

Oregon Country Fair LUMP meeting

March 13, 2018. 7:00 – 9:00 PM.

Dennis Todd, Kory Russel, Shane Harvey, Brent Hefley, DJ Rogers, Bear Pitts, Thom Barr, Ann Rogers, Jain Elliott (scribe). Gene Ehrbar (phone). Steve Wisnovsky (go to meeting)

Special guest: Kory Russel, UO Landscape Architecture and Environmental Studies, discussing human waste treatment technologies in the developing world.

Kory worked in Haiti with thermophilic composting of human waste with money from the Gates Foundation. Container based sanitation moves human feces without water. Worked in Peru, Kenya, Ghana, Madagascar, UK. Now working with World Bank to scale up. These processes serve 100,000 to 120,000 people on a daily basis. Hoping to find innovative financing. In Haiti they collect, move off-site, use minimal mechanics to get compost bins over 150 degrees to meet WHO standards. Cured 3 to 6 months, yield nice soil product. Kenya uses this method, and then black soldier-fly larvae that eat the waste, then they dry & boil the larvae and sell them as high quality chicken feed. Putting feces through a solar concentrator sterilizes them. In the UK they provide toilets to high end festival that encase feces in biopolymer and then either compost them or use for bio gas (& then compost). Refugee camps on the Kenyan border are one of the largest groups. There's no lower limit for thermophilic use—a 5 gallon bucket is fine as long as the temperatures are up. Ascaris eggs are the main concern, but high temperatures will kill them as easily as they kill *E. coli*. The big reason to separate urine & feces is smell—not an issue with biopolymer encasing. Urine that sits over time sterilizes itself with ammonia. Logistically it's more of a problem, because it sloshes, and it has more volume. Separating it removes valuable nitrogen and phosphorus. Double vault composting toilets in national parks really aren't composting—they're drying out, and the bacteria die over time because there's not enough moisture for them. Our infrequent use pattern at the Fair isn't as much of a problem as pharmaceuticals and heavy metals. Caffeine is coming out in high quantities in the U.S. Bio char—burning with low oxygen—binds the nutrients and heavy metals, and fixes the carbon because it's at 400 degrees Celsius. Increases soil moisture retention. Biomass Controls (also works in air filtration) can process the waste from 10,000 users per day, eventually using its own gas to power itself, but the units are extremely expensive. Came out of the Gates Re-Invent the Toilet Challenge. Various cover materials take up various amounts of space—lime the least, leaves the most. Gray water can be put through a bio sand filter first to kill pathogens. Suspended solids clog the filters, but in the Third World they're going 5 to 6 years between backwashing them. Schmutzdecke microbe layer on top may need 30 days to mature before it's fully functional in decomposing solids and dissolved material. Needs to not dry out. A Living Machine system, like the one at the Hassalo on Eighth apartment complex in Portland, might be right for our Community Center. Resource recovery within wastewater systems has been slow to develop on anything but a really large scale. Small scale biogas digesters work best if the gas is being used locally. Generators at the wastewater treatment facility in Eugene use bio gas, but it's so corrosive that it goes through diesel engines quickly. Really large dairy farms have enough scale to be able to refine it twice. We were extremely excited about this presentation.

Gene Ehrbar from Cartography on mapping & green zones: Getting an understanding of what the problem is will help us come up with solutions we want in order to be able to designate on a map the zones that we want to protect during the Fair. Ideally we'd have a lot of people able to contribute data on where the sites are. Dennis: Yes, and we want to have the info accessible, so that Shane could go around and enforce it, with data to back him up. We do have some areas that have been designated in prior years. We have new camp areas where we can designate areas before the campers come in and we have existing camp areas with traditional, but not yet designated zones. Gene: What are their sizes?

Would a dot work, or do we need a shape? Dennis: Both. Some are just a square yard, others (such as the Unorganized Territory) many acres. Gene: The former will be easier to designate. Volunteers describing polygons is more challenging. How many of these sites are there? Dennis: Maybe a dozen now, many more if people knew the option was available. Some areas will need a really specific boundary. Gene and Bear will be in touch on how they can start gathering data, writing for the Fair Family News, setting up workshops, analyzing what we get.

Announcements: Shane says a lot of cutlery still needs to be washed next weekend. Ann says Johnny Lake's doing another learning opportunity, possibly on April 7th.

Minutes of last meeting approved with a pending edit: DJ will email Dennis.

Staff reports (Shane): We closed on Valhalla Monday, got the keys this morning. We can have a tour next month. We bought a new tractor. Road work is planned. Coordinators meeting at Hop Valley March 24th at 2:00.

Old business

- Investigate restrictions on expanding camp sites

- Land use issues on newly-acquired winery property

- Compose text for path signs: Indian Creek, Volunteer Bridge

- Update on-line LUMP manual, consider printing hard copy

- Work with Path Planning, Stewardship in educational outreach, projects for 2018 Fair.

Next meeting Tuesday, April 10, 2018 7:00 OCF office.

2018 meeting schedule (Apr 10, May 8, Oct 9, Nov 13)

Work plan: April: Plans for 2018 Fair