

Oak Lodge Sanitary District
MASTER PLAN COMMUNITY ADVISORY COMMITTEE
Wastewater Treatment Plant Pre-Design Project
Public Outreach Project
Summary of June 9, 2008 Meeting

The June 9, 2008, meeting of the Oak Lodge Sanitary District Master Plan Community Advisory Committee (MPCAC) convened at 6:00 pm in the Conference Room of the District Administration Building at 14611 SE River Rd, Milwaukie, Oregon.

Committee members attending this meeting were Matt Anderson, Tom Foeller, Jerry Foy, Thelma Haggemiller, Greg Leedy, Myron Martwick, Sylvia Milne, Bob Murch, Margaret Pritchard, Leah Robbins, Henry Schmidt, Brad Smith, Charlie Stephens, Leonard Waldemar, and William Wild attending as representative from the District Board of Directors.

No members were absent.

District staff members attending were J. Michael Read, General Manager of the District; Brett Arvidson, Manager of Planning and Engineering; Dave Benfield, Operations Manager, Aric Osterlund, Operations Coordinator, and Kay Deines, Administrative Support Specialist.

Consultants attending were Clark Worth, Barney & Worth, Inc.; Michelle Burkhart, CH2M Hill Project Engineer and Treatment Systems Engineer; Dave Green, CH2M Hill Principal-in-Charge; and Jean von Bargen, Michael Willis Architects.

Members of the Oak Lodge Sanitary District Board of Directors attending the meeting were Paul Savas, President of the Board; David Seigneur, Jim Martin and Doug Woods, members of the Board of Directors; and William Wild, Board representative to the MPCAC.

J. Michael Read, General Manager of Oak Lodge Sanitary District, called the meeting to order at 6:00 p.m. and asked those present to introduce themselves to the group.

Following self-introductions, Clark Worth discussed the Public Outreach activities taking place as part of this project. He described the new page on the District's website that is dedicated to the MPCAC and the Treatment Plant Pre-Design project. Clark discussed important features on web pages that create a site that is easily navigated and readily used by the public, and encouraged the Committee members to visit the District's website if they had not already done so, and to think about what they liked about the site and what they would like to see added or changed. Clark discussed the quarterly newsletter and possible changes to that publication. Clark informed members that there is a green sheet included in the handouts for tonight's meeting. He requests that the members put their comments, suggestions, and advice on the website onto that sheet and submit it to District staff.

Clark led further discussion on the website. It appears that most of the attendees today have at least visited the website, and several use it regularly. Jerry Foy reported that he used the site to keep up-to-date on the Master Planning process, allowing him to avoid using much paper as he could review information on the website. Henry Schmidt suggested that District staff be interviewed to find out what questions and issues they are asked about frequently and consider

their responses in determining web page content. Henry also asked that information on public and private responsibility for lines be included on the site. Tom Foeller suggested that the mapping program and the information used by District staff be included. He feels that this information would be of great interest to the public. Brad suggested that the FAQ section be updated. William Wild suggested that the information be changed and updated regularly to keep the content fresh and interesting.

Clark also discussed the newsletter, and currently accepted Best Practices for designing a newsletter. He explained that it is now possible to print a full-color publication for about the same price as the way the newsletter is currently produced – with only two colors. Besides a full color publication, other MPCAC member suggestions were:

- More frequent publication in order to keep the information fresh and current.
- Reduction of repetitive articles.
- Inclusion of current information from professional trade journals.
- Interesting facts from the community, not necessarily related directly to sewer, storm, or drinking water.
- Readers enjoy the cartoons that have been included in the newsletter.
- Community news and information, such as that in the City of Milwaukie Pilot. The public enjoys reading community oriented news.
- Community identity information – areas, neighborhoods, local issues and how they relate to wastewater and surface water services.
- Continuing articles and news from one publication to the next to develop interest in reading the entire article and looking forward to the next issue.
- Special newsletter dedicated to the Master Plan and Treatment Plant Pre-Design project, informing the residents of decisions once the Board has decided which process to adopt and construct.
- Overall water articles showing the connection between all water issues, not separated into potable, waste, and storm water.
- Some graphic tie in between the website and the newsletter, acknowledging the need to avoid trying to tie the two too closely together.
- Remember that this publication serves two separate Districts, and half of the publication belongs to Oak Lodge Water District. Perhaps patterning the two subjects after the two District's websites will help to make the difference more obvious.
- Hold discussions on changes that could be made to the newsletter with Oak Lodge Water District staff and Commissioners.
- Stress that pharmaceuticals should not be flushed into the sanitary sewer system, return them to the pharmacy for proper disposal.

At 6:40 pm Clark turned the meeting over to Michelle Burkhart and Dave Green of CH2M Hill to describe the three alternative treatment processes and facility maps as presented to the Committee at the May 20, 2008, meeting. She reviewed the process types, the cost comparisons between the alternatives (which do not take into account those facilities common to all of the process such as the headworks and inflow pump station), and the opportunities for phasing of construction.

Those alternatives are:

1. Alternative No. 1: Optimized Master Plan Alternative. Utilizes Conventional Activated Sludge technology, with chemical treatment (polymer and metal salts that are used in potable water treatment) added during peak flows. It has the smallest footprint of the three alternatives. These are proven and reliable technologies.
2. Alternative No. 2: Conventional Activated Sludge (CAS)/Split Flow using Membrane Bio Reactor (MBR) filtration to the side. This alternative has two separate trains of CAS treatment allowing for ease of maintenance and adjustment to the change of flows and the very definite differences in the wet and dry season influent to the plant. Once a supplier for the MBR equipment has been selected, the District will be tied to that supplier for replacement membranes. It also reuses the most existing facilities.
3. Alternative No. 3: Cannibal System. This alternative has the largest footprint of the three, is a robust treatment process allowing for ease of treatment during both wet and dry seasons and during peak flows. The treatment system is proprietary, requiring purchase of a license to use it. This is a one-time payment and the license will not expire. It is a variation of CAS using a long term process resulting in a drastic reduction in the amount of biosolids to be hauled away and land-applied. This reduces truck traffic and fuel costs. Cannibal is a new and cutting edge technology, but one that CH2M Hill staff is very comfortable with and confident in using.

Discussion followed on the various attributes of each, with most of the discussion centering around the Cannibal System as it is the newest proposal, and was not considered in the 2006 Master Plan process.

Questions and comments on the Cannibal System and other Alternatives included:

- Flexible and robust treatment system. Margaret Pritchard, who worked on the design for the first “cannibal” system, which treated waste from a slaughterhouse, stated that this treatment system is capable of handling wide ranges of types of quality of influent without disrupting the treatment process.
- Where does the mass go if there is so much less sludge produced? Michelle explained that “mass” does not disappear. There are two processes at work. One is that “trash” is screened out with the grits using a fine screen drum resulting in a product that resembles wet dryer lint. The screenings are removed to a landfill. The second is that while the influent is in the Cannibal tanks it is subjected to environmental changes produced by mixing, sitting still, or aeration of the sewage to encourage breakdown and cannibalization of the bacteria by more bacteria, and then is mixed back into the treatment process for further breakdown. The bacterial breakdown results in CO₂ and other gasses. This results in a much reduced biomass, down to as low as 1/10 of the amount produced by CAS technology.
- Comparison of energy costs between the Alternatives. Michelle reported that CH2M Hill staff had compared the energy costs between the alternatives at the current \$.09/kwh and an estimated energy cost increase to \$.15/kwh and found that the three Alternatives came out about the same for energy costs. These costs were sometimes in different places, but the processes, such as Cannibal, that use more electrical energy tended to use so much less by not having to digest solids, run primary clarifiers, or haul biosolids by truck, that they saved enough to offset the electrical costs.
- What do the Board and Staff members that visited the Peru, Indiana, Cannibal system treatment plant have to report? Those making the trip to Peru, Indiana, to visit their Cannibal system treatment plant were: Brett Arvidson, Manager of Planning &

Engineering, and Aric Osterlund, Operations Coordinator, to represent District staff; Directors Woods and Wild as representatives of the Board of Directors; and Director Wild to also serve as a representative of the MPCAC. In addition, Michelle Burkhart and Rich Frankenfield of CH2M Hill accompanied the District representatives on the tour of the treatment plant.

Brett reported that the plant they visited serves a population of 13,000 people in and around the city of Peru, Indiana. The city has a combined sewer system (CSO), and the plant is constructed to carry a flow of 8 mgd. These factors differ from the Oak Lodge Sanitary District system which serves a population of approximately 32,000, has a separate sanitary sewer system, and the plant would be designed for about 4.7 mgd. Also, the plant operating in Peru is very lightly loaded, operating at only around 30% to 40% of its capacity. Michelle screened photos of the plant and Brett explained which portions of the process they showed.

- William Wild and Doug Woods – Board representatives on the Cannibal plant tour. William stressed that he went looking for odor, making an effort to find some odor. He said that he could not find any odor. He was struck by the lack of odor. Most of the noise that he noticed was motor hum or the sound of aeration, and he could not hear that if he was any distance at all from the treatment system. Doug added that he was impressed when the Superintendent of the treatment plant told them at the outset of the tour that the first thing he said when he was hired to run the plant was that it would not work. He stated that he has completely changed his mind and stated that the system does work, and works very well.
- How large would a Cannibal plant on the Oak Lodge Sanitary District site be in comparison to the Peru plant? Brett indicated that it would be smaller because the design mgd is only a little over half the design of the Peru plant, however it would not be much smaller than the Peru plant.
- Would a Cannibal plant be neighbor-friendly? Michelle explained that each Alternative would have odor and noise attenuation technology, and landscaping and planting can be used to provide visual screening. She stated that all of the Alternatives can be described as neighbor-friendly or unfriendly depending on which neighbor you happen to be, and where you are standing. She noted that the Cannibal tanks do not go septic, and, while there is some odor, the tanks would be covered and the odor attenuated.
- How do the Operators feel about the Cannibal process? Aric Osterlund stated he is concerned about the low loading in the plant in Peru as it does not reflect the situation in Oak Lodge. Aric stated that the loads at the Peru are approximately ¼ to 1/5 the loading rate in Oak Lodge. The Operators are in favor of conventional technology because they already know it will work, and if Alternative #2 is selected with the split flow to the MBR side train they are sure that they can meet permit requirements even with the situation here where the winter and summer are two completely different treatment situations. He is not sure if the Cannibal process system can meet all of the TMDLs that are likely to apply to the District's effluent in the future.
- Temperature and Pharmaceutical questions. Brett and Michelle indicated that adjusting the aeration during operation could control some of the temperatures. They feel that a Cannibal system could meet temperature TMDL requirements. Regarding pharmaceuticals, the Cannibal system seems to be the best way to deal with them as they cannot be screened or filtered out, but the long biological treatment time does appear to break down the pharmaceuticals.

Dave Green then introduced Jean von Bargaen, an Architect with Michael Willis Architects, and the person who has worked on production of drawings that represent how various structures would affect the houses of Greg Leedy and Brad Smith, members of the Committee. Dave and Jean described the methodology and how they determined which scenarios would best demonstrate future views of the treatment plant area from both homes.

The Cannibal System layout most impacts Greg Leedy's house. There would be a large aeration basin in the field below Greg's house, with two possible layouts suggested. One is a large square basin giving a wider tank to look across but leaves one end of the field empty, and the other is a longer and narrower tank that would cross more of the field but would not be such a large square to screen. Jean von Bargaen expressed her belief that it would be possible to screen most of the view of that large aeration tank with berms, grading, and planting of various types.

Jean von Bargaen explained that their goal is to screen parts of the plant through planting taller trees throughout the entire treatment plant, providing view corridors, and screening views of treatment processes without causing homeowners to feel hemmed in with tall trees. The staff has expressed a desire for this and a willingness to do the extra work necessary to work around plantings. The ability to plant large trees throughout the plant area will also give the area a view more resembling a neighborhood from the hillside homes above the plant. They would also like to use native plants within the plant as much as possible within and around the treatment plant.

Brad Smith noted that Alternatives 1 and 2 show large tanks and treatment facilities in an area that currently, from his home and yard, gives him a view of the wooden train trestle crossing the river, and a grassy field. He expressed his displeasure at having a tall warehouse-like building housing the plant headworks adjacent to his home on one side and large tanks on the other – both of which would be a stark contrast to the current conditions and views.

Leonard Waldemar expressed his opinion that the Cannibal plant layout would provide screening for the facilities and, at the same time, fewer structures because no primary clarifiers are required.

At 8:05 Michael Read stated to the MPCAC that the Oak Lodge Sanitary District Board of Directors would like a "sense of direction" from the Committee. He explained that until directions could be given to CH2M Hill for the type of treatment plant to design, then progress was stalled on the project. The engineers can go no further until they know what the District would like them to design. He asked that each Committee member speak in turn to give their opinion on the information presented to them to date.

In the order that the members were seated around the table, here are their comments:

Charlie Stephens: Charlie stated that he had no comment to make at this time as he was digesting the information he received tonight as well as the materials from the previous meeting.

Leonard Waldemar: Favors Alternative No. 1, with the plan utilizing the ability to phase the reconstruction over as long a period as possible. His second choice is Alternative No. 3.

William Wild: Defer comments due to his status as a member of the District's Board of Directors.

Margaret Pritchard: Favors Alternative No. 3, with the caveat that the Board should negotiate a guaranteed percentage reduction of solids in return for the \$1.8 million license fee. She asked who holds the patent, and Michael replied that Siemens holds the patent, and that the license fee gives the District the right to use the process in perpetuity. She considers a reduction to 3% an insufficient guarantee. Margaret stated that she likes the flexibility of the Cannibal system, in addition to the reduced hauling expenses resulting from this treatment method.

Tom Foeller: Favors Alternative No. 3 because he feels it best meets the criteria of the MPCAC, and probably has the lowest Present Worth and long range rate impact. He has major concerns about the impact of the large aeration basin on plant neighbors. Tom would like to see a requirement that the landscape architect work individually with the neighbors to develop the best screening possible without blocking views off of their properties. He expressed sensitivity to the concerns of the Operations staff regarding a relatively new and untested technology, but referred to Doug Wood's recounting the experience of the Peru, Indiana plant superintendent.

Henry Schmidt: Expressed concern regarding possible problems during construction of Alternative No. 1. Henry favors Alternative No. 2 because of the dual train concept and the flexibility allowing maintenance of the treatment plant. He likes what he sees of the treatment flexibility of Alternative No. 3. He also expressed concern about operation of the plant during high flows for Alternative Nos. 1 and 2. Henry also expressed his concerns about a possible future pipeline carrying solids or flow for treatment from Oak Lodge to a Clackamas County facility. He also stated that he has heard rumors of some flow from Kellogg Treatment Plant being piped to Oak Lodge. He would like staff and the Board to have a conversation with Clackamas County regarding those possibilities and the status of wastewater treatment in the County. Michael Read stated that he would not want to take anything off of the table, however he recommends the District proceed in such a way as to ensure that the wastewater treatment plant could adapt to a request to accept additional flow in the future. Henry also took exception to the idea that Oak Lodge is "built out". He pointed to the common occurrence these days of a single home being removed and the property sub-divided into 2 or 3 lots with new homes on them, and also pointed out the possibility of the McLoughlin Blvd corridor becoming an area of high-density housing.

Greg Leedy: Greg expressed his concern that the Cannibal system process was not suggested during the first iteration of the MPCAC in 2006. He expressed his displeasure that if this alternative is selected that he would have a large sewage aeration basin behind his house rather than the field with ducks and geese in it that he sees now. Greg is in favor of Alternative No. 2 because of the dual train and flexibility of treatment process for the two very different seasonal flows generated within Oak Lodge Sanitary District. His second choice would be Alternative No. 1 because of its smaller footprint.

Brad Smith: He expressed his displeasure at the idea of having a warehouse type of building immediately adjacent to his house and treatment facilities blocking his view of the train trestle and the fields next to it. Both Alternatives Nos. 1 and 2 would negatively impact his home in both of those ways. He is definitely in favor of Alternative No. 3.

Thelma Haggemiller: Thelma is in favor of Alternative No. 3. She pointed out the steady increase of energy/oil costs, and wants the Board to be very cost conscious and consider the high price of hauling biosolids from the treatment plant. She expressed concern over the large

footprint of the Cannibal system plant and the visual impact of the large tanks necessitated by this process. Thelma suggested the possibility of some sort of cover for the aeration basins that could have sod or wild flowers or something like that on top of it to mask them.

Leah Robbins: Leah expressed her strong favor of Alternative No. 2. She noted the maintenance and treatment flexibility offered by the two treatment methods and the filtration offered by the MBR portion of that Alternative, the smaller footprint of the plant, and smaller carbon footprint as some of her reasons.

Jerry Foy: In favor of Alternative No. 3, with the recommendation that a grass-topped cover be placed over the basins. He stated his concern over the proprietary system and that he worries over being locked into a single supplier for equipment. Jerry also stated that he has some confusion over what has been stated regarding energy use, he is not sure if it is a lower or higher energy-using facility.

Matt Anderson: Matt is leaning towards Alternative No. 3. He likes what he has seen regarding the lower Present Worth and costs, and that the treatment process looks like it will work for the District in the flexibility of the process.

Bob Murch: Bob expressed his gratitude to the other members for stating his own thoughts so well, and stated that he is in favor of Alternative No. 3. He shares concern over use of a relatively new technology, and would like to advocate for an ongoing conversation with the designers/owners/operators of the other Cannibal system plants in existence. His second choice is Alternative No. 1.

Myron Martwick: Myron stated that he generally favors Alternative No. 3. He shares concerns over the possibility that this is unproven technology, and expressed his desire that strong contracts and guarantees be negotiated to protect the District's interests.

Sylvia Milne: Sylvia stated that she left the last meeting feeling that Alternative No. 3 was definitely the best option. After listening to the concerns of the Operations staff and Greg Leedy, she is less strongly in favor of it, but it is still her first choice. Her second choice would definitely be Alternative No. 2. Sylvia is concerned that the District constructs the very best treatment plant that we can with the resources available.

Clark Worth then briefly summarized the Members' statements. He noted that although many people spoke in favor of Alternative No. 3, all of them had caveats relating to the proprietary system, new technology issues, Operations staff concerns, and the visual impact on neighbors of all three Alternatives. Some members were strongly in favor of Alternative No. 2, and they mainly stressed the use of the MBR system that would allow flexibility in treatment methods and the dual train conventional treatment system that would allow much easier plant maintenance than is now possible. He then asked Board member William Wild, the Board's representative on the MPCAC, if he had any comments.

William Wild: William expressed his concern over the sole source provider issue, but pointed out that once an MBR process was chosen we would be locked into that provider as they would be the only source for replacement membranes. He stated that he went to view the Cannibal system plant in Peru, Indiana, very much convinced that Alternative No. 2 was the best. He

came away very impressed with the flexibility and quality of treatment allowed by the Cannibal system.

Clark Worth then asked if there were any further questions from the Committee members.

Leonard Waldemar asked for an explanation of the question of sole source providers as it relates to the MBR and the Cannibal systems. Dave Green explained that the MBR system chosen would dictate the provider needed to provide replacement membranes. When the Cannibal system license is purchased, what is purchased is the process, not the equipment. You could go to different suppliers for equipment to operate the process. The license purchased is in perpetuity, it does not have to be re-purchased in the future.

Greg Leedy asked that a neighborhood meeting be convened for those residents that are located near, or overlook, the treatment plant.

Thelma asked if there are replacement items such as the membranes in the MBR system. Michelle Burkhart explained that the entire process is mechanical, and does not require expensive and periodic replacement of anything like the membranes.

Henry Schmidt asked that if Alternative No. 3 is chosen, that the consultants look into covering the basins with a vegetated cover.

Charlie Stephens weighed in with a question regarding the arrangement of the facilities in Alternative No. 3 so as to have less impact on the neighbors. He requests that the consultants review the facilities placement with that in mind. Michelle Burkhart noted that the Alternatives as distributed tonight are initial presentations; they are not final and are fairly cartoonish. Michael noted that the drawings show things much more starkly than the finished plans will, however, without more information and more direction, it was not possible to provide a more finished product. Once a decision has been made, then the Board will provide direction to the Consultants from CH2M Hill regarding what they will want to see next.

Clark Worth reminded members that the next meeting of the MPCAC will be on Monday, June 24, 2008, at 6:00 pm in the District Conference Room.

Tom Foeller reminded everyone that there is a SWM Facilities and Projects tour taking place Thursday night, June 12, leaving from the Administration Building at 5:30 p.m.

Paul Savas reminded everyone that tomorrow night is the regular Oak Lodge Sanitary District Board of Directors meeting and invited everyone to attend.

Tally of Treatment Plant Alternative Preferences by member:

MPCAC Member	Alt. #1	Alt. #2	Alt. #3
Charlie Stephens			
Leonard Waldemar	1		2
Margaret Pritchard			1
Tom Foeller			1
Henry Schmidt		1	2
Greg Leedy	2	1	
Brad Smith			1
Thelma Haggemiller			1
Leah Robbins		1	
Jerry Foy			1
Matt Anderson			1
Bob Murch	2		1
Myron Martwick			1
Sylvia Milne		2	1
Tally	1 First choice, 2 second choice	3 first choice, 1 second choice	9 first choice, 2 second choice

The meeting adjourned at 8:40 pm.