

NOTICE AND CALL OF MEETING

LAS VEGAS VALLEY WATERSHED ADVISORY COMMITTEE

Tuesday, April 14, 2026 2:00 p.m.

MEETING TO BE HELD VIRTUALLY

Join Microsoft Teams Meeting: **1-702-625-8405** / Conference ID: **809 344 290#**

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Visit our website at www.snwa.com for Las Vegas Valley Watershed Advisory Committee agenda postings, copies of supporting material and approved minutes. To receive meeting information, including supporting material, contact the agenda coordinator at (702) 822-8501 or agendas@snwa.com.

Any Committee member may combine two or more agenda items for consideration, consider an item out of order, remove an item from the agenda or delay discussions relating to an item on the agenda at any time.

COMMENTS BY THE GENERAL PUBLIC

NO ACTION MAY BE TAKEN: This is a period devoted to comments by the general public pertaining to items on this agenda. If you wish to speak to the Committee about items within its jurisdiction, but not appearing on this agenda, you must wait until the "Comments by the General Public" period listed at the end of this agenda. Please limit your comments to three minutes or less. No action may be taken on a matter not listed on the posted agenda.

ITEM NO.

1. *For Information Only:* Introductions
2. *For Possible Action:* Approve Meeting Minutes for October 21, 2025 and January 27, 2026
3. *For Information Only:* Receive an Informational Update on Items Related to the Las Vegas Valley Watershed Advisory Committee (LVVWAC) that May Appear on Future Regular Board Meetings of LVVWAC Members' Appointing Agencies
4. *For Possible Action:* Select a Chair and Vice Chair for the LVVWAC
5. *For Possible Action:* Review and Approve the 2024/2025 LVVWAC Accomplishments Document
6. *For Possible Action:* Review and Approve the Revised Cooperative Agreement, including New LTOP Reserve Fund Policy Text
7. *For Information Only:* Receive an Update on the Stormwater Quality Management Committee (SQMC)
8. *For Information Only:* Receive an Update from Wastewater Dischargers
9. *For Information Only:* Set Next Meeting Date/Time and Propose Items for the Next Meeting's Agenda

COMMENTS BY THE GENERAL PUBLIC

NO ACTION MAY BE TAKEN: At this time, the Committee will hear general comments from the public on matters under the jurisdiction of the LVVWAC. Please limit your comments to three minutes or less.

Approved:


Joemel Llamado, Chair
Las Vegas Valley Watershed Advisory Committee

THIS MEETING HAS BEEN PROPERLY NOTICED AND POSTED IN THE FOLLOWING LOCATIONS:

Southern Nevada Water Authority
100 N. City Parkway, Ste. 700
Las Vegas, NV 89106

LAS VEGAS VALLEY WATERSHED ADVISORY COMMITTEE

Virtual Meeting Conducted via Microsoft Teams

October 21, 2025

2:00 p.m.

Members Present:

Keiba Crear, *Las Vegas Valley Water District (LVVWD, alt.)*
Dan Fischer, *Clark County Water Reclamation District (CCWRD, alt.)*
Priscilla Howell, *City of Henderson (COH)*
Lisa Kremer, *Clark County (CC)*
Joemel Llamado, *City of North Las Vegas (CNLV)*
Zane Marshall, *Southern Nevada Water Authority (SNWA)*
Andrew Trelease, *Clark County Regional Flood Control District (CCRFCD)*
Charles Trushel, *City of Las Vegas (CLV)*

Also Present:

Patrick Almeida	Deena Hannoun
Taryn Alves	John Hiatt
Erik Anderson	Ryan Pearson
Steven Anderson	AJ Rodrigues
Jason Bailey	Kristina Sasser
Eric Bauer	John Solvie
Elizabeth Bickmore	David Stoft
Brian Carlson	Todd Tietjen
Richard Donahue	Debbie Van Dooremolen
Shonna Dooman	Xiaoping Zhou
Jason Eckberg	

1. Welcome/Call to Order

Chair Joemel Llamado called the meeting to order at 2:01 p.m.

2. Public Comment

Seeing no request for public comment, Joemel moved forward with the meeting.

3. Introductions

Attendees are listed above.

4. Approve April 8, 2025, Meeting Minutes

Motion to approve the minutes passed.

5. Receive an Informational Update on Items Related to the Las Vegas Valley Watershed Advisory Committee (LVVWAC) that May Appear in Future Regular Board Meetings of LVVWAC Members' Appointing Agencies

There were no comments from the committee members.

6. Approve the Las Vegas Wash Long-Term Operating Plan 2026/2027 Budget

Keiba Crear presented the 2026/2027 Las Vegas Wash Long-Term Operating Plan (LTOP) budget, the fourth budget since LTOP implementation began. All funding categories remained the same, including Erosion & Stormwater, Jurisdictional & Regulatory (i.e., Stakeholder Process), Public Outreach, Funding, Water Quality and Environmental Resources. The only adjustment made to the budget is the annual increase of 2.5 percent, bringing the total operating budget to \$2,843,560. The program expects \$312,625 from the Bureau of Reclamation (BOR), and \$2,530,935 in local contributions. She noted that the BOR funds are currently delayed due to the federal government shutdown, but we historically receive the full BOR amount once government operations resume. If not received, staff will consider budget reductions. The allocations for each entity were reviewed. The proposed budget covers July 1, 2026, through June 30, 2027, and was presented early to support the agencies' internal budget planning.

A motion to approve the 2026/2027 LTOP budget passed unanimously.

7. Review and Approve the LTOP Reserve Fund Policy

Keiba presented the proposed LTOP reserve fund policy, noting a current reserve balance of \$730,938 to be used for extraordinary weir repairs and other emergencies. Staff reached out to LVVWAC members to examine their reserve policies and make recommendations for different reserve funding options. Two options for target amounts were presented: (1) a reserve equal to 50% of the annual budget (\$1.4 million), or (2) a reserve equal to 100% of the annual budget (\$2.8 million). She also presented one option for authorization to use reserve funds: staff can expend up to 50% of the reserve without first seeking LVVWAC approval. She clarified that operating funds not spent on programs within the allocated budget would be put into this reserve, up to the reserve amount. Keiba opened the item for discussion by the committee, stating that once a target amount is determined for the reserve, legal counsel will update LVVWAC bylaws to be approved by the committee at a future meeting.

Priscilla Howell proposed the creation of a working group to further understand the lifecycle of the weirs and to give a better idea of weir maintenance costs. Keiba reassured LVVWAC members that the purpose of the reserve is for extraordinary costs not covered within the annual budget. Keiba brought Ryan Pearson, head engineer on the project, into the conversation. Ryan agreed that a working group could be beneficial and provided rough estimates on weir project and maintenance costs. Andrew Trelease offered that CCRFCD just kicked off a conditional assessment program to examine facilities and their lifespans, and to create standard operating procedures to investigate these issues. Zane Marshall informally proposed setting the reserve fund at \$2.8 million. Dan Fischer first commended staff for the current reserve fund but opposed the \$2.8 million amount, citing a steep jump from current funds in the account. Andrew thought that \$2.8 million makes more sense as \$1.4 million would not be sufficient for 2025 costs. Conversation continued amongst LVVWAC members that while weir construction, planning and design are costly, the intent of these funds is to deal with emergency repairs.

After deliberation, Priscilla made a motion which proposed the \$2.8 million target amount and adjusted the pre-approved percentage for use of the reserve fund to 25 percent. Dan suggested lowering the amount to 10 percent, and Priscilla amended her motion to that percentage. None

opposed and the motion passed. Legal counsel will draft policy text for the LVVWAC bylaws for potential action in April.

8. Receive an Update on the Las Vegas Wash Coordination Committee

Debbie Van Dooremolen, SNWA, gave the update. The Las Vegas Wash Coordination Committee (LVWCC) continues in its mission to stabilize and enhance the Las Vegas Wash (Wash), as directed by the CAMP and LTOP. The LTOP budget is now in year two of a five-year interlocal agreement. For Erosion & Stormwater activities, crews completed maintenance on five weir sites and three stockpile sites for \$1.4 million. Wash water quality data shows lower total suspended solids levels and a substantial decrease in perchlorate levels related to the Athens Channel. Debbie reported on ongoing monitoring of birds, bats, large mammals and benthic macroinvertebrates at the Wash. The LVWCC is currently in long-term operations, and while there are no new planting sites, maintenance and management of existing sites continues. There are more than 600 acres of total revegetation, and tamarisk is down 99 percent. Lastly, Debbie reported on outreach efforts, which had attendance of approximately 13,000, and she stated that the next LVWCC meeting is scheduled for October 28, 2025.

9. Receive an Update on the Clark County Wetlands Park

Elizabeth Bickmore, Clark County Wetlands Park (Wetlands Park), presented the update. She highlighted the completion of Phase 1 of the Wetlands Loop Trail project, with trail design currently under BOR review. A new barrier project is in place to create a park perimeter to help prevent illegal dumping in Wetlands Park, with plans to work with other jurisdictions to expand this project. Maintenance efforts include the purchase of a TRUXOR amphibious marsh mower to improve water quality and flow, renewal of a four-year agreement with the National Park Service (NPS) for weed management and a five-year landscaping contract with BrightView. Public safety continues to be a priority; they are working together with the Southern Nevada Hazardous Fuels Reduction Group to determine fire protection levels within the park and on a Bureau of Land Management (BLM) proposal for fire mitigation. This proposal was submitted October 1, and Elizabeth stated that Wetlands Park is hoping to get additional funds to address fuel loads in Clark County. The park experienced four fires in 2025, affecting 165 acres. The Hollywood Boulevard Extension project is at 60 percent design for Phase 2, supporting future weir installation on Duck Creek. Elizabeth reported that community events and children's programs continue to be a success through field trips and events such as the new BLM Fire Prevention Day. In 2024, approximately 700,000 people visited the park, generating \$58,000 in store revenue and increased digital engagement. Lastly, Elizabeth reported that Placer.ai is now being used to support demographic tracking.

10. Receive an Update on Regional Water Quality

Todd Tietjen and Deena Hannoun, SNWA, presented the update. Todd reported that Lake Mead's water quality remains good, with no major concerns. Data collected from the Colorado River entry point into Lake Mead shows the water entering the lake is warmer than usual, decreasing dissolved oxygen levels. Algal toxins remain low overall, except in Lake Mohave, which showed a higher concentration likely due to wind patterns. Current lake levels are at 1,057 feet above sea level, and with the new water year just beginning, estimated predictions show Lake Mead between 1,053 feet and 1,059 feet by the end of 2026. Todd reported that his team is working to develop an eDNA screening for early identification of invasive mussel

species. He also shared updates on weather stations located throughout Lake Mead which provide real-time data on air and water temperatures, wind speed and direction, wave height and direction, and relative humidity and pressure, with all data tracked online. His team is also working on the rebuilding and overall cleanup of the water quality database, which is now in the testing phase.

Deena presented modeling projects focused on the impacts of water temperature at the Hoover Dam intake, 3D modeling of negative water quality scenarios, and optimization of chlorine dosing at water treatment facilities. She highlighted the team's achievements in a recently published article in *Environmental Modeling and Software*, which compares 2D to 3D modeling to place the location of the Las Vegas Wash plume relative to the drinking water intake, and she noted the addition of two new postdoctoral students to support model building and calibrating the system to establish benchmark standards.

11. Receive an Update on the Lower Las Vegas Wash

Zane gave an update and began with the history of the Lower Las Vegas Wash project to help the committee better understand where the project currently stands. He discussed erosion in the late 1990s. The NPS built four weirs to mitigate this issue, but erosion continued. In 2014, the LVVWAC began a letter writing campaign asking congressional leaders to fund/build additional erosion control structures in the reach. In 2016, funding was deemed unavailable. Since 2019, SNWA has focused on Weirs 5 through 9, particularly Weir 5, conducting extensive environmental compliance work. Following Weir 3's failure in 2023, a \$20 million BOR grant was awarded for a new structure. Zane stated that administrative changes earlier this year revised this agreement to now require SNWA to assume long-term weir maintenance, terms that are deemed unfeasible within the organization. He shared that the original cost estimate for Weirs 5 through 9 was \$120 million, and according to an engineering update six months ago, the estimated project cost stands at approximately \$490 million today. Zane shared that many discussions were held, and staff ultimately decided to end the project. The BOR has been notified of the termination and staff is working to return unused funds and create a plan for the unused project materials.

Priscilla asked what consideration was taken in terminating the project as it pertains to other individuals worried about weir failure such as the Federal Highway Administration and COH, who are concerned about ongoing erosion and infrastructure, particularly the Northshore Road bridge. Zane confirmed that NPS leadership was briefed on the severity of the issue but still chose not to commit maintenance funding.

12. Receive an Update from Members and Staff Regarding Water Resources, Stormwater, Wastewater and Water Quality

Zane announced that the 2026 Water Resource Plan and 2026 Water Budget will go before the SNWA Board of Directors in November 2025. Andrew noted that the Stormwater Quality Management Committee's (SQMC's) monthly meeting has been rescheduled to November 10, to avoid the holiday. Priscilla asked Brian Carlson to give an update on COH projects. Brian reported that completion of the Phase 4 project at the Kurt R. Segler Water Reclamation Facility is set for December 16, adding that it is a 12 million gallons per day (MGD) capacity expansion to allow for maintenance redundancy and infrastructure projects. He also gave

updates on several lift station projects, including the Cadence Lift Station, which will have a capacity of over 3 MGD. No other updates were made.

13. Set Next Meeting Date and Propose Items for the Next Meeting's Agenda

Joemel Llamado reviewed proposed agenda items for the next meeting, including the LVVWAC Accomplishments Document and updates on the SQMC and water dischargers. Dan suggested adding an item on the draft LTOP reserve fund policy. He also proposed additional discussion about future weir costs, possibly within a working group. Keiba stated that the Operations Study Team would be tasked with working through the process to determine future weir costs and Steven Anderson, SNWA legal counsel, will work on the bylaws revision addressing the new reserve fund policy.

She stated that both proposed items will be coordinated with staff to determine whether they can be on the next agenda or if more time is needed. She assured all members that updates will be provided as needed. The LVVWAC unanimously approved a motion to set the next meeting for April 14, 2026, at 2 p.m.

14. Public Comment

There were no comments from the public. Meeting adjourned.

LAS VEGAS VALLEY WATERSHED ADVISORY COMMITTEE

Virtual Meeting Conducted via Microsoft Teams

January 27, 2026

2:00 p.m.

Members Present:

Keiba Crear, *Las Vegas Valley Water District (LVVWD, alt.)*
Dan Fischer, *Clark County Water Reclamation District (CCWRD, alt.)*
Priscilla Howell, *City of Henderson (COH)*
Lisa Kremer, *Clark County (CC)*
Joemel Llamado, *City of North Las Vegas (CNLV)*
Zane Marshall, *Southern Nevada Water Authority (SNWA)*
Andrew Trelease, *Clark County Regional Flood Control District (CCRFCD)*
Charles Trushel, *City of Las Vegas (CLV)*

Also Present:

Patrick Almeida	Richard Donahue
Taryn Alves	Jason Eckberg
Erik Anderson	Alexei Luganov
Steven Anderson	John Tennert
Jason Bailey	Todd Tietjen
Eric Bauer	Debbie Van Dooremolen
Elizabeth Bickmore	Xiaoping Zhou
Danielle Collins	

1. Welcome/Call to Order

Chair Joemel Llamado called the meeting to order at 2:02 p.m.

2. Public Comment

Seeing no request for public comment, Joemel moved forward with the meeting.

3. Introductions

Attendees are listed above.

4. Receive Presentation, Discuss and Authorize Staff to Proceed with Contracting a Consultant for the Weir Lifespan Assessment

Ryan Pearson, SNWA, presented an overview on the condition and lifespan of the Las Vegas Wash weir system. He explained the types of weirs currently in place, including flexible riprap structures, roller-compacted concrete structures, and a concrete-skinned gabion structure. He emphasized that all the weirs rely on sheet pile cutoff walls as a critical structural component and noted that these elements are difficult to inspect due to their submerged nature.

Ryan reviewed the 2020 facilities assessment report which documented surface conditions but did not evaluate sheet pile integrity. He discussed ongoing maintenance activities,

including sediment and vegetation removal, and noted that maintenance relies primarily on visual inspection which is required annually by the Las Vegas Wash Long-Term Operating Plan. While no signs of imminent failure have been observed, he explained that visual inspections alone cannot assess below-grade deterioration, which limits confidence in long-term lifespan estimates. An assessment of the sheet pile is most desirable but requires expertise.

The presentation included a discussion of potential strategies for estimating remaining weir life, such as examining corrosion rates, and in-situ testing. Estimated replacement costs were also discussed, based on historical construction costs and costs based on current construction conditions. He added that each approach has limitations and more accurate planning would require improved condition data and external expertise.

Committee members had extensive discussion regarding the challenges of assessing sheet pile conditions and the absence of an established plan for this type of infrastructure. Dan Fischer recommended referring to the experts in the Operations Study Team to deliver ideas to help make decisions. CCRFCD's recent efforts to develop a standard operating procedure (SOP) and conduct a pilot assessment may serve as a potential model. Priscilla Howell and Andrew Trelease agreed that there is a need for consistency and better understanding of weir lifespan to determine long-term financial planning, and avoid unexpected future capital funding demands. Zane Marshall acknowledged that while no immediate structural failures are anticipated, proactive asset management is necessary which might involve a professional services agreement. Ryan discussed the limitations of in-house expertise and members agreed that outside technical assistance would be required to establish an SOP that defines evaluation criteria and supports lifecycle cost planning. It was noted that firm cost estimates cannot be determined until a qualified consultant is selected and negotiations begin.

Following the discussion, Joemel Llamado summarized the overall discussion points and made a motion to authorize Ryan's team to continue working with the Operations Study Team, begin preliminary scope and develop an SOP, and authorize him to have cost discussions with a selected firm, and return with proposed scope options and associated cost ranges for future consideration and approval. Dan seconded the motion. The motion was approved unanimously.

5. Public Comment

There was no public comment. Meeting adjourned at 3:28 p.m.



Regional Water Quality Plan 2024 & 2025 ACCOMPLISHMENTS

LAS VEGAS VALLEY WATERSHED ADVISORY COMMITTEE

City of Henderson | City of Las Vegas | City of North Las Vegas
Clark County | Clark County Water Reclamation District
Clark County Regional Flood Control District
Las Vegas Valley Water District | Southern Nevada Water Authority

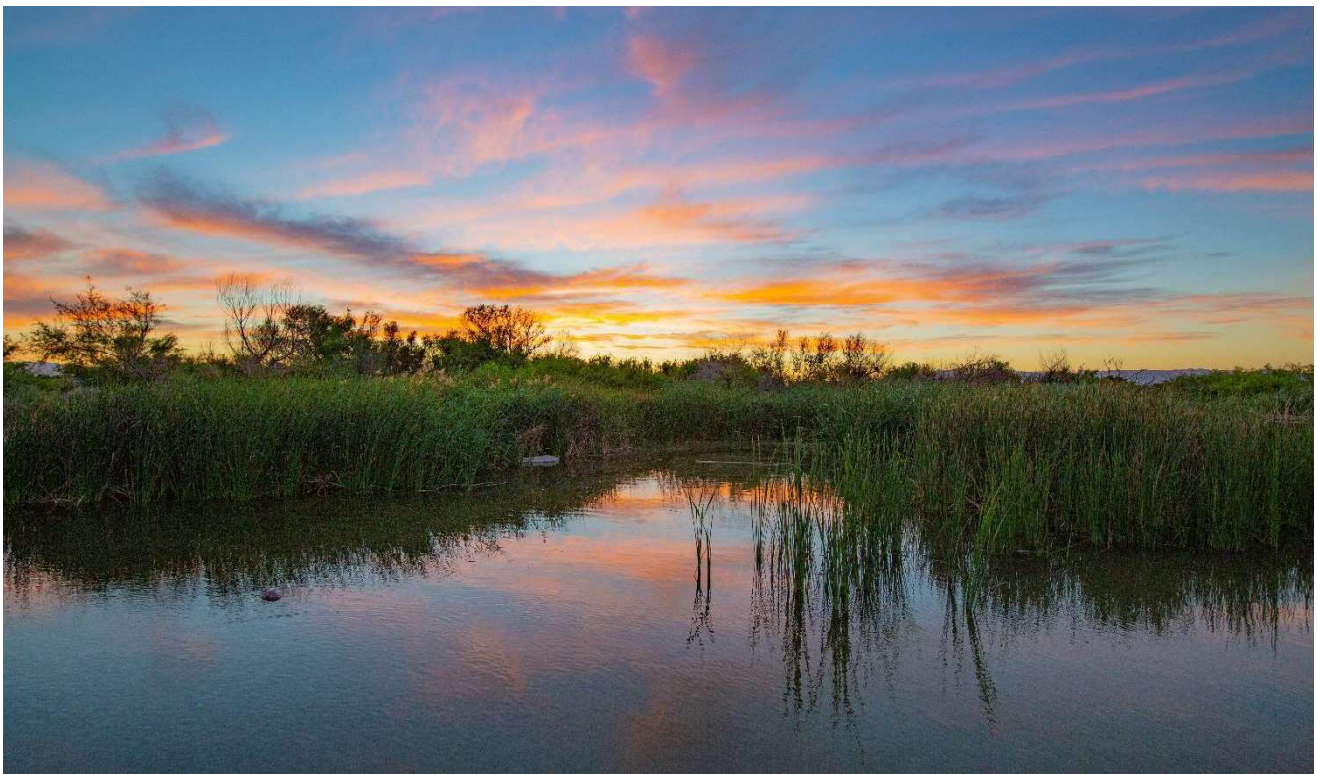
Regional Water Quality Plan | 2024 & 2025 Accomplishments

In January 2009, the Las Vegas Valley Watershed Advisory Committee (LVVWAC) adopted a Regional Water Quality Plan to help meet its mission to:

Protect, preserve and enhance the quality and quantity of water resources in the Las Vegas Valley watershed and to sustain economic well-being and protect the environment for present and future generations.

In December 2012, the LVVWAC approved a Strategy Document that further defines its goals and summarizes actions needed to fulfill the Regional Water Quality Plan.

Each LVVWAC member agency has individual responsibilities that contribute to the management of the Las Vegas Valley watershed. The committee considers all water sources in the hydrographic basin as part of the watershed. This includes Colorado River water, groundwater, shallow groundwater, urban runoff, stormwater and treated wastewater flows. This document outlines the important role of local agencies to protect the Las Vegas Valley watershed's resources, including municipal drinking water supplies, wildlife habitat and recreation. The following is a summary of the LVVWAC's collaborative accomplishments for 2024 and 2025.



Las Vegas Wash



GOAL ONE

Protect Lake Mead as a source of water for Southern Nevada and downstream users

The Las Vegas Valley accesses Nevada's Colorado River allocation through existing facilities at Lake Mead. The Muddy River, Virgin River and Las Vegas Wash also contribute inflows to Lake Mead. In 2024 and 2025, LVVWAC member agencies monitored and responded to upstream inflows to Lake Mead as they:

- Utilized the 2022–2023 Lake Mead Monitoring Plan and optimized resources by sharing staff and equipment to accomplish the goals of the plan;
 - Continued implementing the Las Vegas Wash Surface Water Quality Monitoring and Assessment Plan;
 - Conducted water quality sampling and analysis in Lake Mead, Las Vegas Wash, Muddy River, Virgin River and Colorado River above Lake Mead and below Hoover Dam;
 - Leveraged and initiated upgrades to the Lower Colorado River Water Quality Database — a database utilized by agencies in the lower Colorado River region to facilitate data sharing;
 - Expanded the capabilities of the Lake Mead Model to forecast potential water quality conditions under future water surface elevation scenarios;
 - Installed autonomous weather buoys on Lakes Mead and Mohave to collect and report conditions in real time; and
 - Continued to operate and maintain water quality monitoring platforms on Lake Mead to collect high frequency data.
- Continuing implementation of and compliance with the Las Vegas Valley National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Permit as issued by Nevada Division of Environmental Protection (NDEP) on February 5, 2024;
 - Completing all monitoring required for the MS4 and NPDES Wastewater Discharge permits, and reporting results to the state of Nevada (NDEP);
 - Continuing participation in the Las Vegas Wash Coordination Committee (LVWCC) and its sub-committees (Operations, Administrative and Research and Environmental Monitoring study teams); and
 - Continuing wastewater pre-treatment programs to monitor and prevent contaminants and industrial wastes from entering the wastewater collection system.

LVVWAC member agencies also managed non-point sources from the Las Vegas Valley:

- Revegetating about 10 acres along the Las Vegas Wash to protect against erosion and limit sediment and contaminant movement to Lake Mead;
- Supporting ongoing conservation initiatives that seek to limit outdoor water use, reducing urban runoff from the Las Vegas Valley;

The Clark County Water Reclamation District (CCWRD) and cities of Henderson, Las Vegas and North Las Vegas operate and maintain the community's wastewater treatment facilities. These facilities discharge highly treated wastewater to Lake Mead via the Las Vegas Wash. Additionally, many of these facilities provide



Annual tour of Las Vegas Wash for the LVWCC

reclaimed water for direct non-potable reuse at area parks, golf courses and industries.

In their management, coordination and optimization of water reclamation facilities in 2024 and 2025, LVVWAC member agencies:

- Operated collection systems with sanitary sewer overflows below the U.S. Environmental Protection Agency (EPA) benchmark for well-operated sewer systems of two overflows per year per 100 miles of sanitary sewer;
- Continued operation of state-of-the-art membrane bio-reactor treatment plants by the City of North Las Vegas (CNLV) and City of Henderson (COH);
- Continued operation of state-of-the-art advanced water treatment ultrafiltration membranes at CCWRD's Flamingo Water Resource Center (WRC);
- Continued construction of several capital improvement projects at the Flamingo WRC estimated at more than \$1 billion in contracts, including an expansion of the preliminary, primary and secondary processes, installation of new dissolved air floatation and thickener facilities for the solids dewatering processes, and upgrades of the Whitney and Lincoln lift stations;
- Initiated and continued construction of a new 12 million gallons per day (MGD) expansion of the Kurt R. Segler (KRS) Water Reclamation Facility (WRF) in COH, including \$99 million in contracts with a substantial completion date of December 26, 2025;
- Participated in water and wastewater treatment optimization studies;
- Engaged with NDEP and EPA to better understand and identify sources and trends of per- and polyfluoroalkyl substances (PFAS) in wastewater and drinking water sources; and
- Continued researching and identifying implications of PFAS regulation on the clean water community, including support of a statewide sampling program being implemented by NDEP.



GOAL TWO

Meet or surpass federal, state and local standards and regulations

Key water quality laws and regulations, such as the Clean Water Act, Safe Drinking Water Act and the Nevada Administrative Code are in place to safeguard local and regional water sources. While Southern Nevada's water treatment facilities address many source water quality challenges, proactive management of the Las Vegas Valley watershed remains key to protecting the region's overall water resources.

To protect Lake Mead, the Las Vegas Wash and associated tributaries, LVVWAC member agencies:

- Continued year-round phosphorus removal at wastewater treatment facilities to meet the 334 pounds-per-day waste load allocation for total phosphorus, surpassing permit requirements, which only require phosphorus removal between March 1 and October 31;
- Continued year-round ammonia removal;
- Developed and exceeded internal goals for minimizing sanitary sewer overflows;
- Continued implementation of and compliance with the Las Vegas Valley NPDES MS4 Permit;
- Completed wet and dry weather monitoring programs;
- Performed treatment studies that examined the removal of unregulated contaminants, such as endocrine-disrupting compounds (EDCs), perfluorooctanesulfonic acid (PFOS) and perfluorooctanoic acid (PFOA) in wastewater, which provided guidance on control strategies and the minimization of these contaminants in effluent discharges to the Las Vegas Wash and Lake Mead;
- Monitored Lake Mead weekly to determine the impacts of the inflows (Las Vegas Wash, Virgin River, Muddy River and Colorado River) on the Southern Nevada Water Authority (SNWA) intakes;
- Completed development of site-specific criteria for selenium in the Las Vegas Wash in partnership with the NDEP. The site-specific criteria were adopted by the Nevada State Environmental

Commission (SEC) in December 2022, and approved by the EPA in 2025;

- Completed a Use Attainability Analysis (UAA) of the tributaries in the Las Vegas Valley that are listed on the state 303(d) list in partnership with NDEP to determine if the listing remains applicable. Beneficial uses for the tributaries were designated by the SEC in December 2022; continued working with NDEP to address EPA comments;
- Monitored contaminants of emerging concern quarterly in the Las Vegas Wash, Lake Mead and below Hoover Dam; and



Las Vegas Wash flowing over Rainbow Gardens Weir

- Continued implementation of the Clark County 208 Area-Wide Water Quality Management Plan in collaboration with the Sewage and Wastewater Advisory Committee to address issues associated with water pollution, population growth and long-term planning as required under Nevada Revised Statutes and the Clean Water Act.

Ensuring that Southern Nevada's water meets or surpasses federal, state and local regulations is of key importance to LVVWAC member agencies. As such, the LVVWAC is proud to report that:

- Southern Nevada's water quality continues to

meet or surpass state and federal drinking-water regulations;

- COH, CLV and CCWRD earned the National Association of Clean Water Agencies Platinum Peak Performance Award for at least five years of consecutive 100 percent NPDES permit compliance. CLV achieved 26 consecutive years of compliance, COH reached 21 consecutive years of compliance and CCWRD achieved 13 consecutive years of compliance at the Flamingo WRC and 12 consecutive years of compliance at the Laughlin WRC;
- COH, CLV and CCWRD continued coordination and cooperation with SNWA, CNLV, University of Nevada, Las Vegas, and other partners (Biobot) to sample, analyze and study wastewater epidemiology as a method of monitoring and predicting COVID-19 and other respiratory virus pervasiveness in the community;
- COH completed all three-phases of a membrane replacement/upgrade project at the Southwest WRF. This upgrade replaced existing membrane cassettes with greater treatment capabilities in the same footprint;
- COH completed construction on the KRS WRF expansion which includes new high-speed turbo blowers, a 12-MGD basin and deep-bed sand filters;
- COH is adding eight lift stations to safely transport wastewater to the treatment plants so it can be returned to the Las Vegas Wash;
- CNLV successfully completed the final phase of the membrane expansion and replacement project at its WRF in September 2025. This project has increased treatment capacity from 25 to 35 MGD, in preparation for the city's growth;
- CNLV completed replacement of membrane diffusers in all six bioreactors;
- CNLV successfully completed construction of the flow equalization basin, with commissioning occurring in 2024;
- CNLV successfully completed the Sloan Channel

effluent conveyance repair project in 2025, eliminating leaks from the existing culvert box structures;

- CNLV operated the reuse water line between its WRF and Nellis Air Force Base, delivering 337 million gallons for irrigation use;
- CNLV conducted a flow and load capacity study to evaluate projected wastewater flows to determine timelines and phasing of the wastewater facility expansion;
- CLV completed the design phase for expansion and improvements to increase reliability of the headworks and dewatering processes at the Water Pollution Control Facility;
- CLV successfully completed the Filtration Facility Rehabilitation Project which replaced mechanical, electrical, instrumentation and controls equipment, and addressed concrete infrastructure corrosion;
- CLV continued the biological nutrient removal facility clarifier rehabilitation project replacing clarifier mechanical equipment.
- CCWRD is in the construction phase of installing additional headworks, primary clarifiers, biological nutrient removal trains, primary sludge thickeners and an additional dissolved air flotation tank at the Flamingo WRC to ensure sufficient capacity is available for the future and that current treatment goals can continue to be met;
- CCWRD is rebuilding its two largest lift stations, Whitney and Lincoln, and installing new interceptors to ensure current and future flows are kept in the system and safely conveyed to the Flamingo WRC; and
- CCWRD expanded its Quality Laboratory to include a research arm to study the removal of PFAS and high-risk substances through its wastewater treatment plants.



GOAL THREE

Preserve and enhance the natural, cultural, historic and recreational values of the watershed and Lake Mead

The Las Vegas Valley watershed includes the Lake Mead National Recreation Area, Clark County Wetlands Park (Wetlands Park) and Las Vegas Wash, which present opportunities for recreation and support important environmental resources including wildlife and habitat. To provide for recreation and manage wildlife and habitats, LVVWAC member agencies carried out several vital activities:

- The Las Vegas Wash Project Coordination Team (Wash Team) surveyed for federally threatened and endangered (T&E) bird species at the Las Vegas Wash. In 2024, biologists detected five Yuma Ridgway's rails (YRRA), a pair of southwestern willow flycatchers (SWFL) that fledged one young and a migrant yellow-billed cuckoo (YBCU). In 2025, biologists reported a record seven YRRA during surveys, a SWFL pair and a YBCU, including a pair on a probable breeding territory. A biological opinion (BO) was received in January 2024. The BO for desert tortoise remains in effect;
- The Wash Team continued the general invertebrate inventory at the Las Vegas Wash, identifying 27 new species for a total of 647;
- Wetlands Park enlisted 1,523 volunteers who contributed 4,323 hours during stewardship events in the 2024 and 2025 seasons. Collectively, they removed 34,793 pounds of trash, planted native plants, improved trails, removed weeds and conducted other site improvements across 310 acres within the park;
- Coordinated fuel reduction activities on 8.25 acres with Wetlands Park staff, Bureau of Land Management, Nevada Division of Forestry and Great Basin Institute;
- Staff conducted restoration, weed management and fuel reduction activities throughout the Wetlands Park; and
- COH provided and managed recreational opportunities in the Bird Viewing Preserve, hosting more than 22,000 visitors in 2024 and 23,528 in 2025, including international visitors from 22 countries.



Southwestern willow flycatcher nest

The LVVWAC supports the National Park Service's mission to provide enjoyment of scenery, natural and historic objects, and wildlife in a manner that will leave such resources unimpaired for future generations.

LVVWAC member agencies made the following progress in minimizing impacts on cultural resources:

- Conducted cultural resources compliance for weir maintenance on Bureau of Reclamation lands within Wetlands Park on a project-by-project basis; and
- Provided cultural resource reviews for weir maintenance activities, identifying no impacts.

LVVWAC member agencies also took the following measures to prevent and control invasive species:

- Monitored and facilitated weed treatments at the Las Vegas Wash on approximately 10 acres with the National Park Service Invasive Plant Management Team;

- Continued to monitor and evaluate quagga mussel populations in Lake Mead;
- Began monitoring the invasive golden mussel in Lake Mead; and
- Continued partnership with Nevada Department of Wildlife on removal efforts for the Australian redclaw crayfish at Wetlands Park.

The LVVWAC actively worked to support recreational uses and the health of fisheries and other water-dependent wildlife by:

- Managing and monitoring nutrient inputs from wastewater treatment plants to support a healthy fishery in Lake Mead;
- Monitoring selenium concentrations in the Las Vegas Wash and its tributaries to establish background concentrations and determine sources;
- Monitoring Lake Mead for the presence and concentrations of harmful algal blooms and associated toxins; and
- Ensuring that wastewater quality meets the water quality standards as determined by the NDEP for recreation.



GOAL FOUR

Sustain and coordinate water resources for future generations

LVVWAC member agencies address regional water resource planning and management by working collectively with various regional groups, such as the LVWCC and the Stormwater Quality Management Committee.

In 2024 and 2025, significant strides were made to improve the structural integrity of the Las Vegas Wash, provide for its long-term protection and maximize reclaimed water use and return-flow credits:

- Crews maintained 12 weirs. They removed 2,166 truckloads of clean spoils and vegetation, rebuilt the bank protection between Monson and Visitor Center weirs, and cleared vegetation and debris from the backwaters of the Upper Diversion and Pabco weirs. They also reestablished the lines and grades of seven weirs to their original designed and constructed positions using rock riprap;
- The Wash Team continued to implement the Las Vegas Wash Long-Term Operating Plan;
- COH, CLV, CNLV and CCWRD reclaimed 100 percent of their wastewater effluent by treating it to high standards and returning it to Lake Mead or distributing it to golf courses, parks, industries and other customers throughout the valley;
- COH completed a Wastewater Collection System Master Plan update that evaluates capacity of the system and identifies strategies to address plans for system expansion and capital improvement projects to support those strategies;
- Reclaimed water was efficiently utilized at Wetlands Park and the COH Bird Viewing Preserve to support wildlife habitats;
- The Lake Mead Model was used to forecast changes with changing water levels in Lake Mead to better advise planning for water and wastewater treatment needs; and
- CCWRD and SNWA (and its member agencies) continued a septic conversion program to encourage septic users to connect to the sanitary sewer to reclaim the water and obtain return-flow credits.



Weir maintenance work on Las Vegas Wash

Members worked to conserve water resources by:

- Enforcing policies aimed at reducing water use such as day of the week and time of day watering restrictions; turf limits; policies restricting water from flowing or spraying off property; fountain, water feature and mist system restrictions; landscape codes and vehicle, building and equipment washing restrictions; and
- Approving revisions to Las Vegas Valley Water District Service Rules that aid in conservation by removing all non-functional grass by 2027 and prohibiting the installation of grass in new development; implementing standards for limiting the size of residential pools, spas and water features; incentivizing the abandonment of septic systems and connection to the municipal sewer system; prohibiting evaporative cooling in new development and incentivizing the replacement of evaporative coolers with dry-cooled systems; and prohibiting new golf course development and reducing water budgets at existing golf courses.

In addition, water and wastewater treatment and delivery requires significant energy resources, linking the need to conserve both water and energy and develop renewable energy resources. LVVWAC member agencies have started several renewable energy projects that reduce dependence on non-renewable and less-efficient energy sources. The following are progress highlights:

- CLV continued to formally explore options for the beneficial use of biogas generated by its anaerobic digesters;

- CLV continued beneficial use of biosolids by diverting a portion of biosolids for further processing and use; and
- CLV continued its process air blower replacement project and selected new technologies to provide oxygen to biological processes, which are more energy efficient than the current blowers.



GOAL FIVE

Manage flood risks

Despite an average rainfall of only about four inches per year, the region often experiences periods of intense rainfall and subsequent flash flood events. To minimize the loss of life and property, and to address water quality impacts, LVVWAC member agency Clark County Regional Flood Control District (CCRFCD):

- Completed an update to the Las Vegas Valley flood control Master Plan in 2023, adopted in early 2024;
- Continued implementation of the Master Plan for Flood Control Facilities in Clark County. As of June 2025, there were 111 detention basins and approximately 713 miles of channels and underground storm drains (of which 140 miles are natural, or unlined, washes) throughout Clark County; total flood control funding to date for capital improvements is approximately \$2.52 billion;
- Completed eight flood control construction projects during fiscal year 2024–2025 in Clark County at a cost of approximately \$177.0 million in CCRFCD funds;
- Spent \$15,433,500 in fiscal year 2023–2024 and \$15,655,147 in fiscal year 2024–2025 on the CCRFCD Maintenance Work Program to ensure the efficient and reliable operation of the flood control network. An additional \$22 million has been allocated for fiscal year 2025–2026;
- Completed design and construction of three low-flow features in regional detention basins (Rancho, Oakey and Gowan North detention basins), bringing the total number of low-flow features constructed in the Las Vegas Valley to 14. Low-flow features are designed to help trap pollutants in detention basins during smaller storm events;
- Continued to expand and maintain the Flood Threat Recognition System (FTRS). The FTRS is a network of more than 221 rain gauges, weather and water level monitoring stations throughout Clark County that provides valuable meteorological data to CCRFCD, the National Weather Service, emergency managers and the general public;
- Performed more than 450 site visits for system upgrades and preventive maintenance on the FTRS, with additional visits for needed repairs;
- Continued the CCRFCD's school outreach program, reaching more than 4,100 students at 41 schools in 2024 and 4,150 students at 52 schools in 2025 with messaging about flood safety and stormwater quality;
- Conducted public outreach via media during the annual "Flash Flood Awareness" press conferences held in June 2024 and June 2025;
- Attended more than 170 community events, including underserved communities, to distribute materials reinforcing stormwater quality and flood safety to residents and visitors;
- Continued the flood safety and stormwater quality advertising program. Stormwater quality messaging generally airs from March through May and from November through December each year. Created new stormwater quality ads ("No-No Ball") to encourage residents to properly dispose of household debris, motor oil and pet waste; and
- Produced and aired "The Flood Channel" television program featuring public service announcements and programming related to flood safety and stormwater quality.



Confluence of Flamingo Wash and Las Vegas Wash



GOAL SIX

Build community awareness and support for regional watershed management

Understanding that the public has an impact on the overall water quality of the valley's watershed, the LVVWAC engaged with the community to enhance awareness and support of regional watershed management. In 2024 and 2025, LVVWAC member agencies contributed to presenting a unified public education program, as they:



Volunteers planting at a Wash Green-Up

- Received an estimated 1,523,118 total visitors at Wetlands Park, and 52,850 people visited the Exhibit Gallery and Nature Store;
- Engaged 28,775 youth and adults with Wetlands Park through education, volunteer programs, art, guided tours and events, including 4,281 students through in-person and virtual field trips and off-site assemblies, and engaged 4,498 at outreach events;
- Logged 19,159 volunteer hours of hands-on stewardship, information services, field trips and program assistance at Wetlands Park;
- Hosted Wetland Walker Program that fostered participants to collectively walk the migration distance of wildlife species, tracking walking mileage and engaging in an interpretive program;
- Installed an interactive watershed exhibit in the Nature Center Exhibit Gallery in partnership with the Clean Water Team through an NDEP grant;
- Created a Wetlands Navigator application that guides visitors through the Nature Center Exhibit Gallery, Nature Preserve and Wetlands Park trails. Translated in Spanish and Tagalog, the application has been used 57,000 times, reaching visitors from all over the world;

- Implemented education grants from NDEP on non-point source pollution entering the Las Vegas Wash and Lake Mead. NDEP partially funded Mabel Hoggard fifth-grade field trips and the Wash Green-Up in 2024 and the Green-Up in 2025;
- Educated the community through outreach activities about the Las Vegas Wash and LVWCC, participating in 41 events reaching more than 29,000 people, including the annual World Wetlands Day science symposium for high school students, site tours and other activities;



High school students listen to a presentation at the World Wetlands Day science symposium

- Updated lvwash.org and maintained a presence on social media;
- Performed public outreach at Bark in the Park, the Wash Green-up, Earth Day at the Springs Preserve, BioBlast at the Wetlands Park, and the Las Vegas Science and Technology Festival; and
- Gave 30 tours at COH's KRS WRF and Southwest WRF to 285 visitors ranging from local elementary to university engineering and nursing students and conference attendees and interested public.

The LVVWAC integrated existing stakeholder programs to specifically address watershed issues:

- All agencies promoted water conservation and resource management through the "Be Water Smart" and "Pain in the Drain" programs; and
- A page on SNWA's website (snwa.com) provided enhanced accessibility to LVVWAC information, carrying documents and presentations, as well as posted agendas and meeting minutes.

LVVWAC 2024/2025 Regional Water Quality Plan Accomplishments

Mission

- *Protect, preserve and enhance the quality and quantity of water resources in the Las Vegas Valley watershed and to sustain economic well-being and protect the environment for present and future generations.*

Goal 1: Protect Lake Mead as a Source of water for Southern Nevada and Downstream Users

- Collaboratively conducted research on PFAS and other contaminants to identify sources and treatment.
- Wastewater Treatment/Water Reclamation Facility improvements and expansions
- Collaborative monitoring of Lake Mead and the Las Vegas Wash
- Complete rebuild of the Lower Colorado River Water Quality Database
- Continued expansion of the Lake Mead Model and other models

Goal 2: Meet or Surpass Federal, State, and Local Standards and Regulations

- Continued removal of ammonia and phosphorus by wastewater treatment facilities
- Exceeded goals for minimizing sanitary sewer overflows
- Continued implementation and compliance with the LV Valley MS4 permit
- Treatment studies for the removal of EDCs, PFAS/PFOA, etc.
- Received site specific criteria approval for Selenium in the Las Vegas Wash
- Continued to meet or surpass drinking water regulations

Goal 3: Preserve and Enhance Natural, Cultural, Historic, and Recreational Values of the Watershed and Lake Mead

- Surveys for Threatened and Endangered Birds continue
- Invertebrate survey conducted
- The Wetlands Park Volunteers removed almost 35k pounds of trash, planted native plants and conducted other improvements
- Weed management, plant restoration, and fuel reduction carried out throughout the park
- COH Bird Viewing Preserve had >22k visitors from 22 countries
- Began monitoring for Invasive Golden Mussels
- Continued removal efforts to Australian Redclaw Crayfish

Goal 4: Sustain and Coordinate Water Resources for Future Generations

- Maintenance conducted on 12 weirs
 - Remove spoils and vegetation
 - Rebuild bank stabilization
 - Restore lines and grades
- LTOP implementation continued
- CCWRD and SNWA continued septic conversions to boost return flow credits
- Members enforced water conservation policies
- CLV continues to explore biogas generation

Goal 5: Manage Flood Risks

- Completed an update of the Las Vegas Valley Flood Control Master Plan
- Completed 8 flood control projects
- Continued to expand and maintain the Flood Threat Recognition System
- Attended more than 170 community events

Goal 6: Build Community Awareness and Support for Regional Watershed Managers

- Over 1.5 million visitors to the Wetland Park
- Hosted Wetland Walker Program
- Continued 5th grade Mabel Hogard Field Trips
- Wash Green Ups in 2024 and 2025
- All agencies promoted water conservation and resource management through the “Be Water Smart” and “Pain in the Drain” programs



LAS VEGAS WASH
COORDINATION COMMITTEE

LVVWAC Cooperative Agreement: Draft LTOP Reserve Fund Policy Text

Keiba Crear

April 2026



Background

- In October 2025, LVVWAC approved a reserve fund of up to one year of operating expenses (currently ~\$2.8M), with SNWA able to spend up to 10% without prior approval. This replaces the \$300k sinking fund.
- While we had discussed adding the new language to the bylaws, the text about the sinking fund is in the current LVVWAC cooperative agreement, so that is the document to which the revisions must be made.



LAS VEGAS WASH
COORDINATION COMMITTEE



Draft Revisions to Cooperative Agreement

7.22 Reserve Fund. Using unspent operating dollars from the annual LTOP budget, the SNWA has established and shall maintain, in cooperation with the other PARTIES, a reserve fund to cover emergency costs. A sinking fund of \$300,000 in 2019 dollars was recommended in the LTOP. Costs, particularly those associated with O&M of stabilization facilities, have increased substantially. The PARTIES herein redefine the fund as a reserve fund, increase the target amount of the fund and create guidelines for its use.



LAS VEGAS WASH
COORDINATION COMMITTEE



Draft Revisions to Cooperative Agreement (cont)

7.22.1 Amount. The reserve fund shall have a maximum balance of one year's worth of operating expenses as defined by the LTOP budget to ensure sufficient funding for emergency costs incurred by the PARTIES in executing actions related to the LTOP and as deemed necessary by the SNWA.



LAS VEGAS WASH
COORDINATION COMMITTEE



Draft Revisions to Cooperative Agreement (cont)

7.22.2 Funding. At the end of each fiscal year, operating dollars not spent on programs within the allocated LTOP budget will enter the reserve fund, up to the maximum reserve amount. If the maximum reserve amount has been reached, excess funds will be used to offset future contributions to the LTOP budget by the PARTIES, using the percentages established in the LVVWAC interlocal agreement.



LAS VEGAS WASH
COORDINATION COMMITTEE



Draft Revisions to Cooperative Agreement (cont)

7.22.3 Expenditures. SNWA staff can expend up to 10% of the reserve without first seeking LVVWAC approval at a regular or special meeting. LVVWAC bylaws state that LTOP funds received from the PARTIES may only be expended on functions, activities, and associated administrative support for matters within the scope of the LTOP. Additional LVVWAC funds may be expended on matters outside the scope of the LTOP by unanimous vote of the LVVWAC members.



LAS VEGAS WASH
COORDINATION COMMITTEE



Next Steps

- SNWA will distribute the draft text to members and work with their legal counsels.
- Once text is finalized, the LVVWAC will meet, either in a special meeting or at its October meeting, to approve the revised agreement.
- Finally, the members will take the revised cooperative to their boards/councils for approval.



LAS VEGAS WASH
COORDINATION COMMITTEE



Questions?





HENDERSON



Stormwater Quality Management Committee Update

April 14, 2026

Agenda

1. SQMC Activities
2. MS4 Permit Requirements
3. Overview of the Draft Revised SWMP
4. Questions/Discussion



SQMC Meetings

- SQMC met four times since April 2025
 - May 13, 2025
 - August 12, 2025
 - November 10, 2025
 - February 10, 2026
- Topics included updates on the implementation of the new permit, completion of the annual report, and public outreach activities



SQMC Meetings

- Presentations to the SQMC included:
 - Results of bi-annual survey of residents
 - How to prepare for an inspection
 - Lake Mead Model and impacts of growth on water quality
- SQMC also approved by-laws
 - Companion to the Interlocal Agreement



Key Permit Milestones

- Draft SWMP due 1 year from issue date of the Permit (February 5, 2025)
- Final SWMP due 6 months after receiving formal comments from NDEP
- SWMP must be made available for public comment for 30 days, must hold a public hearing and the Permittees must respond to significant comments



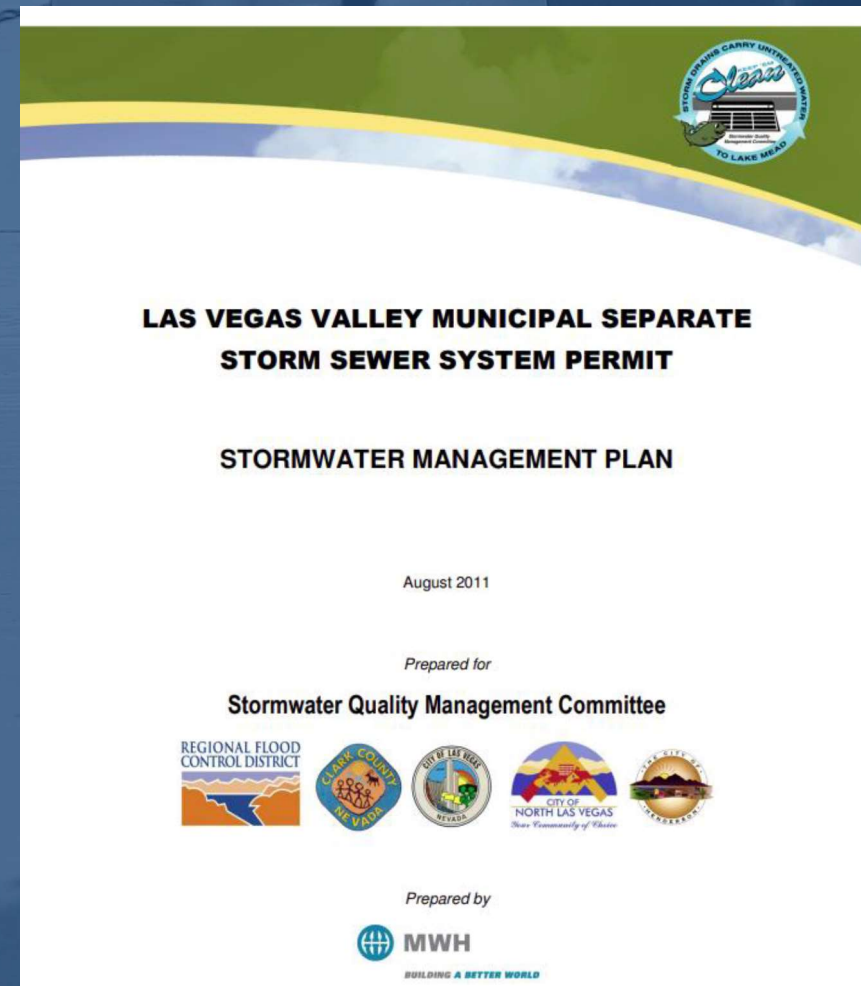
Public Workshop

- Permittees received formal comments from NDEP on January 6, 2026
- Notice of Public Workshop and Public Comment period posted on March 30, 2026
 - Closes on April 30, 2026
- Public Workshop is scheduled for April 22, 2026
 - To be held at District Offices from 3:30-5:30 p.m.



SWMP Revision

- Permittees initiated a revision of the SWMP in September 2023
- Current SWMP is more than 1,100 pages (including Appendices and Technical Memos)
- Revised SWMP is much more streamlined and focused on Permit compliance activities



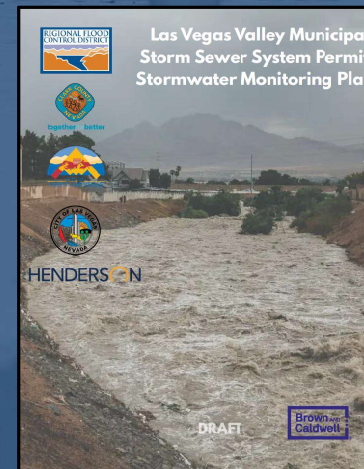
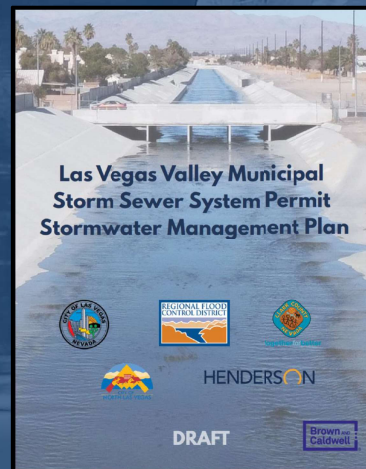
SWMP Requirements

- Permit requires that the SWMP include “measurable goals” for tracking implementation of BMPs
- Measurable goals must be numeric or narrative
- Must include milestones for implementation, and position responsible for implementing and coordinating each program element



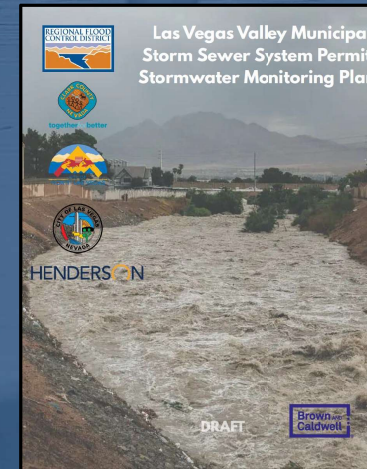
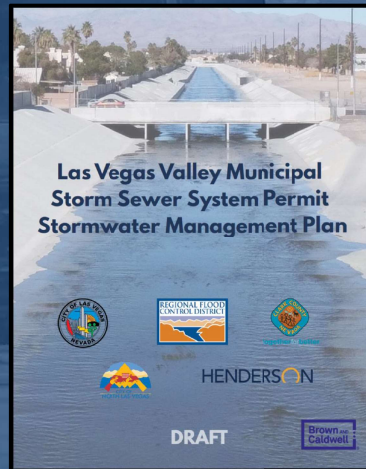
SWMP Revision

- Revised SWMP includes:
 - A clear statement of Permit requirements
 - A focus on program activities required to comply with the Permit
 - Measurable goals (either numeric or narrative) that allow the Permittees to assess compliance and performance



SWMP Revision

- Revised SWMP does not:
 - Include activities that are not Permit requirements and are not under the direct control of the Permittees
 - Include Technical Memos and Appendices that are not required by the Permit



Conclusions

- SWMP was developed to comply with the Permit
- SWMP satisfies the requirements of the Permit and includes measurable goals and objectives
- Permittees are committed to meeting ALL of the requirements of the Permit and revised SWMP





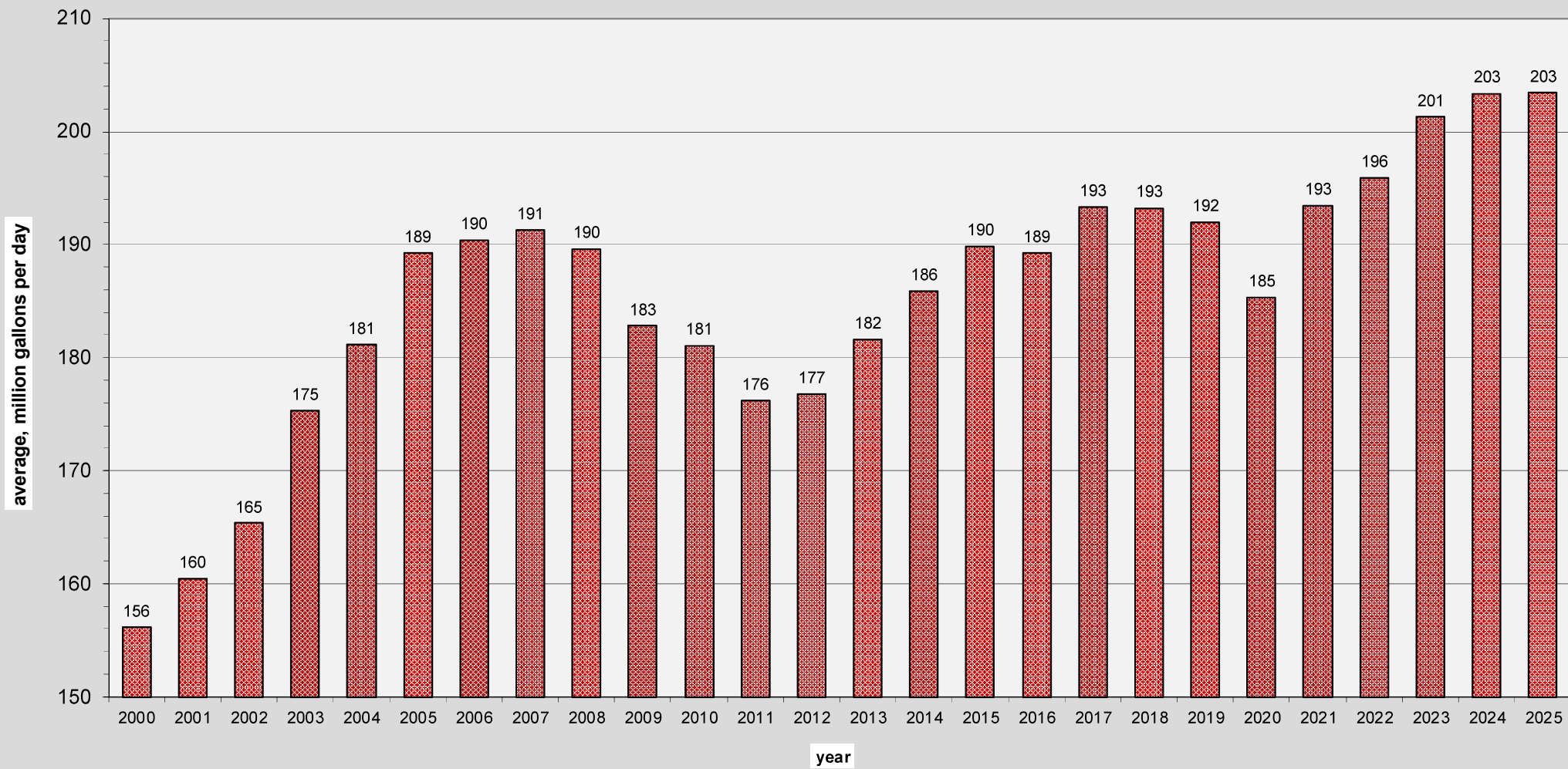
Questions?



CCWRD UPDATE FOR LVVWAC
APRIL 14, 2026
DAN FISCHER

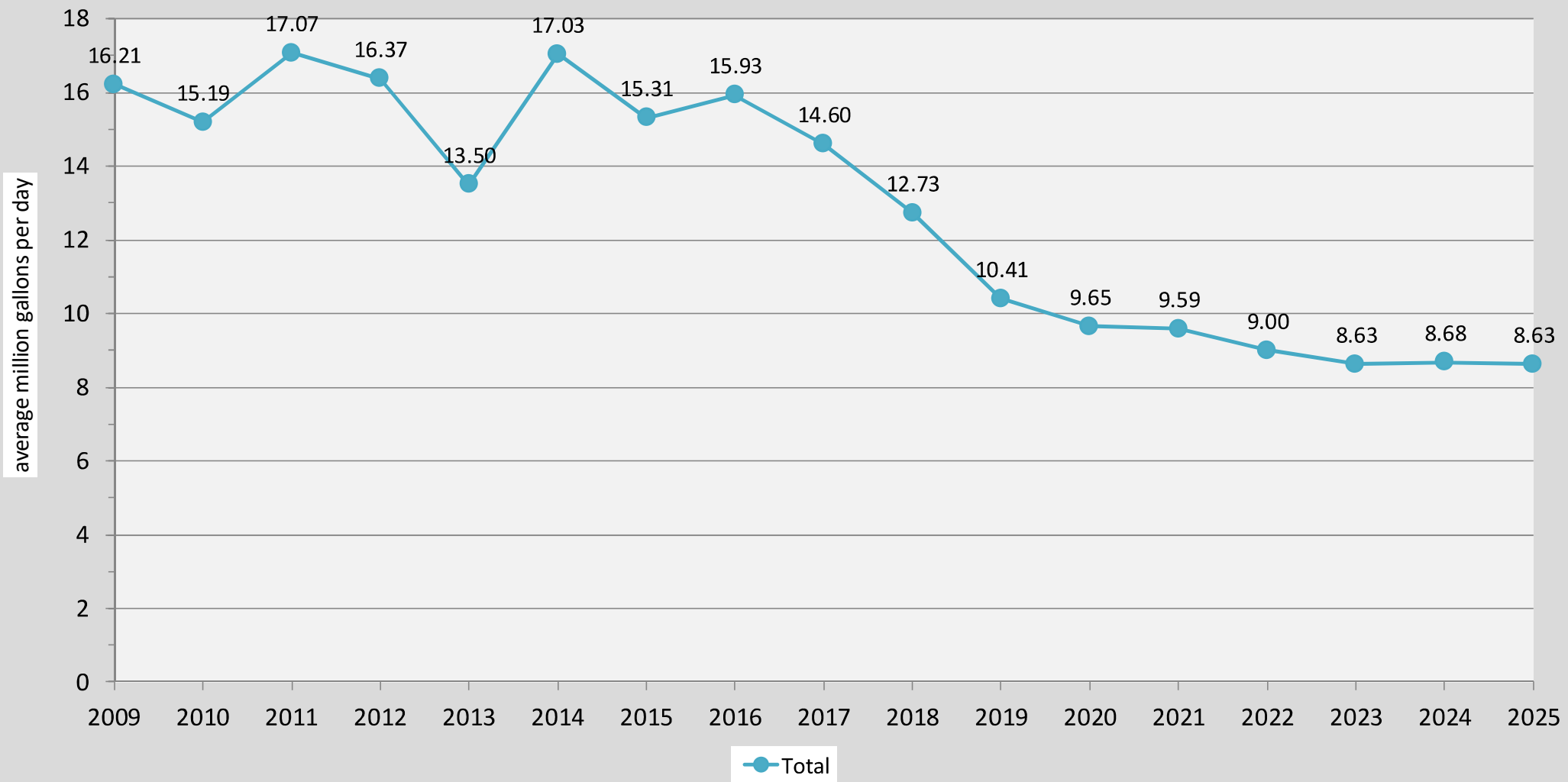


Influent Flows (all dischargers, annual average)

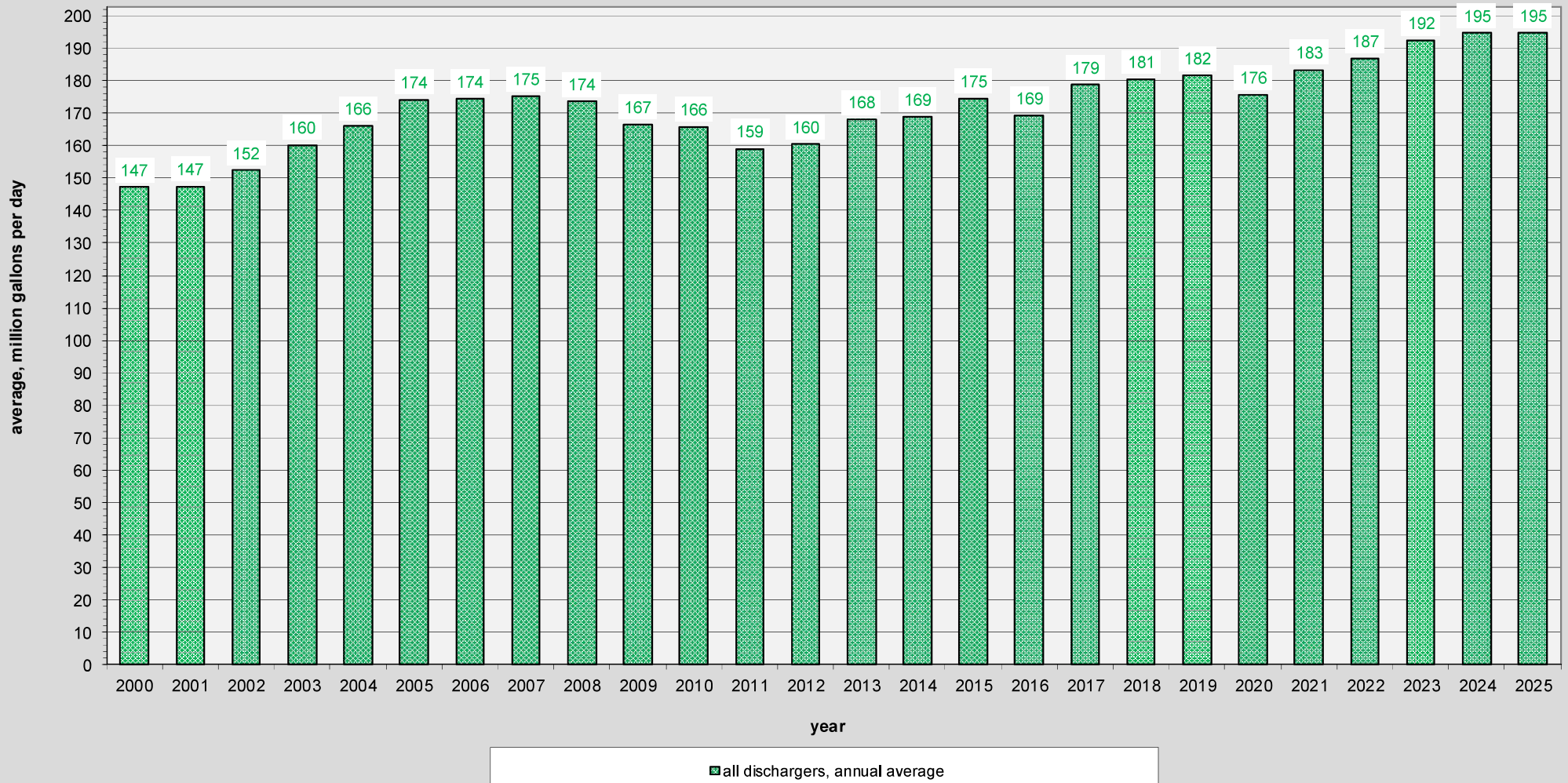


■ all dischargers, annual average

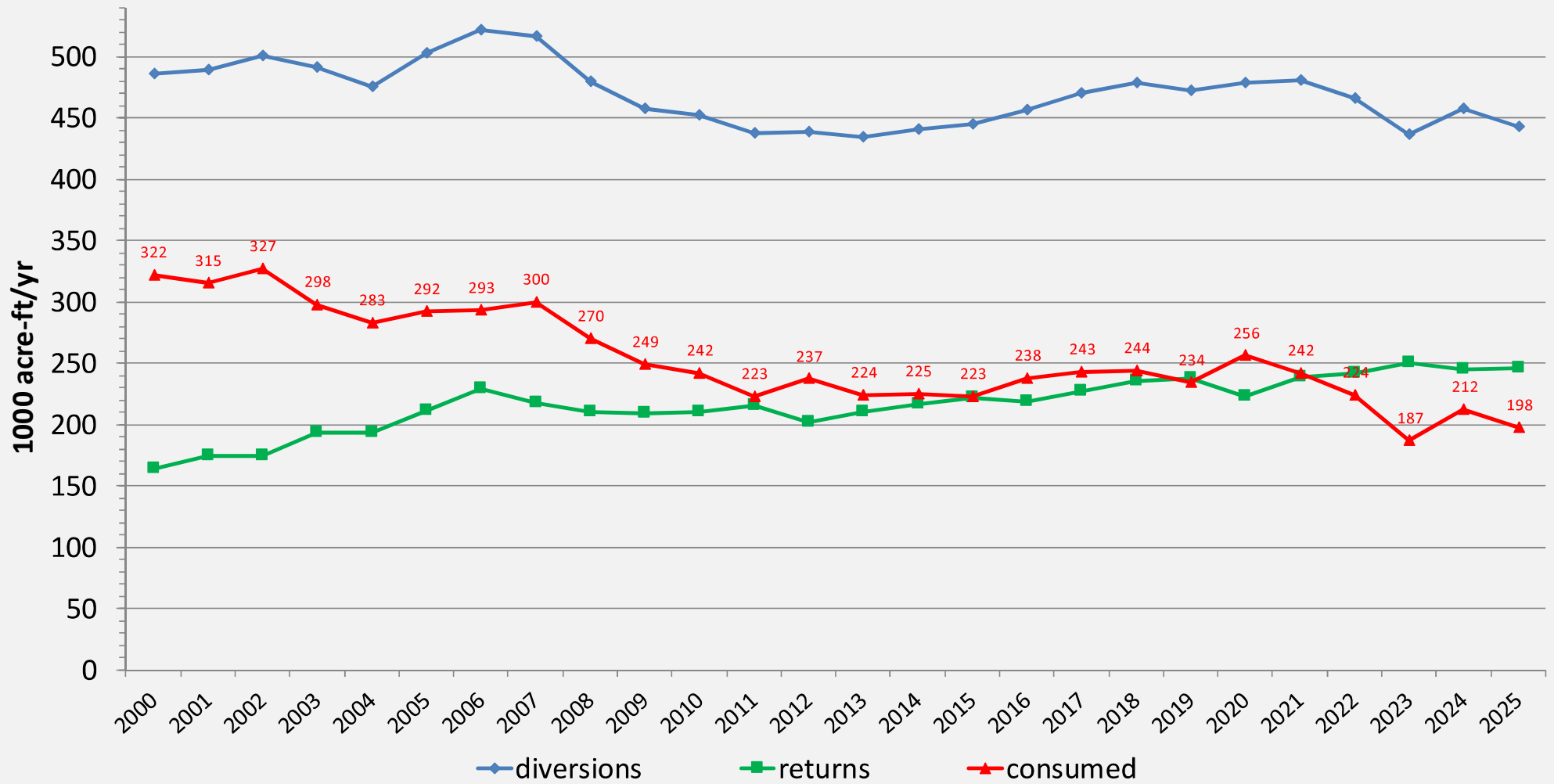
Direct Non-Potable Reuse



Effluent to Wash (all dischargers, annual average)



Nevada's Consumptive Use of the Colorado River



2024 COLLECTION SYSTEM ACCOMPLISHMENTS

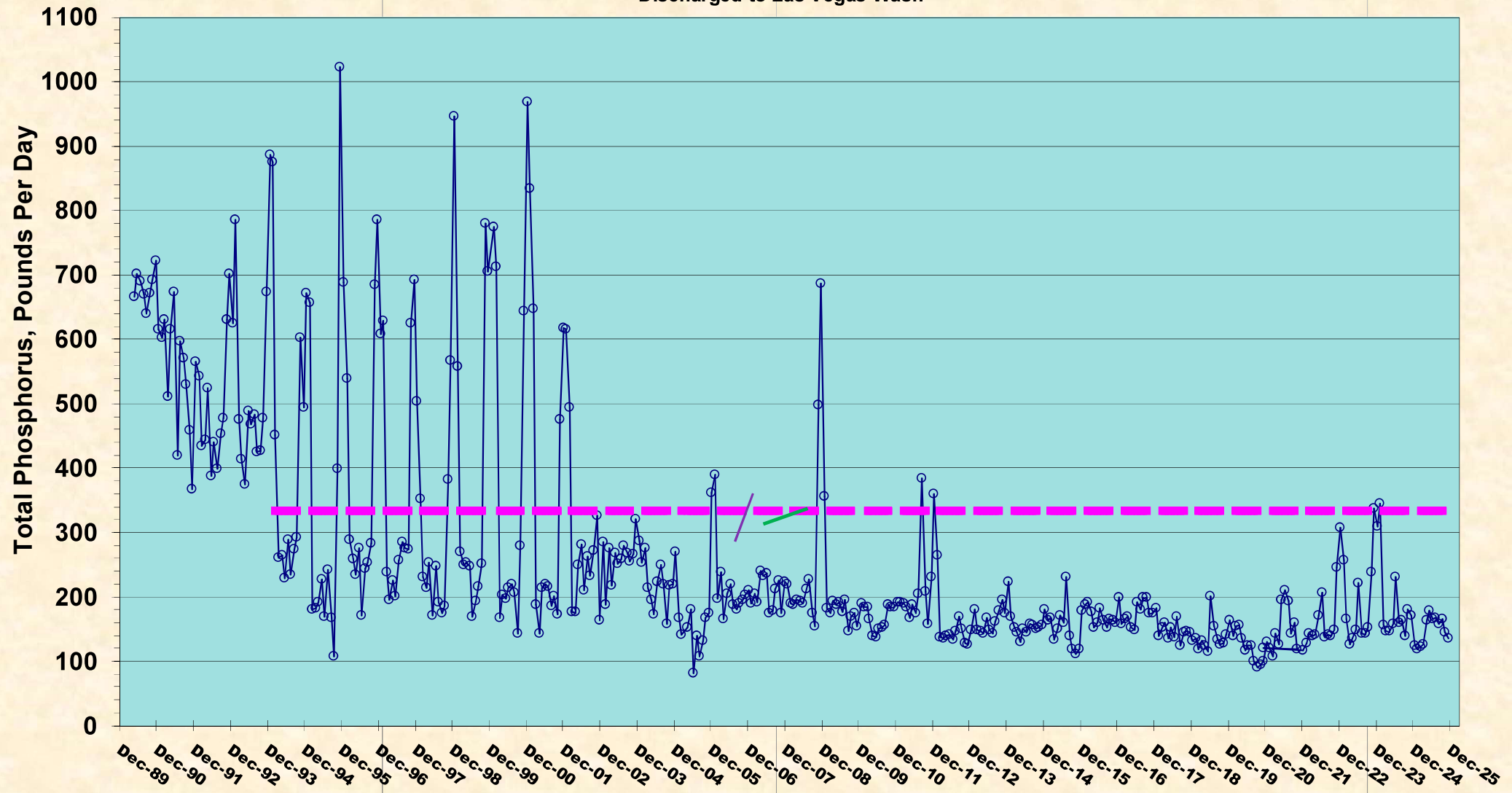
- Effectively maintained:
 - 2400 miles of pipe
 - 52,000 manholes
 - 24 lift stations
- Completed 1600 sand/oil interceptor, 3800 grease interceptor, and 150 mechanical interceptor inspections
- Experienced 5 SSOs
 - 0.2 SSOs/100 miles of pipe
 - EPA standard is 2 SSOs/100 miles of pipe
- Received 11 odor complaints related to our collection systems
- Recovered and recycled 140,00 gallons of grease from the FWRC and 50,000 gallons from Lift Stations

2025 TREATMENT PLANT ACCOMPLISHMENTS

- Treated 42 billion gallons of sewage and returned a total of 128,000 acre-ft of reclaimed water to the Colorado River System.
- Earned NACWA Peak Performance Awards:
 - Flamingo – Platinum 14, Laughlin – Platinum 13, Moapa Valley Platinum 7, – Gold, Indian Springs – Gold
- Excelled at phosphorus removal at our Flamingo plant:
 - TMDL – 0.20 mg/L, internal CCWRD goal – 0.10 mg/L, Annual avg. – 0.07 mg/L, 99% removal
- Upgraded and modernized the supervisory control and data acquisition (SCADA) systems District-wide.
- Advanced wastewater surveillance by partnering with local scientists, WastewaterSCAN, Biobot, and the National Wastewater Surveillance System.
- Launched a research initiative within the District's Quality Laboratory.
- Processed over 12,000 samples and conducted 120,000 laboratory tests at the District's Quality Laboratory.



DISCHARGERS' EFFLUENT AVERAGE DAILY TOTAL PHOSPHORUS
Discharged to Las Vegas Wash



SEPTIC CONVERSION PROGRAM

- Total conversions under our program thru Feb. 2026 = 209
- Total **construction** cost of those 209 conversions = \$10.5M
- Average cost per conversion = \$50,300
- Annual volume recovered by those 122 conversions = 10.7 MG/yr
- Annual volume recovered by those 122 conversions = 32.9 acre-ft/yr
- Construction cost for each acre-ft/yr gained = \$320,000

CCWRD CAPITAL IMPROVEMENT PROGRAM

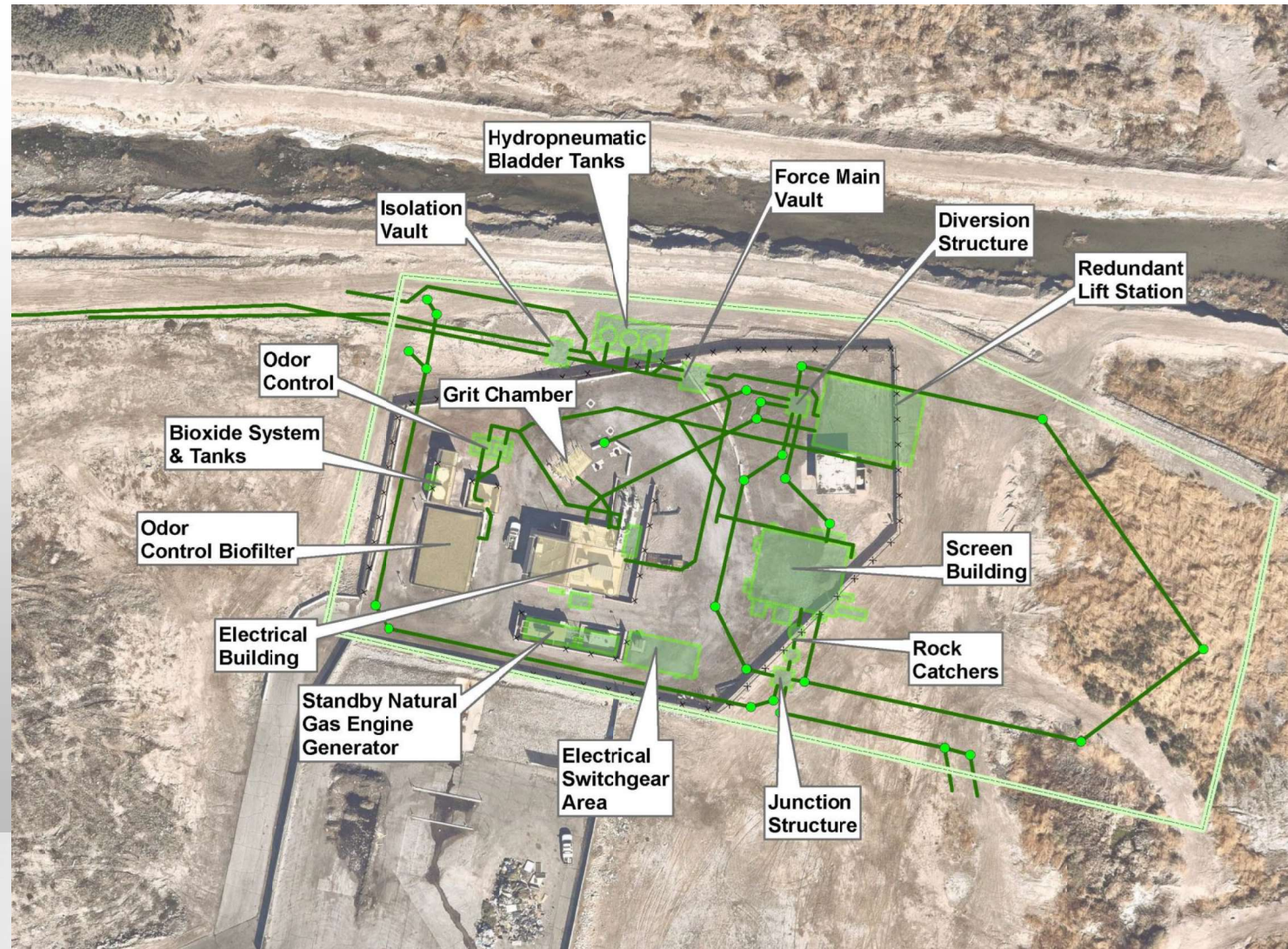
Facility	5 Year CIP FY 26-30	
	\$M	major projects
Flamingo Water Resource Center	\$304	Preliminary/Primary/Secondary expansions; DAFT; sludge thickening
LV Valley Collection System	\$200	Whitney and Lincoln Lift Stations; Crosstown Interceptors; Capacity Upgrades; Oversizing
Outlying Areas	\$43	Laughlin Lift Station and Force Main; Moapa Valley Lift Station and Force Main
Reclaimed/Reuse	\$2	System improvements at the Flamingo WRC
O&M Capital, Facilities, Buildings, Administration/Engineering	\$266	Plant & Collection System Rehabs; Rapid Response, Septic Programs, Buildings, Facilities, Solar Power Administration, Professional/Engineering Services, Oversizing, Interlocal Agreements, Studies
Total	\$820	

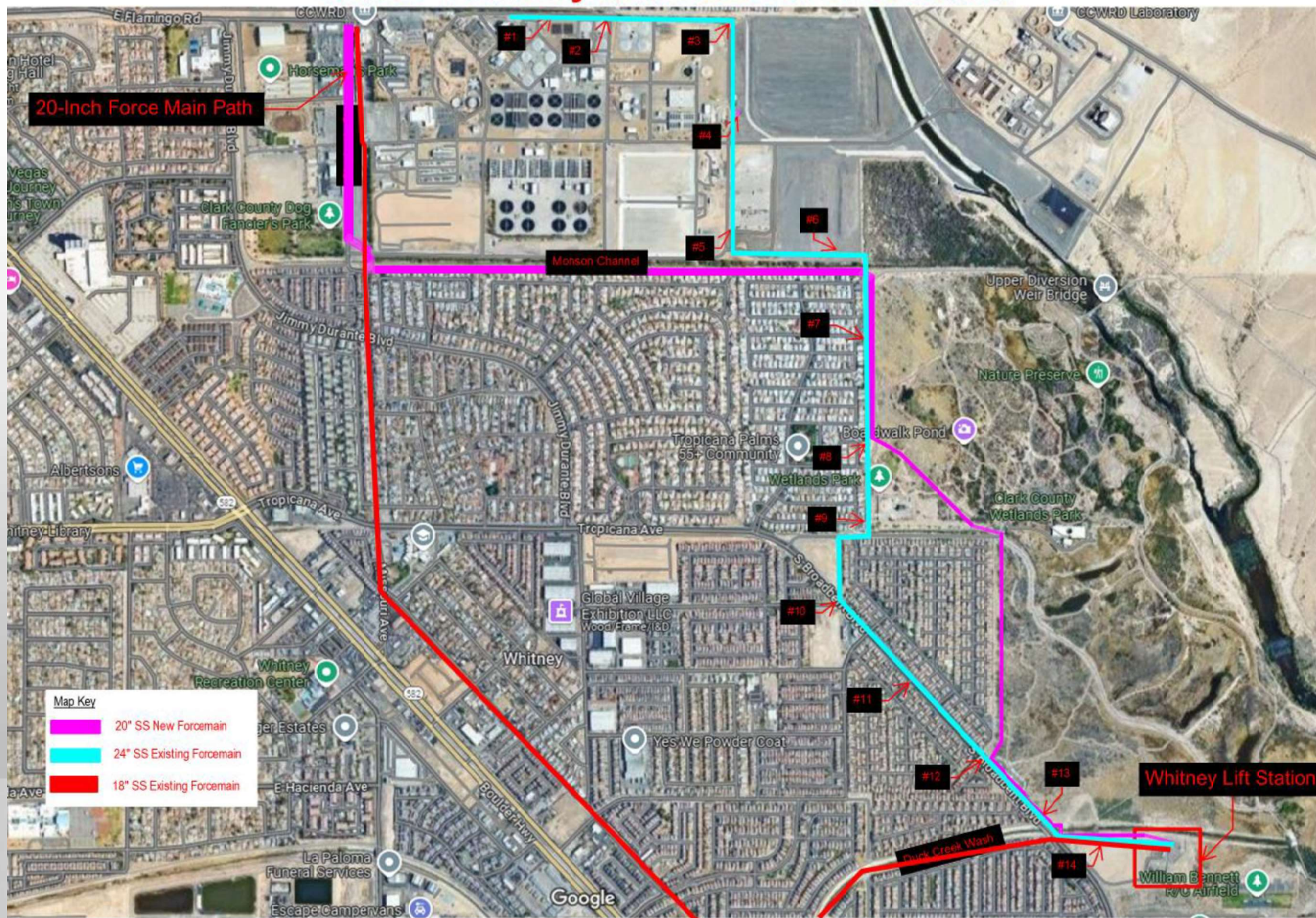
Current 15-year CIP projection is \$2.0B.



WHITNEY LIFT STATION

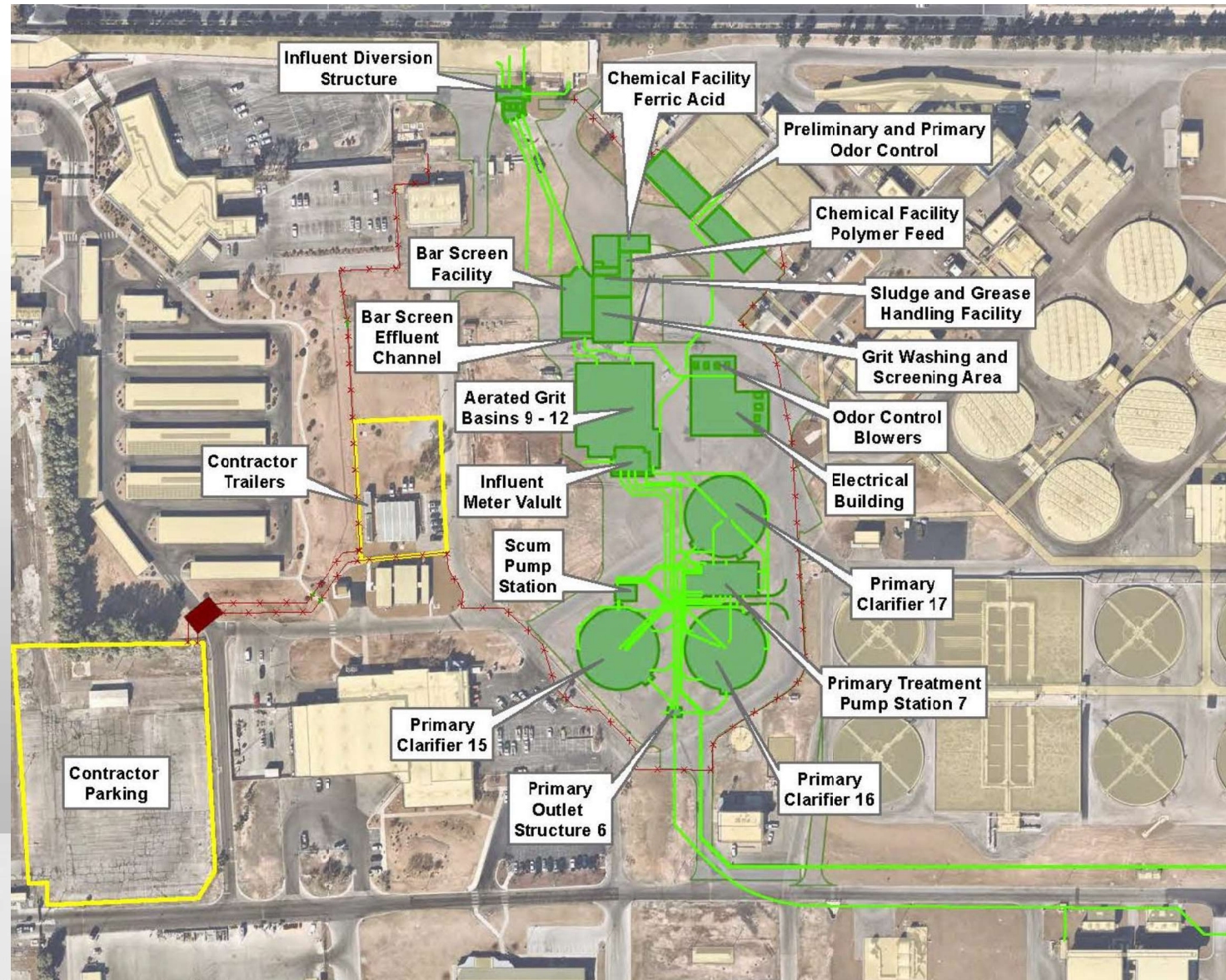
- \$60M \$99M CMAR
- Construction 30% complete
- Final Completion November 2027
- New redundant lift station to 12 MGD
- New flood wall
- Rock catchers and screenings
- Electrical and generator redundancy
- New 20-inch force main to plant





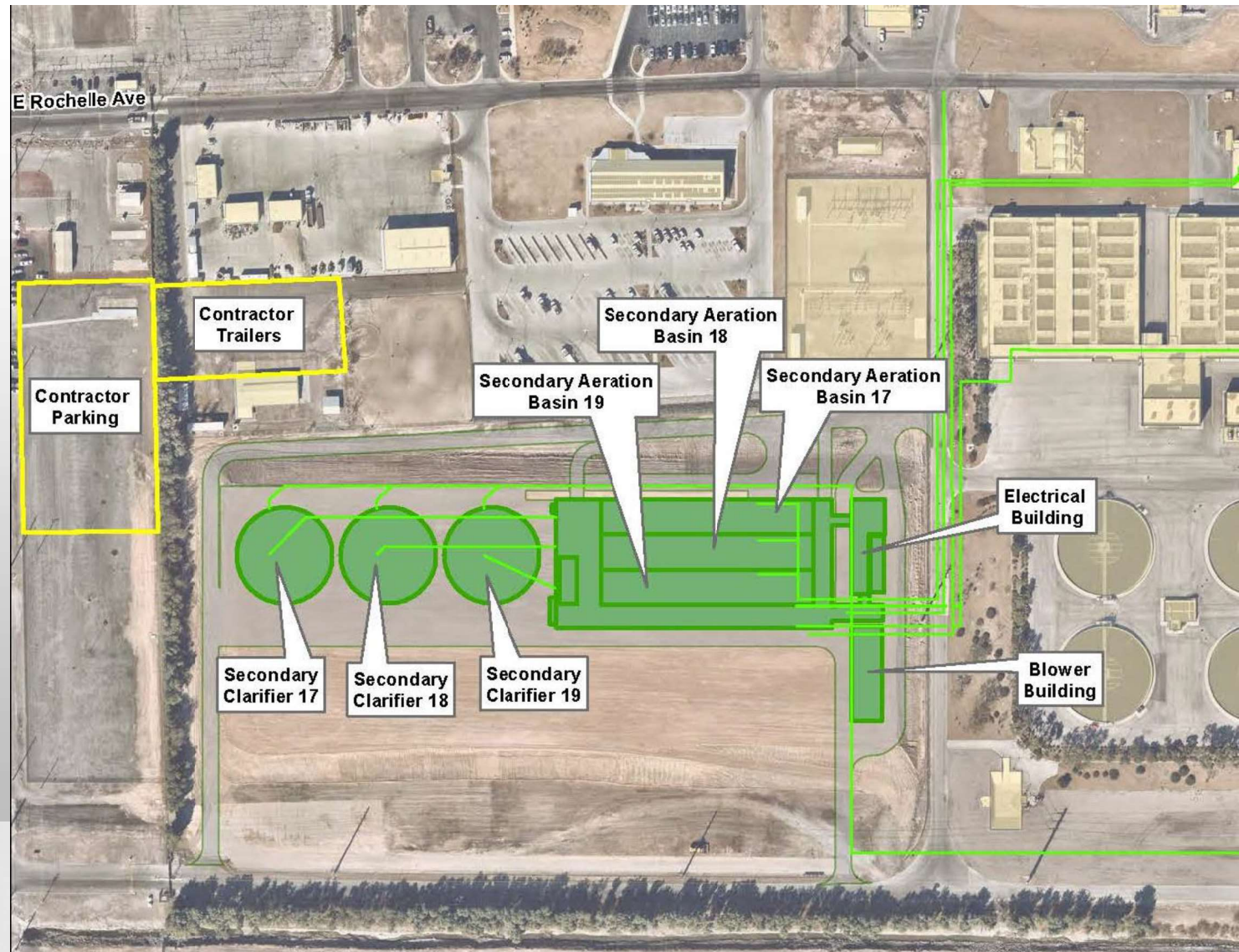
PRELIMINARY AND PRIMARY TREATMENT

- \$275M CMAR
- 30 MGD
- Construction 99% complete
- Final Completion April 19, 2026
- New Bar Screen Facility
- 4 Grit Basins with Blowers
- Grease Handling Facility
- Odor Control Biofilters
- 3 Primary Clarifiers
- Primary Sludge Pumping Station



SECONDARY TREATMENT

- \$240M CMAR
- 30 MGD
- Construction 76% complete
- Final completion May 2027
- 3 Aeration Basins
- 3 Secondary Clarifiers
- Blower Facility
- Electrical Building



the end, questions?

Dan Fischer

dfischer@cleanwaterteam.com



City of Las Vegas

LWWAC Annual Update
April 14, 2026

PW/ENVIRONMENTAL
DIVISION





WPCF 48 MGD Average

Reuse for two Golf Courses

3 MW Solar Site

**DHWRC
(offline)** 10 MGD Capacity

LMLS 1 MGD Average

**Collection
System** >2,000 Miles of pipeline
(8-inch to 104-inch)
46,000+ Manholes





Significant Achievements in 2025



17.5 billion gallons
of wastewater
treated
(48 MGD average)



173 million gallons
of reclaimed water
distributed,
increased from 138
MG in 2024
(added The Club at
Sunrise GC)



Over 67,000 wet
tons of biosolids
disposed or
repurposed
(55K tons and 12K tons)



WPCF received the
NACWA Peak
Performance
Platinum Award for
26 years of permit
compliance in
CY2024



WPCF Capital Improvements: Design

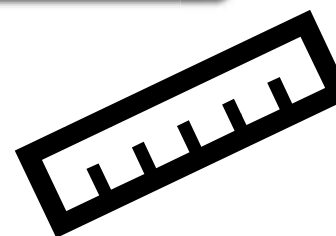
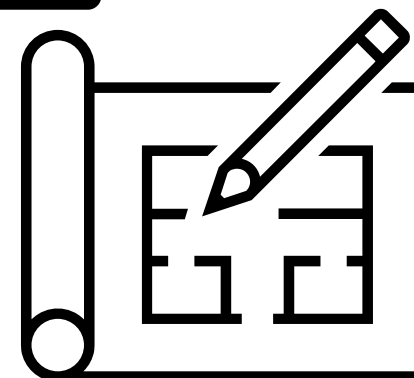
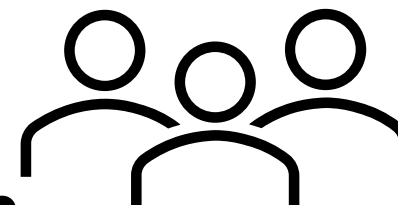
Dewatering Facility Rehabilitation (\$32M estimate, @100%)

Headworks Facility Rehabilitation (\$65M estimate, @30%)

New WPCF Laboratory (\$27M estimate, @60%)

WPCF Site Security Project (\$14M, @60%)

WPCF Odor Control Improvements (\$11.5M estimate, 0%)

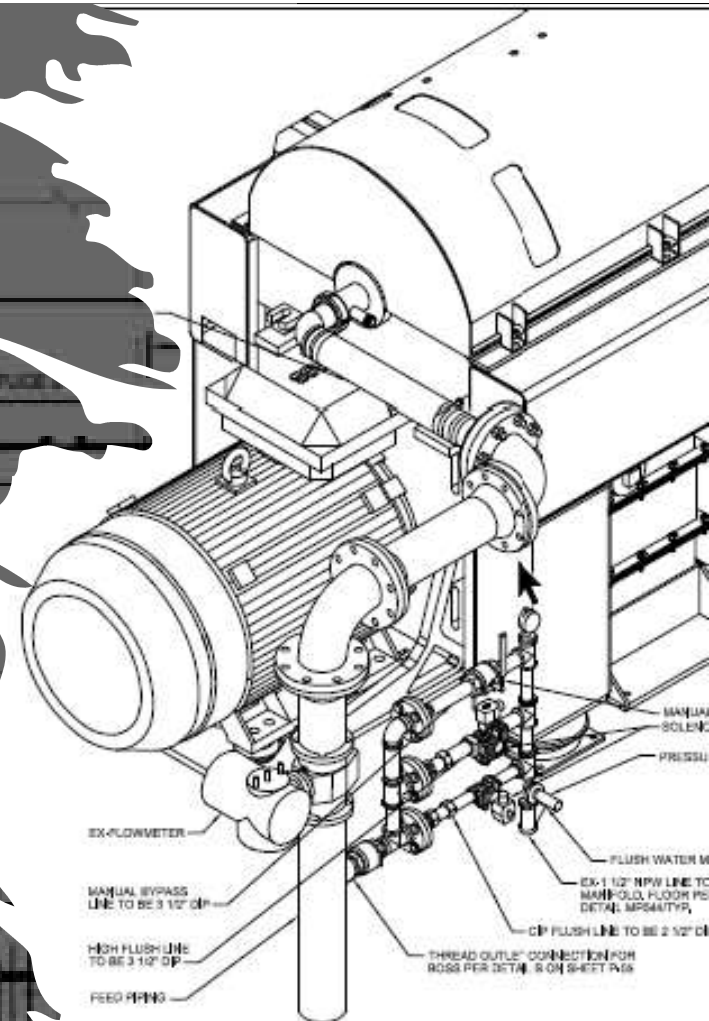




WPCF Dewatering Facility Rehabilitation

Replace end of life equipment for the Solids Removal Process, including centrifuges, chemical delivery systems, electrical and controls, pumps and biosolids conveyance systems.

- Cost estimate \$31.6 million
- Three centrifuge pre-purchase agreement signed with Alfa Laval.
- Design Engineer – Carollo
- Contractor – TBD



Notes

1. NOT ALL PROCESSING IS SHOWN. REFER TO MECHANICAL DRAWINGS FOR CONNECTIONS.

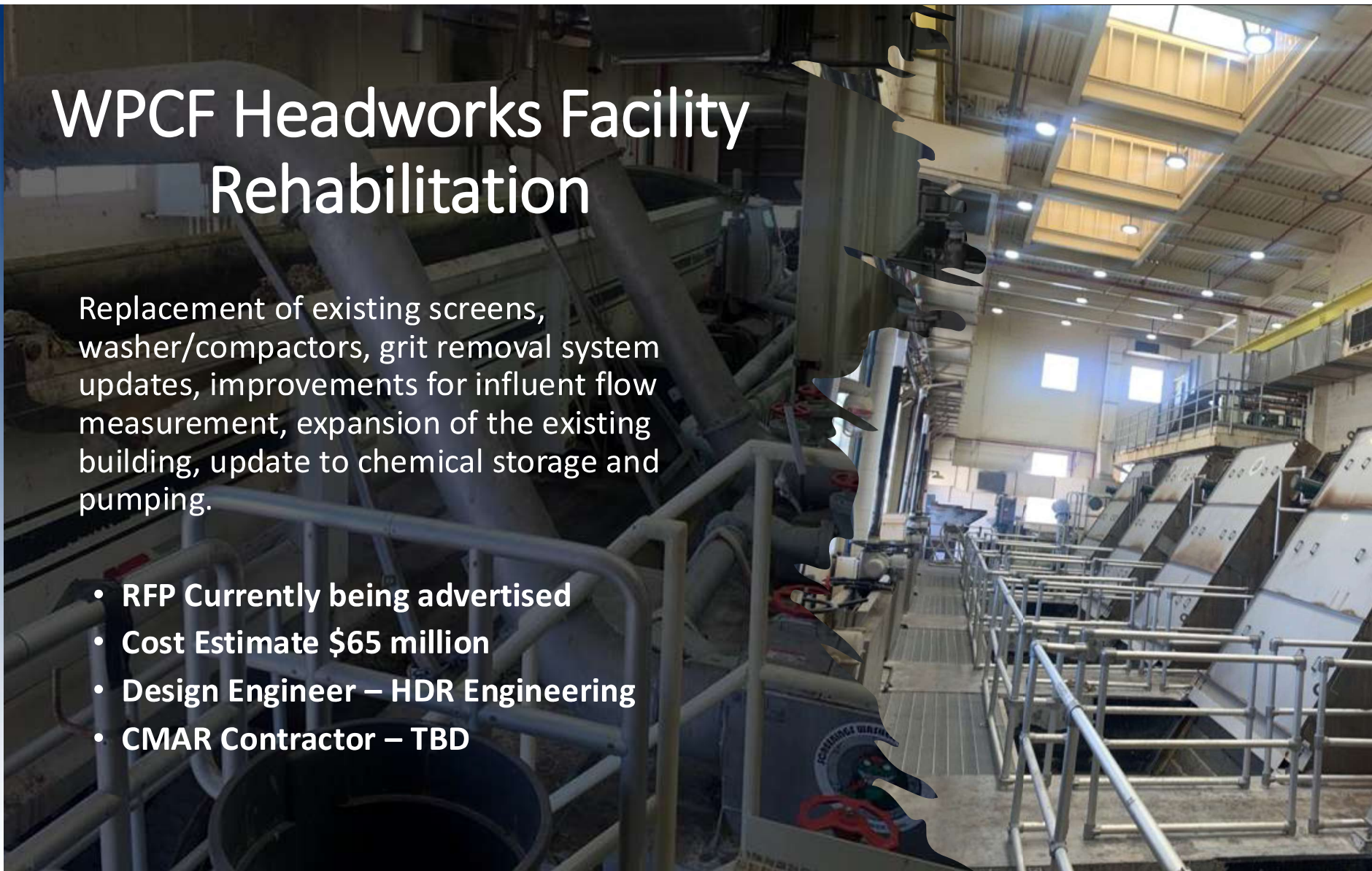
DETAIL



WPCF Headworks Facility Rehabilitation

Replacement of existing screens, washer/compactors, grit removal system updates, improvements for influent flow measurement, expansion of the existing building, update to chemical storage and pumping.

- RFP Currently being advertised
- Cost Estimate \$65 million
- Design Engineer – HDR Engineering
- CMAR Contractor – TBD

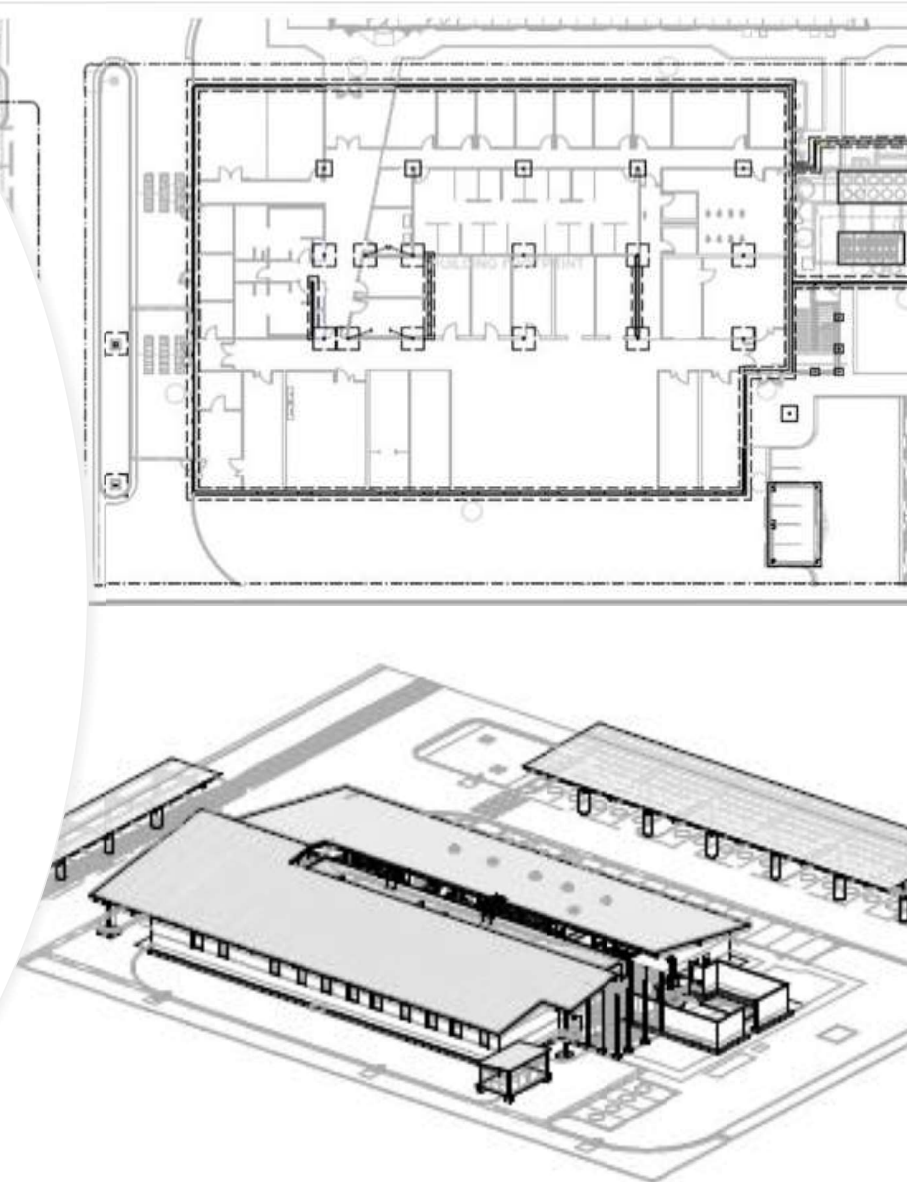




WPCF New Laboratory Building

Construct new laboratory building for chemical and biological analysis, expanding office and meeting spaces, covered parking and boat storage area, etc.

- Building footprint ~18,000 sq. ft.
- Design @ 60% completion
- Cost Estimate \$27 million
- Design Engineer – HDR Engineering
- Contractor – TBD





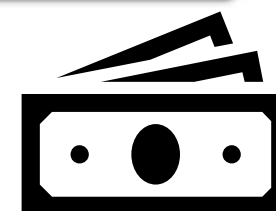
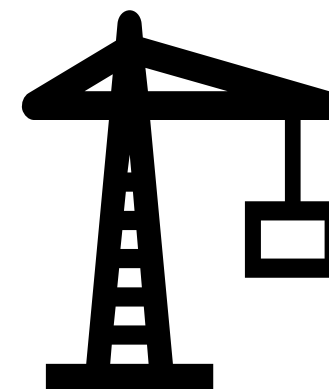
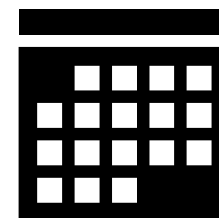
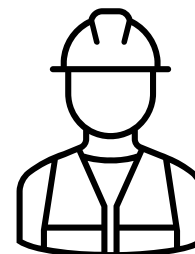
WPCF Capital Improvements: Construction

Filtration Facility Rehabilitation (\$28M completed)

BNR Clarifier Replacements (\$8M completed)

Process Air Improvements Phase 1 (\$5M completed)

Process Air Improvements Phase 2 (@22% completion)





WPCF Process Air Improvements Phase 2 Updates





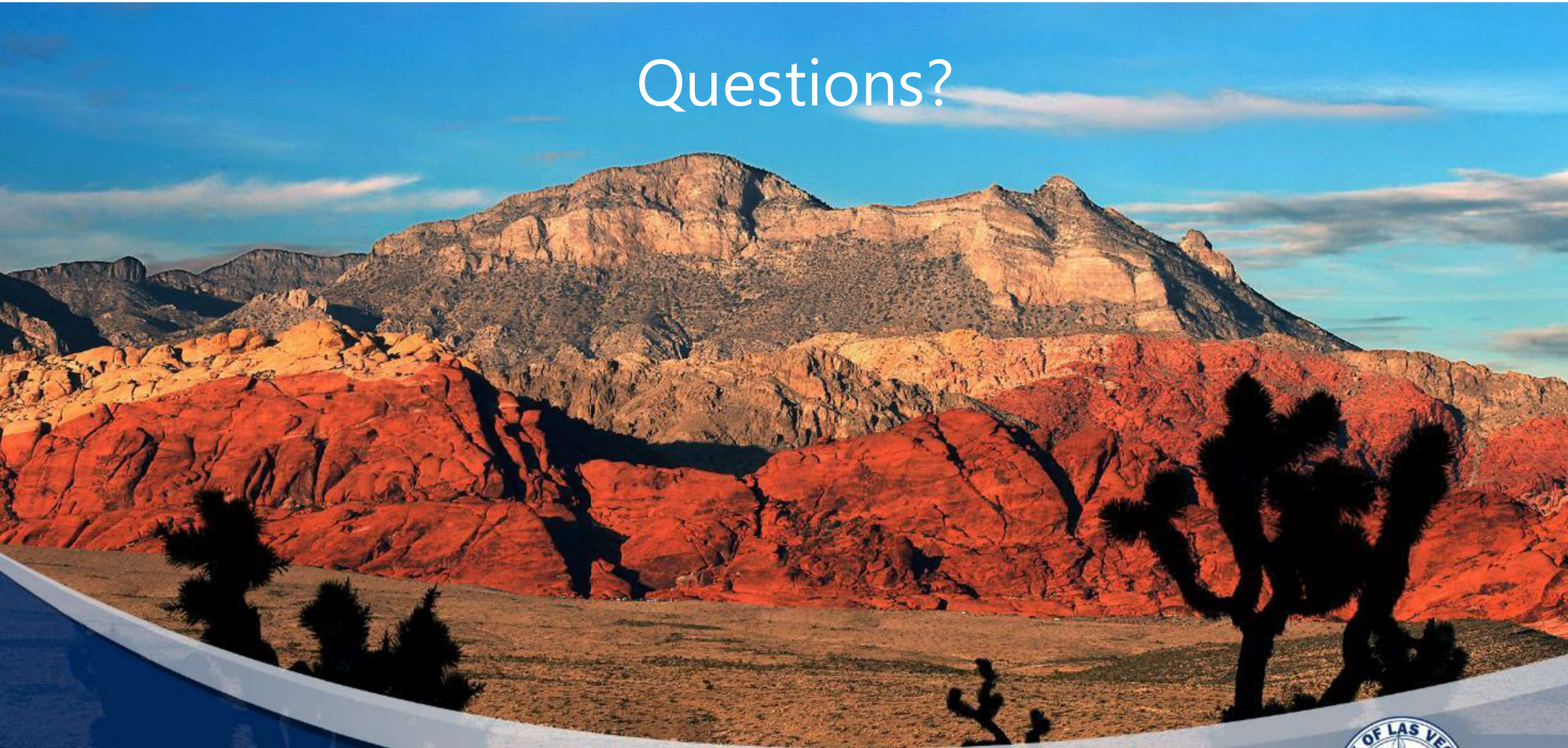
WPCF Process Air Improvements Phase 2

Demolish and remove one Waukesha Engine Driven Multistage blower & four Multistage Blowers, modify and install pipes, electrical, install three Turbo Blowers & relocate 1st installed Turbo Blower.

- Construction 22% Complete
- Design Engineer – Jacobs Engineering
- Contractor – J.A. Tiberti Construction



Questions?



PW/ENVIRONMENTAL
DIVISION





Utilities Services

LVVWAC Annual Update April 14, 2026



2025 Significant Achievements

Wastewater Treatment

- 9.1 billion gallons treated
- 2.4 billion gallons reclaimed water delivered
- 0 permit violations
- Received NACWA Platinum Award for 21 years of full permit compliance



HENDERS^{ON}™

2025 Significant Achievements

Phosphorus removed:
Average concentration
.19mg/l

Ammonia removed:
Average concentration
0.21mg/l

TSS removed:
99.75 percent removal

BOD removed:
99.78 percent removal



HENDERSO^N

2025 Significant Achievements

Sludge removed:
7140 dry tons



HENDERSOTM

2025 Significant Achievements KRSWRF Phase 4

- 12 MG expansion**
- BNR basin**
- Secondary Clarifier**
- Deep bed sand filtration**
- High speed turbo blowers**
- Allows for alternative plant process flow configurations to accommodate long term infrastructure repair projects. (Redundancy)**

HENDERSON™

Jacobs®

MCCARTHY®

HENDERSON™

2025 Significant Achievements

- WRF expansion completion**
- Seeding was on January 11th**

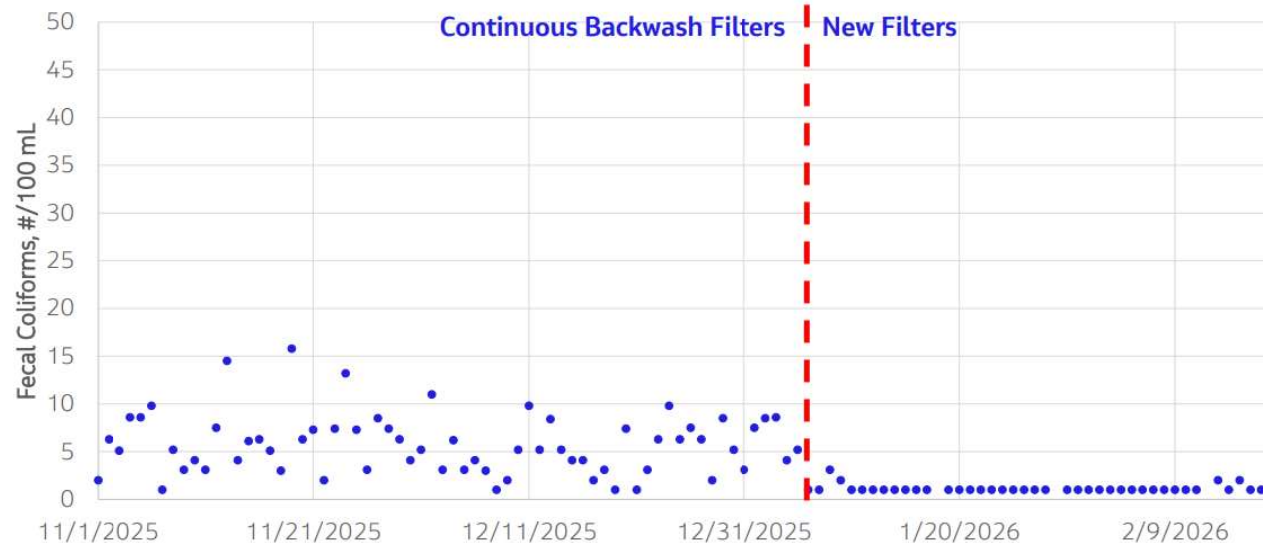


HENDERSON™

2025 Significant Achievements

WRF – Tertiary treatment improvements

Tertiary Treatment Performance – Fecal Coliforms



2025 Significant Achievements

Cadence Lift station

January 2026



HENDERS^{ON}™

Lakemoor/Aries Lift station

Under construction



HENDERSO^N

Under Design Lift Stations

Meriden

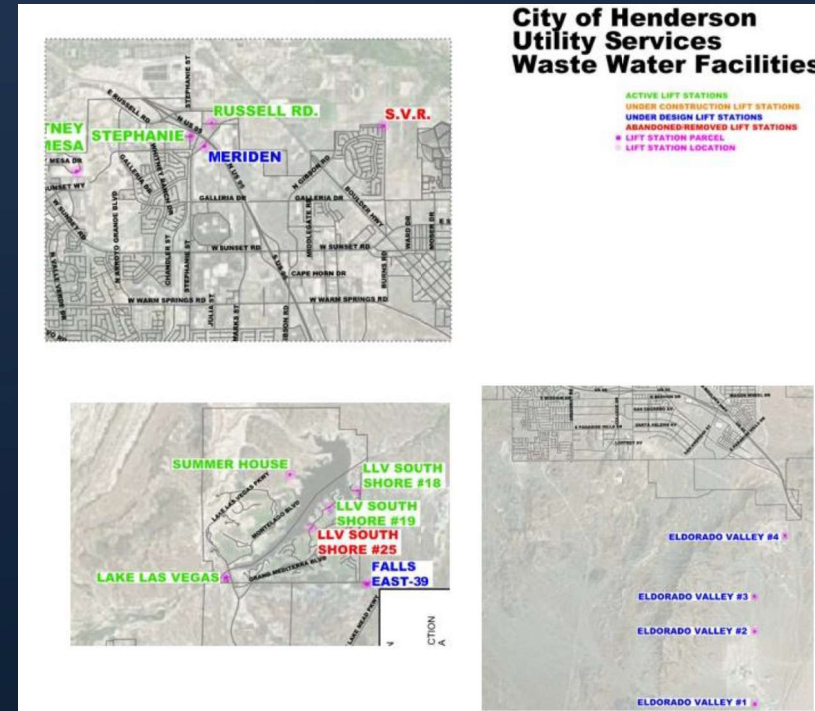
Falls East-39

Eldorado Valley #1

Eldorado Valley #2

Eldorado Valley #3

Eldorado Valley #4



HENDERSOTMN



THANK YOU
Questions???



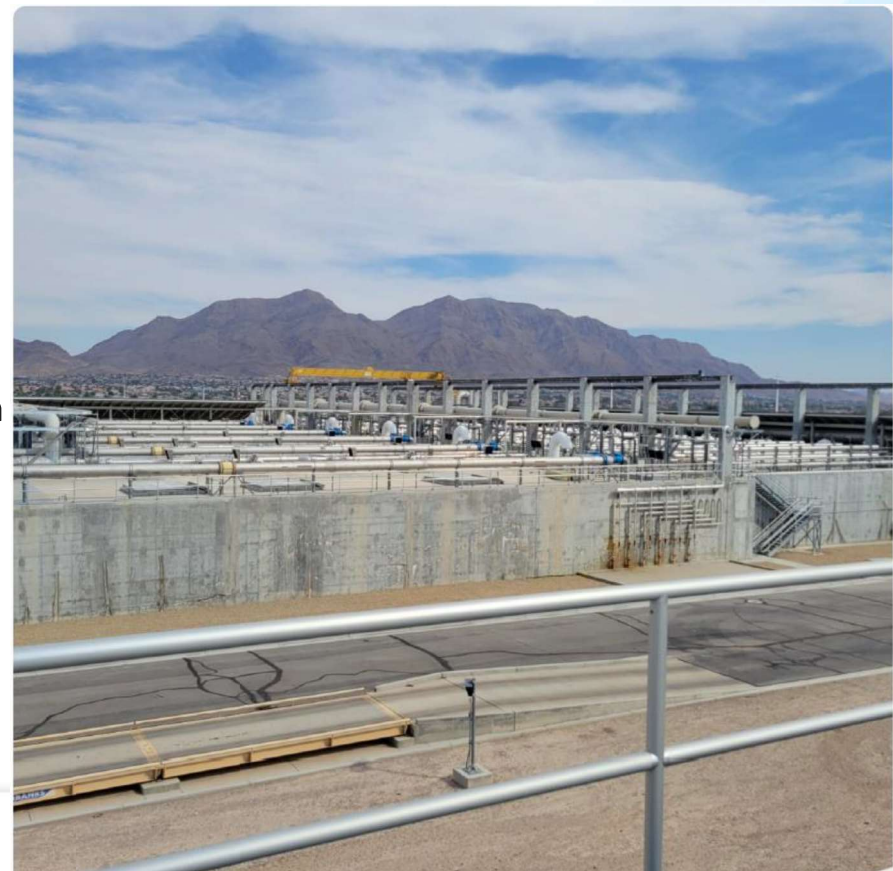
CITY OF
NORTH LAS VEGAS

LVVWAC WASTEWATER DISCHARGERS UPDATES 2026



WATER RECLAMATION FACILITY

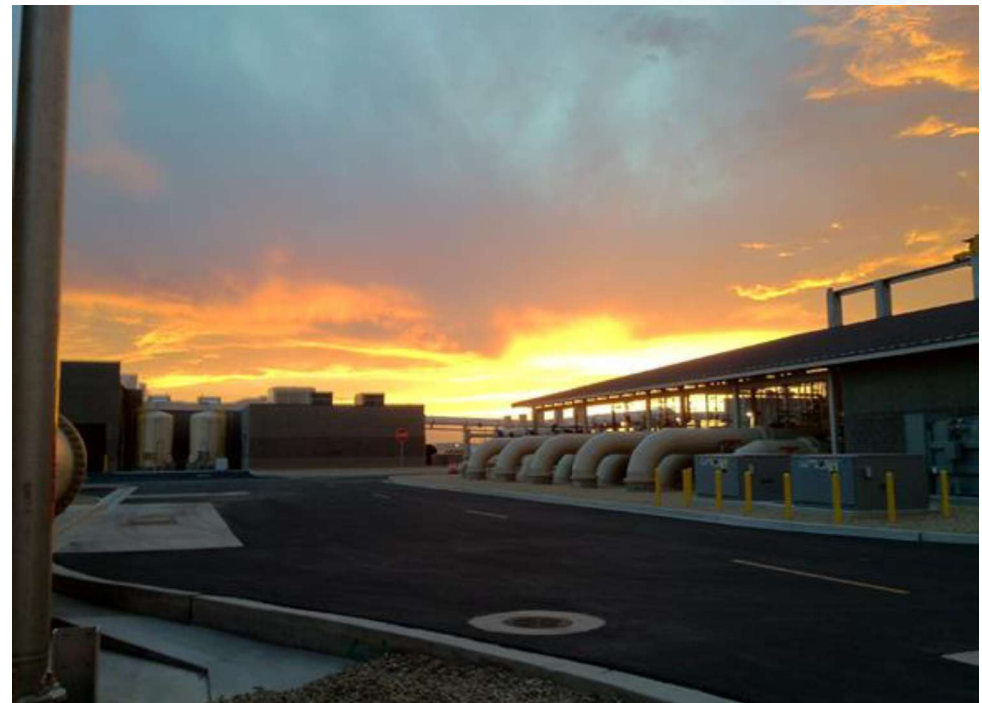
- **Background on Facility**
- **Collections System and Plant Influent Statistics**
- **Plant Operational Challenges Under Investigation**
- **Plant Effluent Statistics**
- **Apex Development and Future Expansion**





WATER RECLAMATION FACILITY

- **WATER RECLAMATION FACILITY CAME ONLINE JUNE 2011**
- **MEMBRANE BIOREACTOR FACILITY WITH ENHANCED BIOLOGICAL NUTRIENT REMOVAL**
- **35 MGD ADF HYDRAULIC CAPACITY**
- **6 BIOREACTORS AND 12 MEMBRANE TRAINS**
- **AVERAGE DAILY INFLUENT FLOW OF 20.8 MGD**
- **SOLIDS ARE DEWATERED UTILIZING GBT'S, CENTRIFUGES AND DISPOSED OF IN THE APEX LANDFILL**





WATER RECLAMATION FACILITY INFLUENT

Collection System

Over 1200 Miles of Sewer Pipe and 80,000 sewer laterals

In 2025

Over 600,000 feet of sewer main cleaned

379,000 ft of sewer main CCTV inspected

3,712 Manholes inspected for deterioration

8 SSOs recorded

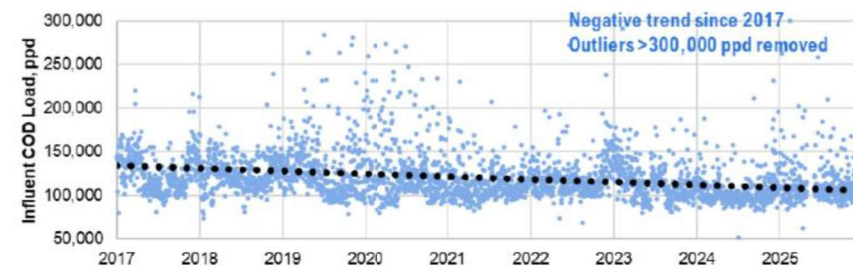
WRF

7.60 Billion Gallons Treated in 2025

20.8 MGD ADF

21.9 MGD Maximum Monthly Flow

Average Peak Hourly Flow 33 MGD



	Design	2017 – 2021, AA	2022 – 2025, AA	Percent Change
Flow, mgd	30 (original)	20.9 (MM)	21.9 (MM)	+3%
COD, mg/L	650 (calc)	784	664	-15%
BOD, mg/L	325	393 (calc)	332 (calc)	-15%
TSS, mg/L	357	434	465	+7%
TKN-N, mg/L	47	38	48	+26%
NH3-N, mg/L	28	27	35	+30%
TP, mg/L	7.6	6.6	6.2	-6%



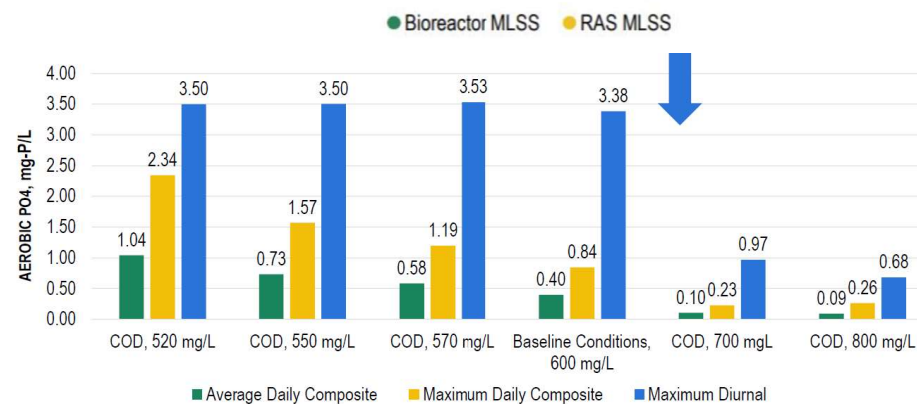
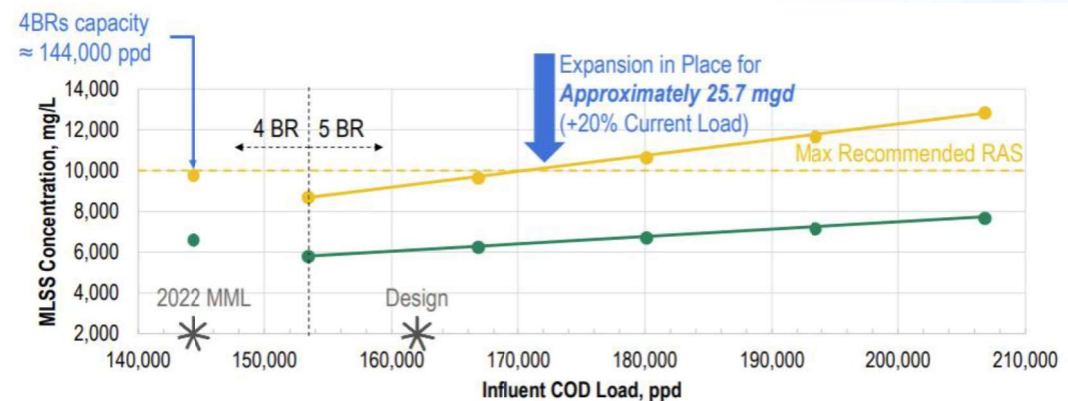
PLANT OPERATIONS: BIOREACTOR SENSITIVITY

Operation of 4 out of 6 Bioreactors Since 2019

Approaching MLSS and HRT considerations for placing a 5th Bioreactor Online

Better Long Term Stability in 5 Bioreactor Configuration as we move towards Plant Expansion

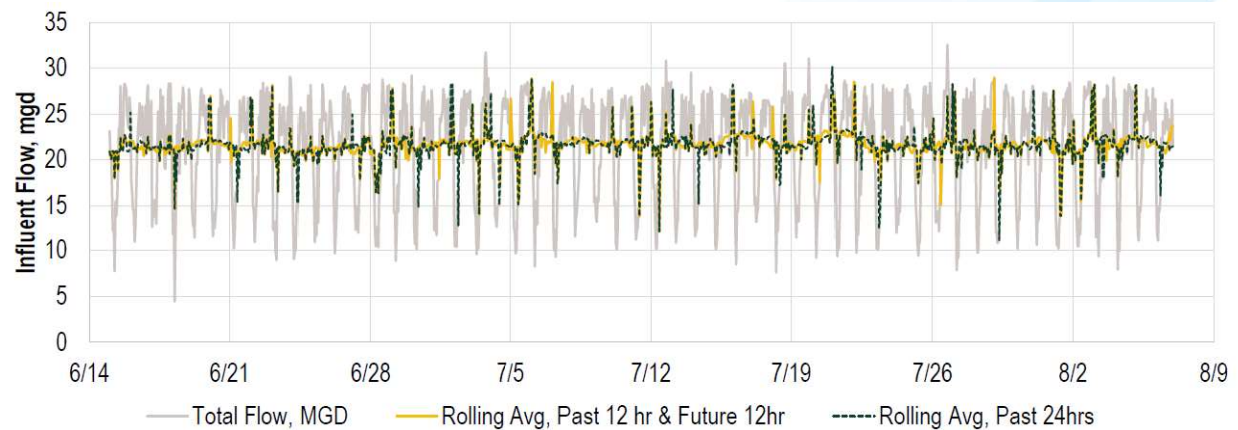
Monitoring potential carbon limitation to EBPR as it develops. Relaxing local limits on BOD, and/or exploring process intensification options .





PLANT OPERATIONS: FLOW EQUALIZATION BASIN

- **2.2 MG FLOW EQUALIZATION BASIN**
- **Place online in August of 2024**
- **Designed to dampen diurnal flows and allow for better fine tuning of recycle rates**
- **Provide consistent HRT for better BNR**
- **Reduce wear and tear on motors and equipment**
- **Coating failures within the basin in September 2025 have resulted in FEB being taken offline for repairs**
- **Ongoing projects for fine tuning of eccentric plug valves to equalize flows, balance aeration and mixing to mitigate H₂S without depleting carbon source in captured influent.**





WATER RECLAMATION FACILITY EFFLUENT

6.99 Billion Gallons Returned to LVW Outfall in 2025

19.15 MGD ADF

19.85 MGD Maximum Monthly Flow

**164.1 Million Gallons provided for reuse irrigation
water to NAFB**

No Permit Exceedances in 2025

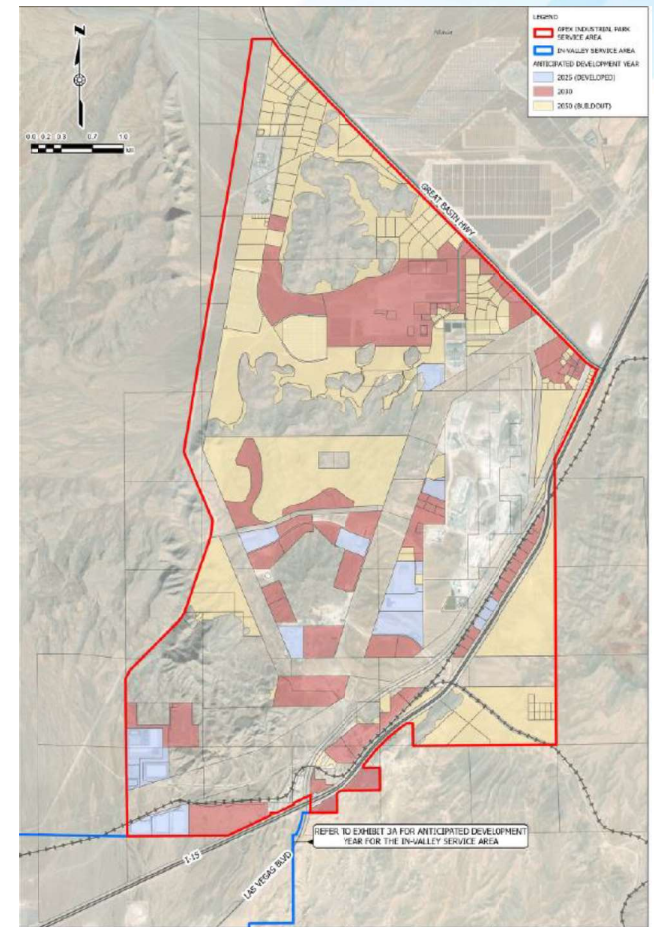
Repairs Completed on Sloan Channel Box Culvert





APEX/GARNET VALLEY

- Apex Industrial Park, and Miner's Mesa will contribute over 8,000 acres of developable land
- Water and Wastewater Infrastructure currently under construction
- 5 year loading forecast and 25 year flow projections
- Analysis of necessary infrastructure improvements and capacity increases
- Most aggressive flow projections give 75.4 MGD by 2050





APEX/GARNET VALLEY

- Significant completion of gravity and force main sewers
- Hydrostatic testing currently ongoing.
- 3 Lift Stations, with functional equipment tests beginning Summer 2026
- Water and Power to be present at lift stations in Fall 2026
- Surge testing in late 2026 to early 2027
- First wastewater flows expected in 2028





Questions?