

Tri-Lakes Wastewater Treatment Facility Joint Use Committee, Jan. 11

Radium ramifications in biosolids considered

By Lisa Hatfield

The Tri-Lakes Wastewater Treatment Facility (TLWWTF) Joint Use Committee (JUC) met on Jan. 11 to review the monthly discharge monitoring report and facility operations.

TLWWTF is owned in equal one-third shares by Monument Sanitation District (MSD), Palmer Lake Sanitation District (PLSD), and Woodmoor Water and Sanitation District (WWSD).

The three-member JUC acts as the board of the facility and consists of one director from each of the three owner districts' boards: PLSD board member Reid Wiecks, JUC president; MSD board Treasurer John Howe, JUC vice president, who was excused from this meeting; and WWSD board Secretary/Treasurer William Clewe, JUC secretary/treasurer.

Facility Manager Bill Burks said that in 2021, expenses came in at 92% of the budgeted amount, mostly due to reductions in chemical analysis and operator expenses.

The JUC revisited past discussions about radium in the facility's biosolids when Burks said starting in July, TLWWTF will have to monitor the levels of radium in both its influent and discharged effluent in addition to testing for radium in the facility's liquid sludge lagoon. Denali Water Solutions (www.denaliwater.com/) is the company that removes the biosolids and presses out the liquid before removal and application to agricul-

tural fields. Denali advised Burks that if Denali's future removed solid sludge test results exceed 20 picocuries/gram, Denali will no longer be able to haul away TLWWTF sludge lagoon biosolids.

Burks also said that TLWWTF plans to remove 315 dry tons of sludge lagoon biosolids in 2022, but Burks may have to cut that amount back to 295 tons to stay within the 2022 budget due to an unexpected price increase for 2022 from Denali.

The consensus of the JUC was to include radium in the long-range TLWWTF plan being prepared by Tetra Tech, since the groundwater levels of radium are rising in the Denver Basin. In some cases, the drinking water treatment to make radium less than 5 picocuries/liter for consumers sends removed radium into the wastewater treatment stream, which could eventually impact TLWWTF and require expensive solutions, especially for worker safety protocols.

For background on the Town of Monument and Woodmoor Water and Sanitation's drinking water, see <https://www.ocn.me/v20n6.htm#juc>, www.ocn.me/v21n4.htm#tlwfwjuc.

Next, Burks said it's a "feather in our cap" that Dmitriy Zinchenko, wastewater process technical lead at HDR, wants to do a presentation about TLWWTF to the Rocky Mountain Water Environment Association "to show off how we got the phosphorus removal analyzer installed without the help of any engineers."

Burks summarized the Jan. 4 Arkansas River/Fountain Creek Coalition for Urban/Rural River Evaluation (AFCURE) meeting. Topics included nutrient sampling locations, wastewater sampling to verify the faster spread of COVID-19 Omicron variant, discontinuation of further periphyton sampling within AFCURE in 2022, and the retirement of City of Pueblo Director of Wastewater Nancy Keller, who has been a mentor and source of expertise for many in the industry.

MSD Environmental Compliance Coordinator Jim Kendrick talked about the Dec. 8 Colorado Wastewater Utility Council meeting. Topics included Colorado Department of Health and Environment (CDPHE)'s new clean water program manager and new enforcement manager, Water Quality Control Division (WQCD)'s chemical evaluation procedures, and a Water Quality Forum permit-related Temperature Implementation Workgroup starting in January.

The meeting adjourned at 11:40 a.m.

The next meeting is scheduled for 10 a.m. Feb. 8 at the Tri-Lakes Wastewater Treatment Facility, 16510 Mitchell Ave. Meetings are normally held on the second Tuesday of the month and are open to the public from all three owner-districts. For information on virtual meeting access, call Bill Burks at 719-481-4053.

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Woodmoor Water and Sanitation District, Jan. 10

Water supply examined; new well planned

By James Howald

The January meeting of the Woodmoor Water and Sanitation District (WWSD) board began with a presentation on the district's projected water supply and demand, focused on planning the construction of a new well beginning in 2022. The board voted on three administrative resolutions. Finally, the board heard operational reports.

New well needed soon

District Manager Jessie Shaffer introduced Daniel O. Niemela, a certified professional geologist at BBA Water Consultants Inc. (BBA), the company WWSD works with on long-range planning, water resources, and water rights issues. BBA was instrumental in WWSD's acquisition of water rights at Woodmoor Ranch, Shaffer said.

Niemela began with a high-level picture of the district's water demand, focusing on short-term planning issues. Currently WWSD has about 4,000 residences that require a total of 1,500 acre-feet of water per year. Niemela projected that in 10 years, the district would have about 6,000 residences and would require 2,000 acre-feet annually. Three months—June, July, and August—account for about 40% of the district's annual usage, and those high-demand months drive the planning for capital improvement projects. Niemela said Lake Woodmoor could hold up to 750 acre-feet of water.

Niemela projected "pretty rapid growth" over the next couple years. He anticipated 250 new residences per year over the short term, leading to 33 acre-feet per year of increased water demand.

In terms of ground water supply, Niemela said WWSD has nine wells that draw from the Arapahoe aquifer, three from the Dawson aquifer and two from the Denver aquifer. The district does not use the Fox Hills aquifer, which has lesser water quality and is expensive to tap. The Arapahoe aquifer is the most reliable source, according to Niemela.

WWSD draws surface water from Monument Creek and Dirty Woman Creek, Niemela said. Surface water availability depends on weather conditions and averages about 500 acre-feet per year, varying between 240 acre-feet in a dry year to 700 acre-feet in a wet one. Surface water is stored in Lake Woodmoor.

Niemela summed up the water supply with a chart showing 60% coming from the Arapahoe aquifer, 30% coming from the creeks, and the remaining 10% from Dawson and Denver wells. During dry years, the district depends heavily on the Arapahoe wells, Niemela said.

Groundwater supplies are not renewable and are diminishing, Niemela pointed out, with the Arapahoe aquifer falling by 16 feet per year, the Dawson by 5 feet per year, and the Denver by 3.5 feet per year. As aquifers

deplete, the water they provide becomes more costly to produce, he said.

Niemela also listed water balance risks that need to be factored into plans: on the demand side greater than expected growth and high dry-year demand, and on the supply side aquifer depletion, drought that reduces surface water supply, and well failure.

Niemela projected a water deficit of 16 acre-feet during the three-month peak demand period in 2022 due to depletion of aquifers and other factors. A new well able to produce 61 acre-feet during the peak demand period would eliminate this deficit in 2022 and reduce it in 2023, he said. Long-range planning would address the deficit beyond 2023, Niemela told the board.

Shaffer told the board his staff was fast-tracking a new well and hoping to complete it by July of 2023. "It will be tight, but I think we can do it," he said.

Niemela said a renewable water supply is critical to avoid escalating well drilling costs.

Resolutions passed

The board voted to approve three technical and administrative resolutions that need to be considered annually.

Resolution 22-01 defines technical aspects of and sets standards for hardware components, such as fire hydrants and service line saddles, that are used throughout WWSD's service area. The resolution was updated for 2022 by District Engineer Ariel Hacker. The board voted unanimously in favor of the resolution.

Resolution 22-02 addresses administrative issues such as where legal notices and meeting announcements will be posted and how the district's financial audits and budgets will be filed with the state of Colorado. The resolution was approved unanimously.

Resolution 22-03 governs the regular district election to be held this year. The seats held by Directors Daniel Beley, William Clewe, and Thomas Roddam expire after their successors are elected on May 3. The three can run again for their seats. The polling place will be The Barn at 1691 Woodmoor Drive, Monument, CO 80132. Self-nomination forms are available through the Designated Election Official Mandi Kirk at 600 17th St., Ste. 2150S, Denver, CO 80202. Forms can be requested by email at MKirk@NortonSmithLaw.com. Interested candidates must file their form by 4 p.m. on February 25, 2022.

Board President Brian Bush pointed out that if there were only three candidates for the three available seats, the election would be cancelled.

The board voted unanimously in favor of the resolution.

Highlights of operational reports

- Bush presented the last financial report of 2021 and commented that revenues were higher than expected and expenses were lower than expected, but bills were still coming in. Unspent funds for construction were carried forward to 2022, and the district "did pretty well financially."
- In his Manager's Report, Shaffer said two water re-use efforts were continuing and both projects have requested funding from El Paso County. WWSD's long-range planning would include a "go it alone" plan in case the re-use projects, which are joint efforts with other water districts, should fail to advance.
- Operations Manager Dan La Fontaine said that sewer cleaning had used 1.2 million gallons of water, temporarily elevating the district's unbilled water statistic.
- LaFontaine reported that Lake Woodmoor is being refilled and had 15 acre-feet of water currently. Shaffer commented that Stanek Constructors Inc. had done a good job meeting the deadlines for the Lake Pump Station, allowing the refilling of the lake to proceed in preparation for the peak demand in the summer months.
- The Central Water Treatment Plant will return to processing groundwater in April and will process surface water by June.
- Hacker told the board a new residential development in the northwest corner of the WWSD service area was expected to build 514 residences on 40 acres in a multi-family format. The property could be annexed by the Town of Monument, Hacker said. Shaffer said developers were focusing less on single-family development and more on multi-family designs such as duplexes and apartments.

The next meeting is scheduled for Feb. 14 at 1 p.m. Meetings are usually held on the second Monday of each month at 1 p.m. at the district office at 1845 Woodmoor Drive; please see www.woodmoorwater.com or call 488-2525 to verify meeting times and locations.

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Triview Metropolitan District, Jan. 20 and 24

Water lease agreements authorized

By Jennifer Kaylor


The Triview Metropolitan Board of Directors met for a work session on Jan. 20 where water attorney Chris Cum-


mins briefed the board on the specifics of three separate water lease agreements. District staffers reported on their respective activities and progress. A separate Jan.

May your February be filled with love!

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