



Sonoma County Community Development Commission
Housing Authority • Redevelopment Agency
1440 Guerneville Road, Santa Rosa, CA 95403-4107

Monte Rio Wastewater Task Group

Meeting Notes

April 19, 2010

6:30 pm

Monte Rio Community Center

Introduction

Task Group Members Present:

Dan Fein, Ken Wikle, Jim Quigley, Lee Torr IV, Rich Holmer, Chuck Burger, Gary Getchell, Steve Mack, Preston Smith, Rene DeMonchy.

Task Group Members Absent:

Doreen Atkinson, Suzie Baxman, Supervisor Efren Carrillo

Staff Present:

Kathleen Kane – Community Development Commission (CDC)
Jane James – Transcriptionist

Other Speakers:

Tristan Bounds, Orenco Systems, Inc.
Jeff Loe, Lescure Engineers, Inc.
Rick McCauley, Superior On-Site Solutions, LLC
Richard Dinges, Lescure Engineers, Inc.
Dan Wickham, SludgeHammer Group, Ltd.

Review and approve prior meeting notes

Notes of 3/15/10 meeting were accepted as written.

Presentation – New Technologies

Tristan Bounds of Orenco Systems made a presentation about the Orenco Effluent Sewer and AdvanTex treatment systems.



Jeff Loe of Lescure Engineers made a presentation about wastewater treatment systems installed at a riverfront mobile home park and at Jordan Winery and Vineyards.

Rick McCauley of Superior On-Site Solutions made a presentation about the Hoot aerobic treatment system.

Richard Dinges of Lescure Engineers made a presentation about producing disinfected tertiary effluent from secondary aerated lagoon effluent.

Dan Wickham of SludgeHammer made a presentation about the SludgeHammer system that uses an aerobic bacterial generator.

Copies of all presentations are attached.

Q & A

Lee Torr IV asked about costs for the Orenco systems. Tristan Bounds clarified that the pumping cost would be \$1/month. The difference between effluent sewer and grinder systems is horsepower for pumps (.5 HP and 2 HP, respectively). Grinder pumps use more electricity and are therefore more costly, and life expectancy of the 2 HP pumps is shorter at 8 yrs vs 25 year life expectancy for .5 HP pumps. But the pump that can be used will depend on specifics of situation.

Rene DeMonchy asked Lescure if technology from Orenco and SludgeHammer systems works so well to clean up effluent, why did Graton do treatment ponds instead? Jeff Loe and Richard Dinges clarified that the Graton pond system was existing when they took it over, so they needed to upgrade what was there. The intent with that system and pasteurization for disinfection is for reclaimed water sales. It will be recycled back to user groups. The area is bisected by a flood-prone creek. A berm was recently built higher to keep flood waters out. The effluent is dispersed onto land with redwood trees, and they also have a discharge permit and will sell treated water to the agricultural community. The system is about 120,000 GPD for mostly residential units. The cost to abandon existing ponds and start over with another type of system would have exceeded cost to upgrade existing system. No downtime required during upgrade process. Final total cost not yet known because still under construction.

Steve Mack asked about flooding impact on subsurface drip systems. Will that be acceptable to Regional Board?

Dan Wickham noted that on-site treatment systems can perform as well as Santa Rosa city system, which is allowed to discharge directly into River. So surface discharge should be ok.

Richard Dinges referred back to Stinson Beach system discussed at meeting in March, and the use of an isolation valve that could be closed when a flood was imminent to prevent water infiltration. Saturated soil was an issue there.

Lee Torr IV observed that all systems discussed are NSF 40 rated and that's good, but can't get approval in Monte Rio if disposal aspect is below 10 year flood plain. Has that requirement changed? He noted that community was told they weren't eligible to do surface discharge.

Steve Mack clarified that, because the on-site system is doing the treatment, rather than the leach field, it could be allowed.

Chuck Burger asked all presenters several questions that led to the following responses:
The standard footprint of their systems without dispersal fields is the size of septic tank. It was noted that all systems have roughly same size tanks.

In Sonoma County all of these systems would require 2 tanks.

All systems can go under water completely – all water tight.

Earthquake impact could break collection system, disrupt power, and cause failed embankments.

Drip tubing is very flexible. If installed in a field area is flexible, heavy machinery should not be driver over it; it won't break, but it might get pinched and cut off flow. Drip tubing is buried 6-10 inches, so you'd have to compact it pretty hard before you would cause damage to it. Normal yard usage is fine. No horses or large cattle or tractor tires with cleats. Lawn mowers ok.

Abuses of systems, such as someone dumping chemicals into the system, can be identified fairly easily in each property has its own tank, which has a structure that the solids settle and float out, so you could note abuses by change in that structure if you have historical info on the system. With gravity or grinder systems, you don't have as much opportunity to identify such issues. For larger centralized plants, periodic abuses would probably get diluted and not be noted.

Dan Wickham noted that a community can have centralized management over a decentralized system. The community needn't have a centralized system.

Lloyd Guccione noted that the presentations were good. He asked if communities that are hooked up to centralized systems might want to go to their system, and what would be the cost to the community to do that? Presenters responded that some have looked at the alternatives, but if they have a system that is working, there wouldn't be a reason to incur the cost to replace. If they have a failed system, they might want to look at these. Mr. Guccione noted the Forestville system as an example, that is antiquated and needs constant maintenance. He asked if it might be the cost effective in such a situation to make a change. Presenters agreed that it might be, but that many times it is not up to them to make such a decision, which is sometimes complicated by CC&Rs, homeowner association boards, etc.

Lee Torr IV stated that he thinks there is now an opportunity to advance to new technologies that weren't available before. The Sweetwater property on top of hill was never studied (400 acres with 700 ft elevation change at top and 400 ft at lower part). It has shale ground, not best, but didn't have option of drip irrigation before. He noted that the effluent needs to be moved as far from River as possible.

Dan Fein noted that most of the lots in Monte Rio don't have enough space to adequately dispose of water and asked if there are decentralized treatment with centralized management examples? Jeff Loe noted that, similar to Oddfellows, Monte Rio could have STEP and STEG system with operation done by wastewater district. A lot of monitoring can be done telemetrically. It is preferred to have a central entity operating a system.

Dan Fein asked if, on systems like HOOT system, are there economies of scale for communities? Presenters responded yes, a community could have multiple houses on one

larger system with equalization tank. If 2000 home community, could design it for clusters of connections. Economies of scale always work.

Dan Fein asked about the life expectancy of these systems. All presenters agreed that the septic tank will last 30-40 yrs. Dan Wickham noted that an aerobic tank will last much longer. Individual components have different life expectancies (like pumps, floats, level detectors, controls) but smaller cost than replacing system. Also comes down to level usage. Those parts will wear out faster.

Lloyd Guccione asked if an education program goes along with installation of system? Are people with tanks more careful than those on central system? What kind of training is given to homeowner so they get the optimum potential of system? Presenters noted that every NSF system must come with homeowner's manual. Booklet shows operation of system, copies of permit, drawings, pictures of construction site. Mr. Guccione ask about information regarding care of system, what types of detergent to use, etc? Presenters said they provides a list of "dos and don'ts". Homeowners pay attention because it's a big expense to have a new septic system installed and they want it to last a long time. Also, an operation and maintenance manual is available, but some systems require a professional maintenance provider to maintain.

Rene DeMonchy asked if each property that has one of these systems with effluent being treated to a beneficial level and then pumped somewhere, presumably uphill, for disposal, what infrastructure is needed - a pump in each unit up to woods, or into a centralized area, and then uphill? Presenters responded that pressurized systems at the lot with a pump would be used to pump to central location for secondary treatment, then pump from there to disposal area. Could use more than one dispersal area, and can "gang" the technologies as needed for a specific situation.

Plan for next meeting and closing

Topic: Reflect on what heard at last 5 meetings and begin planning for summer forum 5/17/10 and 6/21/10, 6:30 pm, Monte Rio Community Center

Adjourn

Meeting adjourned at 8:55 pm.