Stafford County Utilities Commission
January 15, 2026

I. Call to Order– Ms. Epple, 2025 Commission Chair, called the meeting to order at 7:00 pm.

II. Roll Call – Those present at the meeting were: Mr. Albert Bain; Mr. Greg Cox; Ms. Tiffany Epple; Mr. Greg Holland; Mr. William Tignor; Mr. Floyd Bundrant. Staff members present were Mr. Mark Gundersen, Acting Director of Utilities, Mr. Chris Edwards, Chief Operating Officer; Jon Brindle, Acting Utilities Assistant Director of Operations; Mr. Nathan Huber, Utilities Assistant Director of Engineering; Ms. Julia Emilius, Administrative Assistant.

III. New Members Welcome & Information – Mr. Gundersen presented an overview of the Utilities Commission for the New Members. The Utilities department started as two (2) separate water and sewer service districts. They were merged into one County department in 1982. As part of the current growth and direction is taking on a number of projects and expanding extensively. Grown to 14 active tanks, 12 booster stations, 712 miles of water line, over 13,000 manholes, and approximately 574 miles of sewer line. Always investing in infrastructure and maintaining compliance with state and federal regulations. We currently serve over 41,000 customers in the urban area and focus on keeping them in good repair through various 3R and capital projects. Some upcoming projects include Grafton tank rehab, the rehabilitation of other facilities, including the waterline projects in Chatham Heights, improving redundancy through other projects, and investing in our GIS through Asset Management. And this all goes back to our Master Planning documents, which we will be discussing this evening. We are also doing work at plants through structural repairs, filter upgrades, maintenance projects, and electrical upgrades. That brings us to our funding. We are an Enterprise Fund; we do not get any tax dollars from the general fund. Our funding comes from fees that are generated by water and sewer rates. With that, you know, the Commission was based on County Code Ordinance 09-507, enacted on February 7, 1995. That gives this commission oversight of rates, fees, and ordinances. This past July, we were awarded a triple-A bond rating for the utility itself outside the county. We also perform rate studies every three years, with the last one in 2023. We are currently in the process of doing another one, which we will discuss at future meetings and today as well. We'll talk about the definition of Pro Rata, what that means, and how that funding works, all going back to our indentures, our credit rating, and how we apply for grants and loans.

IV. Nominations of Chair – Mr. Cox nominated Ms. Epple, seconded by Mr. Bundrant. The motion passed 6-0.

V. Nominations of Vice-Chair – Ms. Epple nominated Mr. Cox, seconded by Mr. Holland. The motion passed 6-0.

VI. Approval of Meeting Minutes – Ms. Epple motioned, seconded by Mr. Bundrant, to approve the minutes from the May 15, 2025, meeting as presented. The motion passed 6 – 0.

VII. Presentations by the Public – Ms. Kristin Maxon from 1816 Richmond Highway was present. Ms. Maxon began by congratulating the new members of the Utilities Commission. She then stated that on January 15, 2025, a utility company is contacting Stafford residents concerning selling water and septic line insurance coverage. What if the utility trucks run on homeowners, private utility lines, underground lines, and not defined as easement on their engineering drawings. This has been witnessed and documented. This practice is described as sloppy by agents. Page 16 of 568 of our agenda today is empty; it should be this page has been left blank. The public was wondering about the impact of project 370-07-3R replacing 60-year-old 12-inch main pipes along Richmond Highway from American Legion Road to Courthouse Road. Will this construction project block or restrict driveways within the right-of-way easement? See page 550 of 568 in our agenda today. How will the construction affect private utility pipes within the neighboring linkage? One thing I couldn't find is, where is M & M pumping station in 370 central zones, it's not specified in the maps. A supervisor on November 6 asked about the status of the commitment of the data centers to the water reuse system. The reuse system is expected to cost around 400 million. Is this commitment known? As of September 23, 2026, it was not known. Page 64 of 267, November 6th, 2025, Board of Supervisors, item two, data center work session. The declared meeting of November 13 and December 4, 2025, within the utility commissions were both canceled. Cost likely is higher with December 6, 2020, new resolutions. One public concern is Vantage VA 41 substation statement of justification impact. July 11, 2025, 4b. states, the project does not generate water use. And five summary, states no impact upon public. This plan is also submitted with another application, which makes it very confusing, and so this application has no impact statement in the collection.

Ms. Epple asked Mr. Gundersen if he could address Ms. Maxson's concerns. He stated that there are easements through private properties, utilities, water and sewer that have to be accessed on a regular basis. Staff shouldn't be and we've looked into that and I've not had any reports. We do have subcontractors working for us, and there are other entities that access their public easements that we do not have control over. Ms. Epple commented that this would be similar to when you were doing Ferry Farm and you had to go through backyards and things like that. She then asked, if access is needed beyond an easement, would the homeowner be notified in advance? Mr. Gundersen replied that yes, through right away agreements. Mr. Edwards added that in this case, it's mostly contractors that we don't have control over, like one or two entities that do sell water line and sewer line insurance. So that's the portion after your meter barrel that goes to the house at the homeowner's portion for water and sewer, they could access it with the potential to damage, but it's really not part of the county utilities department and not something we could control. Mr. Gundersen resumed, noting that a number of the comments concerned the master plan here, so I'm just going to address all of them as a group here. As to the blank page, we probably should not have that in, and we'll have to take a look at that. The American Legion plan with construction, yes, there are going to be impacts with new construction projects. Obviously, you wouldn't have to work with the contractors, as those are built with any type of construction project. M&M Auto Parts should be specified within the plans. Mr. Edwards added that M&M is not used in normal service but is

there for use in case of an emergency. Mr. Gundersen added that regarding the last statement about Vantage property, and of no water and no service, that without seeing the application number that he would have to get back to Ms. Maxson on that.

No questions by the Commission.

VIII. Public Hearing – Proposed Resolution R26-20: Mr. Edwards gave the presentation on R26-20. Mr. Edwards explained that Proposed Resolution R26-20 would amend the Stafford County Utilities Water and Sewer Master Plan in accordance with the Stafford County Comprehensive Plan in accordance with Code 15.2-2229, by adopting a new document entitled Stafford County Water, Sewer, and Reclaimed Water System Master Plan. They are seeking the Commission's approval to present Proposed Ordinance R26-20 to the Board for adoption. Mr. Edwards provided an explanation of Pro-Rata and that Pro-Rata is a fee paid for by developments as development occurs. Pro-Rata is not paid by taxpayers. He explained that the County's water and sewer pro rata policy, implemented in 1990, is a development fee paid as new development occurs rather than by existing ratepayers. Mr. Edwards said he wanted to make sure that everyone understood that this is not paid by ratepayers. Under the program, the costs of master plan water and sewer projects are calculated and allocated by water zones or sewer sheds, then divided by the number of remaining undeveloped water meters to determine a per-meter fee, with larger meters paying a proportionally higher amount. For example, if a new master plan water line costs $4 and serves four similar developments, each would pay $1. The policy also allows a developer who needs infrastructure before the County builds it to construct the improvement and enter into a pro rata agreement. As additional developments connect, the County collects their pro rata fees and reimburses the original developer for the share of capacity they did not solely use. This approach encourages timely infrastructure construction and enables the County to expand its water and sewer system without having to fully fund master plan projects upfront.

Regarding the Pro Rata program, Mr. Bain asked what would occur if a subsequent developer did not build and did not pay their pro rata share, and whether the County would eventually determine the project would not move forward and reimburse the initial developer, or if the first developer would assume the loss. Mr. Edwards explained that the initial developer could potentially bear some risk; however, in practice, they typically recoup the majority of their costs because the number of connections is generally greater than the simplified example provided. He noted that even if the developer falls slightly short, the infrastructure would still be necessary for their project. Mr. Bain clarified that the developer assumes that risk without recourse, and Mr. Edwards confirmed, adding that pro rata agreements are valid for 10 years, after which any additional payments do not go to the original developer. Mr. Cox inquired whether the arrangement involves a direct payment or a tax credit. Mr. Edwards explained that it functions as both a credit and a reimbursement: developers receive credit toward fees they would otherwise owe, and if surplus funds are available within the applicable water zone or sewer shed, they may also receive reimbursement up to the amount expended. If insufficient funds are available, reimbursement is limited to the funds collected.

Mr. Bundrant asked whether the Pro Rata program applies to water extensions outside the Urban Services Area (USA). Mr. Edwards responded that it does not, as there are no master plan water or sewer projects outside the USA. He noted that while there are no sewers outside the USA, a significant amount of water infrastructure exists there, primarily constructed in the late 1980s and 1990s. Most water lines outside the USA were already in place, and no new master plan projects have been built in those areas. He further explained that County code requires properties located outside the Urban Services Area but within 300 feet of an existing water line to connect, to avoid unused infrastructure. In planning, staff accounted for undeveloped parcels within 300 feet of existing lines to ensure adequate service but emphasized that this was not intended to encourage growth outside the Urban Services Area, only to ensure water availability where infrastructure already exists.

Mr. Edwards outlined three primary sources of revenue for the water and sewer system: user fees collected through the water bill, which fund operations and maintenance; availability fees, which are separate from pro-rata fees, and are paid at the time of development; and pro-rata fees. Availability fees primarily support investment in the water and sewer distribution system and capacity, functioning similarly to purchasing capacity in treatment facilities. Guiding principles for the program include remaining growth-neutral, aligning infrastructure planning with the Comprehensive Plan and designated service areas, and ensuring that water and sewer services meet or exceed regulatory requirements. The County also prioritizes rebuilding, rehabilitating, and repairing existing infrastructure to maintain system reliability, including regulatory compliance projects such as upgrades at the Smith Lake plant. While system needs are significant, affordability remains a key consideration in balancing infrastructure investment with reasonable rates. He continued by noting that the most recent Comprehensive Plan update was completed in 2021, and work on the water service plan began in 2023. Around that time, a draft water service agreement related to the Potomac Church rezoning proposed a reclaimed water system that would reuse treated wastewater and return it to the sewer system. Recognizing the need to properly account for reclaimed water in system projections, staff delayed finalizing the plan until land use data, water demand projections, and reclaimed water assumptions were fully evaluated to ensure adequate system capacity. Two planning concepts were emphasized: “near-term,” referring to projects anticipated within the first 10 years and included in the Capital Improvement Program (CIP), and “buildout,” which assumes full development of all parcels within the Urban Services Area. Although the County does not construct all infrastructure to full buildout immediately, facilities such as water lines—designed to last 50 to 60 years—must be appropriately sized to meet both current demands and long-term growth.

Ms. Epple asked how do you even go about estimating that, not knowing what these larger parcels could bring. Mr. Edwards explained that projections are based on 100 percent planned land use. For undeveloped parcels, assumptions are assigned based on anticipated residential density or commercial and industrial use, with corresponding water demand values applied. While individual parcels may vary, the projections are expected to balance out across thousands of parcels to provide a reasonable overall estimate. He noted that there are no major treatment plant expansions planned within the next 10 years; projects during the near-term planning horizon are primarily focused on repair, rehabilitation, and regulatory requirements. Treatment plant

expansions are anticipated further out, in the 2035–2045 timeframe, but not in the immediate CIP period. Avoiding large-scale capital expenditures in the near term supports the County's financial stability and helps maintain its AAA bond rating by preserving adequate cash reserves and stable cash flow projections. Mr. Edwards also reported a 15 percent decrease in projected water demand, attributed to a shift in rezoning from residential to commercial and industrial uses, changes in customer consumption behavior resulting in lower water usage compared to 15 to 20 years ago, and several large parcels planned to utilize reclaimed water.

Mr. Edwards outlined the major components of the water, sewer, and reclaimed water master plan, highlighting two to three key water projects and one major overall concept. At the Smith Lake water treatment facility, current projects focus on rehabilitation and regulatory compliance. He noted that a recent project bid came in below the engineer's estimate for the first time in several years, following a period of sharply rising construction costs. Additional regulatory upgrades are planned at Smith Lake, including design work to address PFAS requirements, which is moving forward through the procurement process. Due to reduced projected water demand, many large-scale water projects have been deferred, but system reliability and regulatory compliance remain priorities. A central long-term initiative is improving the movement of water throughout the county. Since the construction of Lake Mooney in 2015, the County has been working toward building a major transmission water line running diagonally across the county to move water north from Lake Mooney toward Quantico, creating redundancy and improving system resilience. Upgrades to east-west transmission lines are also needed to allow water to flow in multiple directions. This transmission initiative has been a primary focus of the Capital Improvement Program over the past five to ten years and is expected to remain so. Through the pro-rata program, developers are contributing to approximately 2.2 miles of the transmission line, including sections in the Centerport area, improvements associated with the Stafford Technology Campus, and construction near the North Point development. Developers are constructing portions of the transmission water line, and the County will complete the remaining segments to connect the gaps.

Mr. Bain asked whether those funds for the gaps come from the cash fund you maintain. Mr. Edwards explained that revenues are allocated into separate categories, with water and sewer user fees primarily supporting operations and maintenance. Pro-rata fees are generally directed toward the construction of major water infrastructure projects. However, he noted that pro-rata revenues alone are not sufficient to fully fund these large projects, but they do contribute significantly to advancing them. Mr. Bain continued by recalling the construction, dedication, and opening of Lake Mooney that it was estimated to be adequate for the next 50 years, which was 10 years ago, and asked if that estimate was still good. Mr. Edwards responded by explaining two major water projects. The first is the raw water transfer, which involves utilizing existing raw water at the decommissioned Abel Lake plant. Currently, the facility is not in use, but the long-term plan—projected 10 years out and extending 50 years—is to build a pipeline to transfer raw water into Lake Mooney, ensuring capacity for the next 50–60 years. The second project focuses on Lake Mooney, where most main components remain viable for the next 24 years, though some process improvements will be needed to increase capacity. Once these improvements are complete, the

plant's capacity will double, complementing Smith Lake and Lakeland facilities, and providing sufficient long-term water service.

Mr. Cox asked how you keep those pumps operating on their curves, or do they go to a pumping station? Mr. Edwards explained that pump stations are designed to accommodate progressively larger pumps over time. At the design stage, engineers consider both current and future pumping needs, ensuring that piping, pipe heads, and overall layout can support multiple pumps operating along the required performance curve. Pumps are routinely replaced to maintain system performance—at water booster stations, this occurs regularly, but more frequently at sewer pump stations, where a pump station may be replaced 10 to 15 times over their lifespan.

Mr. Edwards then provided an overview of wastewater facilities. The County has two main wastewater plants: the Aquia facility on Coal Landing Road and the Little Falls plant along Route 3 near King George. Both plants are aging but functional. Near-term improvements focus on general rehabilitation and maintenance. Aquia was originally constructed in 1971 and upgraded in 1979 and 1990, while Little Falls was built in 1991. These facilities continue to receive upgrades to maintain regulatory compliance and operational reliability. Mr. Edwards continued that both wastewater plants were designed using the same technology, which allowed consistent operation through around 2020. The technology was produced by a company called Shriver which went out of business in 2020, though parts are still available. As part of ongoing upgrades, the County is converting to plug-flow treatment and mini-basin technology. The concrete structures will remain, but the process will be more efficient, use non-proprietary components, and provide improved treatment. This upgrade effectively acts as a plant expansion by increasing capacity and efficiency, allowing some future expansions to be deferred. Regarding wastewater conveyance, there have been no major changes since the 2018 master plan and the 2025 Comprehensive Plan, with the central area of the County historically underserved. Infrastructure improvements, including a major water line through this area, will help address service gaps. The integration of reclaimed water into the master plan provides additional benefits. For example, the Stafford Technology Campus data center will contribute reclaimed water to a nearby pump station, supplementing normal sanitary flow and returning roughly 40 percent of that water to the wastewater plant, thereby supporting both water efficiency and wastewater management Mr. Edwards explained that the current master plan represents a significant update for wastewater infrastructure, particularly in the historically underserved central part of the County. This area lies between the Northern and Southern Water Zones and the Northern and Southern Sanitary Districts, where prior growth created gaps in service. A major new water line will run through this central area, improving both water and wastewater service. The integration of reclaimed water into the plan is also beneficial. For example, the Stafford Technology Campus data center will contribute reclaimed water to a nearby pump station, supplementing normal sanitary flow and returning approximately 40 percent of the water to the wastewater plant. Under a negotiated water service agreement, the reclaimed water will be directed through a dedicated pipeline to the wastewater plant, avoiding impact on the existing sewer collection system.

The next topic covered by Mr. Edwards was reclaim water. Mr. Edwards provided a detailed update on the wastewater and reclaimed water projects associated with the Potomac Church

rezoning and the Stafford Technology Campus. As part of the rezoning proffers, the developers agreed to construct a comprehensive wastewater system connected to the Aquia Wastewater Plant. This includes a pump station and three pipelines: two reclaimed water lines and one return sewer line, extending from the plant to the two campuses. The goal of these projects is documented in the County's master plan and is intended to support the eventual development of a reclaimed water pro-rata program. While a second wastewater plant could be considered in the future, there is currently no identified need, and any future plant would require an update to the master plan.

Mr. Bain asked if all of that was being funded by pro-rata. Mr. Edwards replied that no, the project is 100% fully funded by the data centers, meaning there is no financial burden to the County. Reclaimed water will be paid for by users at the same rates as standard water and sewer service, ensuring that costs are recovered and no preferential treatment is provided. The agreements also protect the developers' investment: if another company, such as a competitor, connects to the system, the original developers can be reimbursed to prevent "free rides." Mr. Edwards noted that the project provides a dual benefit to the County, delivering critical infrastructure at no cost while integrating reclaimed water into the system to support efficiency and long-term planning. Approximately 90 percent of the costs for the Potomac Church portion are funded by AWS, illustrating the public-private partnership model that enables these improvements.

Mr. Tignor asked if there were other potential users for reclaim water. Mr. Edwards noted that while other users, such as the hospital, could technically connect to the system for purposes like industrial cooling, the economics make additional connections unlikely. The system serves approximately 32–35 data centers and represents an investment of $400–$500 million. When the total pro rata cost is divided across the connections, each connection effectively carries a cost of $10–$15 million, making it cost-prohibitive for most potential users. Therefore, although connections are technically possible, the high cost is expected to limit the number of additional users.

Mr. Bundrant asked whether there was a water-quality standard that's required to be met to be used for data centers. Mr. Edwards explained that water quality standards are set by the Virginia Department of Environmental Quality (DEQ) and categorized as Tier One and Tier Two. For the reclaimed water system, Tier One quality—suitable for skin contact—is required because employees may come into contact with the water, even though the plant currently discharges Tier Two water to streams, which meets environmental standards. Achieving Tier One quality is costly due to turbidity, or silt content, which fails the standard on only two days per year, necessitating a $150 million facility upgrade. The data centers using the reclaimed water require Tier One quality, and they will fund the plant upgrades. The upgrades include additional filtration and disinfection, providing benefits beyond the data centers, as the system can produce high-quality water without discharging it into local streams, enhancing overall water management for the County. Mr. Bain then asked what the estimated reduction in discharge rate would be once the recycled system is fully implemented, because you're taking quite a bit out through evaporative losses. Mr. Edwards explained that all reclaimed water eventually flows to the wastewater plant, which operates under a DEQ discharge permit for returning water to streams. While cumulative

impact analyses are typically required to assess downstream effects, DEQ policy exempts discharges to tidal rivers or tidal sections of rivers from this requirement, allowing the County to use 100 percent of the reclaimed discharge. To size the reclaimed water system, staff considered both the inflow to the plant and the portion of recycled water returning from the data centers. The system was conservatively designed based on the lowest expected flow, assuming 40 percent of the reclaimed water would return to the plant, ensuring sufficient capacity during periods of peak demand.

Mr. Bain asked if the water would be further contaminated after it is used. Mr. Edwards said no and explained that the reclaimed water from the data centers passes through a heat exchanger, where approximately 40 percent is returned while the remaining 60 percent evaporates or becomes slightly concentrated due to minerals. The system is regulated under a Significant Industrial User (SIU) permit, which sets limits on what can be discharged, requires continuous monitoring, and ensures that any returning water remains treatable by the County's wastewater plant. He noted that, while technically possible, it would require careful management for the data centers to capture and reuse spent water, but the County's monitoring and permit framework ensures that returned flows are safe and manageable within the system.

Mr. Tignor then asked if it was conceivable that the data centers that have used spent water could save it and reuse it. Mr. Edwards explained that the data centers circulate reclaimed water through a large loop multiple times—typically five to twelve cycles—before it is discharged. With each pass, the water warms slightly and becomes incrementally less efficient for cooling. Once it reaches a temperature that is no longer usable, it is discharged back to the system. This process allows the data centers to maximize the reuse of water over several days, improving efficiency while managing thermal limits.

Mr. Holland followed up on Mr. Tignor's question with respect to the affluent that's coming off of these data centers, who is responsible for monitoring? Mr. Edwards explained that water returning from the data centers flows into the County's sewer system and is monitored under a Significant Industrial User (SIU) permit. The data centers are responsible for self-monitoring, collecting samples, and sending them to a third-party lab for analysis, particularly for parameters such as temperature, pH, and conductivity. Mr. Jon Brindle, Assistant Director of Operations, then explained in addition to this self-reporting, County staff conduct at least one annual inspection of each facility, collect independent samples, and submit them to a separate lab to verify the accuracy of the data provided by the data centers. This dual monitoring system ensures compliance and protects the County's wastewater operations. Ms. Epple asked if these inspections would require an additional position within Stafford County, somebody that can go out and inspect these data centers, or is that within everybody's purview already, your technicians? Mr. Brindle confirmed that we already have a treatment coordinator. Mr. Edwards then explained that when they present rates and fees next month, they will also review staffing positions associated with the reclaimed water system. The County has created approximately eight to ten new positions fully funded by reclaimed water revenue, including an additional inspector and an environmental technician. Additional staff, such as mechanics and electricians,

have also been added specifically to support the operation and maintenance of the reclaimed water system, ensuring dedicated resources for its management.

Mr. Bundrant asked what the standards of compliance would be based on, who defines the standards of that compliance, and whether they are compliant. Mr. Brindle explained that water quality standards for the reclaimed water system are developed in consultation with industry experts and local limits. We do not anticipate any additional additives from the data centers beyond a small amount of chlorine to prevent bacterial growth. Key parameters monitored include pH, temperature, conductivity, and total dissolved solids (TDS), while turbidity is not monitored on-site, as it is generally correlated with dissolved solids. These measures ensure the reclaimed water remains safe and compliant with regulatory and operational standards. Mr. Bundrant then asked if this was documented in water usage documents and compliance levels. Mr. Brindle explained that's documented in each significant industrial user, which is another presentation coming up here in a couple minutes, that will get into this a little bit more, but we're defining every data center or every actual reclaimed user is going to be, in addition to the having a water service agreement, is also going to have an SIU permit. This is so the water service agreements and a lot of the application processes that you go through with the county once a facility is constructed goes in. The SIU permit actually starts when that facility takes operation. Mr. Edwards added that the SIU permit is actually documented in county code, so one of the conditions of that would require you to have an SIU permit is if you discharge more than 25,000 gallons per day. We know data centers will discharge more than 25,000 gallons per day, so they will automatically have a discharge permit or SIU permit. And top of that, we pretty much have the the ability to have any commercial user that we think might cause a problem with our water and sewer system, to actually have an SIU permit.

Mr. Bain asked if they the ability to reuse the reclaimed water before it's sent back to the treatment plan, such as to hook up like their restroom drains, or would they be allowed to have a septic field for that? Mr. Edwards clarified that all reclaimed water returning from the data centers will be routed back through the sewer system and treated as wastewater flow. He also noted that all associated facilities and connections are located within the Urban Services Area, consistent with the infrastructure planning and service boundaries. Mr. Edwards noted that the two primary examples discussed involve water-cooled data centers, which generate significant discharge due to their cooling processes. Other facilities utilizing air-cooled systems may also connect in different locations but produce substantially less discharge. The Stafford Technology Campus represents the larger project, with flows directed to a dedicated pump station constructed by the developer and then returned to the County's system. In contrast, the Potomac Church project involves two buildings with comparatively lower flows, which will discharge directly into the standard sewer system. He clarified that only the cooling water is recycled, while regular sanitary flows are not reused and are discharged as typical wastewater.

Mr. Bundrant asked if this information is publicly available? Mr. Brindle stated that the SIU permits are not published but they are available to the public. He noted that the permits are currently in draft form, with the first finalized permit expected to be completed in the coming weeks. Mr. Edwards added that before they start using water, they will have to have an SIU permit. Mr. Bundrant asked what is considered North and Central Stafford. Mr. Edwards referenced the map and described the service area, noting that the area had historically been divided between the northern and southern service areas, with a small existing pump station previously directing flow to Little Falls. Under the updated plan, flows from the data center, a new residential development, and industrial properties along Centreport Parkway will all be directed to the new pump station. The system is designed with operational flexibility, allowing wastewater to be conveyed either to the Aquia Wastewater Plant or redirected back into the southern sewer system. During the summer months, when cooling demand is highest and reclaimed water returns are greater, flows will primarily be directed north toward Aquia. In cooler months, when cooling demand decreases, operations can shift to send flows back to the southern system, maintaining efficiency and balance year-round.

Mr. Tignor asked what other Virginia localities have a reclaimed portion. Mr. Brindle noted that several localities in Virginia have implemented reclaimed water systems, with Loudoun County serving as a leading example, particularly in supporting data centers, which are the primary drivers of its system. In the Hampton Roads region, particularly around Norfolk, a large reclaimed water system is used to recharge the aquifer through groundwater injection. He described the current expansion of reclaimed systems in Virginia as part of a “purple pipe” trend, referencing the color typically used for reclaimed water lines. Spotsylvania County is slightly ahead in developing a similar system to support data center growth. He added that, historically, Virginia has been considered water-rich, so reclaimed systems were less common; however, increasing data center development across the state is driving greater interest and investment in reclaimed water infrastructure. Mr. Edwards stated that staff visited Loudoun County’s reclaimed water system within the past one to two years to review its operations, permitting framework, and lessons learned, including its use of SIU permits and operational challenges. He noted a key difference between the two localities: Loudoun funded and constructed its reclaimed system primarily to reduce the volume of wastewater discharged to streams due to nutrient loading limits. Because discharge permits cap the total amount of nutrients that can be released annually, diverting reclaimed water for industrial cooling reduces the volume discharged and helps manage those nutrient limits. He explained that a similar benefit applies locally, as each gallon reused for cooling supports compliance with the nutrient cap. Ms. Epple asked what happens if you reach the cap’s maximum before the end of the year. Mr. Edwards explained that exceeding the permitted nutrient cap would result in a violation; however, the County typically operates well below its limit, using only about one-quarter of its allowable nutrient allocation. Because of this surplus capacity, the County can sell nutrient credits to other permitted users within the same river basin who may exceed their allocations. This market-based system helps ensure the overall river nutrient cap is not exceeded. He noted that the County generated approximately $200,000 to $300,000 in revenue last year through the sale of nutrient credits. Ms Epple then clarified that it doesn’t cost the County to get rid of water that got too many nutrients, you don’t have to pay

another county to dispose of that? Mr. Edwards noted that no, typically we have an available credit level, so we're usually selling credits to other localities, which will give us a larger surplus.

Ms. Epple asked about the reference to Hampton using the water and asked whether the NASA Hampton steam plant, which is their indoor landfill, used the water as well. Mr. Brindle stated that he was not fully familiar with that specific plan but noted that the HRSD SWIFT project, which involves groundwater injections to recharge the aquifer, is the primary reclaimed water initiative discussed in this region. Mr. Edwards then referenced a similar example in Leesburg, where reclaimed wastewater is used by a nearby power generation facility. During a site visit, staff learned that the plant uses reclaimed water continuously—essentially year-round—for cooling purposes, with nearly all of its water supply coming from the reclaimed system. Mr. Tignor asked if it a standard precedent for the data centers themselves pay for all this. Mr. Edwards explained that water cooling offers operational advantages over air cooling, primarily because it is more energy efficient and requires significantly less power. By using reclaimed water for cooling, data centers can reduce overall energy consumption. He noted that there may also be a public relations benefit, as companies can highlight their use of reclaimed water that would otherwise be discharged. However, he emphasized that the primary advantage is reduced power usage, which remains a significant concern in the industry. Mr. Cox then commented that there must be some confidence that 20 years from now there will still be data centers. Mr. Edwards explained that each data center building typically contains around a billion dollars' worth of equipment. With roughly 40 buildings in the region, the total investment approaches $40 billion. In that context, the $4 million contribution toward reclaimed water infrastructure represents only about 1% of their overall investment. He noted that while it initially seemed surprising that companies would fund this portion of infrastructure, it becomes understandable when viewed relative to the scale of their total investment. Mr. Cox noted that energy costs for running compressors in air-cooled systems are much higher compared to simply circulating water for cooling, which is then discharged. He explained that historically, excess water would be discharged into rivers such as the Potomac or Rappahannock, but environmental regulations now limit the volume and nutrient content that can be returned. Once those limits are reached, operations must shut down. He added that, given the scale of investment—approximately $40 billion in data center equipment—entering a pro rata or cost-sharing agreement for reclaimed water infrastructure is relatively minor and financially feasible. Mr. Edwards commented that while the data centers may express concern over relatively small cost increases—sometimes $5 million—they are minor compared to their overall investments and do not significantly impact operations. He noted that the County is nearing plan approval for the reclaimed water system and has already begun minor demolition work at the water plant. Construction of the system is anticipated to start in late spring.

Mr. Bundrant then stated that the Master Plan truly is just a living document and that it doesn't encompass governments. Mr. Edwards explained that much of the engineering for the water service and associated rezoning had already been completed through the water service agreement. The firm responsible for the reclaimed water documentation primarily compiled and organized projects developed by other engineers, without making major changes. Although the process took longer than anticipated, the County's planning department plans to begin a Comprehensive Plan update this year, approximately a year from now. The initial review

compared conditions between 2023 and 2024 to identify any significant changes, such as land use or flow adjustments, but found that these were not substantial enough to alter the CIP or master plan. The most notable change was the inclusion of wastewater in the master plan, which led to a modification of one pump station to accommodate the majority of reclaimed water flows. Mr. Bundrant asked if there were any plans to generate a governance document that's associated with water usage. Mr. Edwards noted that Chapter 25 of the County Code governs water and sewer rates, and any updates or approvals to rates require formal amendments to the code. He explained that when the County brings back the code change for review, it will include a significant section addressing industrial water use, specifically limiting or prohibiting the use of potable water for industrial cooling by data centers. This aligns with policies previously incorporated into the Comprehensive Plan, which prioritizes reclaimed water for cooling. The update ensures that water and sewer rates can be applied appropriately under the new reclaimed water framework while reinforcing the County's hierarchy for industrial water use. Mr. Bundrant then referenced Chapter 7 of the Master Plan, bridging projects and asked what the circumstances and drivers for that are. Mr. Edwards explained that the concept of "bridging" priorities was incorporated into the rezonings and water service agreements, particularly for the SCC. While the reclaimed water system can ultimately produce approximately 25 million gallons per day, the structured tiered approach allowing limited temporary use of potable water from Lake Mooney, where surplus capacity exists. The data center area is located within one of the surplus water zones, making it feasible to provide an interim supply. However, continued potable water use is contingent upon demonstrated progress in constructing the reclaimed water system and completing required master plan water improvements. Initial use is permitted after key infrastructure is built, with additional allowances tied to 25%, 50%, and 75% completion milestones of the reclaimed system. This phased approach ensures that potable water is used only temporarily and in limited quantities while the reclaimed system is brought online. Mr. Edwards emphasized that forthcoming ordinance will formally prohibit long-term use of potable water for industrial cooling, reinforcing the policy to cap interim use.

Mr. Bundrant noted that bridging projects are typically identified after a project has been developed and approved. Mr. Edwards clarified that these projects were included in the water master plan and that the term "bridging" simply describes how certain master plan water improvements would function to provide interim service. The intent is to allow a limited number of data center buildings to begin operations using potable water before the reclaimed water system is fully operational. Once the reclaimed system is placed in service, the facilities will physically disconnect from the potable water supply and connect exclusively to reclaimed water lines. The buildings are not designed with permanent dual inputs, ensuring a full transition to reclaimed water once it becomes available. Mr. Bundrant questioned why you would approve a project if there is no reclaimed water available. Mr. Edwards explained that the phased bridging approach was structured to ensure continued progress on the reclaimed water system. The primary challenge is the scale of the project, which involves constructing approximately six miles of pipeline in each direction, making it a significant and time-consuming effort. Because the reclaimed system will take longer to complete however, this flexibility is tied to clear incentives and requirements to advance the reclaimed water infrastructure and complete the associated master plan improvements.

Mr. Cox asked how the search for land for utilities offices was going. Mr. Edwards mentioned they toured a potential facility earlier in the day, located at the former jail site. He noted that the building would require significant upgrades before it could be repurposed. He described the interior as largely unchanged, with bars still in place throughout, and noted that the facility's condition made it clear why it had been closed.

Ms. Epple asked why Lake Mooney is low and Smith Lake is high as it relates to PFAS. Mr. Edwards clarified that, without assigning blame, one of the major contributors to PFAS contamination is the historical use of firefighting foams and noted an area military facility has a firefighting facility. He noted that there are thousands of different PFAS compounds, with regulatory focus currently on a limited number. While PFAS has received significant public concern, these compounds are still present in various products. Within the drainage area, a known source is likely past firefighting training activities including those associated with Quantico. He explained that much of the contamination is not from ongoing discharges but from residual PFAS that has accumulated in soil over time and continues to leach into nearby streams. Ms. Epple asked if there was anyway to show that, and would they be responsible for some of the costs to upgrade the equipment to filter out the PFAS that are coming in and is that something the County could do or not. Mr. Edwards stated that they have been exploring potential funding sources to address PFAS, including several federal grant programs that could cover a significant portion of related costs; however, they have not pursued money from the federal government. He noted that much of the legal and financial focus nationally has been on manufacturers, such as 3M and DuPont, which have entered into large settlements related to PFAS production. Similar to opioid-related settlements, these agreements are based on claims that manufacturers were aware of potential harms but continued production. He indicated that they have received approximately $5 million through such settlement funds to help offset PFAS-related impacts. Ms. Epple how long it would take to get Smith Lake where it should be. Mr. Edwards explained that PFAS concentrations are measured in parts per trillion, which are extremely small amounts. The current regulatory limit is four parts per trillion, and we are at approximately five parts per trillion—just slightly above the standard. He noted that, despite the minimal exceedance, the regulations require treatment to remove the contaminant to meet compliance standards.

Mr. Bain stated that he had prepared approximately a page and a half of questions regarding specific items in the master plan that appeared unclear or incorrect to him. Rather than extending the meeting discussion, he requested that the questions be submitted to Mr. Edwards for written responses and that both the questions and responses be included in the meeting minutes.

IX. Public Comment on Proposed Resolution R26-20 – Ms. Epple asked if there were any public comments. Ms. Maxon raised several concerns regarding the master plan and related agenda materials. They noted a correction to the Water, Sewer, and Reclaimed Water System Master Plan date, stating that April 2025 should read December 2025, consistent with the final report date referenced in the meeting packet. They also referenced the Planning Commission agenda from January 14–15, 2025, which indicated that amendments regarding public water and sewer were deferred to January 28, 2026, and cited statements that projected treatment facilities would meet County needs through 2050. The speaker expressed concern that these statements appear

inconsistent with the materials currently under review and suggested a need for improved transparency, background information, and staff review of agenda items. Additionally, Ms. Maxon questioned the financial implications of data center development, noting references to billion-dollar investments and expressing concern about the long-term taxpayer impact, particularly given depreciation schedules for data center campuses. They referenced prior statements about full land buildout and conveyed public concern regarding water flow in the Piedmont region, land terracing, stormwater runoff, impacts to wells near Westlake, and environmental changes near the Stafford Technology Center. The speaker also referenced the Governor's December 2025 veto of House Bill 1601, which would have required developers to submit assessments of data center impacts, noting that such concerns remain relevant to current discussions.

Ms. Epple asked if anyone would like to respond to Ms. Maxon's comments as it relates to the wells going dry. Mr. Edwards provided a brief update regarding concerns about private wells and environmental conditions outside the public water system. It was noted that a wetland or swampy area near Claiborne Creek has reportedly been drying up. Additionally, several residents—primarily in the Hartwood area along Route 17 and outside the Urban Services Area—have reported private wells going dry, with an estimated five to ten wells affected in that vicinity. He indicated that similar reports have been received from other areas outside the Clark's Run and Grove Pike areas, also involving approximately five to ten additional properties. It was clarified that these properties are served by private shallow wells and are not connected to the County's public water and sewer system. Staff also noted that residents frequently contact the County regarding dry wells under the assumption that the public water system may be involved, although these properties are outside the service area. Mr. Edwards explained that shallow wells are more susceptible to drying out due to geological layers that can prevent water from percolating downward. He noted that well depth matters: shallower wells, such as those around 30 feet, are more likely to go dry, while deeper wells, around 60 feet, generally remain functional. He also mentioned that recent dry conditions, particularly from late summer through late winter, have contributed to the issue. The Virginia DEQ monitors drought conditions through a Drought Monitoring Task Force, which categorizes areas from normal to watch, warning, and emergency levels based on precipitation, surface water, reservoir, and groundwater levels. Currently, the County is in the "Watch" category, but groundwater levels remain low compared to surface water and precipitation trends, reflecting the cumulative impact of multiple years of below-average rainfall.

Ms. Epple then asked for a motion on Proposed Resolution R26-20. Mr. Tignor made a motion to approve. Mr. Bain seconded the motion. Motion was approved unanimously.

X. Reports by Commission Members - Mr. Tignor asked about the conservation notice in place. Mr. Gundersen responded that it was still in place.

XI. Director's Report

a. Ordinance O26-03 Presentation - Mr. Gundersen introduced Mr. Jon Brindle, Assistant Director of Operations, to give a presentation on Ordinance O26-03 – Chapter 25 Rewrite.

Mr. Brindle stated that this was informational and separate from the master plan and rates, focusing on the Chapter 25 sewer ordinance update. The update provides us with the authority and authorization to sell, regulate, and manage reclaimed water within its jurisdiction. Reclaimed water is produced by treating wastewater effluent and turning it into a usable resource. The planned system is entirely funded by private data center projects. As discussed by Mr. Edwards, water-cooled data centers are the most efficient form of cooling, and the reclaimed water system will allow these facilities to operate without drawing from the global water supply. The Northern system is currently in design, with no finalized plans, but the code changes would apply to future projects in the southern areas as well. The system is designed to handle up to 100% of the effluent from the Aquia wastewater plant, though peak demand is limited to just a few days per year. For approximately six months annually, data centers will not withdraw water, and during that time, the plant will operate under normal conditions, discharging treated water into the stream as usual. Ms. Epple asked whether this was based on the outside temperature, what would happen if we had unseasonably warm weather, as we have had, and whether you are prepared for that. Mr. Brindle responded that we are, and that he had asked that question directly and was told that it really requires sustained ambient temperatures above about 85 degrees before they need to start using their reclaim systems. Mr. Edwards added that this is actually one of Mr. Bain's questions. It's about flushing the system and that once the system is full, we'll operate for six months out of the year and will take it down for six months. It is designed so that all water from elevated storage tanks will flow back to the plant and be treated there. We will actually take that system down six months out of the year and it actually will not be available to them. We're not allowed to actually discharge reclaimed water onto the ground, so the whole system is just set up to flow back to the wastewater plant, so we can capture that water, put it back into the plant and treat it. Mr. Brindle continued that the upgrades we are looking at is a significant treatment upgrade at the Aquia plant. We do have an entirely separate distribution system that's going out, and then some dedicated return lines. And then there are some portions where you're going directly back into the current sewer system. We are going to have, in addition to the storage capacity at Aquia, there are going to be two 2-million-gallon storage tanks located close to that STC campus. And then we are doing a major overhaul of the Potomac Creek sewer pump station. So, getting to the ordinance itself, it has multiple objectives, with the primary goal of defining reclaimed water, its allowable uses, and establishing the County’s authority to sell and regulate it. It is designed to protect the local water system while incorporating existing Virginia reclaimed water regulations. Rather than revising every reference to water and sewer in Chapter 25, the ordinance mirrors the current code and adds a dedicated section specifically for reclaimed water. This provides enforceability for water service agreements with data centers and ensures legal authority for oversight of the reuse system. The ordinance also establishes definitions for reclaimed water and sets a “Level One” treatment standard, ensuring high water quality for uses involving potential human contact, such as irrigation of sports fields or golf courses. Additionally, the ordinance includes a potable water ban for evaporative cooling, although some existing uses, including a large food processing facility, are grandfathered in. Long-term, the ordinance aims to manage unused reclaimed water during non-peak periods and preserve capacity for future uses.

Ms. Epple asked if that was in McLean or where is that located. Mr. Brindle noted that it was off Courthouse Road. We were not allowed to specifically say that data centers can't use potable

water, so what we had to do was say that the use of potable water for radical cooling purposes is no longer going to be allowed without some special exemptions. But we do have some small scale users, such as the hospital and schools and there are some companies that have small scale servers that also have cooling units with that as well. The plan is that if the facility is still within what a normal industrial use would be, it would probably be allowed, but the large-scale use and the very heavy water use are not going to be allowed on the cooling system. Mr. Bain then asked if another large food processing plant wanted to locate in Stafford County, they would have to somehow tie into the reclaimed water system. Mr. Edwards responded that they would not be able to use reclaimed water. Mr. Brindle added that it would have to be a discussion because we are in the position that we don't want our drinking water being evaporated off. So we are putting a ban on evaporative cooling. Each application will be looked at on a case by case basis. Mr. Bain asked because the data centers paid lock, stock, and barrel for the reclaimed water system, a company would not be able to hook into that system. Mr. Brindle responded that there will be some additional capacity on the system, however the pro-rata effect to hook into that system is probably prohibitive. Mr. Edwards added that to put things in perspective on that use, they are on a daily basis, using about as much water as two data center buildings to make sandwiches. So one of the things we talked about with the water sewer master plan, we go into land use, and if it's undeveloped, we have to assume what it could be, what water flows would be. You start getting a whole lot of users using probably 10 times the amount of water is what we assumed. That's when we would start to run into difficulties. This will help mitigate that.

Mr. Brindle continued that the updated ordinance will outline an application process if there are users that want to come in and hook into the reclaimed system, including the requirement of the water service agreement, as well as upfront water usage projections. He continued this is the section of code that's going to detail what would be a water service agreement. And then we currently have WSAs with the users that are helping us build the system. This would be primarily for anyone else that's coming to hook into the reclaim system, but it would bring in any other portions of the article, detail their responsibility to pay for the water. Allow us to define what they're using the water for, and then ensure we have the right to discontinue service if they break the agreement. Mr. Edwards, responding to one of Mr. Bain's written questions, states that we do not typically require water services agreements, but we do realize that with the reclaim system, usually you're going to have a data center that follows. So the goal is to kind of keep it, in that path where it goes in for a rezoning, if it's, you know, if they proffer to do improvements or whatever boosts are needed, then we will move forward with the water sources agreement. So it really gives the Planning Commission and the board of the last approval authority to make sure that whoever's connecting to the reclaimed water system, it has already been approved.

Mr. Brindle continued the code also includes a comprehensive rate structure, which will be presented along with the water and sewer rates for the reclaimed water system. The structure includes a base monthly fee plus a $1 per 1,000-gallon usage fee, along with provisions for billing delinquency penalties. Key code additions clarify ownership of unwithdrawn water (which reverts to the county), financial responsibility for system improvements, and ownership of meters, which will remain with the utility but be paid for by the users to align with existing county practices. Cross-connection and backflow protections are strengthened, creating clear separations between

potable water, reclaimed water, and sewer systems, and requiring appropriate preventers for irrigation, fire suppression, and food service systems. The ordinance establishes enforcement authority, including right of entry for inspections, restrictions on use per water service agreements and Virginia regulations, signage requirements (purple labeling for reclaimed water), spill reporting responsibilities, and inclusion of reclaimed water within the SIU definition, which triggers ongoing sampling, testing, and annual inspections. Penalties range from notices of violation to administrative fines and, in some cases, criminal charges in certain circumstances. This framework ensures both operational compliance and protection and its reclaimed water infrastructure.

Mr. Cox asked if basic floor drains was going into the normal sewer system. Mr. Brindle replied that depending on where the floor drain is, most of it, if it's going to be like a compensated drain, or like a sump pump or something like that, should actually discharge to surface. We have several provisions in the code, not just the data centers, but across the board, that things like gutter systems and anything that's really not sanitary waste is not supposed to be entering the sewer system. Mr. Holland asked if annual inspections were the best practice in VA for these environments and systems, especially when they are new. Wouldn't you want them to be quarterly or biannually to make sure things are being managed properly? Mr. Brindle responded that annual inspections are the default and what's standard for most SIUs, which is the minimum required by the state. If there was anything we had any level of concern about, there's nothing that prevents us from going in more for your money. Ms. Epple asked what's the main concern and what does cleanup look like if they had a pipe burst or something. What would that look like. Mr. Brindle explained that it would be very case-dependent. What we're dealing with at present is that Virginia DEQ, even though, as we've discussed, that we are, we're taking water that usually go into the stream and cleaning it up to an even further level, they still consider reclaiming water to be sewage, and that's how the state treats this, and that's why anything that we have as far as maintenance and cleaning purposes of the system is being diverted Back To the sewer if we were to have a discharge point out in the system, that discharge point would be regulated as if it was a discharge from a wastewater plant. Mr. Edwards added that one of the difficult things is if you go west like California or Arizona, there are really advanced reuse regulations, because, like California pretty much it comes out of your wastewater plant, it goes back into your water plant, just because water is so scarce. In the state of Virginia reclaimed water is so seldomly used. The state of Virginia really has not invested in reclaimed reuse regulations. So just kind of default Well, the only regulation we have is wastewater regulations. It came from a wastewater plant. We're going to treat as wastewater. Mr. Brindle added that much of the reclaimed water work with the data centers is based on the recent renewal of the Aquia Wastewater Treatment Plant permit obtained earlier this year. The renewal now includes an entire additional section specifically addressing reclaimed water regulations, outlining the responsibility to regulate and oversee all related activities.

b. Proposed 2026 Meeting Schedule – Ms. Epple asked for a motion on the proposed 2026 meeting schedule. Mr. Gundersen asked that everyone make note that there is a scheduled special meeting in March that will deal with rates. Ms. Epple motioned to accept the schedule with Mr. Cox providing the second. The schedule was unanimously approved.

XII. Unfinished Business – None

XIII. New Business – None

XIV. Ms. Epple motioned to adjourn, Mr. Bain second. Meeting unanimously adjourne