



## Cedar Hills Regional Landfill Community Meeting Notes April 13, 2016

King County Library Service Center • 960 Newport Way NW, Issaquah

### **In Attendance**

#### ***King County Solid Waste Division staff***

- Scott Barden, Interim Assistant Operations Manager
- Laura Belt, Engineer III
- Bill Berni, Operations Manager
- Toraj Ghofrani, Engineer III
- Kathy Hashagen, Facilitator
- Kevin Kiernan, Assistant Division Director
- Matt Manguso, Communications Specialist
- Polly Young, Program Manager

#### ***Other King County employees***

- Dhillon Darshan, Health and Environmental Investigator II, Public Health
- Reagan Dunn, King County Councilmember
- Marquis Frank, Housing Project Manager, Community and Human Services
- Bryn Vander Stoep, Legislative Aide, King County Council

#### ***Bio Energy Washington (BEW) staff***

- Kevin Singer, BEW Plant Manager

#### ***Interested parties***

- |                        |                    |                |
|------------------------|--------------------|----------------|
| • Mark Blume           | • Sean Kronberg    | • Jesse Rawley |
| • Kim Brighton         | • Barbara Marowitz | • Ian Sutton   |
| • Karen Dawson         | • Jim Marowitz     |                |
| • Barbara Fotheringill | • Leslie Morgan    |                |
| • Edie Jorgensen       | • Dave Prochazka   |                |

### **Welcome and Introductions**

(Kathy Hashagen)

Kathy Hashagen began the meeting by welcoming those in attendance and explaining the agenda before introducing King County Councilmember Reagan Dunn. Dunn then explained he represents District 9, which includes the Cedar Hills Regional Landfill. Dunn expressed his

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thanks to the public for taking an interest in their communities, and told those in attendance that if they have concerns they can either email him at [Reagan.Dunn@kingcounty.gov](mailto:Reagan.Dunn@kingcounty.gov) or by calling 206-477-1009.

## General Updates

(Kevin Kiernan)

Kevin Kiernan thanked Councilmember Dunn for attending the evening and then introduced King County Solid Waste Division employees and Dhillon Darshan from Public Health.

Kiernan then informed those in attendance about how to contact the Solid Waste Division to report a concern. The number to call is 206-477-4466. It is especially important to use this number because that is how SWD logs and documents calls.

Kevin informed those in attendance about an open house the division will hold on Saturday, April 23, to celebrate 50 years of operations at the Cedar Hills Regional Landfill. Neighbors were encouraged to attend.

## Construction and Environmental Monitoring Activities

(Kevin Kiernan)

### Area 7 Cover

The Solid Waste Division is currently operating in Area 7. As the side slopes reach final grade, it is standard practice to put interim cover on the slopes. This cover helps control landfill gas and wastewater. The project was completed in November. SWD will continue to operate in Area 7 for a number of years.

### South Solid Waste Area (SSWA)

The South Solid Waste Area is an old area located in the southwest portion of the landfill that is about 31.5 acres large and was closed about 30 years ago. To make room for the relocation of two stormwater ponds, garbage and soil were removed from the entire area and moved to other areas of the landfill. Excavation of the area was completed in November.

During the excavation, three areas of contaminated soil were discovered. Two areas of the contaminated soil were able to be removed and buried in a lined area of the landfill. (Regulations that were in place when the SSWA was active did not require a liner.) Analysis of the third area of contaminated soil showed that approximately 1,000 cubic yards of soil needs to be transported to an off-site hazardous waste facility. That will happen this summer.

Construction of the two ponds, one for clean stormwater and one for contaminated stormwater, will occur this summer. The ponds will be slightly larger than the current ponds because of stormwater regulation changes.

### Landfill Gas Pipeline Updates

Before discussing the new pipeline, Kiernan gave an update on the existing pipeline, which takes gas from the North Flare Station to the on-site BioEnergy Washington plant for processing. The

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pipeline is tested annually, and the most recent test occurred in December 2015. The pressure testing was conducted using standards set by the American Society for Testing Materials (ATSM). The pipeline passed the test and no leaks were discovered.

As has been mentioned at past meetings, SWD will install a new pipeline to add redundancy to the system. SWD received budget approval for the new pipe in November. The new pipe will be the primary means for transporting gas from the landfill to BEW and the selected route will go around the west side of the landfill but will not encroach on the buffer. Construction of the new pipeline will occur in the summer.

SWD conducted a State Environmental Policy Act process that including public outreach and a chance for the public to comment. Eleven comments were received and SWD responded to all of them. <http://your.kingcounty.gov/solidwaste/facilities/landfill-gas-project.asp>

SWD also submitted an application to the Department of Ecology for a National Pollutant Discharge Elimination System (NPDES) and State Waste Discharge General Permit for the project. This is normal procedure when a project disturbs a certain amount of soil.

The new pipeline will be a 30-inch diameter high density polyethylene (HDPE) pipe buried two to four feet underground. It will operate under a vacuum, so if there were to be any issues it would suck air in, not release gas. A number of monitoring points will also be installed along the route of the pipeline to ensure it is working properly.

The project went out to bid on Monday, April 11, and construction will begin in June with completion expected to occur by the end of 2016 or beginning of 2017. The same contractor doing the stormwater pond construction will also install the new pipeline.

## **Factoria Transfer Station**

SWD is building a new Factoria Transfer Station in Bellevue to replace the existing station. The next phase of that project involves grading the site and moving a large amount of native, clean soil. The soil will be transported from Factoria to the landfill to be used for daily cover. From June-September, SWD estimates there will be about 90 truckloads of soil arriving at the landfill from 7 a.m. to 5 p.m., Monday-Friday.

## **Groundwater Quality**

Every quarter, SWD samples about 45 groundwater wells throughout the landfill to test water quality in accordance with state requirements. Once a year drinking water wells in

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neighborhoods adjacent to the landfill are sampled. Results from the most recent samplings indicate no significant changes. Results from the fourth quarter of 2015 are posted online, and an annual report, completed April 1, 2016, is also posted on SWD's website.

<http://your.kingcounty.gov/solidwaste/facilities/documents/CHRLF-annual-report-2015.pdf>

## **“Overarching” Project (Environmental Control Systems Modification Project)**

The landfill has been operating for 50 years and many of the environmental systems, including landfill gas, leachate, stormwater, and groundwater, were installed 30 years ago in the mid-1980s. SWD continues to evaluate these systems to ensure their integrity. SWD has hired a consultant to look at these systems and identify any needed improvements.

## **Landfill Gas**

At the last community meeting in October 2015, SWD explained it found air leaking into the landfill gas collection system; gas was not leaking out. The system operates under a vacuum. Pulling in too much air can affect the processing at BEW and can also potentially cause a fire. After finding the leaks, two valves were replaced and 20 more will be installed. The older valves are “on/off” but the 20 new valves will be precision valves that allow for better control.

## **Groundwater Data**

Also at the October meeting, SWD discussed taking water samples from a small “perched zone” that is not connected to drinking water or the regional aquifer. The perched zone is more like wet sand, not strictly water, and it has been impacted by past landfilling activities. SWD is continuing sampling of the perched zone through August 2016 and a draft report of the findings will be out by the end of the year. Based on the results of the report, SWD will develop a remediation plan in collaboration with the Department of Ecology and Public Health.

## **Leachate Lagoon**

In 2015, SWD tested the liner in the leachate lagoon. Anomalies were found in four areas. This summer the lagoon will be emptied to learn more about the anomalies. The lagoon was installed in the 1970s.

## **Landfill Site Development Plan**

The current site development plan estimates the landfill reaching capacity around 2027. Landfilled waste can settle up to 20 feet, so it is possible to regain that room. When the current plan was adopted in 2010, SWD did not choose the maximum capacity option. But following the extension of Interlocal Agreements with most cities in King County until 2040, SWD wants to

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ensure it can provide disposal capacity. SWD is looking at preliminary development alternatives, but SWD is postponing the site development plan for at least a year.

## **Operational Activities**

(Scott Barden)

Operational activities this summer will include normal vegetation removal and control, as well as some road maintenance (filling potholes) and fence repairs. Neighbors will be informed about that work.

The pilot project to use compressed natural gas (CNG) to power division trucks has been approved, and one truck will be retrofitted to use CNG. The plan is to get this project started within the next 60 days, and the pilot will be evaluated for three months. The fueling will occur offsite at a private CNG fueling facility.

## ***Question and Answer***

*The following is a summary intended to capture the general content of the questions asked and the answers provided; not a verbatim transcript.*

***When did you start filling Area 7? (Neighbors on the west side expressed concern that within the past year there have been more frequent and noticeable odors like what they experienced when Area 4 was in operation.)***

- June 2010.

***How many years was Area 4 open?***

- Eight years. (*Note: This information was gathered after the meeting.*)
- SWD has made a number of improvements to its operations since Area 4 closed, including how SWD does final closures and improvements to the gas collection system.

***What does SWD do to mitigate odors?***

- SWD seals side slopes of active areas when it reaches final grade, has a gas collection system installed throughout the landfill, and then pulls a vacuum on the system to prevent gas from escaping.

***How is odor monitored?***

- The intent is not to have odor and significant resources are devoted to that end. SWD reviews its environmental controls and monitors 400 points spread throughout the landfill. A landfill gas collection system operates under a vacuum and gas collection is aggressive.

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- Staff perform onsite odor monitoring twice a day Monday-Friday, and once a day on weekends (Saturday/Sunday). Neighborhood odor monitoring is done once a day, Monday-Friday.
- A landfill is an ongoing system constantly being researched and SWD reacts to complaints. SWD is constantly working to continuously improve its operations.
- SWD keeps a log of all calls related to odor and call logs are available to the public.
- There is no machine as capable as detecting odor as the human nose, which is why SWD trains its staff to respond to odor complaints. Odor can be challenging to detect because it is affected by the wind, air pressure, and other factors.

## ***If odor is prevalent, why isn't there 24-hour service?***

- The division is not aware of any prevalent odors. Regardless, someone is onsite 24-hours a day to respond to odor complaints and supervisors are on call 24-hours a day.

## ***Who responded to SEPA comments on the Landfill Gas Pipeline Upgrade Project?***

- SWD assembled a team to respond to the 11 SEPA comments received.
- The purpose of a SEPA is to determine if the project is likely to have significant adverse environmental impacts, and any future growth will require compliance with SEPA.

*Note: To review the environmental checklist for the Landfill Gas Pipeline Upgrade Project, visit: <http://your.kingcounty.gov/solidwaste/facilities/landfill-gas-project.asp>*

## ***Relationship between SWD and Puget Sound Clean Air Agency (PSCAA)***

- PSCAA has not provided SWD with odor complaints, but SWD will reach out to PSCAA to learn its process on handling odor complaints and the frequency at which that agency collects data. SWD will inform neighbors about the results of that conversation.

*Note: Since the meeting, SWD has learned PSCAA is willing to send weekly odor complaints related to the landfill.*

## ***How do you know the same contractor will handle both the stormwater ponds and pipeline projects?***

- SWD included both projects in the same bid package. Contractors had to submit one bid for both projects. The most qualified lowest bidder will be awarded the contract for both projects.

## ***Where will the contaminated SSWA soil go?***



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- The contaminated soil will be transported to a landfill in Arlington, Oregon. The contaminated area, or “hot spot” has been contained to prevent further contamination and will be kept contained.
- Garbage in that area was placed in the 1970s when regulations did not require landfill liners.
- The contaminants soaked into the soil about 10-20 feet.

## *What is the most current information on the “perched zone?”*

- The 2015 Annual Report, posted on SWD’s website, contains the most current information on groundwater monitoring.  
<http://your.kingcounty.gov/solidwaste/facilities/documents/CHRLF-annual-report-2015.pdf>
- Quarterly reporting is also conducted, but it takes about six weeks to get the samples to the lab, for the lab to test and analyze the samples, and for the lab to return their results, so results were not available at the time of the meeting.
- Initial sampling indicates the perched zone contains organics.

## *Does the landfill have a curfew?*

- SWD’s permit restricts when SWD can operate the landfill, but it does not restrict when trucks can drive on and off the site. The first trucks leave the landfill around 5:15 a.m. and the last trucks return around 8 p.m. It is possible to have trucks return later than that because of traffic.

## **Bio Energy Washington (BEW) Plant Update** **Plant Operations**

(Kevin Singer)

Kevin Singer explained BEW has three core values – health and safety, environmental compliance, and continuous improvement.

### **Health and Safety**

There was a minor injury at the plant recently – a worker fell off a ladder while adding oil to machinery. Since that incident, BEW has provided more training to staff and made the area more accessible so a ladder is no longer needed. The employee is recovering and back to work.

### **Environmental Compliance**

BEW completed its annual compliance testing and passed without exception. With regards to odors, BEW’s first process separations are to remove odors and any gas that would be flared has already been through that processing. Those first steps in BEW’s process are to remove hydrogen sulfides, then remove volatile organic compounds.

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BEW conducts weekly monitoring to check for fugitive emissions. Process condensate is tested monthly to ensure compliance with permit requirements. Lubricating oil utilized in the process equipment such as compressors, engines, and pumps; BEW utilizes a contractor to recycle used oil to minimize its environmental impact.

## **Continuous Improvement**

BEW is confident that the Solid Waste Division is focused on making sure that landfill gas is collected in the gas collection system and minimizing escape to the atmosphere. BEW's efficiency and renewable output are directly affected by the quality of the gas that is collected in the King County Landfill Gas system. BEW and King County are working together to optimize the quality of the landfill gas while meeting the landfill's environmental considerations.

With improved generational uptime and performance, BEW was able to generate approximately 10 percent more power in 2015 than it was in 2014. BEW's power generation utilizes diesel engines retrofitted to run on waste gas that would normally be burned off and use as little diesel as possible. BEW has also taken significant operational steps to reduce flaring and improve gas plant uptime.

## **Upcoming Projects**

There are no major projects planned at this time. There will be replacement of some equipment that has reached the end of its useful life, including an electrical heater used in the oxygen removal process step. BEW's overall conversion efficiency is around 75 percent with 65 percent of incoming methane being converted to natural gas, and 10 percent utilized for power generation.

## ***Question and Answer***

### ***What are BEW's emissions?***

- Primarily products of methane combustion – carbon dioxide, water, nitrogen, and low levels of VOC's, nitrous oxides (NOx), and carbon monoxide (CO).

### ***What type of generation equipment is used?***

- The engines for power generation are retrofitted Detroit diesel 60 series engines.

### ***How does BEW respond to power outages?***

- The plant is fail-safe during a power outage and the plant remains “bottled” up during the outage.



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- Environmental and safety systems are on an emergency generator that energizes when the main utility power goes out.
- When the plant is shut down due to power outages, the flare system at the plant and the North Flare Station remain operable.
- Power outages can have a significant duration; however BEW's overall uptime is greater than 94 percent. BEW has been meeting and working with Puget Sound Energy to discuss improvement efforts around electrical system reliability.