



Cedar Hills Regional Landfill Community Meeting Notes
June 20, 2019
Issaquah Library • 10 Sunset Way, Issaquah

In Attendance

King County Solid Waste Division staff

- Teresa Atkinson; Operations Administrator
- Scott Barden; Assistant Operations Manager
- Laura Belt; Supervising Engineer
- Bill Berni; Operations Manager
- Neil Fujii; Facility, Engineering, and Science Unit Manager
- Toraj Ghofrani; Engineer III
- Kathy Hashagen; Facilitator
- Annie Kolb-Nelson; Communications and Records Supervisor
- Matt Manguso; Communications Specialist
- Meg Moorehead; Strategy, Communications, and Performance Manager
- Glynda Steiner; Deputy Division Director
- Dorian Waller; Government Relations Administrator
- Polly Young; Program Manager

Other King County Staff

- Darshon Dhillon, Public Health Seattle-King County

Bio Energy Washington (BEW) staff

- Kevin Singer, BEW Plant Manager

Department of Ecology Staff

- Tim O'Connor, Hydrogeologist

Interested parties

- Kim Brighton
- Erin Childs
- Melody Craff
- Karen Dawson
- Janet Dobrowolski
- Dustin Green
- Edie Jorgensen
- Sean Kronberg
- Kim Lisk
- Leslie Morgan
- John Richards
- Sue Sander
- Philipp Schmidt-Pathmann
- Lori Smith
- Steve Spang
- K. Sweeney-Easter

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Welcome

(Kathy Hashagen)

Kathy Hashagen began the meeting by welcoming those in attendance, explaining her role as facilitator, and reviewing the agenda. With the large crowd in attendance and to ensure both Bio Energy Washington (BEW) and the Solid Waste Division would have enough time to provide their updates, Hashagen asked if it would be OK if BEW Plant Manager Kevin Singer spoke after Solid Waste Division Manager Laura Belt introduced those in attendance and explained the meeting format. Those in attendance agreed to let Singer speak directly after Belt. Hashagen then introduced Belt.

Introductions, Meeting Format, Reporting Landfill Concerns

(Laura Belt)

Belt thanked those in attendance for coming before introducing Solid Waste Division (SWD) and other King County staff in attendance. Belt then explained the purpose and format of the meetings, as well as meeting elements:

- Division staff provide information about recent and planned activities at the landfill, and the BEW plant manager will do the same regarding its activities
- Meetings occur twice a year in the spring and the fall
- Notes will be provided on the division's website that summarize issues discussed at these meetings; the notes are not intended to be verbatim transcripts, but capture the general content of the meeting, including questions and answers

Belt also explained if neighbors need to report a landfill concern they should call the Solid Waste Division at 206-477-4466. It is important to call this number because that is how the division logs and documents calls. That number, as well as contact information for BEW, is available at every meeting on the handout. If the situation is an emergency, neighbors should call 911.

Bio Energy Washington (BEW) Plant Update

(Kevin Singer)

About BEW

Singer explained that BEW is a renewable gas production facility that converts landfill gas from the Cedar Hills Regional Landfill into pipeline quality gas through a series of processing equipment. The site produces enough renewable gas to supply approximately 30,000 homes each year. The site was established in 2008 and partners with the King County Solid Waste Division and Puget Sound Energy to receive, process and supply gas to consumers.

The site supplies 60-70 percent of its own electricity through onsite power generation. About 80 percent of the methane delivered to BEW from the landfill is recovered at the site. Of that amount, 70 percent is sent to the pipeline and 10 percent is used for power generation.

BEW is committed to three core values – health and safety, environmental excellence, and continuous improvement.

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Plant Operations

- Staffing is 24 hours, 7 days week, 52 weeks per year. Each gas plant technician undergoes a qualification process of at least 90-days before working without supervision. Minimum of two qualified plant technicians are onsite at all times.
- With the economy improving, BEW has seen greater competition and turnover in jobs. Currently the site is at full strength and is training three new technicians.
- BEW maintains a hotline neighbors can call for any concerns is 425-392-3918

Health and Safety

- No injuries recorded at the plant in the past six months.
- No environmental permit exceedances in the past six months
- Annual emissions testing will begin in November 2019 to meet Puget Sound Clean Air Agency permit requirements.

Environmental Compliance

- New catalysts being tested on the power generation system for increased catalyst life to reduce engine exhaust emissions (NOx). The new technology is showing sustained improvement over the baseline performance by about 20 percent.
- Recognize that the Solid Waste Division has environmental requirements that it must adhere to when collecting and delivering gas to BEW. Fully supportive of the mission to minimize greenhouse gas emissions to the environment and maximizing renewable gas for beneficial use.

Continuous Improvement

- Uptime for the plant in 2019 is 90 percent so far. Last year, 2018, ended with a record 97 percent uptime. Downtime is usually due to planned upgrades and unplanned power outages.
- BEW experienced some damage to heat removal equipment due to extremely cold temperatures this winter. While there was no damage to gas processing equipment, BEW was required to rent chillers to provide cooling to the compressor system.
- A new cooler was installed to improve performance during hot summer days.
- BEW and the Solid Waste Division have continued daily coordination to help improve communications and share best practices routinely.
- A new sulfur removal media installed last March performed very well, with 100 percent of sulfur removal by this media. Additional uses of this media to remove sulfur are underway.

Upcoming Projects

- No significant modifications or changes planned that will adversely affect noise, odor, or the community. Most of our work involves inspections, routine maintenance, and changing media that scrubs the landfill gas.

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BEW 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.

Is the equipment that was moved outside back inside the BEW facility?

- The rental equipment that was outside the fence line was removed from the site once the new replacement equipment arrived.

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If the landfill stopped receiving garbage, how long would BEW continue to collect landfill gas?

- A rough estimate would be about five to seven years.

In that scenario, what would happen to the landfill gas that remains at the landfill?

- *This question was answered by SWD Supervising Engineer Laura Belt:* If it were to happen today, we would send it to the flares, but in the future we might have a better solution.

The smell in February was horrid, I think when the site shut down, how can you prevent that from happening again?

- *This question was answered by SWD Assistant Operations Manager Scott Barden:* At the North Flare Station we had some valves frozen shut that we had to open up. In the future, we will be using a heated blanket that can be placed on the valves so they don't freeze. We don't expect this to happen again.

What does BEW do to test for leaks?

- Weekly inspections are done that include visible inspections, as well as odor and smell checks. Handheld detectors are used to check for leaks, and every day, twice a day, technicians perform operator rounds where they take readings throughout the facility. The process gas is under pressure, so small leaks are very rare and are easy to detect.

If there is a major incident or a leak, what is the policy of informing neighbors and how do neighbors find out about what's going on?

- Any leaks found at BEW needs to be reported to the Puget Sound Clean Air Agency (PSCAA) and repaired within 24 hours.
- In the event of a major incident, there is a notification protocol we must follow that, depending on the event, includes informing PSCAA, the fire department and other emergency responders.
- There is not a neighbor notification system; however the entire gas plant is designed to shut down and fail-safely in the event of significant process upsets. The interlocks and layered

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safety systems shut down the plant and either bottle the gas in place or send it to the flare system.

Do any vehicles at the landfill operate off landfill gas?

- *This question was answered by Solid Waste Division Assistant Operations Manager Scott Barden: At this time, no landfill vehicles operate on landfill gas. All of the landfill gas collected is sent to BEW for processing before being sold to Puget Sound Energy. Landfill equipment is mostly run on diesel.*

Construction and Environmental Monitoring Activities

(Laura Belt)

Construction Updates on Area 7 and Area 8

Area 7 is currently the main disposal area that began receiving garbage in June 2010. Area 7 will continue to receive garbage until the next cell, Area 8, opens this year. Earlier this year, the division completed Stage 4 out of five stages of closure. Later this year, the division will put a geomembrane cover and cover soils on the top and side slopes of Area 7 to stabilize that area for the winter. A cover system will be added to the top of Area 7 in the summer of 2020.

Excavation of Area 8 was completed last year (2018). The bottom liner and environmental controls have been installed. These controls include a clay liner, a 60-milimeter thick plastic liner, drain rock, and adding a pumping system for leachate control in the new area. Landfill gas collection piping is laid after garbage is added. A detailed infographic of the landfill cross section is available to look at that shows these features in more detail.

The division is currently awaiting approval of a permit to operate Area 8. Once the division receives permission from its regulators, we will begin filling Area 8. We estimate the area will last for about six years, but that depends on factors such as population, economic conditions and recycling rates.

Groundwater Quality

There are more than 60 groundwater wells throughout the landfill that monitor groundwater levels, water quality, and flow direction to ensure the division is in compliance with regulations and permits. The division checks water levels in all groundwater wells quarterly, and also checks for water quality in 35 of those wells. The most recent testing shows there are no significant changes in the quality of groundwater leaving the landfill site.

The regional aquifer extends throughout and beyond the property. Groundwater flows in a south to north/northeast direction. The division measures the quality of the groundwater that enters (south end) and leaves (north end) the landfill property. The groundwater that leaves the site is compliant with regulatory requirements and has not significantly changed since we last reported to you in October 2018.

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The division also monitors four offsite drinking water supply wells once a year. Water quality has remained consistent with historical data at these wells.

All reports related to groundwater monitoring, including quarterly and annual reports, are available on the division's website https://kingcounty.gov/depts/dnrp/solid-waste/facilities/documents.aspx#cedar_reports.

Perched Zone

As has been mentioned since 2015, there is a small, shallow perched zone on the east side of the landfill that is in a tight, silty formation with minimal flow. The area has had some impacts from past landfilling activities. This was first discovered in the late 1980s. In the 1990s, the division installed an extraction well to pump and treat the water.

The division has installed six new groundwater monitoring wells and two new gas probes in the perched area and we continue to monitor them. The division also decommissioned the old extraction system that was not working properly, and is making adjustments to the landfill gas collection system and installing new valves to better monitor the groundwater in the perched zone.

The division continues to work with the Department of Ecology (DOE) on this and we are implementing recommendations made to address the Perched Zone. The division is reporting all activities to DOE each step of the way. All monitoring efforts and results related to the perched zone can also be found in the quarterly and annual reports on the division's website https://kingcounty.gov/depts/dnrp/solid-waste/facilities/documents.aspx#cedar_reports.

Western Buffer Vegetation Enhancements

The division has received several comments from neighbors on the west side of the landfill about getting more conifers in the buffer to provide better screening for landfill neighbors. The division is working with a landscape architect who has made some recommendations. The division is working internally to determine which recommendation would work best for us and for neighbors. We will provide updates to neighbors on this when we have more information.

Operational Activities

(Scott Barden)

Vegetation and Road Maintenance

The division will begin vegetation maintenance in the coming weeks and will be focusing mainly on mowing and other vegetative maintenance. We drive the fence line roads daily. Work is expected to happen in the afternoon. Several trees and branches came down during the winter snowstorms, so the division will be working to remove those, as well as repairing any fences that

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were damaged by falling trees. Neighbors are encouraged to call the division if they notice any downed branches or trees, or if trees or branches are leaning against the fence.

The division does not anticipate any road maintenance beyond filling in some potholes. Most of the roads were updated in 2017 and remain in good condition.

Safety Training

The Solid Waste Association of North America have several certifications and training programs, and one of them is the Manager of Landfill Operations (MOLO) certification. Two landfill employees recently received MOLO certification, bringing the total number of certified employees to 14.

Landfill Tours

As of the meeting, the division has given 54 landfill tours in 2019. Neighbors are always welcome to request a landfill tour and the division is happy to provide those. Neighbors can call the Solid Waste Division if they would like to set up a tour.

Solid Waste Advisory Committee (SWAC) Recruitment (Dorian Waller)

The division's Solid Waste Advisory Committee (SWAC) has 17 members and is currently recruiting for two new members. One opening is for a landfill neighbor and the other is for someone who works in agriculture. SWAC meetings are held every third Friday at King Street Center in downtown Seattle from 9:30-11:30 a.m. The next meeting is July 21. Members serve two, three-year terms.

More information about SWAC can be found on the division's website at <https://kingcounty.gov/depts/dnrp/solid-waste/about/advisory-committees/swac.aspx> or by reaching out to Dorian Waller at 206-263-1368 or dwaller@kingcounty.gov.

2019 Comprehensive Solid Waste Management Plan Update (Meg Moorehead)

The *2019 Solid Waste Comprehensive Plan* (Comp Plan) is the blueprint for how the division will manage the county's waste over the next 20 years for King County and its 37 partnering cities (all except Seattle and Milton, which are part of separate solid waste systems).

The division started working on updating the Comp Plan in the fall of 2016. There was a public comment period on the Draft Comp Plan from Jan.-March 2018. In April 2019, the King County Council approved the Comp Plan.

Three big policy decisions were addressed in the Comp Plan: Recycling, Transfer Services and Waste Disposal.

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Recycling: The County has a goal to achieve zero waste of resources and a 70 percent recycling rate. The Comp Plan focuses on ways we can achieve those two goals.

Transfer Station System: Garbage is consolidated at transfer stations before being transported to the landfill for final disposal. The system has been undergoing modernization efforts for a number of years. The question posed in the Comp Plan was whether to continue that level of modernization in the northeast portion of King County. Three options were discussed that included keeping the Houghton Transfer Station in Kirkland open as is; building a new, modern recycling and transfer station to replace Houghton; or develop some combination of those two options. The Comp Plan recommends opening a new recycling and transfer station somewhere in northeast King County.

Disposal: With Area 8 expected to reach capacity within six years, the Comp Plan looked at other ways to maximize capacity at the Cedar Hills Regional Landfill. The Plan recommended further development within landfill property. Unlike the previous *2001 Comprehensive Solid Waste Management Plan*, the 2019 Comp Plan doesn't direct us what to do next after the landfill reaches capacity. It leaves that option open and recommends that we make that decision before the next Comp Plan update. Future disposal options could include exporting it via rail, building a waste-to-energy (mass-burn) facility or identifying some other disposal technology.

The Comp Plan was delivered to the King County Council for its review in July 2018. After deliberating for several months, the Council approved the Comp Plan in April 2019. As part of its process, the Council made several amendments that weren't in the original plan.

The amendments include:

- Reinforce past settlement agreements that say the division cannot landfill or stockpile within the buffer; and keep the height of Areas 5, 6 and 7 below 788 feet.
- Develop a bird management plan
- Consult with experts on best practices related to top lifts and covers.
- Work with the King County Office of Performance, Strategy and Budget on developing a plan for a future disposal option by 2021
- Work with the Department of Local Services to make mitigation payments to help keep the roads around the landfill in good condition.
- Submit annual regulator reports to the King County Council. Those reports have always been available, but this amendment adds greater visibility by transmitting those reports directly to Council.

With County Council approval, the Comp Plan is now in the city ratification process and the division's 37 partnering cities have 120 days to either approve the plan, disapprove it, or take no action. Two cities have already adopted it, and 21 have scheduled it for council discussions. The

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120-day period ends in September. After that, it will be sent to the Department of Ecology, which has 45 days to give final approval before it is fully adopted.

Once Council gave its approval, the division began initial planning for maximizing landfill capacity. The first step under the State Environmental Policy Act (SEPA) that is prescribed under state law begins with a checklist to determine either significance or non-significance of the proposed development. It is likely this project will have a determination of significance. We would then look at the scope of environmental issues to be evaluated in an environmental review. It's likely that work would happen later this summer. We will let neighbors know about public input opportunities and other information related to this project.

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.

Of the people on SWAC, how many people have a good understanding of solid waste?

- SWAC applicants are screened before their applications are submitted to the King County Council, who is in charge of appointing members. The division screens them on their knowledge and experience. SWAC members include people from interested groups, haulers, cities and the recycling industry. We are currently looking for members from around the Cedar Hills Regional Landfill and who work in the agriculture industry.

Can a resident with limited knowledge of solid waste seriously contribute to SWAC?

- Yes. In the past, we've had two landfill neighbors serve on SWAC. Being a part of SWAC is mostly about an interest or desire to learn, and most people who serve either have experience with solid waste or an interest in learning more about it.

What happens if someone is appointed but wants to vacate their term early?

- That is acceptable and has happened in the past.

It would be better if landfill neighbors served on the Metropolitan Solid Waste Management Advisory Committee (MSWMAC) instead of SWAC.

- SWAC is intended to give people a voice. It takes a group of people interested in solid waste to make decisions, and we want a landfill neighbor to be heard. It would be beneficial for other members on SWAC to hear from people who live near the landfill.

Can SWAC and MSWMAC meetings be combined?

- The two groups do meet occasionally, and combining the groups permanently has been discussed in the past, but they are currently two distinct groups.

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Why can't we have a stenographer take the notes at landfill neighbor meetings, and can we have the meetings filmed, too? (This question led to several meeting attendees voicing their concerns about a lack of trust in the division, its employees, and the notes taken at the meetings.)

- The division will discuss internally how to improve communication with neighbors to address concerns raised at this meeting and will report back to the neighbors.

What kind of equipment will be used for vegetation maintenance and will it scare livestock?

- The division will be using small weed-eaters and push mowers when doing vegetation maintenance along the fence line.

How big is the buffer?

- The buffer is 1,000 feet around the landfill, but in the past landfilling occurred in the east buffer.

After this Comp Plan is completed, how long until the next update?

- The state requires the division to review the plan every five years to see if it needs updating. With the amendment that requires to have a future disposal option in place by 2021, we'll begin working with King County's Office of Performance, Strategy and Budget on that requirement as soon as the 2019 Comp Plan adoption process wraps up. We need to start looking at future disposal options as soon as possible because it takes time to study options and make decisions, and we need to be prepared for that within the next five years. Interlocal Agreements with our 37 city partners require us to include them in that conversation so everyone's voice is heard.

Why don't the unincorporated areas have a voice?

- Unincorporated areas are represented by the King County Council. The Council spent about nine months listening to the concerns of residents about the Comp Plan and the landfill. The amendments to the Comp Plan were added in direct response to those concerns. Serving on SWAC is another way neighbors can have their voices heard.

In the past, the landfill was covered with soil instead of a tarp. Is there any way we can go back to using soil as daily cover?

- *This question was directed toward and answered by representatives from Seattle-King County Public Health and the Washington State Department of Ecology:*
- Tim O'Connor (Ecology): As a hydrogeologist I am unable to answer that question here, but I can bring this up with other engineers at Ecology who can work with Public Health.

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- Dharshon Dhillon (Public Health): A recent request has been made by the Solid Waste Division to use a different cover, that is neither a tarp nor soil, and that is currently undergoing a pilot project for one month. We will be reporting on the results of that project. I have heard the request to return to soil for daily cover and will keep neighbors updated on our discussions.

What is happening with the eagles? They are becoming a nuisance. The Solid Waste Division should consider working with the Audubon Society to address eagles at the landfill.

- We can look into that.

In relation to the 2018-19 permit and height limits, what is the Solid Waste Division's definition of "circumstances" and "temporary?"

- By "temporary" we mean six months, a year or more, but not 50 years. We've generated a lot of soil from excavating Area 8 that we need to manage and will be moving that soil around the landfill. There's also soil that we will be unable to use at the landfill and we're working to find a place to move that offsite. So because of the excess soil, in some places at the landfill, the height will be higher than 788 feet for temporary periods of time.

Why did it take more than 200 eagles for the Solid Waste Division to determine the tarp isn't effective?

- Both the tarp and the soil we have used for daily cover are applied at night. During the day when we're landfilling, the eagles have as much access to the garbage as they would regardless of what type of cover we're using at night. We're looking into what we can do to mitigate the impacts of eagles. One of the council amendments to the Comp Plan was to develop a bird management plan, which includes eagles. It's difficult because eagles are a federally protected bird so we can't harass, kill or do anything to disturb them. We can, however, study them and figure out how to make the landfill less desirable to them.

What happens if the cities don't approve the Comp Plan?

- If the cities don't approve the Comp Plan we go back to square one and continue to operate under the conditions identified in the approved *2001 Comprehensive Solid Waste Management Plan*. That plan directed us to continue modernizing transfer stations and constructing Area 8, but it doesn't address how much our region has changed in terms of population and other factors.

Is there a threshold for city approval of the Comp Plan?

- Under the Interlocal Agreements, there is a provision that says the plan is approved if cities representing 75 percent of the population of cities that act on the plan approve it within the

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120-day period. It's not 75 percent of the cities in King County, but 75 percent of the population of all the cities that choose to take action on the plan. For example, if Bellevue, Kent and Renton approve it, but Carnation doesn't approve it, then the plan is approved. It depends on how many cities decide to take action. Not all cities take action and we don't expect all 37 cities to take action because solid waste may not be that important to them. The population is the key factor. If a city doesn't take action then their population doesn't count toward or against final approval. The Solid Waste Division does not have to wait the full 120 days, but we will. If we hit the threshold where there's no way the remaining city votes could supersede votes approving the plan, we would still wait so every jurisdiction can have its voice heard.

If a city votes yes, could they change their mind and overrule the original vote?

- It's possible, but that would require them to undertake the process of rescinding that vote. It's a procedure question cities would have to determine themselves.

In relation to Area 5 that was built over old area, what is the definition of "no additional waste to a closed pit?" If there is an existing pit that has been closed and it says no new waste is authorized, can more waste be put on top of it?

- It's important to remember landfills are made up of three-dimensional cells with different areas leaning against others. When you build a new area beside an existing one, we don't put all the waste into the new area. Some of it is put on membrane covers on the side slopes of the area before it is covered up.

How do you make sure it doesn't jeopardize the area it is leaning against?

- In Areas 5 and 6 there were studies done in how they were leaning against Area 4, which was relatively new and not of much concern. There were additional wells placed, dual phase wells to pull out gas, leachate or both, a new liner, and other environmental controls added. We'd have to go back and look at the design of those areas to see what was covered.

The new 2019-20 permit took out all the references to "no additional waste" stipulation. Do we intend to put more waste on top, and is that why those references were removed?

- We're unsure why those references were removed. The concept of putting waste on top of old areas was one of the options discussed in how the landfill could continue to accept waste until 2040. We can't just do that because it's part of the SEPA environmental review process, which is at the start of being identified. If a proposed project doesn't make it through the SEPA process then we can't do it. We would also have to work with Public Health.

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- *Dharshon Dhillon (Public Health):* Some of those areas were closed temporarily, so once Area 8 is completed we can go back and add more waste on top as long as we don't go over the permitted height.

What about Areas 2 and 3 and the Central Pit?

- There are currently no plans to go back and add waste to the top of those areas.

Is there a public health risk associated with the perched zone, and if it does become a risk what happens?

- The Solid Waste Division recently decommissioned 27 extraction wells that weren't working properly and added six additional monitoring wells for groundwater. We continue to monitor and make adjustments in gas extraction to see if that influences the contamination in there and will be moving forward to finalize the Draft Remedial Investigation and Feasibility Study.
- *Tim O'Connor (Ecology):* The conceptual model for the perched zone was being contaminated from the wells that weren't good at extraction. That was an interim action Ecology undertook. We also decommissioned 27 wells and added in six new monitoring wells to see if that reduces the exceedences there and enhances the optimization of the landfill to try and extract landfill gas. There's landfill gas and groundwater monitoring in between the residences and the landfill and there aren't any exceedences there. The regional aquifer is monitored in that area by several wells. The Perched Zone is not a public health risk. The groundwater is moving slowly into the regional aquifer, but the levels we see are not in exceedence of drinking water standards that look for arsenic, iron, magnesium. Across the state, those levels are even higher than they are here.

Is the Solid Waste Division purchasing homes on the east side?

- Yes, that offer is still available to interested neighbors. They can call the division at 206-477-4466 to discuss.

Is there a plan to remove garbage from the buffer on the east side of the landfill?

- No, the division has no plans to excavate garbage in the buffer.

What are the plans for relocating the facilities? What locations are being discussed and does that include the buffer?

- We've identified potential locations and those will be evaluated in the EIS process. There will be the opportunity for the public to engage in that process. Relocating the facilities into the buffer is one of the options being considered, but we would have to apply for a permit modification.

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A comment was made that it was helpful to have employees from Public Health and DOE at these meetings to answer questions, and that more frequent meetings would be helpful.

- The division will discuss internally how to improve communication with neighbors to address concerns raised at this meeting and will report back to the neighbors.

Additional questions were given by a landfill neighbor after the meeting because there was not enough time during the meeting to answer them. Answers to those questions are forthcoming.