



## Board of County Commissioners - Staff Report

**Meeting Date:** October 4, 2016

**Presenter:** Heather Overholser

**Submitting Dept:** ISWR

**Subject:** Compost site design proposal from O2 Composting

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**Statement / Purpose:** To consider a proposal from O2 Composting for concept level composting facility site design and regulatory review.

**Background / Description (Pros & Cons):** O2 Composting specializes in Aerated Static Pile (ASP) composting systems and site design. ISWR would like to hire their services to:

- Review the pertinent solid waste / composting regulations;
- Conduct an evaluation of needs and develop a project strategy and timeline;
- Conduct an estimate of the volumes of raw materials received, bulking agent requirements and finished compost produced;
- Prepare a concept level site plan that illustrates: receiving and processing areas; storm water and leachate management systems; electrical power and water delivery systems; etc.;
- Summarize our findings from the above work tasks in a brief project report that concludes with a list of prioritized recommendations; and,
- Provide assistance to the county to develop a Request for Proposals for contracted site operation.

This work will benefit the County by providing much needed information and guidance on site design for Aerated Static Pile composting, as well as assistance with defining the composting operations contract scope of work. In addition, O2 Composting will assist Teton County in collecting regulatory information that will be useful in the eventual permitting process with the Wyoming Department of Environmental Quality (WDEQ) for the future addition of food waste to the composting program. Currently, WDEQ does not have regulations pertaining to food waste composting, and Teton County will be on the forefront of the State's move in this direction. The proposed work of O2 Composting will help us gain a better understanding of food waste composting regulations and how they might apply here.

Heather Overholser attended an aerated static pile composting workshop with O2 Composting in April 2015. Mr. Moon is one of the few people in the US who acts as a consultant for aerated static planning site design and operations planning, and does not represent a specific manufactured system or product, as is the case for most others consulting and promoting ASP composting. He is extremely knowledgeable on the subject.

**Stakeholder Analysis & Involvement:** This project will involve ISWR staff, Terra Firma Organics as the County's current composting contractor, and Golder Associates as the County's consultant for the overall landfill closure, transfer station construction and site re-design.

**Fiscal Impact:** The cost of the proposed work is \$4,965 as indicated in the proposal. ISWR has \$5,000 in its approved FY2017 professional services budget for compost program planning, and the Teton Conservation District recently approved a grant application for compost planning services in the amount of \$2,500. The Teton Conservation District grant could be applied to this project cost.

**Staff Impact:** Staff will be involved throughout the project to provide information to O2 Composting, in addition to ensuring adherence to the proposed scope of work and budget.

**Legal Review:** Gingery.

**Staff Input / Recommendation:** Staff recommends approval of the O2 Composting proposal for concept level composting facility site design and regulatory review.



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**Attachments:** O2 Composting proposal.

**Suggested Motion:** I move to approve the compost site design proposal from O2 Composting in the amount of \$4,965.00.



September 24, 2016

Heather Overholser  
Teton County Integrated Solid Waste and Recycling  
PO Box 9088  
Jackson, WY 83002

Re: O<sub>2</sub>Compost Proposal for Concept Level Compost Facility Design and Regulatory Review

Dear Heather:

Thank you for requesting our assistance to develop a concept level design for a full-scale aerated compost facility for Teton County, Wyoming. We understand that your goal is to construct and operate a compost facility that is suitable for processing yard debris and commercial food waste, and potentially domestic pet and wildlife mortalities.

We understand that the County's compost facility is operated by an independent contractor (Terra Firma Organics) and is currently undergoing construction to exhume and relocate municipal solid waste from beneath the site to another area of the County's landfill. The reclaimed area will be reconfigured for the purpose of composting using aeration as your primary means of process management.

The objective of this project is to provide a site plan that can be used to guide site development. The proposed scope of work includes the following:

- Review the pertinent solid waste / composting regulations;
- Conduct an evaluation of needs and develop a project strategy and timeline.
- Conduct a mass balance analysis to estimate the volumes of raw materials received; bulking agent requirements and finished compost produced;
- Prepare a concept level site plan that illustrates: receiving and processing areas; storm water and leachate management systems, electrical power and water delivery systems, etc.; and
- Summarize our findings from the above work tasks in a brief project report
- Provide assistance to the County to develop a Request for Proposals (RFP) for contracted site operations.

### The ASP Method of Composting

Our primary goals in designing compost systems are to:

1. Protect surface and ground water resources;
2. Avoid nuisance impacts from odors, flies, rodents, birds and larger wildlife; and
3. Produce a high-quality finished product to use for municipal projects and/or sell to landscapers and home gardeners in the region.

The method of composting that O<sub>2</sub>Compost subscribes to is referred to as Aerated Static Pile (ASP) Composting. This simply means that we induce airflow through the mix of materials using electric blowers that are operated by timers – we do not turn the pile during the first 30 days of composting.

ASP composting was originally developed by the U.S. Department of Agriculture in the mid-1970’s and is used throughout the country to process a wide variety of municipal organic waste materials. The ASP method is ideal for composting green waste, livestock manure, food waste materials and animal mortalities (small and large).

With aerated composting, we maintain aerobic conditions throughout the compost pile and are able to manage pile temperatures. This, in turn, expedites the composting process and yields a high-quality compost product that is effectively free of pathogens, parasites and weed seeds. By composting in this manner, we are able to mitigate offensive odors and flies, improve the aesthetics of the waste handling area, quickly produce a superior product, and minimize your operating cost (i.e., reduced labor, fuel and equipment time).

This method of composting is also effective in very cold climates, as evidenced by a long-term pilot study that O<sub>2</sub>Compost completed in 2008 – 2010 with the Onondaga County Resource Recovery Agency (OCRRRA) in Syracuse, New York.

### Project Budget

The estimated cost for providing these Phase I services is \$4,975, as detailed in the Table 1, below.

<b>Teton County Compost Facility, Jackson, Wyoming</b>					
<b>Concept Level Compost Facility Design</b>	<b>Personnel</b>	<b>Rate</b>	<b>Hours</b>	<b>Cost</b>	<b>By Task</b>
<b>Proposed Budget Estimate</b>					
Task 1 - Review Pertinent Regulations	P. Moon	125	1	125	
	H. Ruppert	95	4	380	505
Task 2 - Conduct a Trial Mass Balance Analysis	P. Moon	125	2	250	
	H. Ruppert	95	4	380	630
Task 3 - Develop a Concept Level Facility Layout	P. Moon	125	8	1000	
	H. Ruppert	95	12	1140	2140
Task 4 - Summarize Findings in a Brief Project Report	P. Moon	125	8	1000	1000
Task 5 - Provide Assistance with Contractor RFP	P. Moon	125	4	500	500
Reimbursable Expenses		LS			200
<b>Total Estimated Cost</b>					<b>\$ 4,975</b>

**Table 1 – Budget Estimate for Concept Level Compost Facility Design**

### Method of Payment

We will submit monthly invoices, along with a short status report that includes a description of work completed, a projection of work for the following month, and attachments (e.g., in-progress site plans, mass balance analyses, etc.). We request that invoices be paid within 30-days of receipt.

## Project Schedule

Our goal is to complete the scope of services by September 30, 2016. My current plan is to be in Jackson, Wyoming starting on Friday, October 7<sup>th</sup> (for personal business), and this will provide us an opportunity to meet and tour the project site with County personnel and other stakeholders, at no cost to the County.

## Project Initiation

You may indicate acceptance of the proposed scope of work and budget by signing where indicated below. We are available to begin work on your project immediately and will strive to be efficient in our use of time and resources. We appreciate the opportunity to submit this proposal and look forward to working with you on this project.

Respectfully Submitted,

Agreed to by:

Peter R. Moon, P.E.

\_\_\_\_\_ Date: \_\_\_\_\_  
Barbara Allen, Chair, Teton County Commission

Peter Moon, P.E.  
President / Principal Engineer

Attest: \_\_\_\_\_ Date: \_\_\_\_\_  
Sherry Daigle, County Clerk