Baltimore County Advisory Commission on Environmental Quality (CEQ)
Minutes for Meeting of January 24, 2024

Attendance: Carol Newill, Andy Miller, Mahnaz Mazaheri Assadi, Brian Fath, Steve Malan, Brian Lindley, Linda Davis, Radu Zamfirache, Anthony Russell, Dustin Shearer, Lois Jacobs, Kathy Martin, Joel Moore

Excused absences: Valerie Androutsopoulos, Lynda Eisenberg, Jennifer Langford, Brian Bernstein, Chris Overcash

7 pm Welcome. Our new procedure for gaining access to this building for our meetings has begun. Thank you to Brian Lindley for unlocking the building's door for CEQ at 6:45 pm, and to Radu for serving as Brian's backup for this task. The rotation for CEQ commissioners to remain at the door from 6:45 to 7 pm (and subsequently be available by text) has been distributed for 2024. Comments and ideas are welcome.

7:10 pm Speaker: Anthony Russell, Jr., Acting Deputy Director for Transportation, DPWT, will provide an update on current practices and goals for Road Salt in Baltimore County.

Tony Russell is Deputy Director of Public Works, oversees more than 500 employees in transportation and solid waste, involved in multimodel street designs, overseeing county transportation needs, and bureau of solid waste. Has worked for County for 34 years.

Salt & Snow Management – the public wants roads to be clear. Baltimore County acknowledges issues with salt and tried to mitigate amount; have made significant changes in last 4 years. We have over 400 pieces of equipment on the road during any given snowstorm. Have implemented BMPs in use and handlng of deicing materials. Users are required to hold various stormwater permits.

Salt storage is important. The County can store 90,000 tons at 1y dirrecnt locations. All inlets and drainage structures are protected and all salt is under cover by days end and salt is stored on impervious surfaces. Once salt has been stored all excess is cleaned off by sweeping the lot. Two 20,000 ton barns – we now are protected against interruption in deliveries.

Entrances of barns and domes are always blocked after loading; hay bales, environmental sleeves, sand berms only occasionally – all to prevent salt from contaminating surrounding environment.

Spreading materials: make sure tailgate chains are properly set; this prevents excess material from falling onto the roadway. With 400 trucks and 8 tons of salt apiece this makes a difference. Make sure spinners are level and properly aligned with the spreader opening. Trucks are calibrated yearly to ensure the correct amount of material is being applied. A good rule of thumb is not to load trucks above their side boards.

Salt is meant to create a bond between road surface and snow; initial application should be as soon as snow or ice begins accumulate but not on bare roads. (Policies on brine application are different and are discussed later.) We run rubber blades when plowing. Salt isn't effective until snow or ice begins to melt, creating he brine effect to make plowing more efficient. Most roads are built with a crown in the middle which keeps water from sitting/ponding.

Outside the URDL because of less utilities in the ground, metal blades can be used and roads may be more clear

Salt loses effectiveness below 20 degrees Fahrenehit and stops working altogether at -6 degrees. If you add more salt to an already salted roadway it will actually cause existing brine solution to freeze. Liquid magnesium might help but it corrodes metal dump trucks.

The following day after each event drivers must re-ride their assigned route to make sure there is no salt left on the roadway. They pick it up and return it to the barn.

After each event, trucks and equipment must be cleaned of any excess material. Cleaning is done inside, not outside. Once the excess is removed the truck or equipment must be thoroughly washed within a wash bay. By using a wash bay equipped with an oil/water separator, the introduction of salt and other sediment are minimized.

All of these measures apply to County roads. Not every jurisdiction follows the same rules. County rarely goes out on state roads. Even contractors have to follow county practice on handling salt.

Contractor support: over 6700 lane miles and 172 snow routes; to help support this task the county can reach out to 317 contracted trucks and pieces of equipment during any given event. Contractors are held to same standards as county employees and this is part of their contract. County staff go to check for spilled salt on contractors' routes. County does not require them to clean their trucks on county property. Contractors are not paid on a tonnage basis. We mirror the state contract – contractors are paid by the hour.

In FY21 the County purchased a brine making machine along with six 1000 gallon spray tanks that slide into the back of trucks; these are used on over 600 miles of primary roads throughout the county. We could use more.

Brine as a road pretreatment prevents snow and ice from bonding to the road surface. Brine can be applied 48 hours prior to a snow event.

The practice of using salt brine takes more than 5 times less salt to prevent ice accumulation than to remove ice after it is formed. To treat 50 center miles of road it takes 40 tons of salt. It only takes 6 tons of salt to make enough brine to treat the same

area. Brine not only cuts down cost, but it cuts down on the amount of salt we introduce to the surrounding environment.

The state experimented with beet juice for a couple of years but that has other drawbacks including impacts on stream ecosystems. The County does not use it and the State no longer uses it.

For fiscal 25 and beyond: we have recently worked with OIT department to set up a device to better track the amount of material used by the fleet. Brining has become a permanent part of the winter program. We currently have 47 out of 215 trucks in our fleet equipped with Force America controls to regulate the amount that gets spread. The school system is using these too. All new trucks ordered will be equipped with these; this is 10-15 new trucks every other year or so. Each winter season our training academy puts on a ?snow college" for all employees. Since FY 21, contractors follow our salt usage guidelines in a show of good faith that their employees understand the importance of "sensible salting."

Are there state regulations? Not as yet but we follow the salt institute of America policy.

7:40 pm Q & A

Q: How many trucks are dedicated to snow only?

We don't keep uses separate – the same trucks are used year-round. We do get support from the school board when needed and the County will also help to clear school drives and lots. Everyone who does salting from any agency has to go through the same training.

The salt and plowing plan is pretty robust. CEQ will request a copy.

Q: Are any routes treated with brine only?

Howard County has tried this, but it requires constant reapplication. For the county here it primarily allows us to have more time before we need to get other salt applications out on the road.

Northern VA has just generated a huge road-salt tool kit based on a northern VA-western MD study.

Going to an APWA snow conference in Kansas City later this year to learn about best practices.

The other area so far is Lake George drainage in NY because the salinity in the lake is getting too high. They have implemented different practices with distance buffers etc.

In Massachusetts since the 90's there are "no salt" zones surrounding the reservoirs.

Around the reservoirs, salt being put down by shops is about 300 pounds per lane mile – half of what is put down in the rest of the county.

Q: During a major snow event are there any precautionary principles?

No, we just do the best we can when a big blizzard occurs. Plows will help people when they are stuck on the roads.

Q: Who makes the call of closing down roads for snow emergencies?

That usually comes from the State and the Governor declaring a state of emergency.

Q: What are some of the common unfounded complaints from citizens? Complaining that their road was not salted. But now when a road was salted they take pictures.

Question about DEI policies in the department regarding possible preferential treatment of some neighborhoods.

There is no difference in treatment in any area, they do their best to get the snow removed.

Q: Please discuss the IT device that was mentioned.

They slide into the backs of the dump trucks – put them in usually 24 hours in advance, it gets strapped down, holds 1000 gallons. Salt for right now is a little unique. Trucks with controllers now have a GPS system that tells trucks where they are. Can also track how much salt is being put out based on rotation speed of spinner. That system will eventually go away and will be replaced by a new system called "Masternaut" used in UK, now available in an American version, which will interface with the controllers we have in trucks – will allow tracking of amount of salt handled.

Q: Does road surface temperature affect decision making or calibration?

We might salt again but when the road gets too cold there's not much you can do until the temperature rises.

Q: What is the cost?

We are now paying $75/ton. Our salt comes from Utah and Chile. Salt lasts indefinitely as long as it's under cover.

Q: Does coarseness vary?

No, it's usually 1/8-1/4 inch.

Q: How much sand do you buy per year?

None. We tried that years ago. Also tried slag from coke ovens but that didn't go well.

Q: There are stream monitoring entities all over the county. Do you know if they are monitoring salt?

Joel Moore pointed out that Izaak Walton League provides kits for semiquantitative monitoring for chloride. MS4 next phase will require monitoring conductivity for 1st order and 3rd order streams in the county. Every county and other entity that has an MS4 permit has to write a salt management plan. Reservoirs have monthly data. Joel has data from 1982-2017 monthly data – not updated since 2017. Started collecting sodium data in all tributaries in 2008. 2011 USGS report by Koterba collected a lot of monitoring data.

Q: What do you need CEQ to talk about?

Help pushing new software for tracking salt usage. One thing we are looking at is new front-end loaders with a scale so we know how much was placed on the truck. Also alert us if you see something that needs our attention – new materials, software, strategies.

Q: When you have made a determination of how much salt is appropriate, do you disseminate that information?

Yes, all the operators know. 500 lbs per lane mile per inch of snow. SHA uses the same standard.

Q: Is there any interest in developing standards for private use (shopping malls, homeowners etc.)?

Nobody has that information.

Q: There are entities looking at this from a different angle. Drexel is looking at concrete that can absorb heat and might reduce the amount of salt application needed. Might we test that kind of new technology as it comes out?

Concrete always freezes before asphalt. But we will look at anything you send. Also note that salt does not react well with concrete.

Linda Davis will contact Anthony Russell after he goes to his conference in April to get an update on what new practices he has learned about.

Q: There is some research suggesting salt is more effective when wet. Do you wet the

salt before you spread it?

No, we just spread it and let it get wet on the ground.

Q: Do you coordinate with complaints about flooding and culvert problems?

We forward those to Radu Zamfirache and his group. We might remove a tree if it's too close to the road. We do clean roadway grates.

Q: Would there be equipment that would improve efficiency in picking up dropped salt?

We have sweepers and we use shovels. But these are not powerful enough to pick up trash and leaves. We do have a 4-week sweeping cycle in the critical area bordering the Bay.

7:55 pm Updating the CEQ Road Salt report of 2009

Linda Davis spoke on recruiting Commissioners for performing specific tasks and provide the outline of the report. Everyone, please sign up to write some part of this, obtain factual data, and/or check reference sources.

Linda made copies of the signup sheets to allow people to sign up for tasks. We need more writers.

We delivered the 2009 report to the County Council and they passed a resolution to create a road salt task force to analyze and evaluate effects, prepare cost-benefit analysis of use of road salt and alternatives, and increase awareness of the impacts of road salt. But that task force was never created. We should be able to push toward follow-through on that given all of the impacts in infrastructure, health, etc.

At that time we were occasionally seeing drinking water reservoir sodium concentrations at the dialysis limit of 20 mg/l; now we are averaging around 20. Joel recommends education and outreach as a focus. Baltimore County schools have done little bits on this because it's easy to measure, but incorporating some on that would be useful for the updated report.

Joel Moore was on the northern VA task force and DEQ has staffers overseeing and facilitating putting the pieces together. Joel was on the watershed monitoring workgroup and also on the steering committee.

Lois mentions that in other places like Boston there is zonation of where salt application should be reduced to a greater extent than others.

Question was raised about policy on oil and grease being poured down drains and affecting sewer operations – What are policies here? The county probably already

knows how to do that kind of publicity work. Radu says he is unaware of a campaign with flyers but Anthony Russell says we do do outreach when we have public meetings. Kathy Martin points out that some of the flyers from the Izaak Walton League are phenomenal.

Would the idea we spoke about probably 8-10 years ago that might have developed local voluntary no-salt application on level roads in local residential areas adjacent to the reservoir be worth resurrecting? That was stopped the last time before we could do anything more about it.

Look at chloride increasing the production of disinfection byproducts.

For the report, we hope to have a draft in March, text for review in April, final copy by May 22.

8:10 pm Update on CEQ Workgroup on Baltimore County Weed Ordinance (County Code 13-7-401) -Members are Brian Fath, Lois Jacobs, Steve Malan, Carol Newill.

- Our report has been posted on CEQ webpage.

- 12/8/23 Carol, Steve, and Kirsten Hoffman (of Green Towson Alliance, who spoke to CEQ on 9/27/23) met with Councilmember David Marks.

- 1/8/24, Carol, Steve and Kirsten met with PAI Director Pete Gutwald and Chief of Code Inspection and Enforcement Adam Whitlock. Followed up with David Marks and he will draft legislation and put it up for consideration by the end of February. Director Gutwald requested help for inspectors so they know what to look for so they don't just issue citations without understanding what they are looking at. Carol and Kirsten are developing a set of photos that could be used in an inspectors' manual that could be used to identify what is or is not low-impact landscaping.(merge this with the next bullet point)

- A set of examples of managed, low-impact landscaping is being developed which could be used by PAI inspectors to guide fair and consistent evaluation of complaints. Anyone who wants to help with this would be welcome to do so.

- Current need: All Commissioners please contact your Councilmember about adding "managed low-impact landscaping" to the list of exceptions to the Weed Ordinance, give them the CEQ report, and provide the workgroup with any questions or feedback. Many council members don't know about this; Izzy Patoka does know but some others may not. Carol will send out a list of bullet points.

8:20 pm MInutes of 12/6/24 - Correct and approve

No edits requested. Moved, seconded, approved unanimously.

There will be a public meeting on Feb. 1 with the new head of Rec & Parks and landscape architect to talk about Oregon Ridge to update everyone on what they are doing and to take questions – this will be at the Nature Center.

Next CEQ meetings in 2024: 2/28, 3/27, 4/24, 5/22, 9/25, 10/23, 12/4.

Adjourned 8:33 p.m.