

BOARD OF THE METROPOLITAN SEWERAGE DISTRICT

December 17, 2025

1. Call to Order and Roll Call:

The regular monthly meeting of the Metropolitan Sewerage District Board was held in the Boardroom of MSD's Administration Building at 2:00 pm, Wednesday, December 17, 2025. Chairman Vebaun presided with the following members present: Ashley, Bryson, Dearth, Lapsley, Manheimer, Pelly, Pennington, Player, Tarleton, Whitesides and Wisler. Moore and Watts were absent.

Others present were William Clarke, General Counsel; Gracie Stevens with Roberts & Stevens; Patty Beaver with CIBO; Ruth Borgmann and Aaron Babson with Hazen & Sawyer; Jeremy Brashears with Ardurra; Tom Hartye, Hunter Carson, Bart Farmer, Darin Prosser, Mike Stamey, Schuyler Taylor and Pam Nolan, MSD.

2. Inquiry as to Conflict of Interest:

Mr. VeHaun asked if there were any conflicts of interest with the agenda items. No conflicts were reported.

3. Approval of Minutes of the November 19, 2025 Board Meeting:

Mr. VeHaun asked if there were any changes to the Minutes of the November 19, 2025 Board Meeting. Mr. Whitesides moved for approval of the minutes as presented. Mr. Pelly seconded the motion. Voice vote in favor of the motion was unanimous.

4. Approval of Minutes of the November 19, 2025 Closed Session:

Mr. VeHaun asked if there were any changes to the Minutes of the November 19, 2025 Closed Session Board Meeting. Ms. Wisler moved for approval of the minutes as presented. Ms. Bryson seconded the motion. Voice vote in favor of the motion was unanimous.

5. Discussion and Adjustment of Agenda: None.

6. Introduction of Guests:

Mr. VeHaun welcomed Gracie Stevens who was in attendance with Mr. Clarke; Forrest Westall with McGill Associates; Ruth Borgmann and Aaron Babson with Hazen & Sawyer; Jeremy Brashears with Ardurra and Patty Beaver with CIBO.

7. Informal Discussion and Public Comment: None.

8. Report of General Manager:

Mr. Hartye reported that attached is a link to a short article about MSD staff involvement in the United Way Day of Caring/Connection at Reynolds Middle School. Thanks to all the MSD Staff who participated.

<https://www.unitedwayabc.org/news/msd-reynolds>

Mr. Hartye reported that Ryan on Balsam Road called to express his appreciation for the work by MSD Construction crews replacing the sewer line and paving in the Ridgecrest area. Thanks to Josh Matthews, Elias Solorio, Josh Shook, Dakota Penley and Robert Denny.

Mr. Hartye reported that he has asked Mike Stamey to present a few slides on the District's preventative maintenance cleaning program. We clean close to 1 million feet of sewer mains annually as part of our State Permit. There are about 1,100 miles of sewer to maintain. Mr. Stamey reported that he would do a very brief overview of the basin and line cleaning program. MSD's Non-Discharge Permit with the State of NC does require us to develop and implement a program for cleaning our system. Item 7 in that permit requires that we clean 10% of our system each year so that is approximately 600,000 LF and a lot of times we do more than that. Why we do that is to reduce the risk of blockages, debris and other items in our pipelines that can cause back-ups in dwellings and SSO's. In our District we have 75 different drainage basins and when we implemented this cleaning program we try to go from basin to basin cleaning. We try to get to each basin at least once every 5 years, but we prioritize based on the needs for maintenance in that basin each year. The first step if we are going to an area to clean is to send out postcards in the mail which direct any residents or property owners to our website and also gives our phone and contact information. If they reach the website, they are directed to a page that does 4 things. First it gives a link to our mapping system where they can go to see where they are located on our cleaning program. It also reminds them that when we are cleaning lines along a street there should be no interruptions to service so they can keep using their sewer while we are doing our work. It does mention two items that we want them to be aware of. One is when we are flushing the sewer line, we are running the jet hose up and down the line and there will be changes in pressure and air as we push to and from our pipeline. When that happens, there is a small risk for a momentary time period where the back surge of pressure from that air can cause burps in toilets and maybe splash a little water from the toilet. The way to fix that is to simply put the lid down on the toilet. There also is a possibility of odor which would happen if the p-traps in the plumbing in homes or businesses are dry. The website provides information on how to cure that situation. These post cards are sent out to these basins 2,000-3,000 at a time. After that is done, we then schedule the work time out in the field. Mr. Stamey presented some slides and videos of the flush truck and jet hose and explained this process. Before we start the process of trying to wash and back surge those pressures, we do try to pull lids off of adjacent manholes and clean out caps to help with the air relief as we are doing this process. He presented a quarterly report and pointed out the mainline washed footage for the months of July – October for this year. In that time period we washed and cleaned 418,000 LF of sewer line and that will go toward the goal of 600,000 LF. Many years we are around 900,000 LF cleaned or more. In this particular four-month period we were in four different drainage basins and sent out over 12,000 postcards to notify residents in these areas. Mr. Pennington stated that this is good timing on this, the Board was copied on an e-mail from a resident that didn't understand first of all that we are required by the State to do at least 10% of cleaning per year and just because you live in a gated community it still means you have public infrastructure. The developer makes an agreement at that time to allow MSD to perform maintenance as required. What's also important for the residents to understand when you flush

grease, wipes, and things like that, you have to clean them out or it is going to cause even worse problems. The other thing to note is that Mr. Pennington personally carries a sewage back-up rider policy on his homeowner's policy. Like Mr. Stamey said though, if you just keep the toilet lid closed it's probably going to prevent anything from coming out that you don't want to see. Mr. Hartye stated that the way it came across in the e-mail is a little different, so he wanted to explain the process and that it is just air going back up. Staff had tried to contact them and had a field supervisor out there, but he slammed the door in their face and Mr. Stamey was hung up on. He still hasn't contacted MSD. Ms. Wisler stated that the other thing the resident said in the e-mail is that they weren't notified. Mr. Hartye stated that Mr. Stamey responded to that and they were mailed out. He added that it is possible that they could've just missed it or thrown it away, that he is guilty of that himself. But the resident did refuse to engage with Staff in trying to rectify or show what the problem was. Mr. Stamey stated that in this batch there were 2,600 postcards mailed out to the residents. There were no further questions or discussion on this matter.

Mr. Hartye reported that the Board members and public often ask who our biggest users are. Attached is a list of our Principal Commercial Users which can be found in the Statistical Section of the ACFR.

Mr. Hartye reported that the Employee Christmas lunch will be held on December 18th at 11:30 am. The next Regular Board Meeting will be held on January 21st at 2 pm. The next Right of Way Committee meeting will be held on January 28, 2026 at 9 am.

9. Consolidated Motion Agenda:

a. Consideration of Bids – West City View at Riverside Drive:

Mr. Hartye reported that the West City View at Riverside Drive project is located in the Town of Woodfin and includes replacing approximately 735 LF of 6-inch clay to be replaced with new 8-inch HDPE. The project was advertised and no bids were received on November 25, 2025. The project was therefore readvertised, and one bid was received on December 4, 2025, as follows: KRG Utility Group with a bid amount of \$321,880.00. The apparent low bidder is KRG Utility Group with a bid amount of \$321,880.00. KRG has extensive experience with District Rehabilitation projects and continues to provide satisfactory workmanship. The FY25-26 construction budget for this project is \$300,000.00. Sufficient funds are available in contingency to cover the overage. Staff recommends award of this contract to KRG Utility Group in the amount of \$321,880,00, subject to review and approval by District Counsel.

b. Consideration of Informal Bids – Ash Lagoon Overflow Rehabilitation:

Mr. Hartye reported that the ash lagoon, located northeast of the treatment plant, is part of the original plant (constructed as a sludge storage lagoon) and has been in use since the late 1960's. Ash slurry is pumped from the incinerator system to the lagoon where it settles out and overflow comes back to where it is treated by

the plant. The overflow structure has been updated several times over the past 60 years but is now in poor condition and in need of a full replacement. The project was advertised informally, and two sealed bids were received on November 26, 2025 as follows: Cove Utility, LLC with a bid amount of \$594,600.00 and T.P. Howard's Plumbing Co., Inc. with a bid amount of \$162,275.00. The apparent low bidder is T.P. Howard's Plumbing Co., Inc. with a bid amount of \$162,275.00. District staff have experience with T.P. Howard and have been pleased with their work. The FY 25-26 construction budget for this project is \$185,000.00. Staff recommends award of this contract to T.P. Howard's Plumbing Company, Inc., in the amount of \$162,275.00.

c. Consideration of Developer Constructed Sewer Systems – Farmstead @ Olivette; Argento on Broad; 1191 Bleachery Boulevard:

Mr. Hartye reported that the Farmstead @ Olivette project is located along Olivette Road in Buncombe County and included extending approximately 1,200 linear feet of 8-inch public gravity sewer to serve 33 single-family units.

Mr. Hartye reported that the Argento on Broad project is located along Clayton Road in Buncombe County and included extending approximately 484 linear feet of 8-inch public gravity sewer to serve the 216 multi-family units.

Mr. Hartye reported that the 1191 Bleachery Boulevard project is located along Bleachery Boulevard in the City of Asheville and included extending approximately 397 linear feet of 8-inch public gravity sewer to serve 7 single-family units.

Staff recommends acceptance of the aforementioned developer constructed sewer systems. All MSD requirements have been met.

d. Cash Commitment Investment Report – Month ended October, 2025:

Mr. Hartye reported that Page 47 represents the rate of return of 4.298% and total cash investments of \$92,713,124. If you take away all current obligations for insurance funds, current year's budget, etc. that leaves just over \$21 Million designated for Capital Outlay for next year. Page 49 presents a breakdown of the District's Investment Portfolio and the Investment Manager's Report is on Page 50. Page 51 and Page 52 represent the YTD Cash Receipts and Expenditures. Both of those are at budgeted expectations. Page 53 presents the 2008a series synthetic bonds with savings to date of approximately \$8.1 Million.

With no further discussion, Mr. VeHaun called for a motion to approve the Consolidated Motion Agenda. Mr. Ashley moved, Mr. Whitesides seconded the motion. Roll call vote was as follows: 12 ayes; 0 nays.

10. Consideration of Acceptance – Solids Handling PER:

Mr. Hartye reported that in March 2023, the MSD Board approved Hazen & Sawyer (Hazen) to complete the Solids Handling Preliminary Engineering Report (PER), an evaluation of existing solids handling processes at the Water Reclamation

Facility (WRF) and phased improvement plan to address biosolids management over a 30-year planning period. The PER included a condition and capacity assessment of existing equipment and then future solids loading projections, which had to go in combination with another project that we are doing, upgrading the biological, so we had to consider all of the increasing solids over the next 30 years with that process as well. This PER also included a redundancy assessment for solids thickening, dewatering, disposal and come up with a conceptual design development of a new solids handling facility. Representatives are present today from Hazen & Sawyer. Ruth Borgmann is going to give a presentation on their findings. Ms. Borgmann reported that Hazen looked at several different solids handling alternatives with the goal of addressing some of the existing capacity limitations that are associated with the existing solids handling equipment at the plant. Particularly the incinerator footprint, also the age of the incinerator, and prepare for upcoming liquid train improvement projects that will change the solids characteristics at the facility and also to consider the redundancy. Right now, when the incinerator goes down, the option is to go to the landfill with the dewatered cake and so we wanted to consider whether there was a better path or redundant option. Hazen looked at a bunch of different options and several evaluations and began to focus on thermal drying and incineration. So, continuing with incineration and doing a reinvestment in the incineration technology or changing to a thermal drying technology. That was what Hazen focused on as the final solids management technology for the facility and also did evaluations of support equipment. Looking at thickening, dewatering and all of the different support processes that go into final solids management. To give a quick recap of the existing process at the plant, the primary and secondary sludge come together into the gravity thickeners which are thickened up a bit and go to a 3-belt filter press for dewatering and then are fed to the incinerator with cake pumps. If your incinerator is out of service for maintenance or any other reason you have the option to do dewatered cake hauling to the landfill. Then there is an air pollution control system, on the emissions there is a stack and there is cleaning of those emissions before they go out and then there is an ash management system which consists of an ash clarifier and then it goes to the ash lagoon. Ms. Borgmann discussed thermal drying vs. incineration pros and cons. With incineration, you can continue along your current path with your project management. You have the ash lagoon and continue to use that and do not have to deal with the final product unless the incinerator is out of service. It does have a smaller facility footprint than the thermal dryer option but there are a lot of other things that come with it particularly associated with the permitting side of things and air pollution control and public protection rules that come with operating an incinerator, potentially adding another incinerator to the facility and a new incinerator would have to have more stringent pollution control requirements than the current incinerator. There's no new incinerators in EPA Region 4 that are under the new tighter emission limit. There is a lot of cost and difficulty in meeting that new stringent limit and going through that permitting process to add a new incinerator with the stricter air pollution control requirements. There are also increased maintenance and labor requirements associated with operating two incinerators if you are going to keep your existing incinerator and new incinerator and try to cycle them on and off. It's very difficult for staff to be able to do that and then just having a redundancy issue to maintain two incinerators. With the thermal dryer option there is some dried product flexibility and positive public perception. You are producing a final product that can be beneficially used, it can be a fertilizer, so you have a reduced regulatory burden.

You can have redundancy within your process with additional sludge storage and future second dryer train that doesn't come with as many complications as a second incinerator would have. It does not have to be rehabilitated as often as an incinerator. There have been many investments in rehabilitation of the incinerator and MSD is working through some right now. Longer life span on the thermal dryer is typically seen. The cons would be that you do have offsite final product management, it has a larger facility footprint and increased operational costs. Ms. Borgmann presented a Thermal Drying Proposed Alternative Process Flow Diagram and explained this process with the primary and secondary sludge going to mechanical thickening and a dewatering centrifuge, which is a type of dewatering technology that results in a slightly drier dewatered cake, to a dewatered cake hopper and then the rotary drum thermal dryer. With the rotary drum thermal dryer technology you feed the dewatered cake to the enclosed rotating drum which is similar to feeding dewatered cake to the incinerator. This is a triple pass drying drum which is rotating and is coming into contact with hot air and that is evaporating the water from the dewatered cake and helping it form a dried pellet. There is also the process that happens after it comes out of the drying drum which sizes the pellet, it goes through a shaker and a crusher to get it to the exact right size so that it is a marketable, consistent product. There is also the Fugitive Dust System that is a part of this, there is an ID fan and different pieces to maintain that and then the Regenerative Thermal Oxidizer that you can see and a lot of times this is used for control of emissions management. The granules are typically 90%-95% dry. Dried Products are considered high end products. It is a fertilizer that can bring value and revenue. Ms. Borgmann passed around a sample from a rotary drum drying facility nearby. This would not produce enough revenue to offset the cost of producing it but it can help with the operational burden. You can also continue to send it to the landfill. Mr. Farmer has been talking to the folks at the landfill to show them what the product looks like. It can be used as daily cover and doesn't have to take up capacity at the landfill. If you do develop that product, it has to have some marketing and customer development. There is also the equipment there and ongoing operational and maintenance costs. Hazen and MSD Staff went on site visits to Aiken, South Carolina, Nashville, Tennessee and Clarksville, Tennessee, trying to find things that were similarly sized to what the MSD size would be and she presented various slides from those visits. The takeaways from these visits were the operational flexibility, the beneficial product with revenue potential, reduced air pollution control requirements, and a preferred concrete building frame. She then presented the Opinion of Probable Construction Cost. This does not include Engineering costs. The Total Construction Cost with no redundancy would be a single thermal dryer unit and a building sized for two thermal dryers to ultimately give the redundancy that you are looking for in the solids handling process vs. incineration. That cost with no redundancy represents a single building sized for one incinerator. The total cost for the redundant unit for incineration is quite a bit more than adding in a second thermal dryer, you would need a whole new building and additional air pollution control equipment. Looking at the total combined construction cost with full redundancy for the thermal dryer is \$170 Million vs. \$212 Million for the incineration. Hazen's recommendation is to move forward with thermal drying. The proposed project process flow will be bringing in that primary and secondary sludge from the liquid train process like we're doing on the existing, except instead of going to the gravity thickener, moving forward with the mechanical thickening and initially putting in two units and in the future adding an additional third unit, having some thickened solids storage, and then

going into the dewatering centrifuges and then to the thermal dryers. The building itself will be sized to support full buildout with full redundancy included. As far as the Drum Dryer package there is only one manufacturer in town and that is Andritz. Andritz is the primary vendor of this size and capacity and is the only vendor that can produce this fully integrated dryer system from start to finish. They have the integrated control, they take everything from the wet cake bin all the way to when you are getting that final product that comes out the back to that perfect spherical pellet. They are the primary vendor and that's what most folks do, they sole source with them directly and get a contract through them and that would be Hazen's recommendation. Regarding site planning, this is a very tight site with rock on one side and the river on the other side. Hazen has been working closely with the biological improvements team on the future upgrades that need to happen to facilitate that. In working with them and talking with the folks at the plant, they have identified the area up above the hill beside the Ash Lagoon which will also free up space down below for future improvements. Ms. Borgmann presented some aerial view and street view renderings of what the site would look like. Phase 1 is the building sized for two dryer trains and future upsizing of dryers, with a single train to go in now and future equipment at a later date at a cost of \$138 Million. That amount includes construction, project contingency, contractor overhead, profit & mobilization and owner's allowance. Overall project cost all in to include engineering cost and construction is estimated at about \$160 Million. Mr. Whitesides stated that Buncombe County is doing all they can to extend the life of the landfill because they know once they reach it they know they will never get another one approved in the County. He asked how this would affect the landfill. Ms. Borgmann stated that you have the option to do something different with your final product. It does not have to go to the landfill, it is a marketable product that can be used as fertilizer because of the nutrients in it, the nitrogen, and the phosphorus. Right now, you are not dependent on the landfill unless you have incinerator downtime. You have had extended periods of incinerator downtime for maintenance where you have to send all of the dewatered cake to the landfill which does eat up capacity. Hazen would anticipate that there would be less downtime with a thermal dryer on an annual basis than with the incinerator. Ultimately when you have a redundant dryer you would have no need to go to the landfill because if one dryer is out of service for maintenance you would be running the other dryer. Mr. Pennington stated that right now Buncombe County is using a Posi-Shell which is a recycled paint with some other products to do the daily cover. This could supplement the daily cover but it is also a very good fertilizer. It is inexpensive, won't burn the grass and is more sustainable. Mr. Hartye stated that what they [the landfill] are getting is 22-24% cake, this is 95%. The wetness of it usually starts at 22-24% so there is a big difference between those two, and volume wise as well. The plan here was to get redundancy so if one dryer goes down another will go up. On both avenues, you will significantly reduce the amount that goes to the landfill. Right now, approximately twelve trucks a day go to the landfill, and it will go down to one or two a day with this and this is good stuff as opposed to the wet stuff. Mr. Ashley asked if it had to go to the landfill. Mr. Hartye stated it would not necessarily have to. If we didn't do the redundant unit and had to bring the whole thing down this would be the product we would prefer opposed to the wet product. Mr. Ashley asked if there could be any profit from sales of this product. Mr. Hartye stated that when the District did the lime stabilization a long time ago, and that went the way of the dinosaur, there wasn't a

lot of demand for it. There may be some demand but not anywhere near enough to cover the cost. It may be something that could be put out front that even the landfill could come and easily pick up to use as cover or even have available. It is a Class A product, so you are able to take it and put it on your lawn. We haven't gotten that far. Ms. Wisler asked in North Carolina, legislatively can we actually sell this because in the City when people brought up selling water and that kind of thing, it is not legal. Ms. Borgmann stated yes. Mr. Tarleton asked regarding the "forever chemical" PFAS (Per-andPolyfluoroalkyl Substances), what liability there is for spreading this granular fertilizer. Ms. Borgmann stated that is a valid question that a lot of people are asking right now. It's still something that is very open and unsure and they have talked about PFAS, what it means, and what the levels are coming into the French Broad. She stated that from what is seen in the influent and effluent, it is very low and they don't expect that there will be a lot of PFAS in the solids because you don't have it coming into the plant right now. However, on the Federal level, there has been some information put out that, as of January, one of the last actions of the Biden Administration, was to put out a draft risk assessment for PFAS in biosolids and they set the limit at 1 part per billion. That is just a risk number, not legislation in any way, it's not regulation, it's just that the first step of regulation is to do the risk management piece. They put that number out, the Trump Administration came in, and they have kind of pulled back on further action right now, so it is kind of in a wait and see period to see if there is anything coming down on the Federal level. As far as what other states are doing, North Carolina seems to be in a wait and see approach. Other states, like New York, have put out some legislation where they have put their number at 20 parts per billion where they are limiting land application of biosolids. Now, what does that mean the thermal dryer is doing? This is an area where this is all new and science is still developing but there have been studies about PFAS and thermal dryer process itself. There was one study that found that when it goes into the drum dryer it is hot, then comes into contact with the air and then the air emissions stream, a lot of it they seem to think is going into the air. Then that air has a scrubber which some condensate comes down so some of that does go back into the water so some of it is just perhaps laying around the plant. Then some goes into air emissions, then there is a regenerative thermal oxidizer on the back end, and they found complete removal of the PFAS on the regenerative thermal oxidizer. That was one study, but that's what exists out there right now. Mr. Hartye added that the District has been testing for PFAS in the French Broad, in the uncontrolled water out in the system, and tested the effluent as well. So far, District numbers are very low, down near the drinking water standard or lower, which is 4 parts per trillion (PPT). We have identified areas that have PFAS, the landfill being one because we take leachate from the landfill, and that is the highest PFAS contributor and we are already low. We could have one big unit over there and if we wanted to isolate that, do some type of preliminary treatment. We are already very low on the water scale and have identified one and Pretreatment Staff are going to all of the industries and any new industries that come in, trying to make sure that they are not contributors as well. The State is probably going to be looking at us developing programs to try to minimize sources and not go for a number but maybe go for best practices from us. The good thing so far for the District is that our numbers look really good and we identified one of our bigger ones. Mr. Tarleton asked if all of the District's solids currently go to the landfill? Mr. Hartye stated yes when the incinerator is down. When the incinerator is burning it gets consumed and put up as ash and treated and then comes back to the plant. When the

Incinerator is being fixed like it is right now, that 20% wet cake is being hauled to the landfill. Mr. Tarleton asked what is happening to the ash right now. Mr. Hartye stated it sits on top of the lagoon. Mr. Tarleton asked, notwithstanding liability, what is the most environmentally responsible thing we could do? Mr. Clarke stated it is just what is being done now, testing what's coming in, testing all of your sources and monitoring what the regulatory climate is going to be. All significant industrial users will have to be monitored for PFAS. Basically, the best thing you can do is monitor what is coming in, monitor what is going out after it's treated, and the big thing identified is coming from the landfill. Mr. Tarleton stated that he is wondering between an incinerator and thermal dryer, which is more environmentally responsible? Mr. Clarke stated that will be part of the study. Ms. Borgmann stated that science is still out on incineration as well. A lot of it is going out the stack and not being treated. Utilities are trying to go to volume reduction and that is what a thermal dryer does. When you think about 20-25% cakes and you're going to 90% dry pellets you have a lot less material that you have to deal with. Mr. Pennington stated that his hometown is Nashville, Tennessee, and they used to incinerate but have gone to all thermal drying. He stated that the other thing that is concerning is that it is a huge cost if you look at the system itself. The other troublesome thing about incineration is that you have ash lagoons. If you will remember from years ago, the Kingston steam plant near Knoxville lost a significant coal ash lagoon right into the water. He stated that he would argue that was severe environmental degradation. There was much discussion regarding the benefits of pellets vs. incineration. Mr. Tarleton stated that they are talking about the same chemicals, semi-dried cake vs. incineration but you aren't changing the real chemical composition of any of it. Ms. Borgmann stated that it does change depending on your process. A lot of it is temperature based and it depends on what temperature you are treating to and some changes are seen in the chemical content. The PFAS group is 5,000-10,000 chemicals at this point. They have what they call terminal products which is what they ultimately break down to and that is what is hard to get rid of. Depending on what your treatment process is, whether it is incineration or thermal drying, you do see transformation of these chemicals from different chemical formations into that terminal product. You do see that with the incineration process, and it does look different than the thermal drying process. It is all a class of chemicals, but what you do with it and how you treat it does impact what ends up in your final product, what ends up in the air stream vs. what ends up in the solids. Mr. Hartye added that what you can try to control is the source and the amount that is coming in. This would be an entirely different conversation if this was cadmium and you have to hit that cadmium target, but this is a moving target. They don't have all of the epidemiology research yet on what the impacts are, what level and what does that mean to bring that level back to your drinking water and your sewage and rivers and that type of thing. They are trying to figure all of that out but in the meantime, you have controls that you can put forth. Mr. Hartye stated that he mentioned this just for perspective what the District is finding in our testing, that we are in good shape compared to a lot of others that ours is very low, below the drinking water standards. There are a lot of people out there that are using carbon to knock out PFAS to get down to a level that we are already at for our wastewater. If the State does come up with a number it is going to be way higher than what we have. It is also a product the landfill will not mind seeing, they can use this for cover. What we send now has to be put in a whole different spot because it is nasty. Mr. Ashley asked how many tons of cake a day are taken to the landfill when the incinerator is down.

Mr. Farmer stated they are hauling roughly twelve tandem loads a day on average. Mr. Farmer also stated that he had brought samples and talked with the landfill and asked if they could use it until a marketing strategy can be found for the product. They were tickled to death with it because you can use it as a cover. Apparently what they have now has to be mixed. As far as the PFAS problem, we are extremely low compared to the rest of the State. Screen samples were taken out of the French Broad upstream of the plant, and twice last year those samples were higher in PFAS than our effluent. The Pretreatment folks are working with industrial users right now making sure there are no significant sources. He feels that this is a beneficial product rather than having ash sitting in the lagoon. Mr. Ashley asked if redundancy is even an option or is that something we must figure out. Mr. Hartye stated that it is easier with the dryer because you're just putting another unit alongside the other. While one is down you can repair the other. Mr. Ashley asked if it would be cheaper than adding an additional incinerator. Mr. Hartye stated that is correct. We did the analysis with one but then if you have redundant units you don't have to worry about taking it to the landfill, you can have that second unit and work on one while the other is operating. Mr. Ashley asked, even if the by product was equivalent from an environmental standpoint, to consider both of these options with the redundancy that has to be done, wouldn't the thermal dryer be much less expensive. Ms. Bormann stated that is correct. Mr. Pennington asked if this was just to approve the study, not to install this right now. Mr. Hartye stated that is correct. Mr. Lapsley asked to go back to the slide showing the three visited locations and stated that Hazen indicated that this is a sole source vendor. Ms. Bormann stated that is correct. The Aiken, South Carolina one was installed in 1999 and Hazen wanted to go and look at the version of what this looked like and to see what improvements and changes the vendor had made as they have been continually operating this equipment over the past 20 years. What they found was the heart of the equipment didn't really change. There have been some additional safety features and minor modifications that they have added along the way. Aiken is similar in size to what you would need here. All three of the site visits were to an Andritz Drum Dryer. Mr. Lapsley asked if Hazen & Sawyer designed all of those three facilities Ms. Borgmann stated that they designed the Clarksville facility. He asked to flip back to the slide that shows the total cost. The total construction cost under the thermal dryer shows \$138 Million. Mr. Lapsley asked how much of that total goes to the vendor. Ms. Borgmann stated around \$18 Million. He stated that the \$18 Million made him feel a little better and that his concern was that a big portion of that \$138 Million was going to one vendor in a non-competitive situation. He stated that once this Board decides on one of these alternatives and direct the consultant to move forward, that vendor is pretty much guaranteed \$18 Million or so in their vats and he would not want to see MSD get into a situation where, just before the eleventh hour, all of the design is done, and then the price goes up to maybe \$25 Million. Then MSD is stuck without another vendor to turn to. Is there some way we can get that vendor locked in. Mr. Hartye stated that is the benefit of the Design-Build, which is next on the Agenda. You get to that point early on so that you see the train coming for a couple months compared to a year, so then you can negotiate fairly quickly. Mr. Carson added that there are competitive manufacturers for centrifuges and for the gravity thickeners and what MSD and these other municipalities will find is that Andritz, because they do manufacture everything, they are able to package all of these components for a cheaper price. Mr. Hartye added that \$18 Million is just for the dryer. Mr. Babson added that there is competition in the market if they don't pull together the entire

envelope like Andritz does. Andritz is the proven manufacturer. Mr. Babson also stated to answer Mr. Lapsley's other question, Hazen has no vested interest in Andritz. Mr. Hartye stated that the engineers could estimate putting that together with multiple vendors and compare them. Mr. Player stated that his concern was that without much competition and if they went belly up over the next year or so what could happen because they are the only vendor in town. He stated he feels better knowing there are other options out there.

With no further discussion, Mr. VeHaun called for a motion to accept the Solids Handling Preliminary Engineering Report prepared by Hazen & Sawyer. Mr. Pennington moved, Ms. Wisler seconded the motion. Roll call vote was as follows: 12 ayes; 0 nays.

11. Consideration of Contract for Owner Advisor Services – Solids Handling Capacity Improvements:

Mr. Hartye reported that the first step for the Solids Handling Capacity Improvements will be getting an Owner's Advisor to put together documents and help support Staff. The item on this Agenda today will be Phase 1- Request for Qualifications and Contract Development Services for a Design-Build Contract. Phase 2 will be for Preconstruction Phase Service and Phase 3 will be for Construction Phase Services. Staff will come back for Phase 2 and 3 at each level. Given Hazen & Sawyers background and their direct involvement in developing the PER, their knowledge of the system and what the District is looking for, they are definitely the most qualified firm to serve as the District's Owner's Advisor. District staff has reviewed Hazen's Phase 1 proposal for a "not-to-exceed" amount of \$150,000.00 and believes it is fair and reasonable. The contract will be billed on an hourly basis. Attached is the "Scope and Fee Proposal for Owner's Advisor Services". There is also a Capital Project Ordinance attached because this will take place in the coming years more so than this year. Staff recommends the District enter into an Owner's Advisor Contract in the not-to-exceed amount of \$150,000.00, subject to review and approval by District Counsel.

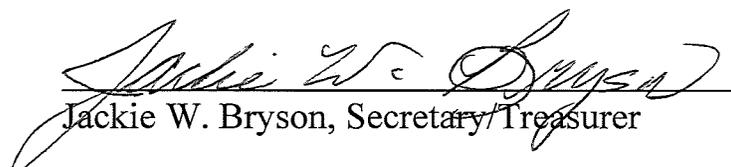
Mr. VeHaun called for a motion to accept Staff's recommendation. Mr. Pennington moved, Mr. Ashley seconded the motion. Roll call vote was as follows: 12 ayes; 0 nays.

12. Old Business: None.

13. New Business: None.

14. Adjournment:

With no further business, Mr. VeHaun called for adjournment at 3:15 pm.


Jackie W. Bryson, Secretary/Treasurer



Metropolitan Sewerage District

Regular Board Meeting

December 17, 2025 @ 2 pm

	Agenda Item	Presenter
	Call to Order and Roll Call	VeHaun
	01. Inquiry as to Conflict of Interest	VeHaun
	02. Approval of Minutes of the November 19, 2025 Board Meeting	VeHaun
	03. Approval of Minutes of the November 19, 2025 Closed Session	VeHaun
	04. Discussion and Adjustment of Agenda	VeHaun
	05. Introduction of Guests	VeHaun
	06. Informal Discussion and Public Comment	VeHaun
	07. Report of General Manager	Hartye
	08. Consolidated Motion Agenda	Hartye
	a. Consideration of Bids— West City View @ Riverside Drive-Information Only	Hartye
	b. Consideration of Bids— Ash Lagoon Overflow Rehabilitation-Information Only	Hartye
	c. Consideration of Developer Constructed Sewer Systems – Farmstead @ Olivette; Argento on Broad; 1191 Bleachery Boulevard	Hartye
	d. Cash Commitment/Investment Report-Month ended October, 2025	Powell
	09. Consideration of Acceptance – Solids Handling PER	Hartye
	10. Consideration of Contract for Owner Advisor Services-Solids Handling Capacity Improvements	Hartye
	11. Old Business:	VeHaun
	12. New Business:	VeHaun
	13. Adjournment: (Next Meeting 1/21/26)	VeHaun
	STATUS REPORTS	

BOARD OF THE METROPOLITAN SEWERAGE DISTRICT
November 19, 2025

1. Call to Order and Roll Call:

The regular monthly meeting of the Metropolitan Sewerage District Board was held in the Boardroom of MSD's Administration Building at 2:00 pm, Wednesday, November 19, 2025. Chairman VeHaun presided with the following members present: Bryson, Dearth, Lapsley, Manheimer, Pelly, Pennington, Player, Tarleton, Watts, Whitesides and Wisler. Ashley and Moore were absent.

Others present were William Clarke, General Counsel; Daniel Gougherty with Cherry Bekaert; Patty Beaver with CIBO; Anabel Winitzky with American Rivers; Todd Johnson, John Wilhoit; Aaron Babson, and Ruth Borgmann with Hazen & Sawyer; Warren Sugg and Jesse Gardner with Civil Design Concepts; Jesse Swords, Derek Allen, Drew Levin and Landon Walls with the Pinner's Cove Development; Tom Hartye, Hunter Carson, Bart Farmer, Scott Powell, Darin Prosser, Mike Stamey, Derrick Swing, Samuel Gettleman, Spencer Nay and Pam Nolan, MSD.

2. Inquiry as to Conflict of Interest:

Mr. VeHaun asked if there were any conflicts of interest with the agenda items. No conflicts were reported.

3. Approval of Minutes of the October 15, 2025 Board Meeting:

Mr. VeHaun asked if there were any changes to the Minutes of the October 15, 2025 Board Meeting. Ms. Wisler moved for approval of the minutes as presented. Mr. Whitesides seconded the motion. Voice vote in favor of the motion was unanimous.

4. Discussion and Adjustment of Agenda: None.

5. Introduction of Guests:

Mr. VeHaun welcomed guests from Cherry Bekaert, CIBO, American Rivers; Hazen & Sawyer and the Pinner's Cove Development.

6. Informal Discussion and Public Comment: None.

7. Report of Committees:

a. Right of Way Committee – October 22, 2025.

Mr. Hartye reported that the Right of Way Committee met on October 22, 2025 and discussed the Consideration of Compensation Budget for the ITT Pump Station and Consideration of Condemnation for Logan Avenue Sewer Rehabilitation. Prior to the meeting Right of Way Staff was able to settle and obtain signatures for Logan Avenue so no further discussion was necessary on that item. Committee made a recommendation to approve the Compensation Budget for the ITT Pump Station Project.

8. Report of General Manager:

Mr. Hartye introduced Daniel Gougherty with Cherry Bekaert to give a presentation of the audit.

Mr. Gougherty reported that the audit was performed within the generally accepted auditing standards and government auditing standards all in which to form an opinion that financial statements are free from material misstatements. For the first time, they performed a Federal Grant Audit. MSD received assistance as it relates to Disaster Relief Funds from FEMA. In terms of those funds anything is tested that has been obligated so anything that FEMA has gone through, done a thorough review on, been approved and has been spent. Anything that has not been obligated will be tested in a future year once that has been obligated. In terms of the compliance audit, the Federal Government had not issued a compliance supplement. Cherry Bekaert audits off of that compliance supplement so they cannot formally issue their reports until that compliance supplement is issued. What is looked for is that MSD is in compliance with the agreement so anything that the grant says you can spend it on, you are spending it on those allowable costs and that you have controls in place to be sure you are spending it on the appropriate items. As of today, auditors have no findings related to this and it is 95% complete. Auditors just need to go through the quality review process. In terms of the financial statements there is an unmodified opinion, also known as a clean opinion, which is the highest level of opinion that can be given under auditing standards. Within the audit, if any corrected or uncorrected business statements that management might need to make or did make during the audit are found, those need to be communicated. None were identified that needed to be corrected or that were corrected during the audit. There was one expected uncorrected item, not a mistake or miss, relating to the implementation of the new GASB Standard for GASB 101. There was an increase in sick leave accrual based on how you are supposed to account for it more likely than not to be used. That resulted in a \$2.4 Million increase. That \$2.4 Million is reflected in the current year where it should have been reflected as a restatement. Due to the amount not being material to the financial statement as a whole when you look at the whole balance sheet it was decided to just post that into the current year. There were no new policies or any related party transactions in the current year. Additionally, we look for any significant or unusual transactions and there were none. Significant estimates are a critical part of any financial statements, there are a number of things such as capital assets, pensions, other post-employment benefits, compensated absences, that rely on estimates that are being made. Based on those inputs, auditors looked at those and they were being abided by consistently every year. There were no issues on any of those estimates. Financial statements are consistent, clear, and neutral. Cherry Bekaert is an external auditor, so they are required to be independent. We did not provide any additional services, we are independent from the District. There were no difficulties or disagreements with Management encountered. They were not aware of any consultations management held with any other firm and neither did they have any consultations internally with any other group. Cherry Bekaert does request certain representations from management and have a management representation letter. There were no items they saw that were fraudulent or illegal during the audit nor up until the date the report was issued. GASB that will be applicable in the coming year will have a small change in how some things look in the annual comprehensive financial report.

Management's discussion and analysis will change slightly in terms of presentation and there will be more emphasis on what resulting changes mean. GASB 104 is disclosures on capital assets and will be tweaked a bit from how it is presented. Within the audit within North Carolina one of the requirements is for them to look at the Local Government Commission indicators. Cherry Bekaert is not to that point yet. In the past there have not been any performance indicators noted that were a concern and do not expect any. There were no late debt service payments. There were no statutory violations noted. The District has been able to grow Capital Assets without growing debt for the last 8 or so years. The District has done well with keeping the revenue in line with expenses. Mr. Gougherty expressed their appreciation to Scott Powell and Cheryl Rice in terms of getting all of their help in getting this completed. This has been a more thorough audit than we have had in the past, and they have been willing to give us information we needed when we needed and have done so kindly. There were no questions.

http://www.msdbc.org/documents/annual_reports/FY2024.pdf.

Mr. Hartye reported that MSD is in the preliminary engineering stages for two very large projects at the Treatment Plant for which Design-Build would be the most beneficial form of delivery. MSD's consultant, Hazen & Sawyer, will give a brief presentation on this method.

Todd Johnson with Hazen & Sawyer reported that MSD has interest in using progressive Design-Build in lieu of traditional Design-Bid-Build to capitalize on some of the benefits from the delivery model. He began by reviewing progressive Design-Build and traditional Design-Bid-Build. The District has two very large, complex capital improvement projects coming up, the Solids Handling Project and the Biological Process Improvements, both of which are being looked at for progressive Design-Build for various reasons. Some of the benefits that are gained with this delivery model is that you can get a contractor on board during design so you can benefit from the ingenuity that they bring to a project. They can help with maintenance and plant operations, scheduling, but based on real time pricing that is not just an estimate but real time experience. There are more and more wastewater projects being delivered through progressive Design-Build and contractors are very interested in that delivery model. Some places are having trouble getting bids on projects. These projects warrant having the best contractors on board and you will get that interest through this delivery model. Mr. Johnson reviewed some of the differences between the different delivery models. Traditional Design-Bid-Build is what you are used to. An engineer designs 100%, then you prepare plans and specs, put it out for bid, receive bids and hopefully multiple bids, not just one or two, then you select the most responsible bidder at the lowest price. Construction Management At-Risk (CMAR) involves similar contractual arrangements but you hire a contractor during the design phase, and you have separate contracts. A CMAR in NC is not allowed to self-perform, they are limited in their ability to control cost, quality, and scale so it's not really used in North Carolina much. Progressive Design-Build (PDB) involves one contract. Some of the benefits that can be brought to your project are that there is one contract instead of two, with an off ramp. It is collaborative with improved communication, you have your contractor in the room in the room helping with the design and participating, you will have fewer change orders, early risk identification and mitigation, putting the risk in the appropriate

hands. You can get started early with construction, overlapping the construction and design phases so you can enhance the schedule. The owner is at the table the whole time with the engineer and contractor. Cost and pricing is transparent, and you can see all of the numbers. What Hazen-Sawyer will do as an owner's advisor in this first project, the Solid's Handling Project, is help with procurement, with the RFP process, with getting a design builder on board, help get the contract, help work through the design, help with a review of design concepts and technical aspects of the project. One very important piece is that Hazen & Sawyer will be the ones that are helping get to that fair price and helping the District get to where you are confident that it is a fair price. We will basically be an extension of District Staff. Your contractor and engineering team is at the table designing your project. In relation to the off ramp, when it is time to get to a Guaranteed Maximum Price (GMP) or a lump sum, there are different ways to do this. The contractor will bring all of their prices, they are going to open the books and show you where problems may exist or where cost is a little higher than originally thought. Hazen & Sawyer, as owner's advisor, and the District, will look at this pricing. We will drill down into production rates, subsistence costs, hotel rooms, etc. and make sure, before this is presented this to this Board, that this is a fair price and we need to be able to make sure that you are comfortable that it is a fair price. If you're not comfortable with the price there is this "off ramp" where you can complete the design and then send it out for bid. When you sign that first contract, which is an "Appropriate Scope and Fee" to get to a price, you are not locked into having to bid the rest of the project, you have leverage. Hazen & Sawyer has been a part of twenty Design-Build teams in the State of North Carolina. Three of those projects were for Charlotte Water, University Park WWTP at Pennsylvania State University and the HRSD Swift Indirect Potable Reuse. Some of the benefits they see are increased opportunities for collaboration and innovation, the overall project life-cycle is condensed, there is a transfer of risk from owner to Design-Builder, a reduction of change orders during construction and actual interest in the work from qualified contractors on bidding large scale, critical projects. Ms. Wisler asked if the owner Owner's Advisor bases their fee on total cost of the project or hours. Mr. Johnson stated that it is based on hours. When the scope and fee is done, it will show hours. It's not going to be a percentage of construction value. Ms. Wisler stated that he said an Owner's Advisor is sort of an extension of staff. She asked if he had any suggestions for the District that they work with as to any changes within their own internal engineering or administrative departments to make this process a little better or more efficient, when they haven't ever done this. Mr. Johnson stated that the biggest thing and something that is different is the pace. Many times clients think they want to do Design-Build to speed a project up and get completed faster. That means the client has to act faster too. When a Design-Builder is working based on a decision being made there needs to be a certain level of confidence that the decision you make is going to be carried forward. Often times if there is a shift in that decision it can affect the project. There is a little bit of difference in the pace and being committed to make a decision. Mr. Hartye added that there is also the purchasing policy that will have to be looked at. There is plenty of information already in the State Statutes that addresses this form of delivery and MSD will be incorporating those into our Purchasing Policy. This will be the first critical thing to change internally. Ms. Wisler asked just to be clear if the Design-Builder typically isn't one company, but sort of a consortium and the Design-Build team is typically a lot of companies. Mr. Johnson stated it is typically at least a contractor and an engineer. Mr. Lapsley added that Henderson County switched their

method for their larger projects, one being \$30 Million to a current courthouse project at \$170 Million, from the standard to the construction manager risk. That has worked extremely well and there is a significant difference between building a school or a courthouse. While each of those had their special features, it's entirely different than trying to build a water or wastewater treatment plant. He stated that he agrees with the suggestion that progressive Design-Build is probably more suited to MSD type projects than they are to general government school or office building. He stated that he would support this change. Mr. Hartye stated that sometimes MSD has had bad experiences with the low bidders and when you get to critical projects like our solids in the middle of the plant that could go south pretty quickly so you do want good partners and good contractors. Mr. Lapsley stated that in his experience, the contractor is going to team up with the designer, the contractor is going to put the bond up to guarantee the price and sign the contract so they want to make sure they can get a good designer that is going to look after them and do things right and not get them in a jam. There is every reason to believe they are going to get a good team together and we are going to get a good product. Mr. Hartye added that MSD wanted to do this primer because we are slowly getting into this and will probably be coming back with the Owner's Advisor recommendations for the larger treatment projects.

Mr. Hartye reported that the next Regular Board Meeting will be held on December 17, 2025 at 2 pm. The November Right of Way Committee meeting is cancelled. The next Right of Way Committee meeting will be held on January 28, 2026 at 9 am.

9. Consolidated Motion Agenda:

a. Consideration of Compensation Budget – ITT Pump Station:

Mr. Hartye reported that the Right of Way Committee recommends approval of the Compensation Budget.

b. Consideration of Developer Constructed Sewer Systems – Arden Pines; Asheville Airport Tracon and ATCT (Terminal Radar Approach Control and Air Traffic Control Tower); Busbee Phase 1A; Crestview Street; Dulce Lomita Community; Fairhaven Summit; Hawthorne @ Holbrook; Mountain Home Dunkin Donuts; Rockberry Apartments; Westview Village:

Mr. Hartye reported that the Arden Pines project is located along Atrium Trail in Buncombe County and included extending approximately 2,020 linear feet of 8-inch public gravity sewer to serve 244 multi-family units.

Mr. Hartye reported that the Asheville Airport Tracon and ATCT project is located along Westfeldt Road in Buncombe County and included extending approximately 1,205 linear feet of 8-inch public gravity sewer to serve the on-site construction.

Mr. Hartye reported that the Busbee Phase 1A project is located along Sweeten Creek Road in Buncombe County and included extending approximately 1,325 linear feet of 8-inch public gravity sewer to serve 179 multi-family units.

Mr. Hartye reported that the Crestview Street project is located along Crestview Street in the City of Asheville and included extending approximately 204 linear feet of 8-inch public gravity sewer to serve 5 single-family units.

Mr. Hartye reported that the Dulce Lomita Community project is located along Gatewood Road in Buncombe County and included extending approximately 1,177 linear feet of 8-inch public gravity sewer to serve 6 existing single-family units. These were previously served by failing septic tanks. The project qualified for the District's Failing Septic Tank Reimbursement Program making it eligible for 10 years of estimated revenue generated by user fees. The estimated revenue is \$18,936 and was approved by the MSD Board on October 18, 2023. Per MSD Policy, District staff also provided design, easement acquisition, and construction administration services. MSD included 6 additional services to include future customers along the 1,177 linear foot route and agreed to reimburse Dulce Lomita for those at \$25,494. The existing community also qualified for Affordable Housing Development Fee rates, which is a reduction. Staff recommends acceptance of this project and disbursement of \$44,430.00 to Dulce Lomita, LLC.

Mr. Hartye reported that the Fairhaven Summit Apartments project is located along Sweeten Creek Road in the City of Asheville and included extending approximately 530 linear feet of 8-inch public gravity sewer to serve 77 multi-family units.

Mr. Hartye reported that the Hawthorne @ Holbrook project is located along Crowell Road in Buncombe County and included extending approximately 1,876 linear feet of 8-inch public gravity sewer to serve 350 multi-family units.

Mr. Hartye reported that the Mountain Home Dunkin Donuts project is located along Asheville Highway in Henderson County and included extending approximately 211 linear feet of 8-inch public gravity sewer to serve the proposed Dunkin Donuts and existing post office.

Mr. Hartye reported that the Rockberry Apartments project is located along Rockwood Road in Buncombe County and included extending approximately 2,420 linear feet of 8-inch public gravity sewer to serve 420 multi-family units and commercial space.

Mr. Hartye reported that the Westview Village project is located along Huffman Road in the City of Asheville and included extending approximately 824 linear feet of 8-inch public gravity sewer to serve 26 single-family units.

Staff recommends acceptance of the aforementioned developer constructed sewer systems. All MSD requirements have been met.

c. Presentation of Audit & Annual Report – FY ended June 30, 2025:

Mr. Powell reported that Domestic User Fees are above budgeted expectations. This was due to a budget adjustment to reflect anticipated decrease pertaining to Tropical Storm Helene. Industrial User Fees above budgeted expectations due to higher-than-expected septic discharges. Facility and Tap Fees are above

budgeted expectations due to receiving revenue from various developers. O&M Expenditures are at 87.2% of budget. This is due to budget adjustments for utility and insurance costs that did not materialize. Capital expenditures were less than budget due to project delays from Tropical Storm Helene.

d. First Quarter Budget to Actual Review FY 2026:

Mr. Powell reported that Page 39 presents the District's First Quarter Budget to Actual Revenue and Expenditure report. Domestic User Fees and Industrial User Fees are above budgeted expectations. Facility Fees and Tap Fees are above budgeted expectations due to development. Interest and miscellaneous income are above budgeted expectations. Actual short-term interest rates are higher than anticipated for the fiscal year as well as FEMA receipts. O&M expenditures are at 29.8% of budget. They include encumbered amounts which has elevated the budget to actual above 25%. Bond principal and interest expenditures are at 83.55%. This is due to the principal and interest expenditures as of July 1. Capital project expenditures are at 79.8% of budget. They include encumbered amounts. Actual expenditures are at \$11.4 Million or 20.2% of budget.

e. Cash Commitment Investment Report – Month ended September, 2025:

Mr. Powell reported that Page 42 presents the makeup of the District's Investment Portfolio. There has not been a significant change in the makeup of the portfolio from the prior month. Page 43 presents the investment manager's report as of the month of September. The weighted average maturity of the investment portfolio is 64 days. The yield to maturity is 4.21%. Page 44 presents the District's variable debt service report. The 2008 series bonds are performing at budgeted expectations. As of the end of October, the issue has saved the District rate payers approximately \$8 Million in debt service since April, 2008.

With no further discussion, Mr. VeHaun called for a motion to approve the Consolidated Motion Agenda. Ms. Wisler moved, Mr. Pelly seconded the motion. Roll call vote was as follows: 12 ayes; 0 nays.

10. Developer Appeal for Private Pump Station and Force Main to serve Subdivided Property:

Mr. Hartye reported that at the October 10, 2025 Planning Committee representatives from Pinners Cove Subdivision appeared to appeal MSD's requirements for connecting to the sewer system. The Planning Committee passed a motion to continue discussion amongst the full Board at this meeting today. The original submittal for this development seeking an allocation came back in 2021 and there have been several iterations since. MSD's extension policies are guided by the Collection System Master Plan that was approved by the MSD Board in 2008. That document provides guidance for the orderly expansion of the collection system. Along with adoption of that plan were several new policies identifying how MSD would financially assist with expansions pursuant to that plan. Included in this Board packet is all of the relevant information, along with the full transcript of the Planning Committee Hearing. Mr. Hartye turned the meeting over to Mr. Carson to provide slides and details regarding MSD's Policies and Procedures. Mr. Carson

reported that the Pinners Cove Subdivision is located in South Asheville at the intersection of Mills Gap Road and Sweeten Creek Road and is a 175-acre parcel. The owner is KLP Pinners EAT LLC, and they purchased this property in 2021. They are currently proposing to put 266 single-family units on the property. MSD's extension policy states that the District will only consider Gravity Sewer extensions to the existing District Sewerage System. MSD does not want pump stations if we can achieve gravity sewer service to the property. As Mr. Hartye stated, in 2008 MSD did a collection system master plan which shows gravity service options to various undeveloped properties. If the District has a subdivided property with multiple ownerships, we want it to be served by a public infrastructure, not a private infrastructure. Gravity is always preferred over pump stations because pump stations are mechanical systems that do fail, typically pump stations are located at the lower end of a development so when pump stations fail, they typically result in sanitary sewer overflows (SSO's). They are expensive to operate, they have electricity running to them, and they require frequent maintenance and inspections which equates to labor hours and visits to each of the sites. Sometimes these things don't always happen. MSD has a lot of scenarios out there where that has not happened. MSD's System Services Department is aware of quite a few pump stations and private systems that have not gotten the attention, funding, or maintenance and inspections that they should have received. Those have failed over the years and are in poor condition. Most of those are multi-ownership situations. That's why there is the policy that if it is subdivided and owned by multiple entities, we want it served by a public sewer extension. MSD policy is intended to maintain a single point of ownership and responsibility and ultimately to protect public health and water quality. In July of 2021, MSD received a request from this developer to site a public pump station on their property. As mentioned previously there is a Collection System Master Plan which identifies master plan gravity alignment that can serve this property. It is lengthy but it is achievable. Furthermore, we definitely do not want developers to dictate where we have public pump stations. That should be a decision made by MSD staff. Due to gravity being achievable and not wanting a pump station just to serve this one development, MSD did deny that request. The developer was offered two (2) sewer service options. One option was a public pump station but sited quite a bit further down the basin which would allow a service area that is much bigger than the development alone. The other option, which is allowed in our policy, was a private pump station, but that would not allow subdivision of the property. They would have to keep the 175-acre parcel as one unit so they could do 266 rentals. Those are the two options they were given. There is no public infrastructure in that basin so in order to have a private pump station they would have to extend public sewer from the west side of the property and then pump up to that public sewer extension. The developer ultimately selected the private pump station option but later requested to subdivide the property. Based on policy, MSD denied that request. There have been three (3) appeals made by the developer. Per MSD policy, after those appeals, developer appeals directly to the Planning Committee. This is what took place on October 10, 2025. The Planning Committee Meeting lasted about 1 ½ hours. Developer requested to subdivide the lots into 266 units under individual ownership that would be for sale but to serve those lots with a private sewer system. That does not agree with MSD Policy. However, developer is proposing to build the private sewer system to MSD public standards which would include appropriate pipe size, appropriate access, easements that would be

presumably conveyed to a third-party operator. They are proposing that the private collection system and the pump station be owned and operated by a third-party entity. MSD is not sure who that would be but Carolina Water is one company that comes to mind who is a contract operator so it could be similar to that. Another peculiar piece of this is that they are also suggesting a policy change that would include the requirement of a conservation easement. They are proposing to put over 100-acres of their property in a conservation easement. By implementing this policy change it would eliminate a lot, probably most, of other projects from being able to meet that requirement. Developer is suggesting that third-party ownership does meet the spirit of MSD's policy but having thought about this scenario, staff does have some concerns. In the Planning Committee Meeting, Ms. Manheimer brought up the potential of slow growth of the development. It is obviously going to cost this third-party owner/operator to operate and maintain the system so what happens if the development is slow to grow. They may have only 5-20 houses that are using the system. Pump stations have to be maintained weekly at a very minimum so where will the funding support come from for this third party if there are very few houses within the development? What happens if that third party owner goes belly up? What does that transfer of ownership look like? That would probably take some amount of time so during that transition period there could be no operation and maintenance happening. Regarding the general quality of operation and maintenance, this third-party entity is going to be a for-profit company. Mr. Carson stated that the ones he has personally seen are contract operations. They have cut corners to save on costs, so he believes that in the future there is a greater likelihood of MSD having to intervene in these systems and be asked to take them over. This has happened on multiple private pump stations and collection systems in the past. It will also equate to higher sewer bills for people in that development. Not only will they be paying the third-party owner/operator for their services, but they will be paying MSD's fees as well. Those fees will definitely be higher than MSD's fees alone. Not only that but they will still be on a private system so they will be receiving fewer services through MSD. They cannot call on MSD to come repair the lines if they have a blockage or other issues. Regarding the conservation easement requirement, Mr. Carson stated that it was his opinion that if we do allow that requirement and go to the effort of changing policy to include that requirement, MSD could have future pressure to remove that from policy. Having a third-party owner/operator and that one single entity responsible for the system is one thing but if that is only applicable to developments that have a 100-acre conservation easement we will see pressure in the future to change the policy again. There are some pros to the proposed scenario. There would be a single ownership entity. Because it is a private pump station and collection system it would be permitted through DEQ, not through MSD, and DEQ would require a certified Operator in Responsible Charge (ORC) so that's one person who is responsible for the operation of that system. They are proposing to build to MSD Public Standards. Additionally, with the conservation easement, not very many developments are going to be able to convey over 100 acres into a conservation easement so that is somewhat of a pro. It's going to eliminate most developments from meeting these requirements. Mr. Carson stated that in summary, he thinks that there are three different options. The first option, and Staff's recommendation, is to deny the appeal and honor current MSD Policy which would go back to the two sewer service options they were provided before, either the private pump station with no subdividing of the property or they can subdivide the property

and build a public pump station further downstream that MSD has located at 455 Mills Gap Road. That option would allow them to subdivide and sell these lots. The second option is a public pump station on their site but make it such that it can serve a larger upstream portion of Robinson Creek. Mr. Carson stated that he would not suggest that personally. The third option would be a private pump station with the ability to subdivide and build to MSD Standards and have the conservation easement portion in there which does require a change to MSD Policy. Mr. Pennington asked Mr. Hartye and Mr. Carson, to be clear to the public and this Board, to clarify that these MSD Standards policies and also the Sewer Ordinance, were adopted by the MSD Board in the past. Hartye and Mr. Carson stated yes, that is correct. Mr. Lapsley stated that if there is a private pump station there with 266 connections, where it discharges wastewater is a whole other issue. It's a private system with 266 customers, who sets the rate that they are going to charge those customers? Mr. Clarke stated that if it is a private system serving 266 homes, they would be regulated as a public utility. Mr. Lapsley stated that from the standpoint of the customer, first they are buying a house, then add on the rates that they are charged. MSD is a component of the treatment side of it. But the operating costs, they would have to get a permit from the State Utilities Commission. Mr. Hartye stated that there are complaints about that now. Carolina Water operates in other parts of the system doing the exact same thing and there are many complaints about the high bills in those areas because they add their fees on top of MSD's. There was some discussion regarding whether they could get an HOA exemption and whether the utilities commission would regulate them. Mr. Clarke stated it would depend on how they were structured, that issue has been litigated or has come before the Public Utilities Commission a lot. If you are a developer operating a system for a certain amount of time and charging for water and sewer you are considered a public utility. If you convey it all to the HOA, then you are exempt. Ms. Wisler asked if no one regulates them. Mr. Clarke and Ms. Manheimer stated that they regulate themselves. Mr. Clarke stated that DEQ now requires an HOA operating a water and sewer system to have an operating agreement and the Public Utilities Commission is also better about reaching out and responding to complaints. Mr. Player asked what would happen if the HOA and this company fall out of grace with each other and that company walks away, how long is that system going to go unmonitored, what problems could arise from that? He stated that he knows people deal with HOA's all the time and that some are great to work with, but some get into very severe disagreements not only with themselves but with other parties. When you inject a third party into the management of something you're never guaranteed that third party is going to stick around. Mr. Carson stated that his understanding is, after that initial conveyance, there is no contractual agreement. The way we've been understanding this is that they are the owner of whatever corridor, maybe there is an easement and all of the infrastructure in it. Mr. Pennington stated that as to the questions, this is exactly why the policy was probably written the way it was. He stated that, as a practicing planner, he probably gets 5-6 calls a day with numerous complaints from property owners regarding a failed HOA, failed road system, then you start getting into all of the civil matters, but this is more of a life safety issue as well because you're dealing with a large quantity of wastewater. Mr. Tarleton asked for clarification regarding where this parcel is, that he saw a stream alongside. Mr. Pennington stated it's on Pinner's Cove up from Mills Gap. Mr. Carson pointed out the creek on the map and stated it is Robinson Creek which is a tributary to Cane

Creek. Ms. Manheimer stated that she had to leave the Planning Committee early and asked if it was unanimously in support of bringing this issue to the full Board or was it unanimously in support of bringing this to the full Board to approve or was it a punt. Mr. Hartye stated it was a punt. Mr. Pennington stated that it was a little odd because typically a committee will make some type of recommendation whereas in this case, it was simply to advance the matter to the Board for consideration. A lot of that may have had to do with these being fairly rare and a lot of questions he has are going to be around the process. This Board will probably need some further guidance from Counsel. There was some discussion regarding other legislative processes for changing policy or changing code. Mr. Clarke recommended continuing this discussion in the closed session after the Pinners Cove presentation. Mr. Clarke added that to answer Ms. Manheimer's question, the Planning Committee's recommendation was to refer this to the full Board for continuing discussion. Mr. Watts asked if there would be one bill to the HOA or if homeowners would be billed individually? Mr. Carson stated that his understanding is that all of these 266 units would be on public water so the City of Asheville would send MSD the volumetric data, MSD would then bill that one third party owner and then they would add their fees and bill the residents. Mr. Watts asked, from MSD's responsibility standpoint, whether our responsibility would start at their discharge point into our system. Mr. Hartye stated that the gravity system at the top would be our responsibility, the rest would not.

Derek Allen, Attorney with ASK Law, then began the Pinners Cove presentation. He reported that he has been working with the Pinners Development team for about 5 years. Also present is Jesse Gardner with Civil Design Concepts, who is intimately familiar with the system that you see here, and Drew Levin who is part of the ownership team. He stated that he would end where Hunter started and that he really appreciates the conversations that they have had with Staff and Billy as they ramped up to this meeting here and he thinks that it has been productive already in terms of trying to grapple with MSD Policy now, what it might look like going forward and how to address the ever growing elephant in our community room which is how do we provide housing in a community where it's very difficult to provide housing. He said he is going to start where Hunter ended, and Option 2 that was up there for about the last five minutes of the conversation that preceded this presentation here, Option 2 would solve all of those issues. He stated that they feel that is probably the best thing for everyone, Option 2. What they have appealed, however, is Option 3. He presented a slide that shows the approved system already ok'd by MSD. In this system, it would be owned, maintained, and operated by a state-licensed third-party utility provider. The system they are proposing is exactly this system. The only thing changing is the ownership of the underlying lots. The 266 lots that are being proposed to be built now are build for rent. The build for rent lots and the financing behind that has changed and was always in flux and at some point this development team has realized that they need to be for sale to go to individual owners which has already been set up because that's the way it's been subdivided so there will be some split. They won't be all 266 as individual lot owned but it will be some portion. Whether it is build to rent or build to own, the rate will be the same, the system will be the same, the owner of that system will be the same, and it will be a third party approved by the utilities commission. He stated that he wanted to back up and hit a couple of policy points. This Board is made up of constituent Members. Each one of the constituent Members that, as a County or

Municipal Body, has the number one thing on their list as their highest priority and that is providing more housing for our area. Every single one of them. MSD's role and it's Policy Manual talks about one of support for the local governments and provides so they can meet their immediate and future needs. Housing Policy is the top priority of every one of these constituents' institutions. He stated that they believe that overly rigid adherence to MSD's policy of single owner for pump stations is not supportive of the planning and policy goals. That's the policy piece. He stated "you're probably thinking, hey you're a lawyer so where is the law part in this, the law part of your appeal?" They think the policy of a blanket prohibition on private pump stations is void for two reasons. One, they believe it is not consistent with DEQ policy and they think it is violative of a newly enacted statutory law. DEQ policy talks about equal or better treatment of waste or equal or better protection of waters of the state and no increased potential for nuisance conditions from noise, odor, or vermin. As already mentioned, this system they are proposing is one that's already been proposed and is exactly the same. MSD's regulations require, no, North Carolina law requires DEQ to consider designs outside of specified standards and policies that the applicant can demonstrate these criteria. MSD's prohibitive policies must also maintain that. In addition, this is set out in the appeal, newly enacted N.C. General Statute 162A-900, enacted by the General Assembly, requires that local sewer authorities may not impose conditions not otherwise authorized by law on residential developments and specifically prohibits conditions requiring adherence to any restrictions related to land development or land use. Here that would obviously be if it is a single owner it is ok, if it is multiple owners of the same system it is not ok and they think that is violative of this provision. As mentioned before, this is the same system and they believe that DEQ would allow this. All over the State they know this is done. It's done in Raleigh and it's done in Western North Carolina. Jesse Gardner can tell us where he has worked. They have already talked to Mikal Wilmar and she has confirmed what they suspected, which is that DEQ would allow what they are proposing. Hunter talked about gravity being preferred, we all know that, but sometimes it's not practical. Sometimes it doesn't make sense, and that's why in this instance the pump station has already been approved. He stated this is the section that deals with the Robinson Creek Basin. When you have unique areas like the Robinson Creek Basin, which is where this project is, you have to have unique solutions. In this particular instance it so specific that he has highlighted this portion in the handout. Under Policy Considerations and says "The map to the left shows the Robinson Creek Basin, identified by RC labels. This basin is designated a primary service area and is a very linear basin. Properties at the top of the basin cannot be served by gravity without constructing the interceptor through the bottom of the basin to the existing Cane Creek Interceptor". He stated that here is the part where his eyes caught. "Policies are needed to consider how these situations will be addressed." This area is so unique that it is called out in MSD's Policy Manual. "It is unlikely that there will ever be enough large projects on a coordinated time frame for the 455 Mills Gap pump station to be built by developers". "Policies are needed to consider how these situations will be addressed". The concerns that were policy driven behind MSD's requirement for single ownership, all of those things can be addressed by what they have proposed. Single ownership is irrelevant in this instance because this will be conveyed to a third party regardless of single ownership or ownership by the HOA. Individual lot owners, the rates will be the same for those end users whether they are renting those homes or owning those homes. He stated that he wanted to quantify something that Hunter mentioned which was the

suggestion about the conservation easement. The concern they were trying to address was “if we do this for you, why can’t we do this for everyone else” and is this going to be the proverbial slippery slope? If you’re going to make a policy change or a policy exception in recognition of the appeal that we have and the legal grounds one way that you could justify that is to talk about specifically the challenges presented by the Robinson Creek Basin and the fact that we have and you could require anyone going down this path to have their private pump station owned, maintained and operated by a state licensed third party utility provider that MSD could approve, should approve, and require a large conservation easement. He asked Mr. Pennington how many conservation easements are there in Buncombe County? Mr. Pennington stated not many, this may be the first one, maybe two or three very small ones. Mr. Allen stated the point being, they are pretty rare so if you are looking for ways to avoid sliding down the slippery slope, there are plenty of ways to do that. The slope growth concern that was put out there, that is the same whether it’s a rental community or a for owner community because of the third-party piece. It could happen with renters as well as owners. They don’t think that is going to be the case specifically in that those will be built out in a big chunk first. Mr. Allen stated that they are requesting that they be allowed to move forward and that the approved pump station and force main to serve multiple properties within the subdivision, with the condition that they turn the system over to a state licensed third party utility provider for ownership, operation and maintenance or that they be allowed the approved private pump station and force main to become a public utility owned and maintained by MSD. They have included their materials in the slide presentation and are here to answer any questions.

At 3:26 pm, Mr. Pennington requested that the Board go into closed session with Legal Counsel to discuss processes, policies and other matters related to this item. Mr. Whitesides seconded the motion. Voice vote was unanimous.

At 3:53 pm, meeting returned to open session. Ms. Wisler made the motion to accept Staff’s recommendation and deny the appeal for the private pump station and force main to serve subdivided property. Mr. Pelly seconded the motion. Ms. Manheimer was not present for the final vote. Roll call vote was as follows: 11 ayes; 0 nays.

11. **Old Business:** None.
12. **New Business:** None.
13. **Adjournment:**

With no further business, Mr. VeHaun called for adjournment at 3:54 pm.

Jackie W. Bryson, Secretary/Treasurer

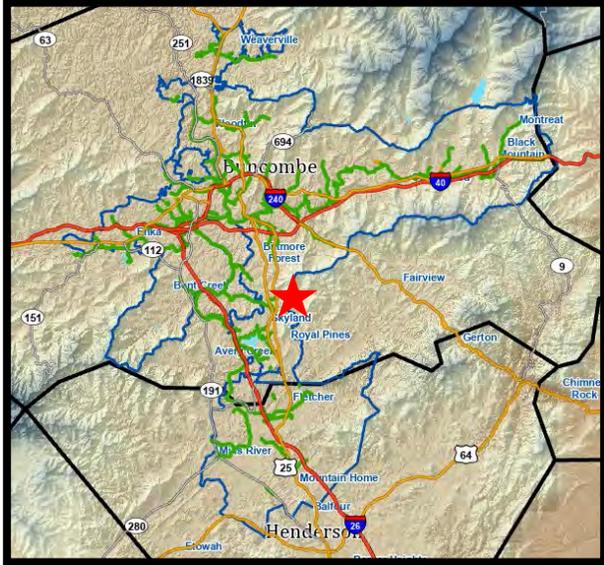
Developer Appeal of MSD Policy



MSD Board Meeting

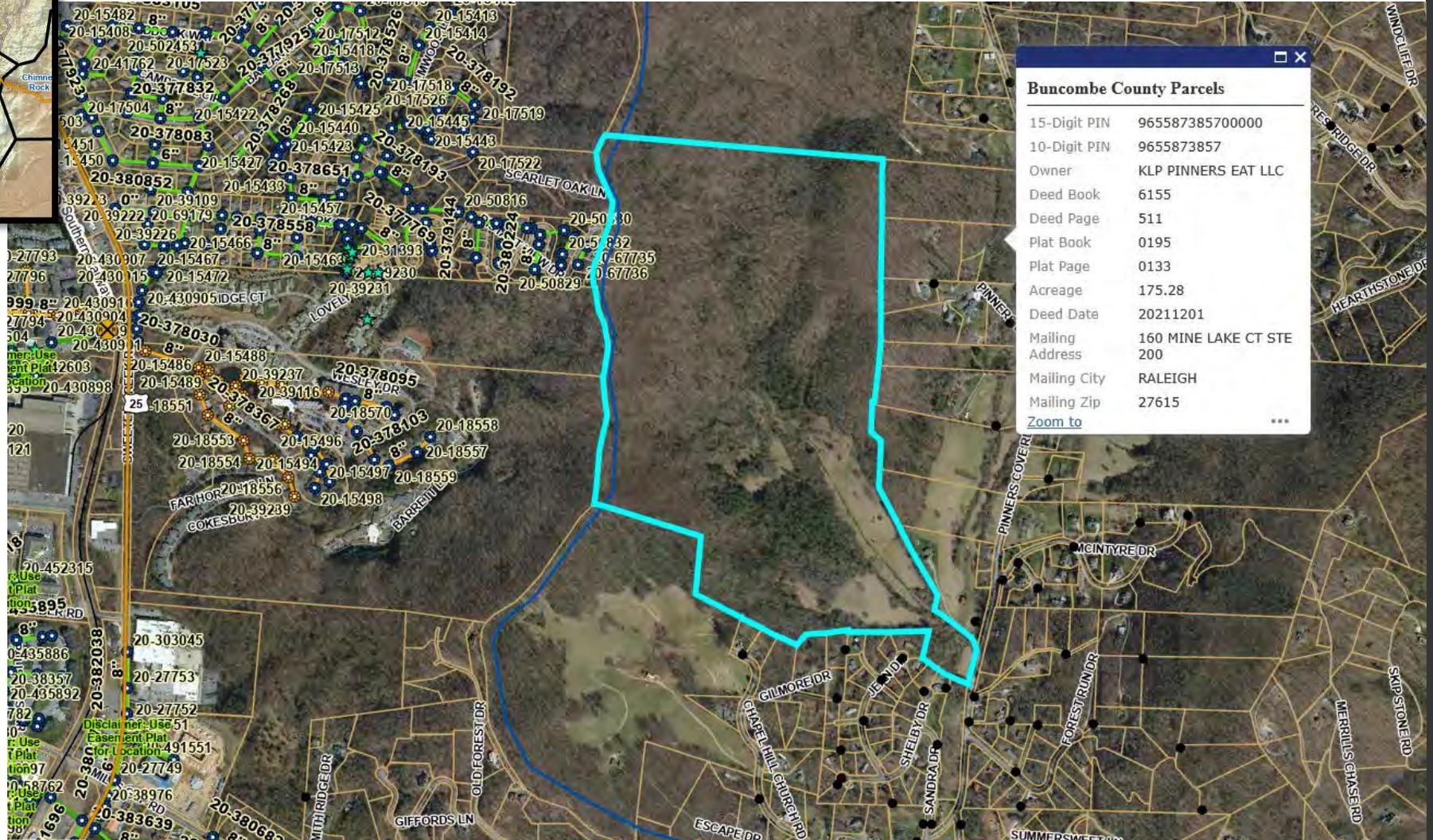
November 19, 2025

Vicinity Map



Pinner's Cove Subdivision

- 175 acres
- Purchased 2021 by KLP Pinner's EAT LLC
- Current proposal is 266 SFR units



MSD Sewer Extension Policy

METROPOLITAN SEWERAGE DISTRICT OF BUNCOMBE COUNTY, NORTH CAROLINA

POLICY AND PROCEDURES FOR THE EXTENSION OF SEWER SERVICE

POLICY

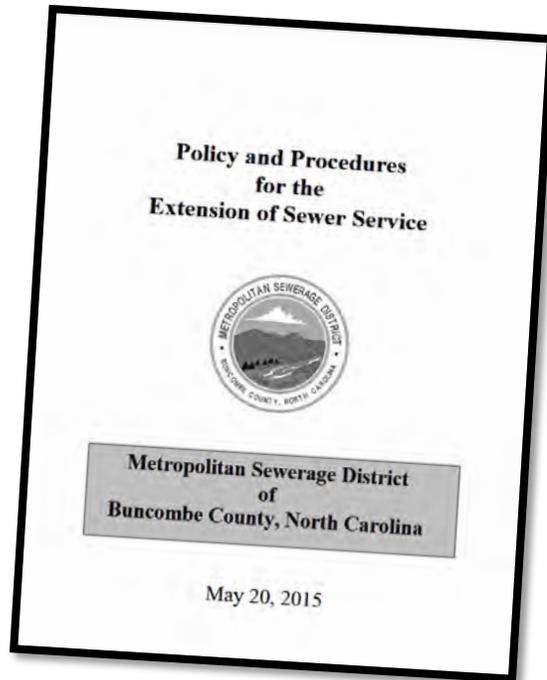
The Metropolitan Sewerage District of Buncombe County (hereinafter "MSD" or "District") recognizes there will be a need from time to time to extend the sewerage system operated by the District (the "District Sewerage System") to serve areas annexed by municipalities, to serve new industrial, commercial and residential development and to serve areas not currently served by the District. The District also recognizes that there will be additional connections to the existing District Sewerage System. The purpose of this document is to set forth the policy, rules and procedures for extension of and connection to the District Sewerage System. Terms used herein are defined in Appendix F – Definitions.

I. GENERAL PRINCIPLES

A. Extensions Defined

The District will only consider Gravity Sewer extensions to the existing District Sewerage System. Extension of service consists of:

1. Construction of new public **Gravity Sewers** and appurtenances. Any extension of sewer service which is proposed to serve more than one property under separate ownership or to serve more than one building under separate ownership must be built to public sewer standards and transferred to and accepted by the District for ownership and maintenance.
2. Pump stations will only be allowed on extensions to the District Sewerage System where, in the opinion of the District, gravity service is not achievable. Pump Stations, if approved, are also subject to payment of a Pump Station Maintenance Fee.
3. Low pressure sewers, vacuum sewers and any other specialized modes of conveyance or alternative systems are not allowed.
4. Construction of new Private Sewer Systems. The District reserves the right to limit or prohibit discharges from Private Sewer Systems. (See Section III)
5. The connection of a Building Sewer to an existing sewer line. (See Section IV)
6. The connection of existing Public or Private Sewer Systems not previously served by the District. (See Section V).

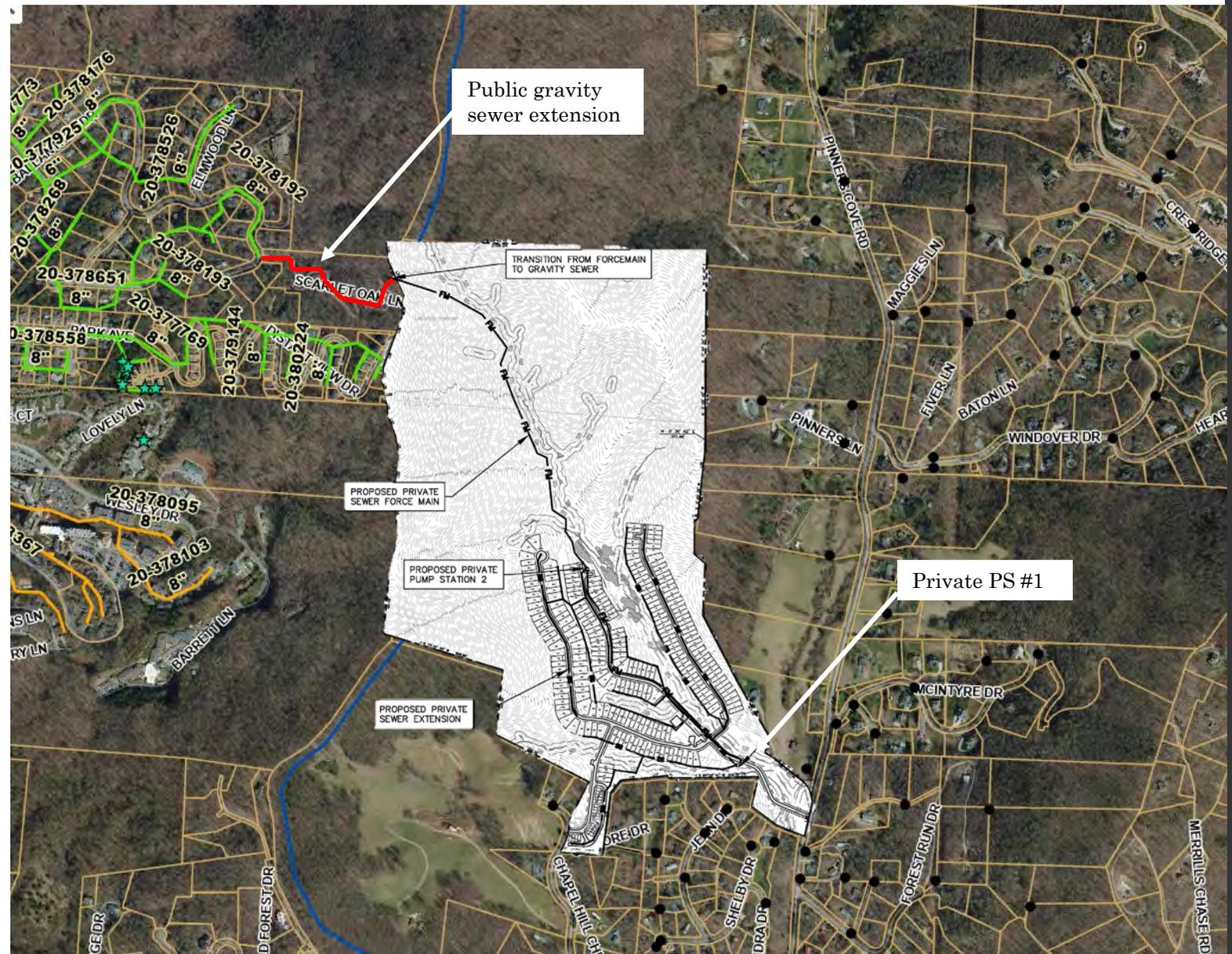


Background on Policy & Current Day Examples

- Gravity is always preferred...period.
 - Pump stations are mechanical systems prone to failure (SSOs)
 - Expensive to operate
 - Require frequent maintenance and inspection
- But...sometimes that doesn't happen
 - MSD System Services is aware of multiple private systems that are currently problematic. Many are multi-ownership situations or operated by HOA.
 - MSD policy is intended to maintain a single point of ownership & responsibility
 - Greater protection of public health and water quality

Appeal Background

- KLP Pinners EAT, LLC requested an onsite Public Pump Station.
- Master Plan Gravity Alignment is “achievable”
- Furthermore, MSD **does not** want developer dictating location of Public Pump Station. MSD denied request and offered:
 - Public PS downstream
 - Private PS onsite
- Developer accepted Private PS option but requested to subdivide. MSD denied due to Policy.



Summary of Appeal Hearing – Oct. 10, 2025 Planning Committee

Developer Requesting:

1. Subdivided lots for sale (individual ownership)
2. Private sewer system (built to public standards) to be owned *and* operated by 3rd party entity
3. Suggested policy change requiring onsite conservation easement \geq 100 acres



Developer suggests that proposal meets the “*spirit*” of Policy, *but* MSD Staff believes this scenario could still be problematic:

- Cons

- Slow development growth – Minimal user fees to support 3rd Party O&M
- 3rd Party Owner/Operator goes belly up
- Quality of O&M? – “For-Profit” 3rd Party will likely cut costs where possible; greater likelihood of MSD being called to intervene in future
- Higher sewer bills
- Future pressure on MSD to remove conservation easement requirement (3rd party Owner/Operator only)

- Pros

- Single-ownership entity
- NCDEQ (permitting agency for private system) will require certified ORC
- Private system built to MSD public standards
- Conservation Easement will exclude most developments

Summary

1. **Staff Recommendation:** Deny Appeal and honor current MSD Policy
 - Private PS (no subdividing), or
 - Public PS @ Mills Gap Rd
2. **Developer Request 1:** Public PS to serve upstream Robinson Creek
3. **Developer Request 2:** Private PS w/ ability to subdivide
 - Requires Policy change



Questions

Metropolitan Sewerage District of Buncombe County
Minutes of Closed Session MSD Board Meeting
November 19, 2025

The MSD Board went into Closed Session at approximately 3:30 PM to discuss the Pinner's Cove Appeal. Hunter Carson, Director of Engineering for MSD, presented the attached slides. Mr. Tarleton asked how a proposed development gets to this point. Mr. Pennington described briefly the process for a developer planning a subdivision in the County. He noted that the development started out as a Conservation Development with smaller lots and a portion of the property protected by a conservation easement. The developer then has to go to the City for water and MSD for sewer. Mr. Pennington noted that the developer in this case is pursuing an administrative appeal of a decision made by MSD and asking for a change in the MSD policy.

Mr. Lapsley noted that there had been several private sewer systems in Henderson County, and the residents had all turned to the County Commissioners for help. At approximately 3:50 PM, Mr. Whiteside moved to return to open session. Mr. Watts seconded the Motion. Voice vote in favor of the Motion was unanimous.

Respectfully Submitted,

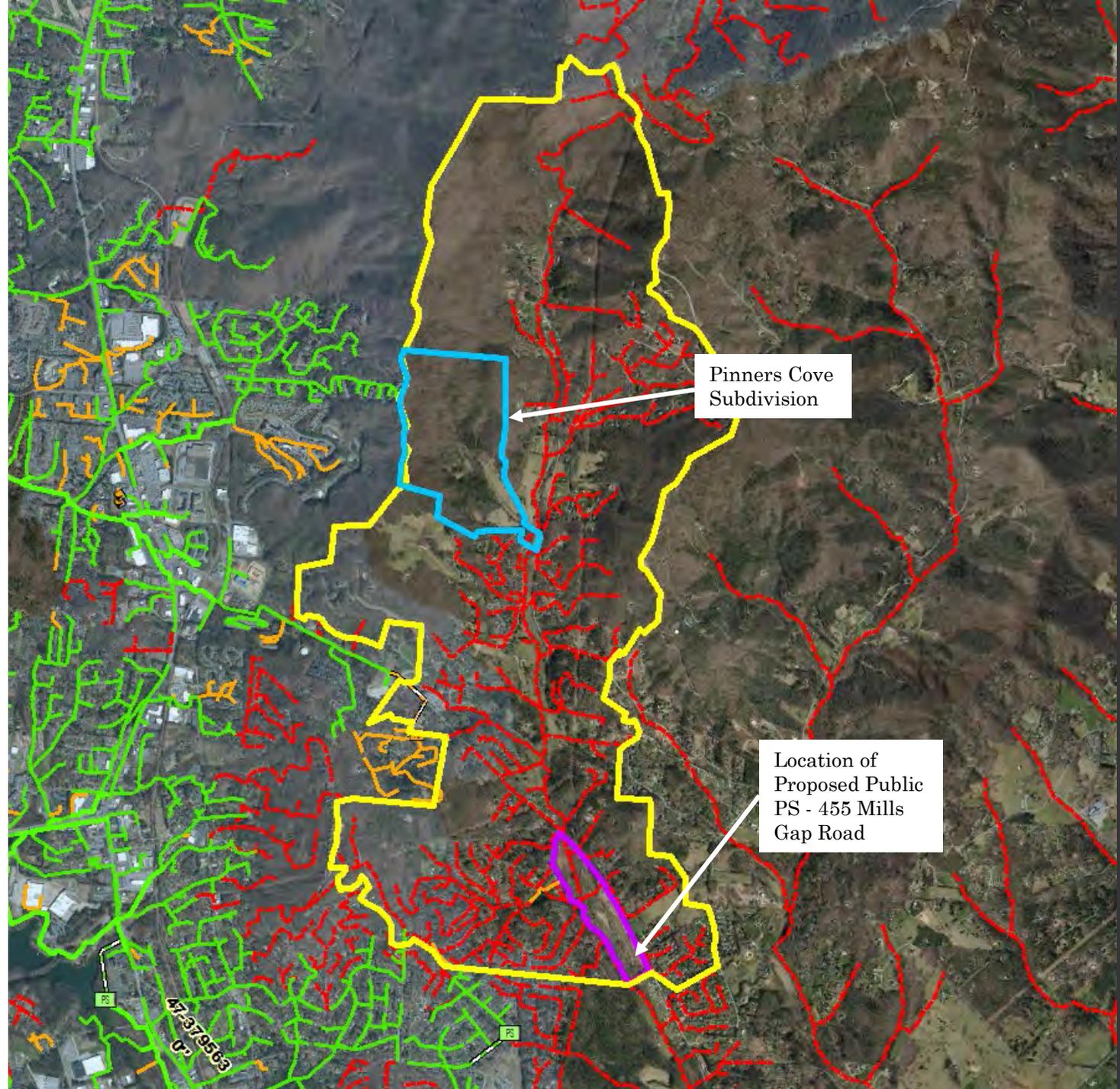
William Clarke

Closed Session Slides

Alternative Option #1

- Allow Public PS closer to Robinson Creek to serve upstream basin
- Require PS Maintenance Fee
 - Present worth of O&M for 20yrs
 - Replacement cost of electrical panels and generator
- Require downstream piping (Ballantree Dr) to be upgraded for additional capacity
- Likelihood of master plan extension to Public PS is very low; PS would remain
- Sets precedent for Developers to have emphasis on Public PS locations

This Option is **NOT**
RECOMMENDED by Staff





MEMORANDUM

TO: MSD Board
FROM: Thomas E. Hartye, P.E., General Manager
DATE: December 12, 2025
SUBJECT: Report from the General Manager

- Kudos
 - Please follow the link below to a short article about MSD staff involvement in the United Way Day of Caring/Connection at Reynolds Middle School. Thanks to all the MSD staff who participated.
<https://www.unitedwayabc.org/news/msd-reynolds>
 - Ryan on Balsam Rd. called to express his appreciation for the work by MSD Construction crews replacing the sewer line in the Ridgecrest area. He said the paving is so smooth he feels like he's driving on a cloud and that it was the best it has ever been in the 17 years he has lived there. Thanks to Josh Mathews, Elias Solorio, Josh Shook, Dakota Penley, and Robert Denny.
- Principal Commercial Users

Board members and the public often ask who our biggest users are. Attached is a list of our Principal Commercial Users which can be found in the Statistical Section of the ACFR. This section also has a lot of other financial and operational statistics that may be of interest.
- Board/Committee Meetings/Events

The Employee Christmas lunch will be held December 18th at 11:30am. The next Regular Board Meeting will be held on January 21st at 2 pm. The next Right of Way Committee meeting will be held on January 28, 2026.



9.5 TONS OF GRAVEL AND A WHOLE LOT OF

Home / Latest News & Stories

/ 9.5 Tons of Gravel and a Whole Lot of Hear...

HEART: MSD

When was the last time you stepped inside a middle school?

For many of us, the answer may be "never" or "students ourselves." And that seems normal, right? Why would anyone step inside a middle school unless they have a child there or work in education?

At United Way of Asheville and Buncombe County (UWABC), we believe something different.

We believe middle schools should be like part of everyday community life – places where people connect, contribute, and take pride in the neighborhood they anchor.

That's exactly why we host the **Day of Connection**—a special day where UWABC staff intentionally connect local businesses with schools and partners across our network. We bring people into schools, not just to volunteer, but to understand how schools operate as community hubs of support.

That belief came to life when the **Metropolitan Sewerage Department (MSD)** traveled to East Asheville to support **Reynolds Middle School**.

Their goal sounds simple enough: help improve an outdoor lunch and recreation space. But what happened next shows what community partnership *really* looks like. MSD didn't just show up with willing hands. They showed up with—wait for it—**a dump truck carrying 9.5 tons of gravel.**



Yes. 9.5 tons. Not books. Not backpacks. Gravel. And it was perfect.

As they leveled the ground and built up seating areas, something beautiful happened. Students began using the newly refreshed spaces *immediately*. Kids sat, talked, laughed, and soaked up the fall sunshine on the very areas MSD had just finished.

MSD workers looked on, smiling – especially two volunteers who realized they were standing in the same place they had once eaten lunch *as Reynolds Middle students themselves*.

Schools don't just need traditional supplies – they need **community**. They need building materials, furniture, clothing, and yes... sometimes gravel.

With nine Community School Coordinators in nine schools across Buncombe County, we hear daily what students, families, and teachers need. And we're especially grateful when businesses or community members ask, "*How can we help?*"



Because when more people step into our schools, more people start caring about what happens inside them. And that changes everything.



Inspired to Step Up?

Make a difference at a Community School
Today: [Volunteer at your local Community Night now!](#)

Want to stay in the loop? [Sign up to Receive our Newsletter](#)

Donate Online to Support our Schools: [Give Here](#)

Principal Commercial Users

FY 2016 & FY 2025

Commercial User	Type of Business	2016			2025		
		Total Charges	Rank	Percentage of Total Charges	Total Charges	Rank	Percentage of Total Charges
Milkco, Inc.	Dairy Products & Juices	\$ 574,628	1	1.90%	\$ 890,254	1	2.05%
Sierra Nevada	Micro-Brewery Manufacturer	195,717	5	0.65%	405,221	2	0.93%
Glatfelter Industries - formerly Jacob Holm Industries	Textile Manufacturer	287,323	3	0.95%	355,304	3	0.82%
New Belgium Brewing	Micro-Brewery Manufacturer	158,595	6	0.52%	304,229	4	0.70%
Meritor Heavy Vehicle Systems	Automotive Parts Manufacturer	-----			227,965	5	0.52%
Royal George Water Authority - (formerly Ridgecrest Baptist Conference Center)	Christian Conference Center/Community Water	226,062	4	0.75%	221,300	6	0.51%
Mission Health System	Health & Emergency Services	422,769	2	1.40%	215,294	7	0.50%
University of North Carolina - Asheville	University	-----			199,221	8	0.46%
Arcadia Beverage	Beverage Supplier for local/global retailers	-----			192,618	9	0.44%
VA Medical Center - Asheville Department of Veterans Affairs	Veterans Hospital	128,858	9	0.43%	173,720	10	0.40%
The Biltmore Company	Tourist Attraction/Winery/Resort Services	-----			-----		
Givens Estates, Inc.	Continuing Care Retirement Community	147,296	7	0.49%	-----		
Bonar - (formerly Colbond)	Chemical Manufacturer	141,997	8	0.47%	-----		
Mission Hospital Laundry	Hospital Laundry Services	121,513	10	0.40%	-----		
TOTAL		\$ 2,404,758		7.94%	\$ 3,185,127		7.34%

Source: District Billing Records

**Metropolitan Sewerage District of Buncombe County
INFORMATION ONLY ITEM**

BOARD MEETING DATE: December 17, 2025

SUBMITTED BY: Tom Hartye, P.E. – General Manager

PREPARED BY: Hunter Carson, P.E. – Director of Engineering
Darin Prosser, P.E. – Project Manager

SUBJECT: Consideration of Bids: W. City View Dr. at Riverside Dr
Sanitary Sewer Rehabilitation Project, MSD Project No. 2024020

BACKGROUND: The West City View Dr. at Riverside Dr. project is located in the Town of Woodfin. The alignment begins within Woodfin’s Riverside Park, crosses beneath Riverside Dr., and continues through several properties along West City View Drive. The project includes replacing approximately 735 linear feet of existing 6-inch clay sewer pipe with new 8-inch HDPE and ductile iron pipe. The existing line is undersized and in poor condition which has resulted in multiple issues and contributed to a sanitary sewer overflow.

The project was advertised, and no bids were received on November 25, 2025. The project was readvertised, and one bid was received on December 4, 2025 at 2:30pm in the following amount:

<u>Contractor</u>	<u>Bid</u>
1) KRG Utility Group	\$321,880.00

The apparent low bidder is KRG Utility Group with a bid amount of \$321,880.00. KRG has extensive experience with District rehabilitation projects and continues to provide satisfactory workmanship.

FISCAL IMPACT: The FY 25–26 construction budget for this project is \$300,000.00. Sufficient funds are available in the CIP contingency to cover the overage.

STAFF RECOMMENDATION: Staff recommends award of this contract to KRG Utility Group.

METROPOLITAN SEWERAGE DISTRICT OF BUNCOMBE COUNTY, NORTH CAROLINA

W. City View @ Riverside Drive Sanitary Sewer Rehabilitation

Project No. 2024020

BID TABULATION

December 4, 2025

BIDDER	Bid Bond	MBE Form	Bid Forms (Proposal)	TOTAL BID AMOUNT
KRG Utility Group Kernersville NC	5%	Yes	Yes	\$321,880.00

Apparent Low Bidder



Darin Prosser, P.E.
Project Engineer
Metropolitan Sewerage District of
Buncombe County, North Carolina



This is to certify that the bid tabulated herein was publicly opened and read aloud at 2:30 PM on the 4th day of December, 2025, in the W.H. Mull Building at the Metropolitan Sewerage District of Buncombe County, Asheville, North Carolina, and that said bid was accompanied by acceptable bidders bond in the amount of 5% of the bid.

**Metropolitan Sewerage District of Buncombe County, North Carolina
CAPITAL IMPROVEMENT PROGRAM**

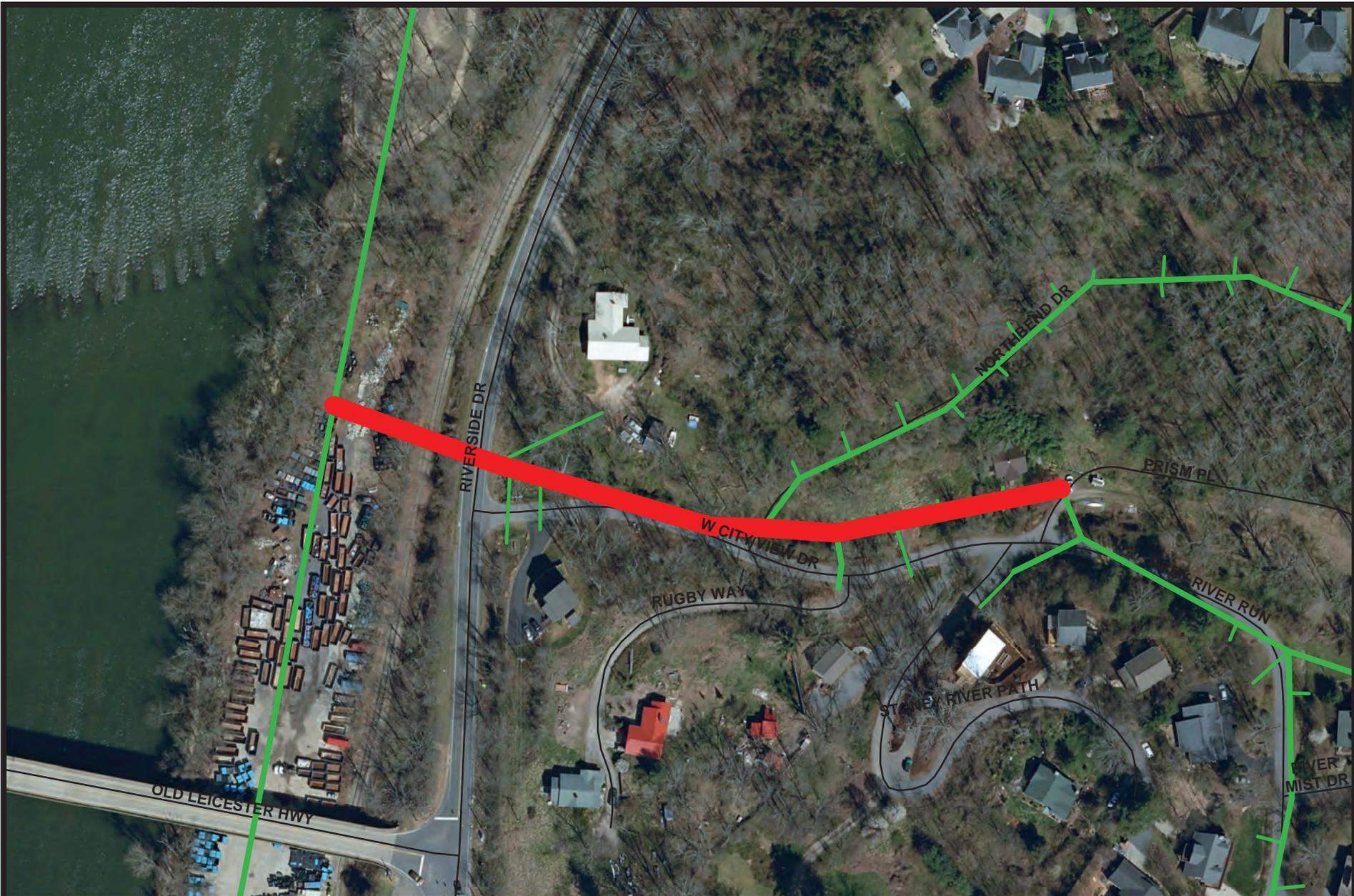
BUDGET DATA SHEET - FY 2025 - 2026

PROJECT:	W. City View Dr. @ Riverside Dr.	LOCATION:	Asheville
TYPE:	General Sewer Rehab.	PIPE RATING:	13
PROJECT NO.	2024020	TOTAL LF:	735
PROJECT BUDGET:	\$364,630.00	PROJECT ORIGIN:	Line Condition, Undersized Pipe

DESCRIPTION	ESTIMATED PROJECT COST	TOTAL EXPENDS THRU 12/31/24	EST. COST JAN - JUNE 2025	BUDGET FY 25-26
55310 - PRELIM. ENGINEERING				
55320 - SURVEY - DESIGN	\$7,500.00	\$7,500.00		
55330 - DESIGN				
55340 - PERMITS				
55350 - SPECIAL STUDIES				
55360 - EASEMENT PLATS	\$5,000.00	\$4,950.00	\$50.00	
55370 - LEGAL FEES	\$7,000.00	\$4,281.00	\$719.00	\$2,000.00
55380 - ACQUISITION SERVICES				
55390 - COMPENSATION	\$20,130.00		\$16,000.00	\$4,130.00
55400 - APPRAISAL	\$4,000.00			\$4,000.00
55410 - CONDEMNATION	\$16,000.00			\$16,000.00
55420 - CONSTRUCTION	\$300,000.00			\$300,000.00
55430 - CONST. CONTRACT ADM.				
55440 - TESTING	\$1,000.00			\$1,000.00
55450 - SURVEY - ASBUILT	\$4,000.00			\$4,000.00
TOTAL AMOUNT	\$364,630.00	\$16,731.00	\$16,769.00	\$331,130.00

ENGINEER:	MSD	DP	ESTIMATED BUDGETS - FY 27 - 35	
R.O.W. ACQUISITION:	MSD	# PLATS: [7]	FY 26-27	\$0.00
CONTRACTOR:			FY 27-28	\$0.00
CONSTRUCTION ADM:	MSD		FY 28-29	\$0.00
INSPECTION:	MSD		FY 29-30	\$0.00
			FY 30-31	\$0.00
			FY 31-32	\$0.00
PROJECT DESCRIPTION: This project begins on the west side of Riverside Drive, runs east crossing Riverside Drive and continues on W. City View Drive. The existing 6-inch clay pipe will be replaced with 8-inch ductile iron pipe and 8-inch HDPE. The 6-inch clay line is undersized and has had numerous problems that has lead to a SSO.			FY 32-33	\$0.00
			FY 33-34	\$0.00
			FY 34-35	\$0.00
			FY 35-36	\$0.00

SPECIAL PROJECT NOTES:



**West City View Drive at Riverside Drive
Project No. 2024020**

NOT TO SCALE



METROPOLITAN SEWERAGE DISTRICT
of
BUNCOMBE COUNTY, NORTH CAROLINA

Budget Map

**Metropolitan Sewerage District of Buncombe County
INFORMATION ONLY ITEM**

BOARD MEETING DATE: December 17, 2025

SUBMITTED BY: Tom Hartye, P.E. – General Manager

PREPARED BY: Hunter Carson, P.E. – Director of Engineering
Shaun Armistead, P.E. – Project Manager

SUBJECT: Consideration of Informal Bids: Ash Lagoon Overflow Rehabilitation, MSD Project No. 2025031

BACKGROUND: The ash lagoon, located northeast of the treatment plant, is part of the original plant (constructed as a sludge storage lagoon) and has been in use since the late 1960s. Ash slurry is pumped from the incinerator system to the lagoon where ash settles out and overflow water (i.e. supernatant) is sent back to the head of the treatment plant. The overflow structure, which controls the water level in the lagoon, has been updated several times over the past 60 years, but is now in poor condition and in need of a full replacement.

The project will include replacement of the concrete structure, installation of a stainless steel weir gate and bar screen, and building a temporary cofferdam around the work area to be able to replace the concrete structure in the dry.

The project was advertised informally, and two sealed bids were received on November 26, 2025, at 2:30 PM in the following amounts:

<u>Contractor</u>	<u>Bid</u>
1) Cove Utility, LLC	\$594,600.00
2) T.P. Howard's Plumbing Co. Inc.	\$162,275.00

The apparent low bidder is T.P. Howard's Plumbing Company, Incorporated with bid amount of \$162,275.00. District staff have experience with T.P Howard's Plumbing Company and have been pleased with their work.

FISCAL IMPACT: The FY 25-26 construction budget for this project is \$185,000.00.

STAFF RECOMMENDATION: Staff recommends award of the contract to T.P. Howard's Plumbing Company, Incorporated.

METROPOLITAN SEWERAGE DISTRICT OF BUNCOMBE COUNTY, NORTH CAROLINA

Ash Lagoon Overflow Rehab

Project No. 2025031

BID TABULATION

November 25, 2025

BIDDER	Bid Bond	MBE Form	Bid Forms (Proposal)	TOTAL BID AMOUNT
Cove Utility LLC Easley SC	N/A	1	Yes	\$594,600.00
TP Howard's Plumbing Co Inc	N/A	1	Yes	\$162,275.00

Apparent Low Bidder



Shaun Armistead, P.E.
Project Engineer
Metropolitan Sewerage District of
Buncombe County, North Carolina

This is to certify that the bid tabulated herein was publicly opened and read aloud at 2:30 PM on the 25th day of November, 2025, in the W.H. Mull Building at the Metropolitan Sewerage District of Buncombe County, Asheville, North Carolina.

**Metropolitan Sewerage District of Buncombe County, North Carolina
CAPITAL IMPROVEMENT PROGRAM**

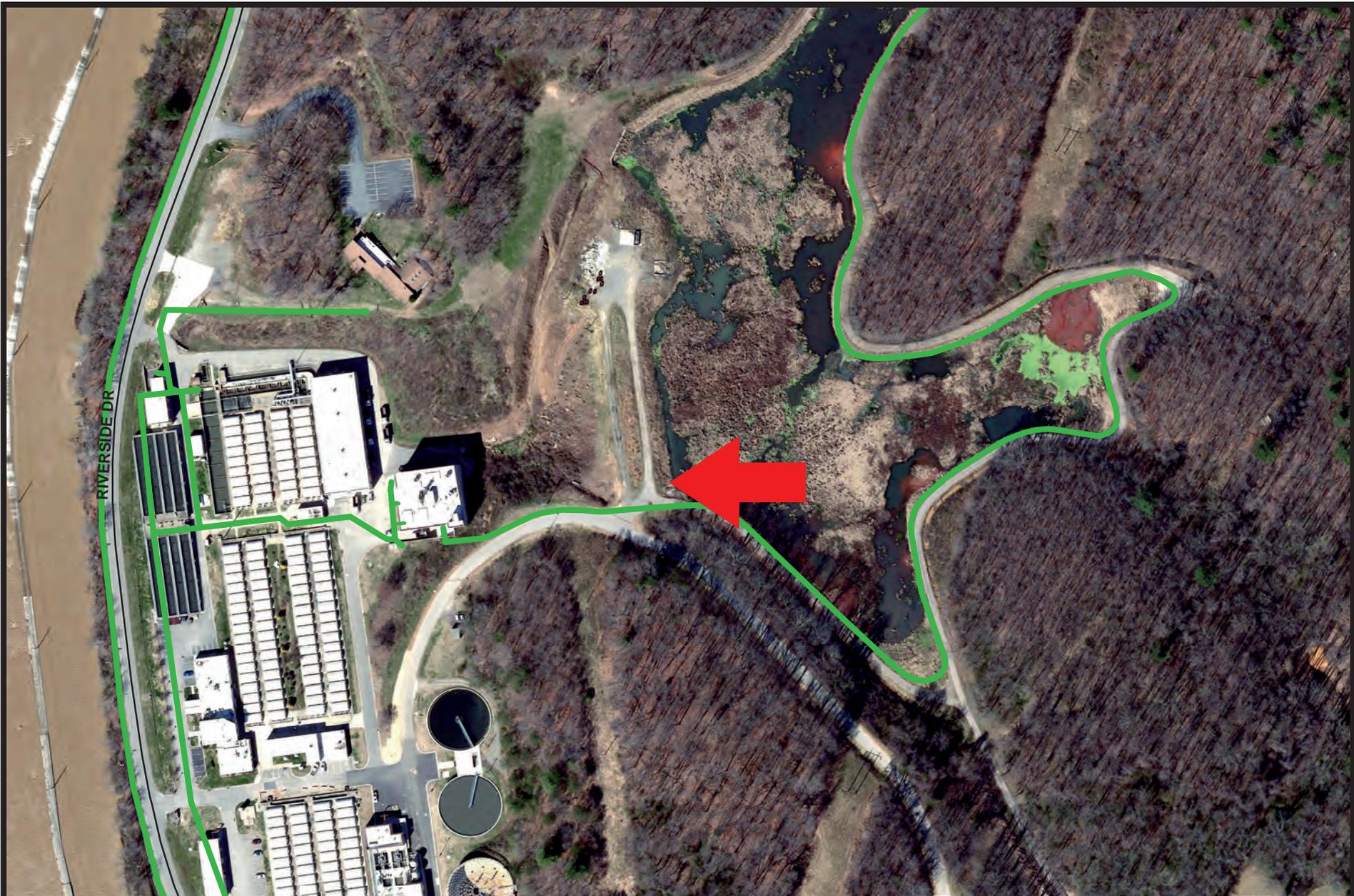
BUDGET DATA SHEET - FY 2025 - 2026

PROJECT:	Ash Lagoon Overflow Rehab	LOCATION:	MSD-Treatment Plant
TYPE:	Treatment Plant	PIPE RATING:	N/A
PROJECT NO.	2025031	TOTAL LF:	0
PROJECT BUDGET:	\$185,000.00	PROJECT ORIGIN:	Aging Infrastructure

DESCRIPTION	ESTIMATED PROJECT COST	TOTAL EXPENDS THRU 12/31/24	EST. COST JAN - JUNE 2025	BUDGET FY 25-26
55310 - PRELIM. ENGINEERING				
55320 - SURVEY - DESIGN				
55330 - DESIGN				
55340 - PERMITS				
55350 - SPECIAL STUDIES				
55360 - EASEMENT PLATS				
55370 - LEGAL FEES				
55380 - ACQUISITION SERVICES				
55390 - COMPENSATION				
55400 - APPRAISAL				
55410 - CONDEMNATION				
55420 - CONSTRUCTION	\$185,000.00			\$185,000.00
55430 - CONST. CONTRACT ADM.				
55440 - TESTING				
55450 - SURVEY - ASBUILT				
TOTAL AMOUNT	\$185,000.00	\$0.00	\$0.00	\$185,000.00

ENGINEER:	MSD	SA	ESTIMATED BUDGETS - FY 27 - 35	
R.O.W. ACQUISITION:	N/A	# PLATS: [0]	FY 26-27	\$0.00
CONTRACTOR:	TBD		FY 27-28	\$0.00
CONSTRUCTION ADM.:	MSD		FY 28-29	\$0.00
INSPECTION:	MSD		FY 29-30	\$0.00
			FY 30-31	\$0.00
			FY 31-32	\$0.00
PROJECT DESCRIPTION: This project includes rehabilitation of the ash lagoon overflow structure, originally constructed in the late 1960s. The concrete structure controls the water level in the ash lagoon and is in poor condition.			FY 32-33	\$0.00
			FY 33-34	\$0.00
			FY 34-35	\$0.00

SPECIAL PROJECT NOTES:



RIVERSIDE DR



Ash Lagoon Overflow Rehabilitation Project No. 2025031

NOT TO SCALE



METROPOLITAN SEWERAGE DISTRICT
of
BUNCOMBE COUNTY, NORTH CAROLINA

Budget Map

Metropolitan Sewerage District of Buncombe County

Board Action Item

BOARD MEETING DATE: December 17, 2025

SUBMITTED BY: Tom Hartye, P.E. - General Manager

REVIEWED BY: Hunter Carson, P.E. - Engineering Director

PREPARED BY: Samuel Gettleman, P.E. – Planning and Development Manager

SUBJECT: Acceptance of Developer Constructed Sewer System for the Farmstead at Olivette Extension MSD Project No. 2021247.

BACKGROUND: This project is located inside the District boundary along Olivette Road in Buncombe County, NC. The developer of the project is Scott Austin of Olivette Development, LLC.

The project included extending approximately 1,200 linear feet of 8-inch public gravity sewer to serve the Single-Family Residential Development.

The wastewater allocation is 9,900 GPD for the thirty-three (33) Single-Family Units. The estimated cost of the sewer construction is \$425,000.

All MSD requirements have been met.

STAFF RECOMMENDATION: Staff recommends acceptance of this developer constructed sewer system.

Metropolitan Sewerage District of Buncombe County

Board Action Item

BOARD MEETING DATE: December 17, 2025

SUBMITTED BY: Tom Hartye, P.E. - General Manager

REVIEWED BY: Hunter Carson, P.E. - Engineering Director

PREPARED BY: Samuel Gettleman, P.E. – Planning and Development Manager

SUBJECT: Acceptance of Developer Constructed Sewer System for the Argento on Broad Extension MSD Project No. 2022174.

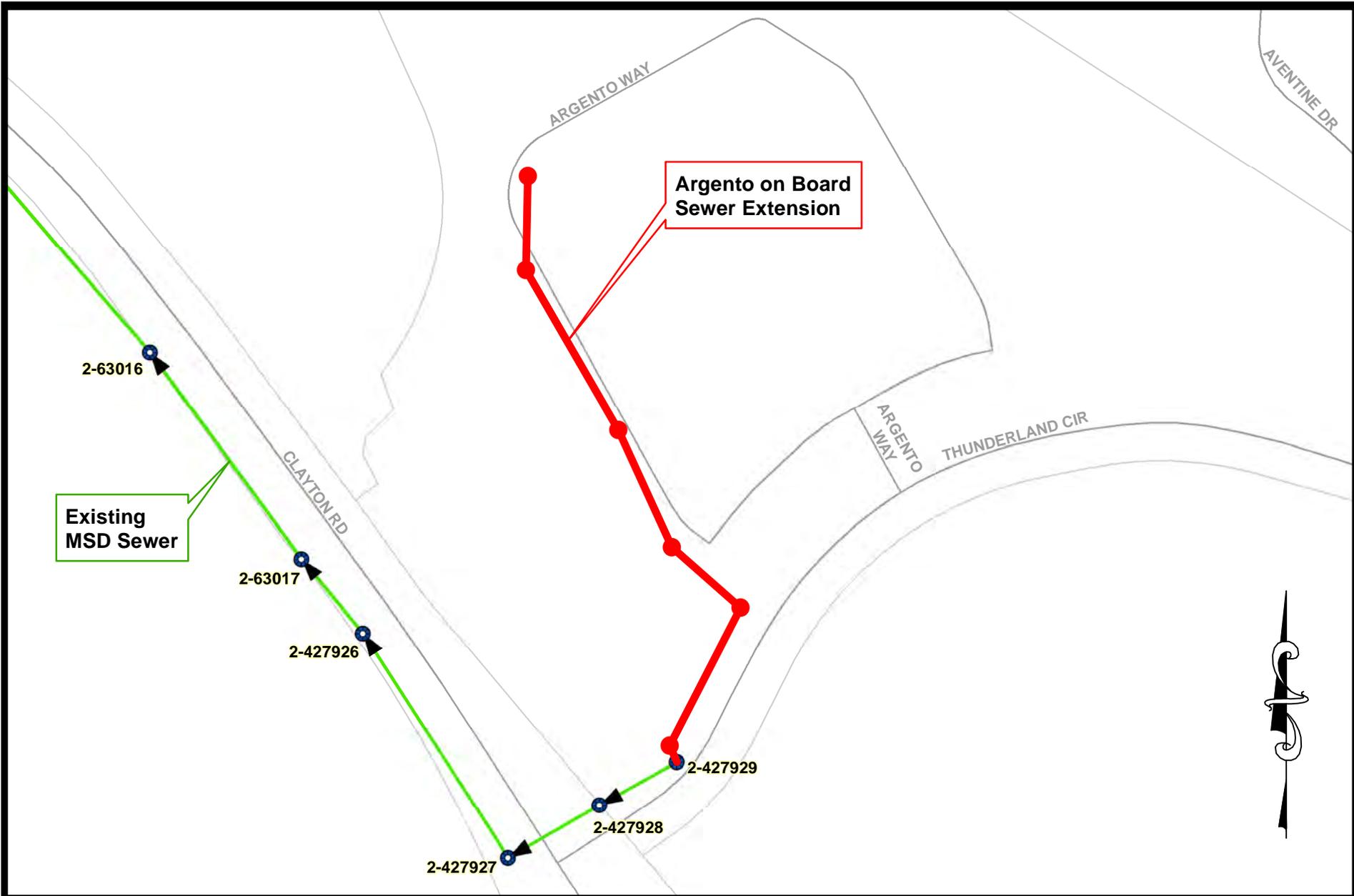
BACKGROUND: This project is located inside the District boundary along Clayton Road in Buncombe County, NC. The developer of the project is Clint Peterson of Sterling Asheville Apartments, LLC.

The project included extending approximately 484 linear feet of 8-inch public gravity sewer to serve the Multi-Family Residential Development.

The wastewater allocation is 33,900 GPD for the two-hundred and sixteen (216) Multi-Family Units. The estimated cost of the sewer construction is \$130,000.

All MSD requirements have been met.

STAFF RECOMMENDATION: Staff recommends acceptance of this developer constructed sewer system.



MSD
Engineering Division

**Argento on Board Sewer Extension
MSD Project # 2022174**

Metropolitan Sewerage District of Buncombe County

12/4/2025

Metropolitan Sewerage District of Buncombe County

Board Action Item

BOARD MEETING DATE: December 17, 2025

SUBMITTED BY: Tom Hartye, P.E. - General Manager

REVIEWED BY: Hunter Carson, P.E. - Engineering Director

PREPARED BY: Samuel Gettleman, P.E. – Planning and Development Manager

SUBJECT: Acceptance of Developer Constructed Sewer System for the 1191 Bleachery Blvd Extension MSD Project No. 2023056.

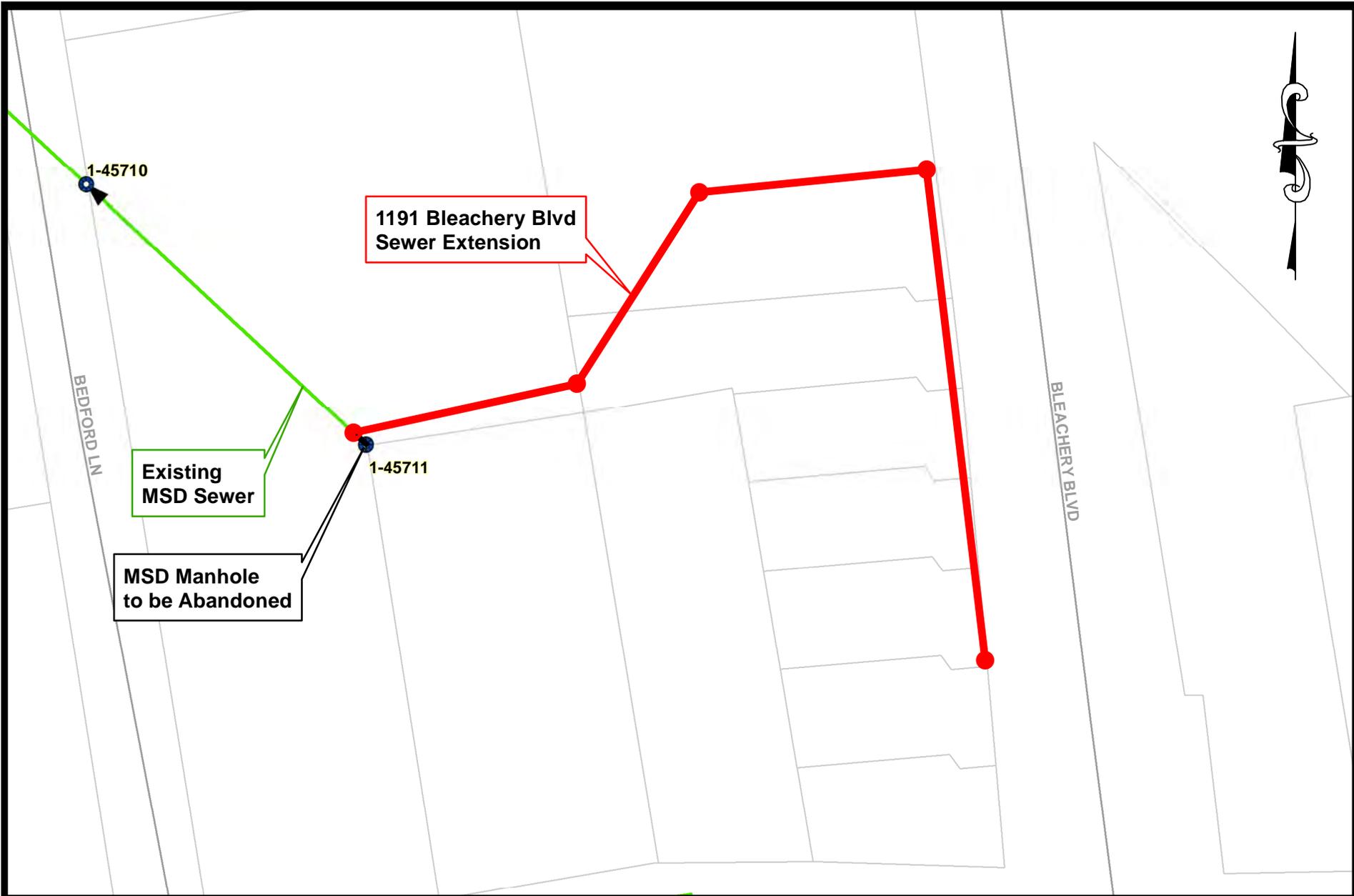
BACKGROUND: This project is located inside the District boundary along Bleachery Boulevard in the City of Asheville, NC. The developer of the project is Christopher Eller of Signature Opportunity C5, LLC.

The project included extending approximately 397 linear feet of 8-inch public gravity sewer to serve the Single-Family Residential Development.

The wastewater allocation is 1,400 GPD for the seven (7) Single-Family Units. The estimated cost of the sewer construction is \$69,000.

All MSD requirements have been met.

STAFF RECOMMENDATION: Staff recommends acceptance of this developer constructed sewer system.



MSD
Engineering Division

1191 Bleachery Blvd Sewer Extension MSD Project # 2023056

Metropolitan Sewerage District of Buncombe County

12/4/2025

Metropolitan Sewerage District of Buncombe County

BOARD INFORMATIONAL ITEM

Meeting Date: December 17, 2025
 Submitted By: Thomas E. Hartye, PE., General Manager
 Prepared By: W. Scott Powell, CLGFO, Director of Finance
 Cheryl Rice, Accounting Manager
 Subject: Cash Commitment/Investment Report-Month Ended October 31, 2025

Background

Each month, staff presents to the Board an investment report for all monies in bank accounts and specific investment instruments. The total investments as of October 31, 2025 were \$92,713,124. The detailed listing of accounts is available upon request. The average rate of return for all investments is 4.298%. These investments comply with North Carolina General Statutes, Board written investment policies, and the District's Bond Order.

The attached investment report represents cash and cash equivalents as of October 31, 2025 do not reflect contractual commitments or encumbrances against said funds. Shown below are the total investments as of October 31, 2025 reduced by contractual commitments, bond funds, and District reserve funds. The balance available for future capital outlay is \$ 21,010,904.

Total Cash & Investments as of 10/31/2025		92,713,124
Less:		
Budgeted Commitments (Required to pay remaining FY26 budgeted expenditures from unrestricted cash)		
Construction Funds	(42,911,764)	
Operations & Maintenance Fund	<u>(16,120,665)</u>	
		(59,032,429)
Bond Restricted Funds		
Bond Service (Funds held by trustee):		
Funds in Principal & Interest Accounts	(62,864)	
FY26 Principal & Interest Due	<u>(1,374,196)</u>	
		(1,437,060)
District Reserve Funds		
Fleet Replacement	(1,849,409)	
Pump Replacement	(192,955)	
WWTP Replacement	(516,112)	
Maintenance Reserve	<u>(1,384,677)</u>	
		(3,943,153)
District Insurance Funds		
General Liability	(185,269)	
Worker's Compensation	(243,245)	
Post-Retirement Benefit	(3,217,471)	
Self-Funded Employee Medical	<u>(3,643,593)</u>	
		<u>(7,289,578)</u>
Designated for Capital Outlay		<u>21,010,904</u>

Meeting Date: December 17, 2025

Subject: Cash Commitment/Investment Report-Month Ended October 31, 2025

Page 2

Staff Recommendation

None - Information Only.

Action Taken

Motion by:

to

Approve

Disapprove

Second by:

Table

Send to Committee

Other:

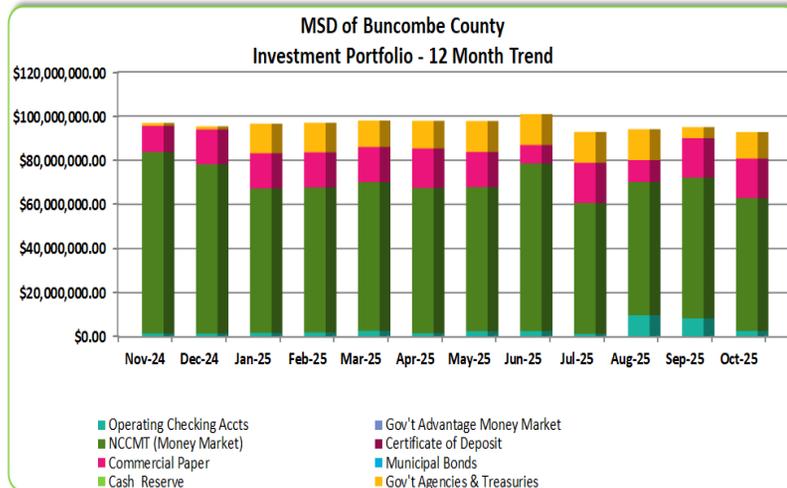
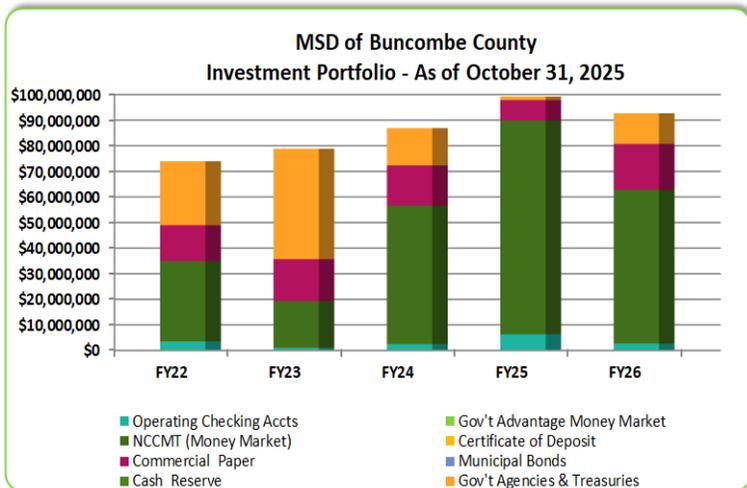
Follow-up required:

Person responsible:

Deadline:

	Operating Checking Accounts	Gov't Advantage Money Market	NCCMT (Money Market)	Certificate of Deposit	Commercial Paper	Municipal Bonds	Cash Reserve	Gov't Agencies & Treasuries	Total
Held with Bond Trustee	\$ -		\$ 62,864			\$ -	\$ -		\$ 62,864
Held by MSD	2,716,854	0	60,053,596	-	17,884,310	-		11,995,500	92,650,260
	\$ 2,716,854	\$ -	\$ 60,116,460	\$ -	\$ 17,884,310	\$ -	\$ -	\$ 11,995,500	\$ 92,713,124

Investment Policy Asset Allocation	Maximum Percent	Actual Percent	
U.S. Government Treasuries,			
Agencies and Instrumentalities	100%	12.94%	No significant changes in the investment portfolio as to makeup or total amount.
Bankers' Acceptances	20%	0.00%	
Certificates of Deposit	100%	0.00%	
Commercial Paper	20%	19.31%	
Municipal Bonds	100%	0.00%	
North Carolina Capital Management Trust	100%	64.82%	All funds invested in CD's, operating checking accounts, Gov't Advantage money market are fully collateralized with the State Treasurer.
Checking Accounts:	100%		
Operating Checking Accounts		2.93%	
Gov't Advantage Money Market		0.00%	



Meeting Date: December 17, 2025

Subject: Cash Commitment/Investment Report-Month Ended October 31, 2025

Page 4

Metropolitan Sewerage District Investment Managers' Report On October 31, 2025

Summary of Asset Transactions

	Original Cost	Market	Interest Receivable
Beginning Balance	\$ 77,802,625	\$ 77,885,664	\$ 90,969
Capital Contributed (Withdrawn)	3,500,584	3,500,584	
Realized Income	279,939	279,939	(41,445)
Unrealized/Accrued Income		21,479	21,479
Ending Balance	<u>\$ 81,583,148</u>	<u>\$ 81,687,666</u>	<u>\$ 71,003</u>

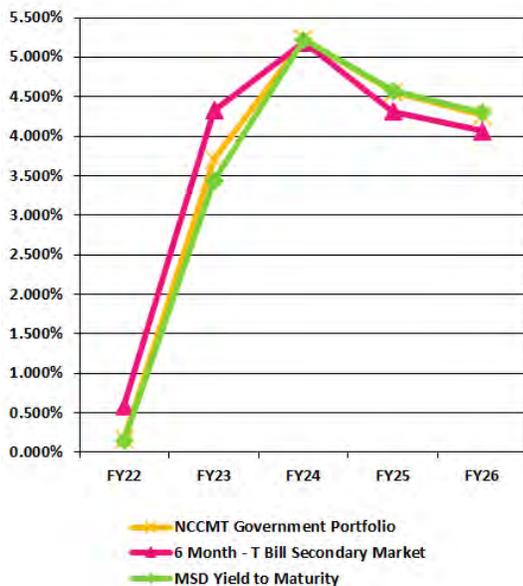
Value and Income by Maturity

	Original Cost	Income
Cash Equivalents <91 Days	\$ 69,587,647	\$ 240,070
Securities/CD's 91 to 365 Days	-	-
Securities/CD's > 1 Year	11,995,500	\$ 41,383
	<u>\$ 81,583,148</u>	<u>\$ 281,453</u>

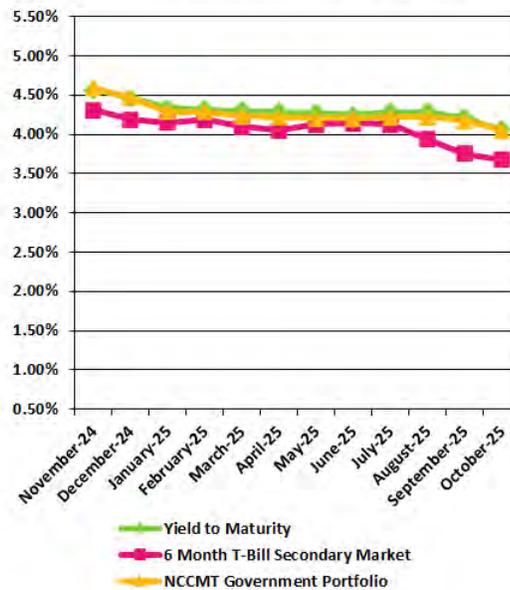
Month End Portfolio Information

Weighted Average Maturity	111
Yield to Maturity	4.06%
6 Month T-Bill Secondary Market	3.68%
NCCMT Government Portfolio	4.05%

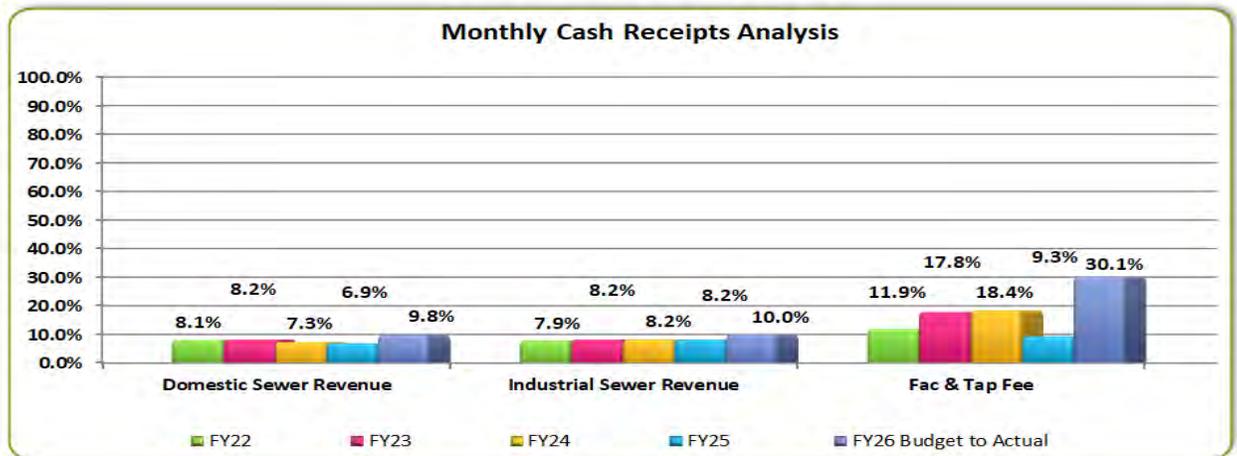
Metropolitan Sewerage District
Annual Yield Comparison



Metropolitan Sewerage District
Yield Comparison - October 31, 2025

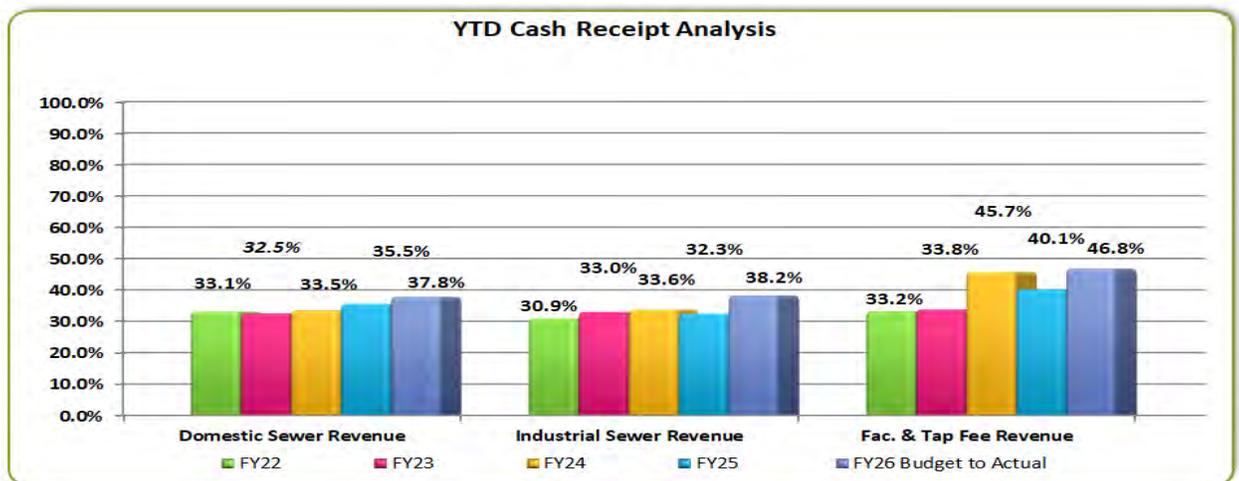


Metropolitan Sewerage District Analysis of Cash Receipts As of October 31, 2025



Monthly Cash Receipts Analysis:

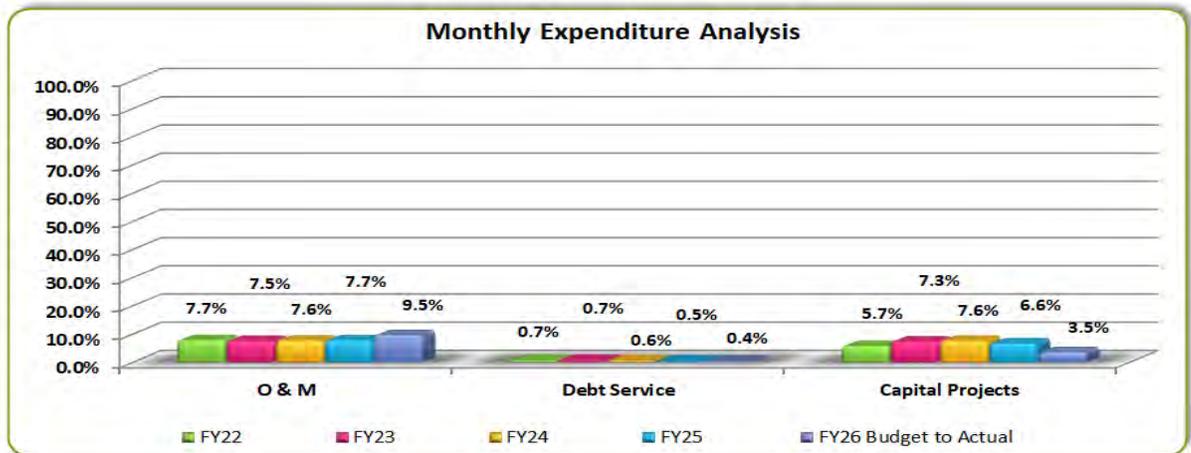
- * Monthly domestic sewer revenue is considered reasonable based on timing of cash receipts in their respective fiscal periods.
- * Monthly industrial sewer revenue is reasonable based on historical trends.
- * Due to the unpredictable nature of facility and tap fee revenue, staff considers facility and tap fee revenue reasonable.



YTD Actual Revenue Analysis:

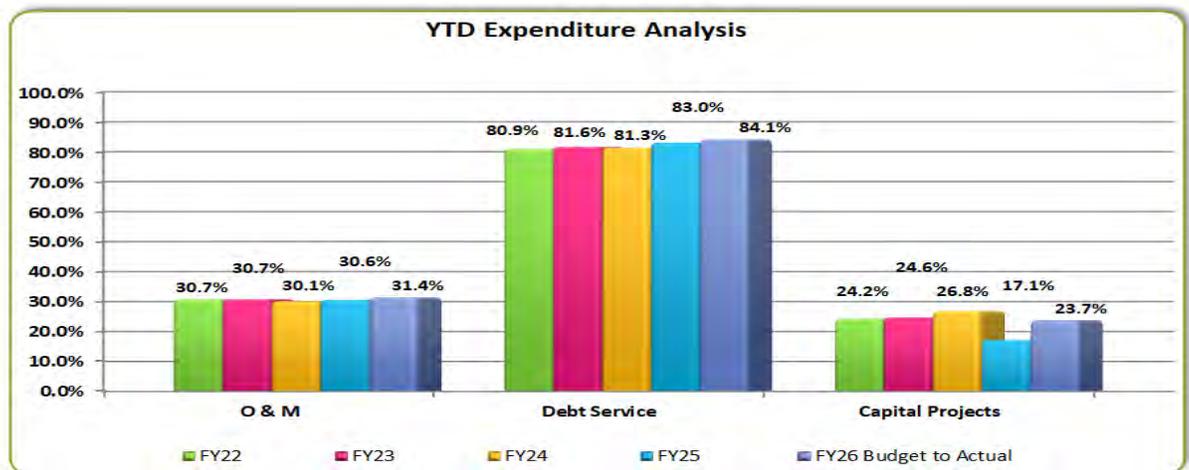
- * YTD domestic sewer revenue is considered reasonable based on historical trends.
- * YTD industrial sewer revenue is reasonable based on historical trends.
- * Due to the unpredictable nature of facility and tap fee revenue, staff considers facility and tap fee revenue reasonable.

Metropolitan Sewerage District Analysis of Expenditures As of October 31, 2025



Monthly Expenditure Analysis:

- * Monthly O&M expenditures are considered reasonable based on historical trends and timing of expenditures in the current year.
- * Due to the nature of the variable rate bond market, monthly expenditures can vary year to year. Based on current variable interest rates, monthly debt service expenditures are considered reasonable.
- * Due to the nature and timing of capital projects, monthly expenditures can vary from year to year. Based on the current outstanding capital projects, monthly capital project expenditures are considered reasonable.



YTD Expenditure Analysis:

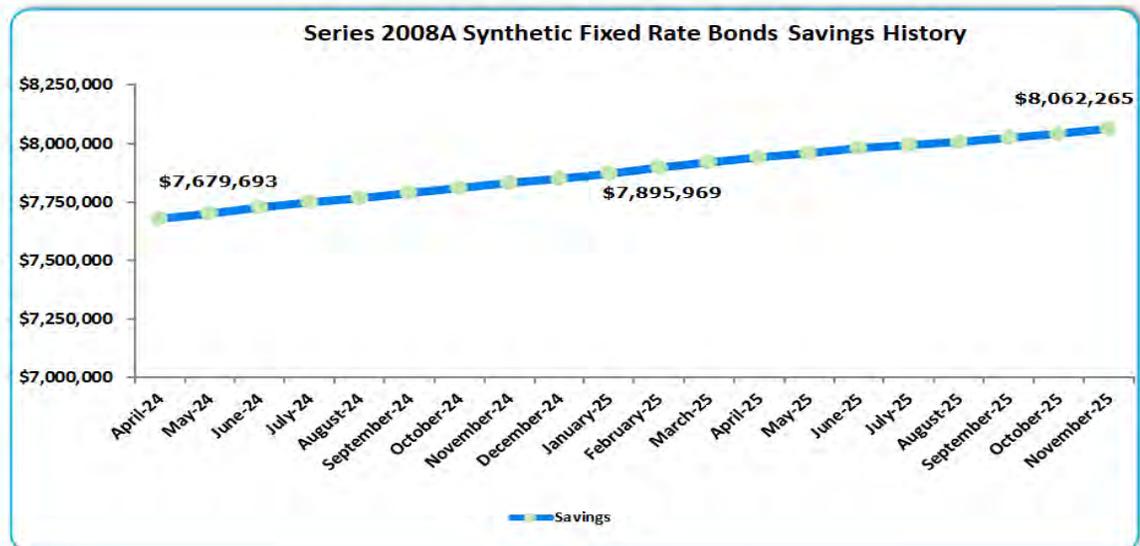
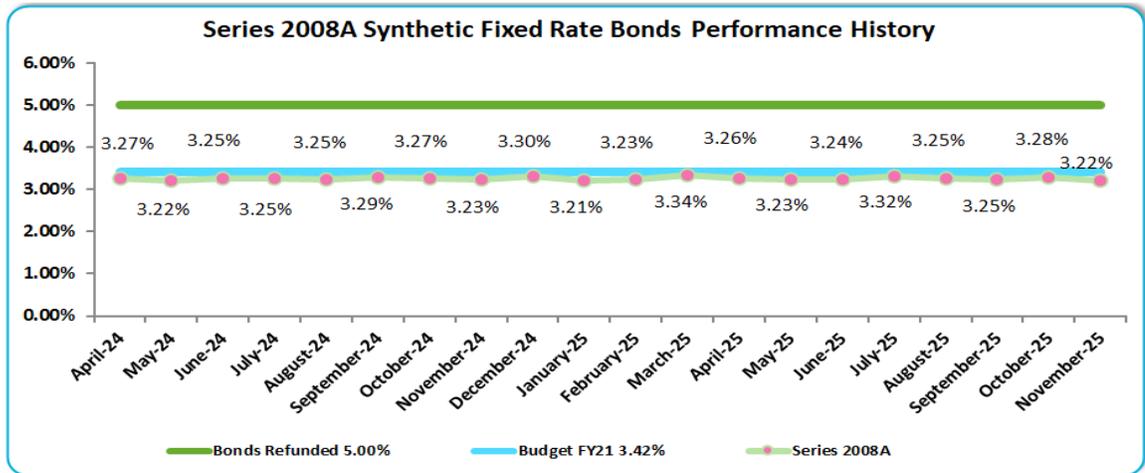
- * YTD O&M expenditures are considered reasonable based on historical trends.
- * Due to the nature of the variable rate bond market, YTD expenditures can vary year to year. Based on current variable interest rates, YTD debt service expenditures are considered reasonable.
- * Due to nature and timing of capital projects, YTD expenditures can vary from year to year. Based on the current outstanding capital projects, YTD capital project expenditures are considered reasonable.

Meeting Date: December 17, 2025

Subject: Cash Commitment/Investment Report-Month Ended October 31, 2025

Page 7

Metropolitan Sewerage District Variable Debt Service Report As of November 30, 2025



Series 2008A:

- * Savings to date on the Series 2008A Synthetic Fixed Rate Bonds is \$8,062,265 as compared to 4/1 fixed rate of 4.85%.
- * Assuming the rate on the Series 2008A Bonds continues at the current all-in rate of 3.7210%, MSD will achieve cash savings of \$4,670,000 over the life of the bonds.
- * MSD would pay \$296,270 to terminate the existing Bank of America Swap Agreement.

Metropolitan Sewerage District of Buncombe County

BOARD ACTION ITEM

BOARD MEETING DATE: December 17, 2025

SUBMITTED BY: Tom Hartye, P.E. - General Manager

PREPARED BY: Hunter Carson, P.E. – Director of Engineering
Darin Prosser, P.E. – Project Manager

SUBJECT: Consideration of Acceptance – Solids Handling Preliminary Engineering Report, MSD Project No. 2023048

BACKGROUND: In March 2023, the MSD Board approved Hazen & Sawyer (Hazen) to complete the Solids Handling Preliminary Engineering Report (PER), an evaluation of existing solids handling processes at the Water Reclamation Facility (WRF) and phased improvement plan to address biosolids management over a 30-year planning period. The PER included a condition and capacity assessment of existing equipment, future solids loading projections, alternatives evaluation and redundancy assessment for solids thickening, dewatering, and disposal, and conceptual design development of a new solids handling facility.

The Fluidized Bed Incinerator (FBI) has been in service since 1992 and serves as the primary means of solids disposal at the WRF. The FBI is currently undergoing internal rehabilitation; however, given the age of the overall system, near-term replacement is recommended. Furthermore, the PER concluded that the FBI's rated capacity of 40 dry tons per day is inadequate to support future peak solids loading events for any of the biological treatment alternatives currently under consideration.

The single FBI unit offers no redundancy, making landfill disposal MSD's only available backup option during planned outages or emergency shutdowns. Due to hauling costs, landfill disposal of wet "cake" (i.e. dewatered biosolids) is not a preferred, nor sustainable alternative. A new solids handling facility is recommended to provide adequate capacity for future growth and redundancy.

The PER evaluated various solids disposal alternatives (e.g. landfill, composting, supercritical water oxidation, lime stabilization, etc.) but shortlisted incineration and thermal drying as the most viable options. Construction of a new incinerator system would prove challenging for several reasons, including more stringent LLLL air emission regulations, permitting challenges associated with the first FBI permitted under LLLL rules in EPA Region 4, and significant capital costs to achieve full redundancy (i.e. two new LLLL incinerators).

Thermal drying is a process that uses heat to evaporate water from biosolids, greatly reducing its volume and mass. The end product is a high quality, Class A pelletized fertilizer that can be marketed for sale or utilized as cover material at the landfill. The PER concluded that thermal drying

has a significantly lower 20-yr life cycle cost when compared to incineration and can be permitted and constructed more easily. Thermal drying is more widely accepted amongst the public since it produces no air emissions and a produces a sustainable, useful end product. The final PER recommendation is to implement thermal drying as the new solids disposal technology.

Use of the existing FBI for purposes of achieving process redundancy was not recommended with thermal drying, nor incineration. Due to site limitations, the new solids facility will be constructed separate from the existing FBI. This arrangement presents significant operational challenges. Additionally, the existing FBI is not appropriately sized to meet future needs, as mentioned above.

The PER also evaluated new solids thickening (gravity belt vs. rotary drum thickeners) and dewatering technology (centrifuge vs. belt filter press). Final selection of the thickening and dewatering equipment will occur during the design-build phase of the project.

The new solids handling facility will be housed in a new building and include thickening, dewatering, and disposal processes. The building will be adequately sized for future capacity requirements with the ability to accommodate redundant units. Equipment installation will be phased with Phase I including one (1) thermal dryer unit and all ancillary equipment. A second, redundant dryer unit will be installed during a later phase.

Since the existing FBI and related solids handling processes must remain in operation during construction, the proposed site for the new solids handling facility will be located east of MSD's Training Center. This location will also benefit the future WRF biological replacement project by providing valuable space for upgrades to the liquid treatment process.

The PER Executive Summary is attached for review.

FISCAL IMPACT: Phase 1 construction of the new Solids Handling Facility is estimated at \$138M. This major CIP project will span five fiscal years and has been incorporated into the ten-year CIP in FY 26-27 through FY 30-31. Funds are budgeted under the "Solids Handling Capacity Improvements" project, MSD Project No. 2019087.

STAFF RECOMMENDATION: Staff recommends the District accept the Solids Handling Preliminary Engineering Report prepared by Hazen & Sawyer.

December 2, 2025

To: Metropolitan Sewerage District of Buncombe County (MSD)

From: Sharanya Ananth, Hazen
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French Broad River WRF Solids Handling PER – Executive Summary

FINAL

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1. Introduction

The Metropolitan Sewerage District (MSD) of Buncombe County retained Hazen and Sawyer (Hazen) to complete a Solids Handling Preliminary Engineering Report (PER) for the French Broad River Water Reclamation Facility (FBRWRF). The PER includes a condition and capacity assessment of the existing equipment, technology assessments, permitting assistance and development of a new solids handling facility concept to be seamlessly integrated into the forthcoming liquid train project.

The purpose of this executive summary is to summarize the results of the following technical memoranda and provide recommendations for the detailed design phase of the solids handling project:

- TM No. 1 – Solids Projections, Condition and Capacity Assessment
- TM No. 2a – Redundancy Assessment
- TM No. 2b – Technology Assessment
- TM No. 2c – Thermal Drying Assessment
- TM No. 2d – Incineration Assessment
- TM No. 3 – Incineration Supplement

1.1 Existing Solids Handling Process

The FBRWRF currently produces a combination of primary sludge (PS) and waste activated sludge (WAS) which are thickened, dewatered, and incinerated. Incinerator ash is managed onsite via an ash thickener and ash lagoon. The existing solids treatment process contains the following major unit process facilities:

- Gravity Thickening
- Belt Filter Press (BFP) Dewatering
- Fluidized Bed Incineration (FBI)
- Ash Handling

Figure 1-1 shows the solids process flow diagram and **Table 1-1** summarizes the design criteria for the existing solids unit processes.

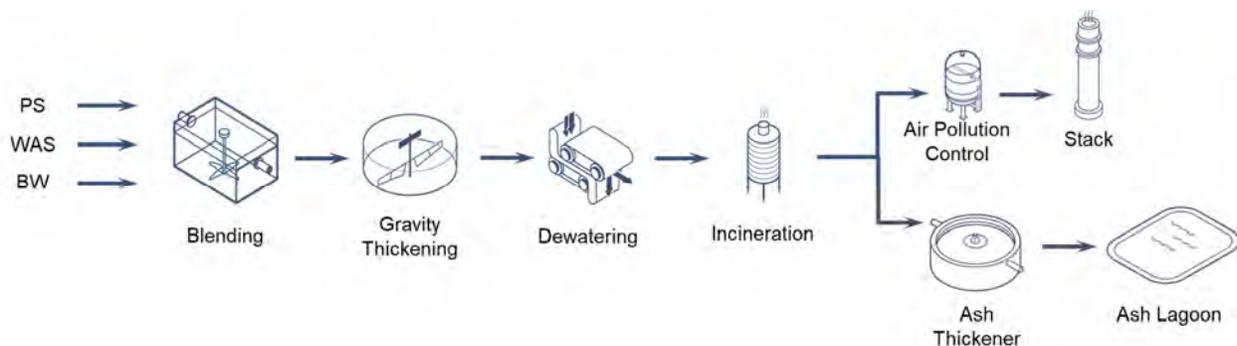


Figure 1-1: Existing Solids Handling Process Flow Diagram

Table 1-1: Summary of Existing FBRWRF Solids Infrastructure

Process Unit	Parameter	Design Criteria
Thickening	Gravity Thickeners	(2) 100-ft gravity thickeners
	Thickened Solids Pumps	(3) 150 gpm progressive cavity pumps
Dewatering	Polymer Feed	Dry polymer prep system 390-gal mix/feed tank (3) 5 gpm dilute polymer solution feed pumps
	Dewatering Equipment	(2) 2.5-meter BFPs Solids Loading Rate: 1,562.5 lb-dry/hr Hydraulic Loading Rate: 250 gpm
	Conveyance	(2) 12-in Screw Conveyors (162 cu ft/hr volumetric capacity, each)
Incineration	Cake Pumping	(2) 42 gpm Schwing Cake Pumps
	Incinerator	(1) 40 dry tons per day (dtpd) FBI, derated to 39.8 dtpd (2) 6,500 standard cubic feet per minute (scfm) fluidizing air blowers (1) primary heat exchanger (1) quencher (1) multi-venturi scrubber (2) purge air blowers (1) NPW booster pump skid
Ash Handling	Ash Slurry Pump	(2) ash slurry transfer pumps
	Ash Thickener	(1) 18-ft ash thickener
	Thickened Ash Pumps	(2) thickened ash pumps
	Ash Lagoon	9-acre lagoon

2. Solids Mass Projections

2.1 Flow and Population Projections

Hazen prepared flow projections to establish the influent flow of the FBRWRF in target year 2053 to estimate future solids handling requirements. The approach utilized the most recent traffic analysis zone (TAZ) population estimates along with unit rates and assumptions established by CDM Smith as part of a 2019 study. MSD and Hazen worked together to refine the expected area to be served over the next 30 years to ensure the flow projections are in line with general growth expectations. At the start of the study in 2022, 2023 was selected as the start year and 2053 as the 30-year projection target year.

Table 2-1 summarizes the flow projections using 2022 as the base year and projecting forward to the target year 2053. **Figure 2-1** shows the projected flow will remain under the plant’s treatment capacity

when the target year is reached. However, the 80% and 90% treatment capacity will be exceeded; therefore, potential 50 and 60 mgd expansion design scenarios were also considered. These flow projections were also used to develop operations and maintenance (O&M) annual and life cycle cost estimates.

Table 2-1: Flow Projection Summary Table

	Population Growth	Per Capita GPCD	Flow (mgd)
Annual Average Dry Weather Flow 2022			20.07
Residential	76,228	58	4.42
Employee	92,931	33	3.07
Industrial & DWI			1.44
2053 Annual Average Dry Weather Flow (mgd)			29.00
2053 Annual Average (1.06x) Flow (mgd)			30.61
2053 Maximum Month (1.3x) Flow Calculation (mgd)			39.79

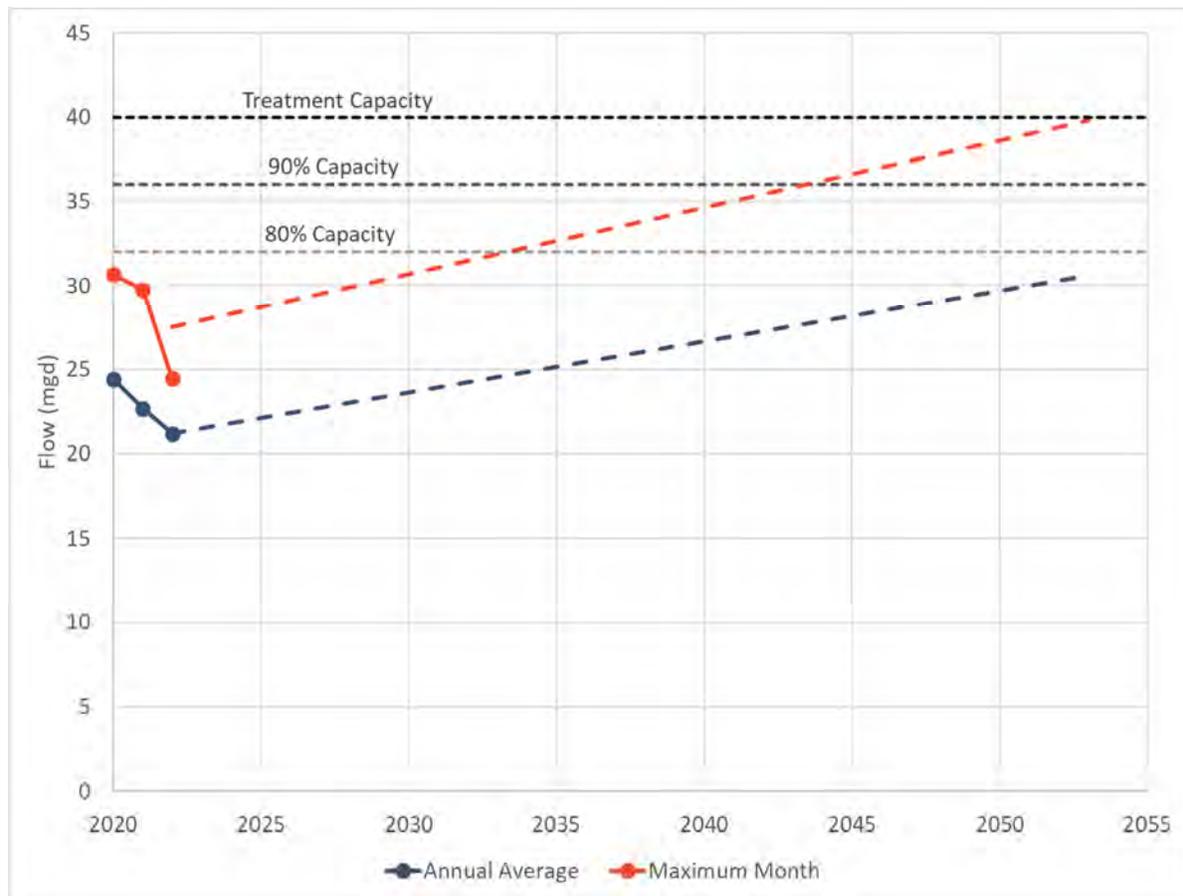


Figure 2-1: Future Flows Projection

2.2 Primary and Secondary Solids Production

The influent wastewater to the FBRWRF is composed mainly of domestic sewage. The average concentrations for influent BOD₅ and TSS were used to calculate the solids loadings. Both the influent BOD₅ and TSS concentrations are characteristic of typical medium strength domestic wastewater.

In the concurrent liquids study, the following six biological nutrient removal alternatives were evaluated:

- Aerobic Granular Sludge (AGS)
- Biological Aerated Filter (BAF)
- Densified Activated Sludge (DAS)
- Integrated Fixed-Film Activated Sludge (IFAS)
- Membrane Aerated Biofilm Reactor (MABR)
- Moving Bed Biofilm Reactor (MBBR)

Based on the evaluation completed as a part of the Biological Treatment Alternatives Evaluation, it was assumed that the recently installed high-rate primary treatment (HRPT) process would be retained with all of the secondary treatment process alternatives. Preliminary testing indicates that the HRPT system can

treat a maximum of 7.5 mgd per train (15 mgd total). Therefore, it was assumed that only 15 mgd of the influent flow would be processed through the HRPT system; the remainder of the influent flow would bypass the HRPT by gravity to the selected secondary treatment process. Additional scenarios were considered when only one HRPT train is in service to ensure that the solids processes are capable of managing increased secondary loads from increased HRPT bypass flows.

Table 2-2 provides a summary of the inputs and assumptions used for calculating annual average (AVG365), maximum month (MAX30), maximum two-week (MAX14), and maximum week (MAX07) solids production. Secondary sludge production rates were estimated as a part of the concurrent biological treatment alternatives study. For the six alternatives, Hazen coordinated with manufacturers and relied on previous modeling experience and documented yield rates to predict biomass growth and decay to develop each sludge production rate. For conservatism, the DAS alternative was carried through the solids assessments since it has the highest secondary solids production.

Table 2-2: Solids Mass Projection Assumptions

Parameter	Value			
Average Annual Influent BOD ₅	230 mg/L			
Average Annual Influent TSS	220 mg/L			
HRPT Maximum Capacity	15 mgd			
HRPT TSS Removal Efficiency	70%			
HRPT BOD ₅ Removal Efficiency	50%			
Biological Reactor Age	Coordinated with each process manufacturer / process modeling ¹			
Peaking Factors	Annual Average (AVG365)	Maximum Month (MAX30)	Maximum Two Week (MAX14)	Maximum Week (MAX07)
BOD ₅ Mass Loading Peaking Factor	1.00	1.15	1.35	1.45
TSS Mass Loading Peaking Factor	1.00	1.15	1.50	1.60

¹See FBRWRF Preliminary Evaluations TM No. 1. In TM, a MAX30 peaking factor of 1.15 and a maximum day peaking factor of 1.8 was established. MAX14 and MAX07 not defined as a part of the Biological Treatment Alternatives Evaluation.

Table 2-3 shows the sludge production loading rate for the 40 mgd design capacity for the DAS process.

Table 2-3: Total Sludge Loading Rates (lb/day) at 40 mgd

Parameter	Design	MAX14	MAX07	PS:WAS Ratio
DAS Sludge Production, lb/day	66,500	83,200	89,000	33%

2.3 Condition and Capacity Assessment

A visual, mechanical condition assessment of the existing solids handling equipment and staff interviews were conducted during a site visit in June 2023 by Hazen and its subconsultant, Chavond-Barry Engineering (CBE), to identify visible mechanical defects and deficiencies. For detailed assessments of each piece of equipment, reference TM No. 1.

Based on the rated capacity of the existing FBI of 40 dtpd, the FBI is inadequate to support estimated maximum two-week (MAX14) and maximum week (MAX07) mass peaking events for all secondary treatment alternatives under consideration at plant permitted capacity. The facility is not anticipated to reach permitted plant flows until 2053 based on the flow projections presented in Section 2.1 above. Therefore, it was determined by MSD and Hazen that installation of a new solids final management technology would be required. The dewatering equipment and polymer system are in good condition and have adequate capacity for the design scenarios, but if a new final solids management facility is constructed in a location at a distance from the existing Solids Handling Facility, conveying dewatered cake may not be a realistic assumption. Based on the age of the dewatering equipment, replacement during the construction of a new final solids handling facility is recommended.

FBRWRF currently operates the gravity thickeners with only one GT in service. With only one gravity thickener in service, the solids loading rate for the projected MAX30, MAX14, and MAX07 scenarios is within the acceptable range for gravity thickeners based on WEF MOP 8. However, with the process configurations for each of the liquid alternatives, gravity thickening presents some challenges. Both AGS and DAS include settling via gravity, through settling tanks and a hydrocyclone, respectively. Therefore, the solids that are received at thickening are not likely to settle well with further use of a gravity settling process.

The existing Sludge Blending Tank capacity of 12,000 gallons was determined to not have adequate capacity for WAS storage and blending. It is recommended that the existing tank only be used for primary sludge storage and three additional tanks adjacent to the proposed solids handling facility be added for PS/WAS and thickened solids storage.

3. Solids Redundancy Assessment

Due to the anticipated capacity issues for the 40 MGD scenario with the existing infrastructure, a redundancy assessment was conducted to evaluate biosolids management strategies that could be implemented to provide redundancy to a new FBI, be implemented during incinerator downtime, or be implemented in place of a new incinerator. The following potential alternatives were considered and presented to MSD:

- Landfill Disposal / Management with current FBI
- Rehabilitation of the existing FBI / New FBI
- Thermal Drying / FBI Rehab
- Thermal Drying – Redundant Units
- Composting
- Supercritical Water Oxidation (SCWO)

- Lime Stabilization
- Third-Party Management

The composting, supercritical water oxidation, lime stabilization and third-party management options were all ruled out for further evaluation by MSD during the Redundancy Assessment Workshop. Details regarding reasoning for the removal of these options from consideration may be found in TM2a – Redundancy Assessment.

The landfill disposal/management with current FBI, rehabilitation of the existing FBI paired with a new FBI, and both thermal drying alternatives were selected for further evaluation and will each be discussed in the following sections. MSD's primary considerations for selection of redundancy alternatives were having control of their own destiny (MSD-led or owned solids handling strategy, with no separate entity) and reduced operation and maintenance costs since the redundant strategy will only be utilized when the new incinerator or thermal dryer is offline.

3.1 Current Scenario: FBI and Wet Cake Landfill Disposal

The current redundant solids management option at the FBRWRF is hauling dewatered cake to the nearby Buncombe County Landfill. This is a short-term biosolids handling outlet. MSD has a long-standing verbal agreement with the Buncombe County Landfill for waived tipping fees for disposal of their biosolids in exchange for receiving the landfill leachate at the FBRWRF. Although this agreement is currently highly beneficial for the FBRWRF during incinerator downtime, there is no guarantee that such an agreement will be maintained in the future and without a written contract, the landfill may refuse to accept dewatered cake for a variety of reasons or impose a high tipping fee, leaving the FBRWRF with no outlet in place to dispose of their solids or a greatly increased operation cost to continue disposing of solids at the landfill. Typical landfill tipping fees at other sites in the southeast region range between \$40 and \$125 per wet ton (wT), which could become a considerable added expense to MSD, if implemented. Another challenge of this option is that the acceptance hours of the landfill do not line up with the dewatering hours required by MSD, meaning truck staging is required to continue dewatering operations when the landfill is not open to accept solids.

Currently, the FBRWRF receives approximately 100,000 to 150,000 gallons of landfill leachate per day from the Buncombe County Landfill. This leachate could represent a significant PFAS and emerging contaminant risk to the treatment facility operations. MSD is evaluating a potential PFAS mitigation system that would be located at the Buncombe County Landfill to reduce PFAS risk at the FBRWRF. Discussions to update leachate management and address PFAS concerns present an opportunity for MSD and Buncombe County Landfill to work together and sign a contract that could formalize the design, construction and operation of a remote leachate treatment system. If this option is continued as the primary mode of redundancy, it should be formalized to protect all parties with regards to PFAS risk and have defined cake hauling expectations.

3.2 Redundancy Alternative: Rehabilitation of Existing FBI with New FBI

Another redundancy option that would allow MSD to leverage existing assets would be to rehabilitate the existing incinerator and upgrade the air pollution control equipment to meet the more stringent LLLL regulations. This alternative would allow the rehabilitated incinerator to operate during times when a new incinerator is down, maintaining the existing ash lagoon as the solids management location for produced ash.

The existing incinerator would not have enough capacity to be a completely redundant alternative for the new incinerator at its current 39.8 dT per day capacity. Therefore, for a truly redundant alternative, the incinerator would need to be replaced with a larger unit in addition to the air pollution control upgrades.

The existing Solids Handling Building is space constrained and does not have room to fit an additional FBI and the associated dewatering equipment. Therefore, the new FBI would need to be located in a separate building. This further complicates this alternative as there are limited options for conveying dewatered cake over long distances which means the plant would likely need to maintain and operate two different dewatering facilities in addition to two different FBIs. Incinerators should not be cycled on and off frequently as thermal cycling can impact material longevity and incinerator startup is an involved process that takes time and significant operator attention. In order to maintain two FBIs in operation, an operational scheme to cycle each incinerator on and offline would need to be developed to balance thermal cycling concerns with maintenance demands on the equipment.

Beyond the operational concerns and siting issues, this alternative requires a significant capital investment in the existing FBI to allow it to operate as a truly redundant facility. In addition, there are potential permitting challenges with this alternative and at a minimum a lengthy permitting process to be the first FBI permitted under the more stringent LLLL rules in EPA Region 4..

3.3 Redundancy Alternative: Thermal Drying with New FBI or Existing FBI

Thermal drying is a process that uses thermal energy (heat) to evaporate a significant amount of water from sludge, resulting in volume and mass reduction of solids, to produce a high-quality Class A dried product, typically greater than 90% dry product solids (less than 10% moisture content). The high quality nature of this dried product would provide MSD with more flexibility in finding a final product outlet. Depending on market and customer development, the dried solids could potentially be a revenue source estimated to be in the range of \$5-\$20 per product ton. However, revenue potential for this project is dependent on identifying a customer, and therefore, revenue from this source will not be considered in the financial analysis. For this redundancy alternative, a thermal dryer, cake bin, dewatered cake conveyance, other ancillary equipment, and a new facility housing the thermal drying process would be required onsite at the FBWRF. Dryer sizing will be further explored in the thermal drying assessment section.

In workshops with MSD, it was noted that thermal drying as a redundancy alternative to a new incinerator presents a significant capital cost and is not the recommended usage of a dryer. In the vast majority of facilities with thermal dryers, the technology is the primary final solids management strategy. Thermal dryers are operated in campaigns to manage the solids produced per week and similar to incinerators

require significant startup effort if not used frequently. Thus, MSD determined that thermal drying would be considered alongside incineration as a primary solids management alternative. Hazen evaluated redundancy alternatives for the dryer as a primary technology option as part of the thermal drying assessment with a second thermal dryer as the redundant option.

3.4 Redundancy Alternative: Redundant Thermal Drying Units

As noted above, thermal drying is typically the primary solids management strategy for a facility and does not serve as a redundant technology to another solids processing technology. Therefore, an alternative with two thermal drying units was evaluated. For this redundancy alternative, the new facility would be sized to house a fully redundant thermal dryer train (from dewatering to pellet loadout) and dryer sizing would take into account the redundancy capabilities to help process peak loading scenarios.

As compared to the Thermal Drying and FBI alternative above, this option allows the facility to focus operations and maintenance on one solids management process alone instead of the difficulty of maintaining the ability to operate two disparate and complex processes. Because a new facility is required for the thermal dryer process, it could be adequately sized for both units and would allow all solids operations to be centralized at the FBWRF instead of having to operate two separate technologies in two separate locations. In addition, transitioning to thermal drying would simplify air permitting for the facility and allow FBRWRF to drop their Title V permit and associated annual stack and rata testing and annual compliance monitoring for the SO₂ and mercury scrubber.

4. Overall Solids Management

Based on the Redundancy Assessment workshop, both thermal drying and incineration were advanced in the evaluation as primary solids management options. For the incineration option, it was assumed that rehabilitation of the existing FBI would be included as the redundancy alternative. For the thermal drying option a redundant thermal dryer was considered. As part of the evaluation, thickening and dewatering technologies were considered with respect to each final solids management technology. The pros and cons of each thickening, dewatering, and final solids technology were assessed to determine the recommended combination of treatment options for the FBRWRF. The following process flows were considered in the development of the technology assessments.

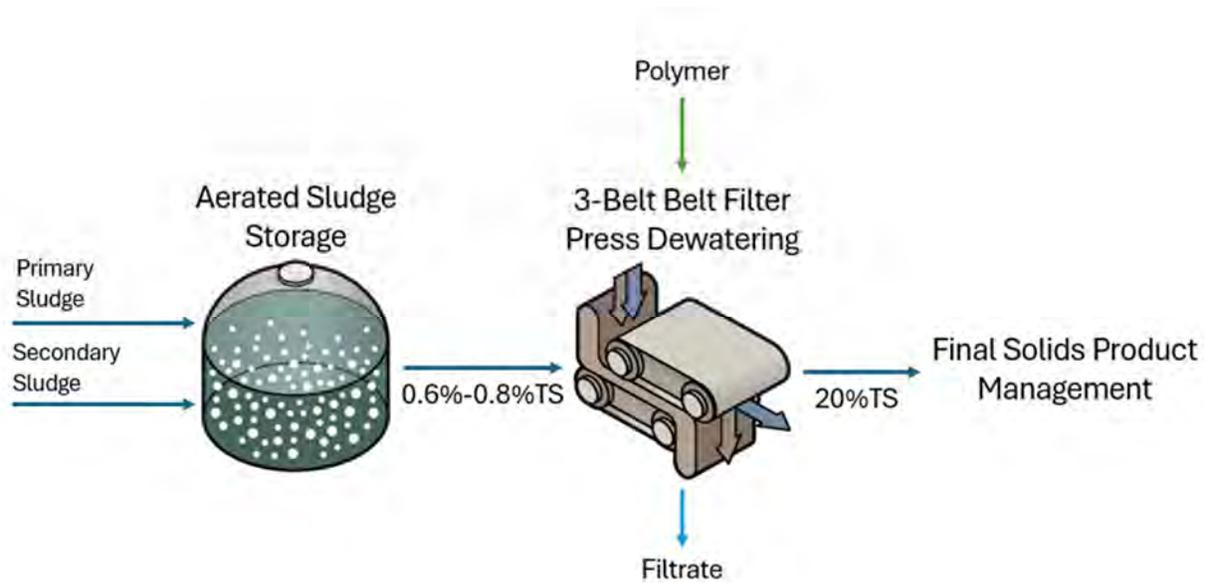


Figure 4-1: Overall Process Flow with 3-Belt BFP (Combined Thickening and Dewatering)

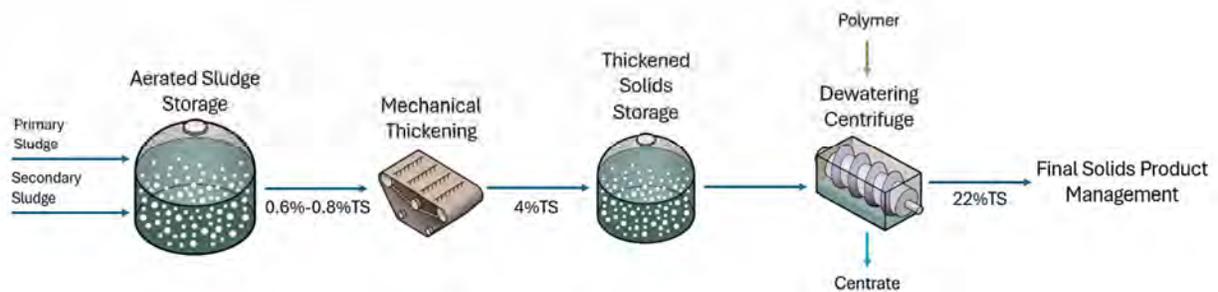


Figure 4-2: Overall Process Flow with Mechanical Thickening and Centrifuge Dewatering

4.1 Solids Management Site Planning

For a facility of the size required for solids processes and a thermal dryer or incinerator, the optimal location on the site is the space behind the former administration and training facility. This location is shown on the plant site in **Figure 4-3** marked with a white box.



Figure 4-3: New Solids Handling Facility Location

The space in this location is adequate for a facility with a maximum size of approximately 300 feet long and 100 feet wide. Per the preliminary geotechnical report commissioned by MSD, this area is suitable for a large solids handling facility. The two borings collected in the area showed deep residual soils that varied from medium to stiff density on average. A more detailed geotechnical evaluation will be required as design progresses to gather additional borings and run settlement analyses on proposed structure loading to provide final confirmation that no subgrade remediation will be required. The space below this footprint is reserved for secondary treatment improvements. Additional sitework will be required to expand this space in the northwest direction. Expansion in other directions is not recommended due to grade and potential conflicts with the ash lagoon. Space is also required around the facility for road access for truck hauling and service purposes.

4.2 Thickening Technology Assessment

The thickening technology assessment considered if the FBRWRF should maintain gravity thickening or transition to mechanical thickening, with a technology such as gravity belt thickening (GBT) or rotary drum thickening (RDT). The recommended number of thickening units was developed based on 24/7 operation, with thickening decoupled from dewatering and final solids management. A detailed comparison of the two technologies can be found in TM No. 2b as well as considerations and concerns with continuing to operate with gravity thickening.

Gravity thickening provides a wide spot between liquids processes and dewatering in the current process configuration. With a transition to mechanical thickening, sludge storage will be required to decouple the thickening process from the liquid treatment processes. Three (3) tanks are proposed to have a volume of 500,000 gallons, each, with one tank designated for each of the following:

- Primary and WAS blending
- Thickened sludge storage
- Swing (blending to thickened sludge storage)

The tanks would have piping for transfer between tanks and will be aerated and mixed.

The thickening equipment will operate in solids limited mode. Based on the breakpoint solids concentration of the equipment, DAS solids must be blended with PS to increase the feed solids concentration for solids limited loading. For layouts and cost estimates, RDTs were considered since more units and ancillary equipment are required.

4.3 Dewatering Technology Assessment

Two dewatering technologies, a belt filter press (BFP) and a dewatering centrifuge (DCEN), were evaluated for the liquid treatment alternatives. The equipment was sized by considering the required downstream solids management for the various solids loading scenarios. Equipment design criteria will be presented in the thermal drying and incineration assessment summary. The primary decision drivers for dewatering technology selection are the final solids management process and capital and O&M costs.

Because it is not recommended to dewater cake in one facility and pump dewatered cake across the site to another final solids management facility, it is not viable to maintain dewatering in the existing Solids Handling Facility. Therefore, it is assumed that a new dewatering facility would be located at the site identified in Figure 4-3. Further discussion of maintaining dewatering in the existing facility vs locating in a new solids complex can be found in TM No. 2b.

In the dewatering technology assessment, a standard 2-belt BFP was considered. However, thickening is recommended prior to BFP dewatering, which necessitates thickened sludge storage. In order to minimize the footprint of the process, a three-belt BFP was proposed following discussion of the thickening and dewatering technology assessments since it incorporates an independent gravity belt that can adapt to a thinner feed sludge without compromising solids mass throughput.

DCENs are a dewatering technology that rely on centrifugal force to separate solids from water in liquid sludge. TM No. 2b provides a more detailed technical description of how the technology works. A comparison of dewatering technologies considered is shown in **Table 4-1**.

Table 4-1: Dewatering Equipment Comparison

Parameter	Belt Filter Press	Centrifuge
Advantages	<ul style="list-style-type: none"> • Lower operating and maintenance costs • Lower energy demand 	<ul style="list-style-type: none"> • Higher cake solids (optimizes thermal drying process) • Smaller equipment footprint • Fully enclosed operation (limited odor potential)
Disadvantages	<ul style="list-style-type: none"> • Open process (higher odor potential) • High washwater demands • Larger equipment footprint 	<ul style="list-style-type: none"> • Requires specialized maintenance and operation • Higher power consumption • Higher noise • High rotational speeds

4.4 Thermal Drying Assessment

Thermal drying utilizes thermal energy to evaporate a significant amount of water from sludge, resulting in both volume and mass reduction of solids to produce a high-quality dried product. For MSD to produce a Class A product, the end product must be greater than 90% dry product solids, because it has undigested primary sludge in the feed. While there are multiple thermal dryer technologies, such as belt dryers and indirect paddle dryers, a rotary drum dryer is recommended for the scale of drying operation required at the 40 mgd condition for the FBRWRF. Further details on the technical theory behind a rotary drum dryer are provided in TM No. 2c – Thermal Drying Assessment.

Advantages of thermal drying as a technology include the flexibility of outlets for the dried product, as it can be pelletized and sold for valuable use. The dried end-product is of a uniform size and shape, which allows it to be marketable in a wide range of applications. However, a large-scale pellet distribution operation will require market evaluation and customer development, as well as increased operational and maintenance costs. The primary operational cost for a rotary drum dryer is the cost of the natural gas required to continually heat the drum during operation.

In the United States, the most common vendor for rotary drum dryer systems is Andritz. **Figure 4-4** shows an example installation of an Andritz rotary drum dryer, along with the required ancillary equipment.



Figure 4-4: Rotary Drum Dryer and Ancillary Equipment by Andritz

In addition to the thermal dryer, several ancillary systems are required to support the drying process. A typical Andritz rotary drum dryer system package includes the following per dryer:

- Wet Cake Receiving Bin / Cake Hopper – receive solids from dewatering
- Dewatered Cake Pumps – transfer solids from the wet cake bin to the dryer
- Regenerative Thermal Oxidizer (RTO) – optional Odor Control for exhaust gas
- Nitrogen Generator – provides nitrogen to maintain an oxygen-deficient atmosphere
- Dried Product Silo – typically 7-14 days of final product storage
- Control equipment – including MCC and VFD

In discussion with MSD, it was determined that two dryer trains would be optimal due to the redundancy present for operational flexibility. For two dryer trains, dryers can be sized such that one train manages the annual average loading at 24 hours per day for seven days a week. The second train can be brought online to manage excess loads during the maximum month or week loading conditions. In MSD's selected scenario, one dryer train would be installed in the original construction with another installed prior to reaching 40 mgd loading. The thermal dryer must be sized so that it can operate on the single dryer scheme for all loading scenarios prior to installation of the second dryer. The thermal dryer and

dewatering equipment design criteria are presented below in **Table 4-2**, for the DAS scenario with two thermal dryers.

Table 4-2: Required Drying and Dewatering Equipment

Parameter	Belt Filter Press	Centrifuge
Number of Thermal Dryers	2	2
Thermal Dryer Model, Andritz	DDS-50	DDS-40
Thermal Drying Evaporative Loading Rate, lb(water)/hr each	11,000	8,800
Recommended Number of Duty Dewatering Units per Dryer	2	1
Recommended Number of Total Duty Dewatering Units	4	2
Recommended Total Number of Dewatering Units	5	3
Dewatering Solids Loading, lb(dry)/hr per unit	1,700	3,200
Dewatering Unit Size	2.0-m (belt width)	24-25 in (bowl size)
Solids Loading Rate per Meter, lb(dry)/hr-m	850	--

Due to the higher solids content of cake produced by centrifuges, the thermal dryer can be downsized from the BFP sizing. Additionally, due to the larger processing capacity available for centrifuges, less dewatering equipment is required. Due to these factors, the layout required for a thermal drying facility with centrifuges is smaller than that required for one with BFPs. Preliminary assessment indicates that the entire solids complex could be located in the location identified in **Figure 4-3**. Detailed layouts may be found in TM2c – Thermal Drying Assessment.

There are many uncertainties with this facility design, including footprint of the selected thickening and dewatering technologies, timeline of installation of the second dryer, and required site work for the location. If thermal drying is selected, further evaluation is required to determine which layout will provide MSD with the most flexibility while being cost efficient.

4.5 Incineration Assessment

Chavond-Berry Engineering (CBE) evaluated a new Fluidized Bed Incinerator (FBI) as a primary solids management option for the FBRWRF. CBE performed an Incineration Assessment on fluidized bed incinerators (FBI) due to MSD’s experience with the technology at the FBRWRF and as the more common incineration style compared to multiple hearth incinerators (MHI). This assessment included review of energy recovery systems, air pollution control measures, mercury control measures, and additional emerging contaminant considerations, namely dioxin furan and per- and polyfluoroalkyl substances (PFAS). Since the construction and permitting of the existing FBI, more stringent air pollution requirements have been placed on sewage sludge incinerators. This necessitates upgraded air pollution control (APC) equipment if a new incinerator is installed.

A design concept for a new incinerator building with solids processing, including dewatering, was developed in the new solids complex area shown in **Figure 4-3**. The following recommendations shown in **Table 4-3** were made for ancillary equipment if a new incinerator is selected. Further details on the

evaluation of each technology are provided in CBE’s Asheville Air Pollution Control TM. With the recommended technologies, a minimum building with a footprint of 50 ft width and 100 ft length is recommended. Based on discussions with MSD, a larger building would be desired to provide additional maintenance and operations access to the equipment. This footprint does not include sludge storage, carbon bed, sand storage silo or ash thickening equipment.

Table 4-3: Incineration Equipment Recommendations

Parameter	Recommendation
Incinerator Type	Fluidized Bed Incinerator
Incinerator Size, dT/day	44.5
Recommended Total Number of BFPs	4
Recommended Total Number of DCENs	3
Energy Recovery Option	Primary Heat Exchanger
Air Pollution Control System	Wet Scrubber with WESP
Mercury Control Technology	Carbon Bed

Advantages of incineration include less management of the final product, as the ash produced by incineration can be processed by the ash lagoon following ash thickening, a smaller footprint than thermal drying, and a simpler 24/7 operational scheme. The primary disadvantage for a new incinerator is the permitting process, which is generally more robust than what is required for a thermal dryer. The public perception of incineration also presents a challenge for construction of a new incinerator compared to thermal drying. In addition, rehabilitation or replacement of the existing FBI would also need to be considered for redundancy. Reuse of the existing Solids Handling Building was considered to fully leverage the existing assets and reduce overall capital cost. However, this means that the facility would have to maintain two separate dewatering and incineration facilities which would be an operational burden. A centralized facility with two new FBIs was not considered due to the prohibitive cost associated with that alternative.

The same considerations for the overall solids management scheme at the FBRWRF are present for incineration as for thermal drying. Centrifuges will provide a thicker dewatered cake to the incinerator, which will require less supplemental fuel than dewatered cake from a BFP. Sludge storage is recommended to decouple the solids and liquids processes and maintain a wide spot for incinerator downtime.

5. Solids Management Considerations

5.1 Cost Comparison

Each facility concept was evaluated for capital and O&M costs. Capital costs are broken down by civil, mechanical, structural/architectural, and electrical/instrumentation costs. The following contingencies are then applied:

- Engineering Contingency: 30% (applied to Subtotal 1)
- Contractor Overhead, Profit, and Mobilization: 30% (applied to Subtotal 2)
- Owner's Allowance: 5% (applied to Subtotal 2)

The capital costs for each of the solids handling facility concepts previously laid out for the process options are shown in **Table 5-2**. The Total Construction Cost (No Redundancy) represents the cost associated with one thermal dryer and one new FBI. MSD requested a capital cost estimate for installation of a second dryer train and for replacement of the existing FBI to understand the total construction cost including redundancy. Therefore, the Total Construction Cost (Full Redundancy) below presents that cost.

Table 5-2: Opinion of Probable Construction Cost

Parameter	Thermal Drying	Incineration
Civil Cost, \$	\$11,000,000	\$8,000,000
Mechanical and Equipment Cost, \$	\$33,000,000	\$35,000,000
Structural and Architectural Cost, \$	\$20,000,000	\$18,000,000
Electrical and I&C Cost, \$	\$13,000,000	\$13,000,000
Subtotal 1: Total Capital Cost, \$	\$77,000,000	\$74,000,000
Engineering Contingency (30%), \$	\$24,000,000	\$23,000,000
Subtotal 2: Total Capital Cost including Contingency, \$	\$101,000,000	\$97,000,000
Contractor Overhead, Profit, and Mobilization (25%), \$	\$31,000,000	\$30,000,000
Owner's Allowance (5%), \$	\$6,000,000	\$5,000,000
Total Construction Cost (No Redundancy), \$	\$138,000,000¹	\$132,000,000²
Total Construction Cost for Redundant Unit, \$	\$32,000,000	\$80,000,000
Total Combined Construction Cost (Full Redundancy), \$	\$170,000,000	\$212,000,000

¹New facility sized for redundant thermal dryer train and associated ancillary equipment

²Redundant FBI to be located in existing SHB, new facility only sized for new FBI

The annual and lifecycle cost comparison of the two alternatives is shown below in **Table 5-3**. These numbers represent the O&M cost for the entire solids management train assuming mechanical thickening, centrifuge dewatering and drying or incineration.

Table 5-3: Thermal Drying and Incineration O&M Comparison

Parameter	Thermal Drying	Incineration
20-year Labor Cost (2024 \$)	\$9,000,000	\$13,000,000
20-year Operation Cost (2024 \$)	\$23,000,000	\$20,000,000
20-year Maintenance Cost (2024 \$)	\$32,000,000	\$30,000,000
20-year Hauling Cost (2024 \$)	\$13,000,000	\$10,000,000
20-year Lifecycle O&M (2024 \$)	\$77,000,000	\$73,000,000
CAPEX Cost (2024 \$)	\$170,000,000	\$212,000,000
20-year Lifecycle Cost (CAPEX + OPEX) (2024 \$)	\$247,000,000	\$285,000,000

Incineration presents a lower operating, maintenance and hauling cost compared to thermal drying, with a higher labor cost. This results in a slightly lower lifecycle O&M cost for incineration. However, when combined with the capital cost for the full 20-year lifecycle cost, the incineration option is more expensive than the thermal drying option. The incineration O&M cost does not include incinerator rehab, only maintenance of the incineration equipment and building. Rehabilitation costs may be substantial and require long shutdowns.

6. Solids Management Selection

Thermal drying and incineration both present viable options for final solids management at the FBRWRF. Both technologies have comparable capital and O&M costs. Although a fully redundant thermal drying scenario has a lower CAPEX and 20-year lifecycle cost than the fully redundant incineration option. Thermal drying will generate a marketable product, but if the market is not viable for MSD, the dried product will require disposal. Incineration ash can be managed in a similar manner to the current system at the FBRWRF, with a potential evaluation of the ash lagoon. Thermal drying will require a large footprint compared to incineration, but combining final solids management with the upstream solids processes in a large facility means that the proposed location will have adequate space for the facility layouts required for each option. Due to the existing FBI, both options will likely be permitted under Title V, with the thermal dryer as a modification to the existing permit. Despite stringent air permitting and regulatory requirements, some members of the public hold negative views of incineration due to the presence of stack emissions. By contrast, thermal drying is seen by the public as a novel, sustainable technology which does not produce air emissions and produces a useful product. Dried product as an

alternative to traditional mineral fertilizers also contributes to the sustainability of the project in the community. A summary of the advantages and disadvantages of each technology is presented in **Table 6-1**.

Table 6-1: Thermal Drying and Incineration Technology Comparison

Parameter	Thermal Drying	Incineration
Pros	<ul style="list-style-type: none"> Dried product flexibility and positive public perception Reduced regulatory burden Greenhouse gas offset Redundancy throughout the process with storage wide spot and future second dryer train Potential for add-on PFAS treatment such as gasification/pyrolysis Does not require substantial rehab as often as incineration 	<ul style="list-style-type: none"> Final product management onsite via ash lagoon Smaller facility footprint
Cons	<ul style="list-style-type: none"> Offsite final product management required Larger facility footprint Campaign operation requires increased sludge storage Increased operational costs 	<ul style="list-style-type: none"> Permitting and public perception hurdles Longer project duration due to permitting Stringent air pollution control requirements Increased maintenance and labor requirements Cake hauling cost during incinerator downtime No redundancy and high cost / difficulty to bring existing incinerator from MMMM to LLLL air pollution control standards Operational difficulty cycling two units on and off

It was determined that site visits to operating rotary drum dryers would aid MSD in coming to a decision on final solids management. MSD visited facilities with rotary drum dryer installations in Aiken, SC, Clarksville, TN, and Nashville, TN. MSD noted preferences for a future thermal dryer facility based on these site visits, including a strong preference for a concrete frame building and wet scrubbers for dust removal. Design decisions specific to a thermal dryer facility will be further explored in detailed design. Detailed design will require evaluations of the existing plant systems to determine all the required components of the proposed solids handling improvements. These systems and facilities include, but are not limited to, the future of the existing ash lagoon and solids handling building, the non-potable water system for equipment washwater usage, and the existing natural gas supply. Looking towards the future, thermal drying will provide more flexibility, redundancy, and reliability for MSD.

6.1 Proposed Project

Based on site visits and MSD internal discussion of the advantages and disadvantages of each technology, MSD selected thermal drying as the final solids management technology and centrifuges as the dewatering technology. Preferred mechanical thickening technology will need to be selected during detailed design. Based on preliminary discussions, MSD had interest in the enclosed nature of RDTs, but was concerned about the quantity of equipment.

MSD selected a phased installation plan to have the flexibility of two dryers in the future without incurring the capital cost of two dryer trains in the present. The equipment will be installed in the following phases, with provisions for equipment life and 50/60 mgd buildout. The building sizing provided is for this phased approach, allowing FBR WRF to transition from the DDS-40s required for 40 mgd to the DDS-50s required for 60 mgd.

- Phase 1: Install 1st DDS-40 and associated train of equipment
- Phase 2: Install 2nd DDS-40 and associated train of equipment when 1st DDS-40 is not adequate to manage MAX07 load
- Phase 3: Replace original DDS-40 at end of life (anticipated to be prior to 50 mgd) with DDS-50
- Phase 4: Replace 2nd DDS-40 at end of life (anticipated to be prior to 60 mgd) with DDS-50

Figure 6-1 shows the proposed process flow diagram for the selected project alternative. Future equipment is shown with a dashed box.

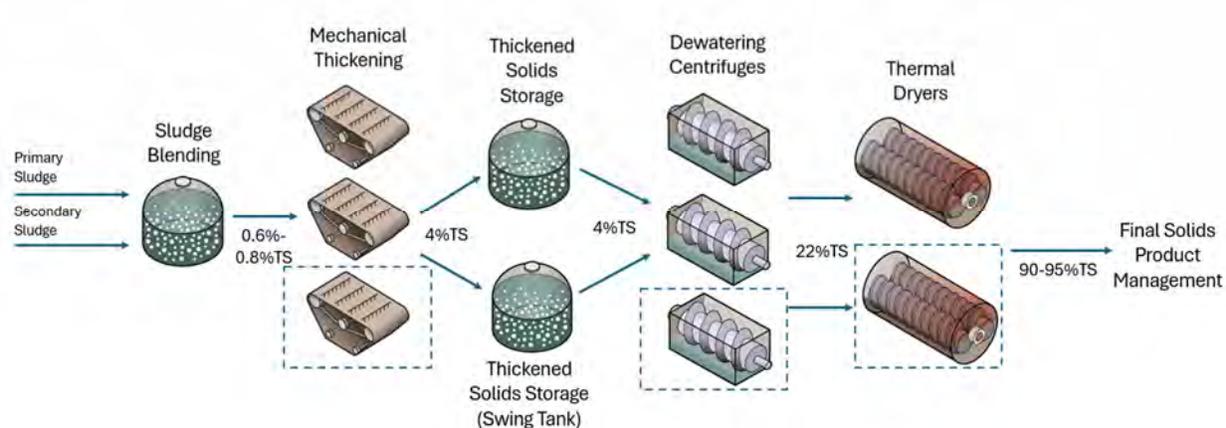
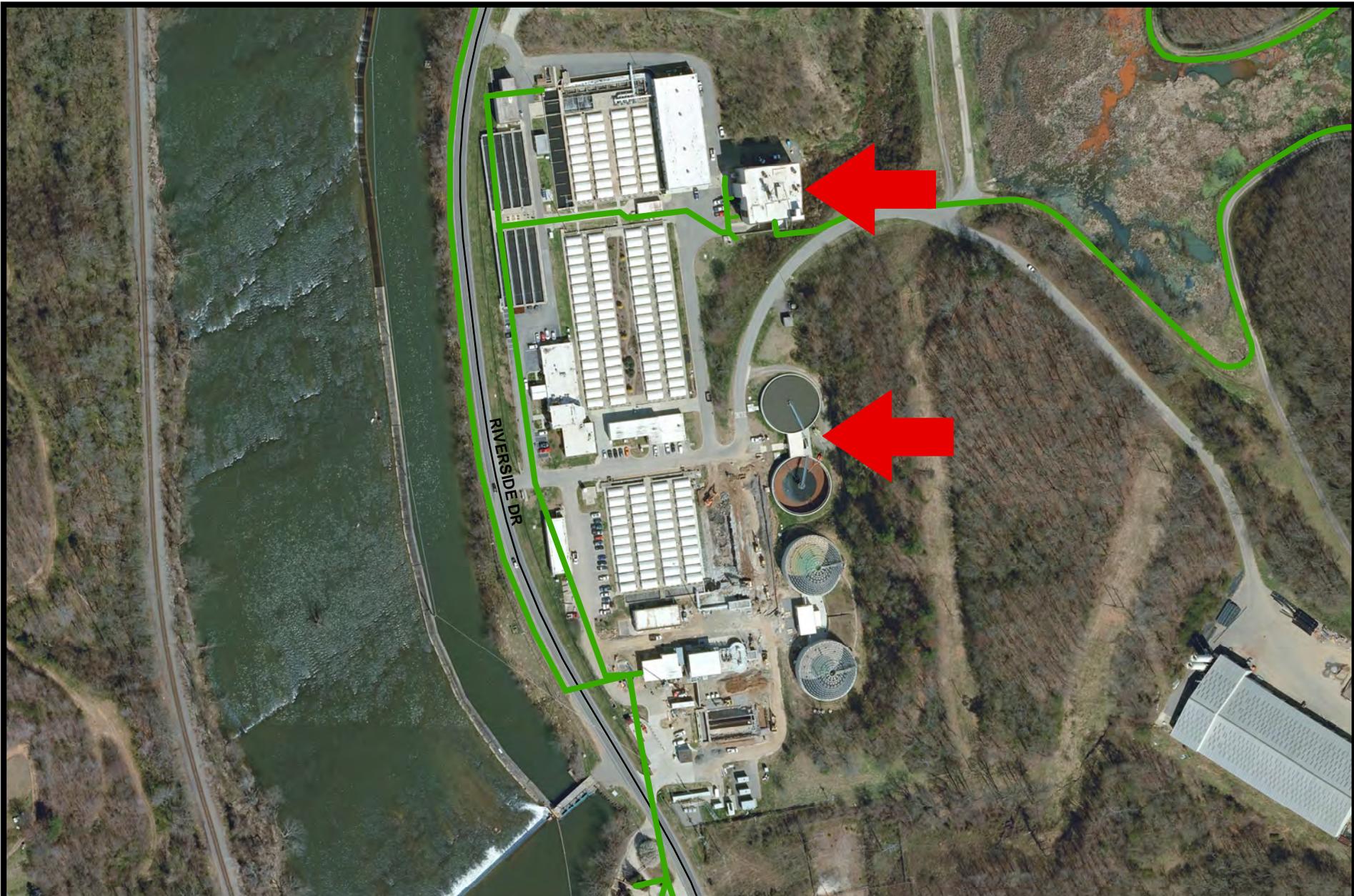


Figure 6-1: Proposed Project Process Flow Diagram



Solids Handling Preliminary Engineering Project No. 2023048

NOT TO SCALE



METROPOLITAN SEWERAGE DISTRICT
of
BUNCOMBE COUNTY, NORTH CAROLINA

Budget Map

Metropolitan Sewerage District of Buncombe County

BOARD ACTION ITEM

BOARD MEETING DATE: December 17, 2025

SUBMITTED BY: Tom Hartye, P.E. - General Manager

PREPARED BY: Hunter Carson, P.E. - Director of Engineering
Darin Prosser, P.E. - Project Manager

SUBJECT: Consideration of Contract for Owner Advisor Phase 1 Services
Solids Handling Capacity Improvements, MSD Project No. 2019087

BACKGROUND: With the Solids Handling Preliminary Engineering Report (PER) now complete, the District will begin transitioning to a progressive design-build (D-B) delivery method for the design and construction of the Solids Handling Capacity Improvements project. As highlighted in the D-B presentation at the November 2025 Board meeting, this effort represents the District's first use of the design-build delivery method. To support this process, the District has requested Hazen & Sawyer (Hazen) to serve as the Owner's Advisor (OA) for this project.

Hazen's OA services will be organized into three phases: Phase 1 - Request for Qualifications and Contract Development Services, Phase 2 - Preconstruction Phase Services, and Phase 3 - Construction Phase Services. This contract is for Phase 1 only. Phases 2 and 3 will be presented for approval at a later date once the D-B team has been selected.

Phase 1 OA services include assisting the District with development of the project scope, preparing the Request for Qualifications and contract documents, facilitating the procurement process, reviewing qualifications submitted by D-B teams, participating in interviews and selection, and assisting with negotiations of the design-build contract. In addition, Hazen will conduct workshops with District staff and legal counsel to ensure a clear understanding of the progressive D-B delivery method, associated standards, and budget considerations.

Given Hazen's direct involvement in developing the PER and their extensive knowledge of the project and its technical requirements, staff believes Hazen is the most qualified firm to serve as the District's OA. District staff has reviewed Hazen's Phase 1 proposal in the "not-to-exceed" amount of \$150,000.00 and believes it is fair and reasonable. The contract will be billed on an hourly rate basis.

Please refer to the attached documentation, including Hazen's *Scope and Fee Proposal for Owner's Advisor Services* for additional details.

FISCAL IMPACT: The design budget for this project includes \$1.6M for Owner's Advisor services (Phases 1 and 2) between FY26-27 and FY27-28. This contract is for Phase 1 only in the amount of \$150,000.00. No funds are budgeted in the current fiscal year; however, staff anticipates that much of Phase 1 will occur in FY26-27. Sufficient funds exist in the CIP contingency fund for expenditures occurring in FY25-26.

A Capital Project Ordinance is required due to the Phase 1 OA services spanning multiple fiscal years, FY25-26 and FY26-27.

STAFF RECOMMENDATION: Staff recommends the District enter into an Owner's Advisor contract in the not-to-exceed amount of \$150,000.00, subject to review and approval by District Counsel.



Hazen and Sawyer
804 Green Valley Road, Suite 206
Greensboro, NC 27408 • 336.478.3378

November 17, 2025

Mr. Hunter Carson, PE
Director of Engineering
Metropolitan Sewerage District of Buncombe County
2028 Riverside Drive
Asheville, NC 28804

**Re: Scope and Fee Proposal for Owner's Advisor Services
OA Services for 2019087 Solid Handling Capacity Improvement Project**

Dear Mr. Carson:

Hazen and Sawyer is pleased to submit the enclosed scope and fee proposal for your consideration to provide Owner's Advisor Services to develop the Contract Documents and Request for Qualifications to select a Design-Build team for the Solids Handling Improvements project.

Per the enclosed proposal, we will provide these services for a categorical rate, not to exceed fee and will complete this phase of the project within 6 months of notice to proceed. The enclosed scope of services will advance this project through the selection and onboarding of the design-build team. Once the schedule and project approach of the selected design-build team is understood, we can prepare an amendment to provide Phase 1 services.

Thank you very much for the opportunity to work with the MSD of Buncombe County, we look forward to continuing to work with your team.

Sincerely,

Aaron D. Babson, PE
Associate Vice President

Scope of Services

MSD of Buncombe County
Solids Handling Improvement Project
Owner's Advisor Services – RFQ Development and Phase 1
Preconstruction Phase Services

PURPOSE OF THE AGREEMENT

The Metropolitan Sewerage District of Buncombe County (MSD) owns and operates the 40 mgd French Broad River Water Reclamation Facility (FBRWRF) in Woodfin, NC. Solids are currently collected from the primary treatment system and secondary clarifiers as well as disk filters and are pumped to gravity thickeners. Thickened sludge is then conveyed to the plant's incinerator building where it is dewatered with belt presses and fed to a fluidized bed incinerator (FBI). The belt filter presses were placed into service in 2004 at the same time the FBI underwent a major rebuild.

To address the capacity limitations associated with the existing FBI, age of infrastructure and prepare for upcoming liquid train improvements, a new solids handling strategy was developed as a part of the Solids Handling Preliminary Engineering Report. Both thermal drying and incineration were evaluated, and various thickening and dewatering technologies were considered with respect to each final solids management technology. MSD selected thermal drying as the final solids management technology.

The proposed project includes: aerated sludge storage for primary and secondary sludge blending, mechanical thickening, aerated thickened sludge storage, centrifuge dewatering and rotary drum drying with final product storage and loadout. Due to the limited footprint available on the current plant site and required space for future liquid train improvements, the location behind the training facility was identified for the entire solids handling facility for the FBRWRF. The new solids handling building will be inclusive of thickening and dewatering and will be sized for two dryers serving future 60 mgd buildout conditions. Each dryer train will include 2 mechanical thickening units, 2 dewatering units and 1 thermal drying system in addition to ancillary solids handling equipment such as sludge storage, blowers, pumps, and polymer makeup. Redundancy will be provided for the thickening and dewatering processes by providing a standby unit. An upgrade to the existing NPW system is anticipated to feed the solids complex demands and will need to be coordinated with the forthcoming liquid train project along with primary and secondary sludge feed to the new solids handling facility.

Hazen and Sawyer (Hazen) understands that the Project will be delivered via a Progressive Design-Build (PDB) **collaborative delivery method. Hazen will provide Owner's Advisor (OA) services to the Metropolitan Sewerage District of Buncombe County for the Project.** It is understood that the Project will be delivered in two phases by the contractor, however, Hazen is offering our OA Services in three distinct phases, generally mirroring those of a typical Progressive Design-Build project as outlined below:

- Task 100 - RFQ and Contract Development Services: Defined as the time between notice to proceed of OA Services to the contract and onboarding of the PDB team. It is anticipated the duration of these services will be six (6) months.

- Task 200 - Phase 1 – Preconstruction Phase Services: Defined as the time between the onboarding of the PDB team and the acceptance of the Guaranteed Maximum Price (GMP) at the anticipated 60% design milestone. It is anticipated that the duration of the preconstruction phase services will be eighteen (18) months.
- Task 300 - Phase 2 – Construction Phase Services: Defined as the time between the acceptance of the GMP at the 60% design milestone and the construction final acceptance, final payment, and completion of Project warranty period.

This proposal outlines the scope and fee for the RFQ and Contract Development Services. Phase 1 - Preconstruction Phase Services and Phase 2 - Construction Phase Services will be scoped at a later date once the Design-Builder has been selected by MSD of Buncombe County and the scope of services for Phase 1 Services has been completed between the Design-Builder and the Owner.

SCOPE OF SERVICES

Hazen will consult with MSD of Buncombe County and act as the Owner's Advisor during the RFQ and Contract Development Services. Services to be provided by Hazen under this Agreement include the following tasks as summarized below and as further expanded in the subsequent paragraphs.

Task 100 - RFQ and Contract Development Services

- Task 101: General Consulting Services:
 - Task 101-1: Solicitation of Interested Contractors: Hazen will prepare a project announcement to advise the contracting and consulting industry of the upcoming project and projected schedule of RFQ advertisement, contracting and construction completion. It is anticipated that our communications team will prepare a digital announcement/flyer to be provided by email with a short description of the project and information identified by MSD and the team of interest.
 - Task 101-2: Manage the Project Team: Hazen will manage the efforts of its team by assigning manpower, delegate responsibilities, review work progress, monitor budget and schedule, and direct the progress of the work. Project status, schedule updates, and invoicing will be communicated monthly to the MSD project manager.

Eight (8) hours per month for 6 months is budgeted for this task.
- Task 102: Development of the Design-Build Contract Documents:
 - Task 102-1: Hazen will work with MSD, **MSD's procurement team and MSD's legal counsel** to develop a customized version of a selected standard agreement tailored to the Progressive Design-Build delivery method. Possible standard agreements include documents available from the Design-Build Institute of America (DBIA), the Water Collaborative Delivery Association, ConsensusDocs, or other relevant organizations.

We anticipate the starting point for these agreements will be the DBIA Document No. 535 (“**Standard Form of General Conditions of Contract Between Owner & Design Builder**”) and DBIA Document No. 545 (“**Progressive Design Build Agreement for Water and Wastewater Projects**”).

- Specifically, this task will include the following:

- Hazen will host a series of workshops with MSD and MSD Legal Counsel to discuss the suggested changes based on our industry experience and talk through the requirements of the contract and the intent of the contract mechanisms that differentiate from typical delivery methods.

For budgeting purposes, this proposal includes a total of four (4) meetings. Three (3) in-person meetings and one (1) virtual meeting is the anticipated effort for these meetings.

- Hazen will implement the requested changes in the document resulting from the series of interactive workshops after each meeting.
- Hazen will not provide legal advice on the boundaries of the contract, decisions that typically require the opinion of an attorney, however Hazen will advise to industry standards and how the requirements and project delivery differ from the traditional delivery methods.
- **Task 103: Development of the Project Criteria:**
 - Task 103-1: Hazen will assist MSD in developing the Project Specific Criteria required by NC General Statute 143.128.1B to move forward with a Design-Build project delivery method. This task will be included in the initial workshop and will include the collective development of the project drivers and goals and the required justification to utilize the progressive design-build delivery method. The specific project criteria will be a key component of the RFQ.
- **Task 104: Development of the Project Specific Documents:**
 - Task 104-1: Assist in the development of the project specific documents, such as the development of the scope of work, assembling the available documents including the PER, geotechnical reports, site record drawings, and other available resources to the design-build teams responding to the RFQ.
- **Task 105: Development of the Design-Build Request for Qualifications (RFQ):**
 - Task 105-1: Hazen will prepare a draft RFQ document to solicit qualified Design-Builders for the Project, including the scoring criteria. The document will adhere to the minimum procurement requirements set forth by MSD, however, it is anticipated to be presented in a manner consistent with MSD's standard procurement policy. It is understood that the Projects will be executed without the contribution of outside funding sources. Therefore, specific procurement requirements related to outside funding sources will not be included in this scope or the RFQ.

Initial development of the RFQ will be discussed in the project kickoff workshop.
 - Task 105-2: Following submittal of the draft RFQ to MSD for review, two meetings (one in-person and one virtual) will be scheduled to receive comments, input, and specific direction provided by MSD Legal Counsel and the procurement team.
- **Task 106: Owner's Advisor Services in the RFQ Advertisement Period:**
 - Task 106-1: Hazen, with assistance from MSD, will respond to any questions from interested design-build teams and will issue addenda to the design-build RFQ.

- Task 106-2: Hazen will prepare the agenda, lead a pre-proposal meeting and coordinate a site visit for interested design-build teams.
- Task 107: Assist in the review and selection of the Design-Build SOQs:
 - Task 107-1: Review of Statement of Qualifications: Hazen will assist MSD with reviewing proposals received from offering Design-Builders. Review of five (5) unique proposals is anticipated. Hazen will work with MSD to develop a scoring criteria sheet (in Task 105) and will assist MSD in the evaluation of the received proposals, however, Hazen will not serve as a scoring member of the selection committee.

For budgeting purposes, the proposal includes one (1) in-person meeting and one (1) virtual meeting.
 - Task 107-2: Assist in shortlisted Design-Build Team interviews: Hazen will assist MSD in coordinating and conducting interviews of the Design-Builders that are shortlisted for consideration. It is anticipated that three (3) proposing teams will be shortlisted. Assistance may include developing a conceptual project scenario for the Design-Builder to demonstrate their project approach, checking references, developing interview questions, and participating in the interviews. Hazen will assist MSD in evaluation of the interviews; however, Hazen will not serve as a scoring member of the selection committee.
- Task 108: Assist in the scoping and contract execution between the Owner and the selected Design-Builder:
 - Task 108-1: Hazen will assist MSD in:
 - Leading the scoping, fee, and contracting meetings with the Owner and Design-Builder.
 - Implementing changes to the Contract developed in Task 102 required by the Design-Builder and working with MSD **to review the Contractor's request.**
 - Coordinate with MSD and the Design-Builder to assist in executing the agreement.
 - Hazen will meet with MSD and Design-Builder during this process. This proposal includes meetings and correspondence through MSD approval.
 - Hazen will not provide legal advice on the boundaries of the contract, decisions that typically require the opinion of an attorney, however Hazen will advise to industry standards and how the requirements and project delivery differ from the traditional delivery methods.

Two (2) in-person meetings and one (1) virtual meeting is included for this task.
- Summary of Anticipated Meetings: Where possible, the meetings outlined below will be combined together for efficiency and to minimize project costs for MSD.
 - In-Person Kickoff Workshop to include:
 - Contract Development Meeting (Task 102)
 - Development of the Project Criteria (Task 103)
 - Development of the Project Specific Documents (Task 104)
 - Kickoff of RFQ Development (Task 105)

- Meetings with prospective Design-Build Teams – Four (4) over a period of two days
- Contract Development Progress Workshops (Task 102) – Two (2)
- Development of the Design-Build RFQ (Task 105)
- Pre-proposal Meeting (Task 106)
- Design-Builder Selection Meeting (Task 107)
- Design-Build Scoping and Contracting Meeting (Task 108) – Two (2)
- Virtual Meetings:
 - Contract Development Meeting (Task 102)
 - Development of the Design-Build RFQ (Task 105)
 - Design-Builder Selection Meeting (Task 107)
 - Contract Review Meeting (Task 108)

BASIS OF COMPENSATION

The work to be performed by Hazen for Owner's Advisor Services associated with MSD's Solids Handling Improvement Design-Build Project, as previously delineated in Scope of Services above, will be billed on an hourly rate basis with a total not-to-exceed cost ceiling limit of \$150,000.

Table 1 provides the Fee Summary by task. Funds can be transferred from one not-to-exceed (NTE) cost ceiling task to another as long as the total NTE cost ceiling is not exceeded. An amendment will be required to increase the total NTE cost ceiling if approved by MSD.

The attached manhour projection summarizes Hazen's staff members anticipated to work on this project. Billing rates for all staff will be based upon the categorical rates in Table 2.

Project expenses for travel and reproduction employed by Hazen will be billed to MSD at cost.

Table 1 - Cost Breakdown

Task	Task Description	NTE Cost Ceiling
101	General Consulting Services	\$11,000
102	Development of the Design-Build Contract Documents	\$29,000
103	Development of the Project Specific Criteria	\$1,000
104	Development of the Project Specific Documents	\$500
105	Development of the Design-Build Request for Qualifications	\$28,000
106	Owner's Advisor Services in the RFQ Advertisement Period	\$8,000
107	Assist in the review and selection of the Design-Build SOQs	\$30,000
108	Assist in the scoping and contract execution between the Owner and the selected Design-Builder:	\$27,000
	Reimbursable Expenses	\$15,500
Total Not-to-Exceed Cost Ceiling		\$150,000

Table 2 - Categorical Rates

Cost Category	Rate
Vice President	\$330
Associate Vice President	\$295
Senior Associate	\$270
Associate	\$235
Senior Principal Engineer	\$205
Principal Engineer	\$180
Assistant Engineer	\$155
Graphics Designer	\$130
Technical Editor	\$90

MSD of Buncombe County Solids Handling Improvements - OA Services RFQ and Contract Development Services - Task 100 Projected Manhours and Associated Fee										
Task No.	Description	VP (Hrs) \$330 Johnson	AVP (Hrs) \$295 Babson	SPE (Hrs) \$205 Wilhoit	Sr Assoc (Hrs) \$270 Borgmann	SPE (Hrs) \$205 Kemak	VP (Hrs) \$330 M. Briggs Contract Support	Admin (Hrs) \$90 Howell	Total Labor Hrs	Total Labor Fee
		QA/QC	Prj Directors	PM	Proj Eng	Proj Eng	Contract Support	Admin		
100	RFQ and Contract Development Services									
101-0	General Consulting Services									
101-1	Solicitation of Interested Contractors		1	2		2			5	\$1,115
101-3	Manage the Project Team			48					48	\$9,840
	Subtotal	0	1	50	0	2	0	0	53	\$10,955
102-0	Development of the Design-Build Contract Documents									
	Contract Development Workshop 1 Preparation		4	4		4			12	\$2,820
	Contract Development Workshop 1 - In-person (Kickoff Workshop)	4	10	10					24	\$6,320
	Contract Development Workshop 2 Preparation		2	2		2			6	\$1,410
	Contract Development Workshop 2 - In-person		6	6					12	\$3,000
	Contract Development Workshop 3 Preparation		2	2		2			6	\$1,410
	Contract Development Workshop 3 - In-person		6	6					12	\$3,000
	Contract Development Workshop 4 Preparation	1	2	2		4			11	\$2,560
	Contract Development Workshop 4 - Virtual	2	2	2		2			8	\$2,070
	Contract Development - Finalize		2	2		4		8	26	\$5,050
	Development of Scoring Criteria of SOOs		2	2			4		4	\$1,000
	Subtotal	7	38	46	0	18	4	8	121	\$28,680
103-0	Development of the Project Criteria									
	Development of the Project Criteria Preparation		2	2					4	\$1,000
	Development of the Project Criteria Meeting - In-Person (Kickoff)								0	\$0
	Subtotal	0	2	2	0	0	0	0	4	\$1,000
104-0	Development of the Project Specific Documents									
	Development of the Project Specific Documents			2					2	\$410
	Subtotal	0	0	2	0	0	0	0	2	\$410
105-0	Development of the Design-Build Request for Qualifications									
105-1	Development of the RFQ Draft		4	4	2				10	\$2,540
	RFQ Development Workshop 1 - Preparation		2	4	2				8	\$1,860
	RFQ Development Workshop 1 - In-person (Kickoff Workshop)								0	\$0
105-2	RFQ Development Progress Meeting 2 Preparation		2	4	1				7	\$1,680
	RFQ Development Progress Meeting 2 - In-person		6	6					12	\$3,000
	RFQ Development Progress Meeting 3 Preparation		2	2	1				5	\$1,270
	RFQ Development Progress Meeting 3 - Virtual	2	2	2					6	\$1,660
	RFQ Development - Finalize Document	2	20	32	2			4	60	\$14,020
	RFQ Development - Solicitation			2					2	\$410
	Subtotal	4	38	56	8	0	0	4	110	\$26,530
106-0	Owner's Advisor Services in the RFQ Advertisement Period									
106-1	Response to Questions/RFIs on the RFQ	1	1	6		6			14	\$3,085
106-2	Pre-proposal Meeting Preparation		2	2		6			10	\$2,230
	Pre-proposal Meeting - In-Person		6	6					12	\$3,000
	Subtotal	1	9	14	0	12	0	0	36	\$8,315
107-0	Assist in the review and selection of the Design-Build SOOs									
107-1	Internal Review of SOOs		6	16		4			26	\$5,870
	Review of SOOs - Meeting 1 - In-person		6	6					12	\$3,000
	Review of SOOs - Meeting 2 - Virtual		2	2					4	\$1,000
107-2	Design-Build Team Interview Preparation	2	4	8		4			18	\$4,300
	Design-Build Team Interview Day 1	8	8	8					24	\$6,640
	Design-Build Team Interview Day 2	8	8	8					24	\$6,640
	Design-Build Team Selection Meeting - In-person		6	6					12	\$3,000
	Subtotal	18	40	54	0	8	0	0	120	\$30,450
108-0	Assist in the scoping and contract execution between the Owner and the selected Design-Builder:									
108-1	Scoping Meeting Preparation		4	8					12	\$2,820
	Scoping Meeting - In-person		8	8					16	\$4,000
	Contract Review Preparation		2	4					6	\$1,410
	Contract Review Meeting - Virtual	2	2	2					6	\$1,660
	Contract Modifications		4	12					16	\$3,640
	Contract Review Meeting 1 - In-Person	8	8	8					24	\$6,640
	Contract Review Meeting 2 - In-Person	8	8	8					24	\$6,640
	Subtotal	18	36	50	0	0	0	0	104	\$26,810
	Reimbursable Expenses									
101	General Consulting Services			8 trips @ 350 miles @ \$0.70 & lodging for 8 nights @ \$150/nt = \$3,160 - round to \$3,500						\$3,500
102	Development of the Design-Build Contract Documents			8 trips @ 350 miles @ \$0.70 & lodging for 8 nights @ \$150/nt = \$3,160 - round to \$3,500						\$3,500
103	Development of the Project Criteria			None						\$0
104	Development of the Project Specific Documents			None						\$0
105	Development of the Design-Build Request for Qualifications			2 trips @ 350 miles @ \$0.70 & lodging for 2 nights @ \$150/nt = \$790 - round to \$1,000						\$1,000
106	Owner's Advisor Services in the RFQ Advertisement Period			2 trips @ 350 miles @ \$0.70 & lodging for 2 nights @ \$150/nt = \$790 - round to \$1,000						\$1,000
107	Assist in the review and selection of the Design-Build SOOs			5 trips @ 350 miles @ \$0.70 & lodging for 8 nights @ \$150/nt = \$2,425 - round to \$3,000						\$3,000
108	Assist in the scoping and contract execution between the Owner and the selected Design-Builder:			8 trips @ 350 miles @ \$0.70 & lodging for 8 nights @ \$150/nt = \$3,160 - round to \$3,500						\$3,500
	Subtotal									\$15,500
Total		48	164	274	8	40	4	12	550	\$148,650

**Metropolitan Sewerage District of Buncombe County, North Carolina
CAPITAL IMPROVEMENT PROGRAM**

BUDGET DATA SHEET - FY 2025 - 2026

PROJECT: Solids Handling Capacity Improvements	LOCATION: MSD-Treatment Plant
TYPE: Treatment Plant	PIPE RATING: N/A
PROJECT NO.: 2019087	TOTAL LF: 0
PROJECT BUDGET: \$171,156,500.00	PROJECT ORIGIN: Capacity Improvements

DESCRIPTION	ESTIMATED PROJECT COST	TOTAL EXPENDS THRU 12/31/24	EST. COST JAN - JUNE 2025	BUDGET FY 25-26
55310 - PRELIM. ENGINEERING				
55320 - SURVEY - DESIGN	\$30,000.00			
55330 - DESIGN	\$27,550,000.00			
55340 - PERMITS	\$220,000.00			
55350 - SPECIAL STUDIES	\$25,000.00			
55360 - EASEMENT PLATS				
55370 - LEGAL FEES	\$1,500.00			
55380 - ACQUISITION SERVICES				
55390 - COMPENSATION				
55400 - APPRAISAL				
55410 - CONDEMNATION				
55420 - CONSTRUCTION	\$137,000,000.00			
55430 - CONST. CONTRACT ADM.	\$6,000,000.00			
55440 - TESTING	\$300,000.00			
55450 - SURVEY - ASBUILT	\$30,000.00			
TOTAL AMOUNT	\$171,156,500.00	\$0.00	\$0.00	\$0.00

ENGINEER: Consultant	DP	ESTIMATED BUDGETS - FY 27 - 35	
R.O.W. ACQUISITION: NA	# PLATS: [0]	FY 26-27	\$5,976,500.00
CONTRACTOR: TBD		FY 27-28	\$34,900,000.00
CONSTRUCTION ADM.: TBD		FY 28-29	\$75,100,000.00
INSPECTION: MSD		FY 29-30	\$36,100,000.00
		FY 30-31	\$19,080,000.00
PROJECT DESCRIPTION: This project will increase the capacity of the solids handling processes at the treatment plant. Additional capacity is needed to accomodate future flow rates and increased sludge generation from the High Rate Primary Treatment process and future biological process upgrade. A Prelim. Engineering Report will confirm exact timing and costs of these capital investments. The project will include a new solids disposal system and dewatering equipment.		FY 31-32	\$0.00
		FY 32-33	\$0.00
		FY 33-34	\$0.00
		FY 34-35	\$0.00

SPECIAL PROJECT NOTES: This project will be design-build delivery method. The budgetary breakdown is not similar to the typical design, bid, build method. Included in the design and const. admin. budgets are the Owner's Adviser, Design Engineer, and Contractor's Pre-construction fees.



**Solids Handling Capacity Improvements
Project No. 2019087**

NOT TO SCALE



METROPOLITAN SEWERAGE DISTRICT
of
BUNCOMBE COUNTY, NORTH CAROLINA

Budget Map

STATUS REPORTS

MSD System Services In-House Construction

FY 2025-2026

PROJECT NAME	LOCATION	ZIP CODE	ESTIMATED FOOTAGE	ESTIMATED PROJECT DATES	WO#	CREW	COMPLETION DATE	ACTUAL FOOTAGE	NOTES
43 Woodfin Street IRS Rehabilitation	Asheville	28801	174	7/8/2025	251271	Cantrel	7/8/2025	174	Complete
51 Coxe Avenue Construction Rehabilitation	Asheville	28801	29	7/21/2025	315501	Cantrel	7/21/2025	29	Complete
286 Old Haw Creek Rd Sewer Rehabilitation	Asheville	28805	100	6/30/25 - 7/25/25	275815	McDevitt	7/28/2025	77	Complete
112 Enthoffer St Phase I	Black Mountain	28711	425	6/30/25 - 8/1/25	305189	Matthews	7/31/2025	429	Complete
112 Enthoffer St Phase II	Black Mountain	28711	200	8/1/25 - 8/15/25	315815	Matthews	8/22/2025	232	Complete
37 Lucerne Ave	Asheville	28806	320	7/30/25 - 10/1/25	310196	McDevitt	8/27/2025	340	Complete
16 Bear Leah Trail Construction Rehab Pipe Repair	Arden	28704	410	9/23/2025	316994	Meadows	9/23/2025	410	Complete
Lorraine Avenue	N Asheville	28804	378	8/29/25 - 10/1/25	300998	Matthews	9/30/2025	290	Complete
105 Timber Hollow Trail (Weaver Hill Rd) Construction Rehab	Asheville	28805	177	10/13/25-10/14/25	317487	Matthews	10/14/2025	177	Complete
12 Parker Road Construction Rehab	Asheville	28803	150	7/15/2025	317609	G. Hensley	10/20/2025	150	Complete
Eola Ave @ Lucerene Ave	Asheville	28806	270	9/2/25 - 10/15/25	316196	McDevitt	10/24/2025	289	Complete
Woodbine Road Sewer Rehabilitation	N Asheville	28804	271	10/1/25 - 10/30/25	315556	Matthews	10/30/2025	302	Complete
615 Biltmore Ave	Asheville	28803	27	11/10/25 - 11/20/25	317910	Matthews	11/12/2025	26	Complete
Mud Creek Pump Station Valve Installation	Fletcher	28732	10	11/10/25 - 11/15/25	317912	McDevitt	11/7/2025	10	Complete
5 Fern Street Construction Rehab	Asheville	28803	232	11/18/2025	318132	M. Hensley	11/18/2025	232	Complete
Baker Place @ Carrier Street Sewer Rehabilitation Section A	Asheville	28806	100	11/17/25 - 1/31/2026	284574	McDevitt	11/26/2025	84	Complete
5 Robinwood Road IRS Rehab	Asheville	28804	300	11/20/2025	317711	Cantrell	11/20/2025	300	Complete
Baker Place @ Carrier Street Sewer Rehabilitation Section B	Asheville	28806	1200	11/17/25 - 1/31/2026	284574	McDevitt			Coinstruction 5% complete
Calvin Trail Sewer Rehabilitation	Montreat	28757	710	12/1/25 - 1/31/26	314843	Matthews			Ready for construction
Knauth Rd Rehabilitation Ph. 2	Asheville	28805	346	FY 25/26	275867	TBA			Ready for Construction
Old Asheland Ave to Phifer Street Sewer Rehabilitation	Asheville	28801	462	FY 25/26	258560	TBA			Ready for construction
Virginia Ave @ Lufty Ave	Asheville	28806	1400	FY 25/26	441499	TBA			Ready for construction
Vandalia Ave Sewer Rehabilitation	Asheville	28806	1325	FY 24/25	248041	TBA			Ready for construction
350 Old Haw Creek Road Sewer Rehabilitation Ph. 2	Asheville	28805	825	FY 24/25	312590	McDevitt			Ready for construction
Carver Avenue @ Owenby Lane	Black Mountain	28711	785	FY 25/26	292540	TBA			In ROW
E Hillcrest Rd Sewer Rehabilitation	Asheville	28804	590	FY 25/26	TBA	TBA			In ROW
Upper Glendale Avenue	Asheville	28803	695	FY 25/26	310029	TBA			In ROW
28 Vista Street Sewer Rehabilitation	Asheville	28803	900	FY 25/26	305205	TBA			In ROW
Applewood Drive @ New Haw Creek Road Sewer Rehab	Asheville	28805	360	FY 24/25	291537	TBA			In Design
55 Congress Street Sewer Rehabilitation	Asheville	28801	823	FY 24/25	247631	TBA			In Design
Syrlin Street @ Edgewood Road	Asheville	28804	725	FY 25/26	228045	TBA			Preliminary Engineering
12 W. Cotton Ave	Black Mountain	28711	320	FY 25/26	309214	TBA			Preliminary Engineering
8 Ellenwood Dr	Asheville	28804	300	FY 25/26	308431	TBA			Preliminary Engineering
73 Argyle Lane	Asheville	28806	755	FY 25/26	219342	TBA			Preliminary Engineering
48 Clarendon Road Sewer Rehabilitation	Asheville	28806	500	FY 25/26	258562	TBA			Preliminary Engineering



CONSTRUCTION TOTALS BY DATE COMPLETED - Monthly

From 7/1/2025 to 10/31/2025

	Dig Ups	Emergency Dig Ups	Dig Up ML Ftg	Dig Up SL Ftg	Manhole Repairs	Taps Installed	ROW Ftg	IRS Rehab Ftg *	Const Rehab Ftg *	D-R Rehab Ftg *	Manhole Installs	Bursting Rehab Ftg *	Total Rehab Ftg *
July 2025	38	14	126	702	19	20	3,000	174	179	506	1	0	859
August 2025	25	7	143	807	20	19	0	0	0	572	6	0	572
September 2025	19	8	27	623	15	18	53,623	0	410	290	1	0	700
October 2025	31	9	72	443	12	15	610	0	177	591	4	0	768
Grand Totals	113	38	367	2,575	66	72	57,233	174	766	1959	12	0	2899

* Used to calculate Total Rehab Footage



CUSTOMER SERVICE REQUESTS

Monthly - All Crews

CREW	MONTH	JOBS	AVERAGE RESPONSE TIME	AVERAGE TIME SPENT
DAY 1ST RESPONDER				
	July, 2025	113	26	48
	August, 2025	99	23	34
	September, 2025	99	21	32
	October, 2025	113	22	37
		424	23	38
NIGHT 1ST RESPONDER				
	July, 2025	52	37	25
	August, 2025	46	38	26
	September, 2025	40	30	25
	October, 2025	36	27	26
		174	34	25
ON-CALL CREW *				
	July, 2025	32	53	40
	August, 2025	24	65	38
	September, 2025	18	43	39
	October, 2025	26	62	37
		100	56	38
Grand Totals:		698	30	35

* On-Call Crew Hours: 8:00pm-7:30am (Jul. - Oct.) 11:30pm-7:30am (from Nov. onward) Monday-Friday, Weekends, and Holidays



PIPELINE MAINTENANCE TOTALS BY DATE COMPLETED - Monthly

July 01, 2025 to October 31, 2025

	Main Line Wash Footage	Service Line Wash Footage	Rod Line Footage	Cleaned Footage	CCTV Footage	Smoke Footage	SL-RAT Footage
2025							
July	99,965	2,860	6,145	106,110	17,790	0	0
August	101,116	2,308	2,543	103,659	13,579	0	26,587
September	116,467	2,412	380	116,847	14,502	883	12,881
October	100,878	1,663	2,096	102,973	14,730	0	21,345
Grand Total:	418,426	9,243	11,164	429,590	60,601	883	60,813
Avg Per Month:	104,606	2,311	2,791	107,398	15,150	221	15,203

Planning & Development Project Status Report

Active Construction Projects Sorted by Work Location and Project Number

December 4 2025

No.	Project Name	Project Number	Work Location	Zip Code	Units	LF	Pre-Construction Conference Date	Comments
1	First Baptist Relocation	2015032	Asheville	28801	Comm.	333	7/21/2015	Final Inspection complete, awaiting close-out docs
2	Hounds Ear (Mears Ave Cottages)	2016123	Asheville	28806	18	402	8/18/2017	Pre-con held, construction not yet started
3	Ashecroft Ph. 2	2016229	Asheville	28806	40	2,450	2/20/2018	On hold
4	RADTIP	2017052	Asheville	28801	0	919	2/13/2018	Final Inspection complete, awaiting close-out docs
5	North Bear Creek Subdivision Ph. I	2018117	Asheville	28806	5	105	9/6/2023	Final Inspection complete, awaiting close-out docs
6	Timber Hollow Subdivision	2019049	Asheville	28805	18	525	7/28/2020	On hold
7	Millbrook Cottages	2019066	Asheville	28806	7	322	2/15/2022	Pre-con held, construction not yet started
8	UNC-A Edgewood Road Parking Lot	2019078	Asheville	28801	Comm.	373	7/19/2019	Final Inspection complete, awaiting close-out docs
9	Onteora Blvd and May Street Relocate	2019207	Asheville	28803	0	16	1/17/2023	Pre-con held, construction not yet started
10	Burton Street	2021048	Asheville	28806	4	64	7/24/2024	Pre-con held, construction not yet started
11	Reserve at McIntosh	2021207	Asheville	28806	228	2,475	12/14/2023	Final Inspection complete, awaiting close-out docs
12	Woodland Townhomes	2022074	Asheville	28806	72	1,445	4/16/2025	Waiting on Testing
13	Emma Road	2022083	Asheville	28806	5	311	4/22/2025	Waiting on Final Inspection
14	16/18 Spring Drive	2022125	Asheville	28806	2	70	4/18/2023	Final Inspection complete, awaiting close-out docs
15	Holiday Villa	2022172	Asheville	28704	7	355	2/15/2023	Final Inspection complete, awaiting close-out docs
16	Star Point (aka Resturant Ct)	2023003	Asheville	28801	70	22	11/8/2024	Waiting on Testing
17	115 Fairview Road Apartments&Townhomes	2023019	Asheville	28803	269	1,036	1/29/2025	Waiting on Final Inspection
18	Helpmate, Inc.	2023041	Asheville	28801	26	484	8/27/2024	Waiting on Final Inspection
19	Evado at Tap Root	2023050	Asheville	28732	310	1,458	7/1/2025	Waiting on Testing
20	West Haywood Street Apartments	2023117	Asheville	28801	46	215	7/16/2024	Final Inspection complete, awaiting close-out docs
21	Enka Commerce Park	2023125	Asheville	28806	Comm.	1,525	7/9/2024	In construction
22	157 New Leicester Apartments	2023197	Asheville	28806	141	529	7/2/2024	In construction
23	Butler Road Apartments	2024011	Asheville	28704	279	1,205	10/7/2025	In construction
24	Chipotle Airport Road	2024056	Asheville	28732	Comm.	247	8/12/2025	Pre-con held, construction not yet started
25	The Shoppes at Winston's Corner	2024092	Asheville	28806	Comm.	777	8/7/2024	In construction
26	Novant Medical Center Hendersonville Road	2024148	Asheville	28803	Comm.	129	6/11/2025	In construction
27	Terra Futura	2025058	Asheville	28806	4	197	9/3/2025	Pre-con held, construction not yet started
28	123 Haywood Street	2025128	Asheville	28801	15	162	9/17/2025	Waiting on Final Inspection
29	Tudor Croft - Phase 2B, 2C, 2D	2018004	Black Mountain	28711	5	224	6/8/2022	Waiting on Final Inspection
30	Sweet Birch Lane Phase 3	2020151	Black Mountain	28711	20	800	6/30/2021	Waiting on Final Inspection
31	Old Toll Road Subdivision	2020182	Black Mountain	28711	14	637	8/17/2021	Final Inspection complete, awaiting close-out docs
32	206 Padgettown Extension	2024251	Black Mountain	28711	7	244	6/24/2025	In construction
33	NC DOT I-5504 NC 191/I-26 Interchange	2016132	Buncombe Co.	28806	0	355	10/23/2017	Installing
34	605 Old US Hwy 70	2018097	Buncombe Co.	28711	64	1,215	4/8/2025	Waiting on Final Inspection
35	841 Charlotte Hwy	2019222	Buncombe Co.	28730	Comm.	110	4/20/2021	Waiting on Testing
36	Broad River Village Off-Site Sewer Extension	2021057	Buncombe Co.	28806	92	2,152	12/10/2025	Waiting on Final Inspection
37	Village at Bradley Branch Ph. 4B	2021120	Buncombe Co.	28704	16	393	11/2/2021	Final Inspection complete, awaiting close-out docs
38	Asheville West Subdivision Ph. 2	2022032	Buncombe Co.	28806	50	1,570	7/26/2023	Final Inspection complete, awaiting close-out docs
39	The Duke Sewer Improvement	2022040	Buncombe Co.	28801	2	168	12/3/2024	Waiting on Final Inspection
40	Christ School Townhomes	2022127	Buncombe Co.	28704	87	2,050	4/16/2025	In construction
41	Double R Sewer Extension	2022200	Buncombe Co.	28715	7	263	1/31/2025	Final Inspection complete, awaiting close-out docs
42	Meribel (Monticello Family)	2022204	Buncombe Co.	28787	168	295	2/5/2025	In construction
43	Edgewood Road S - Offsite Extension	2022262	Buncombe Co.	28803	0	165	10/25/2023	Final Inspection complete, awaiting close-out docs
44	Riverstone Phase 3	2023015	Buncombe Co.	28704	116	660	10/7/2025	In construction
45	Lakeshore Villas	2023112	Buncombe Co.	28803	120	936	5/10/2024	Waiting on Final Inspection
46	Edgewood Road S Subdivision Ph. 2	2023143	Buncombe Co.	28803	7	285	10/25/2023	Final Inspection complete, awaiting close-out docs
47	Crystal Country aka Sky Ridge Development	2023168	Buncombe Co.	28804	16	784	10/22/2024	Final Inspection complete, awaiting close-out docs
48	The Biltmore Park West Offsite	2023190	Buncombe Co.	28803	1	774	9/17/2025	In construction
49	The Apex at Brevard	2023202	Buncombe Co.	28704	197	859	9/23/2025	In construction
50	Old Charlotte Apartments Phase 1	2023216	Buncombe Co.	28803	210	1,723	10/22/2024	Final Inspection complete, awaiting close-out docs
51	Chestnut Ridge	2023234	Buncombe Co.	28804	5	257	9/20/2024	Final Inspection complete, awaiting close-out docs
52	Rydele Heights Pockets	2023235	Buncombe Co.	28804	20	935	3/12/2025	Final Inspection complete, awaiting close-out docs
53	Rolling Hills	2023244	Buncombe Co.	28715	132	4,398	4/15/2025	Waiting on Final Inspection
54	Old Charlotte Phase 2	2024059	Buncombe Co.	28803	221	6,866	12/4/2024	Waiting on Testing
55	High Street	2024080	Buncombe Co.	28804	16	565	9/25/2024	Waiting on Testing
56	Altitude Apartments	2024096	Buncombe Co.	28704	114	340	8/8/2025	Pre-con held, construction not yet started
57	Reems Creek Village	2024120	Buncombe Co.	28787	35	1,440	6/24/2025	In construction
58	Pinner Road/Woodlights Trail	2024123	Buncombe Co.	28704	3	116	7/15/2025	Pre-con held, construction not yet started
59	The One at Candler	2024125	Buncombe Co.	28715	336	2,920	10/28/2025	In construction
60	WD Williams Sewer Relocation	2024153	Buncombe Co.	28806	1	183	11/20/2024	Final Inspection complete, awaiting close-out docs
61	Sheetz Arden	2024184	Buncombe Co.	28704	Comm.	208	7/25/2025	Waiting on Final Inspection
62	Broad River Village On-Site Sewer Extension	2024198	Buncombe Co.	28806	92	1,670	12/10/2024	Waiting on Final Inspection
63	Oak Hill Circle	2024281	Buncombe Co.	28806	8	320	5/2/2025	Waiting on Final Inspection
64	12 Baker Road	2025080	Buncombe Co.	28806	4	409	11/25/2025	Pre-con held, construction not yet started
65	Collett Industrial (Banner Farm)	2020108	Cane Creek	28759	Comm.	255	11/20/2020	Final Inspection Complete, awaiting closeout docs
66	Seasons at Cane Creek Phase 2	2022170	Cane Creek	28732	84	566	5/1/2024	Final Inspection Complete, awaiting closeout docs
67	Taproot Phase 2A	2021161	Fletcher	28732	151	2,462	6/6/2023	Final Inspection complete, awaiting close-out docs
68	Mountain Green Landscaping	2022019	Fletcher	28732	3	427	7/2/2025	In construction
69	Taproot Phase 3	2023114	Fletcher	28732	128	4,130	2/7/2024	Waiting on Final Inspection
70	Asheville Airport Parkinig Lot Sewer Reloc	2023135	Fletcher	28732	0		8/8/2023	In construction
71	Ingles #140 Fletcher	2023139	Fletcher	28732	Comm.	715	11/30/2023	Final Inspection complete, awaiting close-out docs
72	Brickton Road Relocation	2023195	Fletcher	28732	Comm.	275	4/30/2024	Pre-con held, construction not yet started
73	Taproot Phase 4	2023237	Fletcher	28732	113	5,757	2/7/2024	Pre-con held, construction not yet started
74	Taproot Phase 5	2023238	Fletcher	28732	111	3,648	2/7/2024	Pre-con held, construction not yet started
75	Legacy at Mills River	2022117	Hendersonville	28759	456	9,679	6/18/2025	Pre-con held, construction not yet started
76	Advent Health Hendersonville MOB	2023069	Hendersonville	28792	Comm.	356	3/26/2024	Waiting on Final Inspection
77	Marketplace at Mills River	2023174	Hendersonville	28759	Comm.	1,901	4/30/2025	Waiting on Testing
78	Ohalo Sewer Extension	2024116	Hendersonville	28759	1	764	5/27/2025	Final Inspection complete, awaiting close-out docs
79	James River - Mills River Site	2022222	Mills River	28759	2	460	1/17/2024	Waiting on Final Inspection
80	18 Wildwood Park Sewer Relocation	2021129	Weaverville	28787	1	147	2/22/2022	Waiting on Final Inspection
81	Greenwood Park Phase 4	2024254	Weaverville	28787	73	262	4/25/2025	Waiting on Final Inspection
82	Serenity Townhomes	2020037	Woodfin	28804	8	480	7/14/2020	On hold
83	Weaverville Road Subdivision	2020123	Woodfin	28804	4	600	4/6/2021	On hold
84	Terraces at Reynolds Mountain West Ph I & II	2021164	Woodfin	28804	42	1,990	6/26/2024	Waiting on Final Inspection
TOTAL					4,929	90,314		

CAPITAL IMPROVEMENT PROGRAM

STATUS REPORT SUMMARY

December 10, 2025

PROJECT	LOCATION OF PROJECT	CONTRACTOR	AWARD DATE	NOTICE TO PROCEED	ESTIMATED COMPLETION DATE	*CONTRACT AMOUNT	*COMPLETION STATUS (WORK)	COMMENTS
WEAVERVILLE PUMP STATION AND FORCEMAIN IMPROVEMENTS	Woodfin	Haren Construction Co.	1/17/2024	4/15/2024	7/4/2026	\$ 20,986,375.00	63%	Installing forcemain down Old Marshall Hwy and along Wiley Dr. Transformer installed at pump station.
CARRIER BRIDGE PS - RIVER CROSSINGS	Asheville	Cleary Construction	3/19/2025	5/12/2025	7/30/2026	\$ 12,932,000.00	35%	Cofferdam for section 2 complete. Removing rock from trenchline.
OLD COUNTY HOME ROAD	Asheville	Terry Brothers Construction Co.	7/16/2025	9/19/2025	1/17/2026	\$ 2,874,835.00	35%	Pipe installation continues
SWEETEN CREEK @ BUCK SHOALS	Asheville	Terry Brothers Construction Co.	11/25/2025	8/6/2025	5/3/2026	\$ 430,849.00	95%	Paving restoration in progress and being scheduled as weather permits.
INCINERATOR SAND TRANSPORT SYSTEM	WRF	Haynes Utility	7/2/2025	8/11/2025	10/1/2025	\$ 85,400.00	100%	All work complete
MSD FLEET/WAREHOUSE RESURFACING	Woodfin	C&T Paving	9/17/2025	10/27/2025	2/24/2026	\$ 96,490.00	50%	50% of repaving is complete. Subgrade improvements underway on remaining section.
INCINERATOR REHABILITATION	WRF	Industiral Furnace	9/17/2025	11/3/2025	3/3/2026	\$ 1,845,000.00	25%	Interior restoration underway now.
INTERMEDIATE CLARIFIER TROUGH PHASE 2	WRF	Cove Utility	10/15/2025	11/3/2025	7/31/2026	\$ 1,464,000.00	3%	Basin measurement complete. Shop drawings being prepared.
INTERCEPTOR ASSESSMENT & CLEANING	Buncombe Co	Bio-Nomic Services	8/20/2025	11/17/2025	8/14/2026	\$ 1,291,375.00	3%	Contractor has mobilized and pre-cleaned approximately 2,600 LF of line
CARRIER BRIDGE PUMP STATION REPLACEMENT	Asheville	Ruby Collins	7/16/2025	11/3/2025	8/19/2028	\$ 75,378,958.00	5%	Site Grading underway.