

Feasibility of Waste Relocation A Case History from Teton County

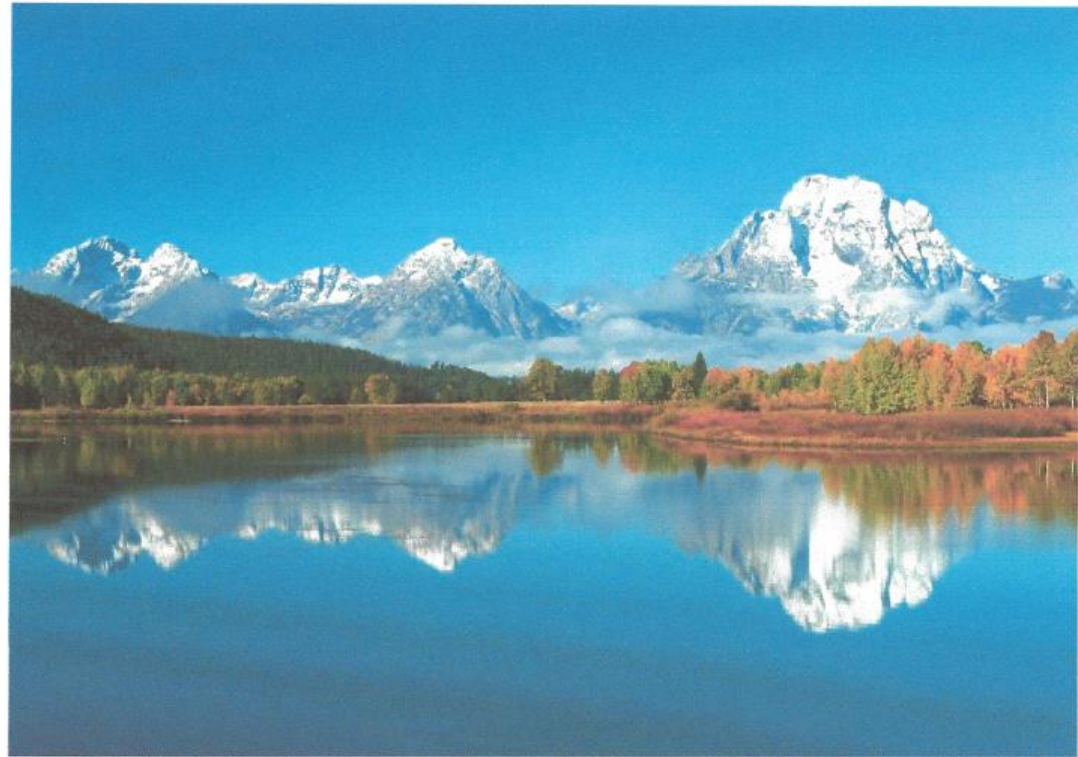
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A Unique Project, A Glance to the Future

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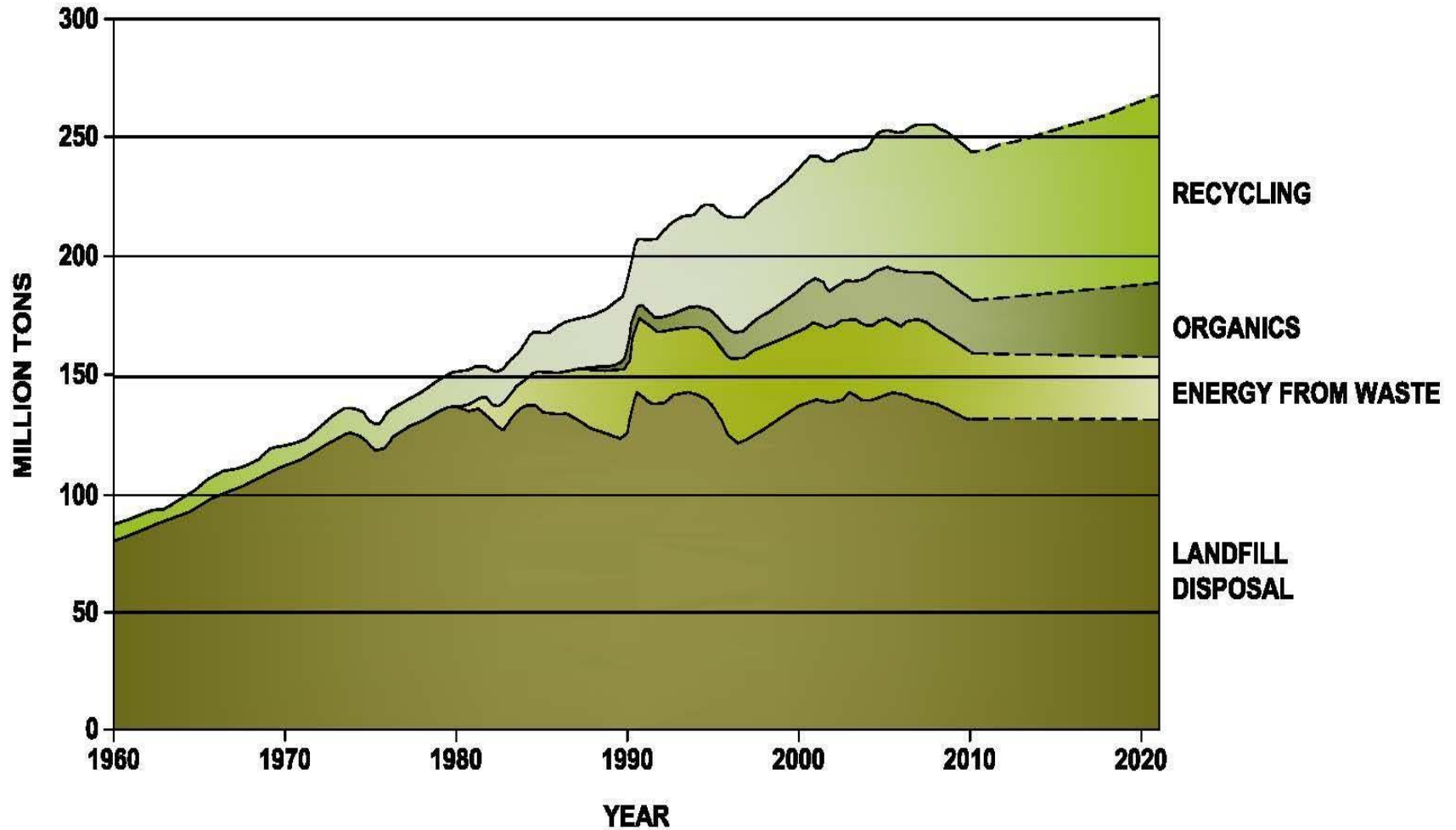
The View From Teton County

A mostly rural jurisdiction in the mountains of northwestern Wyoming is experiencing, in a particularly acute way, some of the forces affecting municipal solid waste management. This makes the county's situation an intriguing test case for measures to deal with the management of MSW in the future.

BY HEATHER OVERHOLSER, MARK MCCLAIN, AND KEITH GORDON



Trends in Waste Management - U.S.





Teton County, Wyoming



1. Teton County mirrors national trends, not typical for Wyoming
2. Need to close old landfill
3. Distance to landfill out of State makes disposal very expensive \$115/ton
4. Little private land, land for new landfill prohibitively expensive (~\$500,000 per acre!)
5. Cost to clean close entire old landfill estimated over \$60MM



Other Sites in Wyoming

- Space not as limited, almost always cheaper to cap in place, if additional space not needed
- Tipping fees lower, not as much incentive for aggressive diversion
- Waste relocation typically used to consolidate small outlying areas and reduce cap size or prevent designs that require a lot of fill material





Plan Moving Forward

- Maximize Diversion! County's program very progressive – Recycling metals, glass, paper, plastic, *fluorescent light bulbs, batteries, cell phones and bear spray*. *Composting green waste, food waste coming soon!*
- *Clear as much space as feasible on existing site for new Transfer Station and diversion area by consolidating waste up-canyon and closing consolidated area.*
- *Approximately 684,000 Cubic Yards of MSW removed and placed up-canyon.*





Advantages of Plan

1. Maximizes space for diversion on existing site, no land purchase necessary
2. Allows unlimited use (New Transfer Station, diversion) of clean-closed area
3. Less \$\$ than complete removal
4. Reduces area for closure





Estimating Waste Volumes

1. **Estimating amount of waste extremely difficult, waste volumes ALWAYS increase!**
2. **Existing information on location of waste very unreliable (old Transfer Station surrounded by and built on waste)**
3. **Test pits, geophysics and historical areal photographs provide an idea of location of waste but limited**
4. **Old waste areas random and disturbed during capping in 1988**
5. **Waste around and beneath old Transfer Station, structural problems**





Logistics of Removing Waste

1. **Coordination with Existing Composting and Transfer Station Operations Difficult, Safety concerns due to high traffic, VERY LIMITED SPACE**
2. **Limited time of year (late spring through summer) to haul onto USFS property due to wildlife restrictions**
3. **Potential for non-MSW, need contingency plans and oversight, put in Bidding Documents**
4. **Coordinating backfill of deep holes**
5. **Daily cover of waste placed**
6. **Erosion Control**





Simplify Bidding and Construction

1. **Include provision to handle hazardous waste if encountered, so waste removal won't stop**
2. **Full-time on-site representative to coordinate with other operations, coordinate on non-MSW**
3. **On-site access to borrow soils for backfill and daily cover**
4. **Built Interim Transfer Station so old Transfer Station could be demolished and waste removed around it**
5. **Closure Contract Separated**
6. **Included demolition of old Transfer Station in Waste Removal Contract**





Challenges

1. **Schedule extended because of additional waste**
2. **Redesign of area to be capped to allow for more waste and to maximize area for diversion**
3. **Coordinating operations and continual movement of composting operation to allow for waste removal**
4. **Removing waste beneath operational roads**
5. **Costly \$3.64-\$4.80/CY to remove, haul and cover**
6. **Multiple regulatory steps, Environmental Assessment for USFS land, USFS special use permit, and County EA, ongoing USFS input, CDPHE closure and County permitting and oversight, sometimes conflicting**





Lessons Learned

1. **Allow for significant contingencies in waste volumes and cost**
2. **Keep design simple, results in better contractor pricing, can use local contractors**
3. **Be flexible in design and schedule, changes are inevitable**
4. **Coordinating contractors on operating site, most difficult part of project! Must have contractors willing to work together on daily basis, need full-time on-site CM**
5. **Local permitting requires lead time, need to be pro-active to keep on-schedule**





Questions

