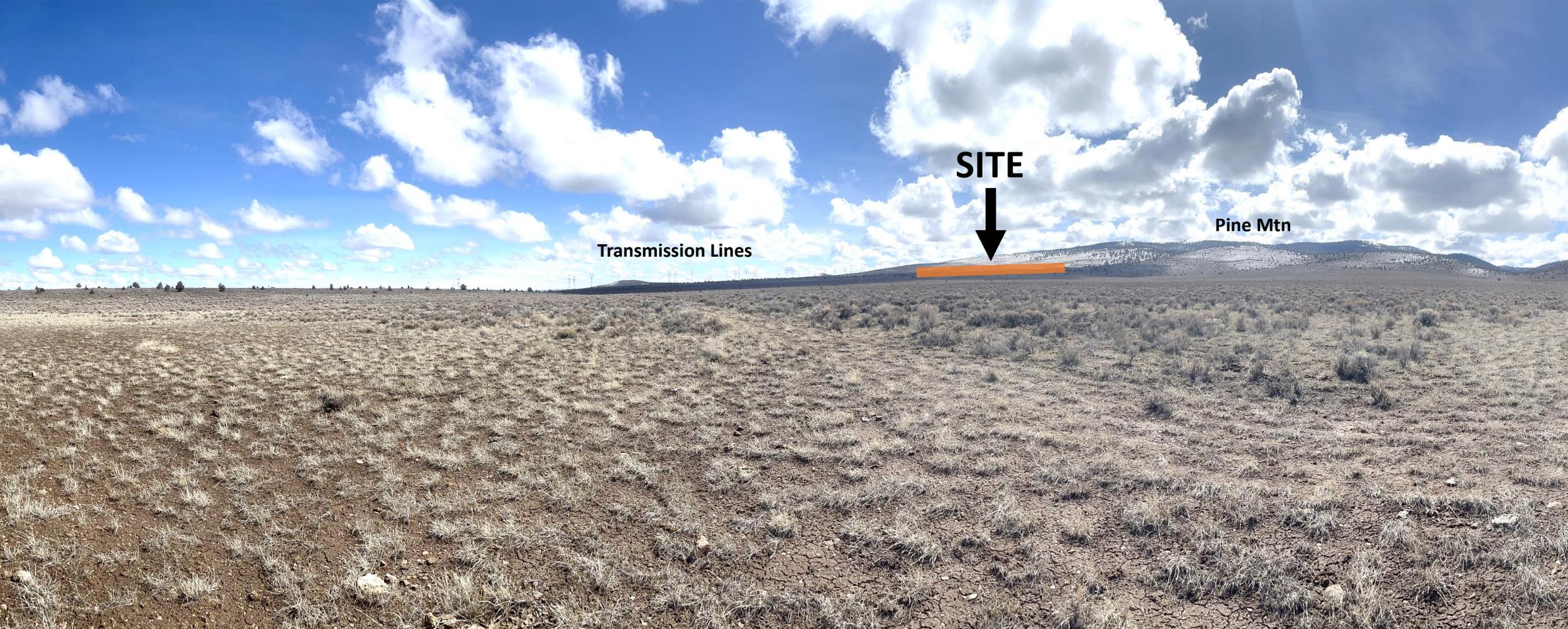
- Finalist SWMF site evaluated to same level as Moon Pit site. Further study not required for selection.
- Near southeast extent of Millican Valley / Basin
- Within Low Density Sage Grouse Habitat Area
- Core Sage Grouse Zone ~0.5 mile SE from disposal area
- Variety of recreational uses in broad vicinity
- Nearest residence ~0.7 mile distant
- Setback 1 mile from Pine Mountain road and Highway 20, and screened from view by topography
- 23-27 miles from waste centroid
- All Roth properties recently offered for sale ~3,000 acres.
- Cost-effective to excavate and operate due to ~300 ft depth of alluvial sediment deposit.

Site Scoring by Category





Roth East Site Photos





Roth East Scoring

| Criteria and weight | Weight | Wtd. Score: | Focused Site Screening Notes |
|--|------------|-------------|--|
| | | 3.60 | |
| Site Characteristics/Engineering | 35% | 3.79 | |
| Site Availability/Acquisition Potential | 35% | 4.20 | |
| <i>Ownership</i> | 40% | 3 | Private |
| <i>Number of Parcels</i> | 20% | 5 | Single Owner |
| <i>Total Site Acreage</i> | 40% | 5 | 1706 acres |
| Geotechnical Location Factors | 10% | 2.60 | |
| <i>Fault Hazards</i> | 25% | 3 | Fault 1.74 miles south of site (DOGAMI/USGS) |
| <i>Seismic Impact Zones/Hazards</i> | 30% | 3 | Moderate liquefaction susceptibility (DOGAMI) |
| <i>Unstable Areas – Mass Movement</i> | 25% | 3 | moderate landslide susceptibility (DOGAMI SLIDO) |
| <i>Unstable Areas – Poor Foundation</i> | 20% | 1 | no data |
| Floodplains | 5% | 3.00 | Footprint is not within the 100 year flood plain, but upstream runoff through seasonal drainage channels will need to be managed with perimeter controls |
| Groundwater Protection/Hydrogeology | 20% | 3.90 | |
| <i>Depth to Groundwater</i> | 25% | 3 | Depth to water near site appears to be greater than 630 ft. Wells located further (~0.7 to 1.3 miles) to the NE 1st water ranges from 460 ft and 495 ft. |
| <i>Proximity to Drinking Water Wells</i> | 30% | 3 | Closest wells could be w/in 0.2 miles, but likely ~0.5 miles of work site area. One of these wells is dry. Both wells capped/not used. Closest located well is ~0.7 miles. |
| <i>Proximity to Wellhead Protection Areas</i> | 15% | 5 | No wellhead protection areas. |
| <i>Site Hydrogeologic Framework</i> | 30% | 5 | Thick deposits of clay/claystone and rock/clay conglomerate appears to be present above WB zone. |
| Development | 15% | 5.00 | |
| <i>Soils</i> | 45% | 5 | Top Soil, Sandstone, Gravel, Clay |
| <i>Topography</i> | 30% | 5 | Avg Slope = 1 to 10 percent |
| <i>Capacity/Site Configuration</i> | 25% | 5 | Disposal Footprint = 450+ acres, Total Property area = 1706 acres |
| Operation | 15% | 2.55 | |
| <i>Haul Distance to Waste Centroid</i> | 60% | 2 | Slightly longer travel distance than focused sites to the west. 28.6 "weighted" miles from various transfer stations. |
| <i>Annual Precipitation</i> | 15% | 4 | Between 10" and 15" isohyetal lines |
| <i>Onsite Water Supply and Management</i> | 25% | 3 | Existing Well onsite (DESC 194). Well and water right expansion/improvement required to support SWMF water needs. |

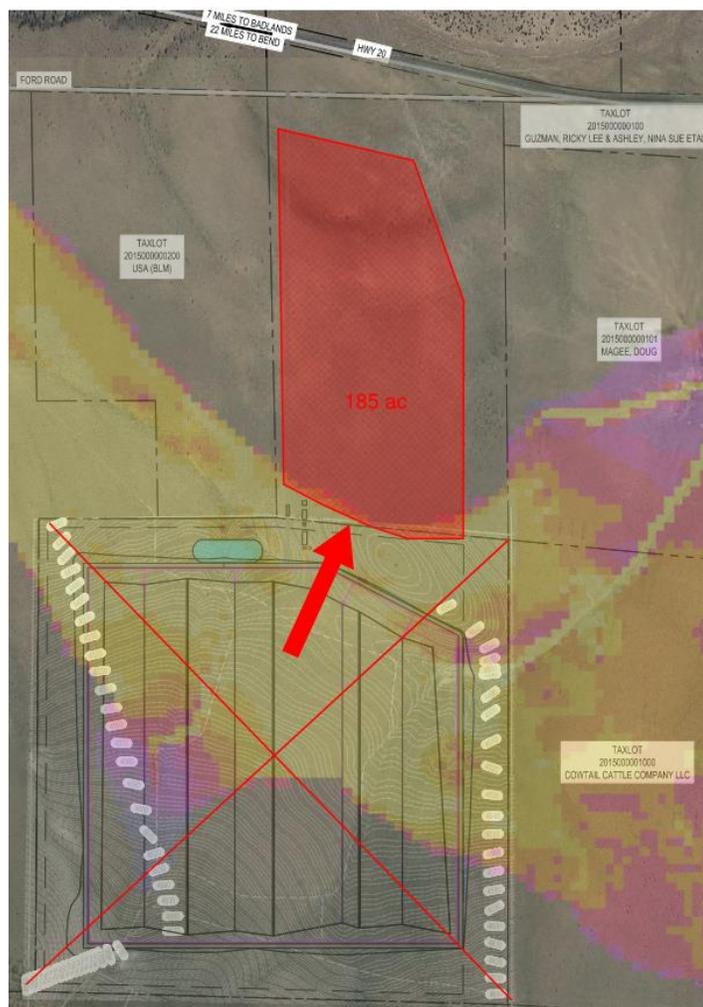
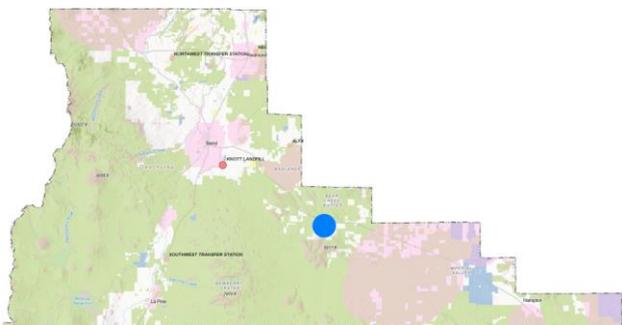


Roth East Scoring

| Criteria and weight | Weight | Wtd. Score: | Focused Site Screening Notes |
|---|------------|-------------|---|
| | | 3.60 | |
| Natural Environments | 35% | 3.40 | |
| Wetlands and Waters Impacts | 10% | 5.00 | No wetlands identified. Site is 300 feet from an ephemeral stream. Aerial imagery indicates seasonal wash (water). |
| Threatened and Endangered Species | 20% | 5.00 | No ESA species identified |
| Wildlife Area Combining Zone | 10% | 1.00 | Within Antelope and North Paulina Deer Winter Range |
| Greater Sage-Grouse Area Combining Zone | 40% | 2.00 | In low density sage grouse area. Core GSG area 0.56 miles from site. Site development would result in direct and indirect impacts to GSG habitat that can be mitigated for with offsite mitigation, In-lieu fee, or mitigation bank if available. |
| Sensitive Bird and Mammal Habitat Combining Zone and Migratory Birds | 20% | 5.00 | |
| <i>Sensitive Bird and Mammal Habitat Combining Zone</i> | 50% | 5 | No SBMH zone within 0.5 mile of site |
| <i>Migratory Birds, Including Bald and Golden Eagles</i> | 50% | 5 | No migratory bird nest within 2 miles of site |
| Land Use | 30% | 3.63 | |
| Proximity to Airports | 15% | 5.00 | greater than 5 miles from airport runways listed in the Deschutes County Transportation System Plan |
| Site Zoning | 20% | 5.00 | EFUHR, Forest Use 1, Landscape Management Overlay, Wildlife Area Combining Zone Overlay (Deer Winter Range; Antelope Range), Surface Mining Overlay |
| Adjacent Land Use Impacts | 20% | 3.50 | |
| <i>Existing Adjacent Use</i> | 25% | 1 | Agricultural, rural residential homes, OHV Recreational Areas/staging areas, hang glider/paraglider landing areas, Pine Mountain Observatory |
| <i>Planned Adjacent Use</i> | 25% | 5 | Ag, Forest to the south, SM to the north |
| <i>Distance to Nearest Residence</i> | 25% | 3 | two dwellings on Newt Morris Rd approx. 0.8 miles from disposal footprint |
| <i>Distance to Nearest Public Road</i> | 25% | 5 | Disposal footprint > 0.25 miles from Cnty Rd 2017, Newt Morris Rd, and Ford Rd |
| Site Visibility/Aesthetic Impact | 10% | 2.00 | |
| <i>Visibility Based on Topography and/or Vegetation</i> | 50% | 1 | a portion of disposal footprint is visible from two dwellings on Newt Morris Rd approx. 0.8 miles away |
| <i>Remoteness</i> | 50% | 3 | dwelling at 56900 Ford Rd is approx. 0.8 miles away from disposal footprint |
| Transportation System Needs/Opportunity | 5% | 1.00 | Needs and opportunities the same for all focused sites along US20 given shared location along the corridor |
| Haul Route Impacts | 5% | 5.00 | Less than 5 housing units along expected haul route |
| On-Site Land Use Impacts | 25% | 2.70 | |
| <i>Displacement</i> | 40% | 3 | potential active cattle ranching on EFU land. |
| <i>Known Cultural Resources</i> | 30% | 2 | No known resources; no existing surevy. |
| <i>Potential for Buried Archaeological Sites</i> | 30% | 3 | Moderate probability for sites based on landform and records for nearby areas. |



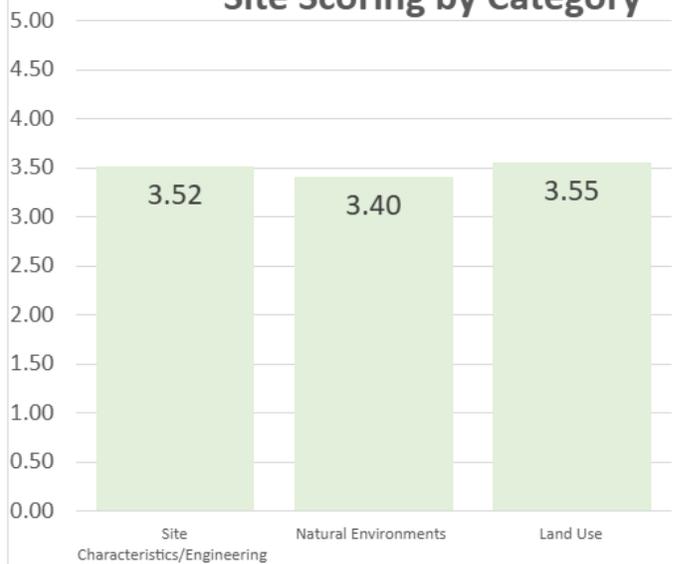
Roth Northeast



Considerations:

- Alternate disposal area north of Roth East site on same taxlot, to avoid mapped Sage Grouse Migration route.
- NE site is setback 1 mile from Pine Mountain road and screened by topography from Millican area views
- Visible from Highway 20 to north, setback ¼ mile
- Transmission lines through NE corner of site
- ~197 acre disposal area, estimated to have closer to 80 years of disposal capacity
- 25 miles from waste centroid
- Nearest residence ~0.5 mile distant
- Within Low Density Sage Grouse Habitat Area
- Core Sage Grouse Zone ~0.8 mile SE from disposal area
- Shorter access road needed, compared to Roth East
- All Roth properties recently offered for sale ~3,000 acres.
- Nearby well logs suggest 100'+ depth of sand, gravel, clay, and cobble deposits – cost effective excavation and operations anticipated – but further investigation needed to confirm.

Site Scoring by Category





Roth Northeast Site Photo



Transmission Lines

SITE

Highway 20



Roth Northeast Scoring

| Criteria and weight | Weight | Wtd. Score: | Focused Site Screening Notes |
|--|------------|-------------|---|
| | | 3.49 | |
| Site Characteristics/Engineering | 35% | 3.52 | |
| Site Availability/Acquisition Potential | 35% | 4.20 | |
| <i>Ownership</i> | 40% | 3 | Private |
| <i>Number of Parcels</i> | 20% | 5 | 1 taxlot & 1 owner |
| <i>Total Site Acreage</i> | 40% | 5 | taxlot includes 1706 total acres |
| Geotechnical Location Factors | 10% | 2.60 | |
| <i>Fault Hazards</i> | 25% | 3 | Fault located 0.7 mi SE (USGS) |
| <i>Seismic Impact Zones/Hazards</i> | 30% | 3 | <i>Moderate liquefaction susceptibility</i> |
| <i>Unstable Areas – Mass Movement</i> | 25% | 3 | <i>Moderate unstable slopes (DOGAMI)</i> |
| <i>Unstable Areas – Poor Foundation</i> | 20% | 1 | <i>No data</i> |
| Floodplains | 5% | 3.00 | North end of site within 10 vertical feet and 800 feet along ground from Dry River 100 year SFHA. No mapped 500-year but site could potentially be within that zone if mapped. |
| Groundwater Protection/Hydrogeology | 20% | 3.90 | |
| <i>Depth to Groundwater</i> | 25% | 3 | Depth to water near site appears to be greater than 435 ft bgs. Wells located to the south (Roth E) have water greater than of 630 ft bgs. Potentially in the shallow saturated zone in the sedimentary sequence; potential footprint of prehistoric Lake Millican. |
| <i>Proximity to Drinking Water Wells</i> | 30% | 3 | Closest wells are located just over 0.5 miles east. |
| <i>Proximity to Wellhead Protection Areas</i> | 15% | 5 | No wellhead protection areas. |
| <i>Site Hydrogeologic Framework</i> | 30% | 5 | Potentially in the prehistoric Lake Millican footprint. Bedrock underlying alluvial sediment within this footprint may separate a shallow water bearing zone from the deeper regional aquifer |
| Development | 15% | 3.65 | |
| <i>Soils</i> | 45% | 5 | Top Soil, Sandstone, Gravel, Clay |
| <i>Topography</i> | 30% | 3 | E/V ratio good, site has slopes and relief that benefit site capacity, but final grade would still rise prominent above surrounding terrain |
| <i>Capacity/Site Configuration</i> | 25% | 2 | 50M Cy capacity is available inside limited 197 ac footprint, final grade prominent well above surrounding terrain |
| Operation | 15% | 2.05 | |
| <i>Haul Distance to Waste Centroid</i> | 60% | 2 | 29 "weighted" miles from the various transfer stations |
| <i>Annual Precipitation</i> | 15% | 4 | 10-15 inches annually |
| <i>Onsite Water Supply and Management</i> | 25% | 1 | 1 well on taxlot DESC194 but distance is to far to be of use for this disposal area and no water rights. |

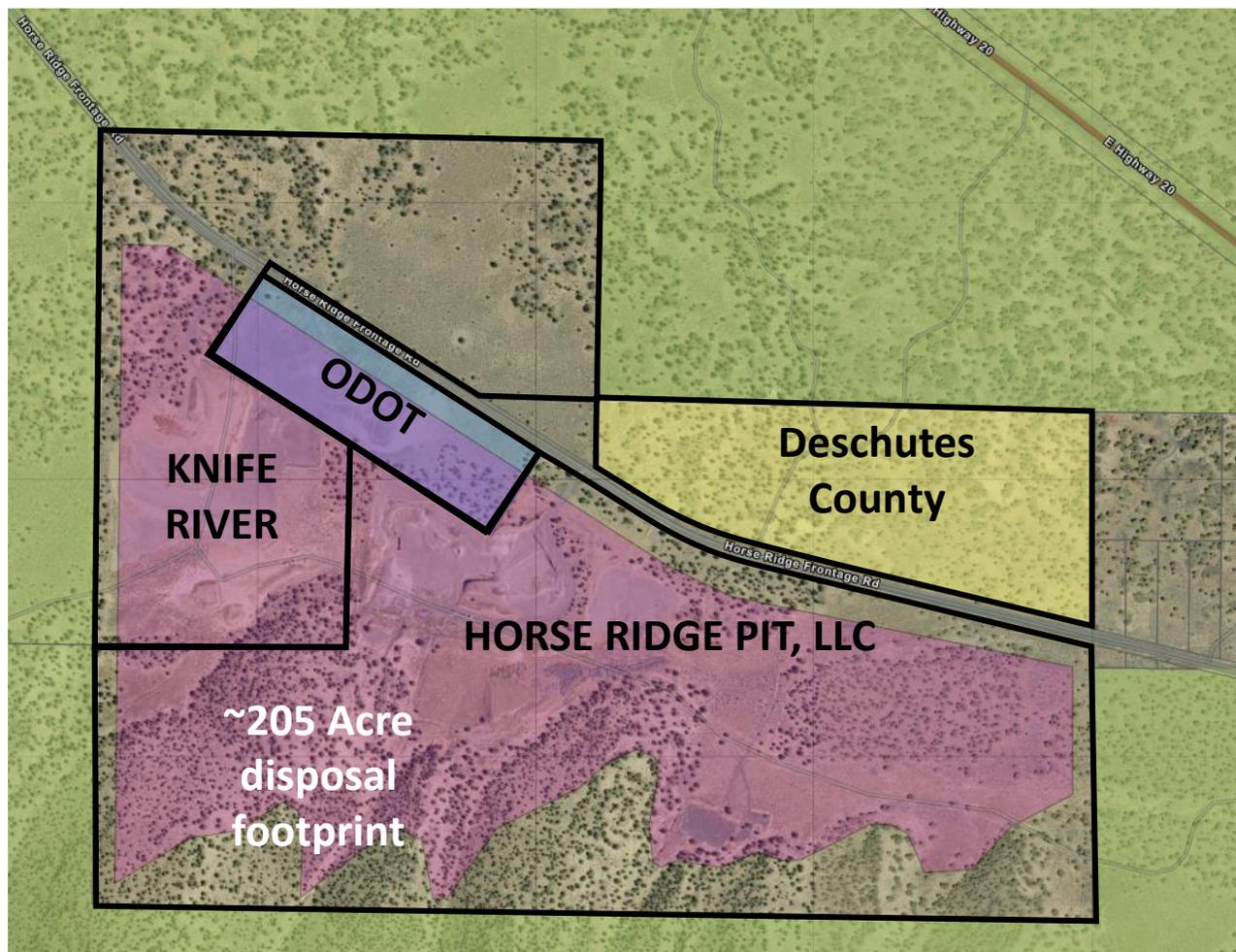


Roth Northeast Scoring

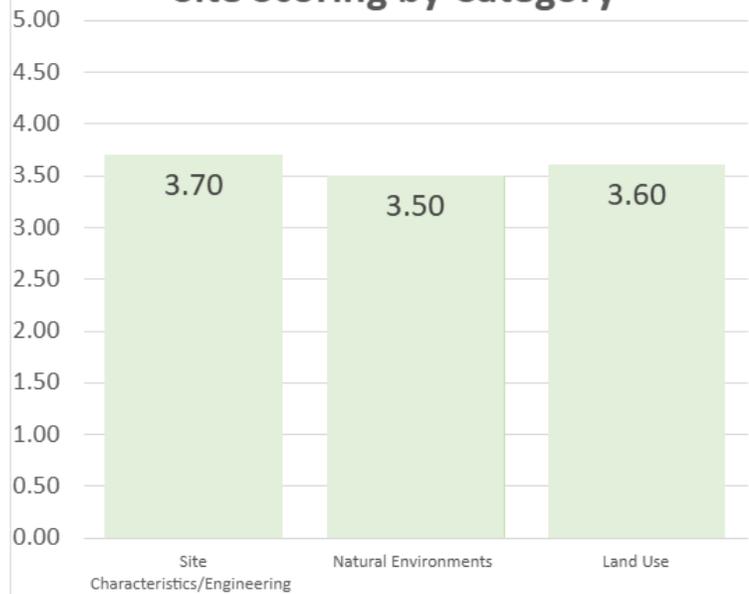
| Criteria and weight | Weight | Wtd. Score: | Focused Site Screening Notes |
|---|------------|-------------|---|
| | | 3.49 | |
| Natural Environments | 35% | 3.40 | |
| Wetlands and Waters Impacts | 10% | 5.00 | No wetlands or waters identified. |
| Threatened and Endangered Species | 20% | 5.00 | No ESA species identified |
| Wildlife Area Combining Zone | 10% | 1.00 | Site occurs within Deschutes County Antelope Range Wildlife Area Combining Zone. Site also occurs within ODFW Category 2 Habitat for mule deer and elk winter range and essential and limited pronghorn habitat. Site development would result in direct impacts to ODFW Category 2 habitat which can be mitigated for with offsite mitigation. |
| Greater Sage-Grouse Area Combining Zone | 40% | 2.00 | Site occurs within low density GSG habitat and is 1 mile away from Core Habitat. Site development would result in direct and indirect impacts to GSG habitat that can be mitigated for with offsite mitigation, In-lieu fee, or mitigation bank if available. |
| Sensitive Bird and Mammal Habitat Combining Zone and Migratory Birds | 20% | 5.00 | |
| <i>Sensitive Bird and Mammal Habitat Combining Zone</i> | 50% | 5 | No SBMH zone within 3 miles of the site. |
| <i>Migratory Birds, Including Bald and Golden Eagles</i> | 50% | 5 | No migratory bird nest within 2 miles of site |
| Land Use | 30% | 3.55 | |
| Proximity to Airports | 15% | 5.00 | greater than 5 miles from airport runways listed in the Deschutes County Transportation System Plan |
| Site Zoning | 20% | 5.00 | EFU - Horse Ridge Subzone (Farmland of Statewide Importance), Wildlife Area Combining Zone (Antelope Range), Landscape Management Area Zone, Surface Mining Impact Overlay In northern section of property |
| Adjacent Land Use Impacts | 20% | 2.50 | |
| <i>Existing Adjacent Use</i> | 25% | 1 | Agricultural, rural residential homes, OHV Recreational Areas/staging areas, hang glider/paraglider landing areas, Pine Mountain Observatory |
| <i>Planned Adjacent Use</i> | 25% | 5 | Ag, Forest to the south, SM to the north |
| <i>Distance to Nearest Residence</i> | 25% | 3 | 0.55 miles |
| <i>Distance to Nearest Public Road</i> | 25% | 1 | 0.17 miles (Hwy 20); 0.59 miles (Newt Morris Rd/FoxTail Butte Rd) |
| Site Visibility/Aesthetic Impact | 10% | 1.00 | |
| <i>Visibility Based on Topography and/or Vegetation</i> | 50% | 1 | Sloping terrain, rolling hills, scattered juniper, sage - some parts more visible than others to Hwy 20. Potentially visible from Pine Mountain. Visible to nearby residence. |
| <i>Remoteness</i> | 50% | 1 | Nearby residence, close proximity to Hwy 20 (landscape management corridor) |
| Transportation System Needs/Opportunity | 5% | 1.00 | more transportation system needs than opportunities, needs and opportunities the same for all supplemental sites along US20 given shared location along the corridor |
| Haul Route Impacts | 5% | 5.00 | less than 5 housing units impacted |
| On-Site Land Use Impacts | 25% | 3.60 | |
| <i>Displacement</i> | 40% | 3 | cattle grazing/ranching on EFU land |
| <i>Known Cultural Resources</i> | 30% | 5 | No known sites; no previous surveys |
| <i>Potential for Buried Archaeological Sites</i> | 30% | 3 | Undisturbed; Landforms is located in close proximity to natural water sources suggest moderate overall probability for archaeological resources |



Horse Ridge

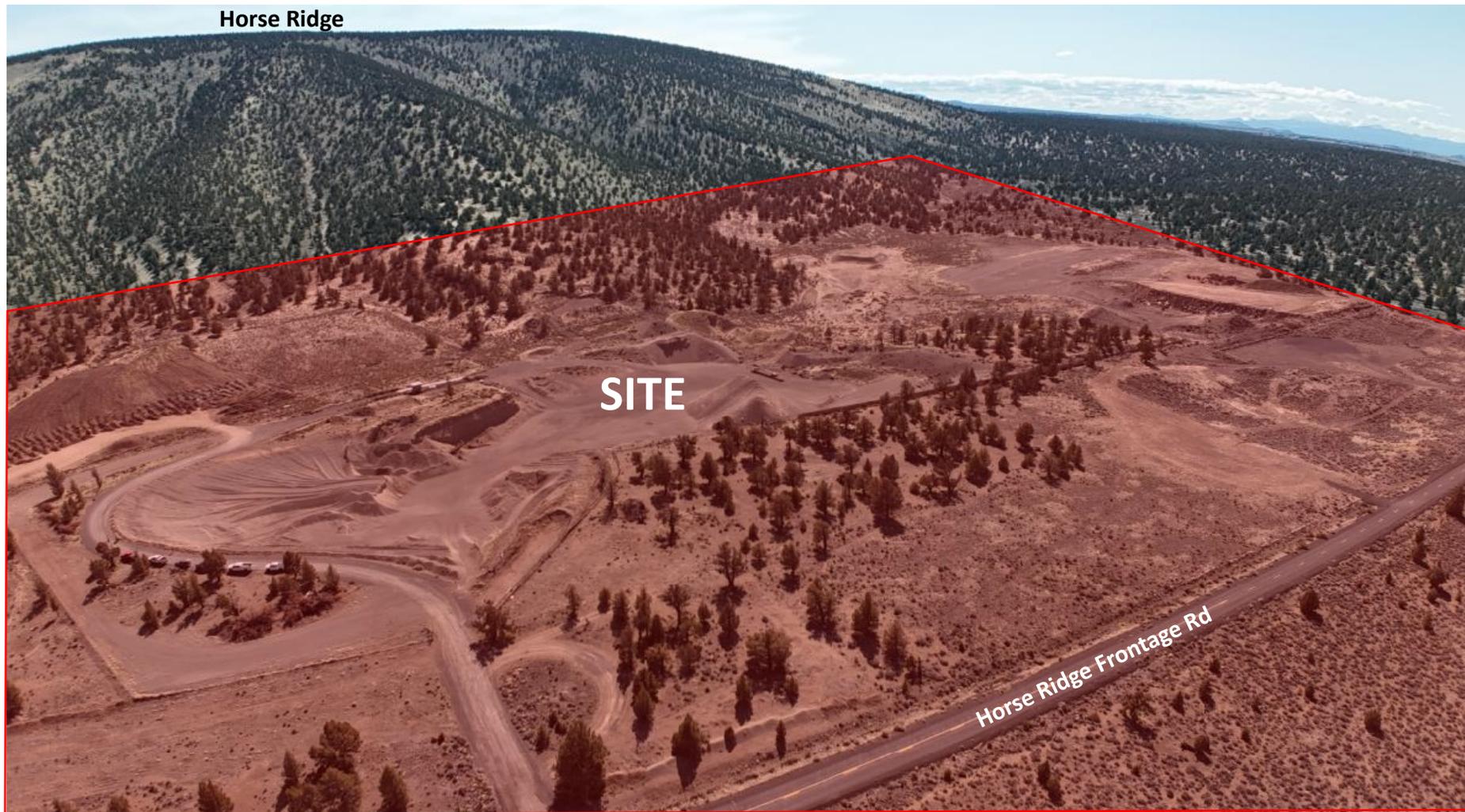


Site Scoring by Category





Horse Ridge Site Photo





Horse Ridge Key Findings

- **Ownership & Parcel Configuration:** Approximately 391 acres across three properties owned by Deschutes County, ODOT, Knife River Corp., and 4-R Equipment. 3 property acquisitions would be required.
- **Site Capacity:** Estimated 100 million cubic yards of disposal capacity available using ~300 acres with road realignment; excellent hillside configuration supports high-capacity design.
- **Soils & Geology:** Central band of sand and gravel (up to 30' deep) underlain by basalt. Soils rated excellent for landfill use. Existing permitted surface mines have already partially excavated portions of the site.
- **Groundwater Protection:** Very deep groundwater (~850–950 ft bgs); confined aquifer system with no wellhead protection areas nearby.
- **Water Supply:** Two existing wells onsite with potential for up to 10,000 gpd under exempt use. No existing water rights; however, one site owner holds nearby water rights.
- **Haul & Access:** ~18 weighted miles from transfer stations (moderate). Accessible from Hwy 20 via Horse Ridge Frontage Rd; <5 residences affected along haul route.



Horse Ridge Key Findings

- **Environmental Considerations:**
 - No wetlands or ESA species identified.
 - Within North Paulina Deer Winter Range and ODFW Category 2 winter habitat; impacts mitigable.
 - ~1 mile from Low-Density Sage-Grouse habitat; indirect impacts mitigable.
 - Golden Eagle nest ~1.5–2 mi SW; may require Eagle Incidental Take Permit, mitigable.
- **Land Use & Visibility:**
 - Zoned SM and EFU with overlays for wildlife and surface mining.
 - Adjacent to recreation (Horse Ridge mountain bike trails) and the Badlands Wilderness (~0.65 mi).
 - Nearest home ~0.36 mi NW. Site visible from Horse Ridge Frontage Rd and limited portions of Hwy 20; low remoteness score due to nearby trailheads and homes.
- **Cultural Resources:** Prior partial survey found no significant resources; projectile point, lithic scatter, and can dumps recorded in 1996; low potential for buried sites due to terrain and disturbance.
- **Utilities & Infrastructure:** No existing power onsite; ~7-mile 3-phase line extension needed from Dodds Road.



Horse Ridge Scoring

| Criteria and weight | Weight | Wtd. Score: 3.60 | Focused Site Screening Notes |
|--|------------|---------------------|---|
| Site Characteristics/Engineering | 35% | 3.70 | |
| Site Availability/Acquisition Potential | 35% | 3.40 | |
| <i>Ownership</i> | 40% | 4 | County, State & Private Ownership. 4 separate owners: Deschutes County, ODOT, Knife River Corporation, 4-R Equipment |
| <i>Number of Parcels</i> | 20% | 3 | 3 separate owners: ODOT, Knife River Corporation, 4-R Equipment |
| <i>Total Site Acreage</i> | 40% | 3 | 391 acres total, including County-owned parcel north of Horse Ridge Frontage Rd |
| Geotechnical Location Factors | 10% | 2.60 | |
| <i>Fault Hazards</i> | 25% | 3 | 1 mi SW of site boundary |
| <i>Seismic Impact Zones/Hazards</i> | 30% | 3 | Moderate liquefaction susceptibility |
| <i>Unstable Areas – Mass Movement</i> | 25% | 3 | moderate landslide risk per mapping and subsurface rock |
| <i>Unstable Areas – Poor Foundation</i> | 20% | 1 | No data |
| Floodplains | 5% | 3.00 | Nearest mapped floodplain is over a 1-mile east of site; Site is at the base of large slope with 6 unnamed ephemeral streams to manage |
| Groundwater Protection/Hydrogeology | 20% | 4.40 | |
| <i>Depth to Groundwater</i> | 25% | 5 | DESC 5751 is located on site. Reported SWL of 950' bgs in 1988. Current SWL at nearby Moon Pit well (DESC 5750) of 850' bgs. |
| <i>Proximity to Drinking Water Wells</i> | 30% | 3 | DESC 5751 (ODOT owned; industrial use); either onsite or immediately adjacent. Domestic wells DESC 61999 & DESC 63009 are located ~0.55 & 0.75 miles NW of site, respectively. |
| <i>Proximity to Wellhead Protection Areas</i> | 15% | 5 | No wellhead protection areas. |
| <i>Site Hydrogeologic Framework</i> | 30% | 5 | Confined aquifer, based on DESC 5751. Material is interbeds of hard lava, fractured lava, and cinders. |
| Development | 15% | 5.00 | |
| <i>Soils</i> | 45% | 5 | Sand, Gravel and Basalt |
| <i>Topography</i> | 30% | 5 | Avg Slope = 2 to 15 percent, Excellent E/V ratio with hillside |
| <i>Capacity/Site Configuration</i> | 25% | 5 | up to 100M cy available using full 300 acres with road re-alignment, existing mining excavation, hillside landfill |
| Operation | 15% | 3.15 | |
| <i>Haul Distance to Waste Centroid</i> | 60% | 3 | 18 "weighted" miles from the various transfer stations |
| <i>Annual Precipitation</i> | 15% | 4 | 10-15 inches annual precipitation average |
| <i>Onsite Water Supply and Management</i> | 25% | 3 | 2 existing wells onsite, up to 10,000 gpd exempt. No water rights onsite, but one of the site owners also holds water rights nearby. Potential for more exempt wells on included taxlots. |

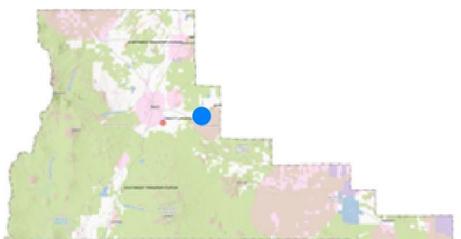


Horse Ridge Scoring

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| | | 3.49 | |
| Natural Environments | 35% | 3.50 | |
| Wetlands and Waters Impacts | 10% | 5.00 | No wetlands or waters identified. |
| Threatened and Endangered Species | 20% | 5.00 | No ESA species identified |
| Wildlife Area Combining Zone | 10% | 1.00 | Site occurs within Deschutes County North Paulina Deer Winter Range Wildlife Area Combining Zone. Site also occurs within ODFW Category 2 Habitat for mule deer and elk winter range and essential and limited pronghorn habitat. Site development would result in direct impacts to ODFW Category 2 habitat which can be mitigated for with offsite mitigation. |
| Greater Sage-Grouse Area Combining Zone | 40% | 3.00 | Low Density GSG area occurs 1 mile SW of the site. Site development would result in indirect impacts to GSG low density habitat that can be mitigated for with offsite mitigation, In-lieu fee, or mitigation bank if available. |
| Sensitive Bird and Mammal Habitat Combining Zone and Migratory Birds | 20% | 3.50 | |
| <i>Sensitive Bird and Mammal Habitat Combining Zone</i> | 50% | 4 | Nearest SBMH zone is approximately 2.5 miles SW of site |
| <i>Migratory Birds, Including Bald and Golden Eagles</i> | 50% | 3 | Nearest mapped Golden Eagle nest is 1-2 miles SW of site, with Horse Ridge between. Site development would result in a permanent alteration of habitat and would require submission of an Eagle Incidental Take Permit. Impacts can be mitigated for. |
| Land Use | 30% | 3.60 | |
| Proximity to Airports | 15% | 5.00 | approx 11.5 mi to Bend airport runway |
| Site Zoning | 20% | 3.00 | Mostly SM, with some EFU (Farmland of statewide importance and prime farmland if irrigated), wildlife area combining zone (North Paulina Deer Winter Range), Surface Mining Impact Area Overlay |
| Adjacent Land Use Impacts | 20% | 3.50 | |
| <i>Existing Adjacent Use</i> | 25% | 3 | agricultural, recreation - Horse Ridge Mountain Biking Trails adjacent to site; Badlands Wilderness (trailhead with horse/ hiking/walking trails about 0.65 miles away), Surface Mining |
| <i>Planned Adjacent Use</i> | 25% | 3 | agricultural, undeveloped, Badlands Wilderness (Recreation), Horse Ridge Mountain Biking Trails, Surface Mining |
| <i>Distance to Nearest Residence</i> | 25% | 3 | nearest residence approximately 0.36 mi NW of site |
| <i>Distance to Nearest Public Road</i> | 25% | 5 | 0.42 miles to Hwy 20, Horse Ridge Frontage road serves as the access road to the site and is exempt from 0.25 mile setback |
| Site Visibility/Aesthetic Impact | 10% | 1.00 | |
| <i>Visibility Based on Topography and/or Vegetation</i> | 50% | 1 | site visible from Horse Ridge Frontage and Highway 20 (in select locations) |
| <i>Remoteness</i> | 50% | 1 | residences and trailheads w/ parking <0.5 mi from site |
| Transportation System Needs/Opportunity | 5% | 1.00 | more transportation system needs than opportunities, needs and opportunities the same for all supplemental sites along US20 given shared location along the corridor |
| Haul Route Impacts | 5% | 5.00 | Less than 5 housing units impacted |
| On-Site Land Use Impacts | 25% | 4.60 | |
| <i>Displacement</i> | 40% | 4 | 3 active & permitted surface mines with separate owners (ODOT, Knife River Corp, 4-R Equipment) |
| <i>Known Cultural Resources</i> | 30% | 5 | Partial prior survey, isolates found, no recorded cultural resource sites |
| <i>Potential for Buried Archaeological Sites</i> | 30% | 5 | 25% existing disturbance; Landforms and lack of natural water sources suggest low overall probability for archaeological resources |



Dodds Road Site



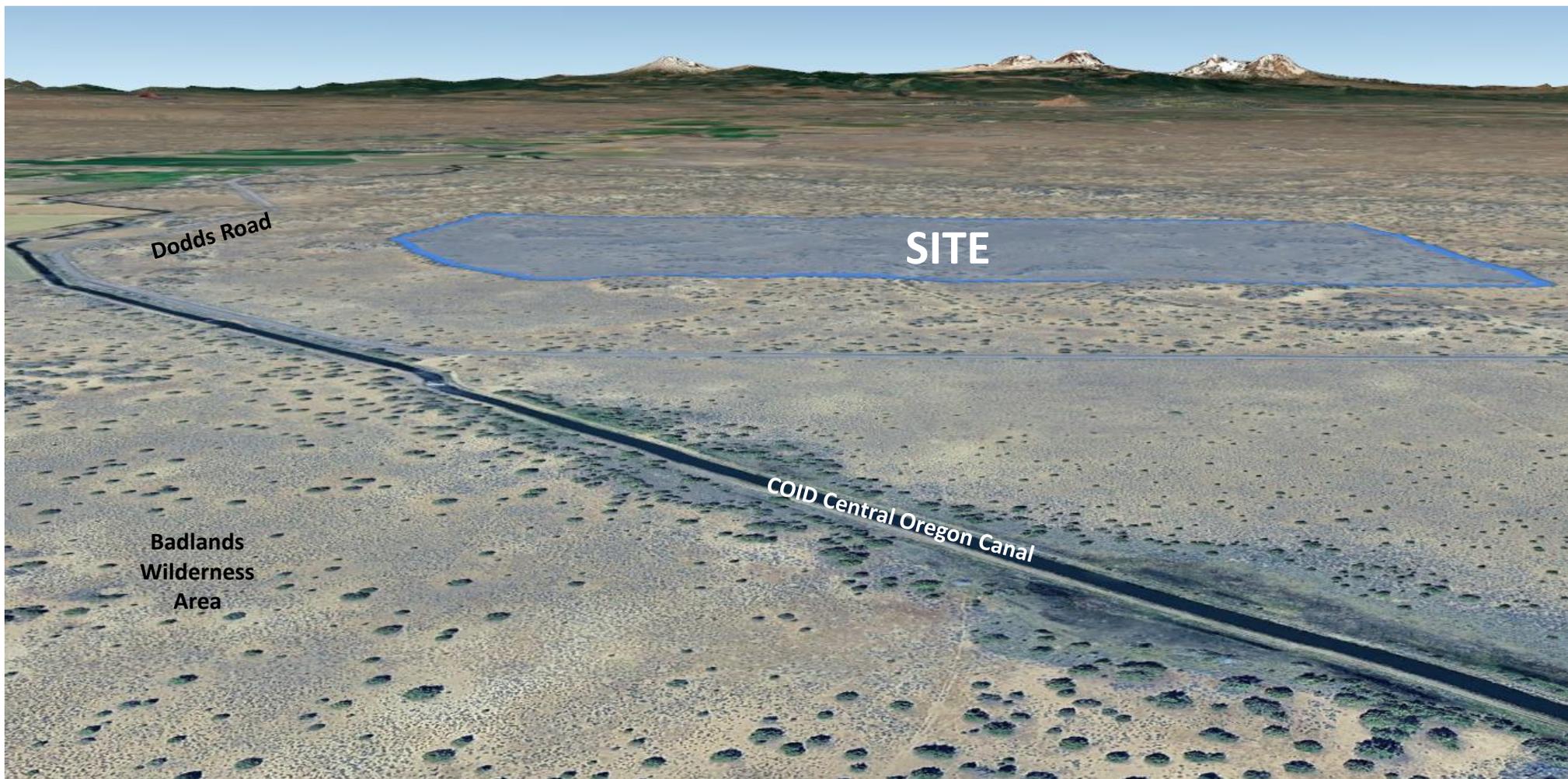
Potential Sites

| Site_ID | Site Nickname | Tot. Dev. Acreage | TAXLOT | Parcel Acreage | OWNER |
|---------|---------------|-------------------|---------------|----------------|------------------------------------|
| 181400 | COID Dodds | 479 | 1814000000300 | 478.91 | CENTRAL OREGON IRRIGATION DISTRICT |



Dodds Site Isometric View

(Google Earth, looking West)





Dodds Site Key Findings

- **Ownership & Size:** 433-acre parcel owned by Central Oregon Irrigation District (COID); responsive regarding acquisition potential.
- **Capacity & Terrain:** Estimated ~80-year landfill capacity; undulating terrain with shallow basalt limits excavation and results in poor E/V ratio.
- **Soils & Geology:** Sandy loam over shallow basalt; exposed rock and poor soil depth limit onsite cover and liner material suitability.
- **Groundwater Protection:** Deep groundwater (621–713 ft bgs); confined aquifer with no nearby wellhead protection zones.
- **Water & Power:** No onsite wells or water rights; 3-phase power available near SW corner at Dodds & Obernolte.



Dodds Site Key Findings

- **Haul & Access:** ~18 weighted miles from waste centroid; accessed via Dodds Rd and Hwy 20. Greater than 21 homes impacted along haul route.
- **Surrounding Land Use:** Bordered by farmland, ranches, and Badlands Wilderness Area (~0.23 mi east). 3 residences within 0.5 miles; ~60 within 2 miles.
- **Visibility & Aesthetics:** Landfill prominence (150-200') required for 100-yr capacity and nearby homes result in low remoteness and high visibility impacts.
- **Environmental Considerations:** No wetlands or ESA species present. Site not in sage-grouse or SBMH zones. Not within County-mapped wildlife zones, but within ODFW Category 2 mule deer/elk habitat, but likely not subject to mitigation.
- **Zoning:** Zoned EFU-Alfalfa (non-high-value farmland); vacant site, no use displacement.
- **Cultural:** One historic abandoned canal crosses site; low archaeological potential based on landforms and geology.



Dodds Site Scoring

| Criteria and weight | Weight | Wtd. Score: 3.81 | Focused Site Screening Notes |
|--|------------|---------------------|--|
| Site Characteristics/Engineering | 35% | 3.35 | |
| Site Availability/Acquisition Potential | 35% | 3.80 | |
| <i>Ownership</i> | 40% | 4 | Central Oregon Irrigation District |
| <i>Number of Parcels</i> | 20% | 5 | 1 parcel & owner |
| <i>Total Site Acreage</i> | 40% | 3 | 433 acres |
| Geotechnical Location Factors | 10% | 4.20 | |
| <i>Fault Hazards</i> | 25% | 5 | No nearby faults within USGS Fault and Fold database |
| <i>Seismic Impact Zones/Hazards</i> | 30% | 5 | No liquefaction susceptibility |
| <i>Unstable Areas – Mass Movement</i> | 25% | 5 | No slope hazard - located in lava field |
| <i>Unstable Areas – Poor Foundation</i> | 20% | 1 | Lava tubes within unit elsewhere |
| Floodplains | 5% | 5.00 | A small abandoned canal bisects site and central OR Canal nearby. Nearest mapped SFHA is Dry Creek ~3 miles east. |
| Groundwater Protection/Hydrogeology | 20% | 3.80 | |
| <i>Depth to Groundwater</i> | 25% | 5 | Ranges from 621 ft bgs in wells located NE of site to 713 ft bg SW of site. |
| <i>Proximity to Drinking Water Wells</i> | 30% | 1 | Multiple domestic wells located between approx 0.25 and 1 mile, located to the NE, SE, and SW. Exact locations not verified, except for addresses listed on borelog. |
| <i>Proximity to Wellhead Protection Areas</i> | 15% | 5 | No wellhead protection areas. |
| <i>Site Hydrogeologic Framework</i> | 30% | 5 | Confined aquifer, based on nearby domestic wells: DESC 52510, DESC 52982, DESC 55360, DESC 57898, DESC 52145, DESC 55168. Material is hard lava, broken lava, and sandstone. |
| Development | 15% | 1.25 | |
| <i>Soils</i> | 45% | 1 | up to 10' overburden soils (sandy loam) in low areas over basalt rock bedrock, per well logs and exposed rock features |
| <i>Topography</i> | 30% | 1 | poor E:V ratio, average slope under 5% with undulating terrain from rock features, final grade prominent well above surrounding terrain |
| <i>Capacity/Site Configuration</i> | 25% | 2 | 50M Cy capacity available, but would require over 50' excavation depth and final grade prominent well above surrounding terrain (up to 200 ft) |
| Operation | 15% | 2.65 | |
| <i>Haul Distance to Waste Centroid</i> | 60% | 3 | 18 "weighted" miles from the various transfer stations |
| <i>Annual Precipitation</i> | 15% | 4 | 10-15 inches annually |
| <i>Onsite Water Supply and Management</i> | 25% | 1 | no well onsite, property owned by irrigation district |



Dodds Site Scoring

| Criteria and weight | Weight | Wtd. Score: | Focused Site Screening Notes |
|---|------------|-------------|--|
| Natural Environments | 35% | 4.70 | |
| Wetlands and Waters Impacts | 10% | 5.00 | No wetlands or waters identified. |
| Threatened and Endangered Species | 20% | 5.00 | No ESA species identified |
| Wildlife Area Combining Zone | 10% | 2.00 | Site does not occur within a Deschutes County Wildlife Area Combining Zone. The site does occur within ODFW Category 2 Habitat for mule deer and elk winter range. However, because the site is not within a Wildlife Area Combining Zone, site development may not require mitigation for impacts to ODFW Category 2 Habitat as ODFW may not have a nexus to comment or enforce their mitigation policy during permitting with the county. This was scored a 2 to reflect impacts would occur to ODFW Category 2 habitat but they may not need to be mitigated for. |
| Greater Sage-Grouse Area Combining Zone | 40% | 5.00 | GSG habitat occurs over 8 miles SE of the site. Site development would not cause any indirect impacts to GSG habitat |
| Sensitive Bird and Mammal Habitat Combining Zone and Migratory Birds | 20% | 5.00 | |
| <i>Sensitive Bird and Mammal Habitat Combining Zone</i> | <i>50%</i> | <i>5</i> | No SBMH zone within 3 miles of the site. |
| <i>Migratory Birds, Including Bald and Golden Eagles</i> | <i>50%</i> | <i>5</i> | No migratory bird nest within 2 miles of site |
| Land Use | 30% | 3.33 | |
| Proximity to Airports | 15% | 5.00 | greater than 5 miles from airport runways listed in the Deschutes County Transportation System Plan |
| Site Zoning | 20% | 5.00 | EFU Alfalfa (Prime Farmland if Irrigated and Not Prime Farmland, not irrigated so non-high value farmland) |
| Adjacent Land Use Impacts | 20% | 1.00 | |
| <i>Existing Adjacent Use</i> | <i>25%</i> | <i>1</i> | Residential, Wilderness (Badlands - boundary about 0.23 miles from site, trails ~1 mile distant), agricultural, irrigation (canal), undeveloped |
| <i>Planned Adjacent Use</i> | <i>25%</i> | <i>1</i> | Residence, Agricultural, Wilderness (recreational - horse/ bike/ walking trails) |
| <i>Distance to Nearest Residence</i> | <i>25%</i> | <i>1</i> | 0.25 miles to the south - additional residences are 0.38 miles (to the south); 0.41 miles (to northeast) |
| <i>Distance to Nearest Public Road</i> | <i>25%</i> | <i>1</i> | Dodds Road is 0.18 miles south of disposal area, will serve as the access road to the site, but continues to the north within 0.25 miles of disposal area. |
| Site Visibility/Aesthetic Impact | 10% | 1.00 | |
| <i>Visibility Based on Topography and/or Vegetation</i> | <i>50%</i> | <i>1</i> | Residence within 0.25 miles to south. Juniper, sage, sloping/rolling terrain from Dodds Road, may be visible from north side residences? |
| <i>Remoteness</i> | <i>50%</i> | <i>1</i> | Nearby residences, closest within 0.25 miles |
| Transportation System Needs/Opportunity | 5% | 1.00 | more transportation system needs than opportunities, needs and opportunities the same for all supplemental sites along US20 given shared location along the corridor |
| Haul Route Impacts | 5% | 1.00 | Greater than 21 housing units directly adjacent to and accessing the haul route between the site and an existing designated state route or county arterial |
| On-Site Land Use Impacts | 25% | 4.70 | |
| <i>Displacement</i> | <i>40%</i> | <i>5</i> | Vacant land, no displacement of use |
| <i>Known Cultural Resources</i> | <i>30%</i> | <i>4</i> | One historic built resource present - Central Oregon Canal, not previously surveyed |
| <i>Potential for Buried Archaeological Sites</i> | <i>30%</i> | <i>5</i> | Landforms and lack of natural water sources suggest low overall probability for archaeological resources; Geology: Quaternary; No resources on GLO |



Supplemental Site Scoring Results

| | | SITE NAME: | MOON PIT | HORSE RIDGE | DODDS | ROTH NORTHEAST | ROTH EAST |
|--|------------|-------------|-------------|-------------|-------------|-------------------|-----------|
| Criteria and weight | Weight | Score: | Score: | Score: | Score: | Score: | |
| Site Characteristics/Engineering | 35% | 3.90 | 3.70 | 3.35 | 3.52 | 3.79 | |
| Site Availability/Acquisition Potential | 35% | 3.40 | 3.40 | 3.80 | 4.20 | 4.20 | |
| <i>Ownership</i> | 40% | 3 | 4 | 4 | 3 | 3 | |
| <i>Number of Parcels</i> | 20% | 5 | 3 | 5 | 5 | 5 | |
| <i>Total Site Acreage</i> | 40% | 3 | 3 | 3 | 5 | 5 | |
| Geotechnical Location Factors | 10% | 2.60 | 2.60 | 4.20 | 2.60 | 2.60 | |
| <i>Fault Hazards</i> | 25% | 3 | 3 | 5 | 3 | 3 | |
| <i>Seismic Impact Zones/Hazards</i> | 30% | 3 | 3 | 5 | 3 | 3 | |
| <i>Unstable Areas – Mass Movement</i> | 25% | 3 | 3 | 5 | 3 | 3 | |
| <i>Unstable Areas – Poor Foundation</i> | 20% | 1 | 1 | 1 | 1 | 1 | |
| Floodplains | 5% | 3.00 | 3.00 | 5.00 | 3.00 | 3.00 | |
| Groundwater Protection/Hydrogeology | 20% | 5.00 | 4.40 | 3.80 | 3.90 | 3.90 | |
| <i>Depth to Groundwater</i> | 25% | 5 | 5 | 5 | 3 | 3 | |
| <i>Proximity to Drinking Water Wells</i> | 30% | 5 | 3 | 1 | 3 | 3 | |
| <i>Proximity to Wellhead Protection Areas</i> | 15% | 5 | 5 | 5 | 5 | 5 | |
| <i>Site Hydrogeologic Framework</i> | 30% | 5 | 5 | 5 | 5 | 5 | |
| Development | 15% | 5.00 | 5.00 | 1.25 | 3.65 | 5.00 | |
| <i>Soils</i> | 45% | 5 | 5 | 1 | 5 | 5 | |
| <i>Topography</i> | 30% | 5 | 5 | 1 | 3 | 5 | |
| <i>Capacity/Site Configuration</i> | 25% | 5 | 5 | 2 | 2 | 5 | |
| Operation | 15% | 3.65 | 3.15 | 2.65 | 2.05 | 2.55 | |
| <i>Haul Distance to Waste Centroid</i> | 60% | 3 | 3 | 3 | 2 | 2 | |
| <i>Annual Precipitation</i> | 15% | 4 | 4 | 4 | 4 | 4 | |
| <i>Onsite Water Supply and Management</i> | 25% | 5 | 3 | 1 | 1 | 3 | |



Supplemental Site Scoring Results

| | | SITE NAME: | MOON PIT | HORSE RIDGE | DODDS | ROTH NORTHEAST | ROTH EAST |
|--|------------|-------------|-------------|-------------|-------------|-------------------|-----------|
| Criteria and weight | Weight | Score: | Score: | Score: | Score: | Score: | |
| <u>Natural Environments</u> | <u>35%</u> | <u>3.60</u> | <u>3.50</u> | <u>4.70</u> | <u>3.40</u> | <u>3.40</u> | |
| Wetlands and Waters Impacts | 10% | 5 | 5 | 5 | 5 | 5 | |
| Threatened and Endangered Species | 20% | 5 | 5 | 5 | 5 | 5 | |
| Wildlife Area Combining Zone | 10% | 1 | 1 | 2 | 1 | 1 | |
| Greater Sage-Grouse Area Combining Zone | 40% | 3 | 3 | 5 | 2 | 2 | |
| Sensitive Bird and Mammal Habitat Combining Zone and Migratory Birds | 20% | 4.00 | 3.50 | 5.00 | 5.00 | 5.00 | |
| <i>Sensitive Bird and Mammal Habitat Combining Zone</i> | 50% | 5 | 4 | 5 | 5 | 5 | |
| <i>Migratory Birds, Including Bald and Golden Eagles</i> | 50% | 3 | 3 | 5 | 5 | 5 | |



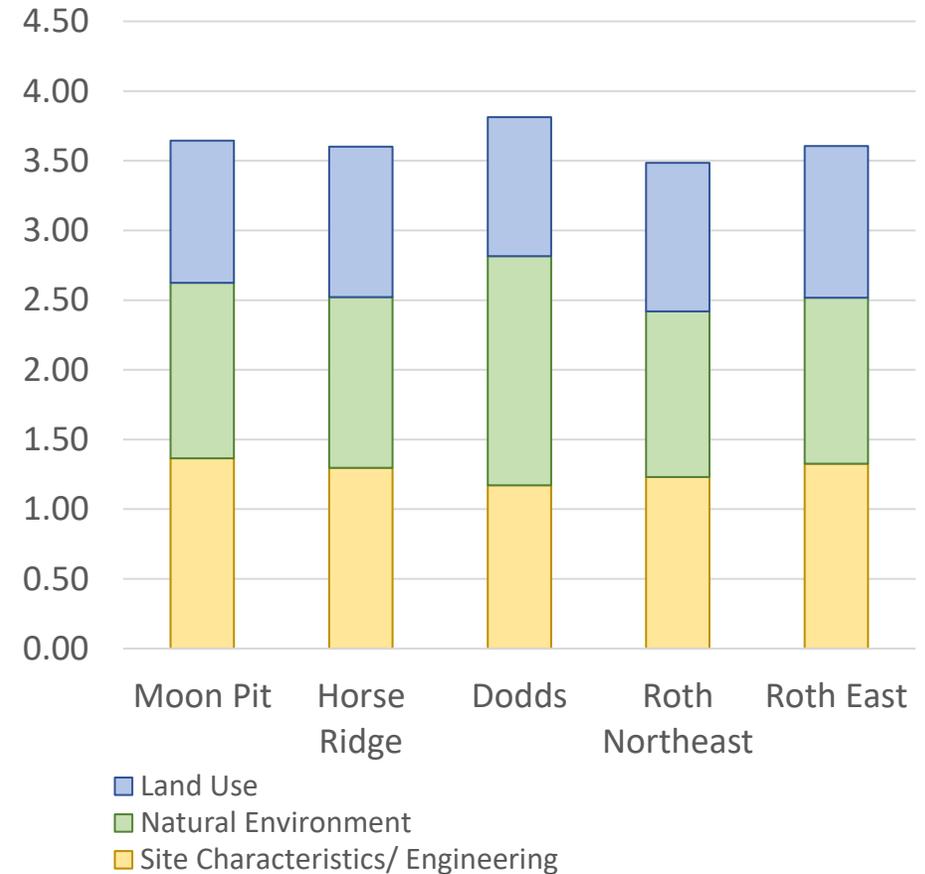
Supplemental Site Scoring Results

| | | SITE NAME: | MOON PIT | HORSE RIDGE | DODDS | ROTH NORTHEAST | ROTH EAST |
|---|------------|-------------|-------------|-------------|-------------|-------------------|-----------|
| Criteria and weight | Weight | Score: | Score: | Score: | Score: | Score: | |
| Land Use | 30% | 3.40 | 3.60 | 3.33 | 3.55 | 3.63 | |
| Proximity to Airports | 15% | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | |
| Site Zoning | 20% | 3.00 | 3.00 | 5.00 | 5.00 | 5.00 | |
| Adjacent Land Use Impacts | 20% | 3.00 | 3.50 | 1.00 | 2.50 | 3.50 | |
| <i>Existing Adjacent Use</i> | 25% | 1 | 3 | 1 | 1 | 1 | |
| <i>Planned Adjacent Use</i> | 25% | 1 | 3 | 1 | 5 | 5 | |
| <i>Distance to Nearest Residence</i> | 25% | 5 | 3 | 1 | 3 | 3 | |
| <i>Distance to Nearest Public Road</i> | 25% | 5 | 5 | 1 | 1 | 5 | |
| Site Visibility/Aesthetic Impact | 10% | 3.00 | 1.00 | 1.00 | 1.00 | 2.00 | |
| <i>Visibility Based on Topography and/or Vegetation</i> | 50% | 3 | 1 | 1 | 1 | 1 | |
| <i>Remoteness</i> | 50% | 3 | 1 | 1 | 1 | 3 | |
| Transportation System Needs/Opportunity | 5% | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Haul Route Impacts | 5% | 5.00 | 5.00 | 1.00 | 5.00 | 5.00 | |
| On-Site Land Use Impacts | 25% | 3.40 | 4.60 | 4.70 | 3.60 | 2.70 | |
| <i>Displacement</i> | 40% | 4 | 4 | 5 | 3 | 3 | |
| <i>Known Cultural Resources</i> | 30% | 1 | 5 | 4 | 5 | 2 | |
| <i>Potential for Buried Archaeological Sites</i> | 30% | 5 | 5 | 5 | 3 | 3 | |



Supplemental Site Scoring Results

| Site ID | Site Name | Site Characteristics/ Engineering 35% | Natural Environment 35% | Land Use 30% | Total Site Score: |
|-------------|----------------|---|----------------------------|-----------------|-------------------|
| 191400-200 | Moon Pit | 3.90 | 3.60 | 3.40 | 3.64 |
| 191400-2400 | Horse Ridge | 3.70 | 3.50 | 3.60 | 3.60 |
| 181400 | Dodds | 3.35 | 4.70 | 3.33 | 3.81 |
| 201500-301 | Roth Northeast | 3.52 | 3.40 | 3.55 | 3.49 |
| 201500-301 | Roth East | 3.79 | 3.40 | 3.63 | 3.60 |





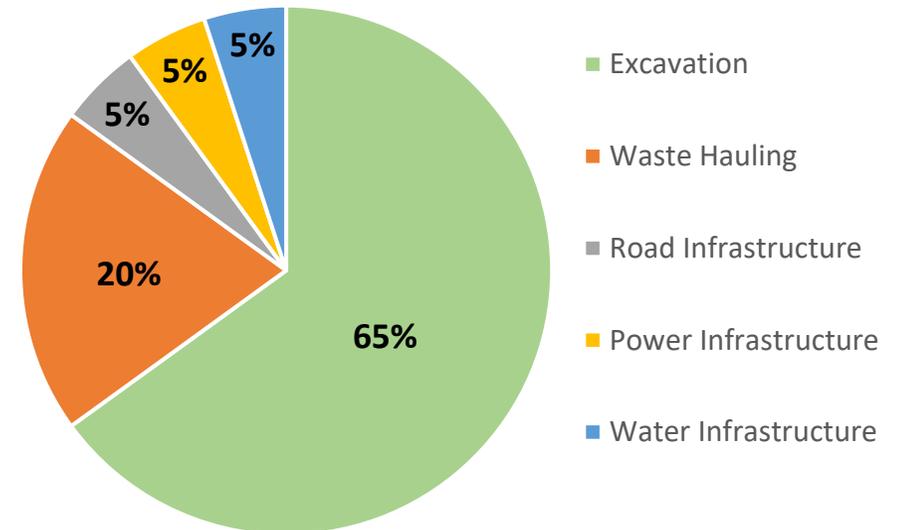
Comparative Cost Factor Analysis

Five major cost factors were identified, which influence the costs to develop and operate a solid waste management facility.

These cost factors include (with estimated weighting):

- Excavation (65%)
- Waste hauling (20%)
- Road infrastructure (5%)
- Power infrastructure (5%)
- Water infrastructure (5%)

Cost Factor Weighting





Comparative Cost Factor Analysis

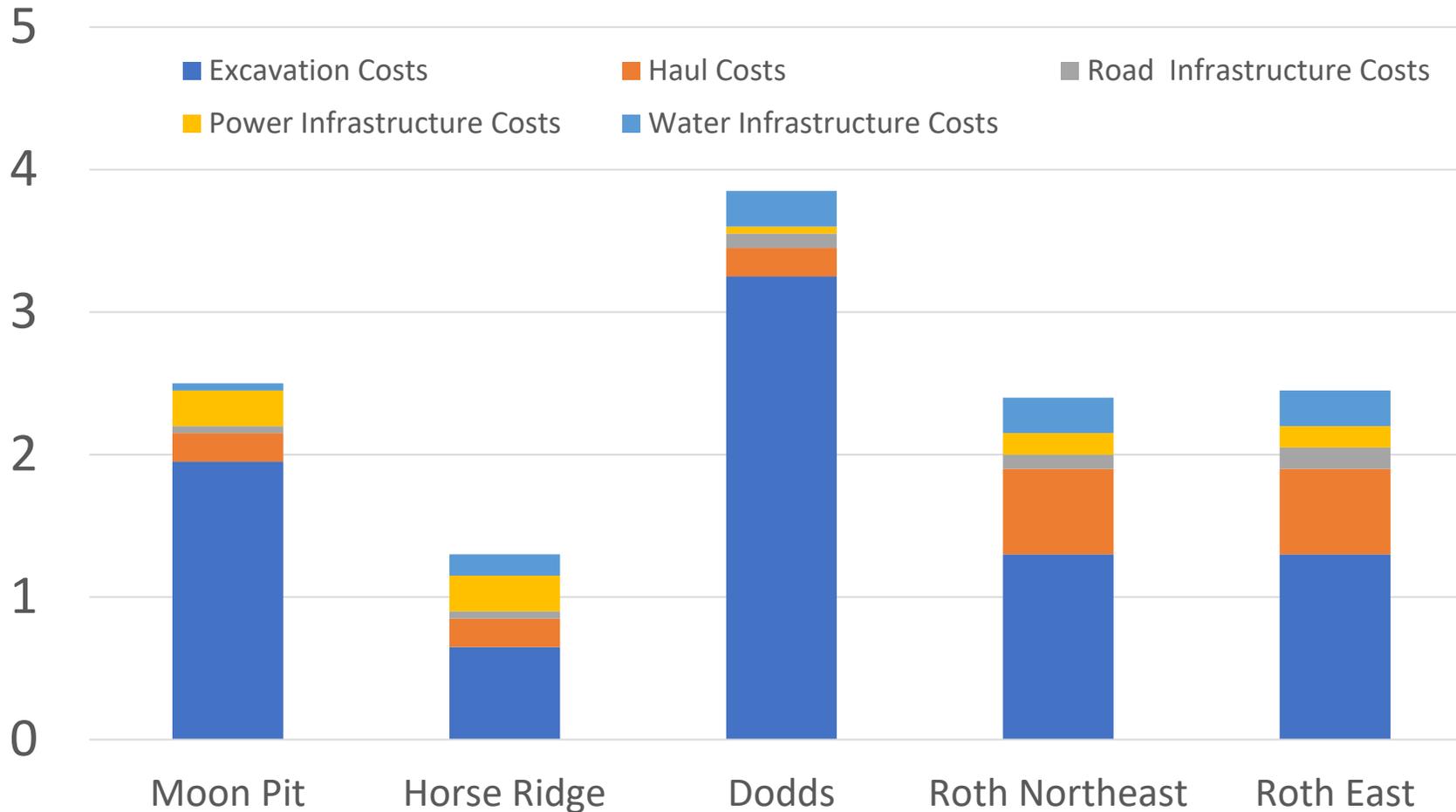
| Cost Factor Weighting: | 65% | 20% | 5% | 5% | 5% | |
|------------------------|------------------|------------|---------------------------|----------------------------|----------------------------|------------------|
| Site Name | Excavation Costs | Haul Costs | Road Infrastructure Costs | Power Infrastructure Costs | Water Infrastructure Costs | Weighted Average |
| Moon Pit | 3 | 1 | 1 | 5 | 1 | 2.50 |
| Horse Ridge | 1 | 1 | 1 | 5 | 3 | 1.30 |
| Dodds | 5 | 1 | 2 | 1 | 5 | 3.85 |
| Roth Northeast | 2 | 3 | 2 | 3 | 5 | 2.40 |
| Roth East | 2 | 3 | 3 | 3 | 5 | 2.45 |

Each site was given a score of 1 to 5 with respect to each cost factor, where 5 represents the **highest** cost and 1 represents the **lowest** cost.

As a result, the sites with higher weighted total scores are anticipated to be relatively less expensive to develop and operate, while the sites with lower weighted total scores are anticipated to be relatively more expensive to develop and operate.



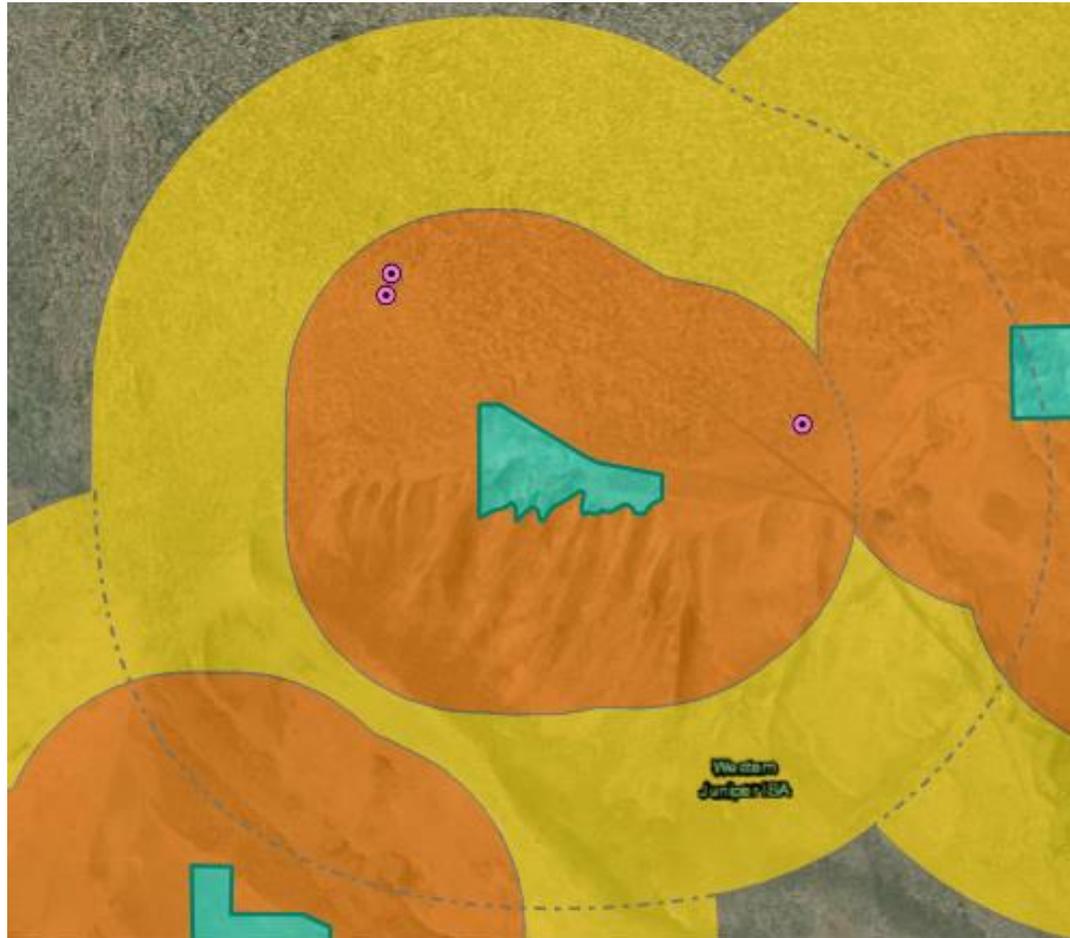
Comparative Cost Factor Analysis



Based on this cost factor analysis, it is estimated that SWMF development and operational costs could likely be the **lowest for the Horse Ridge site** and **highest for the Dodds site**. The SWMF development and operational costs related to the Roth sites are expected to fall between these two extremes, being more expensive than the Horse Ridge site and less expensive than the Dodds sites.



Residential Proximity Analysis



Horse Ridge Site

- 3 dwellings within 1 mile
- 3 dwellings within 2 miles

Known Residences



Supplemental Potential Site Area (for Editing/Revising)



Supplemental Site Buffers (1 Mile & 2 Mile)

distance



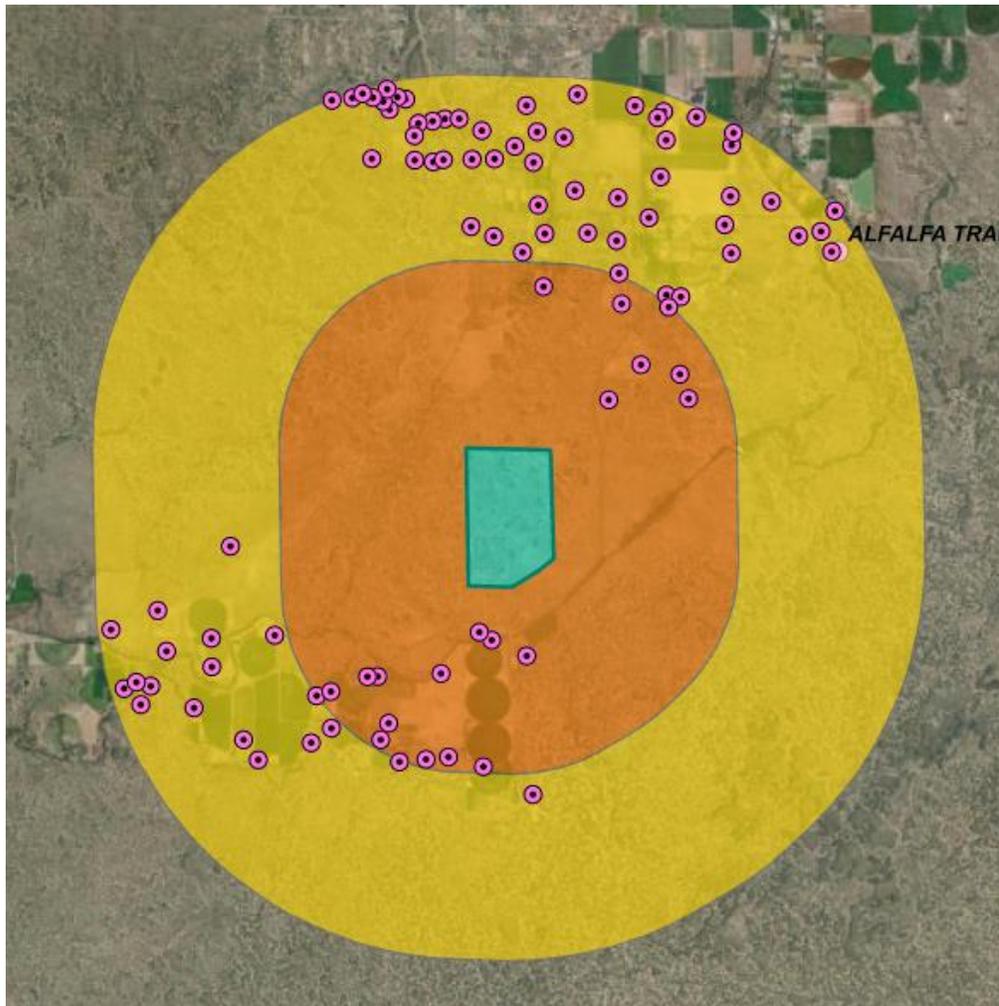
1



2



Residential Proximity Analysis



Dodds Site

- 18 dwellings within 1 mile
- 86 dwellings within 2 miles

Known Residences



Supplemental Potential Site Area (for Editing/Revising)



Supplemental Site Buffers (1 Mile & 2 Mile)

distance



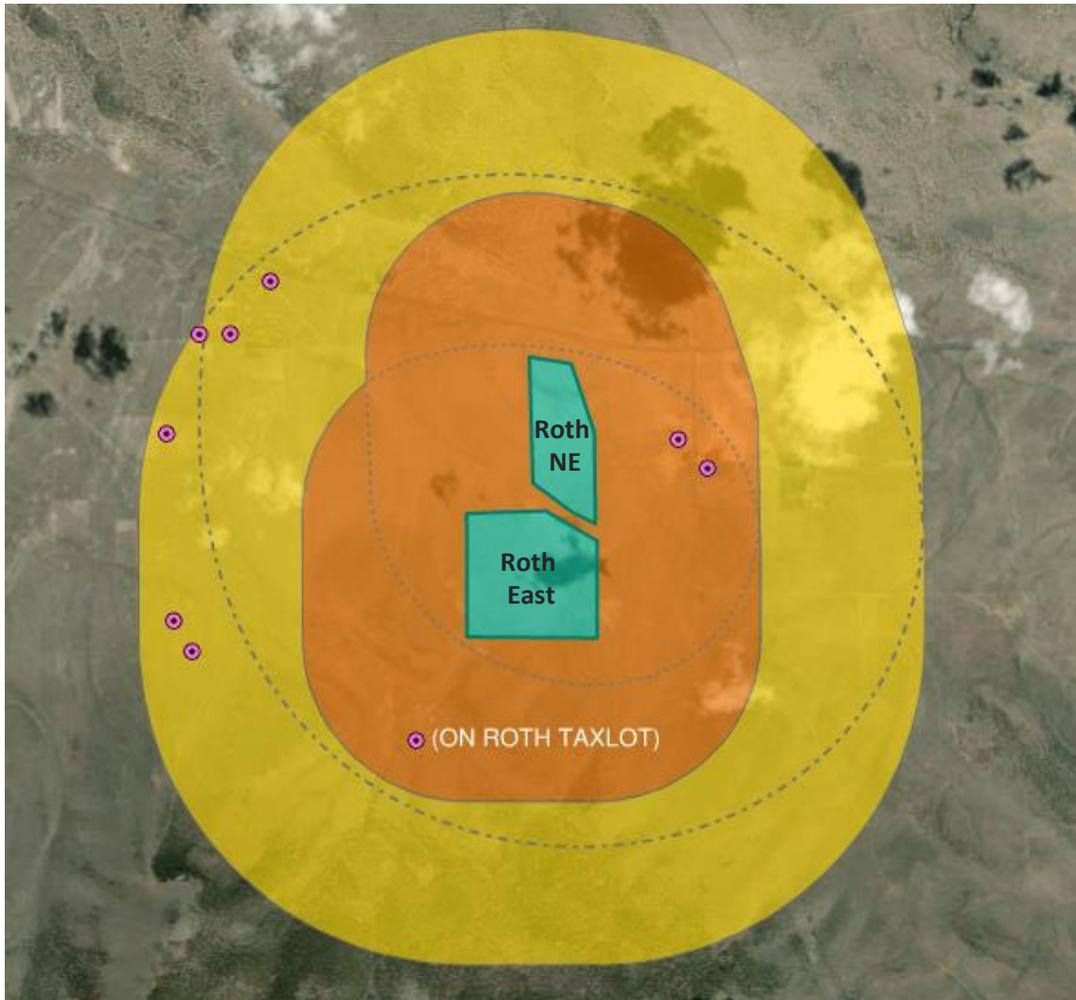
1



2



Residential Proximity Analysis



Roth Northeast Site

- 2 dwellings within 1 mile
- 4 dwellings within 2 miles

Roth East Site

- 2 dwellings within 1 mile
- 8 dwellings within 2 miles

Known Residences



Supplemental Potential Site Area (for Editing/Revising)



Supplemental Site Buffers (1 Mile & 2 Mile)

distance



1



2

Notes:

Residences were identified based on structures listed on the property improvement report per County records.

Unpermitted structures and RVs were not included in estimated dwelling counts in proximity to proposed sites.

The dwelling on the Roth site taxlot was not counted as an adjacent residence.



Residential Proximity Analysis

| Site ID | Site Name | Known Residences within 1 Mile | Known Residences within 2 Miles |
|----------------|------------------|---|--|
| 191400-200 | Moon Pit | 0 | 1 |
| 191400-2400 | Horse Ridge | 3 | 3 |
| 181400 | Dodds | 18 | 86 |
| 201500-301 | Roth Northeast | 2 | 4 |
| 201500-301 | Roth East | 2 | 8 |



SWAC Discussion



SWAC Discussion

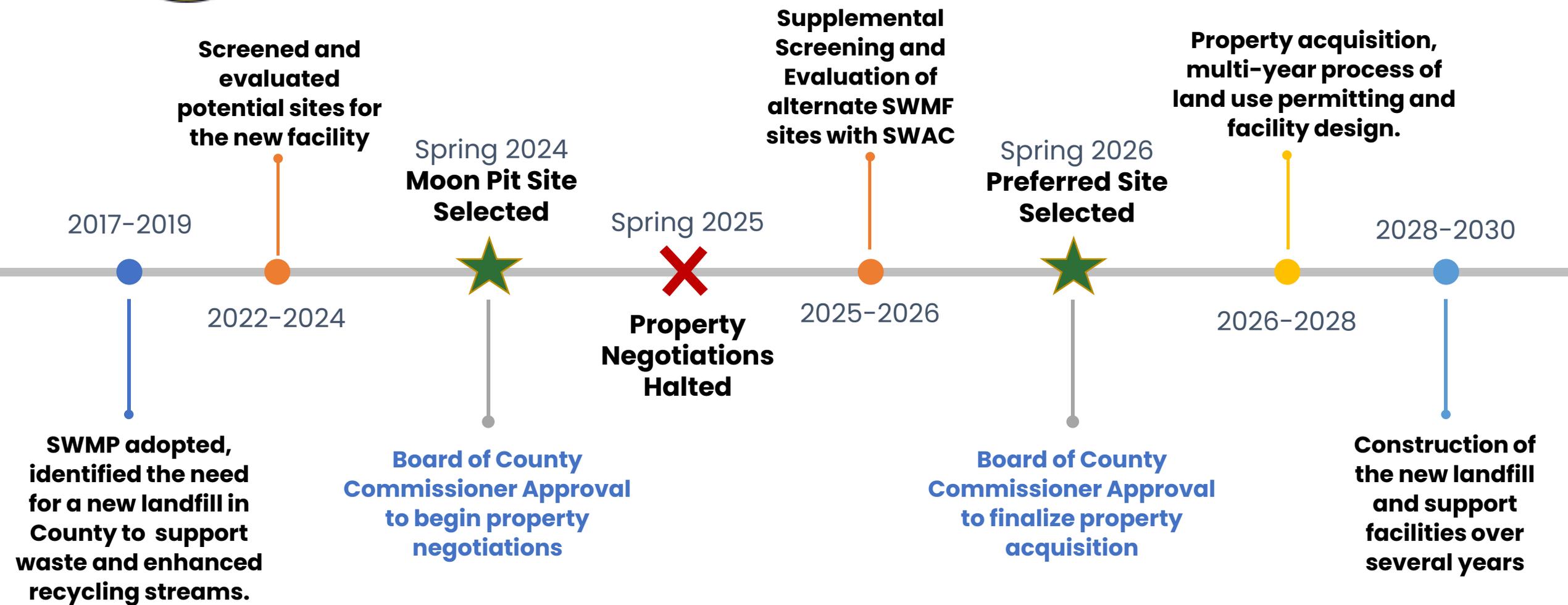
- 1. Do the analyses appear to be accurate and fair, for the purposes of comparing candidate sites?**
- 2. At this point, what site(s) do you think would best serve the County long-term, based on the presented analyses?**
- 3. Are there any sites you would recommend removing from further consideration?**
- 4. Are there any additional data or considerations to incorporate?**
- 5. Other thoughts/questions?**



Next Steps



Roadmap to Opening in 2031





What happens next...

Continuation of SWAC Meetings in 2025 for supplemental site screening and recommendation of alternate SWMF site:

- July 15, 2025, 9-11 am: updated & additional site screening information
- August 19, 2025, 9-11 am: recommendation for final site evaluation or selection

Public Input:

- Public comment reviews & responses
- Correspondence & meetings with interested parties

Ways to stay up to date:

- Visit: deschutes.org/managethefuture
- Email: managethefuture@deschutescounty.gov



**Deschutes
County:
Managing
the Future of
Solid Waste**

Informational Story Map

Deschutes County Department of Solid Waste | August 2024



Adjourn

