

HYBRID MEETING NOTICE

Joint Coordinating Committee

For The Truckee Meadows Water Reclamation Facility

DATE: March 1, 2023
TIME: 10:00 a.m.
PLACE: Truckee Meadows Water Reclamation Facility – Training Center
8500 Clean Water Way, Reno NV 89502

Posting: This Agenda is posted at Reno City Hall, Sparks City Hall, and the Washoe County Administration Complex. Further, in compliance with NRS 241.020, this notice has been posted to the official website for the City of Reno at www.reno.gov, the City of Sparks at <https://cityofsparks.us/>, and a link to this agenda has been posted to the State of Nevada website at <https://notice.nv.gov>. To obtain further documentation regarding posting, please contact Tara Aufiero, City Hall, 1 East 1st Street, 7th Floor, Reno, NV 89501; aufierot@reno.gov.

Members of the Committee may participate in this meeting using the zoom video conference platform.

Members of the public may participate in the meeting by registering through the below zoom link which will provide the meeting ID number and call-in phone number.

Virtual link: <https://us06web.zoom.us/meeting/register/tZMudeGprzwtGN0fqvyWyN282TdnchuSAoZK>

In Person: Truckee Meadows Water Reclamation Facility – Training Center
8500 Clean Water Way, Reno NV 89502

Support Materials: The designated contact to request support materials is Tara Aufiero, 1 East First Street, 7th Floor, 775-333-7751 Support materials are also available at the scheduled meeting.

Order of Agenda: Section titles on this agenda are for convenience and reference purposes and are not intended to define, govern, limit, modify or in any manner affect the titles of the items listed for consideration by the Committee. A time listed next to a specific agenda item indicates that the specific item will not be heard before that time – it does not indicate the time schedule of any other item. Items on the agenda may be removed, postponed, taken out of order and the Committee may combine two or more agenda items for consideration.

Accommodations: Committee and staff will make reasonable efforts to assist and accommodate persons with physical disabilities desiring to attend the meeting. If you require special arrangements for this meeting, please call 334-2350 prior to the date of the meeting.

Public Comment

In-Person

A person wishing to address the public body shall submit a “Request to Speak” form to the presiding officer. Public comment, whether on items listed on the agenda or general public comment, is limited to three (3) minutes per person. Unused time may not be reserved by the speaker, nor allocated to another speaker. No action may be taken on a matter raised under general public comment until the matter is included on an agenda as an item on which action may be taken.

Virtual

No action may be taken on a matter raised under general public comment until the matter is included on a subsequent agenda as an action item.

Pursuant to NRS 241.023, those wishing to submit public comment may do so by sending an email to chewh@reno.gov, by leaving a voicemail at 775-531-7222 or at the meeting during virtual public comment. Public comment is limited to three (3) minutes per person. Voicemail Comments received prior to 4:00 p.m. on the day preceding the meeting will be transcribed, provided to the Committee for review, and entered into the record. Comments received after 4:00 pm on the day preceding the meeting will be provided to the Committee for review prior to adjournment, and entered into the record. Email Comments will be provided to the Committee for review prior to adjournment, and entered into the record.

AGENDA

1. Call Meeting to Order.
2. Roll Call.
3. PUBLIC COMMENT – This item is for either public comment on any action item or for general public comment and is limited to no more than **three (3) minutes** for each commentator.
4. Approval of Agenda – March 1, 2023. (For Possible Action)
5. Approval of Minutes for the February 1, 2023 JCC Meeting (For Possible Action)
6. FY23 Budget-to-Actual as of January 31, 2023– Plant Manager (For Information Only)
7. Update and discussion regarding the TMWRF draft discharge permit issued by the NDEP. (For Information Only)
8. Presentation, discussion, and possible approval of the proposed FY24 Operational Budget by the TMWRF Plant Manager. (For Possible Action)
9. Presentation, discussion, and possible approval of the proposed 5-year Capital Improvement Program (CIP) for fiscal year 2024. (For Possible Action)
10. Identification of future agenda items. (For Information Only)
11. Discussion and Direction regarding setting the next meeting date as May 3, 2023 – 8:00am-9:30am. (For Possible Action)
12. PUBLIC COMMENT – This is for general public comment limited to items that do not appear on the agenda and is limited to no more than **three (3) minutes** for each commentator. Pursuant to NRS 241.020, no action may be taken upon a matter raised under this item until the matter has been specifically included on an agenda.
13. Adjournment. (For Possible Action)

MINUTES

JOINT COORDINATING COMMITTEE (JCC) FOR THE TRUCKEE MEADOWS WATER RECLAMATION FACILITY (TMWRF) Wednesday, February 1, 2023

The Joint Coordinating Committee (JCC) meeting was hybrid using Zoom and meeting in person at Truckee Meadows Water Reclamation Facility - Training Center at 8500 Clean Water Way, Reno NV and conducted the following business:

1. Call Meeting to Order

The meeting was called to order by Chair Ornelas at 10:03 a.m.

2. Roll Call - A quorum was present.

Committee Members Present

| | |
|-----------------|---|
| Donald Abbott | Council Member, City of Sparks |
| Jeff Cronk | Finance Director, City of Sparks |
| John Flansberg | Regional Infrastructure Administrator, City of Reno |
| Trina Magoon | Director of Utility Services, City of Reno |
| Chris Melton | General Manager, SVGID |
| Armando Ornelas | Community Services Director, City of Sparks |
| Vicki Van Buren | Finance Director, City of Reno |

Members Absent

| | |
|---------------|---|
| Jenny Brekhus | Council Member, City of Reno |
| John Martini | Assistant City Manager, City of Sparks |
| David Solaro | Assistant County Manager, Washoe County |

Staff Present

| | |
|--------------------|---|
| Susan Ball Rothe | Deputy City Attorney, City of Reno |
| Matt Smith | Associate Civil Engineer, City of Reno |
| Haley Chew | Associate Civil Engineer, City of Reno |
| Michael Drinkwater | TMWRF Plant Manager, City of Sparks |
| Paul Shapiro | TMWRF Safety Coordinator |
| Rick Breese | TMWRF Operations Manager, City of Sparks |
| Amy Egan | TMWRF Lab Manager |
| Jerry Kingery | TMWRF Maintenance Manager, City of Sparks |
| Casey Mentzer | TMWRF Process Engineer |

3. Public Comment

None

4. Approval of Agenda - February 1, 2023 (For Possible Action)

IT WAS MOVED BY MEMBER FLANSBERG, SECONDED BY MEMBER MELTON, TO APPROVE THE AGENDA. THE MOTION CARRIED UNANIMOUSLY WITH SEVEN MEMBERS PRESENT.

5. Approval of Minutes for November 2, 2022 JCC Meeting (For Possible Action)

IT WAS MOVED BY MEMBER FLANSBERG, SECONDED BY MEMBER MELTON, TO APPROVE THE MINUTES. THE MOTION CARRIED UNANIMOUSLY WITH SEVEN MEMBERS PRESENT.

6. Informational Management Reports from TMWRF Management Team (For Information Only):

a. Safety Update – Plant Manager

Paul Shapiro, TMWRF Safety Coordinator, presented the 2022 Incident Report. There were 18 incidents in 2022. None of the incidents required restricted duty or any treatment beyond normal first aid. None of the incidents were recordable per the OSHA standard.

b. Staffing Update – Plant Manager

Michael Drinkwater, TMWRF Plant Manager, reported no new staff has been added since the last JCC meeting. There are nine staff vacancies. Two of those are for mechanics and they are in the process of being filled.

Rick Breese, TMWRF Operations Manager, reported that five months ago four new operators were hired. Operator overtime has been reduced by about half in the last two months and leave balances have been decreasing.

c. FY 23 Budget-to-Actual as of December 31, 2022 – Plant Manager

Mr. Drinkwater reviewed the report included in the meeting packet.

Mr. Drinkwater confirmed for Member Flansberg that the electricity line item is at 54% due to power costs coming in higher.

Mr. Shapiro reported that he applied for and was granted a \$400,000 Building Resilience Infrastructure and Communities grant through FEMA to perform a seismic study of the facilities.

Casey Mentzer, TMWRF Process Engineer, reported that he applied for a 2.5 million dollar Department of Energy grant to incorporate a pilot scale research that will advance some technology to help reduce carbon emissions of the treatment plant focusing on the dewatering process.

Mr. Drinkwater stated the FY22 audited financials are available on the City of Sparks website.

d. The Influent Flow Split – Plant Manager

Mr. Drinkwater reviewed the report included in the meeting packet.

e. Ongoing Operations activities including status of processes – Operations Manager

Rick Breese, TMWRF Operations Manager, presented information on the Unit Operations Status report included in the meeting packet.

f. Ongoing process and chemical optimization – Plant Process Engineer

Casey Mentzer, TMWRF Process Engineer, reviewed information included in the meeting packet on the average January effluent flows and temperature distribution by year.

g. Ongoing Maintenance activities – Maintenance Manager

Jerry Kingery, TMWRF Maintenance Manager, reported on mechanical and electrical past due work orders as well as mechanical and electrical PMs. Electrical PMs have trended down significantly mainly due to having two new electricians concentrating on the PMs. Asset management end of life replacement overhauls are ongoing this year.

h. Lab Manager Update

Amy Egan, TMWRF Lab Manager, presented information on the lab functions at TMWRF.

7. Update and discussion regarding compliance with the allowable Total Nitrogen (TN), Total Phosphate (TP) and Total Dissolved Solids (TDS) discharges in accordance with the National Pollutant Discharge Elimination System permit issued by Nevada Division of Environmental Protection (NDEP) - Plant Manager. (For Information Only)

Mr. Drinkwater presented information included in the staff report regarding compliance with the National Pollutant Discharge Elimination System permit issued by NDEP.

Member Flansberg discussed concerns with the draft NDEP permit. It could have significant implications to plant operations and the capital improvement program. We are currently having ongoing conversations with NDEP to work through the issues related to being able to meet the permit requirements and the potential financial implications.

8. Update and discussion on review of the FY23 Budget and possible action to authorize the City of Sparks to fill one or more of the following positions approved in the FY23 Budget: Wastewater Plant Operator I/II; Assistant Plant Manager; and/or Network and Infrastructure Administrator (reclassified to "Network Specialist"). (For Possible Action)

Mr. Drinkwater reported on the need to start the process of filling these positions that were approved in the FY23 Budget.

IT WAS MOVED BY MEMBER FLANSBERG, SECONDED BY MEMBER MELTON, TO AUTHORIZE THE PLANT MANAGER AND CITY OF SPARKS TO ADVERTISE AND FILL THE POSITIONS. MOTION CARRIED UNANIMOUSLY WITH SEVEN MEMBERS PRESENT.

9. Update and discussion on the TMWRF Capital Improvement Program (CIP) progress - City of Reno TMWRF CIP Program Manager. (For Information Only)

Matt Smith, TMWRF CIP Program Manager, reviewed the current status of the TMWRF CIP. There are twelve engineering projects and evaluations, and two CIP construction projects currently underway. The status of capital project funding was also included in the report.

Mr. Smith introduced Haley Chew. She is an Associate Civil Engineer with the City of Reno and is part of the CIP team.

10. Presentation and possible approval of the draft FY24 Operational Budget or direction thereon - TMWRF Plant Manager. (For Possible Action)

Mr. Drinkwater presented the report included in the meeting packet on the draft budget and reviewed some of the line items.

IT WAS MOVED BY MEMBER FLANSBERG, SECONDED BY MEMBER MELTON, TO ACCEPT THE REPORT WITH A FINAL VERSION OF THE BUDGET COMING FOR APPROVAL IN MARCH. THE MOTION CARRIED UNANIMOUSLY WITH SEVEN MEMBERS PRESENT.

11. Presentation and possible approval of the draft 5-year Capital Improvement Program (CIP) for FY24 or direction thereon. (For Possible Action)

Mr. Smith gave a presentation on the draft 5-year CIP included in the meeting packet. The presentation included treatment process risk registry and risk mitigation priorities information.

IT WAS MOVED BY MEMBER FLANSBERG, SECONDED BY MEMBER MELTON, TO ACCEPT THE REPORT. THE MOTION CARRIED UNANIMOUSLY WITH SEVEN MEMBERS PRESENT.

12. Nomination and election of Chairperson for Fiscal Year 23/24. (For Possible Action)

Member Flansberg suggested moving this item to the next meeting when Member Martini can be present.

IT WAS MOVED BY MEMBER FLANSBERG, SECONDED BY MEMBER MELTON, TO MOVE THIS ITEM TO THE MARCH AGENDA. THE MOTION CARRIED UNANIMOUSLY SEVEN MEMBERS PRESENT.

13. Identification of future agenda items. (For Information Only)

The March agenda will include the Operational Budget, CIP Budget, and election of a Chairperson.

14. Discussion and direction regarding setting the next meeting date as February 1, 2023.
(For Possible Action)

The next TMWRF JCC meeting is scheduled for March 1, 2023.

15. Public Comment

None

16. Adjournment (For Possible Action)

The meeting was adjourned at 11:27 a.m.

Respectfully submitted by,
Christine Birmingham, Recording Secretary

Agenda Item 6
March 1, 2023

TO: Joint Coordinating Committee (JCC)

FROM: Michael Drinkwater, P.E., Treatment Plant Manager
City of Sparks

DATE: March 1, 2023

RE: FY23 Budget-to-Actual as of January 31, 2023

Update on the Fiscal Year 2023 TMWRF Operating Budget as of 31 January, 2023

TMWRF Operations Costs - FY23 Budget to Actual Unaudited

1/31/2023

| | FY23 Working Budget | FY23 Actuals (thru 01/31/2023) | Remaining Budget | % Used |
|--|---------------------|--------------------------------|-------------------|------------|
| Salaries | | | | |
| Base Salaries | 4,842,729 | 2,462,095 | 2,380,634 | 51% |
| Longevity | 95,200 | 103,199 | (7,999) | 108% |
| Overtime/Premium Pays* | 722,100 | 413,403 | 308,697 | 57% |
| Leave Bank adjustments & cash outs | 219,300 | 152,238 | 67,062 | 69% |
| Other Salaries | 0 | 6,081 | (6,081) | #DIV/0! |
| Total Salaries | 5,879,329 | 3,137,016 | 2,742,313 | 53% |
| Benefits | | | | |
| Retirement - PERS | 1,499,796 | 803,176 | 696,620 | 54% |
| Health Insurance | 1,192,444 | 618,057 | 574,387 | 52% |
| Cell Phone, D/C Match, Tuition, Uniform | 102,207 | 73,402 | 28,806 | 72% |
| Non-contractual Benefits** | 252,784 | 108,056 | 144,728 | 43% |
| Total Benefits | 3,047,231 | 1,602,690 | 1,444,541 | 53% |
| Discretionary Services & Supplies | | | | |
| Chemicals (Budget <i>excludes</i> \$300K Contingency) | 6,634,932 | 3,725,138 | 2,909,794 | 56% |
| Maintenance and Repairs | 2,664,551 | 504,772 | 2,159,779 | 19% |
| Operating Supplies | 1,427,439 | 734,245 | 693,194 | 51% |
| Biosolds Hauling | 1,649,995 | 1,092,666 | 557,329 | 66% |
| Professional Services (includes temp agency costs) | 791,126 | 257,042 | 534,083 | 32% |
| Other Discretionary Services & Supplies | 1,037,250 | 581,620 | 455,630 | 56% |
| Total Discretionary Services & Supplies | 14,205,293 | 6,895,483 | 7,309,810 | 49% |
| Non-Discretionary Services & Supplies | | | | |
| Electricity | 2,175,000 | 1,350,858 | 824,142 | 62% |
| Common Service Charge | 706,828 | 353,417 | 353,411 | 50% |
| General Insurance Premium | 568,700 | 550,255 | 18,445 | 97% |
| Other Non-discretionary Services & Supplies | 222,550 | 138,941 | 83,609 | 62% |
| Total Non-Discretionary Services & Supplies | 3,673,078 | 2,393,470 | 1,279,608 | 65% |
| Capital Outlay (managed by TMWRF staff) | | | | |
| Capital Outlay (Budget <i>excludes</i> \$1M Contingency) | 1,828,185 | 188,832 | 1,639,353 | 10% |
| Total Capital Outlay | 1,828,185 | 188,832 | 1,639,353 | 10% |
| Total | 28,633,116 | 14,217,491 | 14,415,625 | 50% |

* Overtime/Premium Pays include Overtime Callback, Worked Holiday, Standby and Night Differential

** Non-contractual Benefits includes Medicare, Workers Comp, Unemployment and OPEB

Agenda Item #8
March 1, 2023

TO: Joint Coordinating Committee (JCC)

FROM: Michael Drinkwater, P.E., Treatment Plant Manager
City of Sparks

DATE: March 1, 2023

RE: Presentation and possible approval of the draft FY 24 Operational Budget

Attached is the DRAFT Fiscal Year 2024 Operational Budget for the Truckee Meadows Water Reclamation Facility. Of note are the following:

1. The non-cash accounts are not show. (e.g. depreciation)
2. FY 23 budget did not include any CoLA for OE3, but subsequent actions raised wages 3% in FY 23 and a 3% CoLA is programmed for FY 24
3. Inflation allowance did not exist - \$50 per pay period per employee
4. Wages and benefits accounts assume 100% staffing
5. PERS contribution rate increased from 29.75% to 33.5%
6. Utilities were increased to reflect actual costs, +\$550k year over year
 - a. FY 23 budget is \$2.175 million: estimated actual is \$2.6 million
7. General liability insurance up from \$568k, to \$633k
8. Triennial pollution insurance due in FY 24, \$64k
9. Biosolids Hauling
 - a. Tipping fees increased
 - b. Hauling cost increased
 - c. Volume of solids is up
10. Maintenance and Repair – No extra for the asset management plan is requested this year
11. TMWRF Managed capital expenses (the 604xxx account series) are project or item specific:
 - a. New cart for operations
 - b. Shop tools
 - c. Second Seal AA 500 analyzer
 - d. Main server replacement

12. Chemical group -

| Acct # | Chemical | FY 2022 Actuals | FY 2023 Budget | FY 2024 Budget | FY over FY % Difference |
|---------------|----------------------------|------------------------|-----------------------|-----------------------|--------------------------------|
| 603300 | Aluminum Sulfate | \$415,349.82 | \$290,000 | \$370,000 | +27.6% |
| 603302 | Biotower Nutrients | \$0 | \$4,100 | \$4,100 | 0% |
| 603308 | Citric Acid | \$0 | \$35,000 | \$17,500 | -50.0% |
| 603315 | Polymer | \$1,122,296 | \$1,325,000 | \$1,900,000 | +43.4% |
| 603325 | Sulfuric Acid | \$165,142 | \$320,000 | \$320,000 | 0% |
| 603330 | Methanol | \$1,965,701 | \$2,400,000 | \$2,400,000 | 0% |
| 603335 | Other Chemicals | \$67,116 | \$155,832 | \$100,000 | -35.8% |
| 603350 | Sodium Bisulfite | \$128,330 | \$138,000 | \$190,000 | +37.7% |
| 603355 | Sodium Hypochlorite | \$1,224,251 | \$1,950,000 | \$2,410,000 | +23.6% |
| 603360 | Sodium Hydroxide | \$42,245 | \$17,000 | \$120,000 | +605.9% |
| Total | - | \$5,130,430 | \$6,634,932 | \$7,831,600 | +18.0% |

TMWRF FY 24 Operational Budget

| Account | Account(T) | FY22 Actuals | FY23 Working Budget | FY24 Budget | FY23 Budget to FY22 Actuals | FY24 Budget to FY23 Budget |
|------------------------------------|------------------------------------|------------------------|------------------------|------------------------|---|-------------------------------|
| 601010 | Base Salary And Wage | \$ 3,450,205.85 | \$ 4,842,729.00 | \$ 5,195,700.00 | 33.59% | 6.79% |
| 601025 | Inflation Allowance | | | \$ 67,600.00 | | |
| 601030 | Bilingual Incentive | | | \$ 1,300.00 | | |
| 601070 | Longevity Pay | \$ 90,289.22 | \$ 95,200.00 | \$ 109,000.00 | 0.00% | 0.00% |
| 601080 | Annual Leave Pay | \$ 247,503.09 | \$ - | \$ - | | |
| 601081 | Annual Leave Cash Out | \$ 105,781.44 | \$ 43,800.00 | \$ 43,000.00 | | |
| 601090 | Compensatory Leave | \$ 121,986.26 | \$ - | \$ - | | |
| 601100 | Personal Admin Leave | \$ 49,338.27 | \$ - | \$ - | Covered by Base Wages & Salary in budget files | |
| 601101 | Personal Leave Cash Out | \$ 3,634.25 | \$ - | \$ - | | |
| 601110 | Sick Leave Pay | \$ 170,918.90 | \$ - | \$ - | | |
| 601111 | Sick Leave Cash Out | \$ 41,559.00 | \$ - | \$ - | | |
| 601120 | Worker's Comp Leave Pay | \$ 9,787.71 | \$ - | \$ - | | |
| 601130 | Mil/SIIS/Court Leave Pay | \$ - | \$ - | \$ - | | |
| 601150 | Overtime Pay & Non PERS Call Back | \$ 395,315.40 | \$ 420,000.00 | \$ 421,000.00 | 6.10% | 0.24% |
| 601160 | Night Differential Pay | \$ 58,829.21 | \$ 62,100.00 | \$ 67,100.00 | 12.33% | 7.45% |
| 601170 | Call Back Pay - PERSable | \$ 5,416.33 | \$ 7,000.00 | \$ 6,500.00 | 16.67% | -7.69% |
| 601200 | Standby Pay | \$ 152,889.53 | \$ 155,000.00 | \$ 155,000.00 | 1.36% | 0.00% |
| 601210 | Worked Holiday Pay | \$ 86,584.17 | \$ 78,000.00 | \$ 80,000.00 | -8.23% | 2.50% |
| 601215 | Accrued Annual Leave Expense | \$ (17,477.96) | \$ 28,000.00 | \$ 27,500.00 | 163.56% | -1.82% |
| 601219 | Accrued Comp Leave Expense | \$ (9,077.66) | \$ 5,000.00 | \$ 5,000.00 | 281.55% | 0.00% |
| 601225 | Accrued Sick Leave Expense | \$ 130,071.68 | \$ 142,500.00 | \$ 83,000.00 | -56.71% | -71.69% |
| Salaries And Wages Subtotal | | \$ 5,093,554.69 | \$ 5,879,329.00 | \$ 6,261,700.00 | 18.66% | 6.11% |
| 602010 | Retirement | \$ 1,306,614.12 | \$ 1,499,796.25 | \$ 1,786,465.00 | 26.86% | 16.05% |
| 602015 | GASB 68 Pension Expense | \$ (687,298.00) | \$ 100,000.00 | \$ 60,000.00 | 1245.50% | -66.67% |
| 602016 | Other Post Employment Benefits | \$ 41,833.00 | \$ 10,000.00 | \$ 50,000.00 | 16.33% | 80.00% |
| 602020 | Group Health Ins | \$ 869,777.43 | \$ 1,152,444.00 | \$ 1,208,400.00 | 28.02% | 4.63% |
| 602030 | Employee Workman's Comp | \$ 60,703.58 | \$ 73,531.00 | \$ 63,900.00 | 5.00% | -15.07% |
| 602050 | Medicare Employer Contribution | \$ 73,358.34 | \$ 69,253.00 | \$ 74,700.00 | 1.80% | 7.29% |
| 602070 | Cell Phone Allowance | \$ 6,300.00 | \$ 6,300.00 | \$ 7,700.00 | 18.18% | 18.18% |
| 602080 | Uniform Pay | \$ 16,449.00 | \$ 18,849.00 | \$ 18,000.00 | 8.62% | -4.72% |
| 602101 | Retiree Health Ins Subsidies | \$ 8,639.76 | \$ 9,000.00 | \$ 9,000.00 | 4.00% | 0.00% |
| 602105 | NV State Health Ins Subsidy | \$ 32,774.40 | \$ 31,000.00 | \$ 31,000.00 | -5.72% | 0.00% |
| 602110 | Unemploy Comp Ins Reimb | \$ 3,788.74 | \$ - | \$ - | 0.00% | 0.00% |
| 602120 | Deferred Compensation Match | \$ 80,036.20 | \$ 71,058.00 | \$ 97,700.00 | 18.08% | 27.27% |
| 602130 | Tuition Reimbursement | \$ 5,294.76 | \$ 6,000.00 | \$ 6,000.00 | 11.75% | 0.00% |
| Employee Benefits Subtotal | | \$ 1,818,271.33 | \$ 3,047,231.25 | \$ 3,412,865.00 | 46.72% | 10.71% |
| 603005 | Vehicle & Equip Rent - M&R | \$ 43,100.00 | \$ 37,908.00 | \$ 37,500.00 | -14.93% | -1.09% |
| 603006 | Vehicle & Equip Rent - Replacement | \$ 28,823.64 | \$ 31,219.00 | \$ 31,600.00 | 8.79% | 1.21% |
| 603015 | Rent--Equipment | \$ 5,526.61 | \$ 7,623.99 | \$ 7,700.00 | 28.23% | 0.99% |
| 603020 | Common Service Charges | \$ 677,995.00 | \$ 706,828.00 | \$ 698,689.00 | 2.96% | -1.16% |
| 603030 | Laundry & Linen | \$ 58,167.97 | \$ 59,999.64 | \$ 60,000.00 | 3.05% | 0.00% |
| 603035 | Telephone - Land Lines | \$ 9,728.29 | \$ 9,089.79 | \$ 11,000.00 | 11.56% | 17.37% |

TMWRF FY 24 Operational Budget

| Account | Account(T) | FY22 Actuals | FY23 Working Budget | FY24 Budget | FY23 Budget to FY22 Actuals | FY24 Budget to FY23 Budget |
|---------|--|-----------------|---------------------|-----------------|--------------------------------|-------------------------------|
| 603040 | Telephone - Cell | \$ 3,365.98 | \$ 3,669.15 | \$ 4,000.00 | 15.85% | 8.27% |
| 603045 | Communications & Radio Equip | \$ 3,444.00 | \$ 2,121.90 | \$ 2,100.00 | -64.00% | -1.04% |
| 603047 | 800 Mhz Radio Equipment | \$ 632.17 | \$ 810.71 | \$ 900.00 | 29.76% | 9.92% |
| 603050 | Data Communication Lines | \$ 2,400.00 | \$ 2,832.00 | \$ 2,900.00 | 17.24% | 2.34% |
| 603055 | Software, Services & Support | \$ 143,296.85 | \$ 324,218.58 | \$ 209,050.00 | 31.45% | -55.09% |
| 603057 | Software & Updates (Software & D P Programs) | \$ - | \$ 13,245.95 | \$ 28,000.00 | 100.00% | 52.69% |
| 603060 | Employee Physical Examination | \$ 5,296.75 | \$ 2,850.00 | \$ 9,600.00 | 0.00% | 0.00% |
| 603065 | General Insurance Premium | \$ 517,008.16 | \$ 568,700.00 | \$ 697,600.00 | 25.89% | 18.48% |
| 603072 | Cost Share Liab Self Insurance | \$ 75,751.00 | \$ 100,239.00 | \$ 89,607.00 | 15.46% | -11.87% |
| 603080 | Insurance Admin Expense | \$ - | \$ 3,454.95 | \$ 3,500.00 | 100.00% | 1.29% |
| 603130 | Utilities - Electric | \$ 2,226,762.96 | \$ 2,175,000.00 | \$ 2,725,000.00 | 18.28% | 20.18% |
| 603135 | Utilities - Water | \$ 9,139.05 | \$ 10,000.00 | \$ 11,000.00 | 16.92% | 9.09% |
| 603150 | Advertising | \$ - | \$ - | \$ - | 0.00% | 0.00% |
| 603160 | Assoc. & Certification Fees | \$ 11,329.00 | \$ 14,879.00 | \$ 13,500.00 | 16.08% | -10.21% |
| 603165 | Clothing/Uniform/Insignia | \$ 3,329.91 | \$ 3,477.11 | \$ 3,100.00 | -7.42% | -12.16% |
| 603177 | Employee Appreciation Expense | \$ 18,339.39 | \$ 16,209.74 | \$ 15,500.00 | -18.32% | -4.58% |
| 603190 | Maintenance and Repairs | \$ 1,183,593.89 | \$ 2,664,551.32 | \$ 1,761,045.00 | 32.79% | -51.31% |
| 603200 | Mileage Reimbursement | \$ - | \$ - | \$ - | 0.00% | 0.00% |
| 603205 | Operating Permits/Fees | \$ 57,780.00 | \$ 65,000.00 | \$ 78,000.00 | 25.92% | 16.67% |
| 603215 | Photocopying | \$ 345.84 | \$ 349.76 | \$ 400.00 | 13.54% | 12.56% |
| 603220 | Postage Expenditure | \$ 6,759.83 | \$ 6,949.16 | \$ 6,600.00 | -2.42% | -5.29% |
| 603225 | Printing | \$ 1,448.85 | \$ 5,346.35 | \$ 6,500.00 | 77.71% | 17.75% |
| 603235 | Professional Services--Engineering | \$ 62,164.14 | \$ 65,712.25 | \$ 90,000.00 | 30.93% | 26.99% |
| 603240 | Professional Services--Biosolids Hauling | \$ 1,633,690.03 | \$ 1,649,995.00 | \$ 2,050,000.00 | 20.31% | 19.51% |
| 603242 | Professional Services-Other | \$ 344,147.57 | \$ 598,613.30 | \$ 597,440.00 | 42.40% | -0.20% |
| 603244 | Professional Services-Temp Agency Labor | \$ 117,547.71 | \$ 126,800.00 | \$ 131,800.00 | 10.81% | 3.79% |
| 603255 | Retention Interest Expense | \$ 2.15 | \$ 166.96 | \$ - | | |
| 603270 | Testing | \$ 29,580.60 | \$ 30,600.00 | \$ 32,530.00 | 9.07% | 5.93% |
| 603275 | Training | \$ 59,617.10 | \$ 160,346.00 | \$ 157,248.00 | 62.09% | -1.97% |
| 603280 | Travel | \$ 35,231.19 | \$ 72,200.00 | \$ 78,200.00 | 54.95% | 7.67% |
| 603285 | TRWQSA Expense | \$ 447.47 | \$ 418.00 | \$ - | | |
| 603290 | Bank/Investment Fees | \$ 1,151.93 | \$ 1,025.00 | \$ 1,025.00 | 0.00% | 0.00% |
| 603380 | Books/Subscriptions | \$ 1,384.95 | \$ 7,140.00 | \$ 6,800.00 | 79.63% | -5.00% |
| 603395 | Supplies--First-aid | \$ 2,737.25 | \$ 2,000.00 | \$ 3,500.00 | 21.79% | 42.86% |
| 603405 | Supplies--Laboratory | \$ 150,264.63 | \$ 124,782.00 | \$ 137,300.00 | -9.44% | 9.12% |
| 603415 | Supplies--Office | \$ 5,834.98 | \$ 7,000.00 | \$ 7,000.00 | 16.64% | 0.00% |
| 603420 | Supplies--Operating | \$ 1,336,435.97 | \$ 1,269,273.29 | \$ 1,416,000.00 | 5.62% | 10.36% |
| 603425 | Supplies--Safety Equipment | \$ 27,800.00 | \$ 20,000.00 | \$ 25,000.00 | -11.20% | 20.00% |
| 603440 | Employee Meals | \$ 1,967.67 | \$ - | \$ - | | |
| 603445 | Equip & Furnishings - Non Cap | \$ 71,287.87 | \$ 159,210.41 | \$ 174,300.00 | 59.10% | 8.66% |
| 603455 | Fuel - Garage Charges | \$ 11,196.63 | \$ 9,661.31 | \$ 11,300.00 | 0.91% | 14.50% |
| 603460 | Fuel - Propane | \$ 48,833.98 | \$ 50,000.00 | \$ 55,000.00 | 11.21% | 9.09% |
| 603505 | Tools - Minor | \$ 33,575.93 | \$ 33,100.00 | \$ 34,100.00 | 1.54% | 2.93% |
| 603510 | Buildings - Non Cap | \$ - | \$ 18,825.27 | \$ 18,900.00 | 100.00% | 0.40% |

TMWRF FY 24 Operational Budget

| Account | Account(T) | FY22 Actuals | FY23 Working Budget | FY24 Budget | FY23 Budget to FY22 Actuals | FY24 Budget to FY23 Budget |
|--|---------------------------------|-------------------------|-------------------------|-------------------------|--------------------------------|-------------------------------|
| Service & Supplies Subtotal | | \$ 9,068,264.89 | \$ 11,243,441.89 | \$ 11,541,834.00 | 21.43% | 2.59% |
| 603300 | Chemicals - Alum | \$ 415,350 | \$ 290,000 | \$ 370,000 | -12.26% | 21.62% |
| 603302 | Chemicals - BioTower Nutrients | \$ - | \$ 4,100 | \$ 4,100 | 100.00% | 0.00% |
| 603308 | Chemicals - Citric Acid | \$ - | \$ 35,000 | \$ 17,500 | 100.00% | -100.00% |
| 603315 | Chemicals - Dewater Polymer | \$ 1,122,296 | \$ 1,325,000 | \$ 1,900,000 | 40.93% | 30.26% |
| 603320 | Chemicals - Ferric Chloride | \$ - | \$ - | \$ - | 0.00% | 0.00% |
| 603325 | Chemicals - Sulfuric Acid | \$ 165,142 | \$ 320,000 | \$ 320,000 | 48.39% | 0.00% |
| 603330 | Chemicals - Methanol | \$ 1,965,701 | \$ 2,400,000 | \$ 2,400,000 | 18.10% | 0.00% |
| 603335 | Chemicals - Other | \$ 67,116 | \$ 155,832 | \$ 100,000 | 32.88% | -55.83% |
| 603350 | Chemicals - Sodium Bisulfite | \$ 128,330 | \$ 138,000 | \$ 190,000 | 32.46% | 27.37% |
| 603355 | Chemicals - Sodium Hypochlorite | \$ 1,224,251 | \$ 1,950,000 | \$ 2,410,000 | 49.20% | 19.09% |
| 603360 | Chemicals - Sodium Hydroxide | \$ 42,245 | \$ 17,000 | \$ 120,000 | 64.80% | 85.83% |
| Chemicals Subtotal | | \$ 5,130,430.46 | \$ 6,634,932.33 | \$ 7,831,600.00 | 34.49% | 15.28% |
| 604020 | Cap Project Professional Svcs | \$ - | \$ - | \$ 35,000.00 | 0.00% | 0.00% |
| 604050 | Buildings | \$ 14,270.00 | \$ - | \$ - | | |
| 604060 | Site Improvements | \$ 18,900.00 | \$ 751,282.00 | \$ 350,000.00 | 94.60% | -114.65% |
| 604070 | Capital Equipment & Furnishings | \$ 406,530.00 | \$ 1,076,902.61 | \$ 808,000.00 | 49.69% | -33.28% |
| Internal Capital Projects | | \$ 439,700.00 | \$ 1,828,184.61 | \$ 1,193,000.00 | 63.14% | -53.24% |
| | Chemicals Contingency | \$ - | \$ 300,000.00 | \$ 300,000.00 | | |
| | Operational Contingency | \$ - | \$ 1,000,000.00 | \$ 1,000,000.00 | | |
| Contingency Subtotal | | \$ - | \$ 1,300,000.00 | \$ 1,300,000.00 | | |
| Total Operational Budget | | \$ 21,550,221.37 | \$ 29,933,119.08 | \$ 31,540,999.00 | | 5.37% |

Agenda Item #9
March 1, 2023

TO: Joint Coordinating Committee (JCC)

FROM: Matt Smith, P.E., Senior Civil Engineer--City of Reno Utility Services
Department

DATE: March 1, 2023

RE: Presentation, discussion, and possible approval of the proposed 5-year
Capital Improvement Program (CIP) for fiscal year 2024 or direction
thereon. (For Possible Action)

As part of the annual budget review and approval process for TMWRF, each year a 5-year CIP plan is generated and presented to the JCC for review and approval. The 5-Year CIP identifies projects to be funded and initiated in the next fiscal year, and provides preliminary planning direction regarding future CIPs. The 5-Year CIP is reviewed and modified based on a ranking system that takes into account a risk ranking analysis, status of ongoing or recently completed projects, concerns and issues that have arisen over the last year of operation, recently completed engineering evaluations, etc. The 5-Year CIP plan can be considered a “living” document that can change from year to year to address the most pressing needs at TMWRF on an annual basis.

The following table is the latest version of the 5-Year CIP plan being recommended for approval by Staff. Project descriptions for the FY24 projects have been included for reference and clarification.

**TMWRF FY2024 Five-Year Capital Improvement Program Summary
Replacement and Rehabilitation of TMWRF Infrastructure Systems**

For Review and Possible Approval at the March 1, 2023 JCC Meeting

Flow Trigger "Capacity" Projects

| | |
|-------|-------|
| 30MGD | 34MGD |
| 32MGD | 37MGD |

Facility Plan Recommendation Project

| Risk Rank | Process: Description of Activity | FY24 | FY25 | FY26 | FY27 | FY28 | 5 YR Total |
|-----------|---|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|
| 16 | Clarifier Basin Concrete and Steel Rehabilitation (One per year)*** | \$627,000 | \$646,000 | \$665,000 | \$685,000 | \$706,000 | \$3,329,000 |
| 15 | Nitrification Tower Rehabilitation | \$0 | \$0 | \$4,630,500 | \$0 | \$0 | \$4,630,500 |
| 3 | Gas Conditioning System Improvements (Construction) | \$1,000,000 | \$0 | \$0 | \$0 | \$0 | \$1,000,000 |
| 8 | Fluidized Bed Reactors Design | \$3,000,000 | \$0 | \$0 | \$0 | \$0 | \$3,000,000 |
| 8 | Fluidized Bed Reactors (Construction & ESDC) | \$0 | \$12,000,000 | \$0 | \$0 | \$0 | \$12,000,000 |
| 2 | Digester #4 Membrane Cover (Construction) | \$4,000,000 | \$0 | \$0 | \$0 | \$0 | \$4,000,000 |
| 7 | Heat Loop Improvements (Construction Ph1/Ph2) | \$2,200,000 | \$0 | \$0 | \$0 | \$0 | \$2,200,000 |
| 7 | Heat Loop Improvements (Design Ph2) | \$0 | \$250,000 | \$0 | \$0 | \$0 | \$250,000 |
| 7 | Heat Loop Improvements (Construction Ph2) | \$0 | \$0 | \$4,500,000 | \$0 | \$0 | \$4,500,000 |
| 4 | Primary Sludge Screens and APD Valves | \$3,000,000 | \$0 | \$0 | \$0 | \$0 | \$3,000,000 |
| 6 | Filter Expansion Phase 1 (Design) | \$0 | \$2,000,000 | \$0 | \$0 | \$0 | \$2,000,000 |
| 6 | Filter Expansion Phase 1 (Construction) | \$0 | \$0 | \$10,000,000 | \$0 | \$0 | \$10,000,000 |
| 10 | UV Disinfection (Design) | \$0 | \$0 | \$2,000,000 | \$0 | \$0 | \$2,000,000 |
| 10 | UV Disinfection (Construction) | \$0 | \$0 | \$0 | \$17,000,000 | \$0 | \$17,000,000 |
| 9 | Aeration Basin Rehabilitation System 1 (Construction) | \$2,000,000 | \$0 | \$0 | \$0 | \$0 | \$2,000,000 |
| 9 | Aeration Basin Rehabilitation System 2 (Design) | \$0 | \$500,000 | \$0 | \$0 | \$0 | \$500,000 |
| 9 | Aeration Basin Rehabilitation System 2 (Construction) | \$0 | \$0 | \$2,250,000 | \$0 | \$0 | \$2,250,000 |
| 1 | New Dewatering Facility (Design) | \$5,000,000 | \$0 | \$0 | \$0 | \$0 | \$5,000,000 |
| 1 | New Dewatering Facility (Construction & ESDC) | \$0 | \$45,000,000 | \$0 | \$0 | \$0 | \$45,000,000 |
| | Totalizing Reuse Meter | \$200,000 | \$0 | \$0 | \$0 | \$0 | \$200,000 |
| 13 | Emergency Generators (Pre-Design) | \$0 | \$0 | \$0 | \$0 | \$700,000 | \$700,000 |
| 11 & 12 | Primary Sludge Pumping Improvements (Design) | \$0 | \$0 | \$0 | \$1,500,000 | \$0 | \$1,500,000 |
| 11 & 12 | Primary Sludge Pumping Improvements (Construction) | \$0 | \$0 | \$0 | \$0 | \$2,500,000 | \$2,500,000 |
| 14 | Digester #5 Membrane cover (Design) | \$0 | \$0 | \$0 | \$700,000 | \$0 | \$700,000 |
| 14 | Digester #5 Membrane Cover (Construction) | \$0 | \$0 | \$0 | \$0 | \$4,500,000 | \$4,500,000 |
| 15 | Aeration Improvements (Design) | \$0 | \$0 | \$0 | \$500,000 | \$0 | \$500,000 |
| 15 | Aeration Improvements Construction | \$0 | \$0 | \$0 | \$0 | \$3,000,000 | \$3,000,000 |
| | Electrical Expansion & Upgrades (Design) | \$0 | \$0 | \$2,000,000 | \$0 | \$0 | \$2,000,000 |
| | Electrical Expansion & Upgrades (Construction) | \$0 | \$0 | \$0 | \$14,000,000 | \$0 | \$14,000,000 |
| | Total (not including previous FY CIPs) | \$21,027,000 | \$60,396,000 | \$26,045,500 | \$34,385,000 | \$11,406,000 | \$153,259,500 |
| | FY22 Approved = | \$12,927,000 | \$19,456,000 | \$27,415,000 | \$46,315,500 | Total (sansFY22) → | \$106,113,500 |
| | Reno Portion (68.63%) | \$14,430,830 | \$41,449,775 | \$17,875,027 | \$23,598,426 | \$7,827,938 | \$105,181,995 |
| | Sparks Portion (31.37%) | \$6,596,170 | \$18,946,225 | \$8,170,473 | \$10,786,575 | \$3,578,062 | \$48,077,505 |
| | Rank 5 is TWAS Near-Term Improvements and is ongoing. | | | | | | |

TMWRF CAPITAL IMPROVEMENT PROGRAM FY 2024 – 2028

Project

Clarifier Basin Concrete and Steel Rehabilitation

Project Description:

Clarifiers must be periodically removed from service to permit repairs to the mechanical, structural steel components, and the concrete structure. This will be an annual reoccurring CIP.

Risk Assessment Rating

CONSEQUENCE RATING : Moderate consequence/impact disruption

PROBABILITY RATING: Possibility of occurring sometime

Failure Consequence/Impact

- Operations may need to take a clarifier off-line for emergency repairs thereby incurring unplanned cost

Critical Milestones/Schedule

- One clarifier will be rehabilitated per year, starting in Q2 of each calendar year

Potential Permit Ramification

- Little potential for adverse impacts to permit compliance

Strategic Plan Impact

- Supports strategic initiative of compliance with the Asset Management

Cost Est:

FY24: \$627,000

FY25: \$646,000

FY26: \$665,000

FY27: \$685,000

FY28: \$706,000

➤ Project Photo



FY 24 Risk Rank:

16/40 - Moderate

TMWRF CAPITAL IMPROVEMENT PROGRAM FY 2024 – 2028

Project Nitrification Tower Rehabilitation & Improvements

Project Description

To meet total nitrogen permitted discharge limits, the nitrification towers need to be reliably operating at an extremely high level of performance all year. Four of the towers have been in operation since 1989 and need to be rehabilitated, including media replacement and rehabilitation of walls. Other reliability improvements that have been identified include replacement of distribution arm modifications, and complete instrumentation of each tower (DO, Ammonia and Nitrate, temperature, air pressure).

Risk Assessment Rating

- CONSEQUENCE RATING : Serious consequence/Significant Disruption
- PROBABILITY RATING: Possibility of repeated events

Failure Consequence/Impact

- Impacted Nitrification Tower will be out of service limiting the plants ability to nitrify

Critical Milestones/Schedule

- Tower 1 Rehab Design has been delayed until more information is gathered regarding the nitrification tower process upsets.
- Construction tentatively for FY26.

Potential Permit Ramification

- Loss of tower operation subjects TMWRF to increased discharge of total nitrogen and potential permit violation for nitrogen

Strategic Plan Impact

- Supports strategic initiative of compliance with the Operating Permit discharge limitations and for asset management

Cost Est:

FY26: \$4,630,500

➤ Project Photo



FY24 Risk Rank:

15/40 - Moderate

TMWRF CAPITAL IMPROVEMENT PROGRAM FY 2024 – 2028

Project

Gas Conditioning System Improvements

Project Description:

The gas conditioning system has several single points of failure, and the system at large is a single point of failure for the heat loop and digestion process. The gas conditioning drainage has corroded sidewalk concrete and structural supports and has created an unsafe condition.

Risk Assessment Rating

- CONSEQUENCE RATING : Severe consequence/impact disruption
- PROBABILITY RATING: Possibility of recurring events

Failure Consequence/Impact

- If the gas conditioning system could not operate, the heat loop would not be able to generate heat. Without heat, the digesters would not function, and the entire heating system of the plant would be compromised.

Critical Milestones/Schedule

- Construction is scheduled to occur FY24.

Potential Permit Ramification

- Cascading issues could cause a violation.

Strategic Plan Impact

- Supports strategic initiatives related to personnel safety and operational reliability

Cost Est:

FY24: \$1,000,000

➤ Project Photo



FY24 Risk Rank:

3/40 – Very High

TMWRF CAPITAL IMPROVEMENT PROGRAM FY 2024 – 2028

Project Denitrifying Fluidized Bed Reactor Evaluation and Expansion

Project Description

One of the key discharge permit limits is associated with the concentration of nitrogen in the TMWRF effluent being discharged to the river. As the TMWRF acquires new sewer customers and higher flows into the plant, processes need to be expanded to handle the higher hydraulic loadings. This project will confirm the denitrification process capacity and provide recommendations for improvements and expansions for the process.

Risk Assessment Rating

- CONSEQUENCE RATING : Moderate consequence / limited capacity
- PROBABILITY RATING: Possibility of occurring during high flow conditions

Impact

- Increases TMWRFs treatment capacity without incurring violations.

Critical Milestones/Schedule

- Evaluation, basis of design, and pre-design completed in early FY24.
- Engineering design services to be completed by FY25.
- Construction tentatively scheduled to begin in FY25, may continue into FY26.

Potential Permit Ramification

- TMWRF treatment capacity is limited hydraulically by the denitrification fluidized bed reactors. The facility plan states that this process should be expanded at 30.3 million gallons per day (MGD).

Strategic Plan Impact

- Supports strategic initiative of compliance with the Operating Permit discharge limitations and for asset management

Cost Est:

FY24: \$3,000,000

FY25: \$12,000,000

➤ Project Photo



FY24 Risk Rank:

8/40 – High

TMWRF CAPITAL IMPROVEMENT PROGRAM FY 2024 – 2028

Project

Digester #4 Cover

Project Description

The covers for Digester #4 was constructed in 1979. The interior coating, and the outside cover insulation/coating must be replaced or repaired. A life cycle cost analysis was done in FY21 and a new membrane cover was determined to be the most cost-efficient and operationally desirable path forward. Therefore the improvements include the replacement of the existing cover with a new membrane cover.

Risk Assessment Rating

- CONSEQUENCE RATING : Major Consequence/Major Disruption
- PROBABILITY RATING: Possibility of isolated events

Failure Consequence/Impact

- Failure of the digester cover through corrosion will limit the ability of the facility to properly treat process solids and capture of gases to aid in heating and power operations of the plant. Additional operational costs would be incurred during cover failure and repair. Safety hazard for plant staff if not repaired.

Critical Milestones

- Construction of improvements scheduled for FY24

Potential Permit Ramification

- Treatment of hydrogen sulfide emissions from digester operations is required by the air quality permit
- Potential impact to ability of TMWRF to dewater solids if digesters are not operating efficiently.
- Potential for generation of gas to be hindered, resulting in loss of digestion, ability to generate power, and loss of heating at the plant.

Strategic Plan Impact

- Supports strategic initiative of compliance with the Operating permit and Asset Management initiatives

Cost Est:

FY24: \$4,000,000

➤ Project Photo



FY24 Risk Rank:

2/40 – Very High

TMWRF CAPITAL IMPROVEMENT PROGRAM FY 2024 – 2028

PROJECT

Heat Loop System Improvements

Project Description

The heat loop has been in service since 1966, and the majority of the boilers and sludge heaters have been in service since before 1990. Much of the system is approaching the end of its useful design life. The system does not have redundant heating capacity and recent facility improvements have increased heating requirements. This project includes a detailed design to provide improvements to the heat system including additional heating capacity for full redundancy in meeting current and future heating demands.

Risk Assessment Rating

- CONSEQUENCE RATING: Serious consequence/Impact /Disruption
- PROBABILITY RATING: Possibility of isolated incidents

Failure Consequence/Impact

- Potential personnel injury, permit violations and extended key process shutdown

Critical Milestones/Schedule

- Design Phase 1 funded in FY23 and Design Phase 2 to be funded in FY25
- Construction to be funded over FY24 (Phase 1) & FY26 (Phase 2)

Potential Permit Ramification

- Failure to provide proper heating can cause freezing of equipment and chemicals, impacting treatment processes and increasing maintenance costs. Failure to maintain proper temperature in sludge will impact digestion of sludge and critical methane gas generation. Failure of the heat loop has a high potential to cause a permit violation.

Strategic Plan Impact

- Supports strategic initiatives related to personnel safety and operational reliability

Cost Est:

FY24: \$2,200,000

FY25: \$250,000

FY26: \$4,500,000

➤ Project Photo



FY24 Risk Rank:

7/40 - High

TMWRF CAPITAL IMPROVEMENT PROGRAM FY 2024 – 2028

Project

Primary Sludge Screen Improvements

Project Description

TMWRF's primary sludge system has had some failures recently that has required repairs by plant maintenance. This project seeks to replace obsolete primary sludge screens and inoperable sludge valves.

Risk Assessment Rating

- CONSEQUENCE RATING : Severe consequence/Major disruption
- PROBABILITY RATING: Unknown

Failure Consequence/Impact

- Inability to screen sludge before digestion could cause excessive buildup of rags in the digester and could bind pumps and valves.

Critical Milestones/Schedule

- Design and construction to begin in FY24.

Potential Permit Ramification

- Moderate potential for adverse impacts to permit compliance

Strategic Plan Impact

- Supports strategic initiatives asset management and rehabilitation of infrastructure

Cost Est:

FY24: \$3,000,000

➤ Project Photo



FY24 Risk Rank:

4/40 – Very High

TMWRF CAPITAL IMPROVEMENT PROGRAM FY 2024 – 2028

Project

Filter Building Expansion

Project Description

TMWRF's filter building has been in-service since 1989 and has had no repairs since it has been constructed. This project is to evaluate the condition of the filter building and its equipment and components and provide recommendations for improvements. One such improvement would be a bypass. Additionally, the process does not have enough capacity during higher flow events. The expansion of this facility is critical to plant operation.

Risk Assessment Rating

- CONSEQUENCE RATING : Serious consequence/Significant Disruption
- PROBABILITY RATING: Possibility of repeated events

Failure Consequence/Impact

- TMWRF relies upon its filters to remove particulate matter and other constituents. Without this removal, TMWRF may violate the discharge permit.

Critical Milestones/Schedule

- Pre-design to be completed FY24
- Design to begin in FY25, and construction to begin in FY26

Potential Permit Ramification

- Filtration is required for TMWRF's discharge permit.

Strategic Plan Impact

- Supports strategic initiative of compliance with the Operating Permit discharge limitations and for asset management

Cost Est:

FY25: \$2,000,000

FY26: \$10,000,000

➤ Project Photo



FY24 Risk Rank:

6/33 – High

TMWRF CAPITAL IMPROVEMENT PROGRAM FY 2024 – 2028

Project

UV Disinfection

Project Description

This project analyzes the construction of a UV system at the plant, which is anticipated to result in significant operational costs over time.

Risk Assessment Rating

CONSEQUENCE RATING : Serious consequence/Significant Disruption

PROBABILITY RATING: Possibility of repeated events

Failure Consequence/Impact

- Failure of the disinfection process would result in permit violations. Additionally, bleach is shipped to the plant and has the potential to have delays, pricing increases, and variable chemical quality.

Critical Milestones/Schedule

- Pre-design to be completed FY24
- Design to occur FY26
- Construction is tentatively scheduled for FY27

Potential Permit Ramification

- Disinfection is required for TMWRF's discharge permit.

Strategic Plan Impact

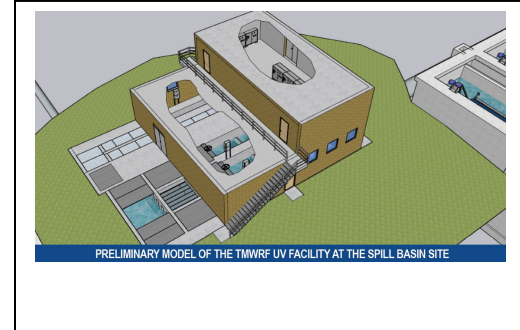
- Supports strategic initiative of compliance with the Operating Permit discharge limitations and for asset management

Cost Est:

FY26: \$2,000,000

FY27: \$17,000,000

➤ Project Photo



FY24 Risk Rank:

10/40 – High

TMWRF CAPITAL IMPROVEMENT PROGRAM FY 2024 – 2028

Project

Aeration Tanks Rehabilitation

Project Description

An evaluation of the aeration tanks was started in FY21. The evaluation will also have recommended improvements to the aeration tanks and what is needed to keep the infrastructure in good working order. This project is to design the improvements as outlined in the evaluation and pre-design project.

Risk Assessment Rating

- CONSEQUENCE RATING : Moderate consequence/minor disruption
- PROBABILITY RATING: Possibility of repeated events

Failure Consequence/Impact

- Operations may need to take a tank off-line for emergency repairs thereby incurring unplanned costs and potential constituent loading increases.

Critical Milestones/Schedule

- One process system will be rehabilitated every other year, starting in FY24

Potential Permit Ramification

- Little potential for adverse impacts to permit compliance

Strategic Plan Impact

- Supports strategic initiative of compliance with the Asset Management

Cost Est:

FY24: \$2,000,000
FY25: \$500,000
FY26: \$2,250,000

➤ Project Photo



FY24 Risk Rank:

9/40 - High

TMWRF CAPITAL IMPROVEMENT PROGRAM FY 2024 – 2028

Project

Dewatering Building

Project Description

The dewatering process at TMWRF is an important part of water recovery and biosolids disposal. The equipment is undersized and lacking in redundancy and efficiency. A seismic report identified that this building has structural deficiencies that would render the building and process inoperable should a large enough earthquake occur. This project includes the evaluation and pre-design of a new building and rehabilitation of the existing building. The two options will be analyzed and selected based on direction of the committee.

Risk Assessment Rating

CONSEQUENCE RATING: Serious consequence/impact Disruption

PROBABILITY RATING: Possibility of recurring incidents

Failure Consequence/Impact

- Failure of the dewatering facility will require mobilization of temporary dewatering facilities to the site and around the clock trucking of solids offsite at significantly increased cost.

Critical Milestones

- Evaluation and pre-design to be completed FY23
- Design is scheduled for FY24
- Construction is tentatively scheduled for FY25

Potential Permit Ramification

- Minimal, assuming temporary equipment can be quickly mobilized to the site.

Strategic Plan Impact

- Supports strategic initiative of compliance with the Operating permit and Asset Management initiatives

Cost Est:

FY24: \$5,000,000

FY25: \$45,000,000

➤ Project Photo



FY18 Risk Rank: 6/35 - HIGH

FY19 Risk Rank: 6/35 - HIGH

FY20 Risk Rank: 2/31 – VERY HIGH

FY21 Risk Rank: 1/30 - HIGHEST

FY22 Risk Rank: 1/32 – HIGHEST

FY23 Risk Rank: 1/33 - HIGHEST

FY24 Risk Rank:

1/40 - Highest

TMWRF CAPITAL IMPROVEMENT PROGRAM FY 2024 – 2028

Project

Totalizing Reuse Meter

Project Description

The TMWRF Reuse system has meter vaults throughout the Reno System and Sparks System. Historically, some meters have been in disrepair and unable to give flow monitoring. This project seeks to provide redundancy for the Reno and Sparks systems, so that if a meter in either Reno or Sparks failed, either city would be able to calculate the flow as required by the NDEP.

Risk Assessment Rating

- CONSEQUENCE RATING : Low consequence/Low disruption
- PROBABILITY RATING: Unknown

Failure Consequence/Impact

- A failure of a meter in the reuse system will not allow TMWRF to accurately provide discharge management reports to the NDEP.

Critical Milestones/Schedule

- Design and construction to begin in FY24.

Potential Permit Ramification

- Moderate potential for adverse impacts to permit compliance

Strategic Plan Impact

- Supports strategic initiatives asset management and rehabilitation of infrastructure

Cost Est:

FY24: \$200,000

➤ Project Photo



FY24 Risk Rank:

Not Ranked

TMWRF CAPITAL IMPROVEMENT PROGRAM FY 2024 – 2028

Project

Emergency Generators

Project Description

There is redundant electrical power at the plant, but if there is an electrical outage, there is no redundant source of power, rendering the plant largely ineffective at moving sewage out of the collection system.

Risk Assessment Rating

CONSEQUENCE RATING : Moderate consequence/impact
Disruption

PROBABILITY RATING: Possibility of isolated incidents

Failure Consequence/Impact

- Potential personnel injury, permit violations and extended key process shutdown.

Critical Milestones

- Pre-Design to occur FY28

Potential Permit Ramification

- Permit violations due to power interruptions and process failure.

Strategic Plan Impact

- Supports strategic initiative of compliance with the Operating Permit discharge limitations and asset management. Supports strategic initiatives related to personnel safety and operational reliability.

Cost Est:

FY28: \$700,000

➤ Project Photo



FY24 Risk Rank:

13/40 - Moderate

TMWRF CAPITAL IMPROVEMENT PROGRAM FY 2024 – 2028

Project

Primary Sludge Pumping & Piping Improvements

Project Description

TMWRF's primary sludge system has had some failures recently that has required repairs by plant maintenance. This project seeks to investigate alternative pumping arrangements and replace deteriorated piping.

Risk Assessment Rating

- CONSEQUENCE RATING : Severe consequence/Major disruption
- PROBABILITY RATING: Unknown

Failure Consequence/Impact

- Failure of primary sludge pumps could result in permit violations and health and safety issues. Without the ability to pump primary sludge, the facility cannot produce biogas and would not be able to heat it's processes.

Critical Milestones/Schedule

- Design to begin in FY27.
- Construction to begin in FY28.

Potential Permit Ramification

- Moderate potential for adverse impacts to permit compliance

Strategic Plan Impact

- Supports strategic initiatives asset management and rehabilitation of infrastructure

Cost Est:

FY27: \$1,500,000

FY28: \$2,500,000

➤ Project Photo



FY24 Risk Rank:

11&12/40 – Moderate

TMWRF CAPITAL IMPROVEMENT PROGRAM FY 2024 – 2028

Project

Anaerobic Digester Cover #5 Repairs

Project Description

The cover for the Anaerobic Digester #5 was constructed in 1979. The outside cover insulation must be replaced or repaired. The interior of Digester Cover #5 was repaired and coated in 2014 but the insulation and exterior coating needs to be replaced. This project includes the design and construction of these items.

Risk Assessment Rating

CONSEQUENCE RATING: Moderate Consequence/Minor Disruption

PROBABILITY RATING: Possibility of repeated events

Failure Consequence/Impact

- Failure of the digester cover through corrosion will limit the ability of the facility to properly treat process solids and capture of gases to aid in heating and power operations of the plant. Additional operational costs would be incurred during cover failure and repair. Safety hazard for plant staff if not repaired.

Critical Milestones

- Design of improvements scheduled for FY27
- Construction to tentatively start in FY28

Potential Permit Ramification

- Treatment of hydrogen sulfide emissions from digester operations is required by the air quality permit
- Potential impact to ability of TMWRF to dewater solids if digesters are not operating efficiently.

Strategic Plan Impact

- Supports strategic initiative of compliance with the Operating permit and Asset Management initiatives

Cost Est:

FY27: \$700,000

FY28: \$4,500,000

➤ Project Photo



FY24 Risk Rank:

14/40 – Moderate

TMWRF CAPITAL IMPROVEMENT PROGRAM FY 2024 – 2028

Project

Aeration Piping Improvements

Project Description

The aeration piping at the plant was the first piping installed in the piping galleries. The aeration piping is located near the ceiling behind several other pipes that cannot be taken down for maintenance. The aeration piping is currently leaking at the joints and cannot be repaired without looping the aeration system to allow more operational flexibility.

Risk Assessment Rating

- CONSEQUENCE RATING : Severe Consequence/Major Disruption
- PROBABILITY RATING: Fairly low possibility of occurrence

Failure Consequence/Impact

- If the main aeration header fails, the activated sludge system will not be able to function. The main treatment process will fail and permit violations will occur.

Critical Milestones/Schedule

- Evaluation and design to occur in FY27
- Construction to occur in FY28

Potential Permit Ramification

- If the aeration system is not able to function, the plant will violate the discharge permit.

Strategic Plan Impact

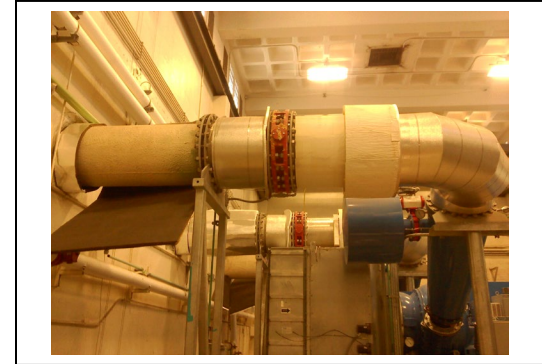
- Supports strategic initiative of compliance with the Operating Permit discharge limitations and for asset management

Cost Est:

FY27: \$500,000

FY28: \$3,000,000

➤ Project Photo



FY24 Risk Rank:

15/40 - Moderate

TMWRF CAPITAL IMPROVEMENT PROGRAM FY 2024 – 2028

PROJECT:

Electrical Substation Expansion

Project Description:

The Truckee Meadows Water Reclamation Facility is serviced by two incoming 24.9 KV sources provided by Nevada Energy. Near term process improvements and expansions require additional electrical capacity. This project will add another substation to allow for near term and future expansions.

Risk Assessment Rating:

- CONSEQUENCE RATING: Serious consequence/Impact /Disruption
- PROBABILITY RATING: Possibility of isolated incidents.

Failure Consequence/Impact:

- Potential personnel injury, permit violations and extended key process shutdown

Critical Milestones/Schedule:

- Design is scheduled for FY26
- Construction is scheduled for FY27

Potential Permit Ramification

- Power failures of the primary power supply equipment would directly impact treatment process operations and threaten compliance with conditions within the Operating Permit.

Strategic Plan Impact

- Supports strategic initiatives related to personnel safety and operational reliability.

Cost Est:

FY26: \$2,000,000

FY27: \$14,000,000

➤ Project Photo



FY24 Risk Rank:

Expansion Project – Not Ranked