A special meeting of the Board of Aldermen was held Thursday, October 14, 2021, at 7:12 p.m. in the Aldermanic Chamber and via Zoom teleconference which meeting link can be found on the agenda and on the City's website calendar.

President Lori Wilshire presided; Deputy City Clerk Allison Waite recorded.

Prayer was offered by City Clerk Susan Lovering; Alderman Patricia Klee led in the Pledge to the Flag.

Let's start the meeting by taking a roll call attendance. If you are participating via Zoom, please state your presence, reason for not attending the meeting in person, and whether there is anyone in the room with you during this meeting, which is required under the Right-To-Know Law.

The roll call was taken with 10 in attendance and 3 via Zoom members of the Board of Aldermen present: Alderman Patricia Klee, Alderwoman Shoshanna Kelly (via Zoom), Alderman Richard A. Dowd, Alderman June M. Caron, Alderman Benjamin Clemons (via Zoom), Alderman Thomas Lopez (arrived at 7:14 p.m.), Alderman David C. Tencza, Alderwoman Elizabeth Lu, Alderman Ernest Jette, Alderman Jan Schmidt, Alderman Skip Cleaver (via Zoom), Alderman Linda Harriott-Gathright, Alderman Lori Wilshire.

Alderman-at-Large Michael B. O'Brien, Sr., and Alderman Brandon Laws were not in attendance.

DISCUSSION

President Wilshire

Tonight we have a discussion on wastewater rates and the paving program update. I am going to recognize the Mayor to introduce the folks that are here this evening.

- Wastewater Rates and Paving Program Update

Mayor Donchess

All right Madam President. Thank you very much. I first want to introduce who's here. We have Commissioner Kevin Moriarty, one of the Public Works Commissioners in the room in the back. He's raising his hand. I believe we have Commissioner Pappas on the phone or at least that's my understanding.

Now we have done a lot of work on paving over the last five years and have made significant progress and I think everyone has been able to observe that throughout the city. You're going to hear more of the details but over the last five years and five years or so ago, we began to embark the Board of Aldermen, and I, and Public Works on a 10-year paving program to upgrade our infrastructure in a very significant way. In those five years, we have - so we're about at the halfway mark - we have paved 113 miles of streets, and there are about 300 miles of streets in the city. In addition to that, we have crack sealed, which is a method of preservation that is much cheaper, less expensive than paving but creates preservation for five years or so. We've cracked sealed another 102 miles of streets. Each street in the city is given a so-called PCI or "paving condition index" score between zero and 100. The average score over these five years for all of the city streets has been increased from 67 to 78.

So we are going to do another year of paving of course in 2022 and we'll be coming back to you for the authorization to continue the program beyond that year in the coming months. But we wanted to update the Board, the City the progress that has been made here at the halfway mark so that people could understand where we are. Now giving the presentation will be Lisa Fauteux who is the Director of Public Works. You all know her. Dan Hudson, who's the City Engineer. Thank you, Dan. Mark Saunders who is the Senior Staff Engineer with the city and William Scarpati, who is an Associate Paving Management Specialist with Stantec. We have a lot of help from Stantec in terms of evaluating all of the streets.

One thing I'd like to mention before I turn it over to our staff is that one important innovation, one important change that we've made, and I've seen that it definitely has had a beneficial effect, is that for the first time about four years ago, we began testing the quality of the asphalt, not only after it was laid down or as it's being laid down on the street - and that has had always been going on - but after Director Fauteux and I visited an asphalt plant and consulted with one of the major pavers in the industry, we decided it was a good idea to engage in inspector to inspect the quality of the asphalt at the production plant. So we would see it - make sure it was conforming with specs as it was being produced and then as it was being laid down. When you get into the chemistry and the composition of asphalt, a small deviation in some of the

ingredients – tar, or sand, or other things like that can really make a big difference. So at least in my observation that initial inspection at the production plant has meant that the quality of asphalt we see on the city streets has been consistently better and that means much more longevity and money much better spent. So with all of that, I'd like to thank all of our staff for everything that they've done over these five years and have made, you know, this significant progress. They have to work with utilities and it's far more complicated than it seems to pave this many miles of streets in a few years. So I'd like to thank Director Fauteux and everybody else who's been working on this for helping us really advance and improve Nashua's infrastructure. So with that, I will give you Lisa who probably will turn it over to Dan or someone else.

Lisa Fauteux, Director of Public Works

Great. Thank you for that introduction, Mayor. Good evening. I will turn it over to Dan Hudson and Mark Saunders who will be presenting this evening.

Dan Hudson, City Engineer

Thank you Director Fauteux. I'm hoping that the presentation can be shown on the screen here. Let me know if I need to do anything.

Alderman Klee

Do we need to switch it over? I think you have to give them administrative rights or something to screen share.

President Wilshire

I apologize for all the technical difficulties. I'm not sure why we keep having these issues.

Dan Hudson, City Engineer

Thanks for everyone's patience. Again, my name is Dan Hudson, City Engineer. Tonight what we'd like to do is make a presentation here and highlight the first five years of the paving program, explain the strategy used to determine the health of the roadway network and overall pavement management philosophy. We'll touch upon different preservation treatments, coordination efforts, and what it takes to pave a road. Finally, we'll share conclusions about current status of the program.

Okay so just touching base on paving history so prior to 2017 as the mayor indicated, the city was typically paving around 6 to 8 miles of roadway annually. At this rate, we were losing ground as evidenced by poor overall condition of the paving network. So a 10-year plan was established. The first five years was approved and funded and over that first five years, we've paved 113 miles, which is a good amount. We've also done crack sealing and other things.

The city currently maintains 311 miles of publicly accepted roadway. Thirty-three percent of that - about 100 miles - is re-inspected annually. So we've broken the city into basically thirds and each year we go around and we inspect 1/3 of that network so we can update the conditions. As the Mayor explained, the roads are scored. It's called the PCI "pavement condition index". It's a zero to 100 score similar to a grade and school. Zero is a totally impassable road and 100 is a perfect road. So you want to be as close to 100 as you can get. So we assess the roads, analyze the conditions that enables us to model deterioration so we can predict how things will perform over the years with different treatments and such

We break the PCIs into treatment bands. So given certain ranges, it can range from 100 would be do nothing because again, a perfectly new road down to conditions closer to zero, and those would be a full base rehabilitation where you actually have to grind up the whole road, or dig up the whole road, and replace it. Obviously, that's very expensive. When the roads are in good shape, you want to maintain them. We're doing a lot of mill and overlay. That provides a new surface of the roadway. But the goal here is to make roads good and then keep them good and that will provide cost savings in the long term for the city.

So here is the work completed to date shown as blue highlight and green highlight on the map on the right. The green is this year's program. The blue is previous years but in total that's the five years. Again 113 miles paved on 520 streets. We've crack sealed 102 miles and that's on over 400 streets. The average PCI has increased 11 points. Here's a little graph of that. It's been a steady increase since the 5 years of the 10 year program was funded and has been put into place.

We spend money on various things. The bulk of what we're doing right now is structural improvement - the majority of it and base rate rehabilitation so it's like 70% of our budget right now. Again, we're trying to pull some of those roads in poor condition up into a better condition and the remaining budget is maintenance efforts. With that now I'd like to turn it over to Mark Saunders, Senior Staff Engineer, and he can kind of go into more details about how this program works and the things that we need to do to make it happen.

Mark Saunders, Senior Staff Engineer

Thank you. So I'm going to take this presentation over for the next few slides. I'm going to start by talking about routine preventative maintenance treatments. So as roadway networks improve, the preservation activities should increase. This is to as Dan alluded to earlier, keep the good roads good. Several preservation techniques are currently being used in the city such as crack sealing, but the goal is also to pilot several other treatments and through that determine which works best for the community as well as the roadway network. So the treatments depicted above - the first one is crack sealing. Like I said before, this is currently used throughout the city but crack sealant is the application of an asphalt rubber compound to seal cracks and prevent moisture from entering in the cracks leading for further degradation.

The next one on the list is a fog sale. A fog sale - this is a full-width topical rejuvenator treatment that penetrates the asphalt to soften the asphalt binder and rebind the aggregates to the roadway. This technology has been recently piloted in the city over the last month.

The next two are a little more in depth and involved. The first one I'm going to be talking about is micro surfacing. This is also a technique that has been used successfully in other neighboring communities. But micro surfacing is a mixture of polymer modified asphalt emulsion and aggregates installed typically in two lifts on a properly prepared surface. This treatment provides skid resistance, restricts moisture intrusion, protects the underlying structure from oxidation unraveling, and this treatment restores roadway appearance.

The last treatment is the bonding wearing course. This has not been used in the city but we have talked to consultants as well as other communities about this and we'd like to pilot it in the future but the bonded wearing course is done by a spray paver application of a polymer modified asphalt emulsion compared with an ultrathin gap graded hot mix asphalt overlay. This treatment is as close to a hot mix overlay that we see in the city that we use pretty regularly. So we don't just pave a road because it's bad, we have to go through a significant coordination effort to clear these streets because the last thing that we want to do is pave a road that needs any utility work. So under the pavement is a vast network of utilities that consist of gas, water, sewer, storm facilities that need to be cleared through coordination in house and with utilities. The Engineering Department works in house to clear the sewer and storm facilities. The main source of this information is gathered through the use of video inspection. Any infrastructure that is reviewed that needs an open cut repair, that roadway will be deferred until that repair is made.

The Engineering Department also worked closely with both gas and water to align their capital projects with our paving schedule. This is so that the last operation on the road is the final paving. Projected paving lists are sent to utility companies for screening before street selection and before the streets get put into a contract and go to bid.

So in addition to resurface in the roadway, a complete street approach is being taken on each road so that a street is finalized once the project is complete. I was being addressed when possible a sidewalk access, roadway drainage, traffic detection, sign replacement, pavement markings, and casting replacement. An effort is being made to reconstruct access ramps of existing sidewalks within the project limit to be compliant with Americans with Disabilities Act. Existing drainage issues are evaluated before and during construction and corrected where feasible. The extent of the drainage correction is directly tied to the treatment of the road. Major intersections are evaluated for traffic camera detection systems and other locations will have the underground loops replaced. An effort is being made to replace damaged or faded regulatory and warnings signs. Once the road is final paved, both thermoplastic and retro reflective paint are used to re-establish the pavement markings. Lastly, nonstandard sewer drain and catch basin castings are replaced.

The paving process. So the paving process from start to finish - it is a complex effort between the city contractors, subcontractors, utilities, and constituents. I'm going to go over what it takes to pave a complete road. Not all roads are created equal and some have more challenges than others .but this is the typical process. The first step before the contractor mobilizes into town and after a contract is awarded is that a notification postcard is sent to the owners or residents that abut the road schedule for paving. This postcard is sent to educate owners and residents about the city's moratorium ordinance. Once the contractor is then ready to mobilize into town and sought a road, the first step is to lower the structures. The contractor is responsible to low all sewer drain and catch basin structures in preparation of the milling or reclamation effort. In addition to that, the utilities also have to hire subcontractors to lower their gas and water gates. So at this point, the first step alone requires three different subcontractors to be working on the road.

Once all the structures are lowered, the road is either milled or reclaimed. Both of these operations are large scale and causes the most impacts. After this activity, the roadway is left either on a milled surface or gravel roadway. This activity is also performed by a subcontractor. The road is then base paved. This provides a level surface that is as close to a new road or feels like a new road but it's just the first layer. This base layer sets the profile, cross slope, and road elevation for the final paving and the rest of the items listed here are completed after the binder course but before final paving.

As roads get screened and selected, drainage issues are assessed. Drainage issues are solved in several ways but the most common is to utilize grading. If a road is reclaimed, the road can be regraded to ensure a positive drainage. This positive drainage is put to an area water can infiltrate back into the ground or directed to close drainage in place. If the road is milled, the shape of the road can only be altered slightly due to that treatments limitations. If drainage cannot be solved by grading or infiltration, another option is to install closed drainage. This effort installs a catch basin and connecting to existing storm water facilities. Installation of closed drainage is typically the last option given the schedule impacts, costs, and continued maintenance.

During milling and reclamation, any underground traffic detection is cut and no longer serviceable. Detection is restored either by the installation of a camera or replacement of the underground loops. Each of these each items are also done by a subcontractor. A focus has been made to reconstruct the existing sidewalk ramps to comply with the Americans with Disabilities Act. In order to construct these ramps, it takes multiple efforts and mobilizations. The first step is to demolish the existing ramp and once the ramp is demolished, it can then be rough graded. After that ramp is rough graded, it is then surveyed and stakes are set for proposed final grade to make sure it's in compliance with the tight tolerances of the ADA.

So after the after the grade is set if there's any curbing, that now needs to be reset to match the roadway so that it's also within the tolerances. After that, it is finally ready to be fine graded. After the ADA ramp is fine graded, it is now ready to have concrete forms set up and once those are verified, the final step is to pour the concrete. Once the concrete is poured, it needs time to cure and after it's cured the tie in between the new concrete ramp and the existing sidewalk is paved in. Each of these activities takes a different mobilization and a different effort. So they're going to these ramps multiple times.

Another item is berm. Berm is a tool that helps with drainage and erosion control. Berm is reinstalled in historical locations as well as locations that are susceptible to roadway erosion or to protect a low lying area but below roadway grade. Erosion can undermine the edge of road and reduce the overall life. Before final paving, all the structures that were dropped at the beginning now need to be raised to their final elevation to facilitate that final paving. This now requires another mobilization of three different subcontractors. So after all that, the road is ready to be final paved. The final lift of asphalt will tie all these other items however, the road is not complete. If there's any pavement markings on the road, they all then need to be laid out and painted by a specific contractor that specializes in roadway painting. Lastly, the final steps is to restore any landscaping, backup any curbing, and to clear the streets of any safety or traffic control devices. So to recap in order to pave a road, it's a complex coordination effort between multiple parties and this is without any unforeseen conflicts or weather delays. So at this time, I'll turn the presentation back over to Engineer Hudson.

Dan Hudson, City Engineer

Thank you Mark. Very, very complicated process and we appreciate what Mark does. Mark is kind of the hub of the wheel that runs this program and is instrumental in making this thing work. So thank you, Mark.

So in conclusion, our recommendations are to continue with this multi-year paving program. We intend to come back next summer and ask for funding for the next five years or the remaining five years of the 10 year plan as originally outlined. We look to expand our routine and preventative maintenance. The city is making significant investment in its paving and we want to protect that and preserve that so it lasts as long as possible. We look to continue our network assessment. Again, it's how we measure what we're achieving. It's how we monitor the conditions of the roadway network and evaluate what needs to be done and when. So with that, I'd be happy to entertain any questions.

Alderman Klee

Thank you, Madam President. Mr. Hudson, I just have two questions and I actually think I'm going to ask my second one first because I do think you did answer it already. That question is if you come back and we do another five years, you're going to do it exactly the same way with the same scoring type of and we would, you know, some roads we may do seal cracking if that's necessary. Some we'll have to mill or reclaim and so on. We would do it in the same manner, correct?

Dan Hudson, City Engineer

Yeah, absolutely. The measurement of PCI is a national standard so we will still score all the roads the same way. As we do this program, we continue to learn. We continue to improve. As Mark mentioned, we've been trying to do a more complete street project lately. So we keep expanding and modifying the program but the assessment methodology is the same.

Alderman Klee

Madam President may I have some follow ups? Thank you. I appreciate that. One of the things I noticed - I'm just gonna use one of the streets in my Ward was Glendale where you did the sidewalk. Right there on the edge, you put in the tip down, the ADA ramp, and so on. One of the things - and I know part of is because of weather - that probably all of us got the most complaints about was that there'd be a sign up that say, "It's gonna start June 1st "and then come July, they still haven't started. But then they do start and then it's not until September because you have these multiple contractors doing different - so I can say like Maywood and Glendale were two that I experienced close to my home. How many contractors on average do you have in a particular road? I mean, this one here, we saw that they brought it down to dirt. Then someone came through, as you said, and put that first layer in that looked like the road, but we knew it wasn't because it was still too low, and then somebody else came through weeks later. Glendale actually kind of started like June and they just - they actually they haven't just finished, they're still working on it. So you know, I'm getting a lot of the neighbors that are saying what's the status on that and why don't we get updates? It would be too - I know -too cumbersome for you to do at all but is that normal?

Dan Hudson, City Engineer

Yeah unfortunately it's challenging and the scheduling is an issue and that is normal. We do the best we can. We do send out a weekly status about what roads we intend to work on that coming week and what the effort is on those, but it's a continually changing thing. The milling when they mobilize to do milling, they try to mill a number of roads because they bring in a big machine and that machine can be here all summer. So they mill a bunch of streets. So that may be why you see the milling and then you don't see an activity for a while. But then all those other efforts that Engineer Saunders mentioned have to occur and the contractor has to sub out that a lot of that work. So like the ramps in particular, that's a subcontractor. It's been a very challenging year. Everyone in the industry - construction industry is suffering from staffing issues. Of course, we're still dealing with COVID issues. There's been a whole host of challenges this year. So we've been doing a big program and this has been a more challenging year than others. So there have been roads that have been open a long time and we do understand why people get frustrated with that. It is frustrating. It's frustrating for us because we'll tell somebody, hey, we're going to be paving your road next week and then situations happen outside of our control and we're not able to do that. So it is frustrating. We always struggle with that, you know, trying to give enough information or as good information, but it's continually changing. So it is it is a hard thing to do communication when it's continually changing.

Alderman Klee

Just one quick follow up. You can't see that I'm smiling underneath this mask but you guys are doing a great job and I want to say that the contractor who are around my home were very accommodating to my neighbors and so on. One was moving and they made sure that there was no activity going on the day she was moving in and moving out. They had to build a temporary ramp for her to be able to get into a driveway. They did good things like that. And then when we did have that leak, you were very responsive and got somebody out there to kind of take care of that issue. I do understand exactly what's going on and I hope the public can understand but you can understand it's frustrating when you have to keep going over these bumps and you're not sure when it's going to be going. I personally do send out that list that Lauren is kind enough to send us and I believe many of my other colleagues do the same thing too. You put it on your website and so on. But I think they just get frustrated when they see this street is going to be on and then two weeks later, nothing is happening on it. So thank you so much for all that you're doing.

Dan Hudson, City Engineer

Thank you. Yeah I understand all of that completely. Of course, we have weather issues too. So there are a lot of challenges. We do the best we can, but we appreciate everyone's patience. I think when we leave, we leave a good product and I think for the most part people are happy with it. So if you just continue to bear with us as we get through the process, we appreciate that.

Alderman Klee

Thank you.

Alderman Lopez

As the Ward that last summer and the summer before got to experience the sinkholes, I think while it is definitely uncomfortable and difficult people have to drive down like Kinsley Street and those kinds of streets and there's work in progress, it's for a good cause and people generally understand that.

Earlier during your presentation, you were talking about berms and this is something that residents have discussed with Public Works but as we do this and we're in your five, new members of the public are being impacted by the repaving. When repaving processes raise or adjust the height of the road or result in changes in water flow and neighbors get water delivered from the road down their driveway, who should they turn to and what kind of help can they get?

Dan Hudson, City Engineer

So they can reach out to us and Mark Saunders or Lauren Byers is a great resource. She'll get in contact with us. But yeah not everything goes perfect so sometimes we have to go back and make some adjustments. We're always - our ears are always open. We're willing to come out and meet with people and try to address the situation.

Alderman Tencza

Thank you. So two questions. One - it's quite a process to pave the streets. Does the city have somebody who is like a compliance officer at each step that verifies that the contractor has complied with the terms of the contract and they can move on to the next step?

Dan Hudson, City Engineer

Yes. Mark is in the field often and we also contract a local engineering company - Hayner Swanson - who helps us with that. They have somebody in the field every day during work. Of course, works occurring in a number of locations so they have to kind of follow it around but they're there. They're watching full time and then Mark is in and out of the office multiple times a day trying to try, you know, respond to issues, and oversee, and ensure things are going according to the specifications.

Alderman Tencza

If I may just, you know, to follow up on what Alderman Lopez was asking about just to give an example. In my neighborhood Ward 8, there are issues all over the place with rainwater, storm water runoff especially one of the roads that was just paved. I had reached out to the Director and to Ms. Byers and it was amazing how responsive they were. I believe Sunshine Paving was the company that had done the original paving of Vieckas Road in my neighborhood. They came back, you know, put up some curbing which greatly reduce the water runoff for the neighbors. Came back, you know, fill filled in, put down loam and seed and everything and it looks great and has alleviated the problem. So I think that anybody who has issues, you know, should feel free to reach out to Public Works because you folks are - not that we don't have great departments - but you folks are probably the most responsive in a lot of ways when there are issues. So thank you.

Alderman Dowd

Yes I know the answer this, but it's just for the public. There are some streets that have been paved that were not out of the city funding. For instance, on Charlotte Avenue on the safe routes to school was done by a grant. A lot of improvements were made to Charlotte Avenue under that grant but it was not part of city funding. It took us five years to get the funding but we finally got it. You guys did a great job at Charlotte Avenue. I assume there may be other areas of city that roads have been done by a grant?

Dan Hudson, City Engineer

Yes. Earlier in the program, we got a federal paving grant so we did about $4 million of paving through that. But yeah, there's a lot of projects going on, different grant funding. We try to coordinate efforts as we can, you know. If we have a project going on such as Charlotte Ave. and that covers the area in front of school but the rest of the street needs to be paid. We try to coordinate and tie in that together so that the whole area there can be done at once. I know our Street

Department came in and did some sidewalk paving after the fact for some sidewalks that weren't covered under that grant. So we do the best to plan these projects out and leave complete products the best we can.

Alderman Dowd

Yeah, the other thing, I'd like to thank you for your coordination. We had many, many conversations about Cleveland Street and you waited to pave that street as soon as we were done to the Fairgrounds Middle School so that all tied together. That worked out exceptionally well so thank you very much for that coordination.

Dan Hudson, City Engineer

You're welcome. Just talking about the drainage a little bit. If people see that their roads on a list coming up, we encourage you to reach out to us and tell us about existing issues before we get there and we'll try to do the best we can to improve conditions. As Engineer Saunders said, when we're doing a reclaim or regrading the whole road that gives us more opportunity to make fixes. If we're just doing, you know, a mill where we're taken out a couple inches and putting back a couple inches, we'll do we can but there is a limitation to how many things, you know, how completely we can fix problems that are existing.

Alderman Schmidt

Thank you, Madam President. Thank you for paving. Really. Cider. I know it intimately because it's how I get through my neighborhood. I've noticed that once the milling was completed, that you found a great deal of problems along the berm, divots, and just stones, and bits. You actually had to take extra time there to fill those in to actually prepare it well and fill it in and it's made a huge difference. I've noticed. The water problems people have had in the past that I've gotten calls on, you've always managed very well and I really appreciate it.

My message would be if everybody could just if they see a problem, let us know as soon as possible because it's so much easier to fix now than it will be later. Could I ask how many projects you have going on right now in the city - paving projects?

Dan Hudson, City Engineer

Oh boy. So I mean we do some in-house paving through our Street Department. This year we put out two paving contracts and they were both awarded to the same company. It's a lot of paving. I mean it is a big program. The city is running to its credit, maybe playing a little catch up, restoring (inaudible) but it's about 23 miles this year. So that's a lot of roads to touch and do all that coordination that Engineer Saunders mentioned and have it all come out in good shape.

Alderman Schmidt

Excellent. Just one more thing, thank you for Coliseum Avenue.

Dan Hudson, City Engineer

Finally got that paved.

Alderman Schmidt

Thank you.

Lisa Fauteux, Director of Public Works

Commissioner Pappas is on the call and she can't unmute herself. She does have a couple of questions, so I'm wondering if it would be possible for her to ask her questions.

President Wilshire

Sure.

Lisa Fauteux, Director of Public Works

But I don't know how to unmute. Can we unmute her?

Jeff Poehnert, PEG Manager

That would be *6.

Lisa Fauteux, Director of Public Works

She tried that and she said it didn't work.

Jeff Poehnert, PEG Manager

Well then I don't have an answer there.

Lisa Fauteux, Director of Public Works

Okay. She's on the zoom call, but she's on a landline and she's tried the *6 and she's said it didn't work. We can't unmute her? No.

Jeff Poehnert, PEG Manager

No, I cannot unmute.

Lisa Fauteux, Director of Public Works

Okay.

Alderman Klee

Can she text the question?

President Wilshire

Alderwoman Lu do you want to ask a question while we're waiting?

Alderwoman Lu

Well I do have questions and she could also text me the question if she would like to.

How many miles are to be repaved in the next five years? Will that be the balance to 300 or fewer?

Dan Hudson, City Engineer

It would be fewer. I mean, we've done 113. That's about through half the program. So we would expect to do a similar amount.

Alderwoman Lu

Okay. All right. And what's the life of a road? Or is that impossible to say, it depends on - so if that's impossible to say, could you tell me the average life of a highly traveled road?

Dan Hudson, City Engineer

Highly traveled roads have the most traffic, the heaviest traffic and that's what you know that fatigues a road over time. There are many factors as you can imagine but I mean a good paved road, 12 years plus or minus on a heavy arterial.

Alderwoman Lu

And what about a minimally traveled like a side street, a residential side street?

Dan Hudson, City Engineer

It can be up to 20 years. Yeah.

Alderwoman Lu

Okay. And can I just ask a couple questions? Could a resident learn their road score?

Dan Hudson, City Engineer

Sure if they want to call us, we'll share what we have for information. Sure.

Alderwoman Lu

Okay. And another. What are the moratorium rules? I know that there are some. I've heard the term. Could you explain that just so I have a better understanding?

Dan Hudson, City Engineer

Sure. I'd be happy to. So the city ordinance stipulate that if a road has been paved, then it goes into a five-year moratorium against cutting into the street, you know, activities such as installing, you know, utility, that type of thing. A driving work that might impact the roadway. So there's a five-year period where we're not allowed to cut into the street unless you get a waiver from that which you need to get from the Board of Public Works. So people can apply if they have a hardship condition and that will be considered by the Board of Public Works.

Alderwoman Lu

Okay. Could I just ask a couple of other smaller questions? So I never - that was new to me and I haven't been sending out the schedule of paving to my Ward. Is that moratorium issue mentioned in the notice that goes out about the paving? It is?

Dan Hudson, City Engineer

Yeah, absolutely. That's one of the main purposes of sending it out. We want to give people a fair warning. It's not years in advance warning but as much as we can give them that this is a pending thing. So if there's anything that they need to do - say they have a really old sewer service that they think is going to need to be replaced, then the time to do it would be before we come and do the paving.

Alderwoman Lu

Okay. I just have two other quick questions. When the State roads are done, is that the city that's actually, you know, is it our contracted people? Is it the same quality and same process - like the overpasses or is that a totally different, you know, oversight that's doing that work?

Dan Hudson, City Engineer

Its different folks doing the work so the State does their own. I mean, they hire contractors but they do their own oversight. We follow the same specifications so it's the same. The pavement mixes that we specify are the State specifications so very similar.

Alderwoman Lu

Great, thank you. I'm all set.

Alderman Jette

So after we complete this 10-year program, will all those streets in the city have been repaved?

Dan Hudson, City Engineer

We probably will have visited everyone and done either a maintenance treatment or paving but no, we won't have milled and paved every street.

Alderman Jette

So will this have to be repeated? Are we going to be spending this kind of money after we finish this 10-year program will we be starting another 10-year program and revisiting all the streets again?

Dan Hudson, City Engineer

It's a fair question. I don't think that's the plan. This program was projected to kind of like I said earlier, play a little bit of catch up because we had full fallen behind. Once we do that, then we'll be in a state (inaudible) into a maintenance mode. The city will always need to be paving. Every year you should be paving so you're trying to keep up because the roads are degrading every year. It's like, you know, paint on your house is degrading every year. It needs to periodically be repainted and the same is true for roadway. No matter how much preservation and maintenance we do, there will always be roads that need paving.

The goal here is to through this significant effort the city's making, like I said, like catch up get the majority of roads in good condition and then we'll be able to do more maintenance which is less costly. So in the long run, this will be financially beneficial to the city. The city will save money over time by having done this and then do more maintenance, preservation efforts in the future but there will always be paving.

Alderman Jette

But the degree of reconstruction won't be necessary to do as much in the future?

Dan Hudson, City Engineer

Yes, that is the intent. You bring the roads up in a good condition; you keep them there, but there will be roads that need repaving so you do that, but you're doing less of it. You're not paving as many roads at a time. So you're, you know, the cost of your annual paving effort can be reduced.

Alderman Jette

Thank you.

Alderman Klee

Thank you again, Madam President. Couple of questions, a couple of comments. First off, I'd like to say thank you for the letters that you do send out with the explanations and so on. I've gotten a number of people that have called me and said, do we know when they're going to be doing it because I want to get my road paved? I had one constituent who actually wanted to bring gas line into their home, which meant going into the street and so on. So they made sure that they get that done timely. So it was it was very helpful and they didn't get... We also had one that was on Concord Street that was a build after it had been a year or so ago when it when it got paved and we were able to figure out a way of them doing it from a side street rather than coming in from Concord. So it does help to have that information, even if it's after the fact.

The other comment that I wanted to make was in the case of flooding. I know you said that you can't always fix it and I know we have a lot of homes that are below grade. Their driveways are below grade and we've had that. When you did your paving, you built berms by their driveways to stop that from going through and I had one – not the same street - on Birchwood that had flooding that was in front of their home. So whenever anybody walked it, it iced up and so on. It was last year and this year you brought someone in to fix it. So, again, it was Sunshine Paving. Fingers crossed that it did work this time but I do appreciate that even though it took a while to do it, I do appreciate that. So I just wanted to kind of give you the kudos for that. It takes a while, people get frustrated but we do see that the work is happening. So thank you.

Dan Hudson, City Engineer

Thank you.

Alderman Dowd

Yeah, those of us that have been around a little while realize that the reason we get into the position of having to spend so much for paving was because in an effort to save money, previous administrations didn't pave enough streets every

year. So the idea is when we went through this bonding to catch up, that we would have a program going forward that we stayed ahead of the paving program and we weren't trying to do little patches here and there because it's pay me now or pay me a lot more later. I look forward to DPW coming up with that program to keep us in a good stead on paving going forward.

President Wilshire

As long as we fund their budget and they ask for paving. I think that's the secret. Someone had their hand up on the side.

Alderwoman Lu

I had one more question. Thank you. If you had to make a rough guess what portion of the streets are the 12-year streets, the major arteries?

Dan Hudson, City Engineer

Well, we've been focusing a lot on those in this first five years. I think you'll find them mostly arterials we've been brought up into a better condition because those are the most heavily traveled. So in this first five years, I think it's about over 30% of our program has been on arterials.

Alderwoman Lu

Well, I meant to ask of the 300 miles in Nashua how many are those arterial, you know, 12 -year scheduled? I know that you might not have that figure but if you if you thought you could throw it out there that would be great. I'm just curious.

Dan Hudson, City Engineer

If I had to wager a guess, I'd say 20%. I don't know. It's been 30% of this first five years and as I said we've focused on those a lot. So as a percentage of the total network, it's going to be less than that.

Alderwoman Lu

Okay, thanks.

Alderman Lopez

Just along those lines because there are parts of it with some pretty large potholes. We did pave Main Street just a couple of years ago, right, and there are plans coming up to do it again?

Dan Hudson City Engineer

Yes. We recognize that there's a need to paint Main Street. We're trying to develop a program to do that. There is utility work that needs to be done. You've seen Liberty Utilities out there. They have all cast iron gas main. Per PUC, they're required to get rid of that within the next five years. So they need to do some work and then we can come in and do some paving. It's a big street obviously and we'll probably end up phasing that in a few different years and develop the program. That is something that we're trying to work out the details of right now.

Alderman Lopez

So it has not escaped attention. There's a plan. It's just complicated and we're working on it?

Dan Hudson, City Engineer

Correct.

Alderman Lopez

Okay.

Alderman Dowd

Just one other thing for people's edifications, when we pave a street like Amherst Street where there are hundreds of trucks, heavy trucks, every hour, you use a thicker coat of tar than you do on side streets. If you didn't, that would break up very quickly. Those heavy vehicles really tear up roads.

Alderman Klee

Backing up on to what Aldermen Dowd had said, Amherst Street – 101A is that not a State road and do we pave that?

Dan Hudson, City Engineer

So we do. There are State numbered routes which still are within our maintenance responsibility. That would be one.

Alderman Klee

Okay thank you.

President Wilshire

Anyone else?

Alderman Harriott-Gathright

I just want to say thank you as well to the paving program. I've had quite a few residents that have call for one reason or another. I would quickly send an e-mail off to Lauren and she's so wonderful. She really is. I get a lot of positive comments from my constituents on how she's responded and worked at times that there's work to be done in other times, she could say when approximately works want to be done. I had a gentleman on Hollyhock just last week - so he sent the thank you to me for sending it to her and a thank you to her for fixing his roadway – Hollyhock because they had big potholes over there. So say thank you, again.

Dan Hudson, City Engineer

We will.

Lisa Fauteux, Director of Public Works

I just want to mentioned that Commissioner Pappas would like to ask a couple of questions and she can't unmute herself and I don't know if the host can unmute her or?

Alderman Klee

Jeff just sent me a message that said if Commissioner Pappas comes in again, he has mute upon entry off so she should be open mic if she comes back in. She's not in right now, she left. So if she calls back in, the auto mute will be off for her.

Lisa Fauteux, Director of Public Works

Okay, let me ask. I'll tell her that.

President Wilshire

While we're waiting, how about those Red Sox?

Alderman Harriott-Gathright

I actually have another question. So there is several areas where the pavements are really, really bad and one of them is Harris Road as it comes into the intersection of Conant Road. I think it's the right-hand side if you're going to Harris Road. Is that in the plan - the pavements? You were referring to at the end of Harris Road.

Mark Saunders, Senior Staff Engineer

Yes, yes. So Harris Road as Engineer Hudson alluded to, we focus on mostly arterials and we've done about 32 miles thus far in the program. So out of that, Harris Road is a borderline collector arterial road due to the volumes it sees and that is one of the last arterials to be completed. So that is up for a resurfacing treatment and needs to be verified after this condition survey as we developed the program just to see where it stands.

Alderman Harriott-Gathright

Okay, thank you for that. And there's one other. Kinsley Street as it goes up from Pine to the Cemetery is that in the making soon?

Mark Saunders, Senior Staff Engineer

What road is that?

Alderman Harriott-Gathright

Kinsley Street from about Pine Street up to the Cemetery - the pavement.

Mark Saunders, Senior Staff Engineer

So Kinsley Street, it was paved from Main Dunstable up to that Pine Street. That section was done with the Broad Street Parkway. That's why that section was jumped through that condition. I have not been over there recently but I believe there's no schedule to pave that due to the condition it's in.

Alderman Harriott-Gathright

Not the street, the pavement.

Alderwoman Lu

Do you mean that sidewalk?

Alderman Harriott-Gathright

The sidewalk. Okay. Sorry.

Dan Hudson, City Engineer

Sidewalks are a whole other thing. We would love to do all the sidewalks as repaving but we just don't have a funding mechanism for that currently. So sidewalks are an issue. As noted, we are at least addressing the access to the sidewalks that are there such as they are but we do hope to continue to do more sidewalk work in the future but that would require some funding source. Yes.

Alderman Harriott-Gathright

Thank you.

Alderwoman Lu

Are we still waiting?

Lisa Fauteux, Director of Public Works

Yeah, I think so.

Alderwoman Lu

I had one question. I have a resident who has called me about water flooding in their – it's not specifically their yard because it's the first I don't know five feet, which I mean it's their yard it's in front of. What city department can help them

with that and is there help for water? I mean, it's really close to a drain but the drain is not catching it. It's on Pine Street right at the bottom of a hill.

Lisa Fauteux, Director of Public Works

Do you know the number?

Alderwoman Lu

I'll reach out to you.

Lisa Fauteux, Director of Public Works

Okay. We can go take a look at that. We might be able to do something. Is that a street that's recently been paved?

Alderwoman Lu

No.

Lisa Fauteux, Director of Public Works

Yeah, sometimes we can help with those problems. We'll go look at it if you just e-mailed me the address.

Alderwoman Lu

I can't believe I forgot to do that but okay.

President Wilshire

Okay. I would like to thank you for your presentation on paving. I don't see anyone else on that we're going to wait for. So I think we're going to move on to the next presentation. Thank you very much.

Mayor Donchess

All right, thank you very much everyone. So why doesn't Mr. Boucher and Ms. Osborne come up and sit where…All right, thank you Madam President. So now we're going to do wastewater. We wanted to just give you insight into the payment structure that the wastewater fees and what the residents are getting for their money. Before we begin, I mean, the main point here is that these improvements and the system in general, the wastewater system, is really highly regulated by the EPA and the DES at the State level. We are subject to many regulations as well as an agreed upon consent decree to make various improvements. So in order to maintain the system in a working condition and to meet the environmental requirements that we are subject to, virtually all of our expenditures are federally or State mandated. But with that, you'll hear that since Mr. Boucher came several years ago, we've made very considerable improvements at the plant trying to upgrade its condition. A lot of equipment was in very bad shape and Ms. Osborne is second in command so to speak and she's done a lot of the work there too. So we really appreciate them.

The sewer system, of course, is something that people under appreciate. They don't really think about it very much, but it's a very important system for the city, of course, and since the Romans developed sewers 2,000 years ago, they've proven to be very essential in any functioning city. So with that, I will give you Director Fauteux, and Mr. Boucher, and Ms. Osborne.

Dave Boucher, Superintendent of Wastewater

Okay, thank you. I'm Dave Boucher, Wastewater Superintendent. Okay, thank you for the first slide. Okay, so the picture is showing an aerial view of the wastewater facility located at 2 Sawmill Road. The footprint that the facility sits on is approximately 28 acres. The facility collects and treats wastewater. We serve about 89,000 customers here in Nashua. We also serve as Hudson, a small part of Merrimack, New Hampshire, and a small part of Tyngsboro, MA.

Our goal is to deliver clean, clear water to the Merrimack River. The wastewater facility also consists of 446 miles of collection system that we have to maintain. It's broken up in three different categories here: 82 miles of combined sewer - this is sanitary sewer and storm water that shares the same pipe; 234 miles of strictly sanitary sewer; 130 miles of separate storm water. The collection system is the network of pipes underground that carries the wastewater from

homes and industries to the wastewater facility. Within the city, we have 13 pump stations. These pump stations are the buildings or structures on the ground that houses pumps and controls these pumps take any sewage from a low elevation, brings it up to a higher elevation so that it can be carried by gravity through these pipes to the wastewater facility. We just finished an upgrade of six pump stations. We're getting ready to start Phase II, which is the remaining pump stations. We upgrade all the pumps, buildings, underground structures and all the controls to the pump stations.

We also have nine combined sewer overflow structures. These are kind of relief points throughout the city. They're designed - they're important that if we have like a flash flood, any swarming gets hydraulically overloaded. These are relief points where highly diluted water would discharge into the river preventing water from coming up into streets or backing into homes. So we have nine of those through the system. We also maintain eight siphon chambers. This is anywhere the sewer system travels under a body of water. We maintain the pipe that goes under the body of water, also the structures on either side for maintenance purposes.

These are some of the numbers we see at the wastewater facility. So the facility has a design flow of 16 million gallons per day. We can receive a peak flow of 110 million gallons per day during major storms. Our average dry weather flow is roughly 12 million gallons per day and we have an annual flow of 4,611 million gallons. We also received septage from Hudson and Nashua. That's roughly about 800,000 gallons per year. So I'll turn over these next couple of slides to the Operations Supervisor Noelle Osborne.

Noelle Osborne, Operations Supervisor

Thank you. Noelle Osborne, Operations Supervisor. As Mayor Donchess was mentioning, we are highly regulated at the wastewater facility. Here's a list of the permits that we have. The first one being the NPDES permit and PDES. That's the National Pollutant Discharge Elimination System. This one's issued by the US EPA but it includes State standards. So New Hampshire has limitations that are even stricter than the EPA has and we have to follow those as well. This is our all-encompassing permit. It reflects site specific conditions so it's specific to Nashua and allows us to discharge into the Merrimack River. It regulates the process through the facility what we've discharged from the facility as well as the biosolids processed, the management of the collection system, and the discharges from our combined sewer overflows.

The next one is the New Hampshire SQC - Sludge Quality Certification. So while the NPDES permit does regulate the basics of our biosolids process, we applied for and were granted additional qualifications for our biosolids giving us what is called a “Class B Status”. This just means we have additional process and testing requirements but in the end, it grants us the ability to beneficially reuse the product with the land application. That allows us to reclaim some of the non-renewable resources in the biosolids such as phosphorus and it's a benefit to farm owners. The Massachusetts AOS is the same as the SQC - the sludge certification, but in Massachusetts so like the SQC, it allows us to land apply in Massachusetts.

The air permit is to the New Hampshire DES. We have on site three large emergency generators as the facility has to continue to run even when there's no electricity from the main grid. We also have two energy recovery generators which are still offline, but we hope to have operational soon. We have multiple odor control units that help to remove pollutants called mercaptans from the air, which is basically just sulphur containing compounds that are air pollutants and have that egg odor. All of the discharges from these units are regulated through this air permit and require monthly and annual inspections, testing reports, and lots of upkeep and maintenance.

The AST and UST are the above and underground storage tanks. Each of the three emergency generators require large quantities of fuel to be on hand at all times and these are stored in those above and underground storage tanks which require regular inspections and maintenance. The multisector general permit “MSGP” - the wastewater facility due to the nature of the equipment and the large footprint is considered an industrial site. It has its own stormwater collection system with catch basins and outfalls. So these are regulated under that MSGP and require testing, inspections, and reporting. The MS4 permit NPDES Phase II Municipal Separate Storm Sewer System, this permit regulates the storm water collection system throughout the entire City of Nashua and includes things like reducing inflow and infiltration, as well as storm water treatment, testing, and reporting.

Hazardous waste SQG and RCRA - that's a Small Quantity Generator and Resource Conservation and Recovery Act. So the facility does produce a small amount of hazardous waste in the laboratory as a byproduct of our testing. So this certification lets the State know what we produce and that we have the training to manage it and we report that to them.

So governing documents. Within the permits are requirements to create governing documents and these documents are written for the City of Nashua either internally or through the use of a consultant. They're specific to our needs and abilities to accomplish specific tasks. So the collection system O and M is through the CMOM portion of the NPDES

permit. It's the capacity management operation and maintenance section. So we are required to determine specific achievable goals for the management of the collection system. For example, how many linear feet we intend to video of the sewers. What is our standard operating procedure for cleaning the sewer and a potential replacement schedule? We write this so we can tailor it to what we believe to be economically feasible. However, EPA and DES have the final approvals on whether or not they believe it to be enough.

Long term control plan/integrated plan. This is, again, the CMOM portion of the NPDES Permit as well as the MS4 Permit. So this looks ahead - what are we looking to do moving forward for long term control of the CSOs as well as storm water management. The consent decree is through the NPDS Permit but it's separate. It's a legal document issued by the EPA, specifically requiring us to take additional steps towards long term CSO control. Our last consent decree was from 2003 and was the specific driver for projects like the screening and disinfection facility, the wet weather flow treatment facility, and Harbor Ave. sewer separation, as well as many others and we expect to see another following the completion of this one.

The post construction monitoring plan is one of the final stages of the existing consent decree. It was written by Nashua as a way to measure the effectiveness of the projects completed for CSO long term control. We've been waiting to kick that off on the completion of several citywide projects. Storm water Management Plan is a requirement of the MS4 Permit and is a plan for the mitigation of storm water pollution. It looks forward at different projects - cleaning schedules on catch basins and other structures, green infrastructure and more.

Illicit Discharge Determination and Elimination Program. This is another MS4 requirement. It provides a plan for looking for illegal connections of storm water to our system and removing them. NOI is the Notice of Intent. It's a document used to declare Nashua under specific general permits such as the MS4 and MSGP. The SWPPP is the Stormwater Pollution Prevention Plan. This is under the MSGP and is written for the wastewater facility site. It includes inspection requirements, testing, education, and training requirements. The SPCC is the Spill Prevention Control and Countermeasure Plan and this is under the AST and UST certification as well as EPA requirements and its necessary of any facility that has the capability of leaking large quantities of oil or fuel to the stormwater system and eventually to the river. Because of the quantities of fuel on site for the emergency generators, we follow into this category and, again, has inspections, reports, tests, and maintenance requirements. So we're going to turn it over to Frank Ayotte of Hazen and Sawyer.

Frank Ayotte, Hazen and Sawyer

Yes, thank you. I'm one of the city's wastewater infrastructure consultants. Before we get into the slides, just to comment on wastewater infrastructure. Always water infrastructure whether it's be treatment, collection, pumping is designed to protect public health. As you can see in the slide, the city has over $85 million dollars and upcoming capital investments to protect public health. There is a number of bulleted items there, which highlights some of the projects. There are over 40 of them in the Capital Improvement Plan and these expenditures are required to replace the aging equipment and infrastructure that keep the city in compliance with all the permits and guidelines Noelle mentioned as issued by the USEPA to avoid costly fines and violations as a result of failed infrastructure.

Let's look how Nashua's residential rates compare with selected regional rates. As you can see, these numbers have been updated for 2021. Nashua is still lower than many of its peer communities. Of importance to note, the average quarterly bill for the cities above not including Nashua is $156.43 as compared to Nashua this time for $94.97 and is still well below the State average of $191.25.

So looking at the residential sewer rates from 21 to 23, we just had a residential increase in 2021 of 20% to bring us to 9497. In 2022, a 15% increase is projected and in 2023, a 0% increase is projected. As I mentioned before, this is still well below the comparison cities averages and the New Hampshire State average. Of importance to note on that last slide Dan, is prior to 2020 over a 16 year period, there was only an average increase of about 2% in the rate. So it was very stagnant over that time.

So what is the City doing to control some of its costs besides taking advantage of State revolving loan fund, low interest rates, and grants? The city has developed an integrated planning framework and has developed a dynamic sewer rate model to comply with its consent decree from the USEPA. What is an integrated planning framework? It is an EPA accepted planning framework that allows the city to prioritize its capital projects that best address the most pressing system needs as determined by Nashua's criteria. So all those capital projects are then linked into a dynamic sewer rate model, which was developed by Hazen and Sawyer and allows us to defer capital projects that have determined to have fewer benefits and some of your more pressing needs. What this allows us to do, it allows us to smooth the cost curve by shifting projects further out into the future that may not have the most immediate benefit.

Okay, what's in the dynamic sewer rate model? Well, it includes a list of all current accounts and assets by rate class, an annual percentage usage by rate class, and the annual percent revenue by rate class. So that's the revenue side of the equation that goes into the rate model. On the other side of that is the projection of expenses, including cash and capital improvement plan debt service, as well as a breakdown of all your O and M costs. So that's your expenditure side. Once all that is linked into the model, including the Capital Improvement Plan over a time schedule, then you can have real time rate change selection. So you can select your rate changes whether they're increases or decreases and see how it real time affects your fund balance. This also is a comparison in the model of the rate change impact to the USEPA affordability index. That index is 2% of your household income. In 2023, Nashua is still at 1.4% based on the current increases planned for 2022 and 23, which 23 was flat. So it's still well below the EPA average.

In conclusion, the sewer rates need to cover the cost to finance the capital investments that are required to comply with the regulatory permits and avoid costly fines due to permit violations as a result of failed infrastructure. Despite the recently approved increases, so we just went through the 20% increase in 2021, and we're looking at 15% increase in 2022. Nashua's sewer charges in 2023 will still be lower than many of its peer utilities and well below current State New Hampshire average household quarterly bill. Nashua rates remain affordable to all major household income brackets based on the USEPA's 2% affordability metric. We analyze that in quintiles. So from the lowest income to the highest income, we break that out in 20% increments and we're still, you know, at the 1.4% in 2023.

Nashua has developed the integrated planning framework to further reduce the rate impacts of its required capital investments. This initiative includes all capital projects linked into the rate model to accurately forecast the sewer rate well into the future. So if we're seeing that this rate model is showing higher than normal rate increases, say further down the road, what can we do to kind of mitigate that? We may be able to come up with a tiered rate structure. We may be able to shift for capital projects that aren't at risk further out into the future. The idea would be to try to get to a cost of living increase over time so you're not getting spikes in the rate. Right now, no additional rate increases are proposed that this time. Rates will be reviewed annually to determine if future adjustments are really needed. So I know the city is moving all its accounts into a MUNIS system and at that time, you know, we'll be able to set running rate model scenarios on the rate based on the city's Capital Improvement Plan.

President Wilshire

Thank you.

Frank Ayotte, Hazen and Sawyer

You're welcome.

President Wilshire

I have a question for Mr. Boucher. One of your first slides you mentioned combined sewers. We still have 86 miles of combined sewers is that…?

Dave Boucher, Wastewater Superintendent

Yes, approximately 82.

President Wilshire

Okay and are we still working to separate those or no?

Dave Boucher, Wastewater Superintendent

Not to my knowledge not the current ones. Any future ones.

Frank Ayotte, Hazen and Sawyer

I can answer that. Right now we have in a long-term control plan submitted to the USEPA that only includes separation of a small area related to I believe CSO8. We also have control recommended for the one-year storm. T hose are technical terms but right now it does not include full separation of the city.

President Wilshire

Okay, thank you.

Alderman Klee

Again, thank you Madam President and I'm glad you brought up the CSO because that was what my question was. I have a couple of questions relative to that and basically where are they located. But before that when we do open and we do put into the Nashua River and the Merrimack River, I know we dilute as much as possible but I've heard that you should stay away from the area for 24 hours. I know that Manchester sends out a report that this has been happening. The reason I bring this up is I have a constituent who is very keen on getting these reports in real time as possible. Manchester does seem to put out an alert. I think Lowell does the same thing. We do put out the information, but its well after the fact after that 24 hour period where people should be avoiding that area. Is there anything that we can do to make that more real time is my first question and then part of that is also is where are these CSOs located? I know you said five on the Merrimack and four in the Nashua River.

Dave Boucher, Wastewater Superintendent

So we do have flow meters that measure the flow leaving. We do get reports. We do have to verify the data before we put it out there because sometimes we have false readings. When these do go off, it's usually a major storm - the rivers are high. It does take a while for the rivers to recede so no one is using the river typically. We don't usually have dry weather discharges but we do post the discharge on our site - the city's website. How soon is that done?

Noelle Osborne, Plant Operations Supervisor

Within 24 hours.

Dave Boucher, Wastewater Superintendent

So we do do that and at all these sites, it is posted. We do have signs that kind of indicate that there is CSO outfall here and what would be discharged? Don't go into the river during this time. The specific locations - I don't know if you have specific locations.

Noelle Osborne, Plant Operations Supervisor

They are on the website on the wastewater portion of the website. There are addresses of all the locations.

Alderman Klee

That's perfect. Thank you that does answer the question.

Dave Boucher, Wastewater Superintendent

Sometimes they don’t have street addresses so it's hard to describe where they are.

Alderman Klee

That's absolutely fine. I can look that up myself and I do appreciate that. Madam President if I could…I had to look up a word that was in there and it was septage. I looked at it and went okay - 800 gallons of that. So that comes through the Nashua wastewater is that what you're saying?

Dave Boucher, Wastewater Superintendent

Yeah, correct. The septage is if your house if you're not near a gravity sewer main, you might have a septic tank out your yard. You'd have to have it pumped every other year or every four years. A truck would pick that up and bring it to the wastewater facility for treatment.

Alderman Klee

Do we have septic tanks in Nashua?

Dave Boucher, Wastewater Superintendent

We do, yes, correct. So we only take it from Nashua and Hudson because we have an agreement with Hudson as well.

Alderman Klee

And you mentioned about the 15% in 2022 and costs have skyrocketed everywhere. Do we foresee that this is actually going to go up beyond the 15%? I mean, I know with the joint specialist, quote, the building has gone up. Some items over 100% of that and we're seeing 20%, 30% of a building type of things. But will that affect this in any way trying to get parts and so on?

Frank Ayotte, Hazen and Sawyer

Going above 15% of it isn't projected that I'm aware of.

Dave Boucher, Wastewater Superintendent

We're gonna to do an analysis annually to review it.

Alderman Klee

With the COVID cost, we don't foresee any of this going up above 15? I'm thinking of delivery and all of those type of things. I didn't know if this would affect your area,

Dave Boucher, Wastewater Superintendent

All our projects we're seeing long delivery lead times on everything. We also are aware of cost increases on all the products we've been buying. So it's hard to project that. I think that's why it's important to do that annual analysis because the economy is going to change.

Frank Ayotte, Hazen and Sawyer

And the rate model too will allow for that.

Alderman Klee

Thank you very much. I appreciate your answering my questions.

Alderman Lopez

So just asking for a friend here. I talked to Director Fauteux about this. River Dave was featured on a segment of that radio show a couple weeks ago. Hopefully it brought some attention to the importance of wastewater treatment but it did make me wonder about a comment made about the sludge and phosphorus which is a renewable resource in it of benefit to farmers. But I mean given that the former owners of that material had pre-filtered it for toxins, you know, its waste for a reason. What are the additional treatments that are that are done to it before it's sent to those places and has it been used on any farms near Nashua?

Dave Boucher, Wastewater Superintendent

Is this the phosphorus or the PPhos I guess they call it?

Alderman Lopez

I was asking about this the human sludge stuff. I didn't know it had peat moss in it.

Dave Boucher, Wastewater Superintendent

Okay, yeah.

Alderman Lopez

And just to clarify, PPhos is in that too or is that…

Noelle Osborne, Plant Operations Supervisor

PPhos is everywhere. So that's not anything that we have regulations on yet PPhos but the Class V biosolids we have at the wastewater facility and anaerobic digester which takes some of those pathogens and those viruses out of the of the product. It reduces the volume. It reduces the odor. That's why you don't have a lot of odors from Nashua's wastewater facility. It is a heavily regulated. It's trucked off site. Usually the farmlands are in the northern part of the State. Class B tends to go to crops that animals would eat not people. So there's that level. There is further treatment that we could do Class A that we're currently exploring and that would be a product that, you know, you could come pick up at the wastewater plant and spread in your gardens. It's pretty inert at that point. Merrimack does that. Residents are able to come and get that Class A biosolid from them, but we're not there yet. We're at Class B so phosphorus yes is a non-renewable resource and its black gold for those farmers that are using it.

Alderman Lopez

I just want to dispel any rumors that were sprinkling or poo on orchards or whatever

Alderman Jette

So there's the stormwater - I understand we try to separate the stormwater from sewerage. Does the stormwater go directly into the river or does that get treated?

Dave Boucher, Wastewater Superintendent

Some stormwater goes to the river and is not plumbed into the wastewater facility. But the ones that is in the combined system or the sewer system that has just storm water will come to the wastewater facility and be treated. It's not separated at the facility. It's treated just like its sewage.

Alderman Jette

Okay, so how much of it goes directly into the river?

Dave Boucher, Wastewater Superintendent

I'm not sure of a percentage that goes to the river direct.

Alderman Jette

And the EPA is okay with that? We're okay doing that? I understand that stormwater it's not just pure rainwater. Its water that's gone over the street, picked up oil, and other pollutants and so it raises the question, in my mind, why would we be allowed to dump that directly into the river?

Dave Boucher, Wastewater Superintendent

I believe that was a decision made by the city to not separate but build a wet weather treatment facility, which would allow us to take in as much as possible and treat. There are some outlier areas where it's not feasible the plummeting currently to the collection system.

Lisa Fauteux, Director of Public Works

No, I don't think - let me let me take a stab at that Dave. I think what Alderman Jette is saying that why isn't all of the stormwater being treated that's going to the river, correct?

Alderman Jette

Correct.

Lisa Fauteux, Director of Public Works

Yeah, so that's something that we think is coming down the pipe and it's something that communities who have fully separated as Manchester is doing is going to have, we believe, will have significant problems because it will end up having to treat all of those stormwater outfalls. That's one of the advantages of our system is that most of the stormwater is going to the treatment plan and being treated and so that's why we are reluctant to separate the entire system. Only the areas that we absolutely need to where we're still having CSO overflows. So that's the way we've approached our wastewater system. So I think you're correct. I think that eventually that's going to be a major problem for a number of communities who are fully separated. Right now it is not though, the EPA is allowing us to just discharge.

Alderman Jette

So if the stormwater that is treated, why do we separate that?

Lisa Fauteux, Director of Public Works

We don't separate it. It's altogether. It's a combined system.

Alderman Jette

Okay.

Mayor Donchess

C I add to that? My impression is that for a while the EPA is, you know, main thrust was to get communities to separate because, you know, cities on the East Coast - these older cities - most of them were separating. The problem with that, as you've just mentioned, is that you get stormwater untreated and untouched going into the rivers. So now, you know, there may be some problems with that approach given the stormwater and so a lot of our stormwater is being treated, which is kind of unusual, actually. I believe most of the cities have separated like Manchester. So I think over the years, you know, there was some separation but then this wet water idea hold the water and then run it through the treatment plant was developed and most of the stormwater runs through that system but not all of it. Now if any of that is not accurate, which it may not be, so let's see. I think it's correct.

Lisa Fauteux, Director of Public Works

Yeah, you're correct.

Alderman Jette

So I guess, you know, the message is that eventually all of the water whether its stormwater or sewerage is going to have to be treated before it goes into the river. That's in the future for us.

Lisa Fauteux, Director of Public Works

We can't answer that for certain. I wouldn't speak for the EPA, but we believe so.

Dave Boucher, Wastewater Superintendent

There are more and more stringent regulations. They seem to get more and more stringent and stormwater is certainly an area they're looking at. You have an MS4 Permit now that monitors stormwater outfalls. That's just taking hold now in a lot of different urbanized communities. Those plans to stop monitoring your outfalls on stormwater and you know, as the regulations get more stringent, more stringent, you know, it leads you to believe that, you know, treatment of stormwater is down the road but to be seen.

Alderman Jette

Okay, thank you.

President Wilshire

Anyone else?

Alderman Schmidt

Thank you. Can you talk a little bit about lining of the old sewerage pipes instead of replacing?

Dave Boucher, Wastewater Superintendent

Sure. So that's part of the CMOM program that the city is undertaking and a lot of that starts off with an inventory of all the city's assets with respect to its sewer infrastructure through TV tapes and cleaning of those lines. Then what we do there, similar to the paving program, is we score the pipe. So we're able to identify cracks and, you know, breakages and basically it allows you to look at the pipe. Is the pipe good enough to be salvaged for a liner or it is it too far gone and need to be replaced? So it turns out to be a mixture. We try to line as many pipes as possible because look at the benefit you get for lining. You're not digging up the street. You're salvaging the existing infrastructure and you're putting essentially almost what winds up to be a hard plastic liner in your pipe that's going to last, you know, years on years on. So does that answer your question?

Alderman Schmidt

Yes, follow up. So that's one of the problems we see between paving and all of the underground work that needs to be done because we count on you to do that art before we can even get to the paving part.

Unidentified Male Speaker

Certainly and, you know, we've done CMOM programs in Manchester. The coordination between paving and trying to do is particularly if it's a pipe replacement, the coordination with the paving program has to be kind of intertwined. Because as Dan said, these cities also have five year moratoriums, you know, so if you're paving Main Street but you got a pipe replacement on Main Street, you better know about or its five years down the road before you're going to be able to do that.

Alderman Schmidt

And so some areas of our city are very old as far as the pipes that are there. Some of the streets downtown are simply being patched, and replaced, and fixed because of this weight that we need to do. Is that right?

Dan Hudson, City Engineer

Sure. Engineer Hudson. Yes, that's true. We do differ paving, do some Band Aid type treatments on some roads that for whatever reason can't do the sewer at that time and need to do it later. But as noted, we are doing as much lining as we can. We find it about 20 times less expensive than doing the full dig replacement and much less disruptive. So we have prioritized the system. We're looking at the older pipes of the system and pipe materials. Pipe materials have changed over time. So we're focusing our effort on the ones that we've seen historically we've had more problems with so we have a good effort and it is tightly coordinated with the paving program. As Engineer Saunders said earlier, ideally the paving should be the last thing but that's not always possible but that is what we strive for.

Alderman Schmidt

Great. Thanks so much.

Alderman Klee

Thank you, again. I guess I have a question as far as the scoring is concerned. Do you like the paving project - don't always necessarily do the worst ones right away. You try to get to those ones that are in the middle before they completely break down. So for instance, I know Orange Street I think they went into do a lining when they got in. They realized it was a lot worse and they had to, I think, do a lot more replacement or at least some of that to that extent. It took longer than was expected but for the most part when you're doing this scoring, again like the paving project, do you try to get in and take care of those before they get so bad versus going in and prioritizing those that are already bad?

Dan Hudson, City Engineer

Yeah, we do - it's a little bit different I'd say because, you know, for roads in bad shape is still passable, still usable but if a sewer pipe collapses, you know, has a major issue, it's not usable and creates quite a problem. So it's a little bit different. As we're doing the TV work when we find collapse pipes, we try to fix those as quickly as we can. But then we

are trying to line pipes and line as many as we can to catch them before we have that type of an issue.

Alderman Klee

Just a quick follow up. I just lost my train of thought sorry about – age. I guess the question that I have is we talked about those that could possibly collapse and so on, do we know when something like that happens? Does it create a sinkhole? How do you know that it's collapsed or are you pretty well versed that this one is on its way out?

Dan Hudson, City Engineer

Well through the TV work, we can see what the issue is. Yeah lots of times we don't know there is an issue in a pipe and a sinkhole leads you out there's something going on here. Sometimes maybe that's a drainage issue or other things but sometimes it's a sewer issue. So if we respond to one of those conditions, we start digging and find and address whatever the problem may be. But we are finding problems as we do the TV work so there's a reason we're doing it and that's why we want to find pipes in good condition but we also want to find the ones that aren't in good condition so that we can address those.

Alderman Klee

Just one quick other comment. Being the Ward Alderman of one of the oldest sections of this city - the north end French Hill area, I do see that you go in and do work. Again, it seems like it's extended. You dig up one part and then come back a little bit longer and so on. Is that because when you get in there you realize you need a part that isn't - in other words, you can't finish it all at once. It seems like Manchester Street seemed to take a little bit longer and I'm pretty sure that was a sewage issue as well - where Mount Pleasant and all that area is. So was that the kind of case that you would have? Orange Street seemed to take a long time as well.

Dan Hudson, City Engineer

Yeah it does take a long time. I mean you're working in and around the utilities. Paving or paving on top of them but here with the sewer work, you're digging right in amongst them, right. So it has to be slow and methodical work so that you don't do damage to those other facilities. Lots of times it's challenging because a lot of the oldest sections city we don't have records. We don't know where a house's sewer connection connects to the sewer main sometimes or where it goes, you know, from the sewer main to their house. Sometimes they have multiple pipes and we don't know that so. You never know what you're gonna find until you start digging but you run into challenges, and you deal with them, and so sometimes things are evolving. You might go on with a plan and sometimes the plan has to change so that may be why we have to come back sometime to do different things.

Alderman Klee

So at least digging up helps you remap things later on. Thank you.

Alderwoman Lu

Thank you. Just a couple of really quick questions if I could. CSO is that combined sewer overflow? Its sewer and stormwater? Alright. It's when we combine the stormwater into the sewer? Okay. So when that is actually sent out into the river, there's sewage put into the river at that point?

Unidentified Male Speaker

Very diluted.

Alderwoman Lu

Did I hear what?

Lisa Fauteux, Public Works Director

Very diluted.

Alderwoman Lu

Did we have more CSOs before and then we reduce them?

Unidentified Male Speaker

Yes.

Alderwoman Lu

Okay.

Unidentified Male Speaker

Significantly.

Alderwoman Lu

Okay. How did we reduce them did we divert the stormwater somewhere else?

Unidentified Male Speaker

So that the city undertook a number of wastewater infrastructure projects as part of their original long-term control plan that included a wet weather facility at its plant which takes a significant amount of wet weather and treats it. Also a screening disinfection facility on the Merrimack River for CSOs 5 and 6 which also has up to a million gallons of storage and anything over that will overflow into the Merrimack but it is disinfected and screened. We did a number of fine tuning of the system by increasing capacity of pipes to get more flow to the plant. That's pretty significant.

Alderwoman Lu

And I may have asked this before but did any of it go to say like, Salmon Brook?

Unidentified Male Speaker

Salmon Brook - I think that CSO was closed. That's CSO 2.

Unidentified Male Speaker

Yeah. No, we haven't had any discharge.

Unidentified Male Speaker

No, not the Salmon Brook.

Alderwoman Lu

Okay and just one other question I had is CMOM. Is that an acronym for a couple of different things?

Unidentified Male Speaker

Yes. It's an acronym for capacity management, operation, and maintenance. It includes basically, like I said before, CMOM program for your collection system will include inventory and TVing all the assets, cleaning them, scoring the pipes, and then basically determining which ones can be lined and which one can be replaced. You do that as you go through the entire city. So you're able to, you know, basically make improvements on a year by year basis. You know, it doesn't happen overnight. If you think about how many miles of sewer you need to TV, inspect, score, and then have a capital improvement project to now to correct those deficiencies based on the number of miles of pipe that you have. So it's a long-term process but as you get into it and you go through it, then you become more and similar to the paving program in a maintenance mode as opposed to a reactive mode. So then you're keeping up with your system. It's anticipated that, you know, sure pipes age as you go along and they'll need to be fixed, but as you go through the program once, which is your biggest kind of expenditures because you haven't done anything of that significant magnitude, once you've gone through all your pipes, it becomes significantly less expensive because you've fixed all

those problems and you've kept up with it.

Alderwoman Lu

Okay, thank you. Just a follow up. So do we sometimes use that phrase as shorthand when we talk about actually spraying that stuff on the inside of the lines to preserve them? I thought they called that CMOM?

Unidentified Male Speaker

You mean like a liner? Well that's CIPP. That's secured in place pipeline.

Alderwoman Lu

I was just mixing up the two.

Unidentified Male Speaker

Yeah it's a different acronym.

Alderwoman Lu

Okay, thank you. They both start with "C". Thank you.

Alderman Caron

Yes, thank you. So since this facility is in Ward 7, I first want to thank you for taking the time to in the last four or five years, doing all this maintenance and catching up because you were lacking on some of that. I know it was a lot of money but as the Mayor said earlier, people rely on the wastewater treatment plant. But if it goes down, it doesn't just affect one or two people, it affects the city as a whole. So I think this is really a good way to proceed and I like that idea that you're going to review this every year annually – rates. Doing increases can be very hard and difficult specially for seniors but if you set it up so that the increments are a little bit lower over a long period of time, I think people will accept that as well. I probably could have answered my own question but with all these regulations that EPA sends down, do they ever send you any money?

Unidentified Male Speaker

No.

Alderman Caron

You know it's wonderful to make these mandates and I understand that, you know, because you want a cleaner environment and you don't want this going into why rivers and streams but people also need to understand that these communities need help in being able to do this work. So I think that's great. In talking about infrastructure, Harvard Street had a major breakdown. I think it was a year or so ago and that street was closed until you could get it because you didn't realize how bad that pipe was over there. So kudos to you. I don't envy your job. I've been there plenty of times but I think it's important for the community to know that this is very important and vital like the Police and Fire Department to our community. So whatever you need, people have to understand that it's not frivolous. It's very important to the community but thank you so much. I appreciate it.

President Wilshire

Anyone else? Seeing no one, I'd like to thank you all for your presentation this evening. Thank you Director Fauteux for informing the Board of paving and the wastewater.

Lisa Fauteux, Public Works Director

Thank you for having us.

President Wilshire

Yup, you bet. Okay, thank you all for being here. We really appreciate it. All set Mayor?

Mayor Donchess

Thank you, Madam President, yes.

President Wilshire

Thank you very much.

Alderman Dowd

Yeah and the presentations will become part of the record of the meeting.

ADJOURNMENT

MOTION BY ALDERMAN DOWD THAT THE OCTOBER 14, 2021, SPECIAL MEETING OF THE BOARD OF ALDERMEN BE ADJOURNED, BY ROLL CALL

A viva voce roll call was taken to adjourn the Special Board of Aldermen meeting which resulted as follows:

Yea:	Alderman Klee, Alderwoman Kelly, Alderman Dowd, Alderman Caron, Alderman Clemons, Alderman Tencza, Alderwoman Lu, Alderman Jette, Alderman Schmidt, Alderman Cleaver, Alderman Harriott-Gathright, Alderman Wilshire	12
Nay:	Alderman Lopez,	0

MOTION CARRIED

The meeting was declared adjourned at 9:03 p.m.

Attest: Susan Lovering, City Clerk