



# Solid Waste Advisory Committee Landfill Siting Kick-off Meeting







# Solid Waste Department Overview

- Collection
- Recycling
- Transfer
- Disposal







# Collection

- Franchise Ordinances and Orders
  - Minimum service levels
  - Maximum Fees Charged to Subscribers
  - Monitoring of Franchise Profits
- Franchise Service Providers
  - Waste Connections
  - Republic Services
- Hazardous Waste Management





# Recycling

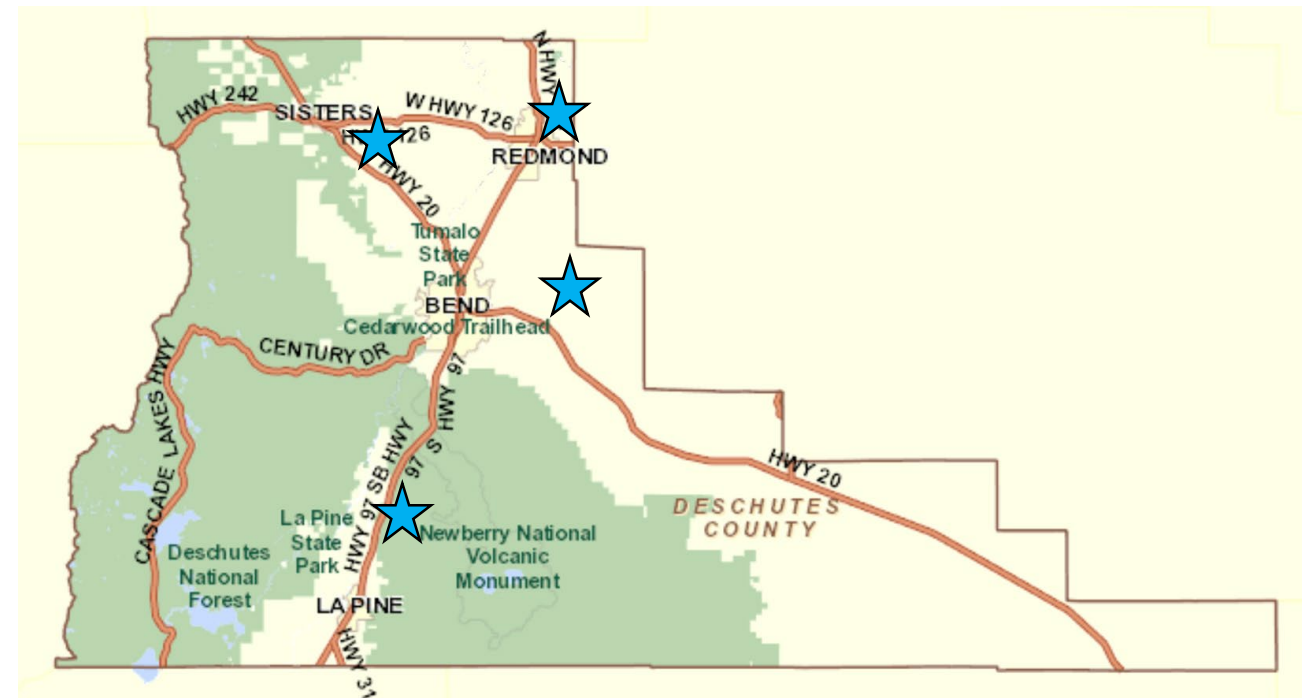
- Curbside Collection
- Drop off sites at Knott Landfill, Transfer Stations and Depots
- Yard Debris Composting
- Education and Promotion





# Transfer

- Negus Transfer Station (Redmond/North County)
- Southwest Transfer Station (La Pine/South County)
- Northwest Transfer Station (Cloverdale/Sisters)
- Alfalfa Transfer Station







# Disposal

- Knott Landfill
  - Engineered Facility
  - Environmental Monitoring
  - Leachate & Landfill Gas Management
- Anticipated to reach capacity in 2029





# Solid Waste Management Plan

- Completed in July 2019
- Primary Areas of Focus in the Solid Waste Management Plan
  - Expanding and Improving Recycling Programs
  - Identifying Infrastructure and Facility Needs and Improvements
  - Evaluating and Identifying Future Disposal Needs



# Future Disposal Needs

## Options for Future Disposal

- Use of Alternative Technologies
- Transfer the County's Waste to a Regional Landfill
- Site a New Facility in Deschutes County





# Future Disposal Needs

## Alternate Technologies Analysis

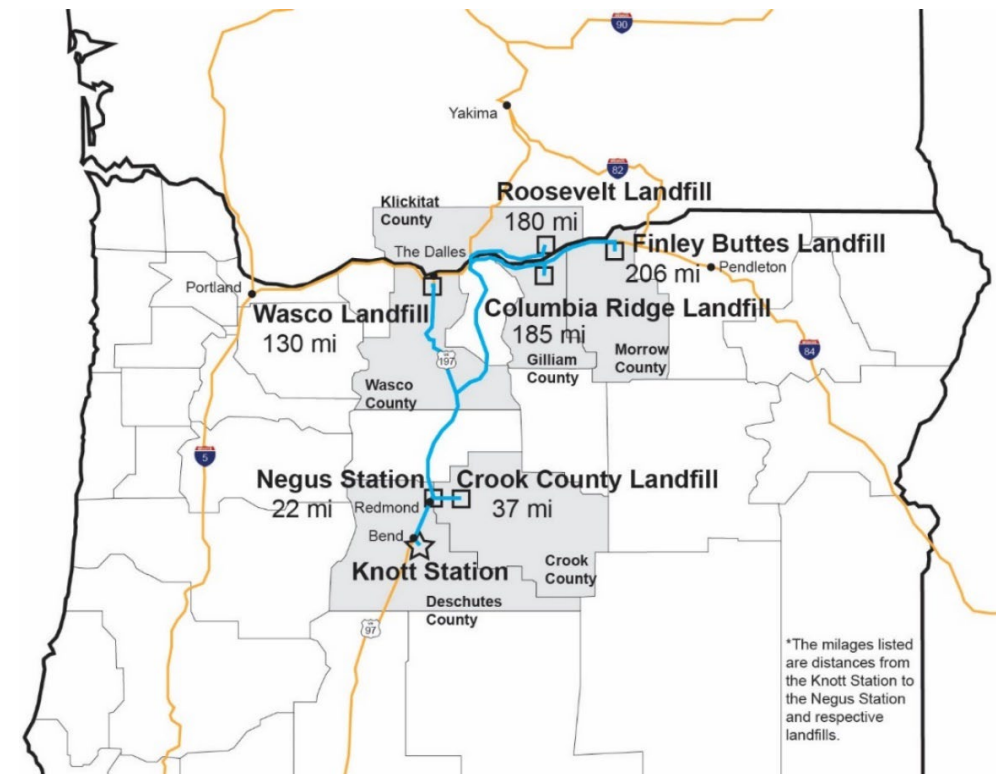
- Substantial capital costs to construct alternative technology facilities
- Technology limitations
  - Established technologies require more waste than generated in Deschutes County
  - Markets for technologies that produce fuel products are not established in the region
  - Emerging technologies have not been proven in full scale application
  - Regardless of the technology, there are always residuals or unprocessable waste that will require landfill disposal



# Future Disposal Needs

## Waste Transfer to a Regional Landfill

- 4 regional landfills in the Columbia Gorge
- 130-200 miles from Knott Landfill
- 40-50 semi-trucks hauling waste each day from Deschutes County at current tonnage
- Estimated disposal cost: \$47-62/ton (transportation, landfill tip fee and host fee)







# Future Disposal Needs

## In-County Landfill

- 30 miles +/- from Knott Landfill
- 500 acres (250 acres of landfill and 250 acres of buffer)
- 100 years of capacity
- Costs:
  - Siting and permitting: \$3,000,000
  - Initial Construction: \$11,000,000
- Estimated transportation and disposal cost: \$42/ton  
(Current cost at Knott Landfill is \$35.21/ton)



# Future Disposal Needs

## Transfer to a Regional Site vs. an In-County Landfill

Primary Factors	Transfer to Regional Landfill	New In-County Landfill
<b>Implementation Considerations</b>	Land use and DEQ permits are in place <i>Advantage</i>	Land use and DEQ permits to be procured Decisions can be appealed or delayed
<b>Regional Economic Impacts</b>	Revenues and jobs move to host community	Revenue and jobs remain in Deschutes County <i>Advantage</i>
<b>Cost</b>	\$47-\$62/ton	\$42/ton <i>Advantage</i>
<b>Rate Stability</b>	Transportation costs can be unpredictable Agreements with host facility can pose risks	Transportation costs are less of a concern Rate stability if County-operated <i>Advantage</i>
<b>System Flexibility</b>	Any changes to waste stream can require contract amendment with host facility	Maximum flexibility when considering changes to waste stream <i>Advantage</i>





# Future Disposal Needs

## Transfer to a Regional Site vs. an In-County Landfill

Primary Factors	Transfer to Regional Landfill	New In-County Landfill
<b>Reliability</b>	Long distance transportation could be subject to weather/construction/other interruptions	Transportation reliability is less of a concern with short haul distance <i>Advantage</i>
<b>Greenhouse Gas Emissions from Landfilled Waste</b>	<i>Even</i>	<i>Even</i>
<b>Transportation Emissions</b>	Over 2,000,000 truck miles/year	350,000 truck miles/year <i>Advantage</i>
<b>Land Impacts</b>	Regional landfills are already in operation <i>Advantage</i>	In-County landfill may require land disturbance
<b>Public Support</b>	Support is in the minority	Surveys indicate 73-93% of the community favor siting a new landfill in Deschutes County <i>Advantage</i>



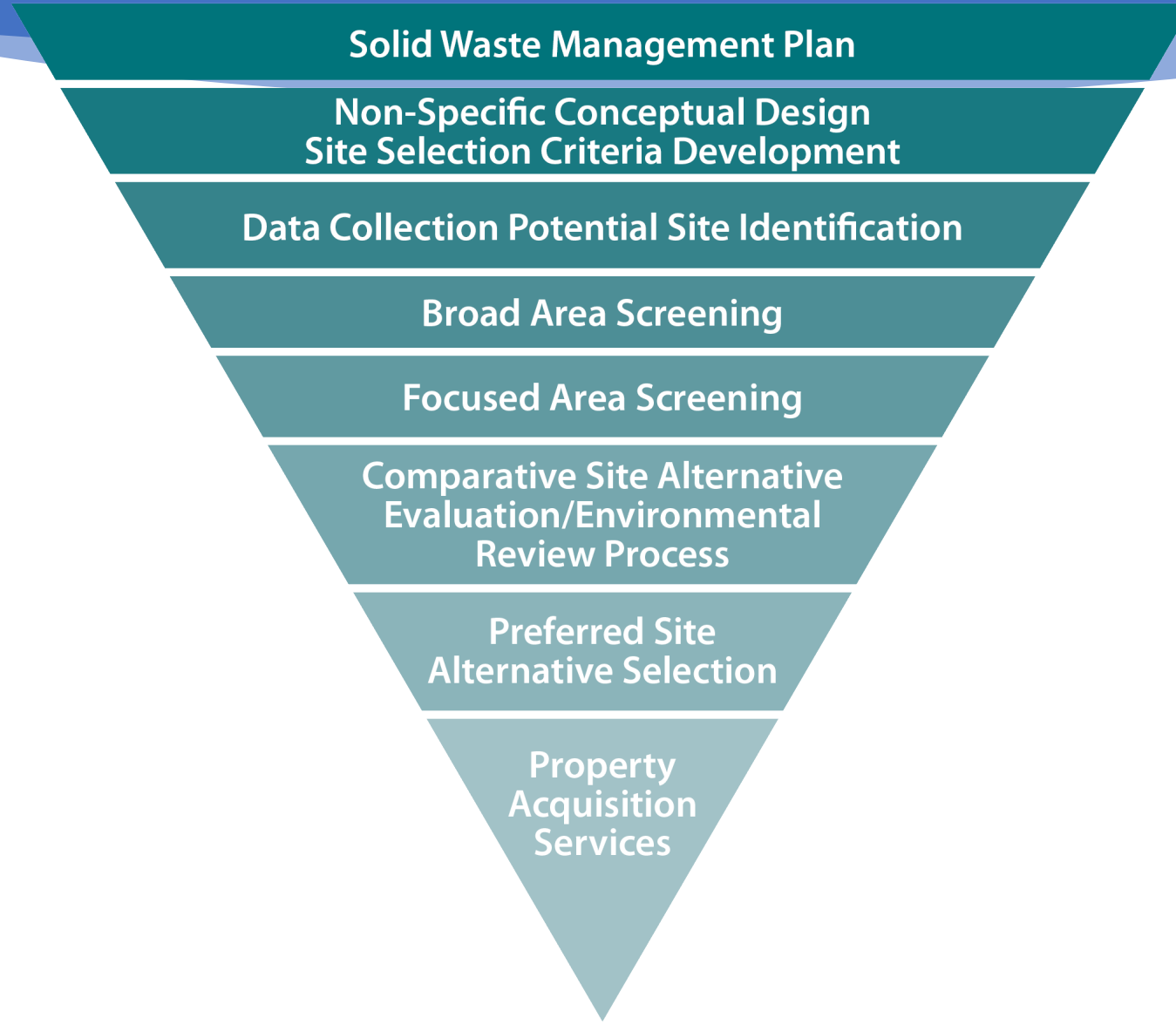
# Solid Waste Advisory Committee Role and Involvement

- Review information on the site selection process for a new Solid Waste Management Facility
- Provide input and guidance throughout the site selection process
- Make recommendations to the Board of County Commissioners as needed during site screening process
- Ultimately make a recommendation to the Board on a final site





# Robust approach to Siting In-County

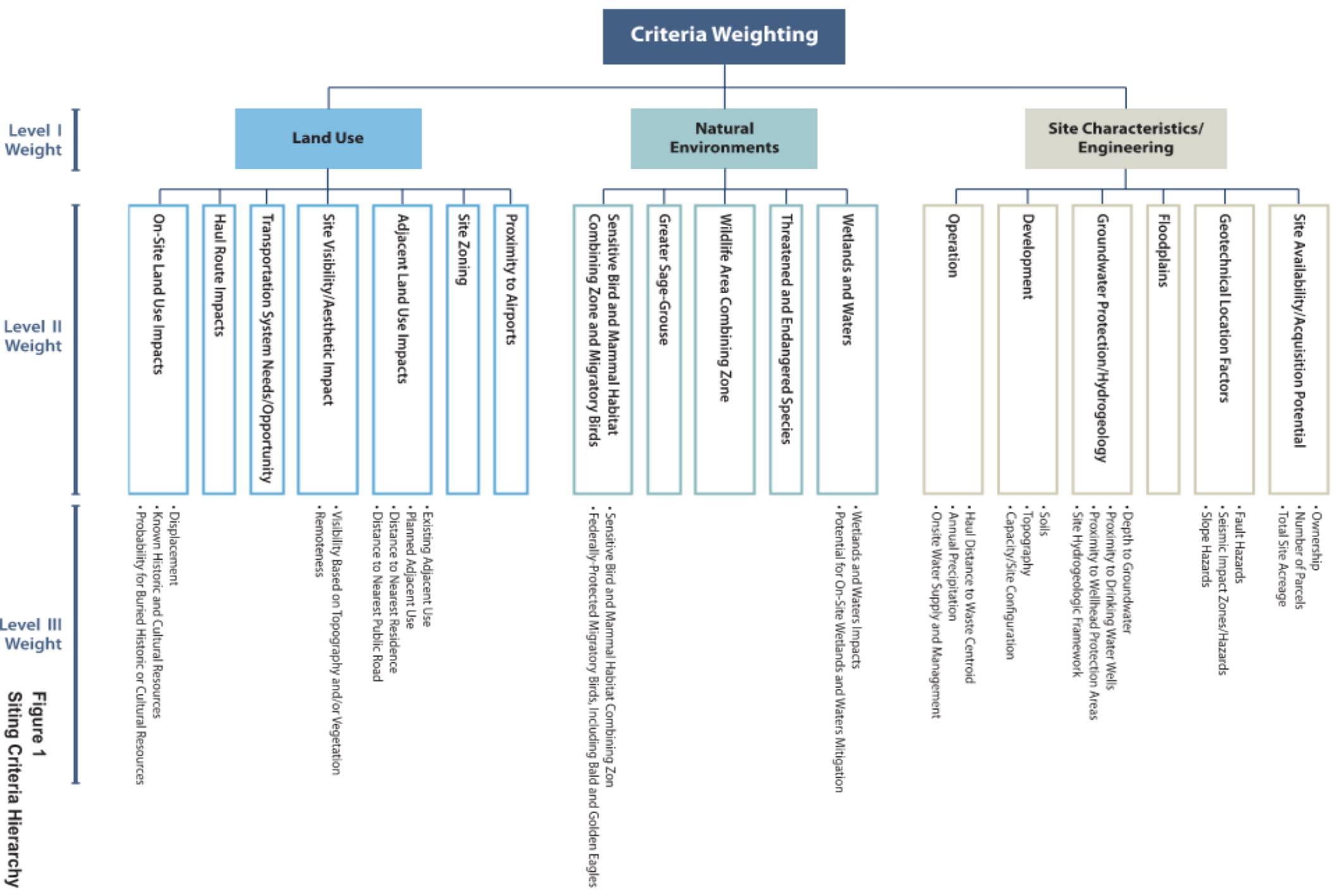




# Schedule

Solid Waste Management Plan, July 2019

Recommendations	2019	2020	2021	2022	2023	2024	2025
<b>Landfill Disposal Options</b>							
7.1 Proceed to site and permit a new County landfill to be operational before Knott Landfill reaches capacity		Develop Siting Process					
7.2 Begin formal process to site and permit new landfill			Siting			Permitting	
7.3 Evaluate and consider privatization of landfill construction and operations						Evaluate & Consider	



**Figure 1**  
**Siting Criteria Hierarchy**



Criteria	Level I Weight	Level II Weight	Level III Weight
	<b>35%</b>		
<b>Site Characteristics/Engineering</b>			
<b>Site Availability/Acquisition Potential</b>		<b>40%</b>	
<i>Ownership</i>			40%
<i>Number of Parcels</i>			20%
<i>Total Site Acreage</i>			40%
<b>Geotechnical Location Factors</b>		<b>10%</b>	
<i>Fault Hazards</i>			15%
<i>Seismic Impact Zones/Hazards</i>			20%
<i>Unstable Areas – Mass Movement</i>			25%
<i>Unstable Areas – Poor Foundation</i>			40%
<b>Floodplains</b>		<b>5%</b>	
<b>Groundwater Protection/Hydrogeology</b>		<b>20%</b>	
<i>Depth to Groundwater</i>			25%
<i>Proximity to Drinking Water Wells</i>			30%
<i>Proximity to Wellhead Protection Areas</i>			15%
<i>Site Hydrogeologic Framework</i>			30%
<b>Development</b>		<b>15%</b>	
<i>Soils</i>			45%
<i>Topography</i>			30%
<i>Distance from Arterials</i>			10%
<i>Capacity/Site Configuration</i>			15%
<b>Operation</b>		<b>10%</b>	
<i>Haul Distance to Waste Centroid</i>			50%
<i>Annual Precipitation</i>			25%
<i>Onsite Water Supply and Management</i>			25%

Criteria	Level I Weight	Level II Weight	Level III Weight
<b>Natural Environments</b>	<b>35%</b>		
<b>Wetlands and Waters</b>		10%	
<i>Wetlands and Waters Impacts</i>			50%
<i>Potential for On-Site Wetlands and Waters Mitigation</i>			50%
<b>Threatened and Endangered Species</b>		20%	
<b>Wildlife Area Combining Zone</b>		10%	
<b>Greater Sage-Grouse Area Combining Zone</b>		40%	
<b>Sensitive Bird and Mammal Habitat Combining Zone and Migratory Birds</b>		20%	
<i>Migratory Birds, Including Bald and Golden Eagles</i>			50%
<i>Sensitive Bird and Mammal Habitat Combining Zone</i>			50%
<b>Land Use</b>	<b>30%</b>		
<b>Proximity to Airports</b>		15%	
<b>Site Zoning</b>		20%	
<b>Adjacent Land Use Impacts</b>		20%	
<i>Existing Adjacent Use</i>			25%
<i>Planned Adjacent Use</i>			25%
<i>Distance to Nearest Residence</i>			25%
<i>Distance to Nearest Public Road</i>			25%
<b>Site Visibility/Aesthetic Impact</b>		10%	
<i>Visibility Based on Topography and/or Vegetation</i>			50%
<i>Remoteness</i>			50%
<b>Transportation System Needs/Opportunity</b>		5%	
<b>Haul Route Impacts</b>		5%	
<b>On-Site Land Use Impacts</b>		25%	
<i>Displacement</i>			40%
<i>Known Historic and Cultural Resources</i>			30%
<i>Probability for Buried Historic or Cultural Resources</i>			30%



# Public Outreach Goals



- Be transparent
- Share information Countywide
- Engage underrepresented communities
- Listen and provide opportunities for feedback throughout the siting process
- Use multiple engagement tools and methods



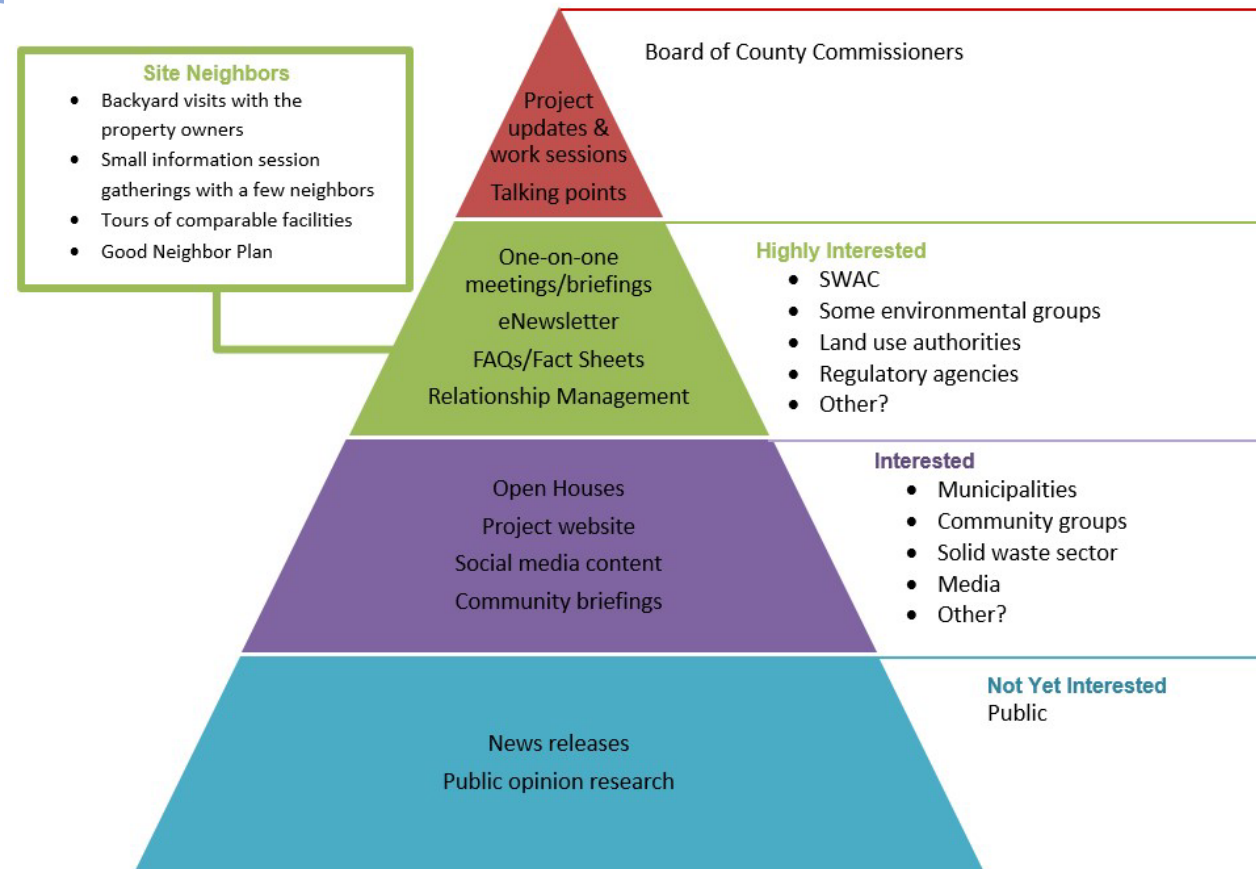


# Public Outreach Activities

- Completing Stakeholder Interviews to gather advice and initial input
- Developing a toolkit of outreach materials to support ongoing communication throughout the project (webpage, e-news, social media)
- Drafting content for the project webpage, including a project timeline, frequently asked questions, and other information resources
- As potential sites are screened, will begin targeted outreach and communications geared to specific stakeholder needs (briefings to interest groups, neighborhood and backyard outreach)



# Communications Pyramid



**Deschutes County Landfill Siting Communications Pyramid**