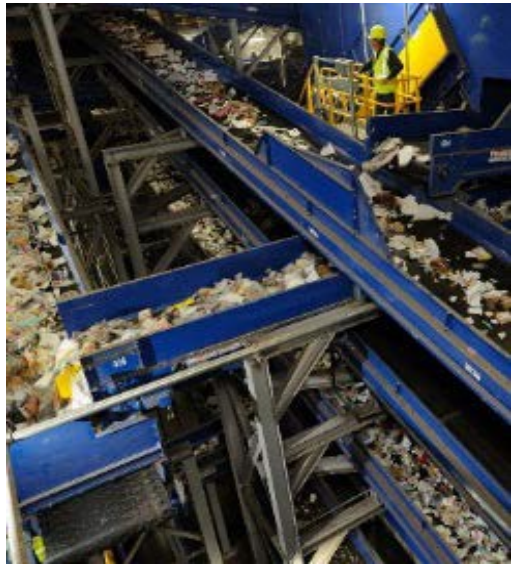
# Deschutes County Solid Waste Management Plan

"Creating a Roadmap for a Sustainable Future"



B&W GBB SOLID WASTE MANAGEMENT CONSULTANTS JRMA ARCHITECTS ENGINEERS ENERGYNEERING SOLUTIONS INC

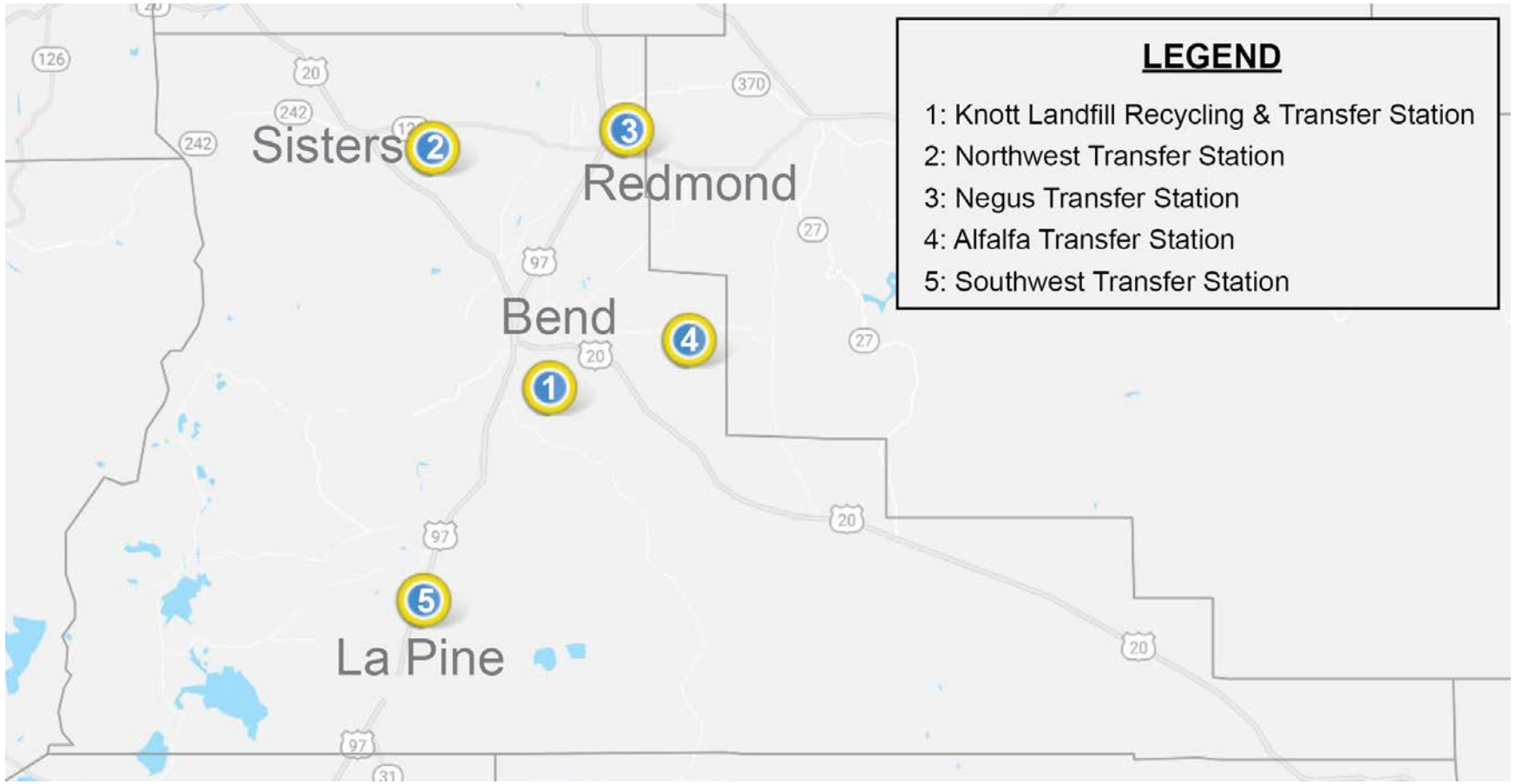
# Purpose of SWMP

**Primary Goal of SWMP**

"To work cooperatively with Cities and service providers to offer citizens and businesses an integrated solid waste management system that delivers quality and cost-effective services while achieving the best use of our resources and reducing waste disposed in landfills."

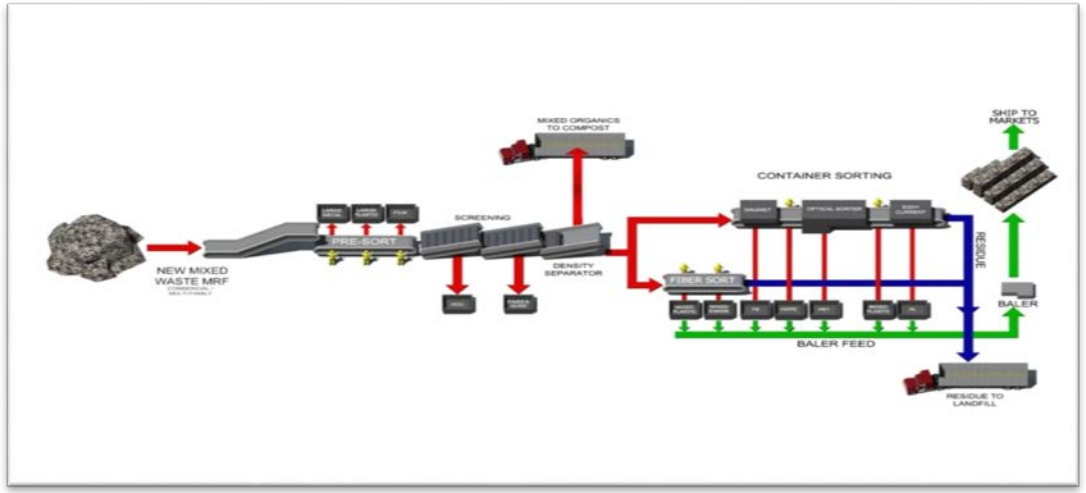
# Transfer Stations

## Transfer Station Locations



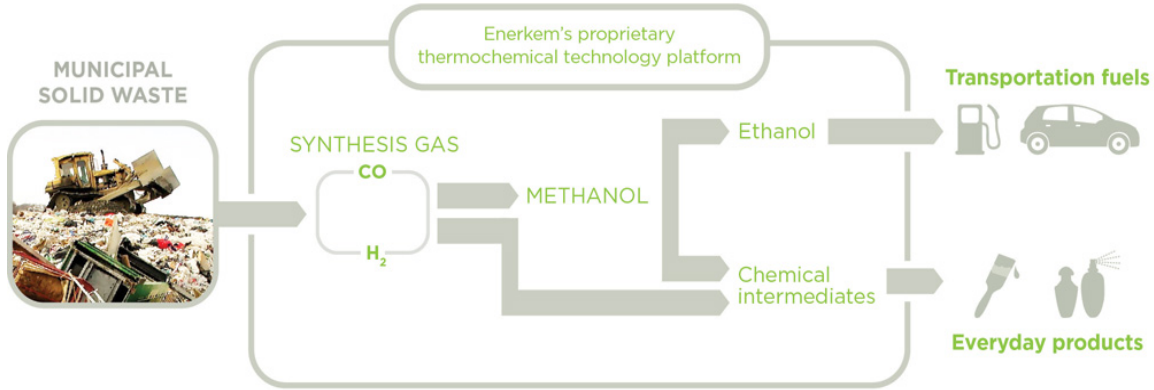
# Alternative Technologies

## Advanced Materials Recovery Facility




## Convert MSW to Biofuel /Renewable Energy (Ethanol)

### Enerkem Process




## Findings

1. Cost to process and convert is not feasible at this time
2. Markets for renewable energy not readily available in Deschutes County
3. County can monitor progress and development of technologies and consider in the future

# Recommendations

**SWMP provides roadmap for enhancing services, making capital investments in infrastructure and addressing long term disposal of waste**

**Changes to collection programs / services –**

- *Expand residential food waste collection*
- *Development of multifamily programs*
- *Expand recycling for businesses – food waste / recyclables*
- *Establish uniform / standardization for programs and services*
- *Develop Alternative for construction / demolition (C/D) waste*

**Changes / Improvements for facilities**

- *Evaluate options / upgrade compost facilities*
- *Upgrade transfer stations – capacity / efficiencies / future disposal system*
- *Develop facilities for managing C/D waste*
- *Implement new disposal system*

# Cost to Operate Knott Landfill

## Current Disposal / Ton Cost

| Total Annual Operating Expenses | | $ 6,000,000 | $/Ton |
|---|---|---|---|
| Annual Waste Disposed | 2016 | 161,000 | $37.27 |
| Annual Waste Disposed | 2017 | 181,000 | $33.15 |
| **Average Disposal Cost** | | | **$ 35.21** |

# Landfill Disposal Options

1. **Transport and dispose at Out of County Site(s)**

    - Regional Landfill
    - Crook County Landfill

2. **Site and Construct a New In-County Landfill**

# Long-Haul Waste Out of County

## Crook County Landfill (CC)

1. The Landfill has over 100 years with current waste flows
2. CC will accept portion of Deschutes County
3. Current rates - $35 per ton + $5 Host Fee

# Long-Haul Waste Out of County

## Regional Landfills

***Landfills Located East of Cascades***

1) **Columbia Ridge Landfill, Arlington, OR** – Owned & Operated by Waste Management

2) **Finley Butte Landfill, Boardman, OR** – Owned & Operated by Waste Connections

3) **Wasco County Landfill, The Dalles, OR** – Owned & Operated by Waste Connections

4) **Roosevelt Regional Landfill, Roosevelt, WA** - Owned & Operated by Republic Services

**Landfills Located West of Cascades**

5) **Coffin Butte Landfill, Corvallis, OR** – Owned & Operated by Republic Services

6) **Dry Creek Landfill, Medford, OR** – Owned & Operated by Rogue Disposal

# Long-Haul Waste Out of County

| Knott Transfer Station | | | |
|---|---|---|---|
| **Description** | **Transportation Costs Rounded ($/ton)** | **Landfill Disposal Costs+ Host Fee ($/ton)(1)** | **Total Transportation / Disposal + Host Fee ($/ton)** |
| Station and Wasco Landfill (135 miles one-way) | $19.00 | $28.00-$31.00 | **$47.00-$50.00** |
| Station and Columbia Ridge Landfill (185 miles one-way) | $26.00 | $30.00-$33.00 | **$56.00-$59.00** |
| Station and Finley Buttes Landfill (206 miles one-way) | $29.00 | $30.00-$33.00 | **$59.00-$62.00** |
| Station and Roosevelt Landfill (180 miles one-way) | $25.00 | $30.00-$33.00 | **$55.00-$58.00** |
| Station and Crook County Landfill (35 miles one-way) | $8.00(2) | $40.00(3) | **$48.00** |
| **Negus Transfer Station** | | | |
| Station and Wasco Landfill (110 miles one-way) | $16.00 | $28.00-$31.00 | **$44.00-$47.00** |
| Station and Crook County Landfill (18 miles one-way) | $6.00 (2) | $40.00 (3) | **$46.00** |

(1) Assumes a host fee of $6 per ton for all regional landfills. Host fees may vary by jurisdiction.
(2) The cost to transport from Deschutes County transfer stations were adjusted considering time to travel through congested areas.
(3) Crook County tip fee is based on the current published gate rate of $35 per ton plus a $5 per ton host fee.

# Long-Haul Waste Out of County

## Implementation and Schedule

1. Transfer stations modified to handle surge / temporary storage capacity (2 - 4 years)
2. Add compactor equipment to improve cost to transport ($1.5M for system)
3. Evaluate Transportation options
   Public ownership of trailers versus private operations
4. Prepare RFP to solicit proposals and select vendor and award contract (2 years)

# Site and Build a New In-County Landfill

## Site New In-County Landfill

1. Estimate 400 - 500 acres to provide 100 years capacity
   - Includes area for buffer
   - Site would be developed and closed in phases

2. County previously conducted site study in late 1990s

3. Areas of County appear to satisfy locational standards

# Site and Build a New In-County Landfill

| Siting a New Public Landfill | |
|---|---|
| Landfill Siting Process (Public Meetings) | $ 300,000 |
| Site Characterization Reports | $ 1,000,000 |
| Preliminary Engineering and Permit Documents | $ 1,200,000 |
| Permitting Contingency (20%) | $ 500,000 |
| **Total** | **$ 3,000,000** |

# Site and Build a New In-County Landfill

| Landfill Development / Construction Cost | |
|---|---|
| Support Facilities<br>(Includes access roads; scales; employee center; Maintenance shops; utilities) | $ 4,000,000 |
| Initial landfill cell / Leachate collection | $ 2,000,000 |
| Leachate lagoon and controls | $ 1,000,000 |
| Environmental Monitoring systems | $ 1,000,000 |
| **Subtotal** | **$ 8,000,000** |
| Engineering / Construction Services / Administration | $ 1,200,000 |
| Contingency (15%) | $ 1,600,000 |
| **Total Estimated Construction Cost** | **$ 11,000,000** |

# Site and Build a New In-County Landfill

## Implementation and Schedule

1. Complete siting studies and permitting (5 to 6 years)
   (assumes potential legal challenges)

2. County has some risk exposure for obtaining permits based on past experience in state

3. Requires capital investment to site and build (2 to 3 years)

# Evaluation of Landfill Disposal Options

| Primary Factors | Transport Out of County | New In-County Landfill |
|---|---|---|
| **1. Implementation Considerations** | • Land use and DEQ permits not required<br>Advantage | • Permits can be appealed or delayed |
| **2. Sound Financial Principles** | • Revenues and Jobs created elsewhere | • Revenue and Jobs stay here<br>Advantage |
| **3. Cost Effectiveness** | $47-$60/ton | $42/ton<br>Advantage |
| **4. Rate Stability** | • Transportation costs unpredictable | • Transportation is a much smaller factor<br>Advantage |
| **5. System Flexibility** | • Any changes require contract amendment | • Maximum flexibility to consider changes<br>Advantage |
| **6. Reliability** | • Long distance transportation could be subject to interruption | • Transportation is a much smaller factor<br>Advantage |

# Evaluation of Landfill Disposal Options

| Primary Factors | Transport Out of County | New In-County Landfill |
|---|---|---|
| **7. Environmental Considerations**<br><br>- ***7.1 Impact from Landfilling:***<br>- ***Greenhouse gas (GHG) emissions*** | Even | Even |
| - ***7.2 Impact from Transportation:*** | • Over 2 million truck miles per year | • About 350,000 truck miles per year<br><br>Advantage |
| - ***7.3 Impact on Land:*** | • Existing regional landfills are available<br><br>Advantage | • County will need to disturb 400-500 acres |

# Next Steps

- Public Outreach
  - Self selecting surveys have shown about 80% favor in-County landfill
  - A statistically valid telephone survey was conducted that shows over 90% of respondents favor an in-County landfill
- Solid Waste Advisory Committee Input
- City Acknowledgement / Adoption
  - Update existing Intergovernmental Agreement
  - Other?

www.deschutes.org/solidwaste under the Planning tab

# Deschutes Disposal Options

**Questions / Comments ?**