OAK CREEK BOARD OF TRUSTEES
AUGUST 22, 2024
REGULAR BOARD MEETING
AGENDA
6:00 P.M.

August 19, 2024
STATE OF COLORADO
COUNTY OF ROUTT

To the Board of Trustees of the Town of Oak Creek and to all Other Persons to whom it may concern:
Notice is hereby given that a **Regular Meeting** of the Board of Trustees, Town of Oak Creek, Routt County, Colorado, will be held on Thursday, August 22, 2024 beginning at 6:00 p.m. in the Hearing Room, Town of Oak Creek Offices, 129 Nancy Crawford Blvd., Oak Creek, Colorado. The Board of Trustees will be attending either in person or via web-based meeting through Zoom (zoom.us). **Agenda is subject to change up to 24 hours before scheduled hearings.** The public is invited to attend/participate via Zoom or Facebook Live. The Facebook Live event will be broadcast through the Town of Oak Creek's Facebook page.

Join Zoom Meeting
https://us02web.zoom.us/j/81449378638
Meeting ID: 814 4937 8638
One tap mobile (for call in meeting): +1-669-900-6833

1. **CALL TO ORDER (5 Minutes):**
   A. Roll Call
   B. Pledge of Allegiance

2. **AUDIENCE PARTICIPATION (5 Minutes):**
   (This section of the agenda is set aside for questions or comments by the public, regarding issues other than agenda items. Please limit comments to three minutes. The Board of Trustees will take comments under consideration but will not make any decision or take any action at this time. Anyone who would like to address the Board of Trustees concerning any agenda item will be given the opportunity to speak for three minutes at the scheduled time for that item.)

3. **CONSENT AGENDA (5 Minutes):**
   A. Approval of August 12, 2024 Special Meeting Minutes
   B. Approval of June 2024 Financial Statements
   C. Approval of accounts payable, manual warrants and payroll for July, 2024
   D. Approval of renewal of Liquor License for Bonfiglio Drug Inc. at 118 W Main Street, Oak Creek

4. **SHERIFF RESERVOIR MATTERS (10 Minutes)**
   A. Ratification of approval and signing of an Engineering Services Agreement between the Town of Oak Creek and W.W. Wheeler & Associates Inc. for the provision of Sheriff Spillway Rehabilitation Funding Support in an amount not-to-exceed $10,000
   B. Consideration for approval of Sheriff Reservoir Dam Operations & Maintenance Manual (O&M Manual) and authorization to sign Financial Plan Supplement to O&M Manual

5. **DRINKING WATER & WASTEWATER TREATMENT IMPROVEMENTS PLANNING – AQUAWORKS DBO, INC. (10 Minutes)**
   Consideration to authorize the amendment and extension of an Agreement for Services with AquaWorks DBO, Inc. to undertake Drinking Water & Wastewater Treatment Improvements Planning tasks identified in the Water and Wastewater System Review Letter Report, June 2023 for the not-to-exceed amount of $50,000

6. **OAK CREEK FIRE PROTECTION DISTRICT COMMENT LETTER – PROPOSED IMPACT FEES (10 Minutes)**
   Consideration of approval of comment letter in response to notification that the Oak Creek Fire Protection District will be considering the adoption and implementation of an impact fee schedule on new construction

7. **RESOLUTION 2024-009 – WHISTLE HILL ALLEY (5 Minutes)**
   Review and consideration for approval and authorization to sign Resolution 2024-009, A Resolution Adopting the Road Name of Whistle Hill Alley

8. **APPROVAL TO HIRE CUSTODIAL WORKER AT STEP 9 (10 Minutes)**
   Consideration of approval to hire a part-time Custodial Worker at Step 9 ($20.34/hr) of the 2024 Salary Schedule beginning August 26, 2024

9. **COMMUNITY DONATION – OAK CREEK LABOR DAY – OC NEIGHBORS CORP (5 Minutes)**
   Discussion and consideration of request to provide community support financial assistance for liability insurance costs in an amount not to exceed $1002 to OC Neighbors Corp for 2024 Oak Creek Labor Day events

10. **113 W FIRST STREET – NON-CONFORMING LOT DETERMINATION (5 Minutes)**
    Consideration and ratification of determination of a non-conforming lot as buildable for a property located at 113 W First Street, Oak Creek

11. **BUDGET WORK SESSION (30 Minutes)**

12. **STAFF & BOARD MEMBER REPORTS**

13. **ADJOURNMENT**

Notice: Three or more members of the Town Board may be meeting informally at the Colorado Bar or The Oak Creek Tavern, Franciosi Brothers or Double D's following the scheduled Board Meeting. Members of the public are welcomed.

Please Note: All programs, services and activities of the Town of Oak Creek are operated in compliance with the Americans with Disabilities Act. If you need a special accommodation as a result of a disability, please call our office at (970) 736-2422 or TDD access through RelayColorado by dialing 7-1-1 to coordinate your needs. Please notify us of your request as soon as possible to allow us time to meet your request. This institution is an equal opportunity provider and employer.

COMMUNICATION FORM

DATE: August 22, 2024
ITEM: Consent Agenda
ATTACHED: August 12, 2024 Special Meeting Minutes
Financials, June 2024
Payment Approval Report, July 2024
Payroll Check Register, July 2024
Bonfiglio Drug Liquor License

BOARD ACTION:
_X_ ACTION ITEM
____ DIRECTION REQUESTED
____ INFORMATION

REQUEST OR ISSUE: The Consent Agenda is used for the approval of routine agenda items, or items that have been reviewed at previous board meetings. The following items have been identified as routine and placed on the Consent Agenda:

A. Approval of June 2024 Financial Statements
B. Approval of accounts payable, manual warrants and payroll for July, 2024
C. Approval of renewal of Liquor License for Bonfiglio Drug Inc. at 118 West Main Street

RECOMMENDED ACTION: That the Board approves the Consent Agenda as presented.

BACKGROUND INFORMATION: The Board has established a process to streamline certain types of items to allow sufficient time for discussion of topics or issues. Items that are routine or have been reviewed at previous board meetings can be placed on a consent agenda and approved with a single motion. Board members can request the removal of an item or items from the consent agenda for further discussion.

FISCAL IMPACTS: As identified in accompanying materials.

LEGAL ISSUES: Approval of these items will comply with the legal requirements for the same.

CONFLICTS OR ISSUES: None known.

SUMMARY AND ALTERNATIVES: See above.

TOWN OF OAK CREEK
SPECIAL TOWN BOARD MEETING
AUGUST 12, 2024
MINUTES

CALL TO ORDER:

Mayor Pro Tem Gagne called the special meeting of the Oak Creek Board of Trustees to order at 6:00 p.m., Thursday, August 12, 2024.

Town Officials present at roll call were: Mayor Pro Tem Gagne and Trustees Julie Gregory, Christopher Hedberg and Erika Pastor. Trustee McElfish joined the meeting at 6:45 p.m. Mayor Dobbins and Trustee Stanger were excused.

Others present: Mary Alice Page-Allen, Interim Town Administrator/Clerk; David Park, Mike Roach, Skyler McKinley and Brady Glauthier, Oak Creek Fire Protection District; Taylor Baker; Nancy Peckham; Trevor Ballantyne, Steamboat Pilot & Today; Clark _____.

Those present recited the Pledge of Allegiance.

EN RE: JOINT MEETING – OAK CREEK FIRE PROTECTION DISTRICT

Mayor Pro Tem Gagne welcomed Oak Creek Fire Protection District (OCFPD) Board Members David Park, Mike Roach and Skyler McKinley and Fire Chief Brady Glauthier to the meeting. He noted that this evening's meeting is to discuss and understand the OCFPD's plan to adopt and implement an impact fee on new residential and non-residential construction per the notice received by the Town in a letter dated June 26, 2024. He reviewed several points outlined in the Impact Fee Support Study related to facilities needed and planned for the OCFPD and expressed his concerns on the potential impacts to housing affordability the fees may have.

David Park, OCFPD Board President, provided an overview of the process the OCFPD Board of Directors undertook to establish the proposal for impact fees on new construction. OCFPD Board members and the Fire Chief answered a number of questions from the Town Board members, staff and members of the public in attendance.

Mayor Pro Tem Gagne directed staff to bring a letter responding to the OCFPD's notice, highlighting the points of concern identified during this evening's discussion, for the Town Board's consideration at the August 22nd's meeting, noting that this will provide comments in a timely manner to the OCFPD's Board of Directors consideration of the adoption of the impact fee schedule slated for August 26th.

Mayor Pro Tem Gagne thanked the OCFPD Board members and Fire Chief and members of public for their attendance.

EN RE: ADJOURNMENT

Trustee Gregory made a motion to adjourn the meeting. Trustee McElfish seconded the motion; passed unanimously.

No further business coming before the Board, same adjourned sine die at 7:02 p.m.

Attest:

_____
Mary Alice Page-Allen
Interim Town Administrator/Clerk

_____
Melissa Dobbins, Mayor

Date:_____, 2024

TOWN OF OAK CREEK
COMBINED CASH INVESTMENT
JUNE 30, 2024

	CASH ALLOCATION RECONCILIATION	
10	ALLOCATION TO GENERAL FUND	(3,043,122.38)
20	ALLOCATION TO ELECTRIC	1,834,388.88
30	ALLOCATION TO WATER	595,727.88
40	ALLOCATION TO SEWER	613,549.14
50	ALLOCATION TO TRASH	(543.52)
	TOTAL ALLOCATIONS BETWEEN FUNDS	.00
	ZERO PROOF SHOWS ALLOCATIONS BALANCE	.00

TOWN OF OAK CREEK
BALANCE SHEET
JUNE 30, 2024

GENERAL FUND

	ASSETS		
10-00-1001	CASH ALLOCATED TO OTHER FUNDS	(3,043,122.38)	
10-00-1010	PETTY CASH	250.00	
10-00-1015	CASH DRAWER	250.00	
10-00-1020	CASH IN REGULAR CHECKING	238,307.72	
10-00-1021	CASH - XPRESS DEPOSIT ACCOUNT	30,767.61	
10-00-1025	INVESTOR 1ST CHOICE ASSET	142,600.79	
10-00-1030	COLOTRUST	3,812,331.51	
10-00-1035	CONSERVATION TRUST FUND	5,927.30	
10-00-1060	CASH WITH COUNTY DIRECTOR	63.44	
10-00-1350	ACCUMULATED DEPRECIATION	(1,580,851.56)	
10-00-1500	ACCOUNTS RECEIVABLE	92,548.09	
10-00-1510	PROPERTY TAX RECEIVABLE	27,787.59	
10-00-1600	LAND	665,604.59	
10-00-1625	BUILDINGS	1,613,208.87	
10-00-1650	EQUIPMENT	813,723.24	
10-00-1900	INVESTMENT IN FIXED ASSETS	(1,511,685.14)	
	TOTAL ASSETS		1,307,711.67
	LIABILITIES AND EQUITY		
	LIABILITIES		
10-00-2192	COLORADO WITHHOLDING	2,542.00	
10-00-2193	EMPLOYEE BENEFIT SHARE PAYABLE	(3,233.58)	
10-00-2194	SUTA PAYABLE	566.07	
10-00-2195	DEFERRED COMPENSATION	(45.25)	
10-00-2197	AFLAC/VISION PLAN PAYABLE	141.18	
10-00-2201	DEF REV-PROPERTY TAXES	27,787.59	
10-00-2205	PAYROLL PAYABLE	4,993.93	
10-00-2252	DEF REV-GRANT	26,000.00	
10-00-2350	TENT MONEY	1,160.00	
	TOTAL LIABILITIES		59,911.94
	FUND EQUITY		
	RESTRICTED		
10-00-2610	PARKS AND RECREATION	100.00	
10-00-2620	TABOR RESERVE	28,800.00	
10-00-2625	PARKING FEE IN LIEU	7,969.80	
10-00-2630	COAL QUEEN - OCLD FUNDS	5,500.00	
	TOTAL RESTRICTED		42,369.80
	COMMITTED		
10-00-2710	OPERATING RESERVE	193,573.00	
10-00-2720	CAPITAL RESERVE - PARKS	21.00	
10-00-2721	CAPITAL RESERVE - POLICE	11,055.00	
10-00-2722	CAPITAL RESERVE - PW	6,732.00	
10-00-2723	CAPITAL RESERVE - STREETS	26,000.00	
	TOTAL COMMITTED		237,381.00

TOWN OF OAK CREEK
BALANCE SHEET
JUNE 30, 2024

GENERAL FUND

	ASSIGNED			
10-00-2830	DESIGNATED CAPITAL PROJECTS		27,104.00	
	TOTAL ASSIGNED			27,104.00
	UNASSIGNED FUND BALANCE:			
10-00-2999	FUND BALANCE	855,317.75		
	REVENUE OVER EXPENDITURES - YTD	85,627.18		
	BALANCE - CURRENT DATE		940,944.93	
	TOTAL FUND EQUITY			1,247,799.73
	TOTAL LIABILITIES AND EQUITY			1,307,711.67

TOWN OF OAK CREEK
REVENUES WITH COMPARISON TO BUDGET
FOR THE 6 MONTHS ENDING JUNE 30, 2024

GENERAL FUND

		PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEARNED	PCNT
	GENERAL REVENUE					
10-01-3110	PROPERTY TAXES	4,572.60	87,346.39	118,382.00	31,035.61	73.8
10-01-3115	LOAN/LEASE PROCEEDS	.00	.00	14,224.00	14,224.00	.0
10-01-3120	SPECIFIC OWNERSHIP	119.64	2,975.87	6,760.00	3,784.13	44.0
10-01-3132	2% SALES TAX- UNDESIGNATED	25,168.46	171,608.83	357,273.00	185,664.17	48.0
10-01-3142	CIGARETTE TAX	58.32	360.68	850.00	489.32	42.4
10-01-3180	ROAD TAX	.00	1,302.90	3,135.00	1,832.10	41.6
10-01-3190	DELINQUENT TAX INTEREST	15.89	26.43	850.00	823.57	3.1
10-01-3211	LIQUOR LICENSES	.00	628.75	1,600.00	971.25	39.3
10-01-3227	PET LICENSES	42.00	129.00	200.00	71.00	64.5
10-01-3228	MJ LICENSES	.00	22,419.00	48,000.00	25,581.00	46.7
10-01-3323	MINERAL LEASING	.00	.00	1,300.00	1,300.00	.0
10-01-3351	MOTOR VEHICLE REGISTRATION	315.93	1,740.47	4,335.00	2,594.53	40.2
10-01-3359	SEVERANCE TAX	.00	.00	15,179.00	15,179.00	.0
10-01-3410	MANAGEMENT FEE - ELECTRIC	18,455.00	42,792.87	73,780.00	30,987.13	58.0
10-01-3411	MANAGEMENT FEE-WATER	.00	.00	23,532.00	23,532.00	.0
10-01-3412	MANAGEMENT FEE-SEWER	4,754.55	9,509.10	19,018.00	9,508.90	50.0
10-01-3611	INTEREST INCOME	16,903.97	104,049.65	115,000.00	10,950.35	90.5
10-01-3683	MISCELLANEOUS	437.66	472.06	1,500.00	1,027.94	31.5
10-01-3694	GRANT/DONATION	.00	42,292.00	180,000.00	137,708.00	23.5
10-01-3725	SERVICE FEES	450.00	7,877.71	17,000.00	9,122.29	46.3
10-01-3800	REVIEW FEES	49.50	1,796.00	3,000.00	1,204.00	59.9
	TOTAL GENERAL REVENUE	71,343.52	497,327.71	1,004,918.00	507,590.29	49.5
	REC PROGRAM AND SPECIAL EVENTS					
10-02-3683	MISCELLANEOUS	14.22	106.46	500.00	393.54	21.3
10-02-3694	GRANT/DONATION P&R	6,750.00	31,975.00	61,200.00	29,225.00	52.3
10-02-3800	AFTER SCHOOL FEES	.00	11,373.01	21,204.00	9,830.99	53.6
10-02-3803	SUMMER CAMP FEES	18,523.00	36,166.50	54,775.00	18,608.50	66.0
10-02-3808	COMMUNITY ED	140.00	2,264.00	3,375.00	1,111.00	67.1
	TOTAL REC PROGRAM AND SPECIAL EVENT	25,427.22	81,884.97	141,054.00	59,169.03	58.1
	PARKS AND OPEN SPACE REVENUE					
10-03-3358	LOTTERY TRUST FUND	2,776.34	5,827.30	10,500.00	4,672.70	55.5
	TOTAL PARKS AND OPEN SPACE REVENUE	2,776.34	5,827.30	10,500.00	4,672.70	55.5

TOWN OF OAK CREEK
REVENUES WITH COMPARISON TO BUDGET
FOR THE 6 MONTHS ENDING JUNE 30, 2024

GENERAL FUND

		PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEARNED	PCNT
	POLICE REVENUE					
10-07-3520	COMBINED COURT INCOME	.00	275.00	300.00	25.00	91.7
10-07-3684	MISCELLANEOUS-POLICE	32.00	450.00	400.00	(50.00)	112.5
10-07-3694	GRANT/DONATION - MISC	.00	.00	500.00	500.00	.0
10-07-3696	GRANT INCOME-COMMUNITY SUPPORT	.00	370.46	200.00	(170.46)	185.2
10-07-3698	GRANT INCOME - POST	.00	809.43	2,000.00	1,190.57	40.5
	TOTAL POLICE REVENUE	32.00	1,904.89	3,400.00	1,495.11	56.0
	STREETS REVENUE					
10-08-3131	1% SALES TAX	12,582.33	85,791.48	178,636.00	92,844.52	48.0
10-08-3352	HIGHWAY USE TAX	3,077.23	17,445.34	31,000.00	13,554.66	56.3
	TOTAL STREETS REVENUE	15,659.56	103,236.82	209,636.00	106,399.18	49.3
	JUDICIAL REVENUE					
10-09-3511	TRAFFIC FINES	.00	.00	50.00	50.00	.0
10-09-3513	OTHER FINES	.00	160.00	300.00	140.00	53.3
10-09-3517	COURT COSTS	.00	630.00	60.00	(570.00)	1050.0
	TOTAL JUDICIAL REVENUE	.00	790.00	410.00	(380.00)	192.7
	TOTAL FUND REVENUE	115,238.64	690,971.69	1,369,918.00	678,946.31	50.4

TOWN OF OAK CREEK
EXPENDITURES WITH COMPARISON TO BUDGET
FOR THE 6 MONTHS ENDING JUNE 30, 2024

GENERAL FUND

		PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEXPENDED	PCNT
	GENERAL EXPENDITURES					
10-11-4111	SALARIES	5,947.06	45,921.26	99,990.00	54,068.74	45.9
10-11-4142	WORKMEN'S COMPENSATION	271.10	1,241.68	1,373.00	131.32	90.4
10-11-4143	INSURANCE- LIFE AND HEALTH	1,030.77	7,876.07	15,551.00	7,674.93	50.7
10-11-4150	EMPLOYER TAX EXPENSE	485.25	3,709.53	7,497.00	3,787.47	49.5
10-11-4160	EMPLOYER PENSION CONTRIBUTION	356.82	2,633.13	5,999.00	3,365.87	43.9
10-11-4192	BANK FEES	1,381.98	6,658.10	12,000.00	5,341.90	55.5
10-11-4193	TREASURER'S FEES	91.77	1,747.47	3,150.00	1,402.53	55.5
10-11-4194	CONTRACT LABOR	.00	.00	1,000.00	1,000.00	.0
10-11-4210	SUPPLIES	639.64	3,060.98	7,000.00	3,939.02	43.7
10-11-4226	EQUIPMENT RENTAL	.00	150.00	600.00	450.00	25.0
10-11-4233	EQUIPMENT MAINTENANCE	.00	1,040.00	1,800.00	760.00	57.8
10-11-4234	BUILDING REPAIRS	.00	.00	500.00	500.00	.0
10-11-4235	UTILITIES	667.21	1,190.99	7,000.00	5,809.01	17.0
10-11-4311	PUBLICATIONS- LEGAL	.00	613.16	600.00	(13.16)	102.2
10-11-4315	LICENSING FEES	.00	158.00	500.00	342.00	31.6
10-11-4334	ASSOCIATION DUES	.00	6,083.77	6,750.00	666.23	90.1
10-11-4335	ADVERTISING & PROMOTIONS	.00	.00	500.00	500.00	.0
10-11-4345	TELEPHONE	641.08	4,019.85	7,760.00	3,740.15	51.8
10-11-4347	POSTAGE	.00	2,068.00	4,500.00	2,432.00	46.0
10-11-4352	LEGAL FEES	.00	1,170.00	2,500.00	1,330.00	46.8
10-11-4354	AUDIT	.00	5,000.00	9,000.00	4,000.00	55.6
10-11-4356	COMPUTER MAINTENANCE	1,372.29	8,110.54	17,750.00	9,639.46	45.7
10-11-4358	TRAINING AND TRAVEL	65.00	728.69	5,200.00	4,471.31	14.0
10-11-4513	INSURANCE PROPERTY/LIABILITY	(5,865.88)	26,292.92	29,142.00	2,849.08	90.2
10-11-4700	DONATIONS/COMMUNITY SUPPORT	.00	24,598.62	33,600.00	9,001.38	73.2
10-11-4800	ELECTION EXPENSE	.00	936.16	1,600.00	663.84	58.5
10-11-4805	MISCELLANEOUS	.00	5.15	1,000.00	994.85	.5
10-11-4900	CAPITAL OUTLAY	.00	.00	5,700.00	5,700.00	.0
10-11-4905	STAFF ADVERTISING	.00	806.60	1,000.00	193.40	80.7
10-11-4910	PROFESSIONAL FEES	11,543.42	25,515.32	171,250.00	145,734.68	14.9
10-11-4999	ALLOCATE OPERATING EXPENSES	(1,910.16)	(16,887.16)	(63,108.00)	(46,220.84)	(26.8)
	TOTAL GENERAL EXPENDITURES	16,717.35	164,448.83	398,704.00	234,255.17	41.3

TOWN OF OAK CREEK
EXPENDITURES WITH COMPARISON TO BUDGET
FOR THE 6 MONTHS ENDING JUNE 30, 2024

GENERAL FUND

		PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEXPENDED	PCNT
	PUBLIC WORKS EXPENDITURES					
10-16-4112	CONTRACT LABOR	.00	875.00	1,000.00	125.00	87.5
10-16-4162	EMPLOYEE BENEFIT	.00	(64.99)	.00	64.99	.0
10-16-4210	SUPPLIES	637.54	1,499.75	9,000.00	7,500.25	16.7
10-16-4226	EQUIPMENT RENTAL	.00	.00	1,000.00	1,000.00	.0
10-16-4231	GAS AND OIL	2,342.94	17,793.54	21,000.00	3,206.46	84.7
10-16-4233	EQUIPMENT MAINTENANCE	413.49	4,488.00	10,000.00	5,512.00	44.9
10-16-4234	BUILDING REPAIRS	.00	.00	3,000.00	3,000.00	.0
10-16-4235	UTILITIES	3,487.49	11,439.19	18,400.00	6,960.81	62.2
10-16-4236	WEED CONTROL	.00	.00	900.00	900.00	.0
10-16-4241	SMALL TOOLS	.00	123.50	1,200.00	1,076.50	10.3
10-16-4242	TRAFFIC CONTROL	.00	.00	1,000.00	1,000.00	.0
10-16-4346	TELEPHONE	63.34	1,454.31	7,400.00	5,945.69	19.7
10-16-4358	TRAINING AND TRAVEL	224.00	224.00	1,000.00	776.00	22.4
10-16-4377	VEHICLE MAINTENANCE	88.47	88.47	5,000.00	4,911.53	1.8
10-16-4805	MISCELLANEOUS	.00	.00	500.00	500.00	.0
10-16-4808	UTILITY LOCATE	34.83	83.85	1,000.00	916.15	8.4
10-16-4905	STAFF ADVERTISING	.00	.00	500.00	500.00	.0
10-16-4999	ALLOCATE OPERATING EXPENSES	(7,292.10)	(38,004.62)	(81,900.00)	(43,895.38)	(46.4)
	TOTAL PUBLIC WORKS EXPENDITURES	.00	.00	.00	.00	.0

GENERAL FUND

		PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEXPENDED	PCNT
	POLICE EXPENDITURES					
10-17-4111	SALARIES	14,913.95	115,078.74	249,532.00	134,453.26	46.1
10-17-4112	CONTRACT LABOR	4,900.00	4,900.00	4,900.00	.00	100.0
10-17-4142	WORKMEN'S COMPENSATION	1,852.55	8,484.89	9,382.00	897.11	90.4
10-17-4143	INSURANCE- LIFE AND HEALTH	2,324.90	21,906.04	45,336.00	23,429.96	48.3
10-17-4150	EMPLOYER TAX EXPENSE	288.97	1,931.28	4,366.00	2,434.72	44.2
10-17-4160	EMPLOYER PENSION CONTRIBUTION	323.26	2,795.95	.00	(2,795.95)	.0
10-17-4161	EMPLOYER FPPA CONTRIBUTION	1,271.42	10,571.68	28,780.00	18,208.32	36.7
10-17-4205	EQUIPMENT	.00	.00	1,000.00	1,000.00	.0
10-17-4210	SUPPLIES	.00	126.10	1,500.00	1,373.90	8.4
10-17-4225	UNIFORMS	.00	(40.00)	1,500.00	1,540.00	(2.7)
10-17-4231	GAS AND OIL	221.10	1,132.41	5,000.00	3,867.59	22.7
10-17-4233	EQUIPMENT MAINTENANCE	.00	164.00	1,000.00	836.00	16.4
10-17-4317	CAR TOWING	.00	.00	300.00	300.00	.0
10-17-4334	DUES AND LICENSES	.00	530.00	2,000.00	1,470.00	26.5
10-17-4346	TELEPHONE	172.01	329.48	2,200.00	1,870.52	15.0
10-17-4350	COMMUNICATIONS-MAINT/REPAIR	.00	.00	500.00	500.00	.0
10-17-4352	LEGAL FEES	.00	428.00	500.00	72.00	85.6
10-17-4356	COMPUTER MAINTENANCE	.00	1,066.72	1,600.00	533.28	66.7
10-17-4358	TRAINING AND TRAVEL	.00	(95.00)	7,000.00	7,095.00	(1.4)
10-17-4377	VEHICLE MAINTENANCE	.00	146.25	2,500.00	2,353.75	5.9
10-17-4378	SPECIAL INVESTIGATION	.00	.00	1,500.00	1,500.00	.0
10-17-4402	GRANT/DONATIONS EXPENSE - MISC	.00	.00	400.00	400.00	.0
10-17-4805	MISCELLANEOUS	.00	.00	500.00	500.00	.0
10-17-4850	ANIMAL CONTROL	.00	.00	250.00	250.00	.0
10-17-4852	WELLNESS EXPENSE	.00	.00	2,484.00	2,484.00	.0
10-17-4853	PATIENT TRANSPORT	.00	.00	500.00	500.00	.0
10-17-4905	STAFF ADVERTISING	.00	.00	500.00	500.00	.0
10-17-4930	LEASE/PURCHASE PAYMENTS	.00	.00	4,241.00	4,241.00	.0
	TOTAL POLICE EXPENDITURES	26,268.16	169,456.54	379,271.00	209,814.46	44.7
	STREETS EXPENDITURES					
10-18-4111	SALARIES	3,908.75	23,388.03	54,967.00	31,578.97	42.6
10-18-4142	WORKMEN'S COMPENSATION	948.87	4,345.92	4,805.00	459.08	90.5
10-18-4143	INSURANCE- LIFE AND HEALTH	870.46	4,411.69	11,716.00	7,304.31	37.7
10-18-4150	EMPLOYER TAX EXPENSE	315.82	1,891.83	4,121.00	2,229.17	45.9
10-18-4160	EMPLOYER PENSION CONTRIBUTION	216.86	1,342.64	3,114.00	1,771.36	43.1
10-18-4210	SUPPLIES	.00	.00	3,000.00	3,000.00	.0
10-18-4235	UTILITIES	162.54	325.78	600.00	274.22	54.3
10-18-4238	STREET MAINT/IMPR 1%	736.10	11,894.05	30,000.00	18,105.95	39.7
10-18-4239	STREET SCORIA	.00	462.13	1,500.00	1,037.87	30.8
10-18-4513	INSURANCE PROPERTY/LIABILITY	1,496.56	2,244.84	3,072.00	827.16	73.1
10-18-4805	MISCELLANEOUS	.00	.00	500.00	500.00	.0
10-18-4900	CAPITAL OUTLAY	.00	.00	15,000.00	15,000.00	.0
10-18-4930	LEASE/PURCHASE PAYMENTS	.00	20,342.77	27,013.00	6,670.23	75.3
10-18-4999	ALLOCATE OPERATING EXPENSES	1,823.04	9,501.17	18,262.00	8,760.83	52.0
	TOTAL STREETS EXPENDITURES	10,479.00	80,150.85	177,670.00	97,519.15	45.1

GENERAL FUND

		PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEXPENDED	PCNT
	JUDICIAL EXPENDITURES					
10-19-4111	SALARIES	.00	374.94	628.00	253.06	59.7
10-19-4112	CONTRACT LABOR	.00	900.00	1,800.00	900.00	50.0
10-19-4150	EMPLOYER TAX EXPENSE	.00	29.43	47.00	17.57	62.6
10-19-4334	ASSOCIATION DUES	.00	.00	20.00	20.00	.0
10-19-4358	TRAINING AND TRAVEL	.00	.00	200.00	200.00	.0
	TOTAL JUDICIAL EXPENDITURES	.00	1,304.37	2,695.00	1,390.63	48.4
	REC PROGRAM AND SPECIAL EVENTS					
10-20-4111	SALARIES	23,461.30	64,669.69	147,613.00	82,943.31	43.8
10-20-4142	WORKMEN'S COMPENSATION	271.10	1,241.68	1,373.00	131.32	90.4
10-20-4143	INSURANCE-LIFE AND HEALTH	3,665.84	11,994.44	22,674.00	10,679.56	52.9
10-20-4150	EMPLOYER TAX EXPENSE	1,839.04	5,067.81	11,067.00	5,999.19	45.8
10-20-4160	EMPLOYER PENSION CONTRIBUTION	305.20	1,928.87	3,800.00	1,871.13	50.8
10-20-4194	CONTRACT LABOR	.00	225.00	1,200.00	975.00	18.8
10-20-4210	SUPPLIES	1,770.93	4,867.13	8,500.00	3,632.87	57.3
10-20-4213	RENT	.00	14,688.55	16,980.00	2,291.45	86.5
10-20-4215	ACTIVITY FEES	14,063.76	16,516.96	18,000.00	1,483.04	91.8
10-20-4231	FUEL	78.01	220.55	1,500.00	1,279.45	14.7
10-20-4334	DUES AND LICENSES	.00	854.30	800.00	(54.30)	106.8
10-20-4345	TELEPHONE	44.01	279.82	720.00	440.18	38.9
10-20-4358	TRAINING AND TRAVEL	3,333.12	11,703.68	7,600.00	(4,103.68)	154.0
10-20-4377	VEHICLE MAINTENANCE	.00	.00	1,500.00	1,500.00	.0
10-20-4805	MISCELLANEOUS	10.47	.00	200.00	200.00	.0
10-20-4910	PROFESSIONAL FEES	.00	203.32	.00	(203.32)	.0
10-20-4930	LEASE/PURCHASE PAYMENTS	.00	.00	13,500.00	13,500.00	.0
	TOTAL REC PROGRAM AND SPECIAL EVENTS	48,842.78	134,461.80	257,027.00	122,565.20	52.3
	PARKS/OPEN SPACE EXPENDITURES					
10-21-4111	SALARIES	1,302.94	20,762.15	23,421.00	2,658.85	88.7
10-21-4143	INSURANCE-LIFE AND HEALTH	290.16	1,470.76	3,905.00	2,434.24	37.7
10-21-4150	EMPLOYEE TAX EXPENSE	105.27	1,648.39	459.00	(1,189.39)	359.1
10-21-4160	EMPLOYER PENSION CONTRIBUTION	72.29	447.54	1,038.00	590.46	43.1
10-21-4194	CONTRACT LABOR	.00	.00	500.00	500.00	.0
10-21-4210	SUPPLIES	129.98	330.83	5,000.00	4,669.17	6.6
10-21-4231	FUEL	.00	.00	250.00	250.00	.0
10-21-4233	EQUIPMENT MAINTENANCE	.00	48.32	1,300.00	1,251.68	3.7
10-21-4234	BUILDING REPAIRS	.00	.00	2,000.00	2,000.00	.0
10-21-4235	UTILITIES	3,376.13	7,753.88	13,000.00	5,246.12	59.7
10-21-4240	PARK IMPROVEMENTS	.00	.00	5,000.00	5,000.00	.0
10-21-4805	MISCELLANEOUS	600.00	625.25	200.00	(425.25)	312.6
10-21-4900	CAPITAL OUTLAY	22,435.00	22,435.00	50,000.00	27,565.00	44.9
	TOTAL PARKS/OPEN SPACE EXPENDITURES	28,311.77	55,522.12	106,073.00	50,550.88	52.3

TOWN OF OAK CREEK
EXPENDITURES WITH COMPARISON TO BUDGET
FOR THE 6 MONTHS ENDING JUNE 30, 2024

GENERAL FUND

	PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEXPENDED	PCNT
TOTAL FUND EXPENDITURES	130,619.06	605,344.51	1,321,440.00	716,095.49	45.8
NET REVENUE OVER EXPENDITURES	(15,380.42)	85,627.18	48,478.00	(37,149.18)	176.6

TOWN OF OAK CREEK
BALANCE SHEET
JUNE 30, 2024

ELECTRIC

	ASSETS			
20-00-1001	CASH IN COMBINED CHECKING		1,834,388.88	
20-00-1045	UTILITY DEPOSITS		53,275.83	
20-00-1300	DEPRECIABLE ASSETS		2,481,584.33	
20-00-1350	ACCUMULATED DEPRECIATION		(1,906,791.76)	
20-00-1500	ACCOUNTS RECEIVABLE		186,736.30	
20-00-1510	UNBILLED USAGE		47,803.83	
20-00-1555	ALLOWANCE FOR DOUBTFUL ACCOUNT		(11,000.00)	
	TOTAL ASSETS			2,685,997.41
	LIABILITIES AND EQUITY			
	LIABILITIES			
20-00-2200	UTILITY DEPOSITS		54,875.00	
20-00-2405	CAPITAL LEASE- WELLS FARGO		12,952.58	
	TOTAL LIABILITIES			67,827.58
	FUND EQUITY			
	NONSPENDABLE			
20-00-2525	INV IN CAP ASSETS NET OF DEBT		54,863.00	
	TOTAL NONSPENDABLE			54,863.00
	ASSIGNED			
20-00-2810	O&M EXPENSES		254,029.00	
20-00-2820	PLANT IN SERVICE		27,040.00	
20-00-2830	ANNUAL DEBT SERVICE		33,705.00	
20-00-2840	CAPITAL IMPROVEMENTS		45,200.00	
20-00-2860	TAP FEES/PLANT INVESTMENT FEE		30,000.00	
	TOTAL ASSIGNED			389,974.00
	UNASSIGNED FUND BALANCE:			
20-00-2999	FUND BALANCE	2,047,231.60		
	REVENUE OVER EXPENDITURES - YTD	126,101.23		
	BALANCE - CURRENT DATE		2,173,332.83	
	TOTAL FUND EQUITY			2,618,169.83
	TOTAL LIABILITIES AND EQUITY			2,685,997.41

TOWN OF OAK CREEK
REVENUES WITH COMPARISON TO BUDGET
FOR THE 6 MONTHS ENDING JUNE 30, 2024

ELECTRIC

		PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEARNED	PCNT
	ELECTRIC REVENUE					
20-06-3401	SALES AND SERVICE	93,727.81	712,284.53	1,265,913.00	553,628.47	56.3
20-06-3406	TAP FEES	.00	.00	1,000.00	1,000.00	.0
20-06-3409	SALES TAX	(221.72)	(2,877.13)	.00	2,877.13	.0
20-06-3443	DISCONNECT/CONNECT FEES	.00	.00	500.00	500.00	.0
20-06-3530	PENALTIES- UTILITY LATE FEES	1,674.84	5,534.44	20,000.00	14,465.56	27.7
20-06-3620	POLE RENTAL	.00	4,961.13	4,300.00	(661.13)	115.4
20-06-3680	NMPP CAPACITY PYMT	.00	2,720.00	31,280.00	28,560.00	8.7
20-06-3681	NMPP ENERGY PYMT	.00	.00	45,000.00	45,000.00	.0
20-06-3683	MISCELLANEOUS	.00	.00	200.00	200.00	.0
20-06-3690	PARTS & LABOR CHARGEBACKS	.00	.00	500.00	500.00	.0
20-06-3694	GRANTS	.00	980.81	.00	(980.81)	.0
	TOTAL ELECTRIC REVENUE	95,180.93	723,603.78	1,368,693.00	645,089.22	52.9
	TOTAL FUND REVENUE	95,180.93	723,603.78	1,368,693.00	645,089.22	52.9

TOWN OF OAK CREEK
EXPENDITURES WITH COMPARISON TO BUDGET
FOR THE 6 MONTHS ENDING JUNE 30, 2024

ELECTRIC

		PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEXPENDED	PCNT
	ELECTRIC EXPENDITURES					
20-11-4111	SALARIES	16,107.65	99,891.39	214,151.00	114,259.61	46.7
20-11-4142	WORKMEN'S COMPENSATION	316.29	1,448.64	1,602.00	153.36	90.4
20-11-4143	INSURANCE- LIFE AND HEALTH	3,407.30	20,326.83	49,591.00	29,264.17	41.0
20-11-4150	EMPLOYER TAX EXPENSE	1,302.05	8,055.06	16,316.00	8,260.94	49.4
20-11-4160	EMPLOYER PENSION CONTRIBUTION	914.66	5,632.48	12,849.00	7,216.52	43.8
20-11-4190	MAINTENANCE CONTRACT	.00	.00	2,800.00	2,800.00	.0
20-11-4194	CONTRACT LABOR	.00	875.00	12,000.00	11,125.00	7.3
20-11-4210	SUPPLIES	.00	.00	8,000.00	8,000.00	.0
20-11-4223	PERMITS	.00	173.45	1,000.00	826.55	17.4
20-11-4227	POWER PURCHASED MEAN	61,474.53	350,957.11	730,000.00	379,042.89	48.1
20-11-4231	GAS AND OIL	.00	.00	18,000.00	18,000.00	.0
20-11-4233	EQUIPMENT MAINTENANCE	1,720.90	19,157.88	20,000.00	842.12	95.8
20-11-4234	BUILDING REPAIRS	.00	.00	500.00	500.00	.0
20-11-4235	UTILITIES	1,554.32	3,500.94	6,105.00	2,604.06	57.4
20-11-4241	SMALL TOOLS	.00	.00	800.00	800.00	.0
20-11-4250	LIGHTS- REPLACEMENT	.00	.00	4,000.00	4,000.00	.0
20-11-4334	ASSOCIATION DUES	.00	.00	1,800.00	1,800.00	.0
20-11-4358	TRAINING AND TRAVEL	.00	.00	2,000.00	2,000.00	.0
20-11-4400	BAD DEBT	.00	27.15	8,000.00	7,972.85	.3
20-11-4513	INSURANCE PROPERTY/LIABILITY	11,318.50	17,580.75	23,237.00	5,656.25	75.7
20-11-4600	CONSERVATION	.00	.00	4,000.00	4,000.00	.0
20-11-4700	MANAGEMENT FEE	18,455.00	42,792.87	97,311.00	54,518.13	44.0
20-11-4805	MISCELLANEOUS	.00	.00	500.00	500.00	.0
20-11-4901	METERS	.00	.00	2,000.00	2,000.00	.0
20-11-4910	PROFESSIONAL FEES	.00	.00	7,850.00	7,850.00	.0
20-11-4999	ALLOCATE OPERATING EXPENSES	2,406.68	14,661.16	32,731.00	18,069.84	44.8
	TOTAL ELECTRIC EXPENDITURES	118,977.88	585,080.71	1,277,143.00	692,062.29	45.8
	CAPITAL OUTLAY					
20-12-4900	CAPITAL OUTLAY	7,921.28	11,044.04	300,000.00	288,955.96	3.7
	TOTAL CAPITAL OUTLAY	7,921.28	11,044.04	300,000.00	288,955.96	3.7
	DEBT SERVICE					
20-13-4930	LEASE/PURCHASE PAYMENTS	.00	1,377.80	8,048.00	6,670.20	17.1
	TOTAL DEBT SERVICE	.00	1,377.80	8,048.00	6,670.20	17.1
	TOTAL FUND EXPENDITURES	126,899.16	597,502.55	1,585,191.00	987,688.45	37.7
	NET REVENUE OVER EXPENDITURES	(31,718.23)	126,101.23	(216,498.00)	(342,599.23)	58.3

TOWN OF OAK CREEK
BALANCE SHEET
JUNE 30, 2024

WATER

	ASSETS			
30-00-1001	CASH IN COMBINED CHECKING		595,727.88	
30-00-1300	DEPRECIABLE ASSETS		8,355,644.05	
30-00-1350	ACCUMULATED DEPRECIATION		(2,837,917.31)	
30-00-1500	ACCOUNTS RECEIVABLE		61,699.33	
	TOTAL ASSETS			6,175,153.95
	LIABILITIES AND EQUITY			
	LIABILITIES			
30-00-2020	ACCOUNTS PAYABLE		(717.50)	
30-00-2400	DUE TO SEWER FUND		297,500.00	
30-00-2405	CAPITAL LEASE PAYABLE		12,952.58	
30-00-2410	CWRPDA LOAN PAYABLE		2,465.93	
30-00-2495	DEFERRED REVENUE		115,599.66	
	TOTAL LIABILITIES			427,800.67
	FUND EQUITY			
	NONSPENDABLE			
30-00-2525	INV IN CAP ASSETS NET OF DEBT		1,797,091.00	
	TOTAL NONSPENDABLE			1,797,091.00
	RESTRICTED			
30-00-2610	RESERVES		82,421.00	
	TOTAL RESTRICTED			82,421.00
	ASSIGNED			
30-00-2810	O&M EXPENSES		67,048.00	
30-00-2820	PLANT IN SERVICE		41,455.00	
30-00-2830	ANNUAL DEBT SERVICE		82,110.00	
30-00-2840	CAPITAL IMPROVEMENTS		429,825.00	
30-00-2860	TAP FEES/PLANT INVESTMENT FEE		11,980.00	
	TOTAL ASSIGNED			632,418.00
	UNASSIGNED FUND BALANCE:			
30-00-2999	FUND BALANCE	3,278,985.04		
	REVENUE OVER EXPENDITURES - YTD	(43,561.76)		
	BALANCE - CURRENT DATE		3,235,423.28	
	TOTAL FUND EQUITY			5,747,353.28
	TOTAL LIABILITIES AND EQUITY			6,175,153.95

TOWN OF OAK CREEK
REVENUES WITH COMPARISON TO BUDGET
FOR THE 6 MONTHS ENDING JUNE 30, 2024

WATER

		PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEARNED	PCNT
	WATER REVENUE					
30-06-3404	SALES AND SERVICE FEES	39,080.11	210,096.96	441,824.00	231,727.04	47.6
30-06-3406	TAP FEES	40.00	240.00	12,750.00	12,510.00	1.9
30-06-3415	WATER METERS	.00	.00	250.00	250.00	.0
30-06-3530	PENALTIES- UTILITY LATE FEES	.00	364.13	500.00	135.87	72.8
30-06-3690	PARTS & LABOR CHARGEBACKS	.00	.00	100.00	100.00	.0
30-06-3694	GRANT/DONATION	38,854.44	38,854.44	84,000.00	45,145.56	46.3
	TOTAL WATER REVENUE	77,974.55	249,555.53	539,424.00	289,868.47	46.3
	TOTAL FUND REVENUE	77,974.55	249,555.53	539,424.00	289,868.47	46.3

TOWN OF OAK CREEK
EXPENDITURES WITH COMPARISON TO BUDGET
FOR THE 6 MONTHS ENDING JUNE 30, 2024

WATER

		PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEXPENDED	PCNT
	WATER EXPENDITURES					
30-11-4111	SALARIES	8,837.69	55,753.11	120,172.00	64,418.89	46.4
30-11-4142	WORKMEN'S COMPENSATION	497.03	2,276.43	2,517.00	240.57	90.4
30-11-4143	INSURANCE- LIFE AND HEALTH	1,672.77	10,691.48	25,068.00	14,376.52	42.7
30-11-4150	EMPLOYER TAX EXPENSE	716.83	4,507.89	9,529.00	5,021.11	47.3
30-11-4160	EMPLOYER PENSION CONTRIBUTION	509.08	3,150.37	7,027.00	3,876.63	44.8
30-11-4193	TREASURER'S FEES	.00	94.95	.00	(94.95)	.0
30-11-4194	CONTRACT LABOR	.00	875.00	2,600.00	1,725.00	33.7
30-11-4210	SUPPLIES	.00	2,491.60	9,000.00	6,508.40	27.7
30-11-4221	CHEMICALS	5,820.00	8,258.00	10,000.00	1,742.00	82.6
30-11-4222	SAMPLING	(187.77)	855.62	4,800.00	3,944.38	17.8
30-11-4223	PERMITS	.00	.00	12,500.00	12,500.00	.0
30-11-4231	GAS AND OIL	.00	.00	200.00	200.00	.0
30-11-4233	EQUIPMENT MAINTENANCE	.00	912.10	20,000.00	19,087.90	4.6
30-11-4234	BUILDING REPAIRS	.00	.00	800.00	800.00	.0
30-11-4235	UTILITIES	7,885.26	15,492.82	27,000.00	11,507.18	57.4
30-11-4238	MAINTENANCE	.00	290.29	3,000.00	2,709.71	9.7
30-11-4243	MAINTENANCE CONTRACT	.00	.00	1,200.00	1,200.00	.0
30-11-4334	ASSOCIATION DUES	.00	300.00	325.00	25.00	92.3
30-11-4346	TELEPHONE	280.96	1,407.60	2,800.00	1,392.40	50.3
30-11-4352	LEGAL FEES	.00	.00	500.00	500.00	.0
30-11-4356	COMPUTER MAINTENANCE	.00	166.68	500.00	333.32	33.3
30-11-4358	TRAINING AND TRAVEL	.00	.00	1,500.00	1,500.00	.0
30-11-4400	BAD DEBT	.00	11,453.68	.00	(11,453.68)	.0
30-11-4513	INSURANCE PROPERTY/LIABILITY	7,278.18	11,520.27	14,942.00	3,421.73	77.1
30-11-4600	CONSERVATION	.00	.00	2,000.00	2,000.00	.0
30-11-4901	METERS	.00	.00	5,000.00	5,000.00	.0
30-11-4910	PROFESSIONAL FEES	.00	.00	26,000.00	26,000.00	.0
30-11-4999	ALLOCATE OPERATING EXPENSES	2,406.68	14,661.10	32,731.00	18,069.90	44.8
	TOTAL WATER EXPENDITURES	35,716.71	145,158.99	341,711.00	196,552.01	42.5
	CAPITAL OUTLAY					
30-12-4900	CAPITAL OUTLAY	.00	87,830.50	282,150.00	194,319.50	31.1
	TOTAL CAPITAL OUTLAY	.00	87,830.50	282,150.00	194,319.50	31.1
	DEBT SERVICE					
30-13-4628	DUE TO SEWER FUND	58,750.00	58,750.00	58,750.00	.00	100.0
30-13-4930	LEASE/PURCHASE PAYMENTS	.00	1,377.80	8,048.00	6,670.20	17.1
	TOTAL DEBT SERVICE	58,750.00	60,127.80	66,798.00	6,670.20	90.0
	TOTAL FUND EXPENDITURES	94,466.71	293,117.29	690,659.00	397,541.71	42.4

TOWN OF OAK CREEK
EXPENDITURES WITH COMPARISON TO BUDGET
FOR THE 6 MONTHS ENDING JUNE 30, 2024

WATER

	PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEXPENDED	PCNT
NET REVENUE OVER EXPENDITURES	(16,492.16)	(43,561.76)	(151,235.00)	(107,673.24)	(28.8)

TOWN OF OAK CREEK
BALANCE SHEET
JUNE 30, 2024

SEWER

	ASSETS			
40-00-1001	CASH IN COMBINED CHECKING		613,549.14	
40-00-1300	DEPRECIABLE ASSETS		5,951,459.41	
40-00-1350	ACCUMULATED DEPRECIATION		(2,186,373.27)	
40-00-1500	ACCOUNTS RECEIVABLE		48,454.24	
40-00-1990	DUE FROM WATER FUND		297,500.00	
	TOTAL ASSETS			4,724,589.52
	LIABILITIES AND EQUITY			
	LIABILITIES			
40-00-2020	ACCOUNTS PAYABLE		(2,609.50)	
40-00-2300	ACCRUED INTEREST PAYABLE		15,650.40	
40-00-2405	CAPITAL LEASE PAYABLE		12,952.58	
40-00-2411	BANK SAN JUANS NOTE PAYABLE		990,019.01	
	TOTAL LIABILITIES			1,016,012.49
	FUND EQUITY			
	NONSPENDABLE			
40-00-2525	INV IN CAP ASSETS NET OF DEBT		3,797,170.00	
	TOTAL NONSPENDABLE			3,797,170.00
	ASSIGNED			
40-00-2810	O&M EXPENSES		73,132.00	
40-00-2820	PLANT IN SERVICE		58,598.00	
40-00-2840	CAPITAL IMPROVEMENTS		36,769.00	
40-00-2860	TAP FEES/PLANT INVESTMENT FEE		15,980.00	
	TOTAL ASSIGNED			184,479.00
	UNASSIGNED FUND BALANCE:			
40-00-2999	FUND BALANCE	(317,653.82)		
	REVENUE OVER EXPENDITURES - YTD	44,581.85		
	BALANCE - CURRENT DATE		(273,071.97)	
	TOTAL FUND EQUITY			3,708,577.03
	TOTAL LIABILITIES AND EQUITY			4,724,589.52

TOWN OF OAK CREEK
REVENUES WITH COMPARISON TO BUDGET
FOR THE 6 MONTHS ENDING JUNE 30, 2024

SEWER

		PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEARNED	PCNT
	SEWER REVENUE					
40-06-3404	SALES AND SERVICE FEES	31,521.15	187,128.05	370,463.00	183,334.95	50.5
40-06-3406	TAP FEES	40.00	240.00	12,750.00	12,510.00	1.9
40-06-3530	PENALTIES- UTILITY LATE FEES	.00	364.14	500.00	135.86	72.8
40-06-3611	INTEREST INCOME	.00	.00	50.00	50.00	.0
40-06-3684	REBATE YVEA	.00	.00	350.00	350.00	.0
40-06-3720	LOAN PROCEEDS	58,750.00	58,750.00	58,750.00	.00	100.0
	TOTAL SEWER REVENUE	90,311.15	246,482.19	442,863.00	196,380.81	55.7
	TOTAL FUND REVENUE	90,311.15	246,482.19	442,863.00	196,380.81	55.7

TOWN OF OAK CREEK
EXPENDITURES WITH COMPARISON TO BUDGET
FOR THE 6 MONTHS ENDING JUNE 30, 2024

SEWER

		PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEXPENDED	PCNT
	SEWER EXPENDITURES					
40-11-4111	SALARIES	8,837.69	55,753.11	120,172.00	64,418.89	46.4
40-11-4142	WORKMEN'S COMPENSATION	361.47	1,655.60	1,831.00	175.40	90.4
40-11-4143	INSURANCE- LIFE AND HEALTH	1,672.77	10,691.49	25,068.00	14,376.51	42.7
40-11-4150	EMPLOYER TAX EXPENSE	716.76	4,507.47	9,529.00	5,021.53	47.3
40-11-4160	EMPLOYER PENSION CONTRIBUTION	509.06	3,150.14	7,027.00	3,876.86	44.8
40-11-4193	TREASURER'S FEES	.00	94.97	.00	(94.97)	.0
40-11-4194	CONTRACT LABOR	.00	875.00	1,000.00	125.00	87.5
40-11-4210	SUPPLIES	.00	.00	3,000.00	3,000.00	.0
40-11-4221	CHEMICALS	1,598.35	4,175.58	12,000.00	7,824.42	34.8
40-11-4222	SAMPLING	974.10	9,486.53	16,500.00	7,013.47	57.5
40-11-4223	PERMITS	.00	.00	3,000.00	3,000.00	.0
40-11-4230	UTILITIES	2,184.44	13,259.00	32,000.00	18,741.00	41.4
40-11-4233	EQUIPMENT MAINTENANCE	.00	194.84	6,500.00	6,305.16	3.0
40-11-4234	BUILDING REPAIRS	.00	.00	500.00	500.00	.0
40-11-4235	SEWER LINE MAINTENANCE	.00	.00	2,000.00	2,000.00	.0
40-11-4238	MAINTENANCE	.00	.00	2,000.00	2,000.00	.0
40-11-4358	TRAINING AND TRAVEL	.00	.00	500.00	500.00	.0
40-11-4400	BAD DEBT	.00	6,507.86	.00	(6,507.86)	.0
40-11-4513	INSURANCE PROPERTY/LIABILITY	5,833.80	9,353.69	11,977.00	2,623.31	78.1
40-11-4700	MANAGEMENT FEE	4,754.55	9,509.10	19,018.00	9,508.90	50.0
40-11-4805	MISCELLANEOUS	.00	.00	500.00	500.00	.0
40-11-4910	PROFESSIONAL FEES	.00	.00	17,850.00	17,850.00	.0
40-11-4999	ALLOCATE OPERATING EXPENSES	2,406.68	14,661.10	32,731.00	18,069.90	44.8
	TOTAL SEWER EXPENDITURES	29,849.67	143,875.48	324,703.00	180,827.52	44.3
	CAPITAL OUTLAY					
40-12-4900	CAPITAL OUTLAY	.00	.00	25,000.00	25,000.00	.0
	TOTAL CAPITAL OUTLAY	.00	.00	25,000.00	25,000.00	.0
	DEBT SERVICE					
40-13-4700	SEWER PROJECT LOAN	56,647.06	56,647.06	56,647.00	(.06)	100.0
40-13-4930	LEASE/PURCHASE PAYMENTS	.00	1,377.80	8,048.00	6,670.20	17.1
	TOTAL DEBT SERVICE	56,647.06	58,024.86	64,695.00	6,670.14	89.7
	TOTAL FUND EXPENDITURES	86,496.73	201,900.34	414,398.00	212,497.66	48.7
	NET REVENUE OVER EXPENDITURES	3,814.42	44,581.85	28,465.00	(16,116.85)	156.6

TOWN OF OAK CREEK
BALANCE SHEET
JUNE 30, 2024

TRASH

	ASSETS			
50-00-1001	CASH IN COMBINED CHECKING		(543.52)	
50-00-1500	ACCOUNTS RECEIVABLE		24,418.90	
	TOTAL ASSETS			23,875.38
	FUND EQUITY			
	UNASSIGNED FUND BALANCE:			
50-00-2999	FUND BALANCE	25,941.28		
	REVENUE OVER EXPENDITURES - YTD	(2,065.90)		
	BALANCE - CURRENT DATE		23,875.38	
	TOTAL FUND EQUITY			23,875.38
	TOTAL LIABILITIES AND EQUITY			23,875.38

TOWN OF OAK CREEK
REVENUES WITH COMPARISON TO BUDGET
FOR THE 6 MONTHS ENDING JUNE 30, 2024

TRASH

		PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEARNED	PCNT
	TRASH REVENUE					
50-06-3400	SALES AND SERVICE CHARGE	18,300.66	108,999.24	208,820.00	99,820.76	52.2
	TOTAL TRASH REVENUE	18,300.66	108,999.24	208,820.00	99,820.76	52.2
	TOTAL FUND REVENUE	18,300.66	108,999.24	208,820.00	99,820.76	52.2

TOWN OF OAK CREEK
EXPENDITURES WITH COMPARISON TO BUDGET
FOR THE 6 MONTHS ENDING JUNE 30, 2024

TRASH

		PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEXPENDED	PCNT
	TRASH EXPENDITURES					
50-11-4111	SALARIES	345.49	2,644.65	5,398.00	2,753.35	49.0
50-11-4143	INSURANCE- LIFE AND HEALTH	.00	930.33	2,250.00	1,319.67	41.4
50-11-4150	EMPLOYER TAX EXPENSE	27.39	200.80	405.00	204.20	49.6
50-11-4160	EMPLOYER PENSION CONTRIBUTION	20.73	97.69	324.00	226.31	30.2
50-11-4229	RESIDENTIAL TRASH SERVICE	17,607.58	105,784.42	179,721.00	73,936.58	58.9
50-11-4999	ALLOCATE OPERATING EXPENSES	159.18	1,407.25	5,260.00	3,852.75	26.8
	TOTAL TRASH EXPENDITURES	18,160.37	111,065.14	193,358.00	82,292.86	57.4
	TOTAL FUND EXPENDITURES	18,160.37	111,065.14	193,358.00	82,292.86	57.4
	NET REVENUE OVER EXPENDITURES	140.29	(2,065.90)	15,462.00	17,527.90	(13.4)

Report Criteria:
Detail report.
Invoices with totals above $0.00 included.
Only paid invoices included.

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Net Invoice Amount	Amount Paid	Date Paid	Voided
10-11-4142								
25	Pinnacol Assurance	072024	Admin	07/15/2024	237.13	237.13	07/31/2024	
	Total 10-11-4142:				237.13	237.13		
10-11-4195								
2956	Melissa Dobbins	062024	Trustee compensation April, May,	07/01/2024	335.00	335.00	07/25/2024	
2977	Stanger, Sascha	062024	Trustee compensation April, May	07/01/2024	255.00	255.00	07/25/2024	
	Total 10-11-4195:				590.00	590.00		
10-11-4210								
21	Green Company	214608	Hand soap	07/02/2024	30.44	30.44	07/11/2024	
2985	VISA - Hewes	062024	Franciosi Brothers	06/11/2024	103.20	103.20	07/30/2024	
2985	VISA - Hewes	062024	Omni Graphics	06/11/2024	375.00	375.00	07/30/2024	
2985	VISA - Hewes	062024	Amazon	06/11/2024	32.33	32.33	07/30/2024	
2906	VISA - Torgler	062024	Staples	06/11/2024	78.88	78.88	07/30/2024	
	Total 10-11-4210:				619.85	619.85		
10-11-4226								
69	Francotyp-postalia Mailing Sol	RI106251252	Postage Meter Rental	06/04/2024	150.00	150.00	07/11/2024	
	Total 10-11-4226:				150.00	150.00		
10-11-4345								
17	Century Link	0620241	970-736-2459	06/25/2024	140.62	140.62	07/11/2024	
17	Century Link	0620242	970-736-2422	06/25/2024	438.28	438.28	07/11/2024	
17	Century Link	0620243	970-736-8413	06/25/2024	62.61	62.61	07/11/2024	
1183	Century Link	692658701	Long Distance	06/16/2024	7.19	7.19	07/11/2024	
1183	Century Link	81011876	Long distance	07/16/2024	6.84	6.84	07/25/2024	
2888	Jennifer Hewes	072024	Quarter 3 cell phone	07/01/2024	150.00	150.00	07/11/2024	
	Total 10-11-4345:				805.54	805.54		
10-11-4356								
2906	VISA - Torgler	062024	Google Gsuite	06/11/2024	131.99	131.99	07/30/2024	
2906	VISA - Torgler	062024	SWS web services	06/11/2024	21.98	21.98	07/30/2024	
	Total 10-11-4356:				153.97	153.97		
10-11-4358								
2906	VISA - Torgler	062024	CGFOA	06/11/2024	30.00	30.00	07/30/2024	
	Total 10-11-4358:				30.00	30.00		
10-11-4700								
2958	Waste Management	0702025-2535-	Clean up day trash service	07/01/2024	1,310.87	1,310.87	07/11/2024	
	Total 10-11-4700:				1,310.87	1,310.87		

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Net Invoice Amount	Amount Paid	Date Paid	Voided
10-11-4905								
2906	VISA - Torgler	062024	Swift Communications	06/11/2024	1,005.60	1,005.60	07/30/2024	
2906	VISA - Torgler	062024	Swift Communications	06/11/2024	1,511.60	1,511.60	07/30/2024	
	Total 10-11-4905:				2,517.20	2,517.20		
10-16-4162								
890	Rocky Wisecup	72024	Uniform allowance	07/01/2024	200.00	200.00	07/11/2024	
	Total 10-16-4162:				200.00	200.00		
10-16-4210								
547	Ace At The Curve	122325	public works supplies	06/18/2024	45.50	45.50	07/11/2024	
547	Ace At The Curve	122379	public works supplies	06/20/2024	172.75	172.75	07/11/2024	
547	Ace At The Curve	122484	public works supplies	06/26/2024	400.84	400.84	07/11/2024	
2985	VISA - Hewes	062024	Murdochs Ranch & Home	06/11/2024	145.78	145.78	07/30/2024	
2985	VISA - Hewes	062024	Elkhead Supply	06/11/2024	120.09	120.09	07/30/2024	
	Total 10-16-4210:				884.96	884.96		
10-16-4234								
252	Visa - Holliday	062024	Amazon	06/11/2024	569.88	569.88	07/30/2024	
252	Visa - Holliday	062024	Amazon	06/11/2024	17.37	17.37	07/30/2024	
	Total 10-16-4234:				587.25	587.25		
10-16-4346								
2926	Bostock, Lorren	072024	Quarter 3 cell phone	07/01/2024	150.00	150.00	07/11/2024	
2961	Garret Holliday	072024	Quarter 3 cell phone	07/01/2024	150.00	150.00	07/11/2024	
2902	Lucas Sullivan	072024	Quarter 3 cell phone	07/01/2024	150.00	150.00	07/11/2024	
890	Rocky Wisecup	072024	Quarter 3 cell phone	07/01/2024	150.00	150.00	07/11/2024	
67	Verizon Wireless	9968420763	970-846-1958 PW Director	07/06/2024	42.96	42.96	07/25/2024	
67	Verizon Wireless	9968420763	970-846-9079 PW Pager	07/06/2024	18.37	18.37	07/25/2024	
	Total 10-16-4346:				661.33	661.33		
10-16-4808								
570	Utility Notification Center Of	224061074	RTL Transmissions - Positive Res	06/30/2024	49.02	49.02	07/11/2024	
570	Utility Notification Center Of	224061074	correct credit on UNCC account	06/30/2024	6.15-	6.15-	07/11/2024	
	Total 10-16-4808:				42.87	42.87		
10-17-4142								
25	Pinnacol Assurance	072024	Police	07/15/2024	1,620.39	1,620.39	07/31/2024	
	Total 10-17-4142:				1,620.39	1,620.39		
10-17-4210								
2985	VISA - Hewes	062024	Quill	06/11/2024	68.28	68.28	07/30/2024	
	Total 10-17-4210:				68.28	68.28		
10-17-4233								
2833	Axon Enterprise, Inc	INUS260426	Body Camera maintenance	07/01/2024	854.88	854.88	07/11/2024	
	Total 10-17-4233:				854.88	854.88		

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Net Invoice Amount	Amount Paid	Date Paid	Voided
10-17-4346								
2887	AT&T Mobility	287306251361	police cell phones	06/20/2024	208.94	208.94	07/11/2024	
	Total 10-17-4346:				208.94	208.94		
10-18-4142								
25	Pinnacol Assurance	072024	Streets	07/15/2024	829.95	829.95	07/31/2024	
	Total 10-18-4142:				829.95	829.95		
10-19-4112								
2702	Jessica Ryan	072024	Judge Fees	07/01/2024	300.00	300.00	07/11/2024	
	Total 10-19-4112:				300.00	300.00		
10-20-4142								
25	Pinnacol Assurance	072024	Parks	07/15/2024	237.13	237.13	07/31/2024	
	Total 10-20-4142:				237.13	237.13		
10-20-4210								
674	Andrea Abrahamson	07241	reimburse for art class supplies	07/01/2024	227.16	227.16	07/11/2024	
2963	Kirstyn Shaffer	0724	reimburse purchase of supplies	07/01/2024	13.92	13.92	07/11/2024	
2985	VISA - Hewes	062024	Amazon	06/11/2024	204.74	204.74	07/30/2024	
2985	VISA - Hewes	062024	Amazon	06/11/2024	32.96	32.96	07/30/2024	
2949	Visa - Hill	062024	Yampatika	06/11/2024	46.93	46.93	07/30/2024	
2949	Visa - Hill	062024	Costco	06/11/2024	975.11	975.11	07/30/2024	
2949	Visa - Hill	062024	OTC Brands	06/11/2024	9.89	9.89	07/30/2024	
2949	Visa - Hill	062024	City Market	06/11/2024	110.86	110.86	07/30/2024	
2949	Visa - Hill	062024	OTC Brands	06/11/2024	349.30	349.30	07/30/2024	
2949	Visa - Hill	062024	Target	06/11/2024	51.48	51.48	07/30/2024	
252	Visa - Holliday	062024	Amazon	06/11/2024	171.03	171.03	07/30/2024	
252	Visa - Holliday	062024	Amazon	06/11/2024	175.73	175.73	07/30/2024	
	Total 10-20-4210:				2,369.11	2,369.11		
10-20-4215								
674	Andrea Abrahamson	0724	art class and meditation class	07/01/2024	240.00	240.00	07/11/2024	
2983	Dreiling, Hannah	0724	405 hours tutoring - summer cam	07/01/2024	90.00	90.00	07/11/2024	
2963	Kirstyn Shaffer	0724	reimburse for summer camp activi	07/01/2024	10.00	10.00	07/11/2024	
2528	Old Town Hot Springs	114	summer camp swim lessons	06/20/2024	880.00	880.00	07/11/2024	
2986	Parker, Peyton	0724	reimburse for paying summer cam	06/20/2024	90.00	90.00	07/11/2024	
2949	Visa - Hill	062024	Mountain Recreation	06/11/2024	460.00	460.00	07/30/2024	
2949	Visa - Hill	062024	Snow Bowl	06/11/2024	238.73	238.73	07/30/2024	
2987	WhitWork, LLC	00001	NADA session	06/25/2024	90.00	90.00	07/11/2024	
	Total 10-20-4215:				2,098.73	2,098.73		
10-20-4231								
2944	Kimberly Cross	0724	travel reimbursement for summer	06/20/2024	54.23	54.23	07/11/2024	
2963	Kirstyn Shaffer	0624	travel reimbursement summer ca	06/20/2024	28.16	28.16	07/11/2024	
	Total 10-20-4231:				82.39	82.39		
10-20-4345								
67	Verizon Wireless	9968420763	970-200-4149 Parks & Rec	07/06/2024	42.96	42.96	07/25/2024	

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Net Invoice Amount	Amount Paid	Date Paid	Voided
Total 10-20-4345:					42.96	42.96		
10-20-4358								
2949	Visa - Hill	062024	CDHS OEC Background	06/11/2024	31.44	31.44	07/30/2024	
2949	Visa - Hill	062024	CDHS OEC Background	06/11/2024	31.44	31.44	07/30/2024	
2949	Visa - Hill	062024	CDHS OEC Background	06/11/2024	31.44	31.44	07/30/2024	
2949	Visa - Hill	062024	CODHS OEC Background	06/11/2024	31.44	31.44	07/30/2024	
2949	Visa - Hill	062024	CDHS OEC Background	06/11/2024	31.44	31.44	07/30/2024	
2949	Visa - Hill	062024	CDHS Oec Background	06/11/2024	31.44	31.44	07/30/2024	
Total 10-20-4358:					188.64	188.64		
10-20-4377								
2949	Visa - Hill	062024	Velocity Car Wash	06/11/2024	12.00	12.00	07/30/2024	
Total 10-20-4377:					12.00	12.00		
10-20-4910								
2949	Visa - Hill	062024	IdentoGo	06/11/2024	54.50	54.50	07/30/2024	
2949	Visa - Hill	062024	IdentoGo	06/11/2024	54.50	54.50	07/30/2024	
2949	Visa - Hill	062024	IdentoGo	06/11/2024	54.50	54.50	07/30/2024	
Total 10-20-4910:					163.50	163.50		
10-21-4210								
252	Visa - Holliday	062024	Amazon	06/11/2024	38.74	38.74	07/30/2024	
252	Visa - Holliday	062024	Amazon	06/11/2024	594.33	594.33	07/30/2024	
252	Visa - Holliday	062024	Amazon	06/11/2024	43.03	43.03	07/30/2024	
Total 10-21-4210:					676.10	676.10		
20-00-2200								
2850	Electric Deposits	1150.09	Electric Deposit Refund	07/31/2024	231.49	231.49	07/31/2024	
2850	Electric Deposits	383.12	Electric Deposit Refund - 383.12	07/17/2024	250.00	250.00	07/17/2024	
2850	Electric Deposits	507.01	Electric Deposit Refund 507.01	07/16/2024	227.92	227.92	07/17/2024	
2850	Electric Deposits	51902	Electric Deposit Refund - 519.02	07/17/2024	100.92	100.92	07/17/2024	
2850	Electric Deposits	627.05	Electric Deposit Refund 627.05	07/10/2024	124.85	124.85	07/11/2024	
Total 20-00-2200:					935.18	935.18		
20-06-3409								
34	Colorado Department Of Revenue	062024	June sales tax	06/30/2024	2,576.74	2,576.74	07/16/2024	
Total 20-06-3409:					2,576.74	2,576.74		
20-11-4142								
25	Pinnacol Assurance	072024	Electric	07/15/2024	276.65	276.65	07/31/2024	
Total 20-11-4142:					276.65	276.65		
20-11-4227								
53	Municipal Energy Agency Of Neb	305778	MEAN kWh 626,246 June	07/19/2024	52,691.24	52,691.24	07/25/2024	
Total 20-11-4227:					52,691.24	52,691.24		

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Net Invoice Amount	Amount Paid	Date Paid	Voided
20-11-4233								
952	Flat Tops Ranch Supply	2386	electric dept supplies	06/12/2024	174.32	174.32	07/11/2024	
	Total 20-11-4233:				174.32	174.32		
20-11-4334								
2985	VISA - Hewes	062024	CO Secretary of State	06/11/2024	5.00	5.00	07/30/2024	
	Total 20-11-4334:				5.00	5.00		
20-12-4900								
2885	McKinstry Essention, LLC	20073876	Schedule of Values march and Ap	07/17/2024	394.47	394.47	07/25/2024	
	Total 20-12-4900:				394.47	394.47		
30-00-1076								
2871	David Torgler	900.19	refund utility account credit 900.19	07/31/2024	730.94	730.94	07/31/2024	
	Total 30-00-1076:				730.94	730.94		
30-11-4142								
25	Pinnacol Assurance	072024	Water	07/15/2024	434.74	434.74	07/31/2024	
	Total 30-11-4142:				434.74	434.74		
30-11-4210								
2866	Ferguson Waterworks #1116	1534294	water supplies	06/26/2024	1,376.88	1,376.88	07/11/2024	
2866	Ferguson Waterworks #1116	1534375	water supplies	06/28/2024	1,810.74	1,810.74	07/11/2024	
2866	Ferguson Waterworks #1116	1534728	water supplies	06/26/2024	99.40	99.40	07/11/2024	
2866	Ferguson Waterworks #1116	1534801	water supplies	07/02/2024	1,571.26	1,571.26	07/11/2024	
2866	Ferguson Waterworks #1116	1534809	water supplies	06/27/2024	249.43	249.43	07/11/2024	
1037	M & N Plumbing Supply Co.	S100299118.00	couplings, tubing cutter	06/25/2024	651.79	651.79	07/11/2024	
1037	M & N Plumbing Supply Co.	S100299361.0	Poly pipe, brass nipples, legend	06/26/2024	477.22	477.22	07/11/2024	
	Total 30-11-4210:				6,236.72	6,236.72		
30-11-4222								
2445	FedEx	8-542-89159	Sample shipping	06/27/2024	151.73	151.73	07/11/2024	
2644	SGS North America Inc	52160156138	PWSID CO0154566	07/05/2024	338.99	338.99	07/11/2024	
	Total 30-11-4222:				490.72	490.72		
30-11-4233								
252	Visa - Holliday	062024	Amazon	06/11/2024	17.09	17.09	07/30/2024	
	Total 30-11-4233:				17.09	17.09		
30-11-4238								
183	Redmond Brothers, Inc.	608933	screened rock, pit run	06/27/2024	807.30	807.30	07/11/2024	
	Total 30-11-4238:				807.30	807.30		
30-11-4346								
17	Century Link	062024	970-736-1164	06/25/2024	281.24	281.24	07/11/2024	
	Total 30-11-4346:				281.24	281.24		

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Net Invoice Amount	Amount Paid	Date Paid	Voided
40-11-4142								
25	Pinnacol Assurance	072024	Sewer	07/15/2024	316.17	316.17	07/31/2024	
Total 40-11-4142:					316.17	316.17		
40-11-4221								
2972	PVS DX, INC	737002428-24	Sodium HYPO 10%, Drum cleanin	07/09/2024	1,518.35	1,518.35	07/25/2024	
2972	PVS DX, INC	737002430-24	Sulfur Dioxide 150#CYL	07/09/2024	63.75	63.75	07/25/2024	
2972	PVS DX, INC	DE73000575-2	Sulfur Dioxide 150# CYL	06/30/2024	80.00	80.00	07/25/2024	
Total 40-11-4221:					1,662.10	1,662.10		
40-11-4222								
328	ACZ Laboratories, Inc.	90649	Nutrient monitoring	06/21/2024	250.00	250.00	07/11/2024	
328	ACZ Laboratories, Inc.	90805	Monthly-Comp-GRAB	06/27/2024	914.70	914.70	07/11/2024	
39	City Of Steamboat Springs Wate	15528	Lab Analysis services June July	07/24/2024	45.00	45.00	07/25/2024	
2882	TRE Environmental Strategies LL	5231	Study 023, 024	07/10/2024	2,000.00	2,000.00	07/11/2024	
128	Usa Blue Book	INV00385228	hach Nitrogen-Nitrate tests	06/05/2024	158.22	158.22	07/11/2024	
Total 40-11-4222:					3,367.92	3,367.92		
40-11-4230								
15	Yampa Valley Electric Assn., I	062024	oak creek sewer plant	07/09/2024	92.72	92.72	07/25/2024	
15	Yampa Valley Electric Assn., I	0620241	Sewer Plant Oak Creek	07/09/2024	71.42	71.42	07/25/2024	
15	Yampa Valley Electric Assn., I	0620242	24595 State Hwy 131	07/09/2024	2,572.00	2,572.00	07/25/2024	
Total 40-11-4230:					2,736.14	2,736.14		
40-11-4910								
2939	AquaWorks DBO, INC	2817	Consulting on project	07/06/2024	6,436.88	6,436.88	07/25/2024	
Total 40-11-4910:					6,436.88	6,436.88		
50-11-4229								
2958	Waste Management	0059726-2514-	Monthly Trash Service	07/01/2024	17,624.42	17,624.42	07/11/2024	
Total 50-11-4229:					17,624.42	17,624.42		
Grand Totals:					116,739.95	116,739.95		

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Net Invoice Amount	Amount Paid	Date Paid	Voided

Dated: _____

Mayor: _____

City Council: _____

_____

_____

_____

_____

_____

City Recorder: _____

Report Criteria:

Detail report.

Invoices with totals above $0.00 included.

Only paid invoices included.

Report Criteria:
Includes all check types
Includes unprinted checks

Pay Period Date	Journal Code	Check Issue Date	Check Number	Payee	Payee ID	Description	GL Account	Amount
08/03/2024	CDPT		0	Vision Service Plan - Connecticut	5	Vision Pay Period: 8/3/2024	10-00-1020	51.06-
08/03/2024	CDPT		0	State Withholding Tax	7	State Withholding Tax Pay Period:	10-00-1020	1,178.00-
08/03/2024	CDPT		0	Colorado State Treasurer	8	SUTA State Unemployment Tax P	10-00-1020	77.59-
08/03/2024	CDPT		0	Delta Dental	13	Dental Insurance Pay Period: 8/3/2	10-00-1020	44.40-
08/03/2024	CDPT		0	CEBT Payments	25	Health Insurance Pay Period: 8/3/2	10-00-1020	703.95-
08/03/2024	PC	08/09/2024	48303	Torgler, David	18		10-00-1020	2,841.22-
08/03/2024	PC	08/09/2024	48304	Holliday, Garret	33		10-00-1020	1,472.76-
08/03/2024	PC	08/09/2024	48305	Wisecup, Rocky J.	63		10-00-1020	1,993.36-
08/03/2024	PC	08/09/2024	48306	Holliday, Thomas D	64		10-00-1020	2,622.38-
08/03/2024	PC	08/09/2024	48307	Rossi, Eileen M.	65		10-00-1020	339.70-
08/03/2024	PC	08/09/2024	48308	Sullivan, Lucas M.	70		10-00-1020	1,857.18-
08/03/2024	PC	08/09/2024	48309	Cross, Kimberly	109		10-00-1020	350.99-
08/03/2024	PC	08/09/2024	48310	Bruner, Kayedence	114		10-00-1020	692.89-
08/03/2024	PC	08/09/2024	48311	Anarella, Carmen	116		10-00-1020	505.06-
08/03/2024	PC	08/09/2024	48312	Hagenbuch, Trevor	117		10-00-1020	475.21-
08/03/2024	PC	08/09/2024	48313	Bostock, Lorren	136		10-00-1020	1,332.23-
08/03/2024	PC	08/09/2024	48314	Hill, Alissa	146		10-00-1020	1,827.03-
08/03/2024	PC	08/09/2024	48315	Hewes, Jennifer	156		10-00-1020	2,577.33-
08/03/2024	PC	08/09/2024	48316	Plank, Brittney	203		10-00-1020	607.47-
08/03/2024	PC	08/09/2024	48317	Parker, Peyton	212		10-00-1020	461.17-
08/03/2024	PC	08/09/2024	48318	Kinne, Dafawn	230		10-00-1020	954.24-
08/03/2024	PC	08/09/2024	48319	Meade, Cindy	233		10-00-1020	570.00-
08/03/2024	PC	08/09/2024	48320	Sanchez, Izabell A.	234		10-00-1020	279.69-
08/03/2024	PC	08/09/2024	48321	Thompson, Carolyn	235		10-00-1020	901.13-
08/03/2024	PC	08/09/2024	48322	Martindale, Alyssa	239		10-00-1020	302.46-
08/03/2024	PC	08/09/2024	48323	Horn, Angela	240		10-00-1020	462.35-
08/03/2024	PC	08/09/2024	48324	Shaffer, Kirstyn	242		10-00-1020	1,259.41-
08/03/2024	PC	08/09/2024	48325	Edwards, Alayna	243		10-00-1020	365.17-
08/03/2024	PC	08/09/2024	48326	Flint, Greg	300		10-00-1020	2,078.62-
08/03/2024	PC	08/09/2024	48327	Christensen, Darin	302		10-00-1020	4,052.20-
08/03/2024	CDPT	08/05/2024	111809	FPPA	6	FPPA - D&D Pay Period: 8/3/2024	10-00-1020	1,733.67-
08/03/2024	CDPT	08/05/2024	111810	IRS Tax Deposit	1	Federal Withholding Tax Pay Perio	10-00-1020	8,439.12-
08/03/2024	CDPT	08/05/2024	111811	Vantagepoint Transfer Agents - 307	15	Retirement Plan Pay Period: 8/3/2	10-00-1020	2,269.78-
08/03/2024	PC	08/09/2024	622052	Smith, Scott	16		10-00-1020	30.13
Grand Totals:								45,648.69-
			34					

Report Criteria:

Includes all check types

Includes unprinted checks

STATE OF COLORADO

TOWN OF OAK CREEK

BY AUTHORITY OF THE BOARD OF TRUSTEES

ALCOHOL BEVERAGE LICENSE

FOR BONFIGLIO DRUG, INC.

TO SELL AT RETAIL Malt, Vinous and Spirituous Liquor

This is to Certify, that Bonfiglio Drug , Inc., of the State of Colorado, having applied for a license to sell Malt, Vinous and Spirituous Liquor, and having paid to the Town Clerk the sum of $72.50, the above applicant is hereby licensed to sell Malt, Vinous and Spirituous Liquors for off premises consumption as a liquor licensed drug store establishment at 118 W. Main Street in the Town of Oak Creek, Colorado, for a period beginning on the 2nd day of October, 2024 and ending on the 2nd day of October, 2025, unless this license is revoked sooner as provided by law.

This License is issued subject to the laws of the State of Colorado and especially under the provisions of Article 47 of Title 12, Colorado Revised Statutes, as amended and the Municipal Code.

Approved this 22nd day of August, 2024.

By _____
Mary Alice Page-Allen
Interim Town Administrator/Clerk

COMMUNICATION FORM

DATE: August 22, 2024
ITEM: Sheriff Reservoir Matters
ATTACHED: WW Wheeler Engineering Services Agreement 7/30/2024
Sheriff Reservoir Dam Operations & Maintenance Manual, August 2024 including Supplemental Financial Plan

BOARD ACTION:
_X_ ACTION ITEM
____ DIRECTION REQUESTED
____ INFORMATION

REQUEST OR ISSUE: Sheriff Reservoir Matters

a. Ratification of approval and signing of an Engineering Services Agreement between the Town of Oak Creek and W.W. Wheeler & Associates Inc. for the provision of Sheriff Spillway Rehabilitation Funding Support in an amount not-to-exceed $10,000
b. Consideration for approval of Sheriff Reservoir Dam Operations & Maintenance Manual (O&M Manual) and authorization to sign Financial Plan Supplement to O&M Manual

RECOMMENDED ACTION: That the Board approves

a. The ratification of approval and signing of an Engineering Services Agreement between the Town of Oak Creek and W.W. Wheeler & Associates Inc. for the provision of Sheriff Spillway Rehabilitation Funding Support in an amount not-to-exceed $10,000; and
b. The Sheriff Reservoir Dam Operations & Maintenance Manual (O&M Manual) and authorization to sign Financial Plan Supplement to O&M Manual

BACKGROUND INFORMATION: Both of these items relate to the on-going work of WW Wheeler & Associates related to the Sheriff Dam project and, specifically, the Town's applications for funding the project through the State of Colorado and the Federal Emergency Management Agency.

FISCAL IMPACTS: The budget for the work is not-to-exceed $10,000

LEGAL ISSUES: Ratification of the Agreement will finalize the Town's approval to proceed with the work noted therein. The O&M Manual's approval provides written documentation for the on-going operations of Sheriff Reservoir by the Town and assurances that funding for such maintenance will be appropriated accordingly.

CONFLICTS OR ISSUES: None known.

SUMMARY AND ALTERNATIVES: Finalizing these two matters related to Sheriff Reservoir moves this project in a forward direction and conforms to the requirements of likely funding agencies.

ENGINEERING SERVICES AGREEMENT

THIS IS AN AGREEMENT made as of the 30th day of July in the year 2024, by and between Town of Oak Creek, a Colorado statutory municipality, (hereinafter called OWNER) and W.W. Wheeler & Associates, Inc. (hereinafter called ENGINEER).

OWNER and ENGINEER in consideration of their mutual covenants herein agree in respect to the performance of professional engineering services by ENGINEER and the payment for those services by OWNER, as set forth below.

ENGINEER shall perform the engineering services as set forth in Exhibit A, a letter proposal dated July 17, 2024 (hereinafter referred to as the PROJECT).

ENGINEER shall perform professional services in accordance with generally accepted engineering practices in this area for the use of OWNER.

OWNER shall pay ENGINEER for services rendered in accordance with the rate schedule, Exhibit B, attached hereto. In the event the PROJECT extends beyond February 29, 2017, a revised schedule with reasonable fee adjustments shall be submitted to the OWNER, and OWNER agrees to pay for services rendered after that date in accordance with the revised schedule.

Daily time sheets will be kept in the office of the ENGINEER, showing the time each person engaged directly on the PROJECT devotes to the work. Records of reimbursable expenses will also be kept by the ENGINEER. These records of time and expenses will be available to audit by OWNER at any time during regular business hours.

ENGINEER shall prepare monthly statements of charges for services rendered and for reimbursable expenses incurred. Such statements shall be submitted to OWNER within fifteen (15) days of the end of each calendar month. Payments of amounts due shall be made by OWNER within thirty (30) days after receipt of each statement.

If OWNER fails to make any payment due ENGINEER for services and expenses within sixty (60) days after receipt of ENGINEER's bill therefore, the amounts due ENGINEER shall include a charge at a rate of 1.5% per month from said sixtieth day plus attorney's fees for collection and in addition, ENGINEER may, after giving seven (7) days written notice to OWNER, suspend services under this Agreement until he has been paid in full all amounts due him for services and expenses.

The work of the ENGINEER may be terminated and this Agreement canceled by the OWNER at any time upon giving ENGINEER ten (10) days prior written notice, in which event OWNER will reimburse ENGINEER for costs incurred or paid and a reasonable fee based thereon up to the effective termination date.

OWNER and ENGINEER have discussed their risks, rewards and benefits of the PROJECT and the ENGINEER's total fee for services. The risks have been allocated such that OWNER agrees that to the fullest extent permitted by law, ENGINEER's total liability to OWNER for any and all injuries, claims, losses, expenses, damages, or claim expenses arising out of this agreement from any cause or causes, shall not shall not exceed ENGINEER's total fee for this PROJECT. Such causes include but are not limited to ENGINEER's negligence, errors, omissions, strict liability, breach of contract or breach of warranty. ENGINEER shall not be responsible for the acts or omissions of any other persons except his own employees and agents performing any of the work on the PROJECT.

IN WITNESS WHEREOF the parties hereto have made and executed this Agreement as of the day and year first above written.

OWNER:

Mary Alice Page-Allen, Interim Town Administrator/Clerk

ENGINEER:

W.W. Wheeler & Associates, Inc.

by

(NAME& TITLE)

Attachment A

July 17, 2024

Melissa Dobbins, Town Mayor
Town of Oak Creek
PO Box 128
Oak Creek, CO 80467

Re: Sheriff Spillway Rehabilitation Funding Support

Dear Melissa:

Per our recent discussions, W. W. Wheeler & Associates, Inc. (Wheeler) is providing this proposal to assist the Town of Oak Creek (Town) in its effort to obtain funding for construction of the Sheriff Dam Rehabilitation project. Our proposed scope of work and associated budget is presented below.

Introduction

Wheeler is a Colorado-based, consulting engineering firm that has been in business for 69 years. We specialize in water resources, dam engineering, and geotechnical engineering. Wheeler has been working with the Town for several years on the rehabilitation design for Sheriff Dam. The rehabilitation design was approved by the Colorado Division of Water Resources (DWR) Dam Safety Branch earlier this year. Wheeler also prepared the design and assisted with on-site engineering support during the outlet gate replacement construction that was completed in the fall of 2023. Wheeler also helped the Town engage a Construction Manager/General Contractor (CM/GC), Zak Dirt, Inc. If the Town receives the necessary funding, Zak Dirt is prepared to complete the dam rehabilitation in the summer and fall of 2025.

Scope of Work

The proposed scope of work for this funding assistance phase is to provide grant application assistance to the Town with the goal of securing approximately $5.5 million in funding for the Sheriff Dam spillway replacement construction, permitting, and construction engineering services. If the dam rehabilitation project can be funded and completed, the current reservoir storage restriction at Sheriff Reservoir, which was imposed by the Colorado DWR Dam Safety Branch in 2021 can be removed. Recent discussions with the Colorado Office of Emergency Management indicate there is a strong possibility that grant funds from the Federal Emergency Management Agency (FEMA) could cover approximately 60 percent of the anticipated construction funds, if the remaining funds can be obtained from other state and local partners.

Funding Grant Support

Wheeler will assist the Town in preparing grant applications from the following organizations:

- FEMA
- The Colorado River District, Community Funding Partnership program
- The Yampa Water Conservancy District
- The Yampa, White, Green Basin Roundtable
- The Colorado Water Conservation Board
- The Department of Local Affairs DOLA
- Routt County
- Congressional Directed Funding sources

Our services will also include making a presentation to these funding organizations, as needed.

Budget and Schedule

Wheeler will perform the above scope of work on a time and materials basis for a not-to-exceed budget of **$10,000**. This budget will only be exceeded with prior written approval from the Town of Oak Creek. Wheeler's professional engineering services will be performed in accordance with our Engineering Services Agreement, provided as Attachment A. Our invoices will be based on our 2024 Standard Rate Schedule, provided as Attachment B. We can initiate this work upon receipt of the signed agreement from Attachment A. We will provide you with a final signed executed agreement.

We are looking forward to continuing our work with the Town on this project. If you have any questions or comments about the services offered in this proposal, please call me at (720) 313-3587.

Sincerely,
W. W. Wheeler & Associates, Inc.

John Treacy, P.E.

Attachments:
Attachment A: Engineering Services Agreement
Attachment B: 2024 Standard Rate Schedule

File location: T:\1800\1865.PB_Sheriff_Funding\SheriffDamFundingAssistance_17Jul2024.docx

Attachment B

2024 Standard Rate Schedule

STANDARD RATE SCHEDULE

EFFECTIVE APRIL 1, 2024

Classification	Rate Per Hour
Chief Engineer	$241.00
Senior Water Resources Engineer	$224.00
Senior Geotechnical Engineer	$224.00
Senior Project Engineer	$207.00
Senior Engineer	$191.00
Project Engineer	$175.00
Associate Engineer	$159.00
Staff Engineer	$144.00
Assistant Engineer	$129.00
Junior Engineer	$116.00
CADD Technician	$101.00
Administrative Assistant	$95.00
Technician III	$100.00
Technician II	$83.00
Technician I	$67.00

Our Lab Testing Rate Schedule is provided on the following page. In addition to the above Rate Schedule, the following expense items will be reimbursed to W. W. Wheeler & Associates, Inc. at cost or as indicated below:

- Fees by subconsultants, surveyors, laboratories, etc. will be billed at cost plus a 5% mark-up.
- Prints, photos, and reproductions by others will be billed at cost.
- Special supplies and equipment will be billed at cost.
- Out-of-town living expense will be billed at cost or per-diem.
- In-house reproductions:
  - Black and White: $0.15/page
  - Color Letter: $0.50/page
  - Color Ledger: $1.00/page
- Two-wheel-drive vehicle: $0.70/mile
- Four-wheel-drive vehicle: $0.85/mile

LAB TESTING RATE SCHEDULE

EFFECTIVE APRIL 1, 2024

Classification	Rate Per Hour
Visual Classification (ASTM D2488)	No Charge
Moisture (ASTM D2216)	$20.00
Moisture/Density (ASTM D2216)	$45.00
Gradation (ASTM D6913) : 1-1/2" minus	$120.00
Large Gradation (ASTM D6913) : 3" minus	$130.00
Hydrometer (ASTM 7928)	$175.00
Atterberg Limits (ASTM D4318)	$90.00
-200 Sieve (ASTM D1140)	$40.00
Specific Gravity (ASTM D854)	$40.00
Swell Consolidation (ASTM D4546)	$150.00
Remolded Swell-Consolidation (ASTM D4546)	$200.00
Standard Proctor (ASTM D698)	$175.00
Modified Proctor (ASTM D1157)	$190.00
Proctor Point Check (ASTM D698 or D1557)	$120.00
Electrical Resistivity (ASTM G57)	$150.00
pH (ASTM E70)	$50.00
Chloride Content (AASHTO T290, CP-L 2104)	$65.00
Pin-Hole Dispersion (ASTM D4647)	$235.00
Lab Preparation Rate (per hour)*	$95.00

* Lab Preparation Rate will be applied only to specialized testing requiring additional lab preparation.

Note: Testing by outside lab: W. W. Wheeler & Associates, Inc.'s cost plus 10% markup.

3700 S. Inca Street, Englewood, CO 80110-3405
303.761.4130 • wwwheeler.com

SHERIFF RESERVOIR DAM

RIO BLANCO COUNTY, COLORADO
WATER DIVISION 6, WATER DISTRICT 57
NID: CO 01015
COLORADO DAMID: 570129

OPERATIONS & MAINTENANCE MANUAL

Dam Owner:

129 Nancy Crawford Blvd.
Oak Creek, Colorado 80467

August 2024

SHERIFF DAM
OPERATIONS & MAINTENANCE MANUAL

TABLE OF CONTENTS

Appendices

1.0 GENERAL INFORMATION

1.1 Dam Description

Sheriff Reservoir Dam is located approximately 12 miles southwest of Oak Creek, Colorado within the Medicine Bow-Routt National Forest in Rio Blanco County. The Town of Oak Creek, which owns and operates the dam, is in Routt County, approximately 20 miles southwest of Steamboat Springs.

Sheriff Reservoir Dam is classified as a High Hazard dam and is inspected by a Dam Safety Engineer with the Colorado State Engineer's Office approximately once per year. According to DWR Engineer Inspection Reports, Sheriff Reservoir Dam is 47-feet high and 630-feet-long. Sheriff Reservoir has an absolute, total decreed storage of 986.5 acre-feet (CDSS, 2020), which is reflected on the Engineer Inspection Reports as a normal storage at the spillway crest of 987 acre-feet (DWR, 2020). An updated reservoir capacity curve based on 2018 surveys indicates that the normal storage in the reservoir is currently approximately 902 acre-feet.

The current emergency spillway is a 32-foot-wide ogee spillway with a control crest at Elevation 9735.5 (Landmark, 2019-1). Engineer Inspection Reports document a spillway capacity of 2,460 cubic feet per second (cfs) and a freeboard of 7.0 feet. 2018 survey data (Landmark, 2019-2) indicate that the current dam crest has a variable crest height between Elevation 9740.9 to 9741.7 and therefore a freeboard of 5.4 to 6.2 feet. Additionally, the dam crest length based on the 2018 data is approximately 610 feet.

The dam's low-level outlet works consists of a 36-inch-diameter, steel outlet pipe with a sloped configuration slide gate mounted on a concrete headwall on the upstream slope of the embankment. The Town tries to capture as much spring snowmelt runoff as possible. Subsequently, the spillway often has seasonal flows of a few inches over the ogee. The reservoir is typically drawn down in the fall to meet the Town's water demands.

1.2 Dam History

Detailed history from original construction in the late 1950's to the present is included in the *CDSE report.*

Sheriff Dam was constructed in 1954 but not to the full design height (Drawings, 1953) and was enlarged in 1965 (Drawings, 1965). The 1953 drawings represent the original construction of Sheriff Dam. The 1965 construction included a downstream slope enlargement that raised the dam crest by 7 feet to the current height. According to DWR Engineer's Inspection Reports, Sheriff Reservoir Dam is a 47-foot-high, high hazard embankment dam with an original normal storage capacity at the spillway crest of approximately 987 acre-feet (DWR, 2020-5).

Key dam safety issues including inadequate spillway capacity and operational issues with an aging low-level outlet works gate have been documented in several reports as well as annual inspections by the DWR. The earliest report indicating inadequate spillway capacity was by Chas. T. Main, Inc in 1980 (Main, 1980). Geotechnical Engineers Inc. (GEI) submitted a Feasibility Study Report in 1986 (GEI, 1986) which presented four alternatives to provide acceptable flood routing capacity. Engineer Inspection Reports from 2018, 2019, and 2020 document operational issues and reliability concerns expressed by the Town's Public Works Director at the outlet gate (DWR, 2018, 2019 and 2020-5). Outlet gate issues include a stem casing which contains holes and is not water or oil tight, and operational observations that the gate often does not seat properly when closed on the first try due to the worn-out guides.

A Feasibility Study to address the dam safety deficiencies was conducted for the Colorado Water Conservation Board (CWCB) on behalf of the Town by W. W. Wheeler & Associates, Inc. (Wheeler, 2021). Part of the Feasibility Study work included the 2018 Landmark survey. During the 2018 site investigation, a sinkhole was discovered in the dam foundation immediately upstream of the toe of the dam.

The DWR determined that temporary emergency repairs were required to address the sinkhole. A zero-storage restriction was placed on the reservoir by the DWR until emergency repairs were completed. Since then, an interim storage restriction of one foot below the Normal High-Water Line (NHWL) is in effect until the longstanding dam safety deficiencies are addressed, which is the purpose of the Sheriff Dam rehabilitation project.

1.3 Authorization

Town of Oak Creek is the owner and operator of the dam. Sheriff Reservoir Dam provides a supplemental water supply for the Town during dry months. The population of Oak Creek is approximately 900 people. The Town generally captures as much spring snowmelt runoff as possible and draws the reservoir down in the summer and fall to meet the Town's water demands. Reservoir releases are diverted from Trout Creek via the Rich Ditch into Oak Creek, and then to the Town of Oak Creek. A Special Use permit issued by the U.S. Forest Service authorizes the Town to operate and maintain Sheriff Reservoir Dam on Forest Service land. The dam is regulated by DWR dam safety requirements.

1.4 Roles and Responsibilities

Town of Oak Creek, as the dam owner, is responsible for normal operations including water delivery, storage, general maintenance, and capital repairs. The Dam Safety Branch of the Colorado Division of Water Resources (DWR) has statutory responsibility for inspections and enforcement of any mandated maintenance or capital repairs. County and State Emergency Management authorities have jurisdiction over any flood management issues.

1.5 Personnel Training and Qualifications

Town of Oak Creek currently has no minimal standards for training or qualifications of personnel carrying out O&M activities. The dam operations are covered by the Public Works Employees. Town of Oak Creek management has several years of experience operating the dam and reservoir activities; and the engineering firm currently providing technical assistance to the dam owner is highly qualified and has been involved with this dam for 5+ years.

2.0 OPERATING PROCEDURES

2.1 Routine Operations

Annual operations and maintenance are conducted by the Public Works department and a contracted engineering firm to coordinate water delivery, general maintenance, and capital repairs. Reservoirs are subject to annual inspection by Colorado Dam Safety Division and water consumption is measured and monitored by the State to assure compliance with existing water rights.

2.2 Flood Operation

Flood Operations are described in the *Emergency Action Plan (EAP)* also attached to this report. The EAP lists procedures and contacts for response to any flood emergency and relies on County and State emergency management agencies, along with local law enforcement agencies, to respond to all emergencies. The EAP is required, and approved, by the State and is updated annually. Town of Oak Creek's primary responsibility in an emergency is to notify the appropriate authorities and then yield to their direction.

2.3 Design Features with Safety Limits

Design Features with Safety Limits – are minimal for this site. The general dam construction meets all industry/engineering standards, and all plans and improvements are subject to State approval. Specific safety limits to this site are locks for gate operation security, an emergency spillway, and a downstream flow path capable of handling a 100 yr. storm.

2.4 Equipment Operating and Testing Procedures

Minimal application at this site since this site is considered Forest Service land with limited vehicular access; there are no equipment operations other than the manual operation of outlet gate. The single testing procedure is piezometer readings and reservoir level readings that are performed by the Town. Town of Oak Creek is not aware of any safety limits required for manual operation of outlet gates and occasional work with a small, tracked excavator.

3.0 MAINTENANCE PROCEDURES

3.1 Summary and Schedule

Primary maintenance includes the Owner's monthly visits and the operation of the outlet gate. These functions are performed on an as-needed basis for water releases, and the inspections are completed monthly in the late spring through late fall with weather and access permitting.

3.2 Routine Maintenance

Includes normal operation of the outlet works; cleaning debris from downstream channel as needed, monthly logging of staff gauge readings; and removal of tree and plant growth on the upstream and downstream slope as directed by State inspection.

3.3 Major Maintenance

Major maintenance is prioritized according to specific needs based on annual State inspection (i.e. tree removal, concrete repair, replace riprap). We typically budget and spend approximately $10,000 annually for these inspection related projects.

3.4 Checklists

Town of Oak Creek does not use regular checklists for these items. Monthly maintenance duties are provided by our Public Works employees and is covered under the Public Works Budget.

4.0 INSPECTIONS

4.1 Review

Full history of annual/semi-annual inspections is available at Dam Safety Division office. Town of Oak Creek keeps three years of recent inspections in company electronic files. *Most recent inspection report for this project is attached.*

4.2 Inspection Schedules

The Town of Oak Creek complies with all state regulatory requirements for high hazard dams. This site is typically inspected once every two years, but due to the current restriction this dam is inspected annually.

4.3 Recommended Repairs

Required repairs are typically completed within one year. Following the CDSE report in 2023 a full evaluation of dam integrity was performed by a local engineering firm. That evaluation generated a report recommending repairs to the dam including enlargement of the spillway capacity, uneven dam crest, and deteriorated outlet works terminal structure. A rehabilitation design has since been prepared by a registered engineer, has been reviewed and approved by the State engineer's office and approved by Town of Oak Creek…. including authorization to seek FEMA funding.

4.4 Checklists

State authored inspection reports include a section for recommended items and a checklist for completion. Town of Oak Creek regularly reports to the State on progress toward inspection-mandated items.

5.0 FILE AND RECORDS MANAGEMENT

5.1 Inspection Reports

All inspection reports are signed by Town of Oak Creek and filed with State Dam Safety office. Town of Oak Creek also keeps an electronic copy of the last three inspections.

5.2 Dam Incidents

All dam related incidents are reported to the dam safety office either for general field inspection or a specific request for a specific problem. Field operations protocol is, if you notice something unusual notify the State and request an inspection.

6.0 PERMIT APPLICATIONS

All modifications for the dam have been approved by submitting the appropriate design package and securing approval from the Colorado Division of Water Resources. Town of Oak Creek will request that the State notify FEMA of any plans for future work or permits.

7.0 REVIEW AND REVISION OF O&M PLAN

The Sheriff Dam O&M plan will be reviewed and updated as needed every five years.

8.0 LIABILITY CLAUSE

After the planned rehabilitation in 2025, any changes to the maintenance and operation of dam will be reported to the State Dam Safety office and to FEMA within a month of the change.

Dam owner, Town of Oak Creek, accepts sole responsibility for the safety of dam and any associated liability. Town of Oak Creek will carry insurance to cover liability for operations and associated liability. Town of Oak Creek will comply with all FEMA requirements regarding penalty for failure to comply with provisions of the O&M Plan.

9.0 O&M AGREEMENT AND FINANCIAL PLAN

Both are provided as appendices to this plan outline. The financial plan, in Appendix C, is provided in the form of an approved annual budget for sponsor agency Town of Oak Creek. This budget incorporates expenses of between $8,500 to $10,000 annually for general operations and maintenance, plus a range of $100,000 to $200,000 annually for capital repair and improvements to Town of Oak Creek water enterprise-related facilities. An annual budget of this scope has been in place and implemented for 30+ years.

OPERATIONS AND MAINTENANCE AGREEMENT

for

SHERIFF DAM

RIO BLANCO COUNTY, COLORADO
WATER DIVISION 6, WATER DISTRICT 57
NID: CO 01015
COLORADO DAMID: 570129

This document is a legally binding contract written to supplement the Operation and Maintenance Agreement for Sheriff Dam dated August 22, 2024. It may be revised by mutual consent of all signatory parties, hereinafter referred to as sponsors:

- Town of Oak Creek as subrecipient
- Colorado State Division of Dam Safety

Sponsors O&M responsibilities begin when the rehabilitation project is deemed by FEMA to be complete and extends through the 50-year period following completion or the expected life of the dam. Sponsors may continue to be liable until the dam and any appurtenant structures are removed.

Town of Oak Creek, as designated funding subrecipient, will:

- Complete all maintenance, repair, replacement activities within a reasonable time. Be responsible for replacement of dam components that have a design life less than the expected life of the dam. Obtain prior approval from FEMA for any planned alteration to the dam.
- Notify FEMA of any future proposed agreement with other parties for the operation and maintenance of the dam and provide FEMA a copy of the proposed agreement. Provide FEMA personnel or its agents with free access to the site at a reasonable time for the purpose of carrying out the terms of this agreement. Comply with all applicable federal, state, local, laws and regulations.
- Arrange for State inspections, regular maintenance activities, mandated replacement, or capital repair, as summarized in O&M plan. Assure the EAP is reviewed and updated annually and establish and maintain a funding mechanism to fund operations, maintenance and repair.
- Monitor and respond to State mandated annual inspections and ensure completion of detailed reports summarizing inspection methods, conditions observed, and maintenance work required if needed.
- Town of Oak Creek will be responsible for O&M of dam and associated structures and for retaining records of all inspections conducted by the State including costs and completion dates of required repairs. Records shall be made available to FEMA upon request.
- Town of Oak Creek shall prepare and maintain proper revenue and expense funding for annual costs for O&M. Funding for O&M shall come from, but not be limited to:
- Annual assessments on Company shareholders
- Fes and charges for recreation and general use
- Loans and grants as secured.
- Miscellaneous income

- Financial management of operations will come in the form of an annual operating budget approved by Town of Oak Creek Board of Directors and based on priorities set by capital needs, debt obligations, and general maintenance and operations costs. A copy of the Town of Oak Creek annual budget will be provided to the State and to FEMA upon request.

The O&M Agreement shall be enforced as necessary to protect the interests of the government, the listed sponsors, and the public. This agreement and associated O&M plan shall be reviewed at least once every five years by the sponsors and may be revised, as needed, by mutual consent of both the sponsors and FEMA.

The O&M Plan for Polly A. Deane Dam is attached to and incorporated into this agreement. Also incorporated are various reports, plans, and budget information noted in the Agreement as *"attached."* The undersigned sponsors agree to carry out the terms of this agreement and commit to provide operation and maintenance for Sheriff dam for the 50-year period following completion of the intended rehabilitation, or the expected life of the dam, whichever is longer.

Concurrence

This plan was authorized after virtual review of all documents and attachments, and e-mail communication of agreement provisions. Signatories are all authorized to execute this document on behalf of their respective agencies.

Town of Oak Creek

Signature:_____ Date: _____
Title: _____

Colorado Division of Water Resources, Dam Safety Branch

Signature:_____ Date_____
Title:_____

COMMUNICATION FORM

DATE: August 22, 2024
ITEM: Drinking Water & Wastewater Treatment Improvements Planning – AquaWorks DBA, Inc.
ATTACHED: AquaWorks DBO Inc. Agreement for Services, 4/28/2023
Oak Creek Water and Wastewater System Review, 6/26/2023
DOLA Grant Agreement 12/31/2024 Extension Approval, 8/14/2024
Proposed AquaWorks DBO Inc. Agreement for Services, 8/14/2024

BOARD ACTION: _X_ ACTION ITEM
____ DIRECTION REQUESTED
____ INFORMATION

REQUEST OR ISSUE: Consideration to authorize the amendment and extension of an Agreement for Services with AquaWorks DBO, Inc. to undertake Drinking Water & Wastewater Treatment Improvements Planning tasks identified in the Water and Wastewater System Review Letter Report, June 2023 for the not-to-exceed amount of $50,000

RECOMMENDED ACTION: That the Board authorizes the amendment and extension of an Agreement for Services with AquaWorks DBO, Inc. to undertake Drinking Water & Wastewater Treatment Improvements Planning tasks identified in the Water and Wastewater System Review Letter Report, June 2023 for the not-to-exceed amount of $50,000

BACKGROUND INFORMATION: In April, 2023 the Town contracted with AquaWorks DBO Inc. (AquaWorks) to assess and assist the Town in addressing the requirements of its wastewater treatment discharge permit and potable water system limits. On June 26, 2023 AquaWorks delivered their evaluation report (Report) of the systems and provided a number of recommendations for next steps that are needed to be undertaken or finalized to meet the standards and regulations. This report served to support a grant funding application to the Department of Local Affairs (DOLA) in the amount of $25,000 matched with $25,000 from the Town's water and sewer enterprises to undertake these next steps. To date, none of the anticipated work has been done and none of the awarded funding has been spent.

The DOLA grant funding award was slated to expire on August 31, 2024. A request was made to extend the grant's expiration deadline to December 31, 2024 and such has been authorized. The recommendations in the Report have been prioritized in conversation with Tom Holliday, Public Works Director, and Scott Smith, the Town's water and wastewater system operator, and a proposal to undertake those high-priority recommendations was solicited from AquaWorks due to their recent familiarity with the systems' needs and their confirmation that such work can be completed prior to the recently extended grant award deadline.

Due to AquaWorks familiarity with the Town's systems, their extensive work with small systems located in mountain communities (e.g. Steamboat Mountain School, Morrison Creek Water & Sanitation District, Phippburg, Milner and Yampa), and their confirmation that they can complete the tasks identified by the Town within the budget and on time, staff is recommending that the Town Board authorize moving forward as proposed.

FISCAL IMPACTS: The budget for the work is not-to-exceed $50,000

LEGAL ISSUES: An Agreement needs to be in place to authorize the work.

CONFLICTS OR ISSUES: None known at this time. Staff is developing a Request for Proposals for Engineering Services that meets the criteria of future anticipated capital funding sources.

SUMMARY AND ALTERNATIVES: Moving forward in this manner will allow the Town to take the necessary next steps to address our current compliance issues, particularly with the wastewater treatment system.

AGREEMENT FOR SERVICES BETWEEN AQUAWORKS DBO, INC. AND CLIENT

3252 Williams Street, Denver, CO 80205 | (303) 477-5915 | www.AquaWorksDBO.com

PROJECT	Drinking Water & Wastewater Treatment Compliance Consulting
CLIENT	Town of Oak Creek
LOCATION	Routt County, Colorado
DESCRIPTION	Assist the Town with addressing the requirements of its wastewater treatment discharge permit and potable water system limits.
TYPE OF SERVICE	Compliance Consulting & Preliminary Engineering
CLIENT REP	Mr. Tom Holliday
PROJECT NUMBER	3479
PREPARED BY	Adam Sommers, P.E.

SCOPE OF SERVICES

1. Review existing information, designs, reports, and applications prepared by others for the drinking water and wastewater treatment systems.
2. Make a site visit to the Town to review the treatment process and condition of the existing treatment systems.
3. Review the existing Discharge Permit and ability of the existing system to meet current and proposed limits.
4. Provide a list of additional analytical sampling to the Town should take at the raw water source, WTP, WWTP, and receiving water.
5. Provide the CDPHE updates the Town is making to address meeting the limits.
6. Provide preliminary recommendations for the treatment systems.
7. Assist the Town with responding to compliance schedule requirements.
8. Any other services requested by client.

BUDGET FOR SERVICES

CONTRACT TYPE	Time and Materials
NOT TO EXCEED FEE TOTAL	$10,000

Payment Terms and Conditions

1. Subconsultant expenses, fees, and additional services not specified within the scope of services which are required either directly by the client, its agents, or otherwise incurred in the performance of this agreement will be billed as additional services, according to the enclosed terms.
2. Changes in scope will require additional compensation to AquaWorks DBO according to existing or extended terms, or existing standard hourly rates in lieu of a written agreement for additional services.
3. Invoicing will be performed monthly or as close as practical. The invoiced amount is due within 30 days of receipt, after 30 days an interest charge of 1.5% per month or portion thereof will be incurred.

FEE SCHEDULE

HOURLY FEES

PRINCIPAL/SENIOR PROJECT MANAGER	$ 205/hr
PROJECT MANAGER	$ 195/hr
SENIOR ENGINEER	$ 185/hr
SENIOR PROJECT ENGINEER	$ 175/hr
PROJECT ENGINEER	$ 165/hr
WORD PROCESSING/ ADMINISTRATIVE	$ 65/hr

OTHER DIRECT CHARGES

MILEAGE	Current IRS Rate

REIMBURSEABLE EXPENSES

(Subject to actual cost) May include, but are not limited to:

- Additional outside professional services provided beyond those stipulated in the scope of work
- Additional copies of reports, drawings, etc. beyond those stipulated in the scope of work
- Postage, courier fees, and shipping
- Other owner-approved, project-related purchases

ACCEPTANCE AND AUTHORIZATION

CLIENT'S DESIGNATED REPRESENTATIVE		AQUAWORKS DBO DESIGNATED REPRESENTATIVE	
Company:	Town of Oak Creek	Company:	AquaWorks DBO, Inc. 3252 Williams Street Denver, CO 80205
Name:	Tom Holliday	Name:	Adam Sommers
Title:	Public Works Director	Title:	President
Signature:	4-28-2023	Signature:	Adam Sommers
Date:	Tom Holliday	Date:	4/19/2023

Signature indicates that individual is qualified as the Client's representative to enter into an agreement for services.
Notice to Proceed: Provide by returning acceptance and authorization, to be effective as of date of signature.

A. CONTRACTOR shall be responsible for the acts, errors and omissions of itself and its employees, consultants, agents, and any other persons employed or retained on behalf of CONTRACTOR in connection with the Project and for the acts, errors and omissions of the Project's owners and users. Within the limitations of the Colorado Constitution and statutes, CONTRACTOR agrees to indemnify, hold harmless, and defend the OWNER and its directors, officers, employees, agents, and attorneys for the actions, errors and omissions of CONTRACTOR and CONTRACTOR'S employees, consultants, agents, and any other persons employed or retained on behalf of CONTRACTOR in the performance of this Contract and for the acts, errors and omissions of the Project's owners and users. The parties recognize that the OWNER is a governmental entity subject to the provisions of the Colorado Governmental Immunity Act, C.R.S. § 24-10-101, et seq. Neither Party waives, and both Parties are relying upon, the immunities, limitations of liability and protections of that Act.

B. At its sole cost CONTRACTOR, or at CONTRACTOR's cost shall purchase and maintain in effect through Project completion insurance which will protect it and the OWNER from claims which may arise out of, result from or be related to CONTRACTOR'S performance of the work on the Project, whether such performance be by itself or by anyone directly or indirectly retained or employed by CONTRACTOR or by anyone for whose acts, errors, or omissions any of them may be liable. Such insurances required herein shall be written for limits of liability as follows:

Commercial General Liability:
i) Bodily Injury and Property Damage: $2,000,000 each occurrence/$2,000,000 aggregate
II)Personal Injury: $2,000,000 each occurrence/$2,000,000 aggregate

Workers' Compensation and Employer's Liability:
i) Compensation: Statutory
ii)Employer's Liability:
$100,000 each accident
$100,000 disease – each employee
$500,000 disease – policy limit

C. The Commercial General Liability and Commercial Automobile Liability policies required hereunder shall include the OWNER named as primary, non-contributory, additional insured. If CONTRACTOR'S SUBCONTRACTOR is providing the necessary insurance CONTRACTOR shall also be named as primary, non-contributory, additional insured. CONTRACTOR shall supply the OWNER with a certificate of each insurance policy required herein at least thirty (30) days prior to the estimated commencement date, unless otherwise agreed upon by the parties. The certificates of insurance shall evidence that the premium has been paid and contain a valid provision or endorsement that the policies may not be canceled, terminated, changed, or modified without thirty (30) days written notice to the OWNER.

D. Neither CONTRACTOR nor OWNER intend by this Contract to create a multi-year fiscal obligation of either Party. All financial obligations of the Parties are subject to appropriation of funds in years subsequent to the current fiscal year.

Client Services. AquaWorks DBO through and by its officers, employees and subcontractors is an independent consultant and agrees to provide client, for its sole benefit and exclusive use, consulting services set forth in this proposal. No third party beneficiaries are intended by this Agreement.

Payment Terms. Client agrees to pay AquaWorks DBO's invoice within 30 days. Client agrees to pay a service charge of 1.5% per month or the allowable legal rate, including reasonable attorney's fees and expenses if collected through an attorney. No deduction shall be made from AquaWorks DBO's invoice for retainage.

Standard of Care. AquaWorks DBO's services under this Agreement will be performed in a manner consistent with that degree of care and skill ordinarily exercised by members of the same profession currently practicing under similar circumstances in the vicinity of the project. No other warranties, express or implied are made.

Insurance. AquaWorks DBO maintains insurance to statutory and professional standards for comparable work of this type in this area at the time of service.

Limitation of Liability. In recognition of the relative risks and benefits of the project to both the Client and AquaWorks DBO, the risks have been allocated such that the Client agrees, to the fullest extent permitted by law, to limit the liability of AquaWorks DBO and its subconsultants to the Client and to all construction contractors and subcontractors on the project for any and all claims, losses, costs, damages of any nature whatsoever or claims expenses from any cause or causes, so that the total aggregate liability of AquaWorks DBO shall to be limited to $1,000,000 per occurrence or $2,000,000 aggregate. This limitation applies to all claims of any kind arising out of this agreement.

Site Operations. Client will arrange right-of-entry to the property for the purposes of performing project management, studies, review of existing conditions and evaluations pursuant to the agreed services. Client represents that it possesses necessary right-of-entry authority, permits, and licenses required for its activities at the site.

Documents. AquaWorks DBO will furnish Client the agreed upon number of written reports, plans, and supporting documents as identified in the scope. These instruments of service are furnished for Client's exclusive use and reliance, but not for advertising or other type of distribution, and are subject to the following:

a. Client shall furnish documents or information reasonably within Client's control and deemed necessary by AquaWorks DBO for proper performance of its services. AquaWorks DBO may rely on Client-provided documents in performing the services under this Agreement; however, AquaWorks DBO assumes no responsibility or liability for their accuracy. Client provided documents will remain the property of the Client, but AquaWorks DBO may retain one confidential file copy as needed to support its report or designs.

b. Removed.

c. Upon Client's request AquaWorks DBO's work product may be provided on electronic or digital media. By such request, Client agrees that the written copy provided to the Client shall be the official base document. AquaWorks DBO makes no warranty or representation to Client that the electronic or digital copy is accurate or complete, but will correct in good faith any omissions or errors brought to AquaWorks DBO's attention by the Client during the course of this Agreement. Any modifications of such electronic or digital copy by Client shall be at Client's sole risk and without liability to AquaWorks DBO. Such electronic or digital copy is subject to all other conditions of this Agreement.

Opinions of Cost. If requested, AquaWorks DBO will use its experience on similar projects to provide opinions of cost for construction as appropriate based on reasonably available data, AquaWorks DBO's designs, or AquaWorks DBO's recommendations. Such opinions are intended primarily to provide information on the order of magnitude or scale of such costs and are not intended for use in firm budgeting or negotiation unless specifically agreed otherwise, in writing with AquaWorks DBO. Client understands actual costs of such work depend heavily on regional economics, local construction practices, material availability, site conditions, weather conditions, contractor's skill, and many other factors beyond AquaWorks DBO's control.

Credit for Work. Client agrees to the best of ability to give appropriate credit to AquaWorks DBO in any publicity releases, awards, submissions, publications, and identification in on-site signs which identify other professionals and/or contractors working on this project.

Governing Law. This Agreement shall be governed by and interpreted in accordance with the laws of the State of Colorado. Any claim or dispute arising out of this Agreement shall be brought in the courts of Routt County, State of Colorado.

Confidentiality. AquaWorks DBO will maintain as confidential any documents or information provided by the Client and will not release, distribute or publish same to any third party without prior permission from Client, unless compelled by law or order of a court or regulatory body of competent jurisdiction.

Priority over Form Agreement/Purchase Orders. The parties agree that the provisions of these terms and conditions shall control over and govern as to any form writings signed by the Parties, such as Client Purchase Orders, Work Orders, or other agreement forms, and that such forms may be issued by Client to AquaWorks DBO as a matter of convenience of the Parties without altering any of the terms or provisions hereof.

Survival. All provisions of this Agreement for indemnity or allocation of responsibility or liability between Client and AquaWorks DBO shall survive the completion of services and/or the termination of this agreement.

Severability. In the event that any provision of this Agreement is found to be unenforceable under law, the remaining provisions shall continue in full force and effect.

Assignment. This Agreement cannot be assigned by either party without prior permission of the other.

Integration. This Agreement, the attached documents and those incorporated herein constitute the entire Agreement between the parties and cannot be changed except by a written instrument signed by both parties.

Consequential Damages. Neither Client nor AquaWorks DBO shall be liable to one another for incidental, indirect, indirect, or consequential damages rising out of AquaWorks DBO's services under this Agreement. This mutual waiver of damages includes, but is not limited to, claims for loss of use, rent, income, profit, financing, business and reputation, claims for delay damages and damages due to either party's termination under this agreement.

Claims. In the event of a dispute, Client agrees to make claim against AquaWorks DBO as a corporate entity only and not against any individual employee, owner, officer, director, or agent of AquaWorks DBO.

Unilateral Changes. If Client makes any unilateral modifications to this Agreement, such shall not become part of this Agreement and shall not be enforceable unless and until initialed by an authorized representative of Consultant.

Job Site Safety. Client agrees that the Contractor is solely responsible for job site safety and for health and safety precautions required by regulatory agencies. AquaWorks DBO shall have no obligation to direct or control the Contractor's job site activities or the means and methods of construction and shall have no liability for job site safety.

Time for Performance. AquaWorks DBO shall perform services under this Agreement in a timely manner, consistent with the exercise of independent, professional judgment. AquaWorks DBO shall not be responsible for delays in completion of its services caused by Client or third parties.

Termination. Either Client or AquaWorks DBO may terminate this Agreement without cause upon 10 days written notice to the other party. AquaWorks DBO may terminate this Agreement within 7 days after a demand for payment of outstanding invoices. Upon termination, AquaWorks DBO shall be paid for all outstanding services performed through the date of termination.

Dispute Resolution. The parties agree that any claim or dispute arising out of their respective obligations under this Agreement shall be subject to voluntary mediation as a pre-condition to the initiation of legal proceedings. Mediation shall be conducted pursuant to the construction industry rules of the American Arbitration Association within 30 days of a demand thereof.

Exclusions. The following services, including those which are not considered normal or customary Basic Services are not included in the Scope of Services. Additional or Supplemental Services beyond the above Scope of Work shall be performed only upon mutual agreement in writing between AquaWorks DBO and Client.

a. Services resulting from significant changes in the extent of the Project or its design including, but not limited to, changes in size, complexity, Client's schedule, or character or construction or methods of financing; and revising previously accepted studies, reports, design documents or Contract Documents when revisions are due to causes beyond AquaWorks DBO control.
b. Water rights investigations, consulting, or certification.
c. Furnishing the services of land surveying, geotechnical, geological, or hydrogeological consultants.
d. Land use or regional (council of governments) planning documents including, but not limited to, 208 plans and amendments, 1041 permit, and zoning amendments.
e. Permit or application fees of any kind, including CDPHE fees or County or City permit fees.
f. Services of an Attorney and associated fees.
g. Bidding or construction engineering services.

3252 Williams Street
Denver, Colorado 80205
(303) 477-5915
www.aquaworksdbo.com

MEMORANDUM

TO:	David Torgler, Oak Creek Administrator Tom Holiday, Public Works Director	**DATE:**	June 26, 2023
FROM:	Adam Sommers, P.E., AquaWorks DBO	**CC:**	Scott Smith
SUBJECT:	Oak Creek Water and Wastewater System Review	**PN/File:**	

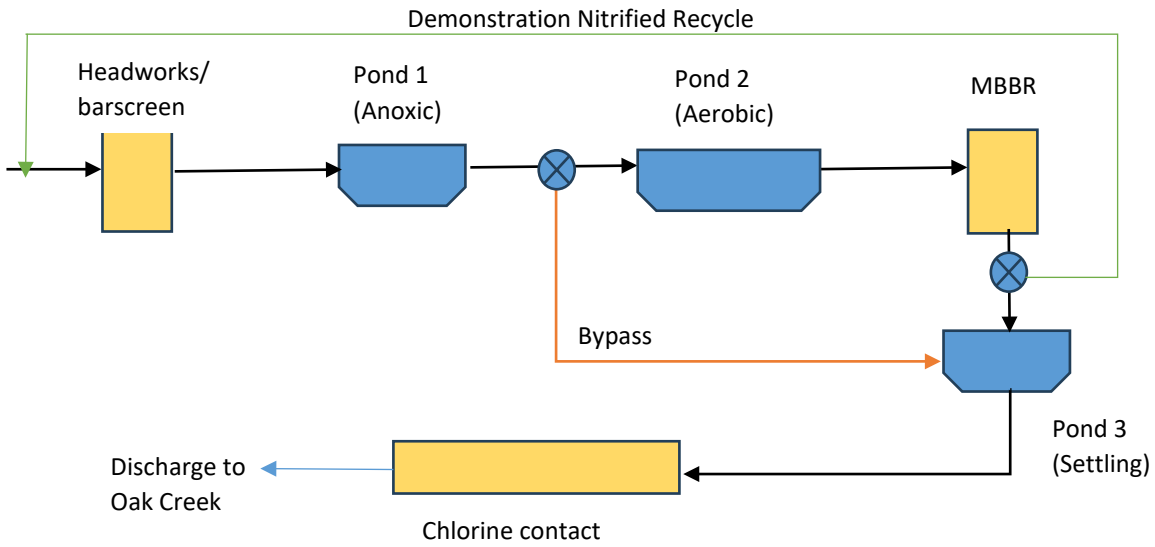
The Town of Oak Creek requested AquaWorks DBO review their water and wastewater systems. As part of the review, AquaWorks DBO reviewed CDPHE records, the wastewater treatment plant discharge permit COG589159 (effective 11/1/2021), the water treatment plant MORs, and the record of approved waterworks. In addition, a site visit was performed on May 17, 2023.

This memo summarizes the current conditions of the Town's drinking and wastewater systems and provides preliminary recommendations to address deficiencies in the systems. Detailed information about the wastewater system is presented first, followed by the drinking water system.

Wastewater Treatment System:

The following is a general flow diagram of the wastewater treatment plant:

Figure 1: General Flow Diagram



Plant Performance and Permit Review COG589159:

The Town's discharge permit includes effluent limits for a comprehensive list of parameters. Due to the length of the list, the effluent limits are broken into two tables (Table 1 and Table 2). A copy of the Town's current permit, number COG589159 is Attachment 3 in this memo. While the current discharge permit includes several report-only limits, the permit's factsheet includes an evaluation completed by CDPHE describing potential future effluent limits based on the information they had available at that time (2021). These anticipated limits for a future permit renewal are presented in Table 3 below. Table 3 is a summary of the CDPHE's October 29, 2021permit factsheet Tables 4a, 4b, 5, and 8. . The factsheet is attached for reference as Attachment 4 of this memo.

Table 1: Oak Creek WWTP Existing Effluent Limits (Discharge Permit COG589159)

Lagoon Facilities with Design Flows Less Than or Equal to 0.5 MGD								
ICIS Code	Parameter	Limitation				Sampling	
		30-Day Avg.	7-Day Avg.	Daily Max.	2-year Avg.	Frequency	Type
50050	Flow, MGD	0.25 [1]		Report		Continuous [4]	Recorder [4]
00010	Temp. Daily Max. (°C) Apr-Oct			Report		Continuous	Recorder
	Temp. Daily Max. (°C) Nov-Mar			Report		Continuous	Recorder
	Temp. MWAT (°C) Apr-Oct		Report			Continuous	Recorder
	Temp. MWAT (°C) Nov-Mar		Report			Continuous	Recorder
00310	BOD_5, mg/l	30	45			Monthly	Grab
81010	BOD_5, percent removal [2]	85% (min)				Monthly	Calculated
00530	Total Suspended Solids, mg/l						
	Aerated Lagoons	75	110			Monthly	Composite
81011	TSS, percent removal [2]	85%				Monthly	Calculated
50060	Total Residual Chlorine, mg/l **until 9/30/2026**	0.015		0.024		Weekly	Grab
50060	Total Residual Chlorine, mg/l **beginning 10/1/2026**	0.011		0.019		Weekly	Grab
00640	Total Inorganic Nitrogen as N **until 6/30/2026**			18 mg/l		Monthly	Composite
00640	Total Inorganic Nitrogen as N **beginning 7/1/2026**			15 mg/l		Monthly	Composite
00640	Total Inorganic Nitrogen as N **beginning 1/1/2031**			13 mg/l		Monthly	Composite
00610	Total Ammonia, mg/l as N						
	January	3.5		8.5		Monthly	Grab
	February	3.1		7.5		Monthly	Grab
	March	2.2		4.9		Monthly	Grab
	April	1.9		4.1		Monthly	Grab
	May	2.4		5.3		Monthly	Grab
	June	3.0		7.1		Monthly	Grab
	July	2.3		6.4		Monthly	Grab
	August	1.9		5.3		Monthly	Grab
	September	2.3		5.8		Monthly	Grab
	October	3.1		7.4		Monthly	Grab
	November	3.1		7.4		Monthly	Grab
	December	2.6		6.0		Monthly	Grab
00400	pH, s.u.			6.5-9.0		Weekly	Grab
84066	Oil and Grease, mg/l			Report		Weekly	Visual
03582	Oil and Grease, mg/l			10		Contingent	Grab
51040	*E. coli*, no/100 ml	205	410			Monthly	Grab
70295	Total Dissolved Solids, mg/l [3]	Report [3]		Report [3]		Quarterly	Grab
00978	As, TR (µg/l) **until 12/31/2027**	Report				Monthly	Grab
00978	As, TR (µg/l) **beginning 1/1/2028**	0.02				Monthly	Grab
01309	As, Dis (µg/l)			Report		Monthly	Grab
01113	Cd, TR (µg/l)			Report		Monthly	Grab

Table 2: Continuation of Oak Creek Effluent Limits (Discharge Permit COG589159)

01313	Cd, Dis (µg/l)	Report		Report		Monthly	Grab
04262	Cr+3, TR (µg/l)			Report		Monthly	Grab
01314	Cr+3, Dis (µg/l)	Report				Monthly	Grab
01220	Cr+6, Dis (µg/l)	Report		Report		Monthly	Grab
01306	Cu, Dis (µg/l)	Report		Report		Monthly	Grab
00718	CN, Free (µg/l)			Report		Report	Grab
00980	Fe, TR (µg/l) **until 9/30/2026**	1136				Monthly	Grab
00980	Fe, TR (µg/l) **beginning 10/1/2026**	590				Monthly	Grab
01046	Fe, Dis (µg/l)	342				Quarterly	Grab
01114	Pb, TR (µg/l)			Report		Monthly	Grab
01318	Pb, Dis (µg/l)	Report		Report		Monthly	Grab
01319	Mn, Dis (µg/l) AQ	Report		Report		Quarterly	Grab
01056	Mn, Dis (µg/l), WS **until 9/30/2026**	217				Monthly	Grab
01056	Mn, Dis (µg/l), WS **beginning 10/1/2026**	125				Monthly	Grab
01129	Mo, TR (µg/l)	Report				Monthly	Grab
50286	Hg, Tot (µg/l) low level	Report				Quarterly	Grab
01074	Ni, TR (µg/l)	Report				Monthly	Grab
01322	Ni, Dis (µg/l)	Report		Report		Monthly	Grab
01323	Se, Dis (µg/l)	Report		Report		Monthly	Grab
01304	Ag, Dis (µg/l)	Report		Report		Monthly	Grab
22708	U, TR (µg/l)	Report				Monthly	Grab
01303	Zn, Dis (µg/l)	Report		Report	Report	Quarterly	Grab
00940	Chloride (mg/l)	Report				Monthly	Grab
51202	Sulfide as H_2S (mg/l)	0.0025				Monthly	Grab
81020	Sulfate (mg/l)	288				Monthly	Grab
11503	Radium 226 & 228, total (pCi/l)	Report				Quarterly	Grab
	WET, chronic [6]						
TKP6C	Static Renewal 7 Day Chronic *Pimephales promelas*			NOEC or IC25 $\geq$ IWC [5]		Quarterly	3 Grabs/ Test
TKP3B	Static Renewal 7 Day Chronic *Ceriodaphnia dubia*			NOEC or IC25 $\geq$ IWC [5]		Quarterly	3 Grabs/ Test
00918	Calcium (mg/l)	Report		Report		Monthly	Composite
00921	Magnesium (mg/l)	Report		Report		Monthly	Composite
00923	Sodium (mg/l)	Report		Report		Monthly	Composite
00440	Bicarbonate as HCO_3 (mg/l)	Report		Report		Monthly	Composite
00931	SAR calculated limit *	Report		Report		Monthly	Calculated
00931	Adjusted SAR effluent **	Report		Report		Monthly	Calculated
51613	SAR pass/fail ***	Report		Report		Monthly	Calculated
00094	EC (dS/m)	Report				Monthly	Composite

Table 3: CDPHE Estimated Anticipated Limits (Source: CDPHE Permit Factsheet 10/29/2021)

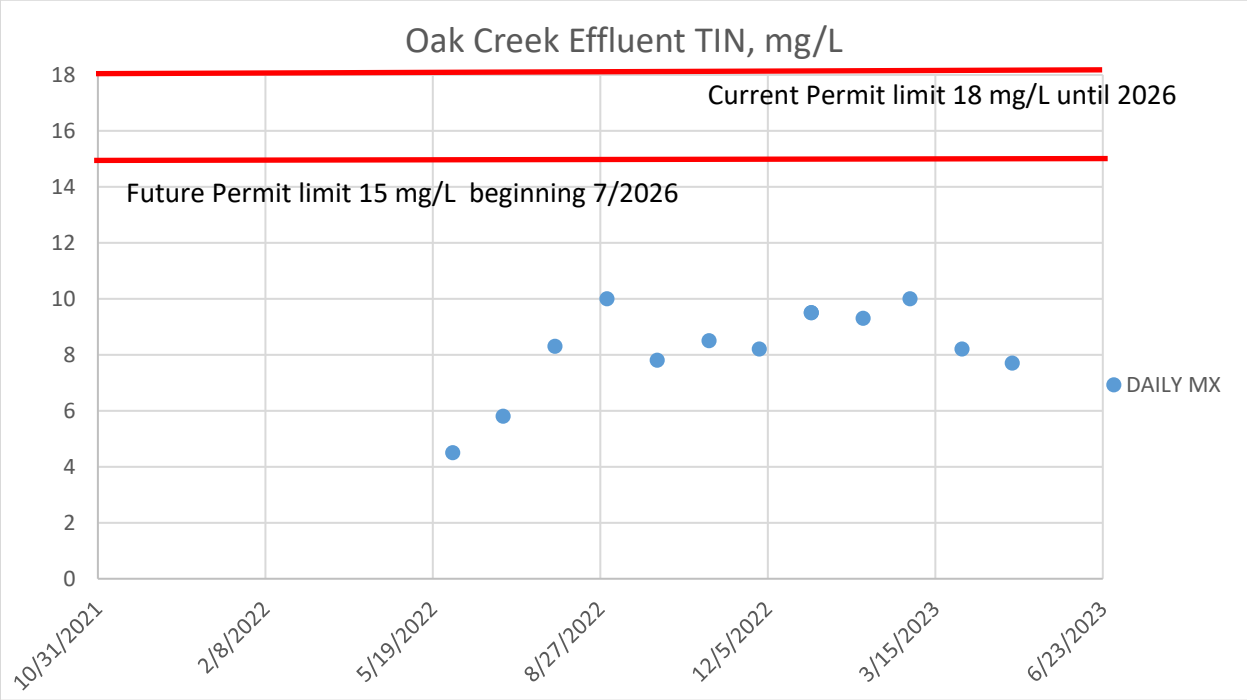
Parameter	NIL	WQBEL	ADBAC	Chosen Limit
Temperature (°C) April- Oct* 7-day avg		18.3		
Temperature (°C) Nov-Mar* 7-day avg		9.0		
Temperature (°C) April- Oct* daily max		24.3		
Temperature (°C) Nov-Mar* daily max		13.0		
Electrical Conductivity (EC) dS/m		1.4		
TRC (mg/l)	0.015	0.011	NA	WQBEL
Total Inorganic Nitrogen as N (mg/l)	14	13	NA	WQBEL
NH3 as N, Tot (mg/l) Jan	28	3.5	NA	WQBEL
NH3 as N, Tot (mg/l) Feb	28	3.1	NA	WQBEL
NH3 as N, Tot (mg/l) Mar	28	2.2	NA	WQBEL
NH3 as N, Tot (mg/l) Apr	28	1.9	NA	WQBEL
NH3 as N, Tot (mg/l) May	28	2.4	NA	WQBEL
NH3 as N, Tot (mg/l) Jun	28	3.0	NA	WQBEL
NH3 as N, Tot (mg/l) Jul	9.1	2.3	NA	WQBEL
NH3 as N, Tot (mg/l) Aug	9.1	1.9	NA	WQBEL
NH3 as N, Tot (mg/l) Sep	11	2.3	NA	WQBEL
NH3 as N, Tot (mg/l) Oct	11	3.1	NA	WQBEL
NH3 as N, Tot (mg/l) Nov	28	3.1	NA	WQBEL
NH3 as N, Tot (mg/l) Dec	28	2.6	NA	WQBEL
E.coli (#/100 ml)	1920	205	NA	WQBEL
Total Dissolved Solids		Report only		
As, TR (µg/l)	NA	0.025	NA	WQBEL
As, Dis (µg/l)	NA	427	NA	WQBEL
Cd, TR (µg/l)	NA	6.3	NA	WQBEL
Cd, Dis (µg/l)	NA	1.0	NA	WQBEL
Cr+3, TR (µg/l)	NA	63	NA	WQBEL
Cr+3, Dis (µg/l)	NA	191	NA	WQBEL
Cr+6, Dis (µg/l)	NA	14	NA	WQBEL
Cu, Dis (µg/l)	NA	24	NA	WQBEL
CN, Free (µg/l)	NA	6.3	NA	WQBEL
Fe, Dis (µg/l)	NA	342	NA	WQBEL
Fe, TR (µg/l)	590	1136	NA	NIL
Pb, TR (µg/l)	NA	63	NA	WQBEL
Pb, Dis (µg/l)	NA	8.2	NA	WQBEL
Mn, Dis (µg/l) WS	NA	125	NA	WQBEL
Mn, Dis (µg/l) AQ	179	2765	NA	NIL
Mo, TR (µg/l)	NA	188	NA	WQBEL

Hg, Tot (µg/l)	NA	0.013	NA	WQBEL
Ni, TR (µg/l)	NA	126	NA	WQBEL
Ni, Dis (µg/l)	NA	137	NA	WQBEL
Se, Dis (µg/l)	NA	5.8	NA	WQBEL
Ag, Dis (µg/l)	NA	0.43	NA	WQBEL
U, TR (µg/l)	NA	30	NA	WQBEL
U, Dis (µg/l)	NA	4970	NA	WQBEL
Zn, Dis (µg/l)	20	339	77	ADBAC
Chloride (mg/l)	NA	314	NA	WQBEL
Sulfide as H2S (mg/l)	NA	0.0025	NA	WQBEL
Sulfate (mg/l)	NA	288	NA	WQBEL
Radium 226 & 228 (pC/l)	NA	6.3	NA	WQBEL

AquaWorks DBO used the facility's discharge monitoring report data from EPA ECHO to review the existing plant's performance relative to the discharge permit's current limits, the known upcoming 2026 effluent limits included in the discharge permit, and the CDPHE projected limits for a future permit renewal. Although the current permit became effective in November of 2021, the data pulled from EPA ECHO only included data between May 2022 and April 2023. Based on the data available, the plant effluent appears to be largely in compliance with many of the parameters included in the permit and the anticipated limits contained in the permit factsheet. To determine the wastewater treatment plant's compliance with the existing, upcoming, and projected limits, AquaWorks DBO graphed the effluent water quality for each parameter. The following section highlights a handful of parameters that are of particular interest or will have compliance challenges based on existing effluent data. While the body of this memo only includes discussion on the selected parameters, Attachment 2 includes graphs for all parameters.

Discharger Specific Variance - Total Inorganic Nitrogen

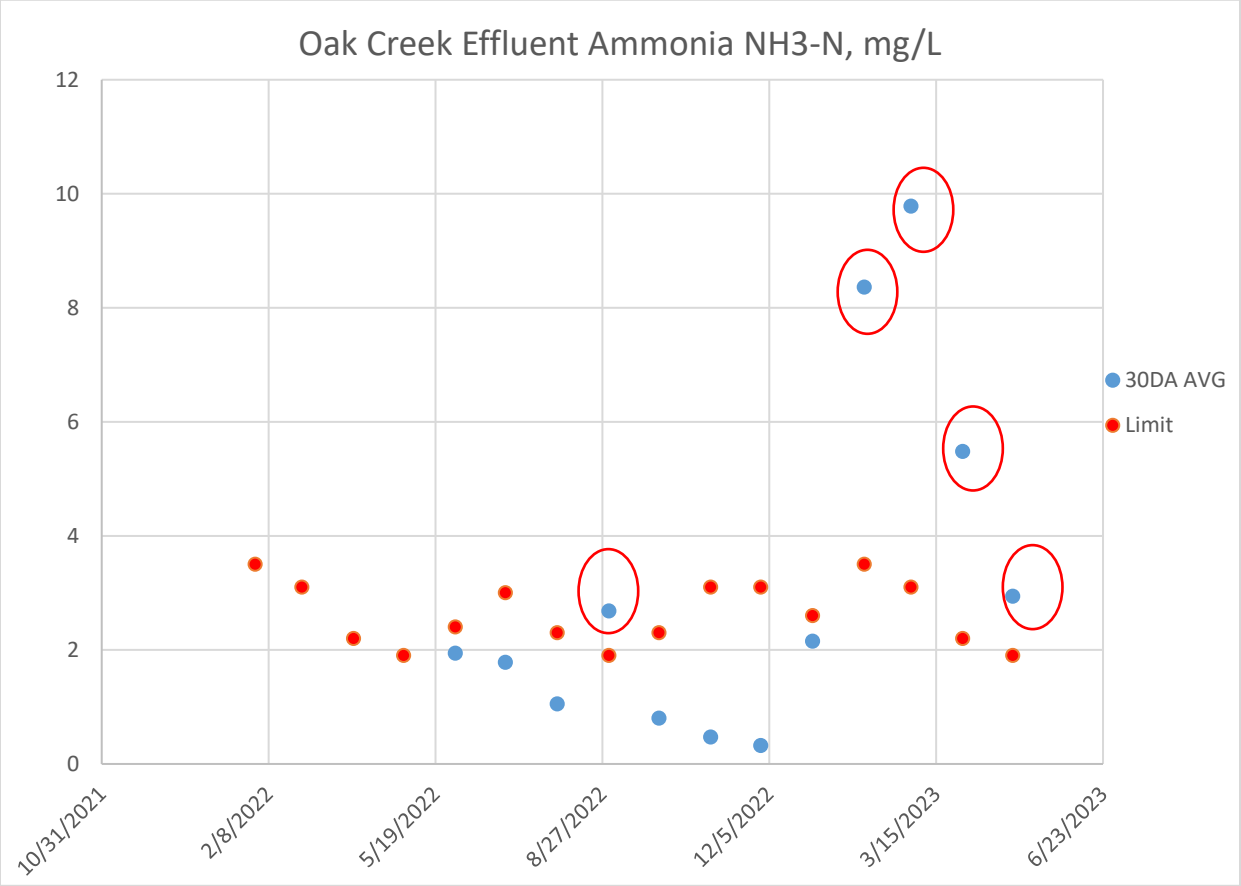
Based on the total inorganic nitrogen (TIN) effluent monitoring, the plant complies with both current and future (effective July 2026) TIN alternative effluent limits that are required by the facility's discharger specific variance (DSV) adopted on December 14, 2020. The effluent limits are implemented as a daily max for both the current limit of 18 mg/L and the future limit of 15 mg/L that becomes effective in 2026. In addition to the limits described in the graph below, a longer-term future limit of 13 mg/L is scheduled to become effective in 2031. So far, effluent data indicates the plant can meet all limits, including the 2031 limit.



Total Ammonia:

The total ammonia limit included in the Town's discharge permit varies based on the month of the year and is graphed in red dots in the figure below. Based on the last year of effluent data, the plant had one exceedance of the 30-day average ammonia limit in August 2022 and has exceeded every month of 2023 to date.

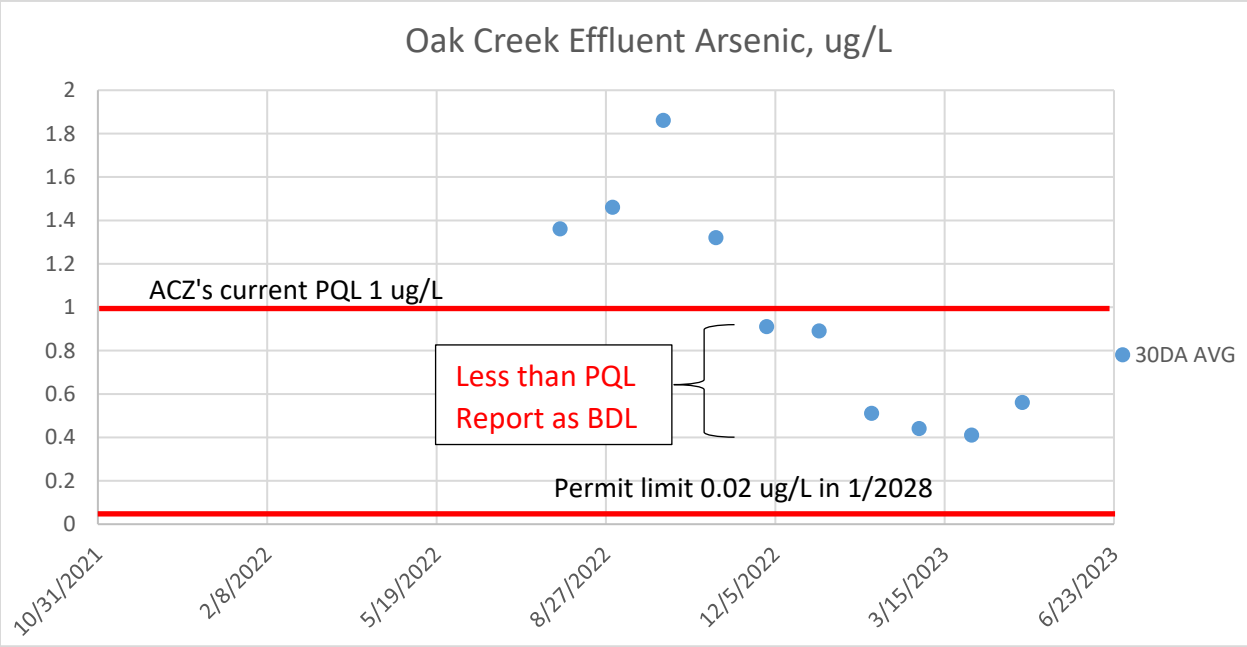
Ammonia is typically harder to treat in the winter when cold temperatures slow the nitrification process. A summertime exceedance indicates the nitrification process may have experienced inadequate air, inadequate alkalinity, or loading exceeding the MBBR capacity. The recent exceedances in 2023 could be related to cold temperature inhibiting nitrification, flow or ammonia loading exceeding the MBBR loading capacity, inadequate air or alkalinity, or a combination of factors. Based on the lab data, the effluent alkalinity was typically above 200 mg/L as $CaC0_3$, indicating adequate alkalinity was present for additional nitrification to occur. Based on AquaWorks DBO's conversations with the operator and CDPHE, the issue in early 2023 may be high hydraulic loading through the MBBR, possibly exceeding the unit's treatment capacity. The internal recycle flow rate had increased significantly. While the recycle flow rate was reduced after ammonia exceedances were identified in January and February, the MBBR recovery may have been extended due to cold temperatures and the slow growth of nitrifying bacteria. The ammonia concentration has shown a decreasing trend since February, and the analytical results for May 2023 show the ammonia was further reduced to 1.48 mg/L and back in compliance with the discharge permit limit.


Oak Creek Effluent Ammonia NH3-N, mg/L
12
10
8
6
4
2
0
10/31/2021
2/8/2022
5/19/2022
8/27/2022
12/5/2022
3/15/2023
6/23/2023
30DA AVG
Limit

Total Recoverable Arsenic:

The current permit includes a report-only limit for total recoverable arsenic (As). However, a numeric limit of 0.02 ug/L becomes effective in January 2028. This limit is based on the water quality standard, but domestic wastewater treatment plants are not generally able to meet this limit. In addition, the permitted effluent limit of 0.02 ug/L is lower than ACZ laboratory's practical quantitation limit (PQL) for the method used to quantify arsenic. As identified on ACZ's analytical reports, the lab's arsenic PQL is 1 ug/L. In accordance with the CPDHE Discharge Monitoring Report Guidance document dated December 2021, when the laboratory PQL and State PQL (also 1 ug/L) are greater than the permitted limit, the Town should report below the detection limit (BDL) on the DMR. Based on ACZ's current PQL and the last year of effluent data, the plant is not expected to comply with the upcoming permit limit, Still, it can report BDL for all samples less than 1 ug/L, therefore remaining compliant with the arsenic requirement.

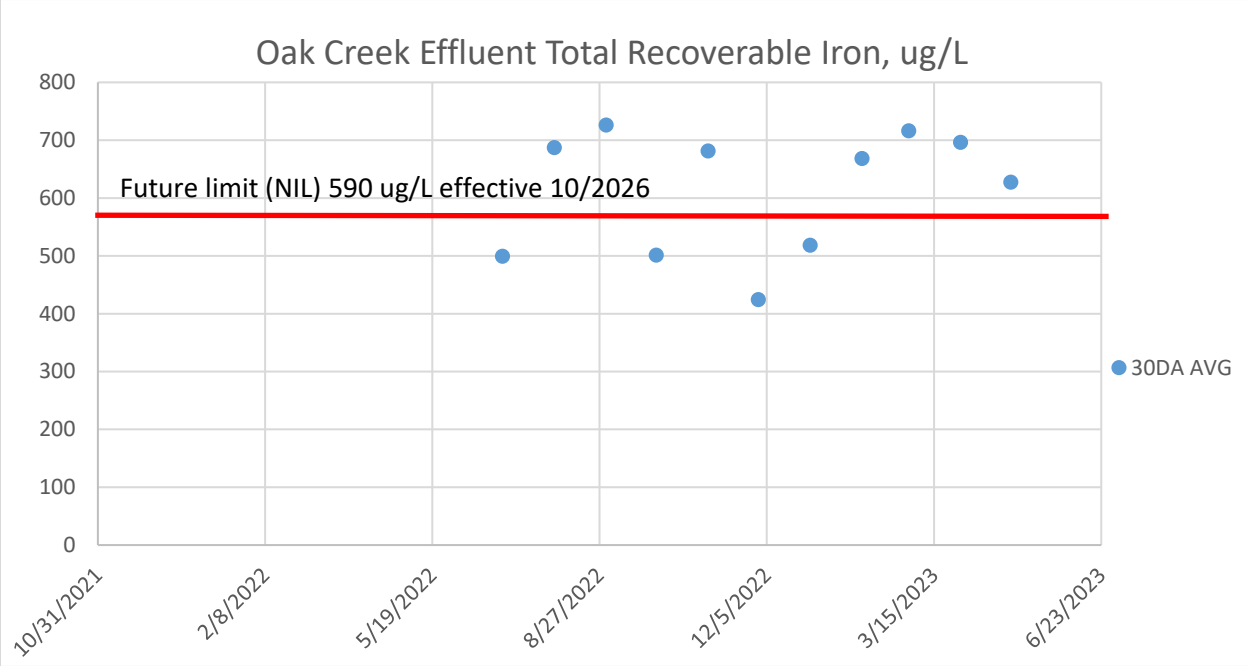
AquaWorks DBO understands that the WQCD is working on extending the existing temporary modification implemented through 2027. The arsenic limit is so low that most of Colorado's surface water dischargers would be out of compliance. **If the WQCD and the Water Quality Control Commission (WQCC) extend the temporary modification, Oak Creek should submit a permit modification to implement the temporary modification by January 2028 before the limit becomes effective**. AquaWorks DBO also anticipates that a project to reduce I&I into the collection system will concurrently reduce arsenic that may be entering from local groundwater.



Total Recoverable Iron (Fe):

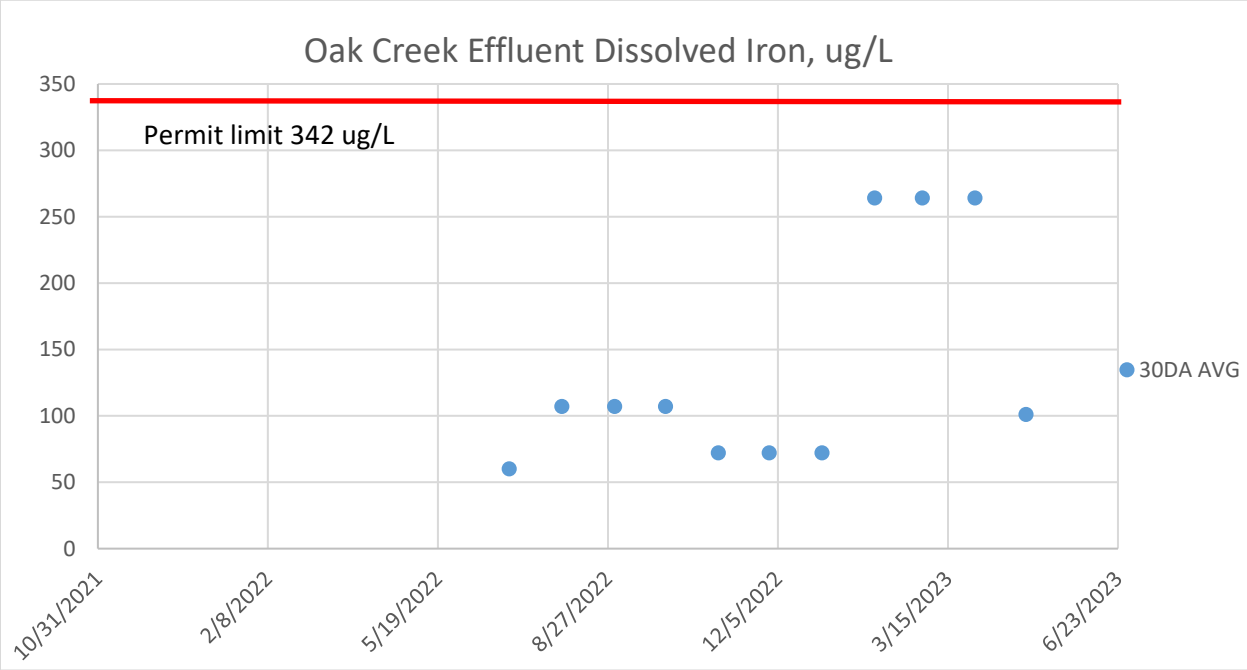
The current permit includes a 1,136 ug/L limit for total recoverable iron (Fe, TR) and a future limit of 590 ug/L will becomes effective in October 2026. As shown in the figure below, when the lower limit is implemented, the effluent from the existing plant may exceed the limit. Therefore, action is required to maintain compliance with the future limit. Per Table 3 in this memo, the limit on total recoverable iron is based on an antidegradation review, and the selected limit is a non-impact limit (NIL). Some options for compliance with this limit include:

1. Determine the source of iron and consider efficiency of reducing iron at the source before entering the wastewater collection system
2. Perform an antidegradation alternatives analysis
3. Improve treatment to meet total recoverable iron limits



Dissolved Iron:

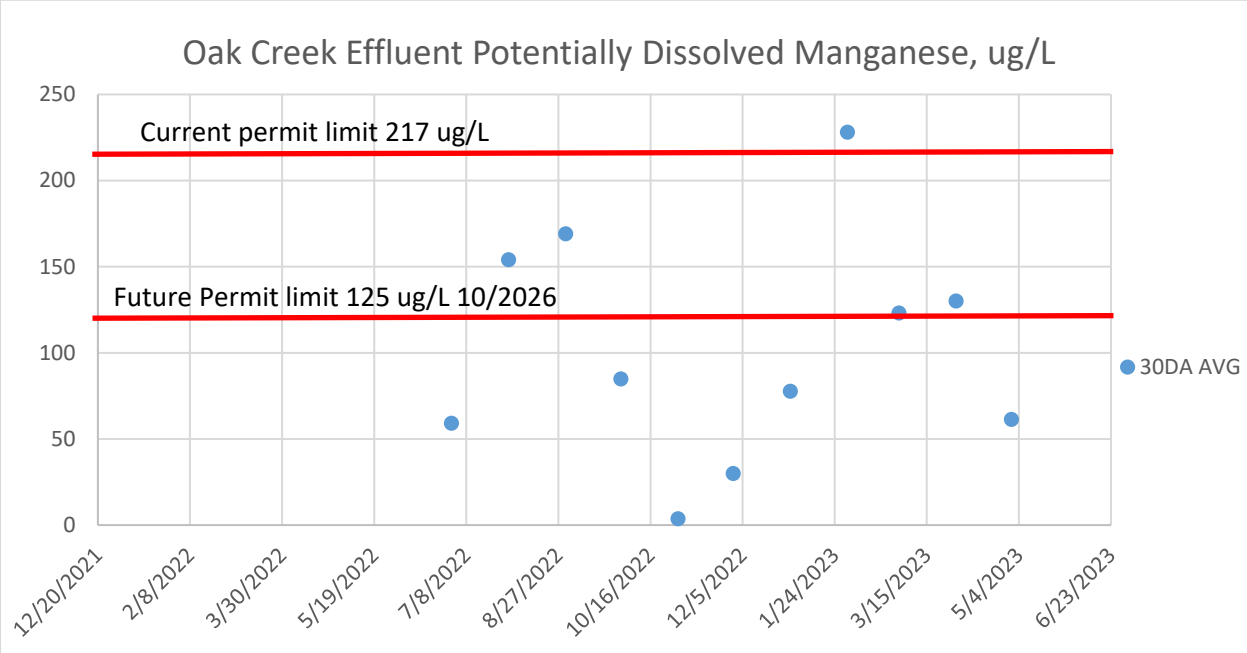
In addition to the total recoverable iron limit, the discharge permit includes a limit for dissolved iron. According to Figure 3 above, the dissolved iron (Fe, Dis) limit of 342 ug/L is developed as a water quality-based effluent limit (WQBEL). Therefore, the limit is required to meet the underlying water quality standard on Oak Creek. Effluent data from the treatment facility for the last year for dissolved iron are shown in the graph below. As shown, the highest dissolved iron concentration was 264 ug/L, which is 77% of the permit limit. While the effluent is under the limit, dissolved iron is also a component of the total recoverable iron but is harder to treat. However, since the dissolved iron is relatively high compared to the permitted limit, dissolved iron should be further evaluated to discern long-term compliance as additional data are collected.



Potentially Dissolved Manganese (Mn):

The current discharge permit includes an existing permit limit of 217 ug/L and an upcoming permit limit of 125 ug/L effective in October 2026. According to Table 3, the WQCD developed these limits as water quality-based effluent limits. The treatment facility's effluent monitoring data from the past year are shown in the graph below. As shown, the plant has experienced one effluent violation above 217 ug/L. The effluent data also indicates that violations will become more common once the permit limit decreases to 125 ug/L in 2026. Therefore, action is required to comply with the total recoverable manganese limit. Since this is a WQBEL, some options include:

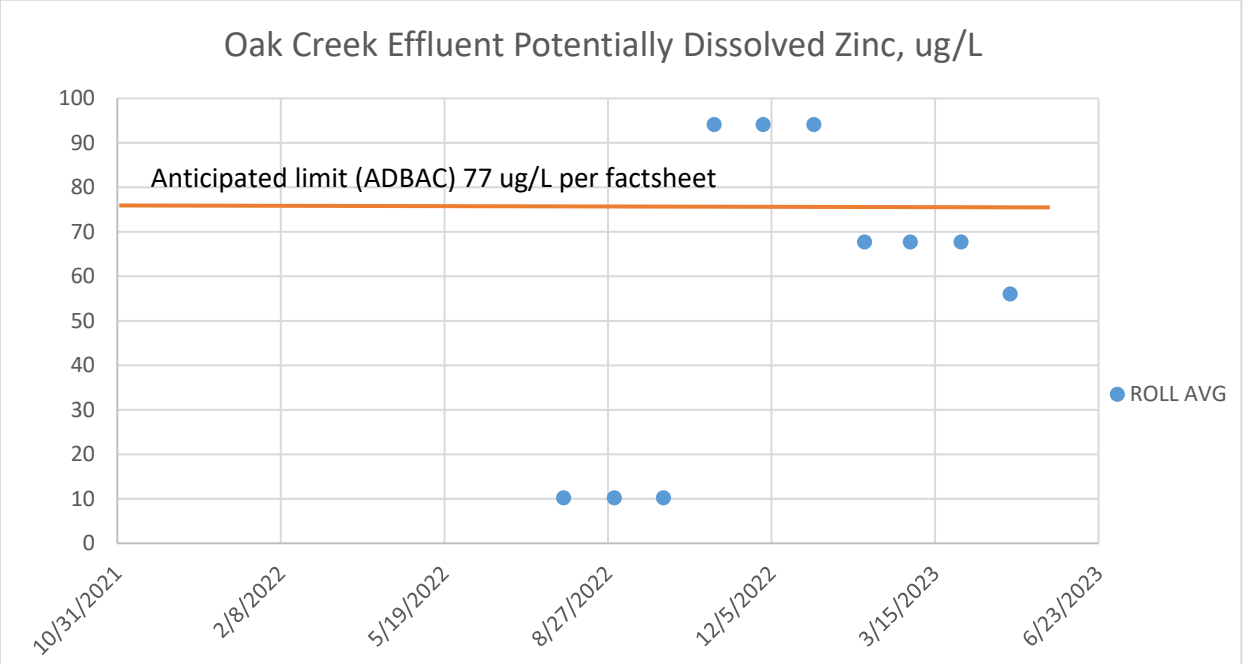
1. Determine the source of manganese. Consider the efficiency of reducing manganese at the source before entering the wastewater collection system
2. Commence DSV process
3. Consider wastewater treatment improvements to treat manganese



Potentially Dissolved Zinc (Zn):

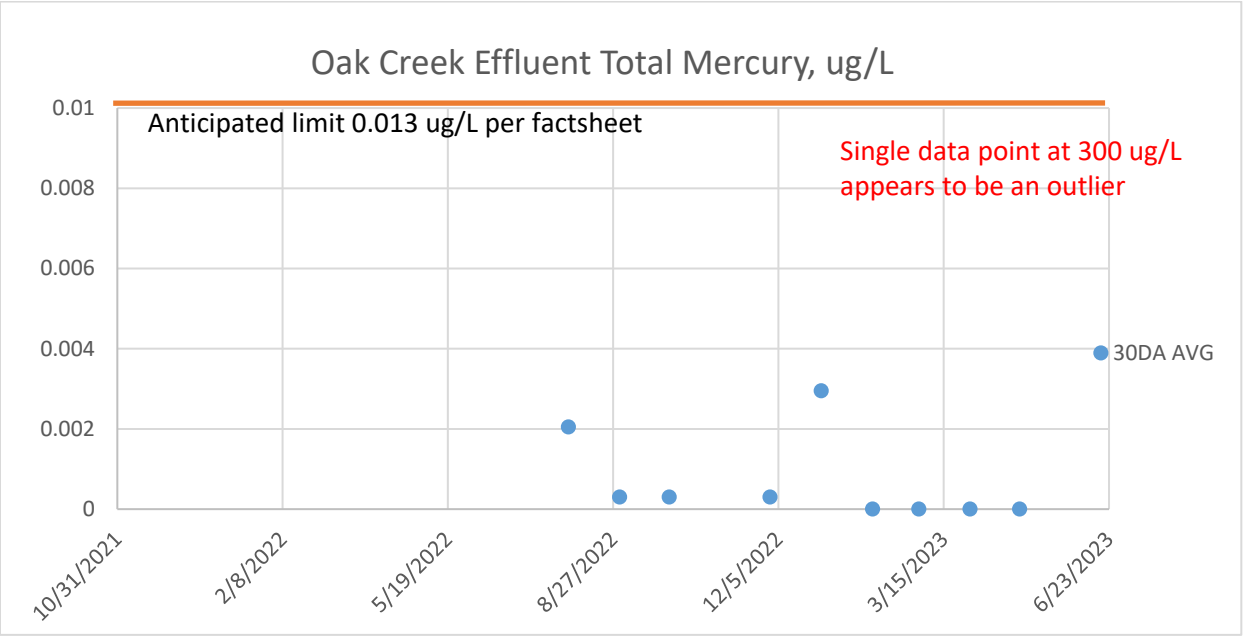
The current discharge permit includes report-only limits for potentially dissolved zinc. Based on the permit factsheet, there will be both a WQBEL limit and an antidegradation limit that may be calculated based on the antidegradation-based concentration (ADBAC), which CDPHE calculated to be less stringent than the NIL. The anticipated WQBEL of 339 ug/L is expected to be applied as a 30-day average limit, and the ADBAC of 77 ug/L is expected to be applied as a 2-year rolling average. The dissolved zinc concentrations from the past year are shown in the graph below. Based on the facility's monitoring data, the effluent concentration exceeds the anticipated ADBAC limit. The data indicates that the plant will meet the WQBEL limit. Therefore, some of the compliance options for the ADBAC limit include the following:

1. Determine the source of zinc (source water, pipe materials, etc.). Consider the efficiency of reducing zinc at the source before entering the wastewater collection system
2. Perform an antidegradation alternatives analysis
3. Improve wastewater treatment for zinc reduction



Mercury (Hg):

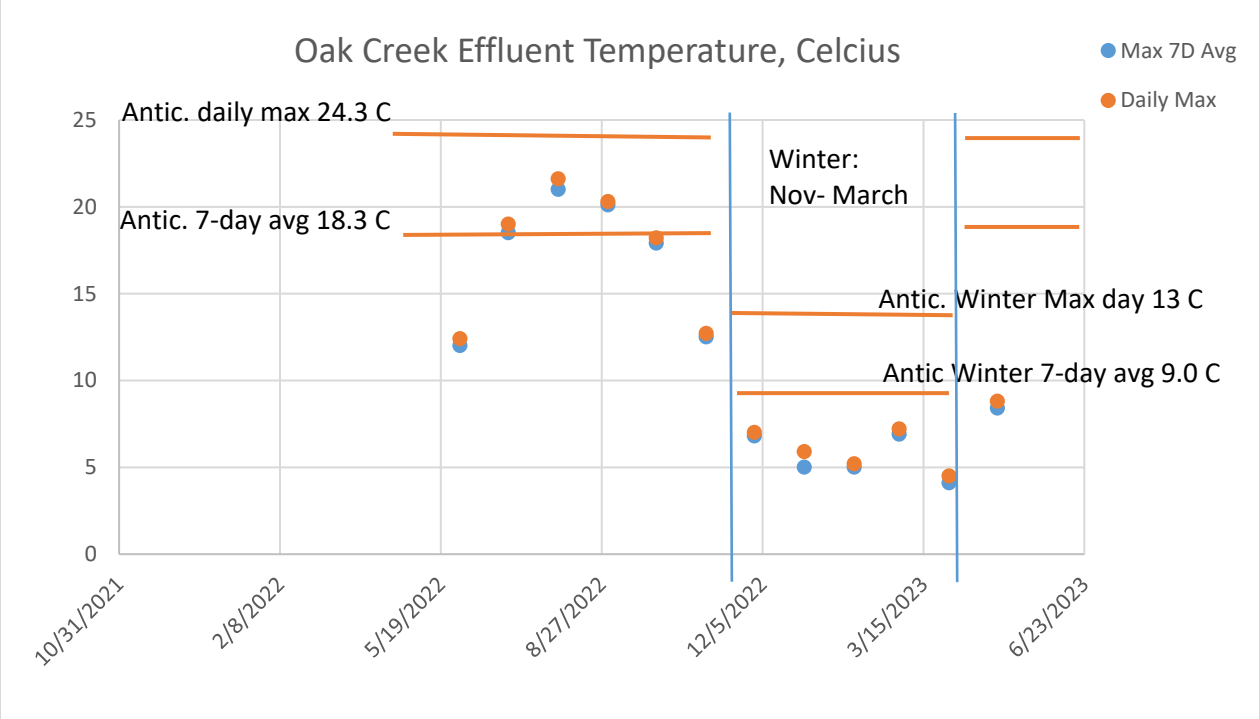
The current permit includes a report-only limit for mercury (Hg). Based on the permit factsheet, CDPHE calculated an estimated anticipated future limit of 0.013 ug/L that will likely be applied as a 30-day average limit. The effluent data is shown in the graph below and indicates the treatment will be capable of meeting this limit. in the data point on October 2022 of 300 ug/L appears to be an outlier. However, since it appears in the data set, this is included in the memo to monitor mercury confirming that the single data point is indeed an outlier.



Temperature:

The current permit includes report only limits for temperature. In the permit factsheet, CDPHE calculated the anticipated effluent temperature limits based on the information available in 2021 when the permit was developed. Based on the factsheet, the anticipated summer (April- Oct) max day limit will be 24.3 ºC, and the anticipated summer 7-day average limit will be 18.3ºC. The anticipated winter (November - March) max day limit will be 13.0ºC, and the anticipated winter 7-day average limit will be 9.0ºC. Effluent data from the treatment facility is provided in the graph below. As shown, the treatment plant effluent is currently meeting the anticipated winter temperature limits for both max day and 7-day average. However, the effluent temperature is exceeding the anticipated summer 7-day average temperature limit. Based on the last year of data, the plant exceeded the anticipated 7-day average limit in June, July, and August. The September effluent temperature was 17.9ºC and was just 0.4ºC below the limit. Therefore, the Town's planning process should include future temperature limits. The anticipated temperature limits are based on WQBELs; therefore, possible compliance options include the following:

1. Commence the DSV process
2. Improve treatment to include temperature treatment



Monitoring Reduction Evaluation:

CDPHE determines permit monitoring frequency based on *Policy 20 Baseline Monitoring Frequency, Sample Type, and Reduced Monitoring Frequency Policy for Industrial and Domestic Wastewater Treatment Facilities.* After the facility has a two-year set of monthly monitoring data, the data can be

evaluated for reduced monitoring frequency. According to Policy 20, the Division will review the facility's eligibility for reduced permit monitoring frequencies based upon the following requirements summarized below:

1. Facility Enforcement History – Any criminal or active civil judicial actions will render the facility ineligible for reduced monitoring. Similarly, a compliance order on consent will render the parameter included in the consent order ineligible for reduced monitoring.
2. Permit Compliance
    a. A facility must not have had any effluent violations for the parameter being considered for reduced monitoring for the last 2 years.
    b. A facility must be in compliance with all other permit requirements, including monitoring requirements, DMR submittals, compliance schedules, PQL requirements.
3. Facility Information
    a. Any facility which has undergone a major upgrade that changes the operational functions of the facility will be considered new and ineligible for reductions pending data collection demonstrating reliable treatment.
    b. Performance levels shall be maintained at the level used as the basis for granting monitoring reductions.
4. Exceptions - The Division may elect to maintain baseline monitoring levels or to increase monitoring above the baseline levels in individual situations. This decision may be made for a particular parameter or all parameters. Reduced monitoring may not be granted, on a case-by-case basis, in instances such as discharge to a waterbody containing Threatened or Endangered species or a waterbody designated as critical, etc.

If a permit or parameter meets all four requirements listed above, it may be considered for reduced monitoring. Typically, any reduction in monitoring will be based on the past performance. CDPHE will use the most recent two years of monthly average effluent data representative of current operating conditions to calculate long-term characterization (LTC) discharge concentration to determine if the parameter qualifies for reduced monitoring.

While Oak Creek needs to address items (primarily compliance schedule items past due) based on Oak Creek WWTP effluent monitoring data, several parameters should be further evaluated for potential reduction to their monitoring frequency once two years of data are obtained. As shown in Tables 1 and 2, the Town's current discharge permit requires monthly effluent sampling for most parameters and quarterly sampling for a handful of parameters, including the list below. Since the data is quarterly, these parameters may not qualify for reduced monitoring. However, based on effluent monitoring data available to date, the most likely quarterly monitoring parameters that could qualify for reduced monitoring are mercury and radium 226 & 228.

- Total dissolved solids (TDS)
- Dissolved Iron (Fe)
- Dissolved Manganese (Mn)
- **Total Mercury, (Hg)***
- Dissolved Zinc (Zn)

- **Total Radium 226 & 228***
- Wet testing (chronic)

Based on existing data to date, permitted parameters monitored monthly that may qualify for reduced monitoring is as follows:

- Total Recoverable Cadmium, ug/L
- Potentially Dissolved Cadmium, ug/L
- Trivalent Potentially Dissolved Chromium, ug/L
- Trivalent Total Recoverable Chromium, ug/L
- Total Recoverable Lead, ug/L
- Potentially Dissolved Lead, ug/L
- Total Recoverable Molybdenum, ug/L
- Total Recoverable Nickel, ug/L
- Potentially Dissolved Nickel, ug/L
- Potentially Dissolved Selenium, ug/L
- Potentially Dissolved Silver, ug/L
- Total Uranium, ug/L

Note that two years of data are reviewed, and per Item 2 "Permit Compliance," the compliance schedule deliverables must be submitted to CDPHE before the CDPHE will consider a reduction in monitoring frequency.

Wastewater System Regulatory Compliance Status:

Regulation 22 Site Application:

AquaWorks DBO completed a review of the wastewater system's overall compliance with the state's regulatory requirements. Based on the records in CDPHE's online records center, the facility appears to require site application approval. The current facility had approval to install a demonstration project that included the internal recycle to achieve total inorganic nitrogen reduction. A copy of the facility's approval (ES.21.SA.06233) dated August 10, 2021, is provided in Attachment 1 of this memo. The site approval expired in May 2022; therefore, a demonstration report and a second site application to CDPHE are required to maintain compliance with Regulation 22.

Discharge permit compliance schedule:

The Town is overdue on several compliance schedule items, including:

- Collection system I&I evaluation
    - Recommended actions: Begin water balance and collection system video studies.
- Activities to meet future TIN limit of 15 mg/L
    - Recommended actions: AquaWorks DBO provided the required permit paperwork to CDPHE on 6/14/2023.
- Activities to meet Iron, Manganese, and Total Residual Chlorine (TRC) limits

- Recommended actions for iron and manganese: Begin water balance on the drinking water system and begin sampling raw and finished water for iron and manganese.
- Recommended actions for TRC: Continue TRC sampling in wastewater effluent. Effluent data over the last year indicated that TRC has been below detection in all samples; therefore, data were not graphed.

Water Treatment System:

Based on a review of CDPHE records, the water system substantially complies with the Colorado Primary Drinking Water Regulations Regulation 11 (CPDWR). Issues identified by the Town include:

1. Water production limited by filters in winter
2. Lead and Copper Rule requirement
3. A handful of unmetered water taps

During the site visit, AquaWorks DBO and the Town discussed water production relative to the Town's population. The production appears to be much higher than anticipated for a population of approximately 900 people. For example, the daily water production reported at the treatment plant was approximately 300,000 GPD. This flow rate equates to an average of 330 GPD per person when outdoor irrigation is expected to be low (April/May), especially since this spring has been very wet. The calculated average of 330 GPD per person is almost three times the expected range of 75-100 gallons per day per person (excluding outdoor use). These numbers suggest the distribution system may have significant water loss, which should be investigated further. According to Town staff, the Town's distribution system is significantly metered, with only a handful of unmetered taps. AquaWorks DBO recommends the following:

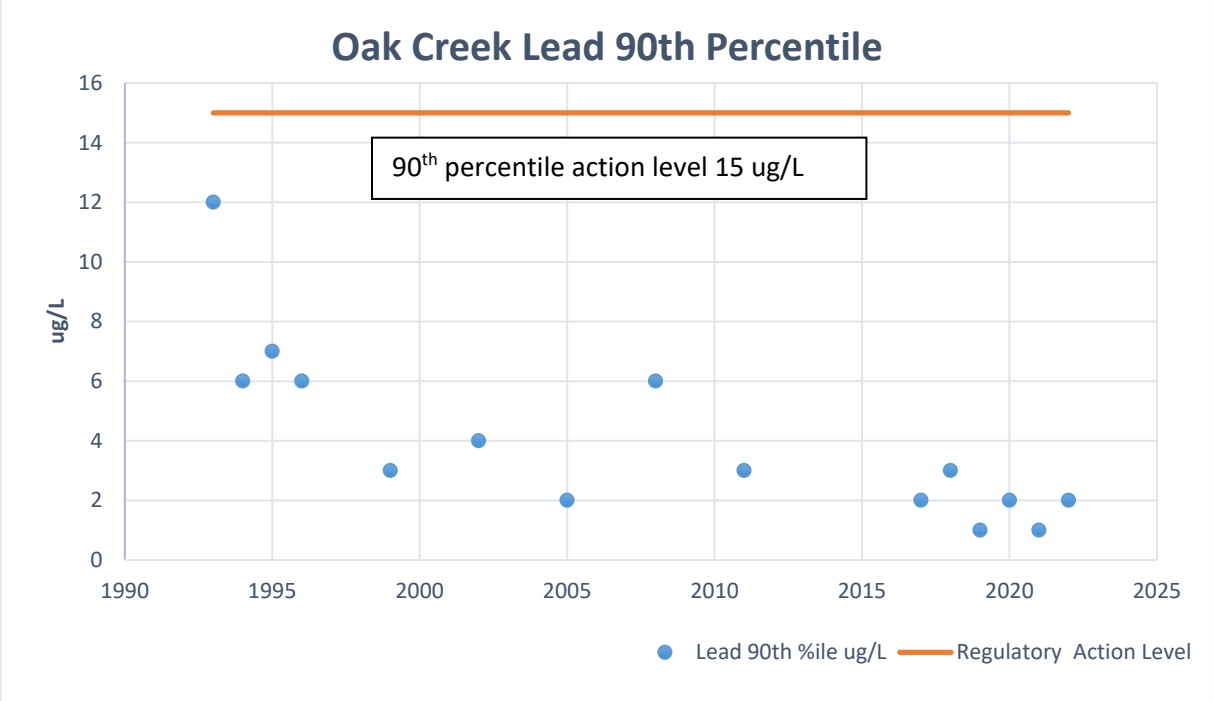
1. comparing both water billing and treatment plant water production data for potential discrepancies and evaluating water loss within the distribution system.
2. calibrating the flow meter.
3. installing meters on those taps that are currently unmetered.

Based on the Town's Record of Approved Waterworks document produced by CDPHE, the Town has two 0.5 MGD filter skids installed in the treatment plant. The plant should be capable of producing nearly 1 million gallons of water per day if both skids were operating at 100% capacity. CDPHE records show replacement membranes were approved in 2016 and are approximately seven years old. Due to the age, the membranes may need to be replaced again soon. Since the filters cannot keep up with demand, the membrane condition needs to be reviewed. AquaWorks has requested as-built drawings from the Town and has begun conversations with the membrane manufacturer, Dupont, for additional information regarding the membrane skids and possible troubleshooting. If filter performance has decreased over time, the membranes may have experienced some fouling resulting in reduced membrane flux. Organics, iron, and manganese could be sources for membrane fouling and these parameters should be sampled in the raw water to determine concentrations occurring naturally in the source.

Based on a review of CDPHE records, the water system generally complies with Colorado Primary Drinking Water Regulations (Regulation 11) requirements. There has been a recent 95% turbidity violation likely due to spring runoff conditions. The treatment plant does not have pretreatment capabilities, including flocculation and sedimentation. Due to the lack of pretreatment, the plant has limited ability to reduce turbidity when the source water has high turbidity. If high turbidity runoff years persist, then pretreatment ahead of the membrane skids may need to be added in the future to avoid future violations. In addition, if iron, manganese, and/or natural organic matter (NOM) are found to be contributing to membrane fouling, pretreatment processes could help address these constituents as well.

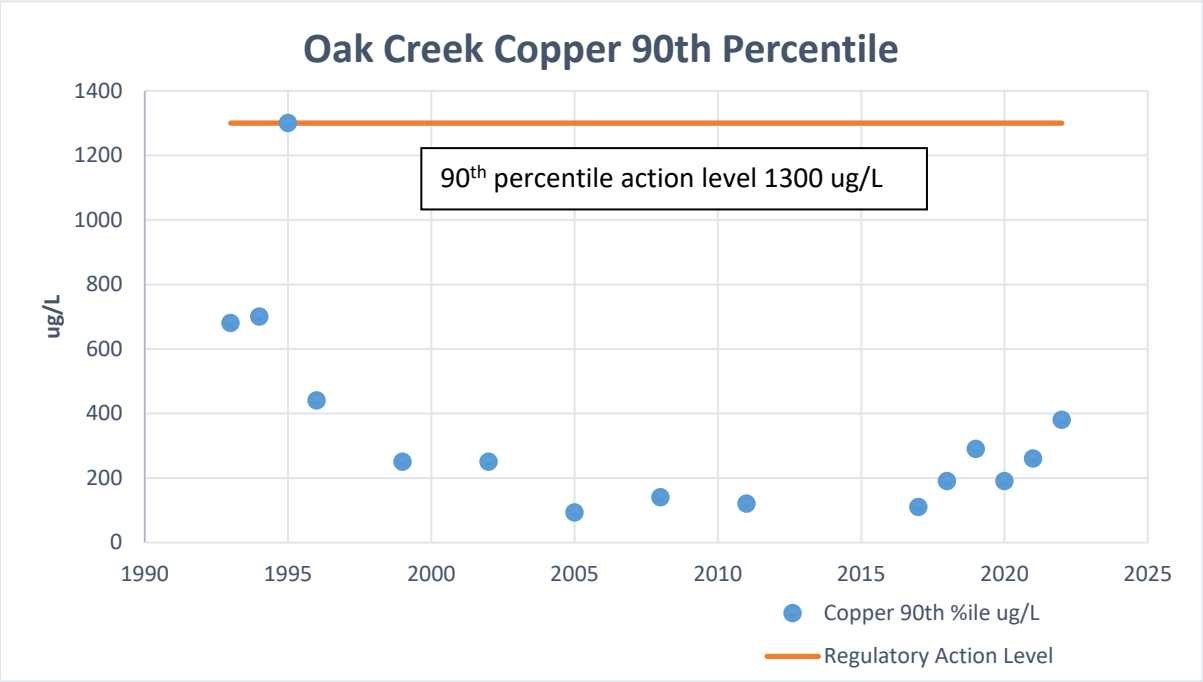
Revised Lead and Copper Rule Compliance:

The lead action level is 15 ug/L. Based on historical monitoring data from the distribution system, Oak Creek has not exceeded the lead action level since data was acquired starting in the 1990s. The revised lead and copper rule now includes a lead "trigger level" of 10 ug/L that requires water systems to incorporate additional planning, monitoring, and treatment. The figure below shows that Oak Creek's has had only one point above the trigger of 10 ug/L, and that occurred in 1993. Since then, the lead 90th percentile has been below the trigger level.



In addition to the 90th percentile lead concentration, the lead concentration at each tap needs to be below the action limit of 15 ug/L. So that people are protected from lead and copper, the revised lead and copper rule requires that separate taps also be less than the action limit. Therefore individual tap data should be reviewed to confirm taps are below the action limit. If any individual taps are near or above the action limit of 15 ug/L, the revised lead and copper rule will require additional action at those taps.

The copper action level is 1,300 ug/L. Based on historical monitoring data, Oak Creek has not exceeded the copper action level since the 1990s. In 1995, the copper 90th percentile came was at the action level of 1,300 ug/L but has not been above 800 ug/L since that single event. Based on the historical data, copper corrosion does not appear to be an issue within Oak Creek's service area.



The revised lead and copper rule requires an inventory of 100% of the system's service lines to determine the service line materials. Regardless of ownership, each service line must be identified as lead, galvanized, requiring replacement, unknown, or non-lead (including plastic or copper, etc.). Upon completing the material survey, a lead service line replacement (LSLR) plan must be submitted to the CDPHE by October 16, 2024. Per CDPHE, the LSLR must include the following:

- A strategy for determining the composition of lead status unknown service lines in its inventory;
- A procedure for conducting full lead service line replacement;
- A strategy for informing customers before a full or partial lead service line replacement;
- For systems that serve more than 10,000 persons, a lead service line replacement goal rate is recommended by the system in the event of a lead trigger level exceedance;
- A procedure for customers to flush service lines and premise plumbing of particulate lead;
- A lead service line replacement prioritization strategy based on factors including, but not limited to, the targeting of known lead service lines, lead service line replacement for disadvantaged consumers and populations most sensitive to the effects of lead; and
- A funding strategy for conducting lead service line replacements which considers ways to accommodate customers that are unable to pay to replace the portion they own.

Since the level of work is significant to evaluate all service tap materials, AquaWorks DBO recommends starting work on the inventory as soon as possible.

Summary of Recommendations:

Overall, additional information is required to complete a comprehensive evaluation and set full priorities. Based on CDPHE records, the drinking water treatment plant should be capable of producing nearly 1 MGD of drinking water, assuming both skids are operating and able to produce 0.5 MGD each. Theoretically the treatment plant should have adequate capacity to serve the Town. However, operations staff report that the treatment plant struggles to keep up with demand, primarily in winter. Factors that could be contributing to this include leaking pipes in the distribution system, declining membrane performance with water temperature, membrane fouling, age, or a combination of all factors.

Overall, the wastewater treatment plant is approved to receive and treat 0.25 MGD as the maximum month average flow and 292 PPD BOD. The treatment plant is well within the organic capacity limit.However, during the site visit in May 2023, it was receiving more than the permitted flow capacity. The collection system was experiencing significant I&I during this wet year.

Wastewater Treatment Plant Reccomendations

- Demonstration site approval for the internal recycle expired in May 2022. Provide updated site application documentation to CDPHE Engineering Section. Another or extended demonstration is recommended in the short term, but a longer-term solution is needed.
- Complete permit compliance schedule past due deliverables for I&I
- Completeactivities to address iron, manganese, and TRC.
- After two years of data, further evaluate treatment plant performance and DMR data to determine potential reductions in parameter monitoring.
- Address the January through April 2023 ammonia violations by evaluating the following uases and solutions:
    - Evalaute the possibility of flow bypassing treatment Pond 2 and the MBBR. Possible solution: Pump from Pond 1 to Pond 2 may be necessary to ensure all water is fully treated. After a hydraulic evaluation, bypassing only the MBBR may be a better alternative than the current bypass.
    - Inappropriate recycle flow rate resulting in high loading within the MBBR. Confirm recycle rate is approximately 100% of influent. Changes to the recycle should be performed slowly.
    - Confirm adequate air, temperature, and capacity for nitification. Confirm recycle rate is appropriate.
    - Evaluate if the temperature is less than 4ºC. Lagoon covers are suggested to help retain the temperature in the winter. Alternatively, the existing MBBR heaters could be operated during the winter months if nitrification is inhibited by low temperatures (less than 4ºC). The use of these tools should be considered in conjunction with future temperature limits.
- Iron and manganese violations:
    - Evaluate sources of iron and manganese. Sample raw water and finished drinking water.

    - Evaluate possible treatment at the source, including solids disposal options. Evaluate possible treatment at the wastewater treatment plant, including solids disposal options.
    - Evaluate possible regulatory options (antidegradation alternatives analysis for iron or DSV for manganese).
- While a numeric temperature limit is several years away, based on existing effluent temperature data, the anticipated summer 7-day average temperature limit is expected to be a challenge for the treatment plant. Oak Creek should begin planning for future temperature treatment or a regulatory process such as a DSV.
- While a numeric zinc limit is several years away, based on existing effluent zinc data and the CPDHE's future anticipated ADBAC limit, consider a possible antidegradation based alternatives analysis for regulatory flexibility.
- Evaluate the flow path in the treatment system for bypassing via the telescoping valve from Pond 1 to Pond 3. This valve should be closed to avoid potential violations of the discharge permit. If proper forward flow (i.e., flow from pond 1 to pond 2) is not being achieved, evaluate options:
    - Verify pipe between Pond 1 and Pond 2 is not blocked
    - Provide pumping from Pond 1 to Pond 3 to establish proper flow
    - Evaluate plant hydraulics to determine there is a bottleneck creating a backup of water in Pond 2 and subsequently into Pond 1 and the headworks during high flows. The MBBR may be a hydraulicly limiting flow throughput.
-

Collection System Reccomendations During the site visit, the treatment plant was receiving flows in excess of the plant capacity due to I&I. AquaWorks DBo reccomends the following:

- Perform water/wastewater balance:
    - Compare the wastewater treatment plant flow to drinking water treatment plant production and drinking water use and billing data to estimate I&I
- Camera and video of the sewer system. AquaWorks DBO recommends hiring a contractor to video the condition of the sewer system and prioritize areas for rehabilitation or replacement.

Drinking Water System Reccomendations

- Water production reported from the Town's water treatment plant exceeds standard engineering per capita water use. Therefore, Aquaworks recommends performing a water balance:
    - Confirm water plant production flows and compare to water customer use and billing data.
- Evaluate the membrane skids and membrane condition to troubleshoot capacity and flux issues. Membrane manufacturer Dupont/memcor has been contacted to begin this process.
- Review historical raw water turbidity data. Conduct raw water sampling as described below and add parameters based on Dupont input.
- Revised Lead and Copper Rule Compliance
    - Review individual tap data to confirm individual tap lead results are below the action level of 15 ug/L.

- Begin the lead service line materials inventory this year (2023). Review building construction dates using tools like the county assessor's office. Per CDPHE guidance, buildings constructed after 1986 are unlikely to have lead service lines or lead plumbing.
- Based on inventory analysis, submit the lead service line replacement plan by October 16, 2024.

Preliminary Sampling Recommendations

- Source water, finished water, and raw wastewater for iron and manganese
- Source water, finished water, and raw wastewater for zinc
- Source water and finished water for total organic carbon (TOC) and dissolved organic carbon (DOC).
- Source water turbidity
- Raw wastewater and treated effluent alkalinity

Additional sampling may be needed as more information becomes available.

COLORADO
Department of Public Health & Environment

Attachment 1 - Copy of Site Location Approval for Demonstration

August 10, 2021

David Torgler
129 Nancy Crawford Blvd.
Oak Creek, CO 80467

Subject: Approval of Demonstration Project
Regulation 22 Site Location Approval No.: 3714
Oak Creek Denitrification Pilot Study, Town of Oak Creek WWTF
Colorado Discharge Permit System (CDPS) No. CO0041106
Routt County
ES Project No. ES.21.SA.06233

Dear Mr. Torgler:

The Water Quality Control Division (Division) is in receipt of the Town of Oak Creek's Oak Creek Denitrification Pilot Study demonstration project testing plan dated August 5, 2021, for the proposed demonstration project at the Town of Oak Creek WWTF. As described, the project proposes to evaluate the effectiveness of denitrification through re-circulation within the lagoon system and process optimization to meet total inorganic nitrogen effluent discharge limitations. The Water Quality Control Commission's ***Site Location and Design Regulations for Domestic Wastewater Treatment Works 5 CCR 1002-22*** (Regulation 22) allows for demonstration projects in Section 22.11.

The approval to proceed with the proposed Demonstration Project is granted, subject to the following conditions:

1. The approval is effective as of the date of this letter. If the demonstration testing work does not commence within 60 calendar days from the date of this letter, please provide written notification to the Division.

2. The duration of the demonstration project is limited to May 2022. The Demonstration Project cannot extend beyond May 2022 without receiving an extension from the Division. The Division may authorize the operation of demonstration equipment and processes beyond May 2022 upon written request. The written request shall specify the reason(s) for the extension request, set forth a proposed schedule for completion of the demonstration project, and identify a specific date by which the demonstration project will conclude. Requests for extension of the demonstration project testing period must be made in writing no later than 45 calendar days prior to the end of the authorized testing period.

3. The Demonstration Testing Project work must be performed in accordance with the Oak Creek Denitrification Pilot Study dated August 5, 2021.

4. Upon completion of the demonstration project, the Town of Oak Creek WWTF must submit a Demonstration Project Testing Report to the Division. The report must include a summary of the testing activities, sampling and analyses results, and a discussion of findings and conclusions.

5. During the demonstration project, the Town of Oak Creek WWTF must provide interim reporting of the results of the demonstration project to the Division. The report must include specifics of the testing activities, progress of sampling, preliminary analyses, and a discussion of findings to date.

6. Once the demonstration testing period ends, the tested equipment/process must be taken off-line. Prior to permanent utilization of the process/technology involved in the demonstration project, site location and design approval must be obtained, refer to Section 22.7 or 22.10, as applicable, of Regulation 22.

7. If the Town of Oak Creek WWTF foresees that demonstration project test results may be used in the future for a site location application or falls into the "Alternative Technology" category, it is generally recommended to coordinate with the Division early to assure data collected satisfies the needs of the Division for the review and approval process. An alternative technology review process is for new or nonconforming technologies not represented in the current design criteria. Alternative technology refers to an established or innovative technology with a compliance record that is in use in other states or countries, but is alternative in the sense that Colorado design criteria have not been developed for the technology. Thus, the technology is not currently accepted for use in Colorado.

8. Throughout a demonstration project, the Division retains its enforcement authority as it relates to the Colorado Water Quality Control Act. The Town of Oak Creek WWTF will be responsible for ensuring that the demonstration project does not cause non-compliance with the discharge permit for the treatment works at which the demonstration project is being implemented.

The Division's approval of the proposed Oak Creek Denitrification Pilot Study does not relieve the applicant/owner from compliance with all local, state, and federal regulations prior to construction nor from responsibility for proper engineering, construction and operation of the treatment works.

The Engineering Section is interested in gaining feedback about your experience during the engineering review process. We would appreciate your time to complete a Quality-of-Service Survey regarding your experience during the engineering review process leading up to issuance of this decision letter. The Engineering Section will use your responses and comments to identify strengths, target areas for improvement, and evaluate process improvements to better serve your needs. Please take a moment to fill out our survey here.

If you should have any questions, please contact Michelle Kemp by phone at 720-213-6481 or by email at michelle.kemp@state.co.us.

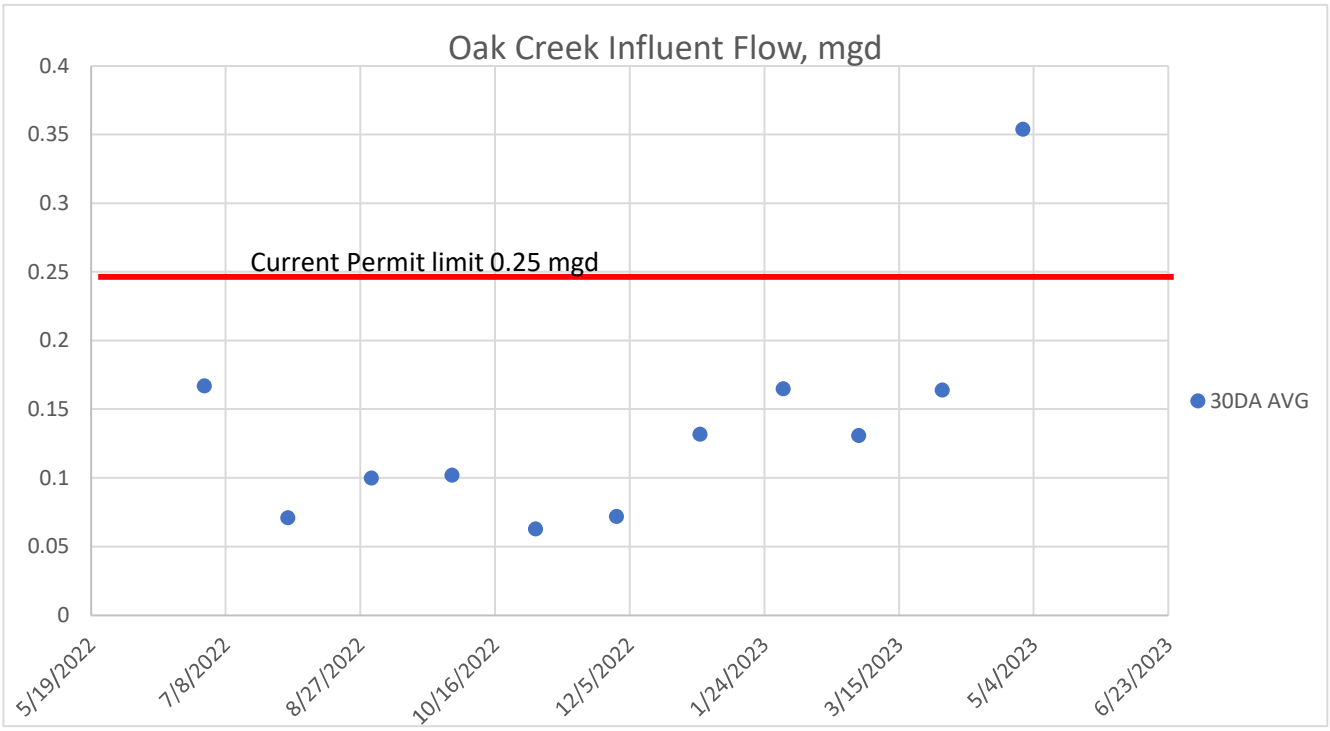
Sincerely,

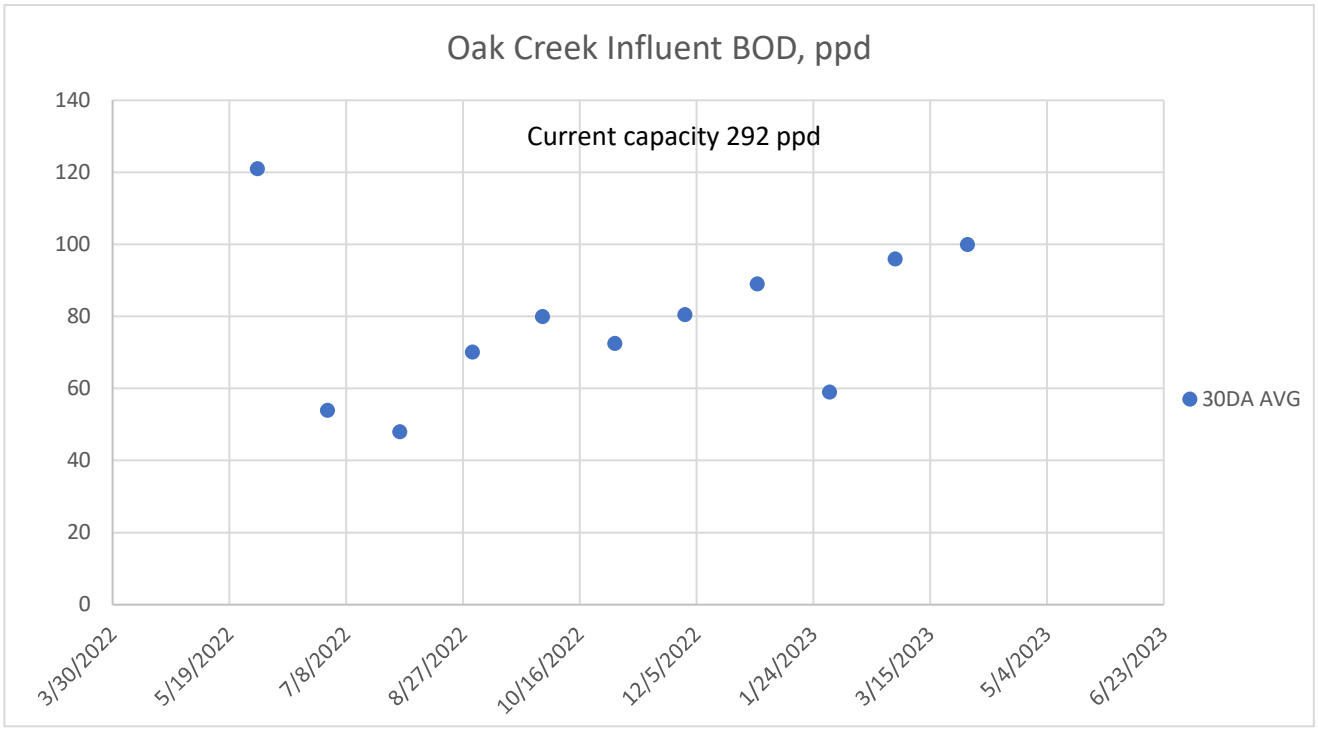
Bret Icenogle Digitally signed by Bret Icenogle
Date: 2021.08.10 17:06:36 -06'00'

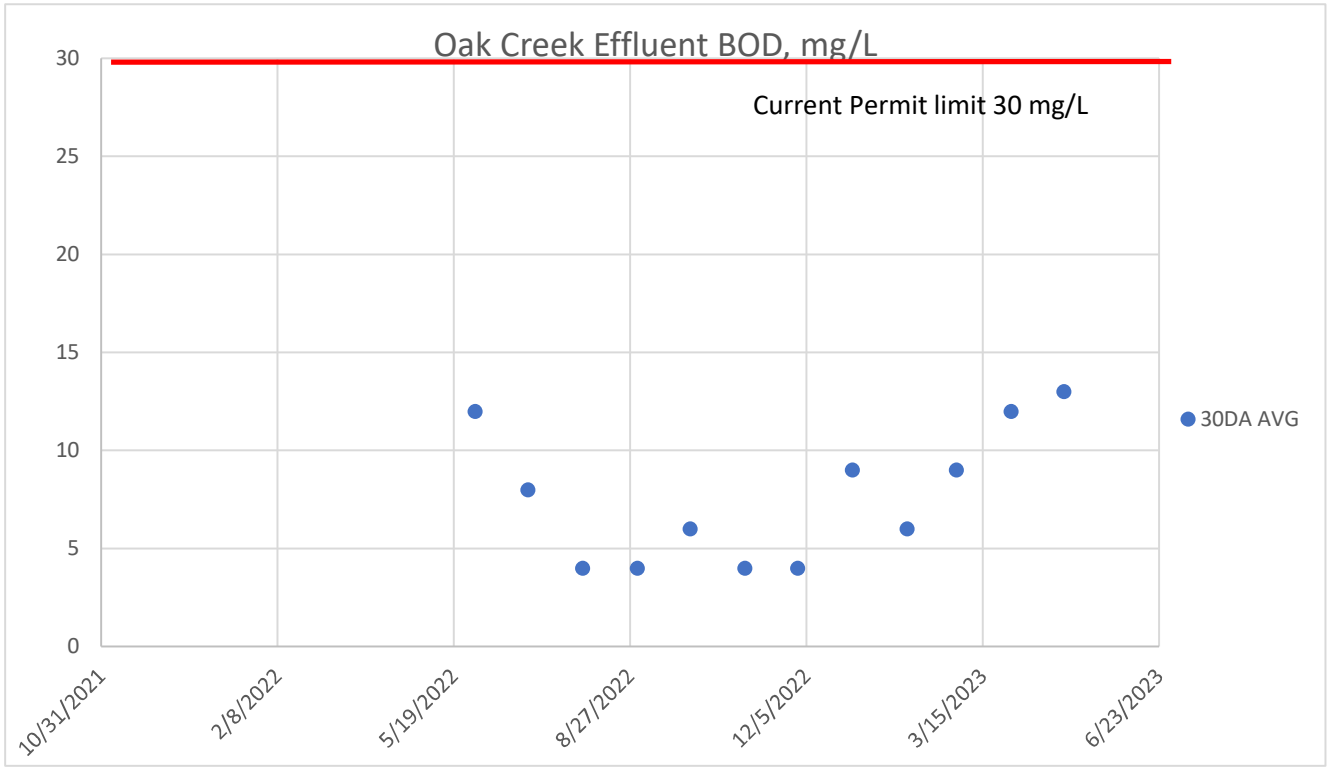
Bret Icenogle, P.E.
Engineering Section Manager
Water Quality Control Division
Colorado Department of Public Health and Environment

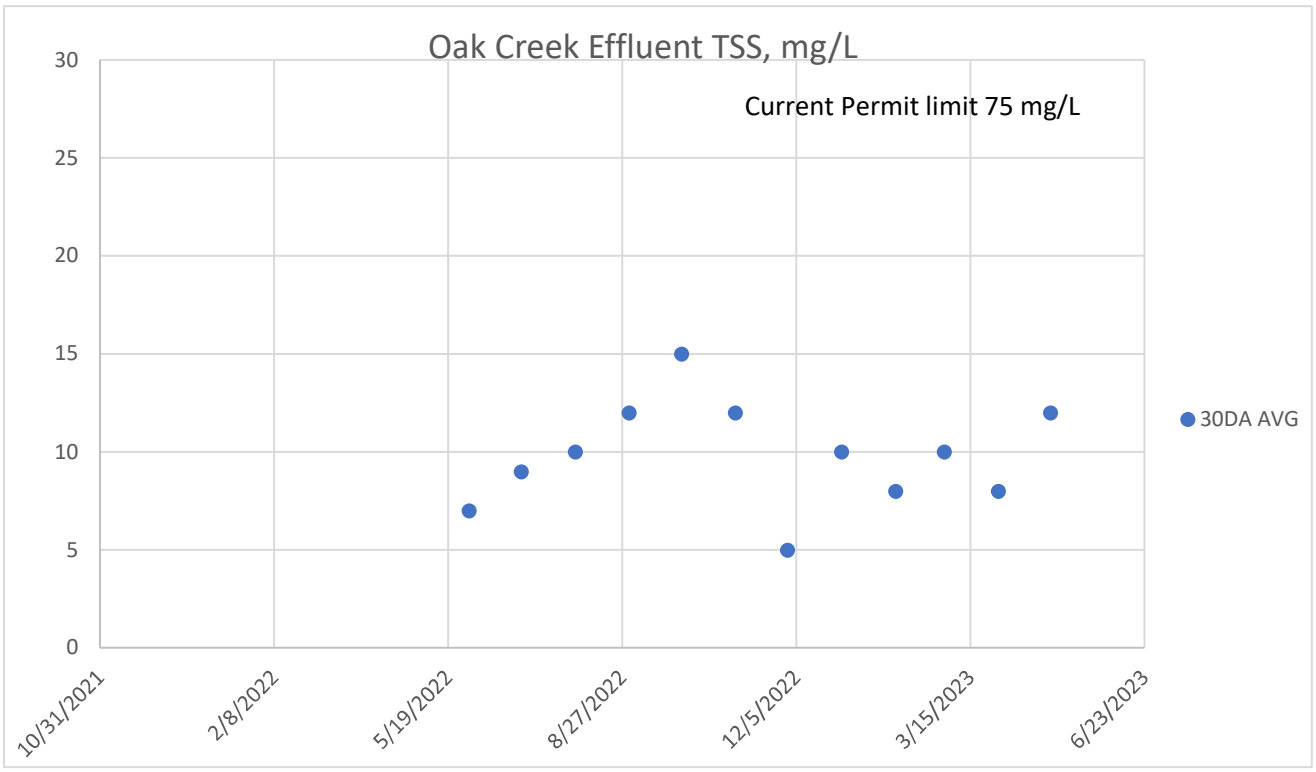
cc: Scott Smith, ORC
Patrick Hill, TriplePoint Environmental
William O Irvine, Engineering Fluid Solutions
B. Scott Cowman, Routt County Environmental Health
Amanda Williams, Rout County Environmental Health

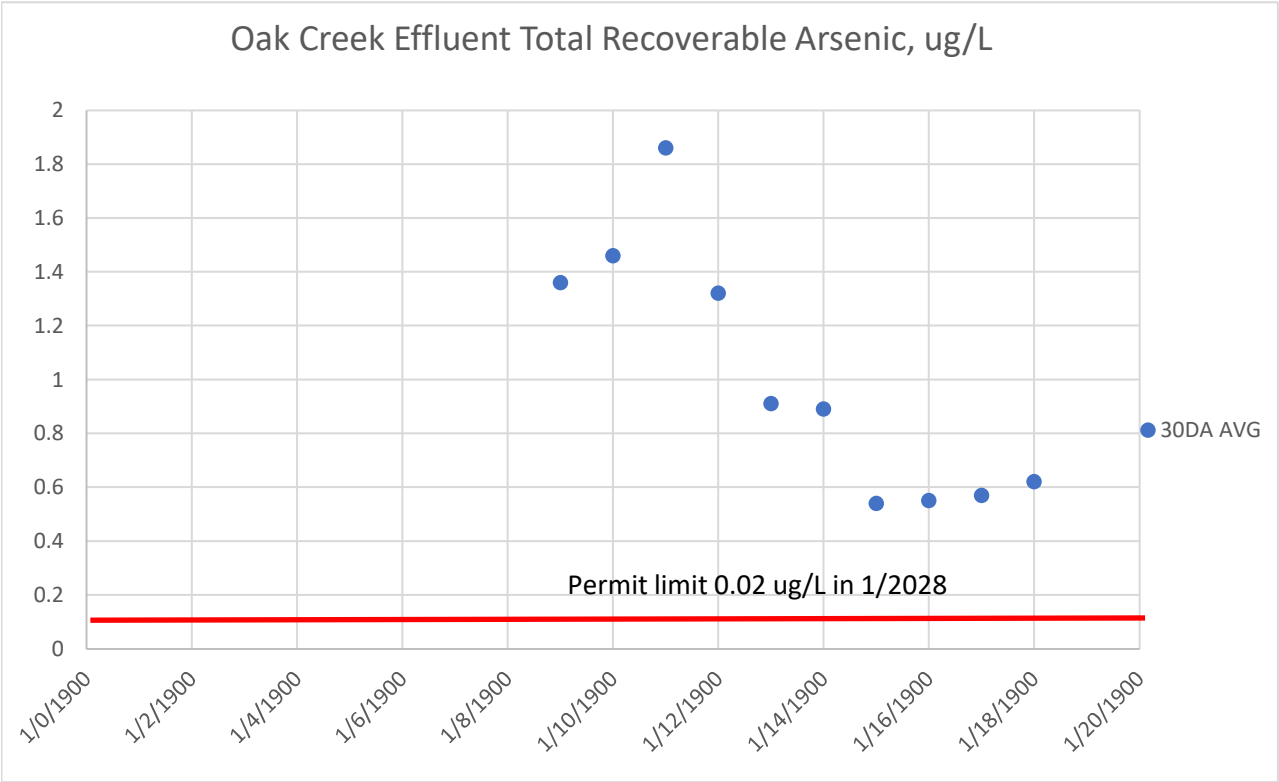
Attachment 2 - Permitted Parameter Influent and Effluent Graphs

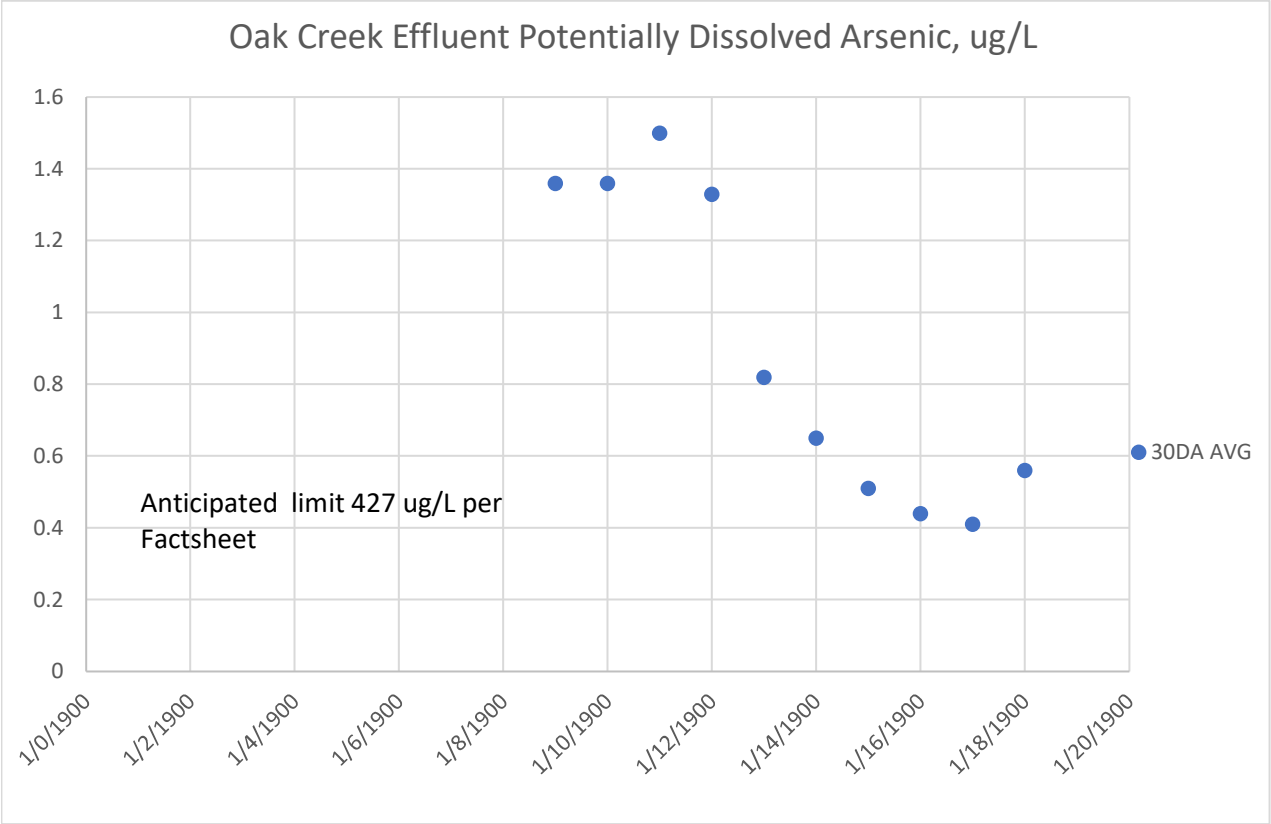


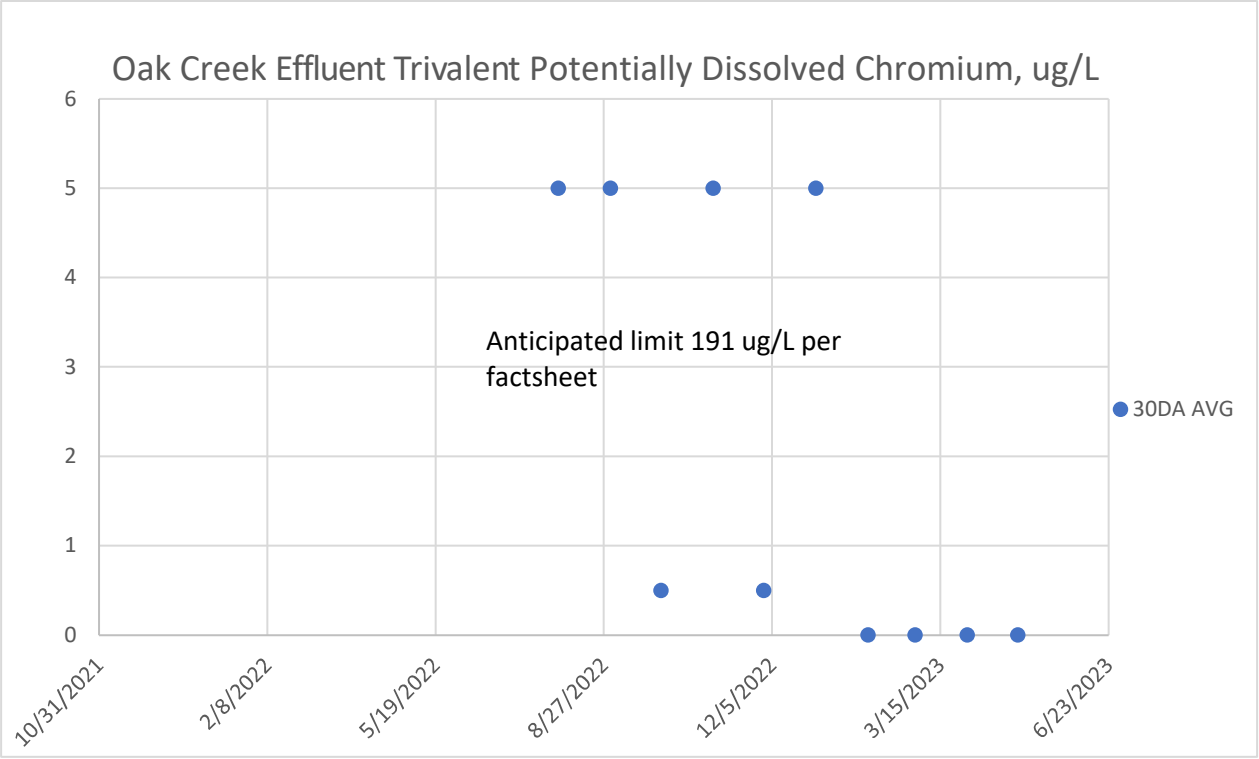


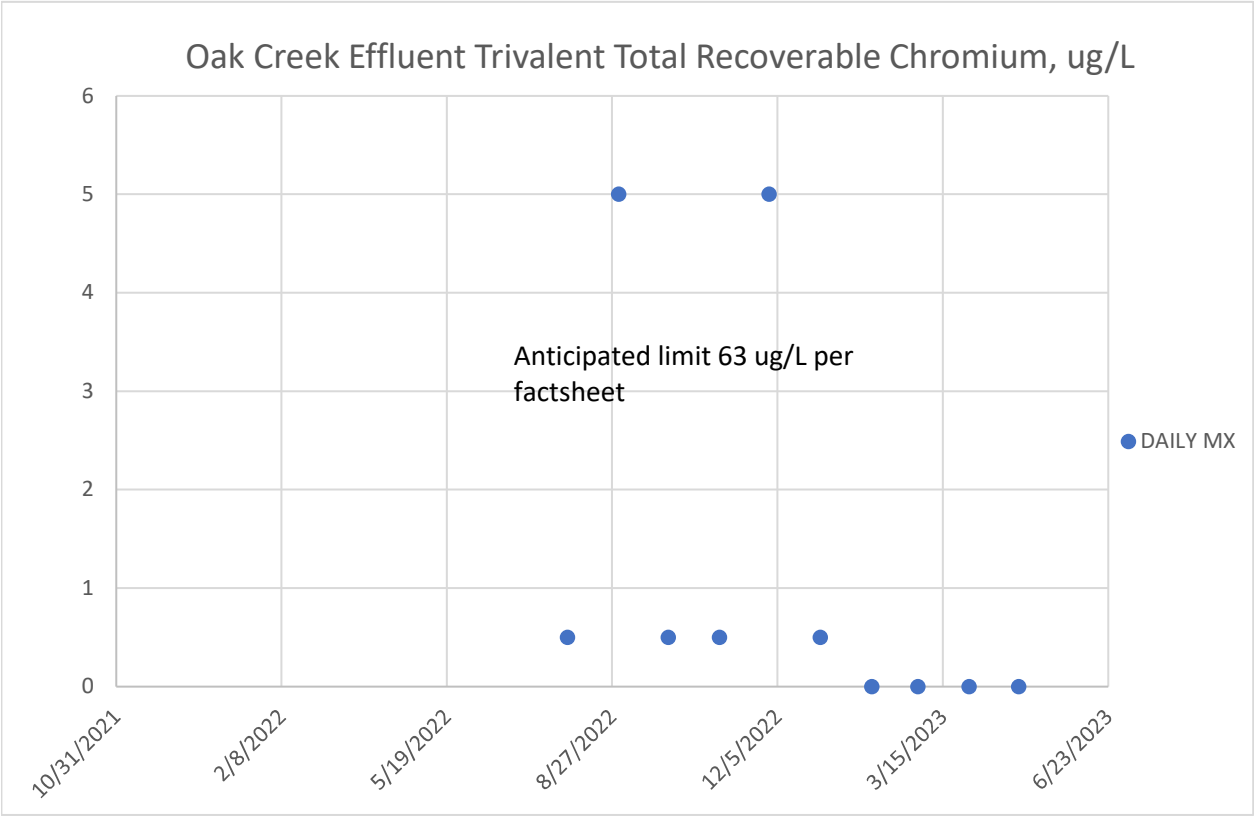

Oak Creek Effluent BOD, mg/L
Current Permit limit 30 mg/L
30DA AVG
30
25
20
15
10
5
0
10/31/2021
2/8/2022
5/19/2022
8/27/2022
12/5/2022
3/15/2023
6/23/2023

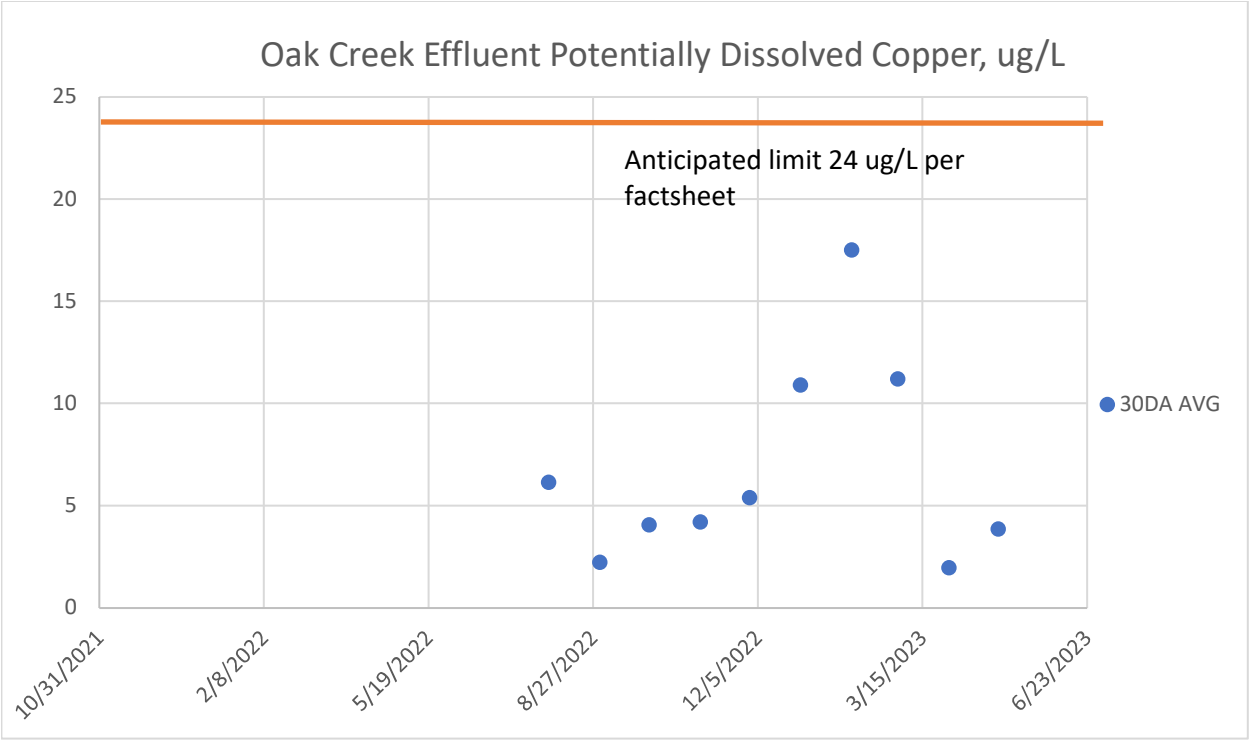

Oak Creek Effluent TSS, mg/L
Current Permit limit 75 mg/L
30DA AVG
30
25
20
15
10
5
0
10/31/2021
2/8/2022
5/19/2022
8/27/2022
12/5/2022
3/15/2023
6/23/2023

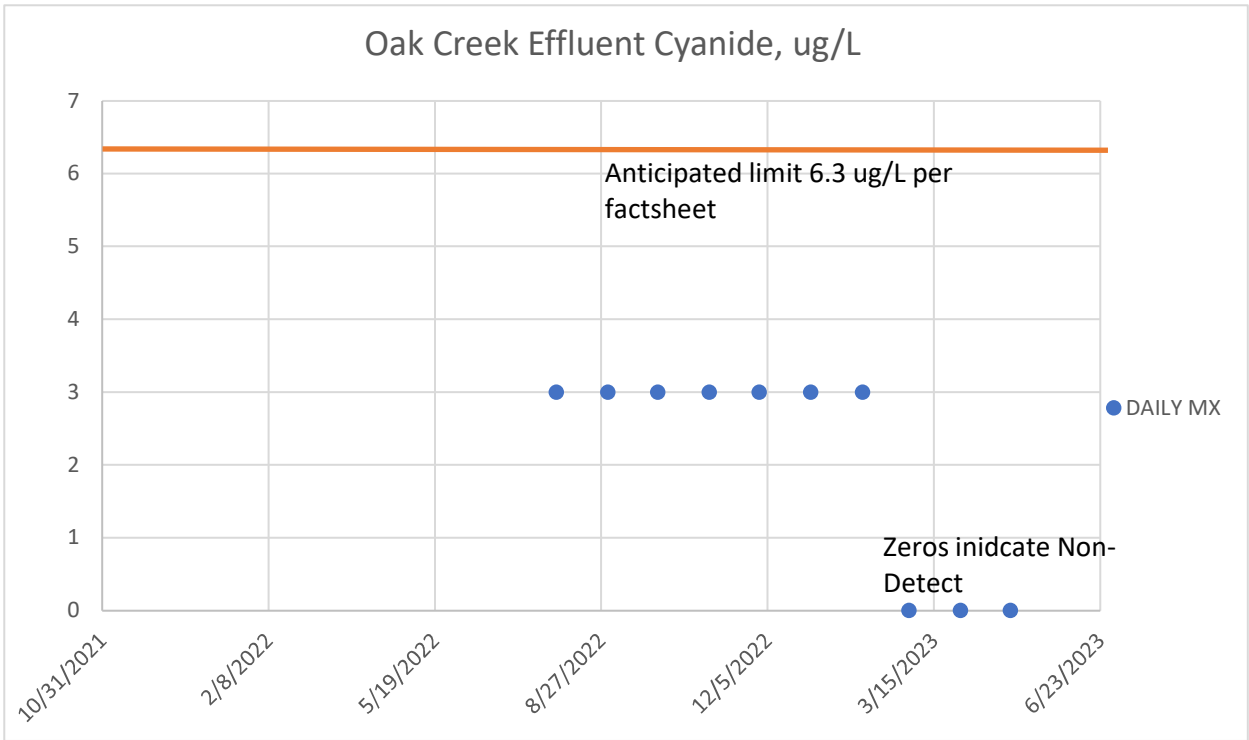

Oak Creek Effluent Total Recoverable Arsenic, ug/L
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Permit limit 0.02 ug/L in 1/2028
30DA AVG
1/0/1900
1/2/1900
1/4/1900
1/6/1900
1/8/1900
1/10/1900
1/12/1900
1/14/1900
1/16/1900
1/18/1900
1/20/1900

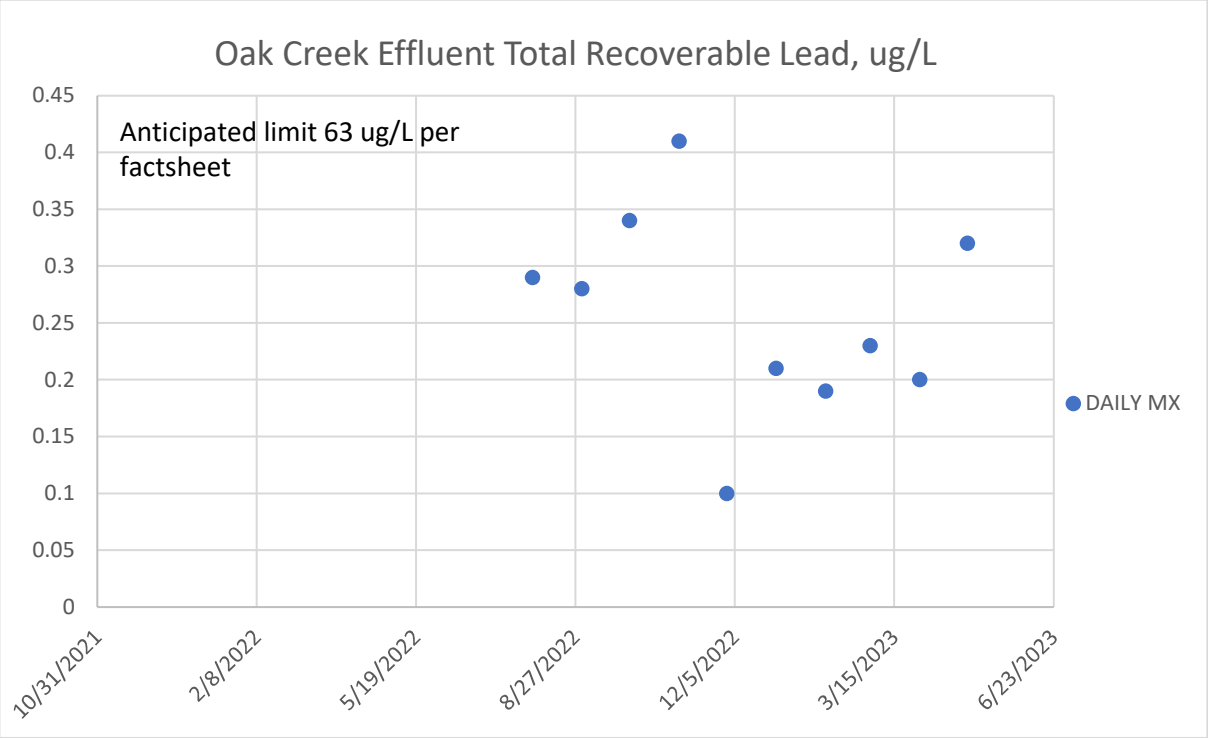

Oak Creek Effluent Potentially Dissolved Arsenic, ug/L
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Anticipated limit 427 ug/L per Factsheet
30DA AVG
1/0/1900
1/2/1900
1/4/1900
1/6/1900
1/8/1900
1/10/1900
1/12/1900
1/14/1900
1/16/1900
1/18/1900
1/20/1900

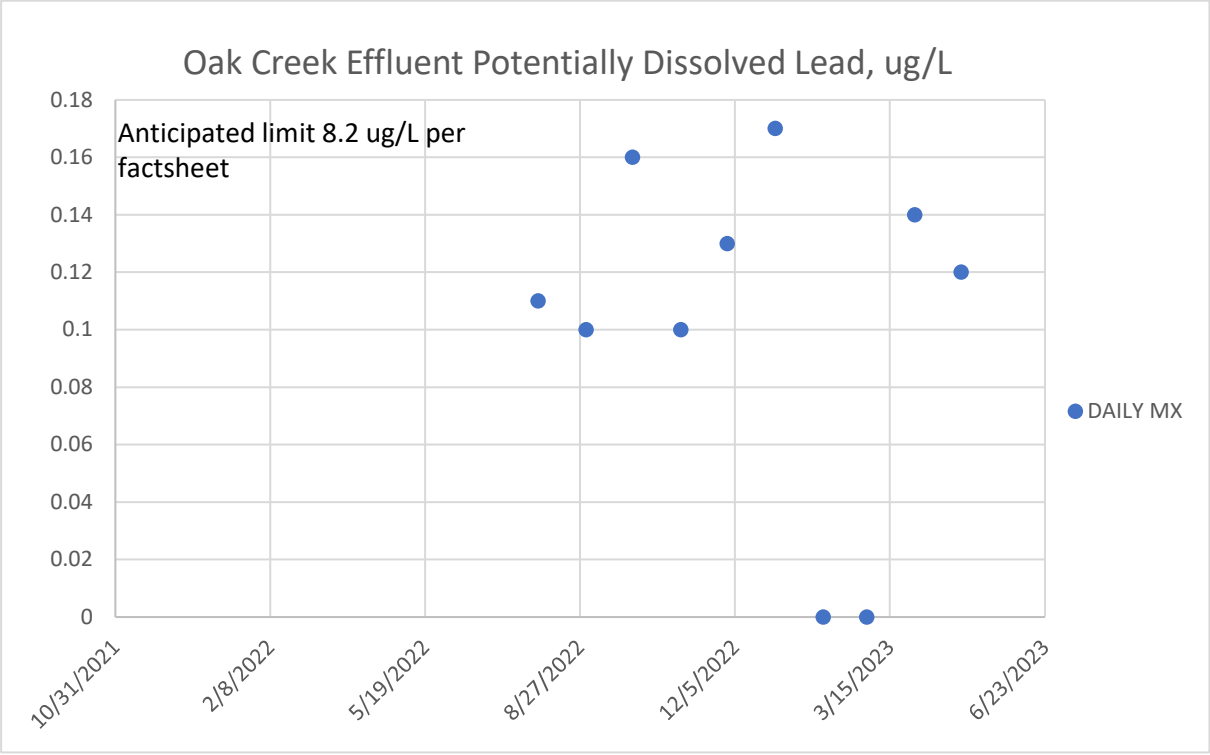

Oak Creek Effluent Trivalent Potentially Dissolved Chromium, ug/L
6
5
4
3
2
1
0
Anticipated limit 191 ug/L per factsheet
30DA AVG
10/31/2021
2/8/2022
5/19/2022
8/27/2022
12/5/2022
3/15/2023
6/23/2023


Oak Creek Effluent Trivalent Total Recoverable Chromium, ug/L
6
5
4
3
2
1
0
Anticipated limit 63 ug/L per factsheet
DAILY MX
10/31/2021
2/8/2022
5/19/2022
8/27/2022
12/5/2022
3/15/2023
6/23/2023


Oak Creek Effluent Potentially Dissolved Copper, ug/L
25
20
15
10
5
0
Anticipated limit 24 ug/L per factsheet
30DA AVG
10/31/2021
2/8/2022
5/19/2022
8/27/2022
12/5/2022
3/15/2023
6/23/2023


Oak Creek Effluent Cyanide, ug/L
7
6
5
4
3
2
1
0
Anticipated limit 6.3 ug/L per factsheet
DAILY MX
Zeros inidcate Non-Detect
10/31/2021
2/8/2022
5/19/2022
8/27/2022
12/5/2022
3/15/2023
6/23/2023


Oak Creek Effluent Total Recoverable Lead, ug/L
Anticipated limit 63 ug/L per factsheet
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
10/31/2021
2/8/2022
5/19/2022
8/27/2022
12/5/2022
3/15/2023
6/23/2023
DAILY MX


Oak Creek Effluent Potentially Dissolved Lead, ug/L
Anticipated limit 8.2 ug/L per factsheet
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
10/31/2021
2/8/2022
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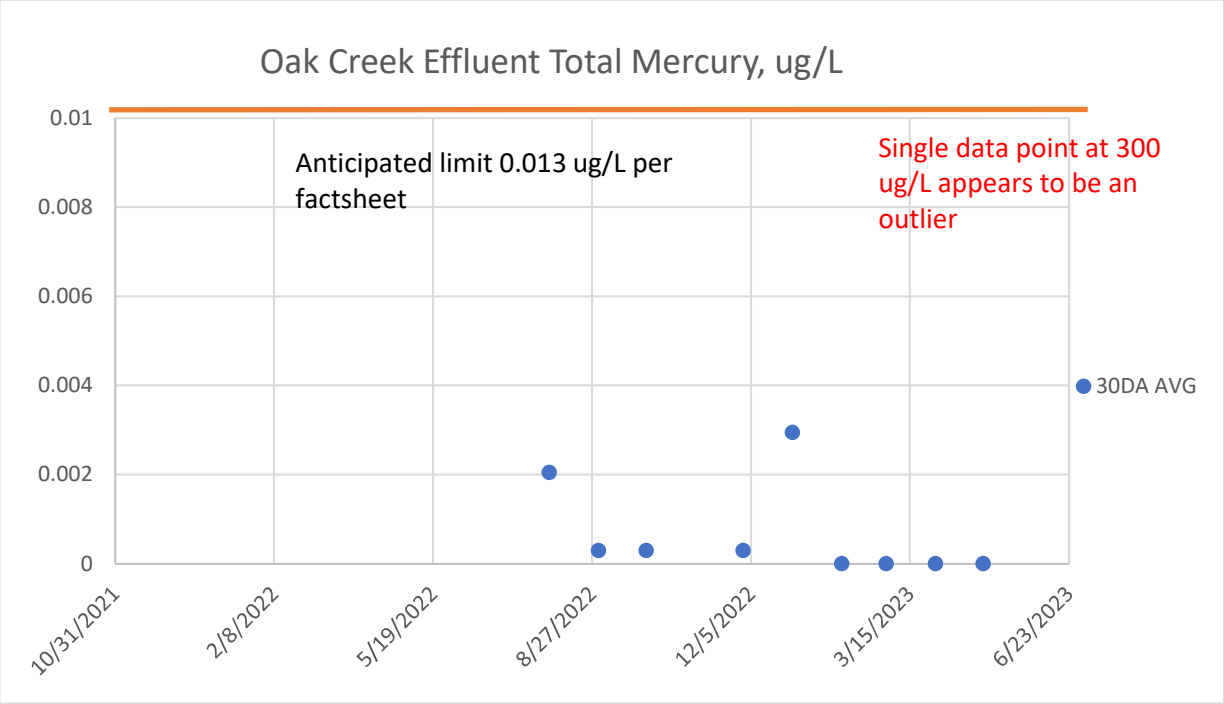
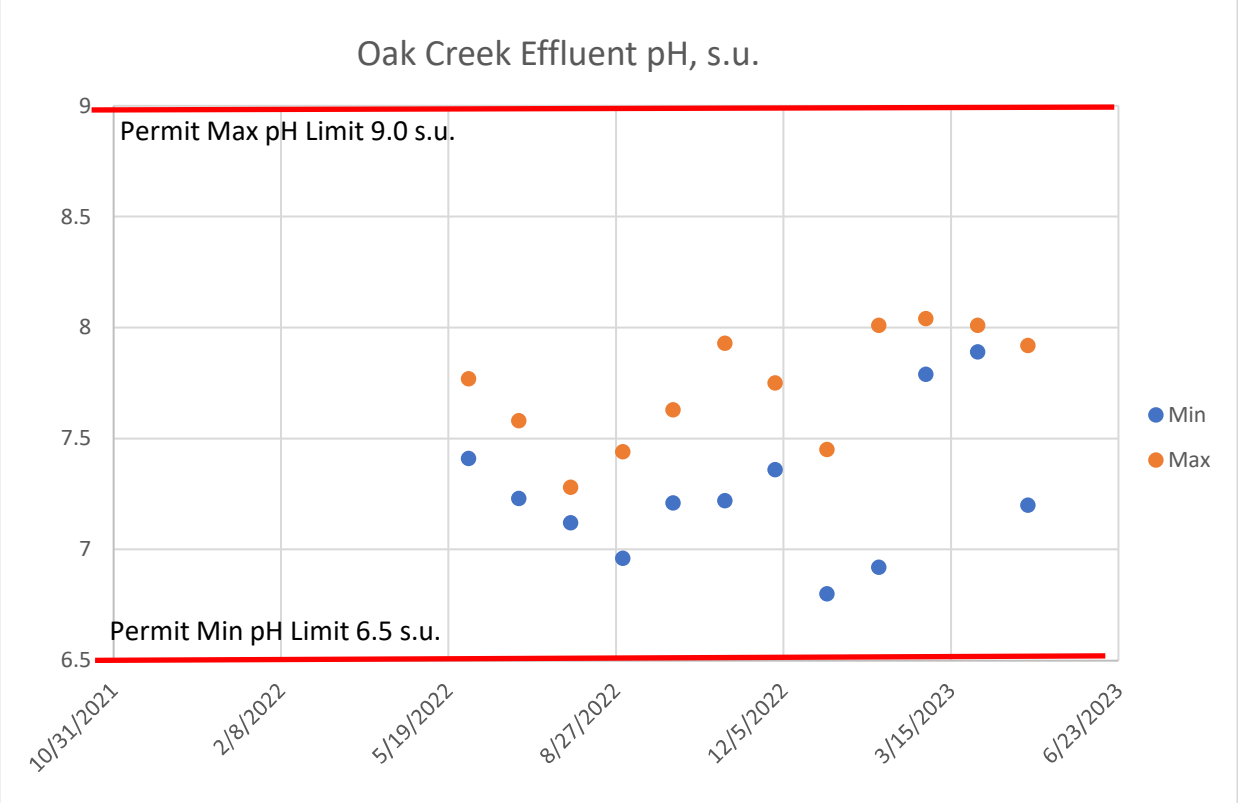
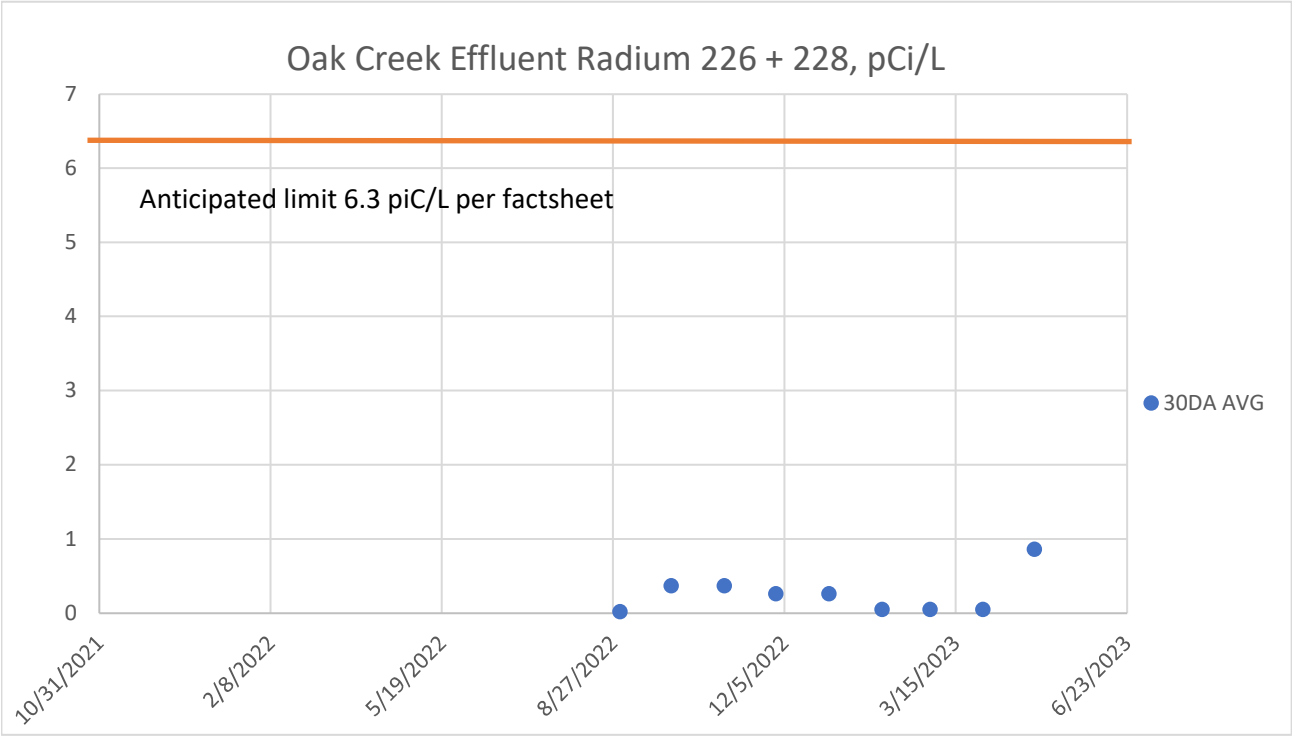
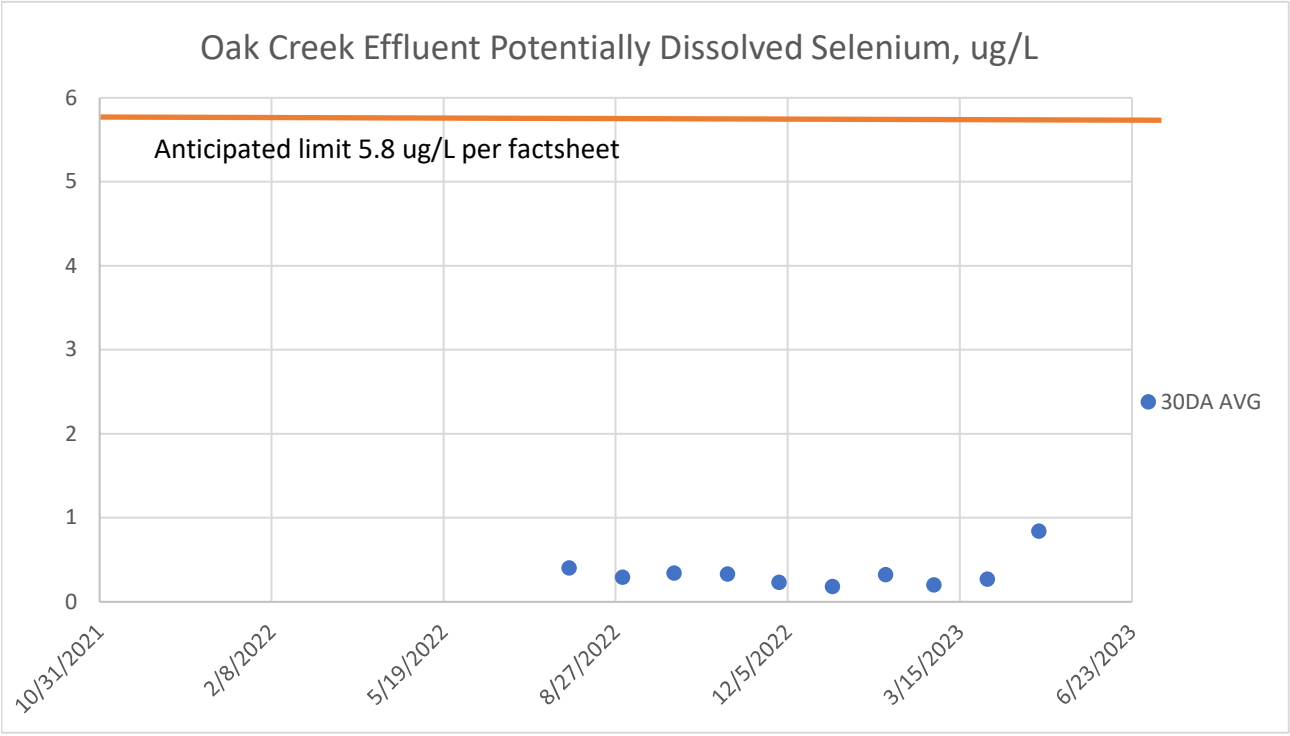
12/5/2022
3/15/2023
6/23/2023
DAILY MX


Oak Creek Effluent Total Mercury, ug/L
0.01
0.008
0.006
0.004
0.002
0
Anticipated limit 0.013 ug/L per factsheet
Single data point at 300 ug/L appears to be an outlier
30DA AVG
10/31/2021
2/8/2022
5/19/2022
8/27/2022
12/5/2022
3/15/2023
6/23/2023


Oak Creek Effluent pH, s.u.
9
8.5
8
7.5
7
6.5
Permit Max pH Limit 9.0 s.u.
Permit Min pH Limit 6.5 s.u.
Min
Max
10/31/2021
2/8/2022
5/19/2022
8/27/2022
12/5/2022
3/15/2023
6/23/2023


Oak Creek Effluent Radium 226 + 228, pCi/L
Anticipated limit 6.3 piC/L per factsheet
30DA AVG
7
6
5
4
3
2
1
0
10/31/2021
2/8/2022
5/19/2022
8/27/2022
12/5/2022
3/15/2023
6/23/2023


Oak Creek Effluent Potentially Dissolved Selenium, ug/L
Anticipated limit 5.8 ug/L per factsheet
30DA AVG
6
5
4
3
2
1
0
10/31/2021
2/8/2022
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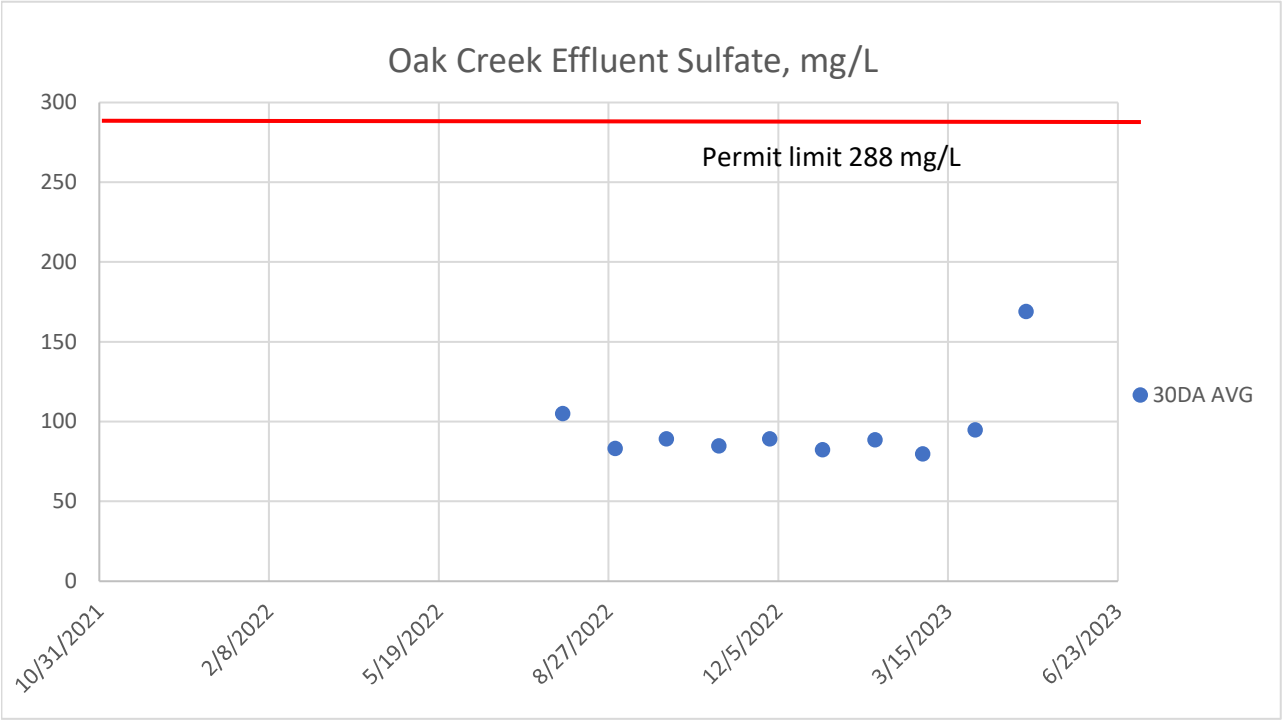
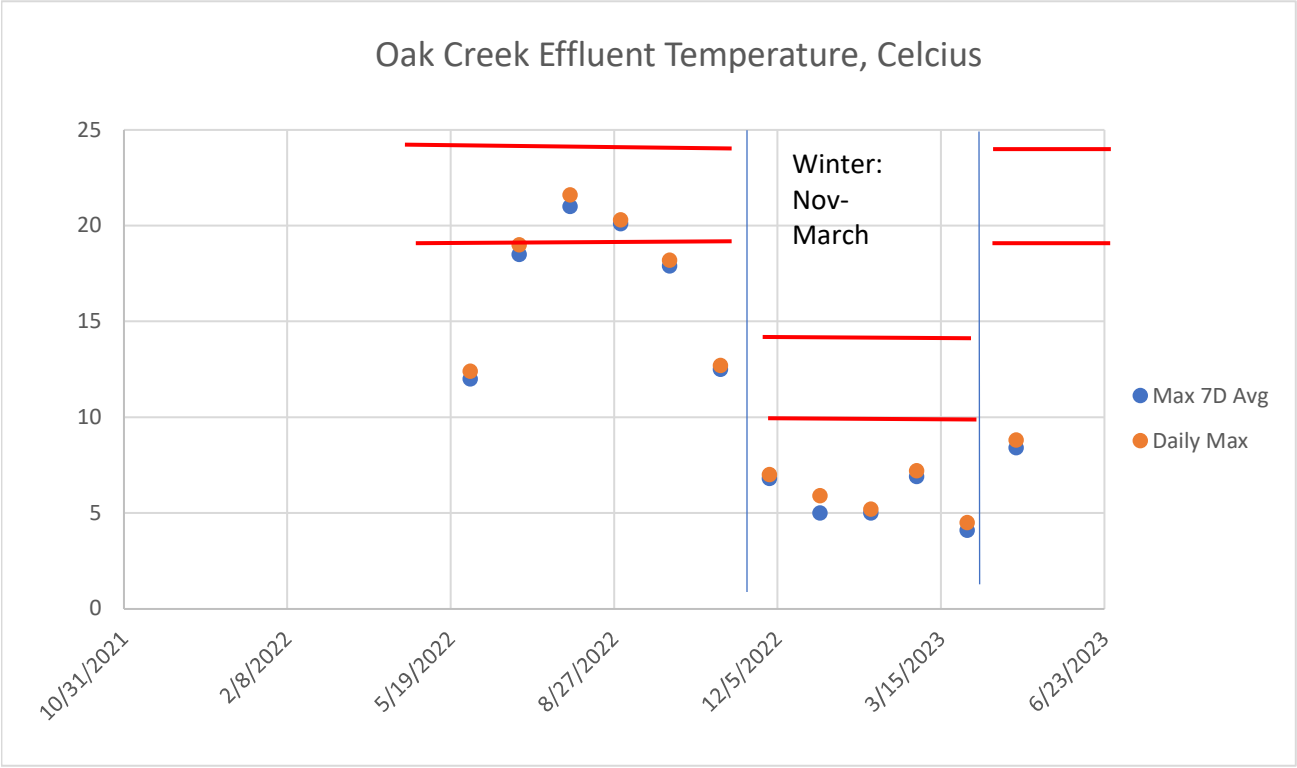
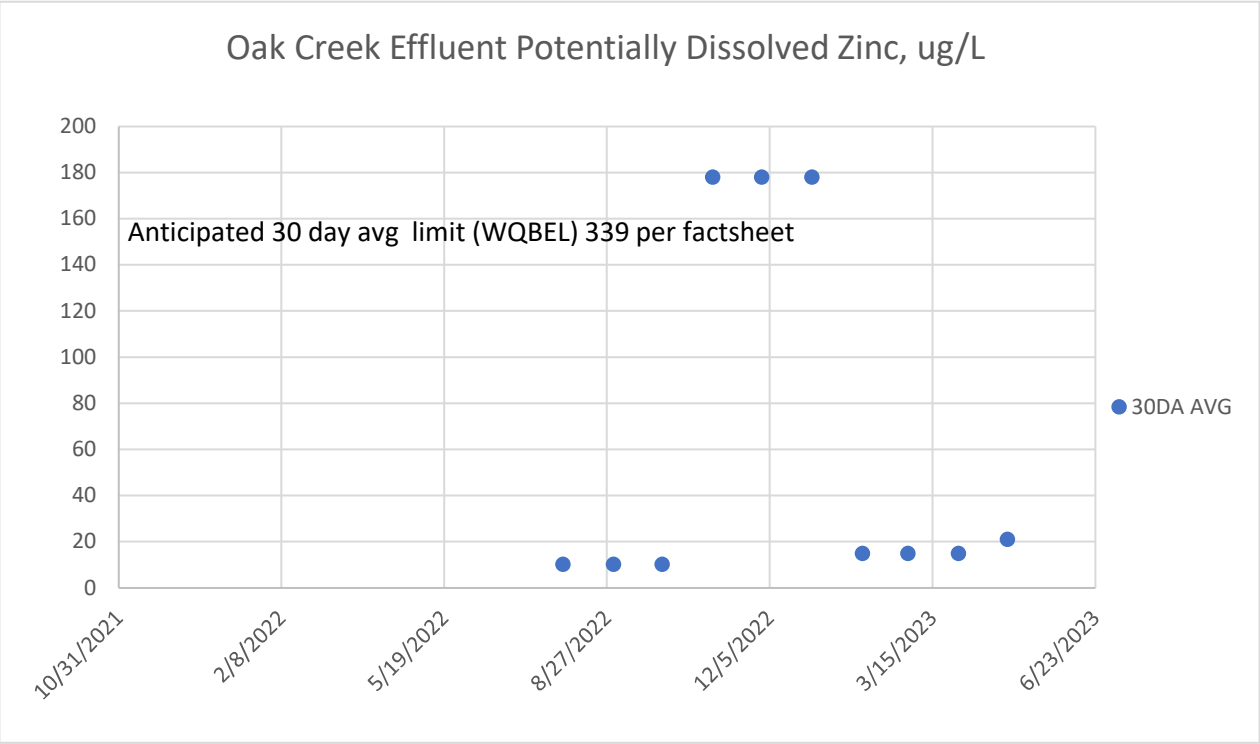
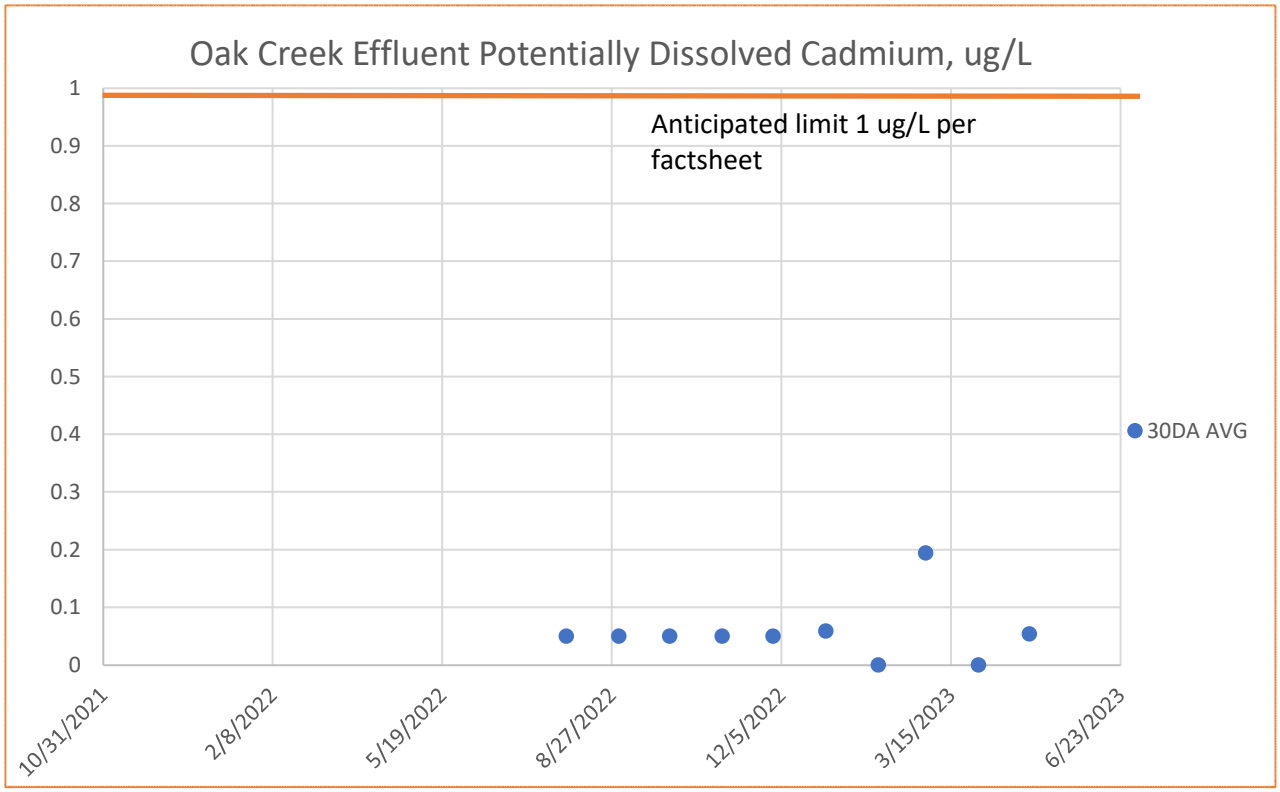
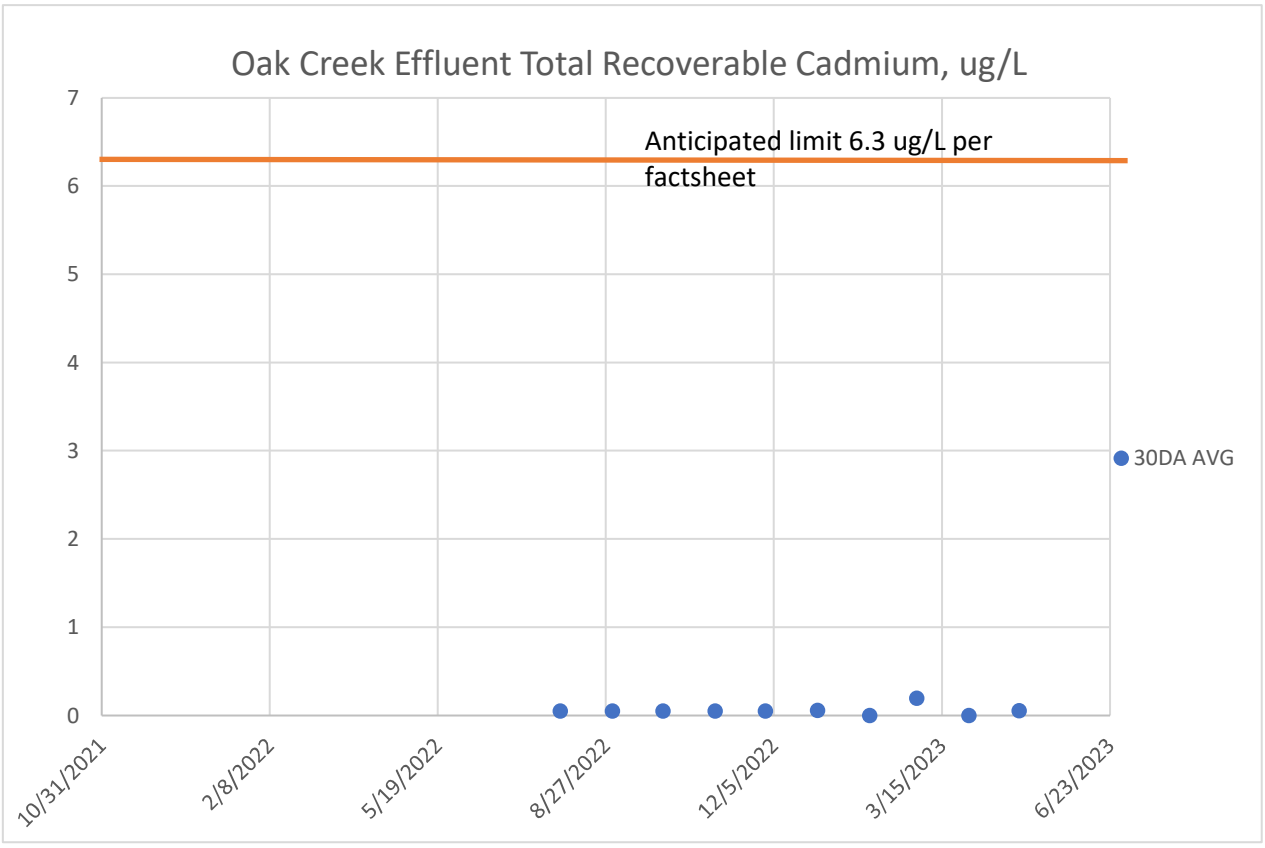
8/27/2022
12/5/2022
3/15/2023
6/23/2023

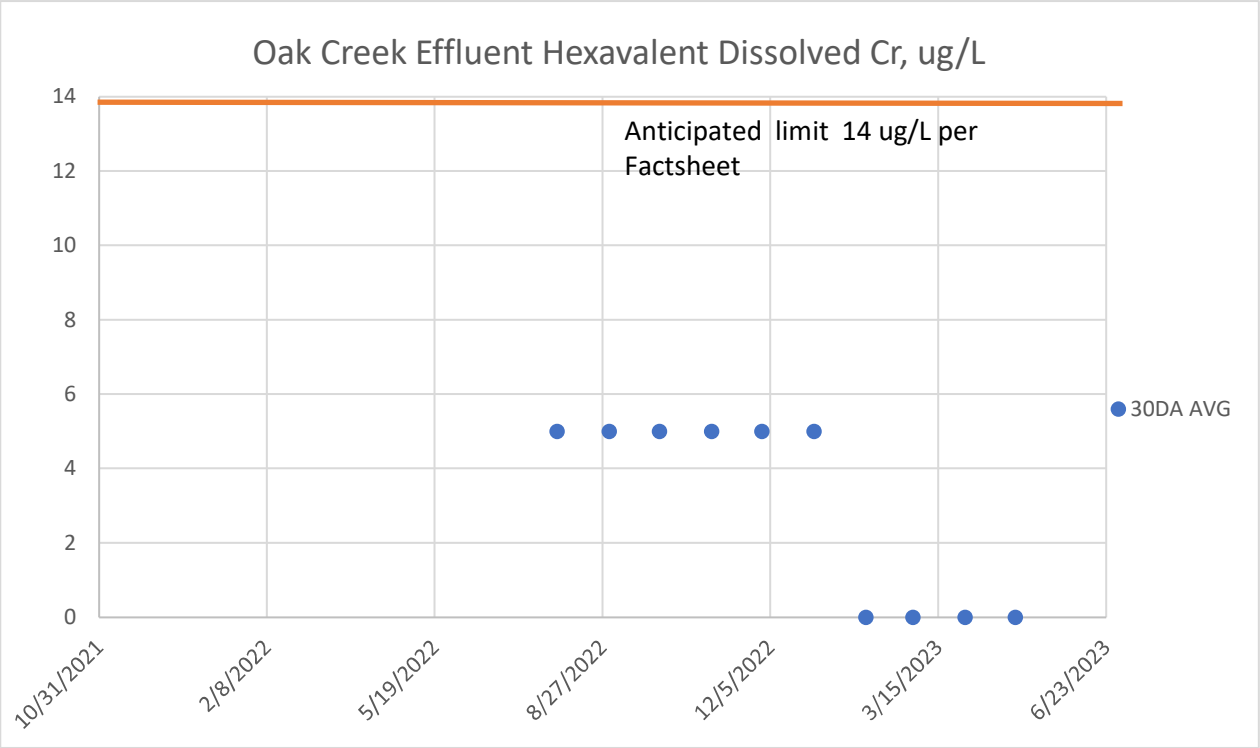

Oak Creek Effluent Sulfate, mg/L
300
250
200
150
100
50
0
Permit limit 288 mg/L
30DA AVG
10/31/2021
2/8/2022
5/19/2022
8/27/2022
12/5/2022
3/15/2023
6/23/2023

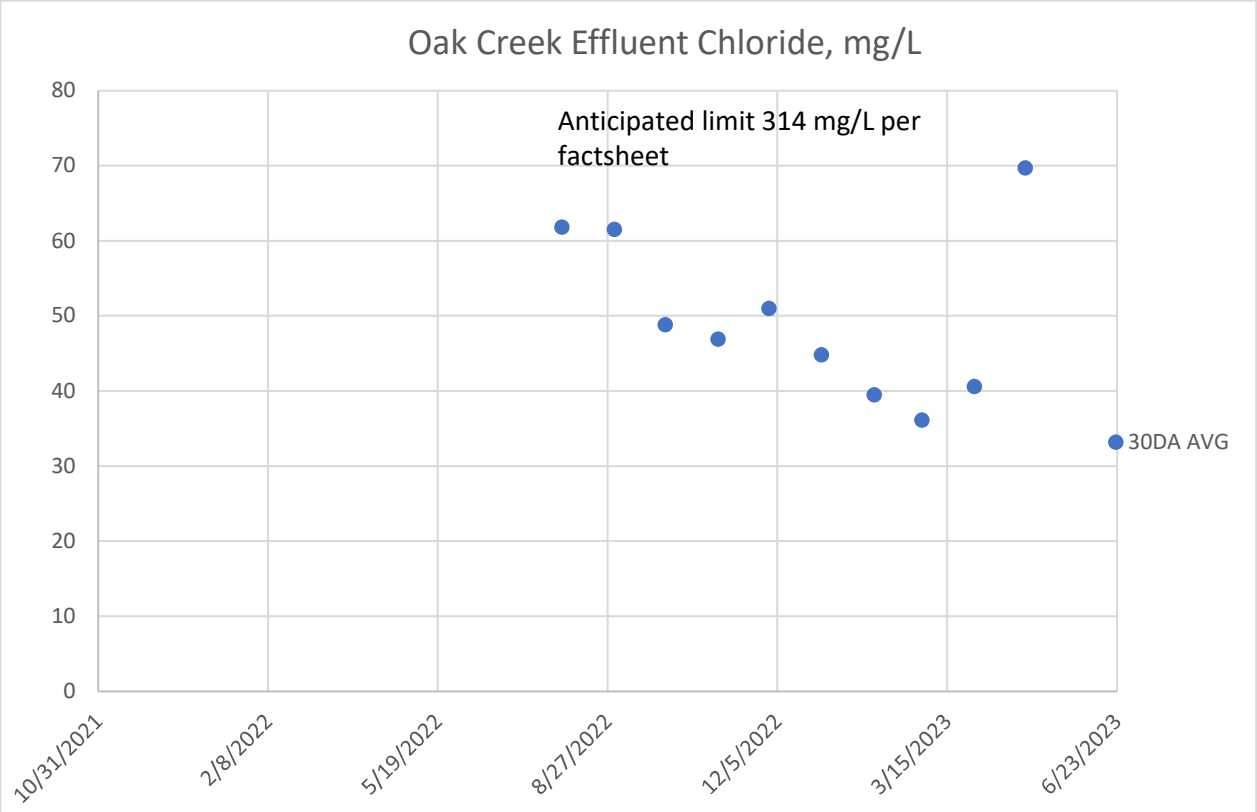

Oak Creek Effluent Temperature, Celcius
25
20
15
10
5
0
Winter:
Nov-
March
Max 7D Avg
Daily Max
10/31/2021
2/8/2022
5/19/2022
8/27/2022
12/5/2022
3/15/2023
6/23/2023

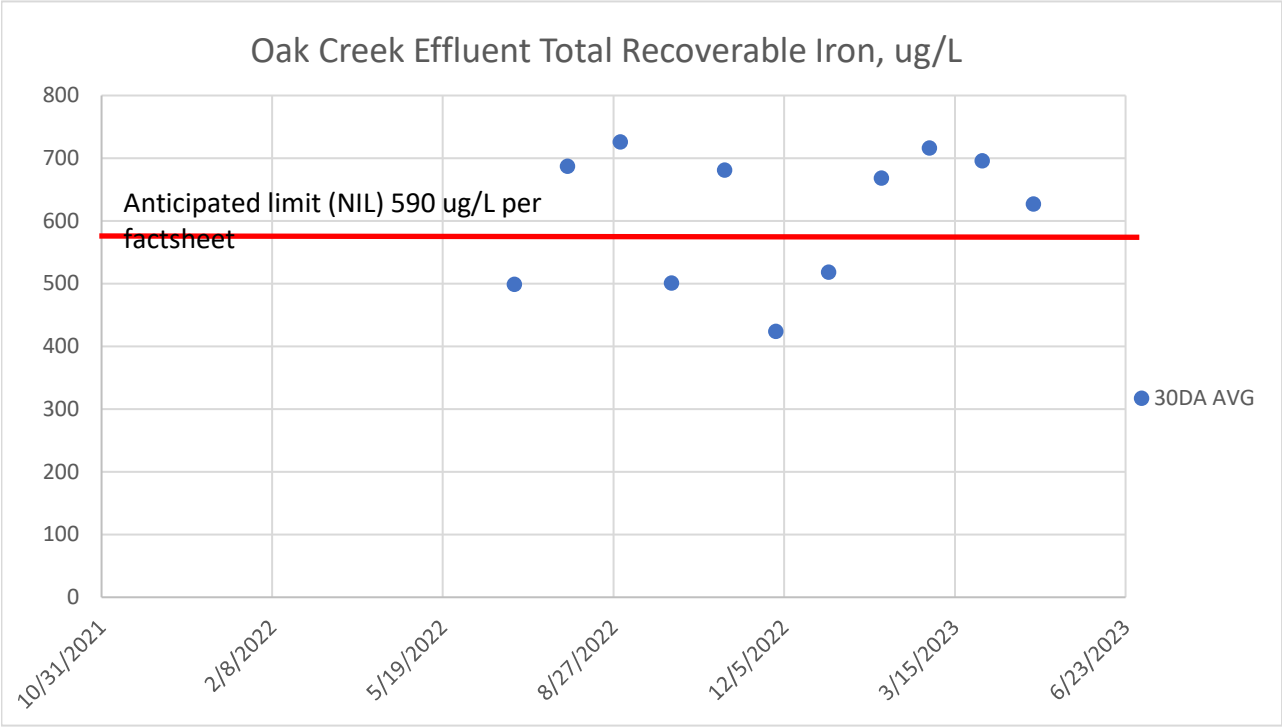

Oak Creek Effluent Potentially Dissolved Zinc, ug/L
200
180
160
140
120
100
80
60
40
20
0
Anticipated 30 day avg limit (WQBEL) 339 per factsheet
10/31/2021
2/8/2022
5/19/2022
8/27/2022
12/5/2022
3/15/2023
6/23/2023
30DA AVG

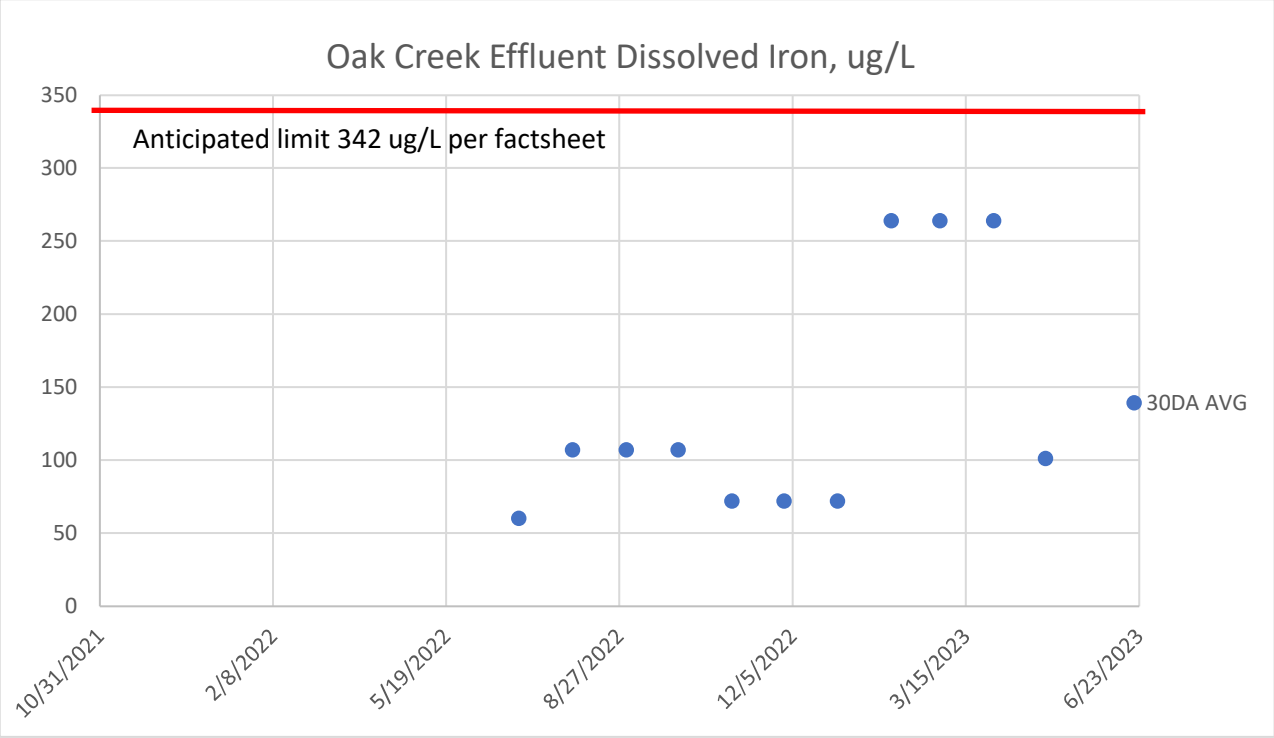

Oak Creek Effluent Potentially Dissolved Cadmium, ug/L
Anticipated limit 1 ug/L per factsheet
30DA AVG
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
10/31/2021
2/8/2022
5/19/2022
8/27/2022
12/5/2022
3/15/2023
6/23/2023

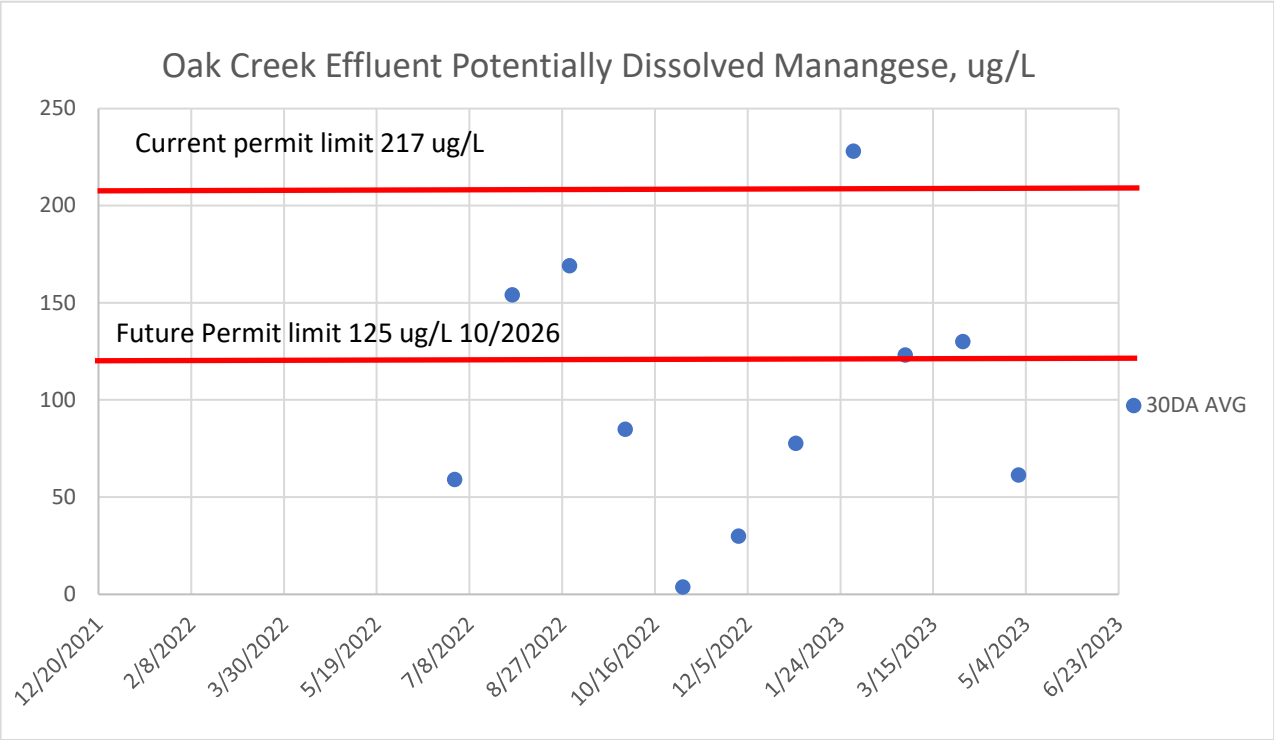

Oak Creek Effluent Total Recoverable Cadmium, ug/L
Anticipated limit 6.3 ug/L per factsheet
30DA AVG
7
6
5
4
3
2
1
0
10/31/2021
2/8/2022
5/19/2022
8/27/2022
12/5/2022
3/15/2023
6/23/2023

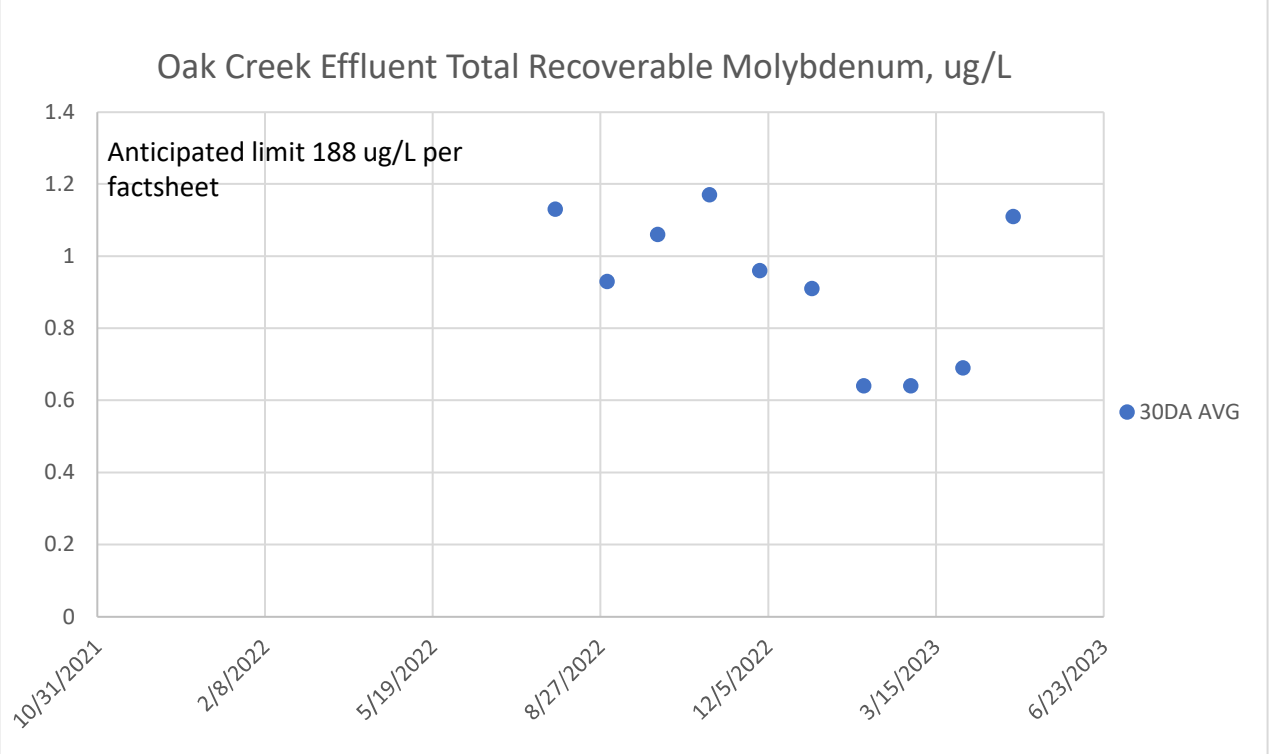

Oak Creek Effluent Hexavalent Dissolved Cr, ug/L
Anticipated limit 14 ug/L per Factsheet
30DA AVG
14
12
10
8
6
4
2
0
10/31/2021
2/8/2022
5/19/2022
8/27/2022
12/5/2022
3/15/2023
6/23/2023

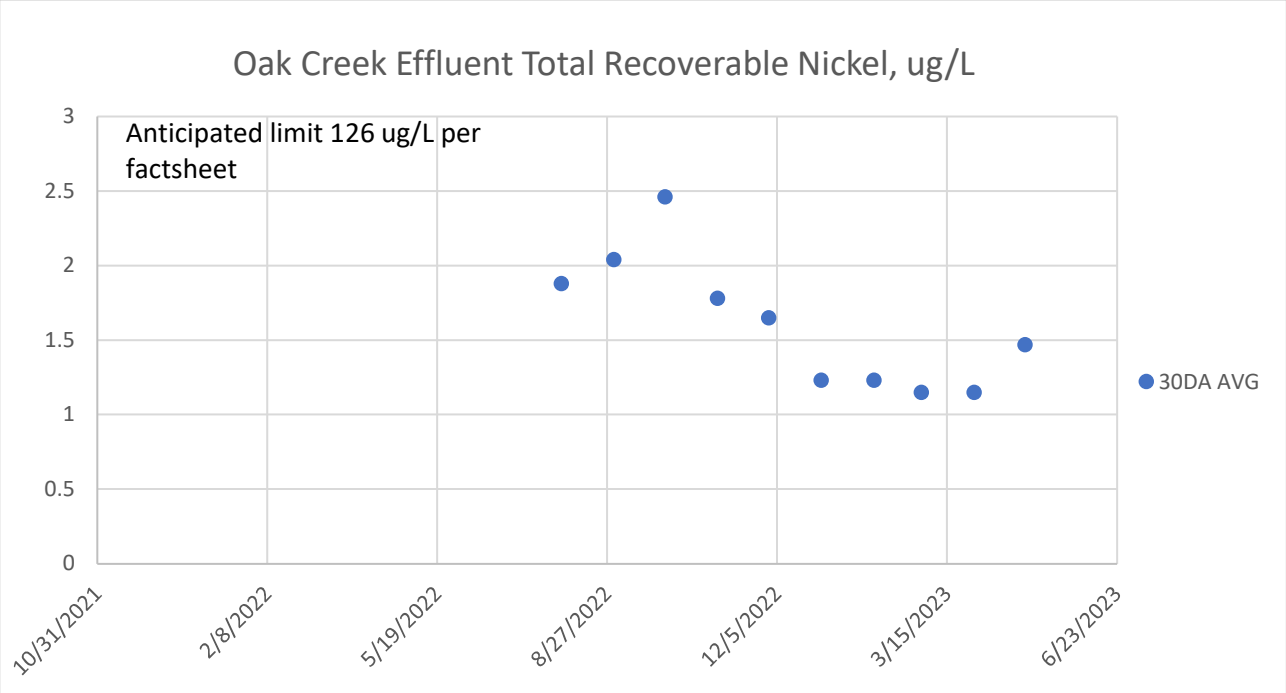

Oak Creek Effluent Chloride, mg/L
Anticipated limit 314 mg/L per factsheet
30DA AVG
80
70
60
50
40
30
20
10
0
10/31/2021
2/8/2022
5/19/2022
8/27/2022
12/5/2022
3/15/2023
6/23/2023

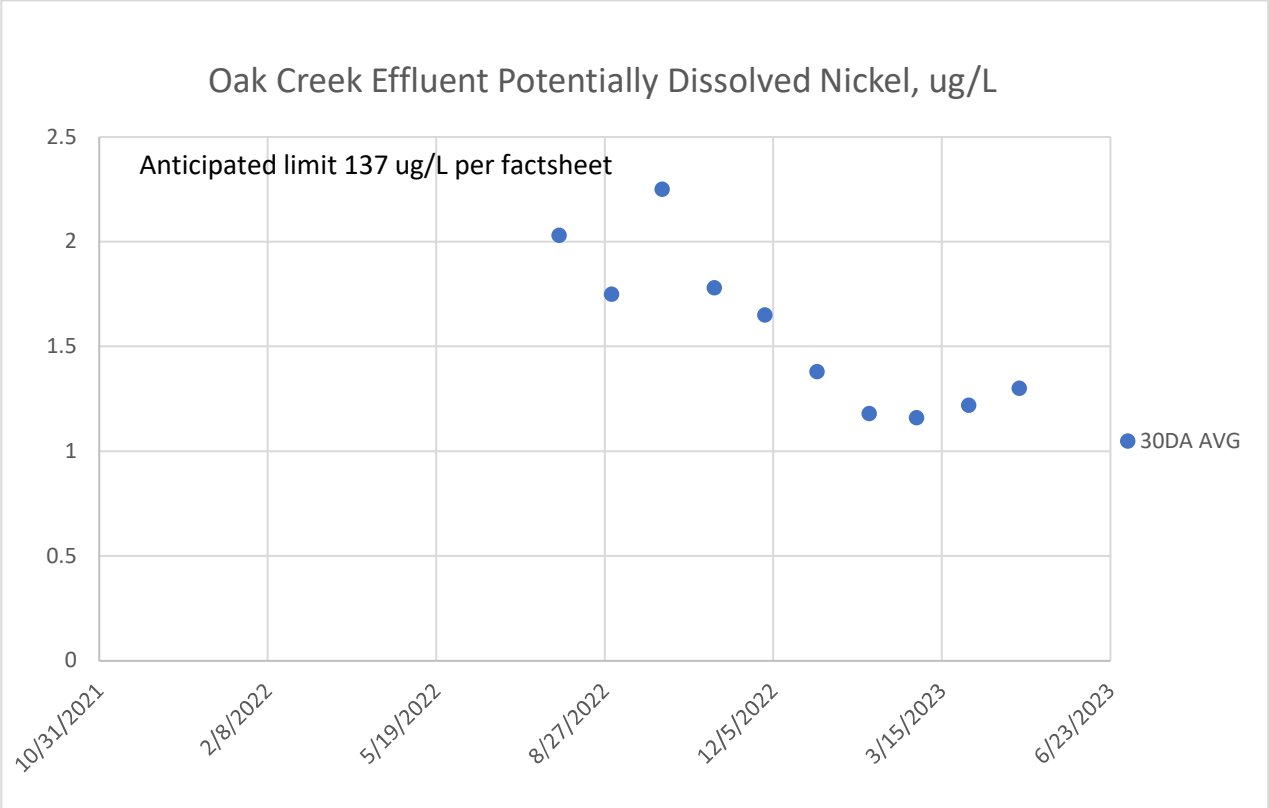

Oak Creek Effluent Total Recoverable Iron, ug/L
800
700
600
500
400
300
200
100
0
Anticipated limit (NIL) 590 ug/L per factsheet
30DA AVG
10/31/2021
2/8/2022
5/19/2022
8/27/2022
12/5/2022
3/15/2023
6/23/2023

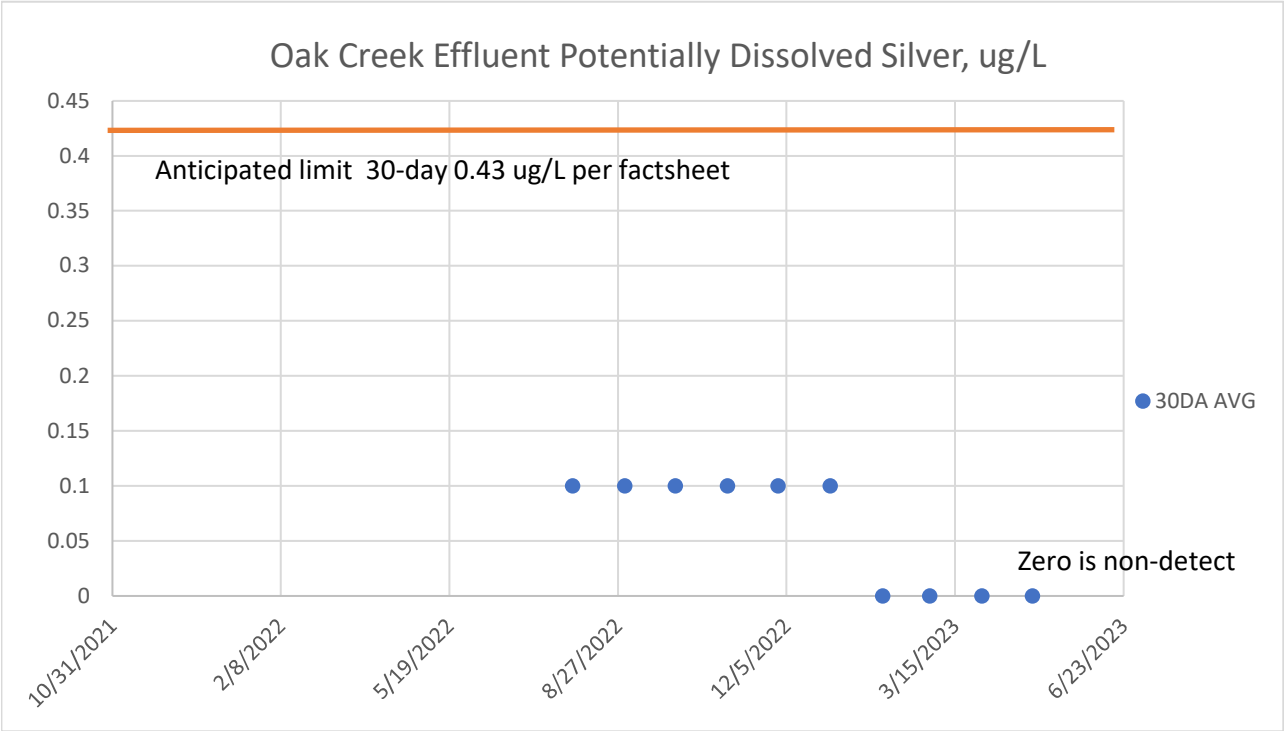

Oak Creek Effluent Dissolved Iron, ug/L
350
300
250
200
150
100
50
0
Anticipated limit 342 ug/L per factsheet
30DA AVG
10/31/2021
2/8/2022
5/19/2022
8/27/2022
12/5/2022
3/15/2023
6/23/2023

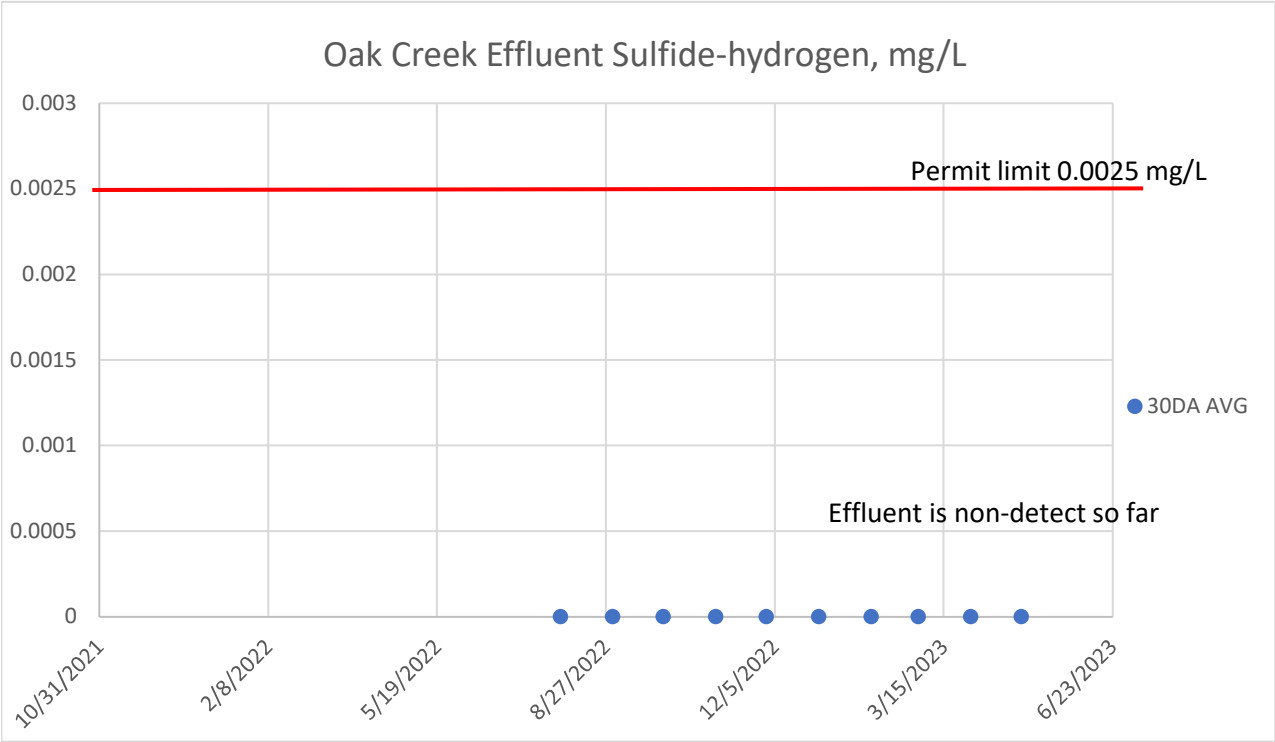

Oak Creek Effluent Potentially Dissolved Manangese, ug/L
Current permit limit 217 ug/L
Future Permit limit 125 ug/L 10/2026
250
200
150
100
50
0
12/20/2021
2/8/2022
3/30/2022
5/19/2022
7/8/2022
8/27/2022
10/16/2022
12/5/2022
1/24/2023
3/15/2023
5/4/2023
6/23/2023
30DA AVG

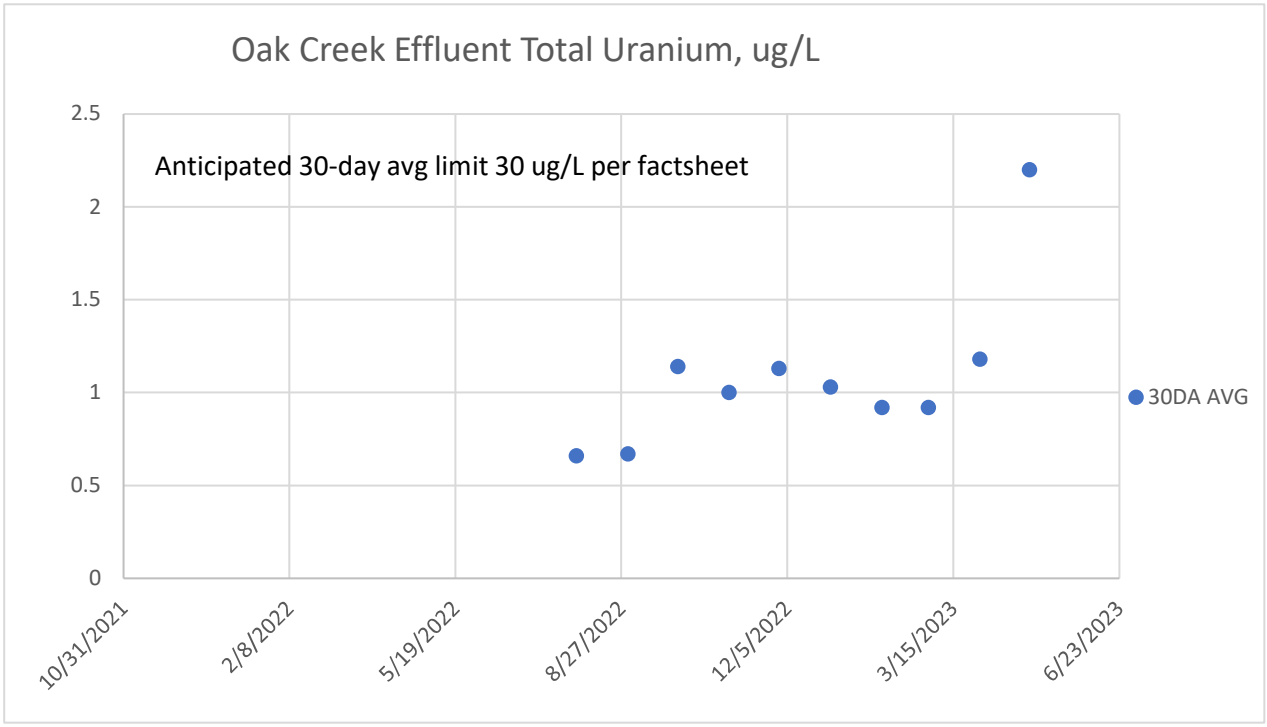

Oak Creek Effluent Total Recoverable Molybdenum, ug/L
Anticipated limit 188 ug/L per factsheet
1.4
1.2
1
0.8
0.6
0.4
0.2
0
10/31/2021
2/8/2022
5/19/2022
8/27/2022
12/5/2022
3/15/2023
6/23/2023
30DA AVG

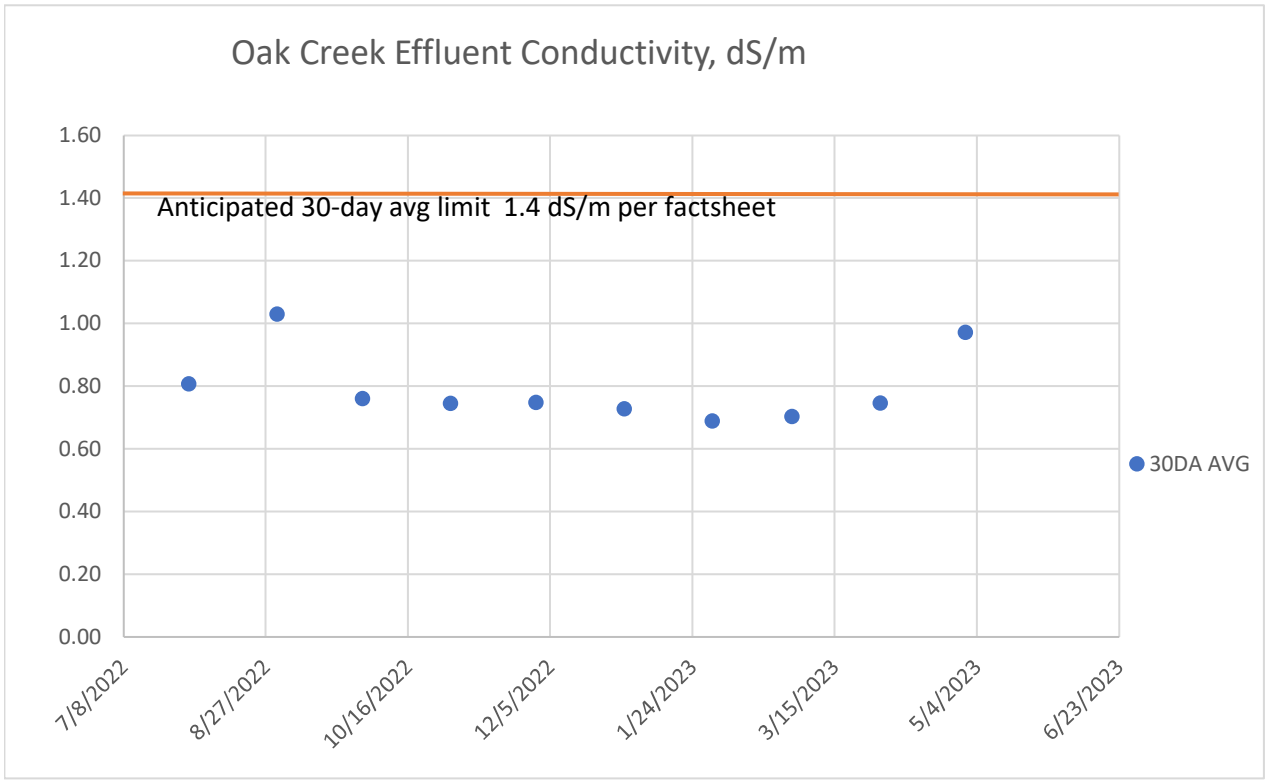

Oak Creek Effluent Total Recoverable Nickel, ug/L
Anticipated limit 126 ug/L per factsheet
3
2.5
2
1.5
1
0.5
0
10/31/2021
2/8/2022
5/19/2022
8/27/2022
12/5/2022
3/15/2023
6/23/2023
30DA AVG

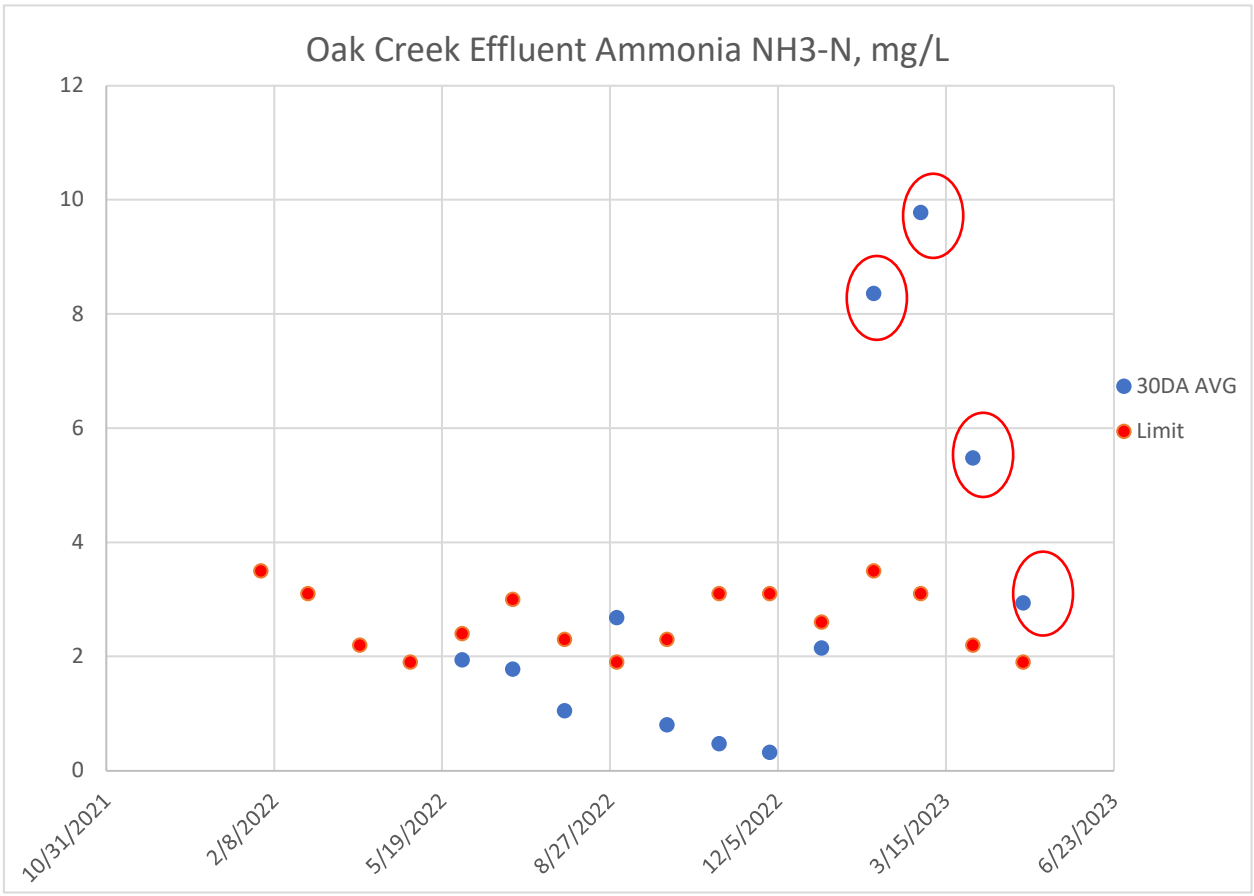

Oak Creek Effluent Potentially Dissolved Nickel, ug/L
Anticipated limit 137 ug/L per factsheet
2.5
2
1.5
1
0.5
0
10/31/2021
2/8/2022
5/19/2022
8/27/2022
12/5/2022
3/15/2023
6/23/2023
30DA AVG

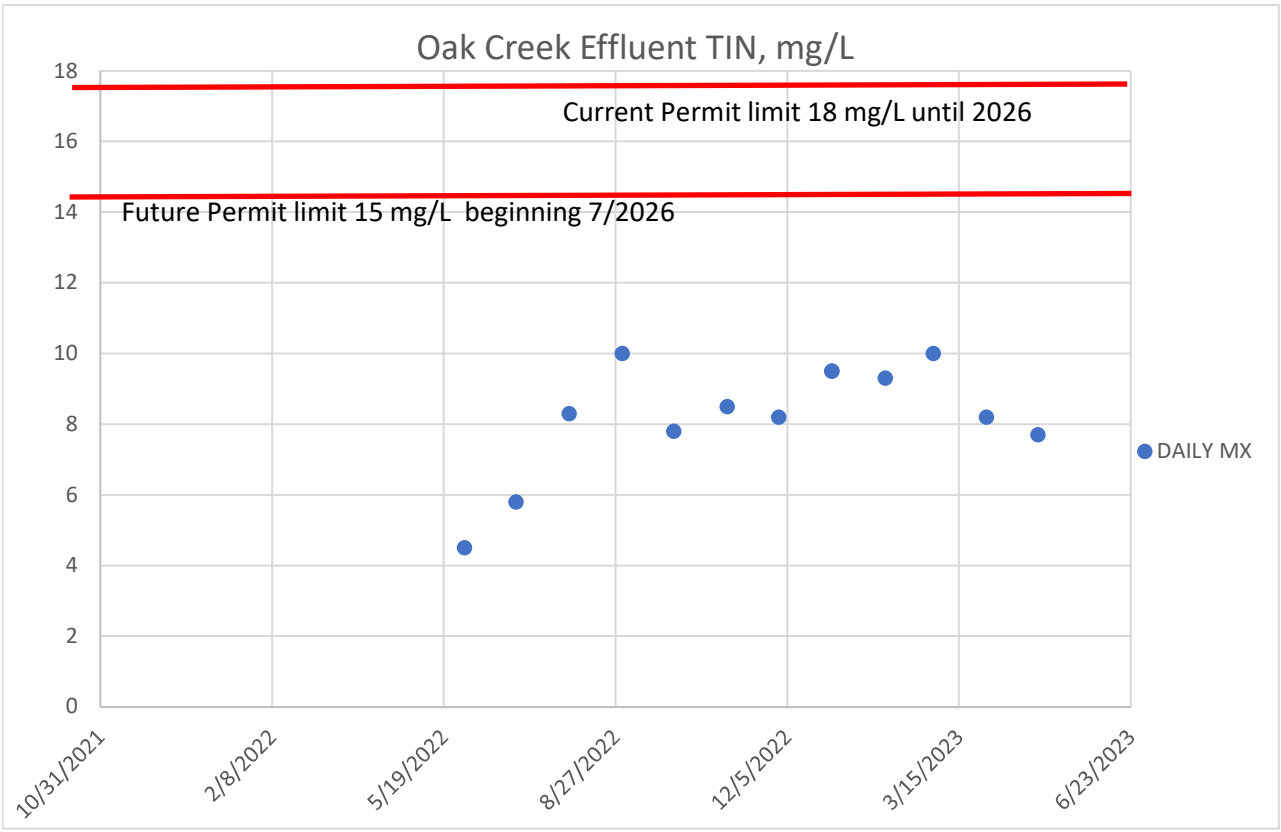

Oak Creek Effluent Potentially Dissolved Silver, ug/L
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
Anticipated limit 30-day 0.43 ug/L per factsheet
30DA AVG
Zero is non-detect
10/31/2021
2/8/2022
5/19/2022
8/27/2022
12/5/2022
3/15/2023
6/23/2023


Oak Creek Effluent Sulfide-hydrogen, mg/L
0.003
0.0025
0.002
0.0015
0.001
0.0005
0
Permit limit 0.0025 mg/L
30DA AVG
Effluent is non-detect so far
10/31/2021
2/8/2022
5/19/2022
8/27/2022
12/5/2022
3/15/2023
6/23/2023


Oak Creek Effluent Total Uranium, ug/L
Anticipated 30-day avg limit 30 ug/L per factsheet
2.5
2
1.5
1
0.5
0
10/31/2021
2/8/2022
5/19/2022
8/27/2022
12/5/2022
3/15/2023
6/23/2023
30DA AVG


Oak Creek Effluent Conductivity, dS/m
Anticipated 30-day avg limit 1.4 dS/m per factsheet
1.60
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
7/8/2022
8/27/2022
10/16/2022
12/5/2022
1/24/2023
3/15/2023
5/4/2023
6/23/2023
30DA AVG


Oak Creek Effluent Ammonia NH3-N, mg/L
12
10
8
6
4
2
0
10/31/2021
2/8/2022
5/19/2022
8/27/2022
12/5/2022
3/15/2023
6/23/2023
30DA AVG
Limit


Oak Creek Effluent TIN, mg/L
18
16
14
12
10
8
6
4
2
0
Current Permit limit 18 mg/L until 2026
Future Permit limit 15 mg/L beginning 7/2026
10/31/2021
2/8/2022
5/19/2022
8/27/2022
12/5/2022
3/15/2023
6/23/2023
DAILY MX

CERTIFICATION TO DISCHARGE UNDER CDPS GENERAL PERMIT COG589000
MINOR DOMESTIC WASTEWATER TREATMENT FACILITIES THAT DISCHARGE TO RECEIVING WATERS THAT ARE: UNCLASSIFIED; USE PROTECTED; REVIEWABLE; OR ARE DESIGNATED THREATENED AND ENDANGERED SPECIES HABITAT
Certification Number: **COG589159**

This Certification to Discharge specifically authorizes:

Town of Oak Creek to discharge from the facility identified as **Oak Creek WWTF to: Oak Creek**

Facility Type: Lagoon System
Facility Address: 129 Nancy Crawford Blvd, Oak Creek, CO 80467 Routt County
Facility Latitude/Longitude: 40.29083 Latitude N; -106.97722 Longitude W

Permitted Features:

Permitted Feature 001A External Outfall	40.29083 Latitude N; -106.97722 Longitude W following disinfection and prior to entering Oak Creek
Permitted Feature 300I Influent Structure	A representative location prior to chemical, physical, or biological treatment

The hydraulic and organic capacities in this certification are 0.25 MGD and 292 lbs. BOD_5/day, respectively. These values are based on Site Approval number 3714 for this WWTF.

Permit Limitations and Monitoring Requirements apply as outlined in the Permit Part I.B.1 for Classified Waters that are Use Protected; Reviewable; Or Are Designated Threatened And Endangered Species Habitat

Lagoon Facilities With Design Flows Of Less Than Or Equal To 0.5 MGD
Permitted Feature ID: 001A
Permitted Feature Type: External Outfall for Lagoon WWTF < or = 0.5 MGD
Limit Set: 3

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Lagoon Facilities with Design Flows Less Than or Equal to 0.5 MGD							
ICIS Code	Parameter	Limitation				Sampling	
		30-Day Avg.	7-Day Avg.	Daily Max.	2-year Avg.	Frequency	Type
50050	Flow, MGD	0.25 [1]		Report		Continuous [4]	Recorder [4]
00010	Temp. Daily Max. (°C) Apr-Oct			Report		Continuous	Recorder
	Temp. Daily Max. (°C) Nov-Mar			Report		Continuous	Recorder
	Temp. MWAT (°C) Apr-Oct		Report			Continuous	Recorder
	Temp. MWAT (°C) Nov-Mar		Report			Continuous	Recorder
00310	BOD_5, mg/l	30	45			Monthly	Grab
81010	BOD_5, percent removal [2]	85% (min)				Monthly	Calculated
00530	Total Suspended Solids, mg/l						
	Aerated Lagoons	75	110			Monthly	Composite
81011	TSS, percent removal [2]	85%				Monthly	Calculated
50060	Total Residual Chlorine, mg/l **until 9/30/2026**	0.015		0.024		Weekly	Grab
50060	Total Residual Chlorine, mg/l **beginning 10/1/2026**	0.011		0.019		Weekly	Grab
00640	Total Inorganic Nitrogen as N **until 6/30/2026**			18 mg/l		Monthly	Composite
00640	Total Inorganic Nitrogen as N **beginning 7/1/2026**			15 mg/l		Monthly	Composite
00640	Total Inorganic Nitrogen as N **beginning 1/1/2031**			13 mg/l		Monthly	Composite
00610	Total Ammonia, mg/l as N						
	January	3.5		8.5		Monthly	Grab
	February	3.1		7.5		Monthly	Grab
	March	2.2		4.9		Monthly	Grab
	April	1.9		4.1		Monthly	Grab
	May	2.4		5.3		Monthly	Grab
	June	3.0		7.1		Monthly	Grab
	July	2.3		6.4		Monthly	Grab
	August	1.9		5.3		Monthly	Grab
	September	2.3		5.8		Monthly	Grab
	October	3.1		7.4		Monthly	Grab
	November	3.1		7.4		Monthly	Grab
	December	2.6		6.0		Monthly	Grab
00400	pH, s.u.			6.5-9.0		Weekly	Grab
84066	Oil and Grease, mg/l			Report		Weekly	Visual
03582	Oil and Grease, mg/l			10		Contingent	Grab
51040	*E. coli*, no/100 ml	205	410			Monthly	Grab
70295	Total Dissolved Solids, mg/l [3]	Report [3]		Report [3]		Quarterly	Grab
00978	As, TR (µg/l) **until 12/31/2027**	Report				Monthly	Grab
00978	As, TR (µg/l) **beginning 1/1/2028**	0.02				Monthly	Grab
01309	As, Dis (µg/l)			Report		Monthly	Grab
01113	Cd, TR (µg/l)			Report		Monthly	Grab

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01313	Cd, Dis (µg/l)	Report		Report		Monthly	Grab
04262	Cr+3, TR (µg/l)			Report		Monthly	Grab
01314	Cr+3, Dis (µg/l)	Report				Monthly	Grab
01220	Cr+6, Dis (µg/l)	Report		Report		Monthly	Grab
01306	Cu, Dis (µg/l)	Report		Report		Monthly	Grab
00718	CN, Free (µg/l)			Report		Report	Grab
00980	Fe, TR (µg/l) **until 9/30/2026**	1136				Monthly	Grab
00980	Fe, TR (µg/l) **beginning 10/1/2026**	590				Monthly	Grab
01046	Fe, Dis (µg/l)	342				Quarterly	Grab
01114	Pb, TR (µg/l)			Report		Monthly	Grab
01318	Pb, Dis (µg/l)	Report		Report		Monthly	Grab
01319	Mn, Dis (µg/l) AQ	Report		Report		Quarterly	Grab
01056	Mn, Dis (µg/l), WS **until 9/30/2026**	217				Monthly	Grab
01056	Mn, Dis (µg/l), WS **beginning 10/1/2026**	125				Monthly	Grab
01129	Mo, TR (µg/l)	Report				Monthly	Grab
50286	Hg, Tot (µg/l) low level	Report				Quarterly	Grab
01074	Ni, TR (µg/l)	Report				Monthly	Grab
01322	Ni, Dis (µg/l)	Report		Report		Monthly	Grab
01323	Se, Dis (µg/l)	Report		Report		Monthly	Grab
01304	Ag, Dis (µg/l)	Report		Report		Monthly	Grab
22708	U, TR (µg/l)	Report				Monthly	Grab
01303	Zn, Dis (µg/l)	Report		Report	Report	Quarterly	Grab
00940	Chloride (mg/l)	Report				Monthly	Grab
51202	Sulfide as H_2S (mg/l)	0.0025				Monthly	Grab
81020	Sulfate (mg/l)	288				Monthly	Grab
11503	Radium 226 & 228, total (pCi/l)	Report				Quarterly	Grab
	WET, chronic [6]						
TKP6C	Static Renewal 7 Day Chronic *Pimephales promelas*			NOEC or IC25 $\geq$ IWC [5]		Quarterly	3 Grabs/ Test
TKP3B	Static Renewal 7 Day Chronic *Ceriodaphnia dubia*			NOEC or IC25 $\geq$ IWC [5]		Quarterly	3 Grabs/ Test
00918	Calcium (mg/l)	Report		Report		Monthly	Composite
00921	Magnesium (mg/l)	Report		Report		Monthly	Composite
00923	Sodium (mg/l)	Report		Report		Monthly	Composite
00440	Bicarbonate as HCO_3 (mg/l)	Report		Report		Monthly	Composite
00931	SAR calculated limit *	Report		Report		Monthly	Calculated
00931	Adjusted SAR effluent **	Report		Report		Monthly	Calculated
51613	SAR pass/fail ***	Report		Report		Monthly	Calculated
00094	EC (dS/m)	Report				Monthly	Composite

1 The 30-day average effluent limitation for flow as identified in this certification, is based on the hydraulic capacity of the facility as outlined in the most recent site approval, and is enforceable under this permit.

2 The % removal is based on the arithmetic mean of the BOD_5 and TSS concentrations for effluent samples collected during the DMR reporting period, and shall demonstrate a minimum of eighty-five percent (85%) removal of both

BOD_5 and TSS, as measured by dividing the respective difference between the mean influent and effluent concentrations for the DMR monitoring period by the respective mean influent concentration for the DMR monitoring period, and multiplying the quotient by 100.

3 TDS measurements only required when the discharge is in the Colorado River Basin. Samples are to be of the raw water supply. If more than one source is being utilized, a composite sample proportioned to flow shall be prepared from individual grab samples.

4 The monitoring frequency and sample type for effluent flow is specified in the certification and is fully enforceable under this permit. Mechanical type treatment facilities are required to have either influent or effluent flow measuring and recording devices. If only one device is applicable, then that device will be used to report both influent and effluent flow. However, where these devices are not in place at the time of certification, the permittee has one year from the end of the calendar month that certification was given to install the required equipment. Where such equipment is in place, the frequency and type of flow monitoring will be "Continuous" and "Recorder", respectively. Where such equipment is not in place, the frequency and type of flow monitoring, during the interim period, will be specified in the certification. For certain facilities, the use of a metered pumping rate or potable water use or may be allowed. In these cases, the monitoring frequency and sample type will be determined and specified in the certification.

5 IWC = 80%

6 See below for WET Testing reporting requirement and other details.

* This SAR limit is to be calculated using the actual measured EC value (30-day average) of the effluent and substituting this value in to the following equation to solve for SAR. The equation for determining the SAR limit is: SAR = (7.1 * EC)-2.48. This limitation is capped at 9.

** The SAR value of the effluent is to be reported as the adjusted SAR. See the definitions section below for information on calculating the adjusted SAR value.

**** The permittee shall compare the SAR value of the effluent (adjusted SAR) to this calculated SAR limitation and report as Pass/Fail whether the effluent SAR meets this value. If the SAR effluent value (adjusted SAR) is less than or equal to the calculated limit, then the permittee will report “Pass”; and if it is greater than the calculated limit, the permittee will report “Fail”.

Permitted Feature ID: 300I
Permitted Feature Type: Influent Structure for Lagoon WWTF < or = 0.5 MGD
Limit Set: 3

Lagoon Facilities With Design Flows Of Less Than Or Equal To 0.5 MGD						
ICIS Code	Parameter	Influent Monitoring			Monitoring Frequency	Sample Type
		30-Day Avg.	7-Day Avg.	Daily Max.		
50050G	Flow, MGD	Report		Report	Continuous [1]	Recorder [1]
00180G	Facility Capacity (% of Hydraulic Capacity) [2]	Report			Monthly	Calculated [2]
00310G	BOD_5, mg/l	Report	Report		Monthly	Composite
00310G	BOD_5, lbs/day	Report	Report		Monthly	Calculated
00180G	Facility Capacity ((% of Organic Capacity) [2]	Report			Monthly	Calculated [2]
70295G	Total Dissolved Solids [3]	Report			Quarterly	Composite
00530G	Total Suspended Solids, mg/l	Report	Report		Monthly	Composite

1 The monitoring frequency and sample type for effluent flow is specified in the certification and is fully enforceable under this permit. Lagoon type treatment facilities are typically required to have both influent and effluent flow measuring and recording devices. However, where these devices are not in place at the time of certification, the permittee has one year from the end of the calendar month that certification was given to install the required equipment. Where such equipment is in place, the frequency and type of flow monitoring will be "Continuous" and "Recorder", respectively. Where such equipment is not in place, the frequency and type of flow monitoring, during the interim period, will be specified in the certification. For certain facilities, the use of a metered pumping rate or potable water use or may be allowed. In these cases, the monitoring frequency and sample type will be determined and specified in the certification. For this facility, two flow recording devices are provided and are located at the point of inflow to and discharge from the treatment plant.

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2 The % capacity is to be reported against the listed capacities for the hydraulic capacity and for the organic capacities as noted in the Site Approval and as listed in this certification. The percentage should be calculated using the 30-day average values divided by the corresponding capacity, times 100.
3 TDS measurements only required when the discharge is in the Colorado River Basin. Samples are to be of the raw water supply. If more than one source is being utilized, a composite sample proportioned to flow shall be prepared from individual grab samples.

A. SPECIAL STUDY AND COMPLIANCE SCHEDULE(S)

a. Inflow/Infiltration Study – The permittee shall identify areas where I/I exists and begin reducing I/I in accordance with the following schedule.

Code	Event	Description	Due Date
04399	Inflow/Infiltration Report	Submit a plan that identifies sources of I/I and prioritizes repairs and rehabilitation to the collection system to correct I/I. The plan must be based on a study of the collection system, including video-inspection, that identifies the areas of the collection system that are contributing I/I. A report, summarizing the findings of the study, must be prepared by a professional engineer registered in Colorado, and must accompany the plan. The plan must include annual milestones that should correct I/I at 25% each year over the next four years beginning with elimination of the most significant contributions of I/I beginning first.	7/31/2022
04399	Inflow/Infiltration Report	Install water meters in all residences and create an inventory of residential sump pumps; submit a progress report to the division, including notification that water meters have been installed.	10/31/2022
04399	Inflow/Infiltration Report	Submit a progress report summarizing the progress in implementing the I/I control program, including notification that the first 25% of I/I targeted repairs have been completed.	10/31/2023
04399	Inflow/Infiltration Report	Video-inspect the residential sewer lines during spring runoff to identify areas of infiltration and reline sewers and seal manholes where inflow is identified. Submit a progress report to the division, including notification that sewers lines have been relined and manholes sealed as determined necessary by the findings of the video inspection.	6/30/2024
04399	Inflow/Infiltration Report	Submit a progress report summarizing the progress in implementing the I/I control program, including notification that 50% of I/I targeted repairs have been completed.	10/31/2024
04399	Inflow/Infiltration Report	Submit a progress report summarizing the progress in implementing the I/I control program, including notification that 75% of I/I targeted repairs have been completed.	10/31/2025
04399	Inflow/Infiltration Report	Submit final study results that indicate that 100% of I/I targeted repairs have been completed.	7/31/2026

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b. Activities to Meet Total Inorganic Nitrogen Alternative Effluent Limitation (AEL) – In order to meet Total Inorganic Nitrogen Alternative Effluent Limitation of 15 mg/l, the following schedule for construction (if deemed necessary by the permittee) are included in the permit.

Code	Event	Description	Due Date
CS010	Status/Progress Report	If daily max. T.I.N. effluent concentration is not equal to or less than 15 mg/l, begin implementing Phase II improvements. Submit a progress report to the division and a letter of notification that a Colorado licensed engineering consultant has been obtained and funding has been secured for planning aspects.	5/31/2022
CS011	Plan, Report, or Scope of Work	Submit a progress report in obtaining funding for design and construction aspects. Obtain approval from the division for Phase II improvements through Site Location Application Amendment (if appropriate). Submit an amendment application package in accordance with the provisions set forth in Section 22.10 in the Site Location and Design Regulations for Domestic Wastewater Treatment Works (Regulation No. 22, 5 CCR 1002-22).	1/31/2023
73905	Engineering Plan	Submit a letter of notification that funding has been obtained for design and construction aspects, and final plans specifications have been submitted to the Division. Note that a Site Application and a preliminary design must be submitted and approved by the Division prior to final plans and specifications.	8/31/2023
CS015	Commence Required Work or On-Site Construction	Submit a letter of notification that Final Design Approval has been received from the Division and construction has commenced.	1/31/2024
CS016	Complete Required Work or On-Site Construction	Complete construction of improvements. Submit progress report describing the appropriate actions the permittee is working towards in order to achieve the final limitations.	9/30/2024
CS011	Plan, Report, or Scope of Work	Submit a progress report that includes a description of appropriate actions that demonstrate that the permittee is working towards achieving the final limitations.	6/30/2025
CS017	Achieve Final Compliance with Emissions or Discharge Limits	Submit results that show compliance has been attained with the final limitations.	6/30/2026

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c. Activities to Meet Total Inorganic Nitrogen Final Limits – In order to meet Total Inorganic Nitrogen final limits of 13 mg/l, the following schedule for construction (if deemed necessary by the permittee) are included in the permit.

Code	Event	Description	Due Date
06599	Hire a Consultant/ Professional Engineer	If daily max. T.I.N. effluent concentration is not equal to or less than 13 mg/l, begin implementing the next stage of improvements. Submit a letter of notification that a Colorado licensed engineering consultant has been obtained and funding has been secured for planning aspects	6/30/2026
CS011	Plan, Report, or Scope of Work	Submit a progress report in obtaining funding for design and construction aspects.	6/30/2027
73905	Engineering Plan	Submit a letter of notification that funding has been obtained for design and construction aspects, and final plans specifications have been submitted to the Division. Note that a Site Application and a preliminary design must be submitted and approved by the Division prior to final plans and specifications.	6/30/2028
CS015	Commence Required Work or On-Site Construction	Submit a letter of notification that Final Design Approval has been received from the Division and construction has commenced.	6/30/2029
CS010	Status/Progress Report	Submit a construction progress report summarizing the progress in construction or other activities.	6/30/2030
CS016	Complete Required Work or On-Site Construction	Complete construction of facilities or other appropriate actions, which will allow the permittee to meet the final limitations.	12/31/2030

d. Activities to Meet Total Residual Chlorine, Total Recoverable Iron and Dissolved Manganese (Water Supply) Final Limits - In order to meet the limitations for the pollutants referenced above, the following schedule is included in the permit.

Code	Event	Description	Due Date
43699	Facility Evaluation Plan	Submit a report that identifies sources of total recoverable iron and dissolved manganese to the wastewater treatment facility and identifies strategies to control these sources or treatment alternatives such that compliance with the final limitations may be attained.	9/30/2022
00899	Implementation Schedule	Submit a progress report summarizing the progress in implementing the strategies to control sources such that compliance with the final limitations may be attained.	9/0/2023
00899	Implementation Schedule	Submit a progress report summarizing the progress in implementing the strategies to control sources such that compliance with the final limitations may be attained.	9/30/2024
00899	Implementation Schedule	Submit a progress report summarizing the progress in implementing the strategies to control sources such that compliance with the final limitations may be attained.	9/30/2025

CS017	Achieve Final Compliance with Emissions or Discharge Limits	Submit study results that show compliance has been attained with the final limitations.	9/30/2026

e. Activities to Meet Total Recoverable Arsenic Final Limits - In order to meet the limitations for total recoverable arsenic, the following schedule is included in the permit.

Code	Event	Description	Due Date
43699	Facility Evaluation Plan	Submit a report that identifies sources of the pollutants referenced above to the wastewater treatment facility and identifies strategies to control these sources or treatment alternatives such that compliance with the final limitations may be attained.	12/31/2025
00899	Implementation Schedule	Submit a progress report summarizing the progress in implementing the strategies to control sources such that compliance with the final limitations may be attained.	12/31/2026
CS017	Achieve Final Compliance with Emissions or Discharge Limits	Submit study results that show compliance has been attained with the final limitations.	12/31/2027

All documents required by this compliance schedule (except permit modification applications) must be submitted to the Division accompanied by a fully completed "Permit Narrative Conditions Form" available at https://cdphe.colorado.gov/wq-per-forms.

Regulation 61.8(3)(n)(i) states that a report shall be submitted to the Division no later than 14 calendar days following each date identified in the schedule of compliance. Consistent with 61.8(5)(b), the 14 days have already been incorporated into the above dates and therefore all reports are due on or before the date listed in the table.

B. CHRONIC WET TESTING AT OUTFALL 001B

a. General Chronic WET Testing and Reporting Requirements

The permittee shall conduct the chronic WET test using *Ceriodaphnia dubia* and *Pimephales promelas*, as a static renewal 7-day test using grab samples. The permittee shall conduct each chronic WET test in accordance with the 40 CFR Part 136 methods described in Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms, Fourth Edition, October 2002 (EPA-821-R-02-013) or the most current edition.

The following minimum dilution series should be used: 0% effluent (control), 20%, 40%, 80%, 90%, and 100% effluent. If the permittee uses more dilutions than prescribed, and accelerated testing is to be performed, the same dilution series shall be used in the accelerated testing (if applicable) as was initially used in the failed test.

Tests shall be done at the frequency listed above. Test results shall be reported along with the Discharge Monitoring Report (DMR) submitted for the end of the reporting period when the sample was taken. (i.e., WET testing results for the calendar quarter ending March 31 shall be reported with the DMR due April 28, etc.) The permittee shall submit all laboratory statistical summary sheets, summaries of the determination of a valid, invalid or inconclusive test, and copies of the chain of custody forms, along with the DMR for the reporting period. If a test is considered invalid, the permittee is required to perform additional testing during the monitoring period to obtain a valid test result. Failure to obtain a valid test result during the monitoring period shall result in a violation of the permit for failure to monitor.

b. Violations of the Permit Limit, Failure of One Test Statistical Endpoint and Division Notification

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A chronic WET test is considered a violation of a permit limitation when both the NOEC and the IC25, for the same sub-lethal endpoint are at any effluent concentration less than the IWC. This determination is made independently for each test species. The IWC for this permit has been determined to be **80**% effluent.

A chronic WET test is considered to have failed one of the two statistical endpoints when either the NOEC or the IC_{25} are at any effluent concentration less than the IWC. Simultaneous failure of both the NOEC and IC25 for both sub-lethal endpoints, when tests are performed on identical split samples, constitutes only a single violation of the Daily Maximum Effluent Limitation for Chronic WET specified in tpermit table above. The IWC for this permit has been determined to be 80% effluent.

In the event of a permit violation, or during a report only period when both the NOEC and the IC25 are at any effluent concentration less than the IWC, or when two consecutive reporting periods have resulted in failure of one of the two statistical endpoints (regardless of which statistical endpoints are failed), the permittee must provide written notification to the Division. Such notification should explain whether it was a violation or two consecutive failures of a single endpoint, and must indicate whether accelerated testing or a Toxicity Identification Evaluation or Toxicity Reduction Evaluation (TIE or TRE) is being performed, unless otherwise exempted, in writing, by the Division. **Notification must be received by the Division within 14 calendar days of the permittee receiving notice of the WET testing results.**

c. Automatic Compliance Response

The permittee is responsible for implementing the automatic compliance response provisions of this permit when one of the following occurs:

- there is a violation of the permit limit (both the NOEC and the IC25 endpoints are less than the applicable IWC)
- during a report only period when both the NOEC and the IC25 are at any effluent concentration less than the IWC
- two consecutive monitoring periods have resulted in failure of one of the two statistical endpoints (either the IC25 or the NOEC) , including during a report-only period. This determination is made independently for each test species.
- the permittee is otherwise informed by the Division that a compliance response is necessary

When one of the above listed events occurs, the following automatic compliance response shall apply. The permittee shall either:

- conduct accelerated testing using the single species found to be more sensitive
- conduct a Toxicity Identification Evaluation (TIE) or a Toxicity Reduction Evaluation (TRE) investigation as described below.

i. Accelerated Testing

If accelerated testing is being performed, testing will be at least once every two weeks for up to five tests with only one test being run at a time, using only the IC25 statistical endpoint to determine if the test passed or failed at the appropriate IWC. Accelerated testing shall continue until; 1) two consecutive tests fail or three of five tests fail, in which case a pattern of toxicity has been demonstrated or 2) two consecutive tests pass or three of five tests pass, in which case no pattern of toxicity has been found. Note that the same dilution series should be used in the accelerated testing as was used in the initial test(s) that result in the accelerated testing requirement. If accelerated testing is required due to failure of one statistical endpoint in two consecutive monitoring periods, and in both of those failures it was the NOEC endpoint that was failed, then the NOEC shall be the only statistical endpoint used to determined whether the accelerated testing passed or failed at the appropriate IWC. Note that the same dilution series should be used in the accelerated testing as was used in the initial test(s) that result in the accelerated testing requirement.

If no pattern of toxicity is found the toxicity episode is considered to be ended and routine testing is to resume. If a pattern of toxicity is found, a TIE/TRE investigation is to be performed. If a pattern of toxicity is not demonstrated but a significant level of erratic toxicity is found, the Division may require an increased frequency of routine monitoring or some other modified approach. The permittee shall provide written notification of the results within 14 calendar days of completion of the Pattern of Toxicity/No Toxicity demonstration.

ii. Toxicity Identification Evaluation (TIE) or Toxicity Reduction Evaluation (TRE)

If a TIE or a TRE is being performed, the results of the investigation are to be received by the Division within 180 calendar days of the demonstration chronic WET in the routine test, as defined above, or if accelerated testing was performed, the date the pattern of toxicity is demonstrated. A status report is to be provided to the Division at the 60 and 120 calendar day points of the TIE or TRE investigation. The Division may extend the time frame for

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investigation where reasonable justification exists. A request for an extension must be made in writing and received prior to the 180 calendar day deadline. Such request must include a justification and supporting data for such an extension.

Under a TIE, the permittee may use the time for investigation to conduct a preliminary TIE (PTIE) or move directly into the TIE. A PTIE consists of a brief search for possible sources of WET, where a specific parameter(s) is reasonably suspected to have caused such toxicity, and could be identified more simply and cost effectively than a formal TIE. If the PTIE allows resolution of the WET incident, the TIE need not necessarily be conducted in its entirety. If, however, WET is not identified or resolved during the PTIE, the TIE must be conducted within the allowed 180 calendar day time frame.

The Division recommends that the EPA guidance documents regarding TIEs be followed. If another method is to be used, this procedure should be submitted to the Division prior to initiating the TIE.
If the pollutant(s) causing toxicity is/are identified, and is/are controlled by a permit effluent limitation(s), this permit may be modified upon request to adjust permit requirements regarding the automatic compliance response.
If the pollutant(s) causing toxicity is/are identified, and is/are not controlled by a permit effluent limitation(s), the Division may develop limitations the parameter(s), and the permit may be reopened to include these limitations.

If the pollutant causing toxicity is not able to be identified, or is unable to be specifically identified, or is not able to be controlled by an effluent limit, the permittee will be required to perform either item 1 or item 2 below.
1) Conduct an investigation which demonstrates actual instream aquatic life conditions upstream and downstream of the discharge, or identify, for Division approval, and conduct an alternative investigation which demonstrates the actual instream impact. This should include WET testing and chemical analyses of the ambient water. Depending on the results of the study, the permittee may also be required to identify the control program necessary to eliminate the toxicity and its cost. Data collected may be presented to the WQCC for consideration at the next appropriate triennial review of the stream standards;
2) Move to a TRE by identifying the necessary control program or activity and proceed with elimination of the toxicity so as to meet the WET effluent limit.

If toxicity spontaneously disappears in the midst of a TIE, the permittee shall notify the Division within 10 calendar days of such disappearance. The Division may require the permittee to conduct accelerated testing to demonstrate that no pattern of toxicity exists, or may amend the permit to require an increased frequency of WET testing for some period of time. If no pattern of toxicity is demonstrated through the accelerated testing or the increased monitoring frequency, the toxicity incident response will be closed and normal WET testing shall resume. The control program developed during a TRE consists of the measures determined to be the most feasible to eliminate WET. This may happen through the identification of the toxicant(s) and then a control program aimed specifically at that toxicant(s) or through the identification of more general toxicant treatability processes. A control program is to be developed and submitted to the Division within 180 calendar days of beginning a TRE. Status reports on the TRE are to be provided to the Division at the 60 and 120 calendar day points of the TRE investigation.

If toxicity spontaneously disappears in the midst of a TRE, the permittee shall notify the Division within 10 calendar days of such disappearance. The Division may require the permittee to conduct accelerated testing to demonstrate that no pattern of toxicity exists, or may amend the permit to require an increased frequency for some period of time. If no pattern of toxicity is demonstrated through the accelerated testing or the increased monitoring frequency, the toxicity incident response will be closed and normal WET testing shall resume.

d. Toxicity Reopener
This permit may be reopened and modified to include additional or modified numerical permit limitations, new or modified compliance response requirements, changes in the WET testing protocol, the addition of both acute and chronic WET requirements, or any other conditions related to the control of toxicants.

C. DEFINITION OF TERMS - SAR AND ADJUSTED SAR

The equation for calculation of SAR-adj is:

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$$SAR\text{-}adj = \frac{Na^{+}}{\sqrt{\frac{Ca_{x} + Mg^{++}}{2}}}$$

Where:

Na+ = Sodium in the effluent reported in meq/l
Mg++ = Magnesium in the effluent reported in meq/l
Cax = calcium (in meq/l) in the effluent modified due to the ratio of bicarbonate to calcium

The values for sodium (Na+), calcium (Ca++), bicarbonate (HCO3-) and magnesium (Mg++) in this equation are expressed in units of milliequivalents per liter (meq/l). Generally, data for these parameters are reported in terms of mg/l, which must then be converted to calculate the SAR. The conversions are:

$$\text{meq/l} = \frac{Concentration\ in\ mg/l}{Equivalent\ weight\ in\ mg/meq}$$

Where the equivalent weights are determined based on the atomic weight of the element divided by the ion's charge:

Na+ = 23.0 mg/meq (atomic weight of 23, charge of 1)
Ca++ = 20.0 mg/meq (atomic weight of 40.078, charge of 2)
Mg++ = 12.15 mg/meq (atomic weight of 24.3, charge of 2)
HCO3- = 61 mg/mep (atomic weight of 61, charge of 1)

The EC and the HCO3 -/Ca++ ratio in the effluent (calculated by dividing the HCO3 - in meq/l by the Ca++ in meq/l) are used to determine the Cax using the following table.

Modified Calcium Determination for Adjusted Sodium Adsorption Ratio

HCO_3/Ca Ratio And EC 1, 2, 3													
Salinity of Effluent (EC)(dS/m)													
		0.1	0.2	0.3	0.5	0.7	1.0	1.5	2.0	3.0	4.0	6.0	8.0
Ratio of HCO_3/Ca	.05	13.20	13.61	13.92	14.40	14.79	15.26	15.91	16.43	17.28	17.97	19.07	19.94
	.10	8.31	8.57	8.77	9.07	9.31	9.62	10.02	10.35	10.89	11.32	12.01	12.56
	.15	6.34	6.54	6.69	6.92	7.11	7.34	7.65	7.90	8.31	8.64	9.17	9.58
	.20	5.24	5.40	5.52	5.71	5.87	6.06	6.31	6.52	6.86	7.13	7.57	7.91
	.25	4.51	4.65	4.76	4.92	5.06	5.22	5.44	5.62	5.91	6.15	6.52	6.82
	.30	4.00	4.12	4.21	4.36	4.48	4.62	4.82	4.98	5.24	5.44	5.77	6.04
	.35	3.61	3.72	3.80	3.94	4.04	4.17	4.35	4.49	4.72	4.91	5.21	5.45
	.40	3.30	3.40	3.48	3.60	3.70	3.82	3.98	4.11	4.32	4.49	4.77	4.98
	.45	3.05	3.14	3.22	3.33	3.42	3.53	3.68	3.80	4.00	4.15	4.41	4.61
	.50	2.84	2.93	3.00	3.10	3.19	3.29	3.43	3.54	3.72	3.87	4.11	4.30
	.75	2.17	2.24	2.29	2.37	2.43	2.51	2.62	2.70	2.84	2.95	3.14	3.28
	1.00	1.79	1.85	1.89	1.96	2.01	2.09	2.16	2.23	2.35	2.44	2.59	2.71
	1.25	1.54	1.59	1.63	1.68	1.73	1.78	1.86	1.92	2.02	2.10	2.23	2.33
	1.50	1.37	1.41	1.44	1.49	1.53	1.58	1.65	1.70	1.79	1.86	1.97	2.07
	1.75	1.23	1.27	1.30	1.35	1.38	1.43	1.49	1.54	1.62	1.68	1.78	1.86
	2.00	1.13	1.16	1.19	1.23	1.26	1.31	1.36	1.40	1.48	1.54	1.63	1.70
	2.25	1.04	1.08	1.10	1.14	1.17	1.21	1.26	1.30	1.37	1.42	1.51	1.58
	2.50	0.97	1.00	1.02	1.06	1.09	1.12	1.17	1.21	1.27	1.32	1.40	1.47
	3.00	0.85	0.89	0.91	0.94	0.96	1.00	1.04	1.07	1.13	1.17	1.24	1.30

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	3.50	0.78	0.80	0.82	0.85	0.87	0.90	0.94	0.97	1.02	1.06	1.12	1.17
	4.00	0.71	0.73	0.75	0.78	0.80	0.82	0.86	0.88	0.93	0.97	1.03	1.07
	4.50	0.66	0.68	0.69	0.72	0.74	0.76	0.79	0.82	0.86	0.90	0.95	0.99
	5.00	0.61	0.63	0.65	0.67	0.69	0.71	0.74	0.76	0.80	0.83	0.88	0.93
	7.00	0.49	0.50	0.52	0.53	0.55	0.57	0.59	0.61	0.64	0.67	0.71	0.74
	10.00	0.39	0.40	0.41	0.42	0.43	0.45	0.47	0.48	0.51	0.53	0.56	0.58
	20.00	0.24	0.25	0.26	0.26	0.27	0.28	0.29	0.30	0.32	0.33	0.35	0.37
	30.00	0.18	0.19	0.20	0.20	0.21	0.21	0.22	0.23	0.24	0.25	0.27	0.28

[1] Adapted from Suarez (1981)
[2] Assumes a soil source of calcium from lime ($CaCO_3$) or silicates; no precipitation of magnesium, and partial pressure of CO_2 near the soil surface (PCO_2) is 0.0007 atmospheres
[3] Cax, HCO_3, Ca are reported in meq/l; EC is in dS/m (deciSiemens per meter)

Because values will not always be quantified at the exact EC or HCO_3^- /Ca^{++} ratio in the table, the resulting Cax must be determined based on the closest value to the calculated value. For example, for a calculated EC of 2.45 dS/m, the column for the EC of 2.0 would be used. However, for a calculated EC of 5.1, the corresponding column for the EC of 6.0 would be used. Similarly, for a HCO_3^- /Ca^{++} ratio of 25.1, the row for the 30 ratio would be used.

The Division acknowledges that some effluents may have electrical conductivity levels that fall outside of this table, and others have bicarbonate to calcium ratios that fall outside this table. For example, some data reflect HCO_3^- /Ca^{++} ratios greater than 30 due to bicarbonate concentrations reported greater than 1000 mg/l versus calcium concentrations generally less than 10 mg/l (i.e., corresponding to HCO_3^- /Ca^{++} ratios greater than 100). Despite these high values exceeding the chart's boundaries, it is noted that the higher the HCO_3^- /Ca^{++} ratio, the greater the SAR-adj. Thus, using the Cax values corresponding to the final row containing bicarbonate/calcium ratios of 30, the permittee will actually calculate an SAR-adj that is less than the value calculated if additional rows reflecting HCO_3^- /Ca^{++} ratios of greater than 100 were added.

Certification issued 10/29/2021 **Effective** 11/1/2021
Expiration Date: This authorization expires upon effective date of the General Permit COG589000 renewal unless otherwise notified by the division.

ADMINISTRATIVELY CONTINUED

This certification under the permit requires that specific actions be performed at designated times. The certification holder is legally obligated to comply with all terms and conditions of the permit.

Approved by
Michelle DeLaria
Permits Unit Manager
Water Quality Control Division

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COLORADO
Water Quality Control Division
Department of Public Health & Environment

Attachment 4 - Permit COG589159 Factsheet

Dedicated to protecting and improving the health and environment of the people of Colorado

David Torgler, Town Administrator
Town of Oak Creek
PO Box 128
Oak Creek, CO 80467

Memorandum

TO: Town of Oak Creek, David Torgler, david@townofoakcreek.com

FROM: Permit Writer, Ana Ruiz, ana.ruiz@state.co.us, 303-692-6273
or Debbie Jessop 303-692-3590

DATE: 10/29/2021

RE: Certification, Colorado Discharge Permit System – Domestic Wastewater Treatment Facilities that Discharge to Waters that are Unclassified; Use Protected; Reviewable; Or Are Designated Threatened And Endangered Species Habitat, Permit Number COG589000. Certification Number: COG589159
Discharging to **Oak Creek** of **Segment COUCYA07**

ATTACHMENTS:
Certification COG589159 (previous CDPS permit CO0041106)
CDPS General Permit for Domestic Wastewater Treatment Facilities that Discharge to Waters that are Unclassified; Use Protected; Reviewable; Or Are Designated Threatened And Endangered Species Habitat

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The Water Quality Control Division (the Division) has reviewed the application submitted for the Oak Creek WWTF facility and determined that it qualifies for coverage under the CDPS General Permit for Domestic Wastewater Treatment Facilities that Discharge to Waters that are Unclassified; Use Protected; Reviewable; Or Are Designated Threatened And Endangered Species Habitat.

Attached is your certification to discharge under which was issued under the Colorado Water Quality Control Act. **Please read the enclosed permit, fact sheet and certification as well as this letter, which outline the requirements under this permit, and the explanation of how certain limitations were developed.** The Division holds the permittee legally liable for all permit requirements.

Facility Information:

- **Treatment Facility Description**

  The facility consists of a bar screen headworks, an anaerobic cell, a large aerobic pond divided into three smaller cells by baffle curtains, a settling pond, Moving Bed Bioreactor (MBBR), and a disinfection chamber.

  Wastewater treatment is accomplished using a hybrid process of aerated lagoons and mechanical treatment, with the MBBR used for ammonia removal. Because the lagoon is the primary treatment used for TSS removal, TSS requirements for lagoons are included in the permit certification. The Oak Creek WWTF receives filter backwash form the drinking water plant, as confirmed by the permittee by email to the division on 2/11/2021.

  Pursuant to Section 100.5.2 of the Water and Wastewater Facility Operator Certification Requirements, this facility will require a certified operator. If the facility has a question on the level of the certified operator it needs, the facility may contact the Engineering Section of the Water Quality Control Division.

The hydraulic and organic capacities, applicable to Part I.A.2 of the general permit, are 0.25 MGD and 292 lbs. BOD_5/day, respectively. These values are based on Site Approval number 3714 for this facility.

- **Discharge Specific Variance for Total Inorganic Nitrogen**

A discharger specific variance for the Town of Oak Creek WWTF for T.I.N. was adopted by the Water Quality Control Commission (WQCC) on December 14, 2020. The alternative effluent limitation (AEL) for T.I.N. is 15 mg/l (acute) and has an expiration date of 6/30/2026. Regulation 33.6(c).

A DSV represents the highest attainable condition that is feasible for the discharger to achieve during the term of the variance. A DSV establishes a temporary water quality standard that maintains the long-term water quality goal of fully protecting all classified uses, while temporarily authorizing an alternative effluent limit (AEL) to be developed for a specific pollutant and specific point source discharge where compliance with the water quality-based effluent limit (WQBEL) is not feasible. At a minimum, DSVs must protect existing uses (Regulation 31.7(4)(b)) and may not result in any lowering of the currently attained ambient water quality (40 CFR § 131.14(b)(ii)).

Additionally, in accordance with Regulation 31.9(5)(a), a discharger specific variance must comply with an initial effluent limitation which, at a minimum, must represent the level currently achieved at the time the variance is approved.

Reg. 33.66(A), Statement of Basis and Purpose states: "At the re-evaluation of this DSV at the 2024 Upper Colorado Basin rulemaking hearing, the commission will review the Town of Oak Creek's progress towards achieving the alternative effluent limit, and will determine whether the requirements of the DSV continue to be the highest attainable condition. The requirements of the DSV will be reviewed during the re-evaluation rulemaking hearing, and will either remain as the AEL identified at the time of the adoption of the variance or be modified to reflect the highest attainable condition. Because there is significant uncertainty in the final effluent quality that will be achieved, the Town of Oak Creek will collect additional data to characterize the effectiveness of treatment and may request a hearing before the commission to modify the DSV before it is re-evaluated or expires. If it remains infeasible for the Town of Oak Creek to achieve TIN WQBELs at the end of the variance, a subsequent DSV may be appropriate." The DSV may be adjusted by the Commission as new information becomes available. This DSV will be reviewed at the Upper Colorado basin rulemaking hearing in June 2024.

Upon expiration of the DSV on June 30, 2026 and in the event that the DSV is not renewed, a compliance schedule is set to begin in order to meet the daily max. WQBEL-based limitation of 13 mg/l.

As described in the Division's Prehearing Statement-Exhibit C (dated 12/14/2020), "(t)he Town of Oak Creek WWTF currently exceeds its design capacity one or two months per year, due to excess inflow. Excess flows reduce the hydraulic residence time in the treatment plant, which hinders treatment performance. For this reason, the town also needs to invest in repairs to the collection system to reduce infiltration and inflow… The division recommends prioritizing limited resources toward reducing infiltration and inflow first, which will make it more economically feasible to upgrade treatment to achieve T.I.N. permit limits."

Exhibit C also includes the flowing information: "There are three goals to be achieved during the term of the variance: 1) to meet the highest attainable condition by reducing TIN as much as feasible; 2) to make progress toward ultimately achieving the underlying standard by reducing infiltration and inflow, which will make additional treatment more economically feasible; and 3) to complete a pilot/demonstration project that, if successful, could be a low-cost strategy utilized by other communities with similar treatment plants. In addition, the requirements for the proposed DSV will not result in any lowering of currently attained ambient water quality.

In order to implement the selected alternatives approved by the Commission, the following conditions have been included in the permit certification and in this fact sheet:

1. An Infiltration/Inflow study and reduction requirement
2. An interim (initial) T.I.N. limitation of 18 mg/l (highest effluent concentration) to maintain current conditions
3. A compliance schedule to meet the Alternative Effluent Limit of 15 mg/l established in the DSV
4. A compliance schedule to meet the T.I.N. daily max. WQBEL of 13 mg/l, set to begin at the expiration date of the DSV
5. Timeline of interim milestones and sampling activities for Phase I and Phase II of the selected alternative, including annual reporting requirements (in fact sheet)

- **Chemical Usage**

  The application identified the following chemicals which are added during or after the treatment process. The MSDS sheets, along with additional toxicity information, have been reviewed and the following chemicals have been approved for use.

List of Chemicals		
Chemical Name	**Purpose**	**Constituents of Concern**
Sodium Hypochlorite	Disinfection	TRC, pH, TDS
Sulfur Dioxide	Dechlorination	pH, sulfate, sulfide

  On 4/26/2021, the facility submitted a chemical evaluation application for Sodium Hypochlorite and Sulfur Dioxide. The facility submitted chronic Whole Effluent Toxicity testing results for these two chemicals on 4/14/2021. An updated application was submitted to the division on 5/11/2021.The application submitted on 5/11/2021 includes Safety Data Sheets for Sodium Hypochlorite and Sulfur Dioxide. The division requested additional information regarding the expected effluent concentrations of the chemicals proposed for use. For Sodium Hypochlorite, the facility subsequently submitted an amended application on 9/22/2021 (dated 9/21/2021) that stated the expected effluent concentration of chlorine (<0.02 mg/l). For Sulfur Dioxide, the facility submitted an amended application on 10/18/2021 that stated the expected effluent concentration of sulfide (<0.02 mg/l) and sulfate (25 mg/l). The analysis conducted in the following evaluation is based on the expected effluent concentrations specified above and listed on the applications dated 9/21/2021 and 10/18/2021.

  Sodium hypochlorite in the effluent may decrease pH and increase chlorine concentration, therefore these are considered a pollutants of concern for this facility. Chlorine, pH, and TDS are constituents of concern addressed in the permit and are not further evaluated in this fact sheet.

  Sulfur dioxide in the effluent may decrease pH in the receiving stream, therefore it is considered a pollutant of concern for this facility. There are permit limitations in place for pH, therefore this parameter is not further evaluated in this fact sheet. However, excess dosing of sulfur dioxide may produce excess sulfide, which can react with dissolved oxygen to produce sulfates. Sulfate and sulfide are parameters regulated by the division for stream segments classified for water supply use.

  Chronic WET testing toxicity reports for *Ceriodaphnia dubia* and *Pimephales promelas* were provided to the division. According to information provided by the permittee, WET tests were performed using effluent that had been dosed with sodium hypochlorite and sulfur dioxide at the dosing rates specified in the application.

  Based on the passing WET test results, sodium hypochlorite and sulfur dioxide are approved for use at the dosage rate and expected effluent concentrations specified in the chemical evaluation applications (dated 9/21/2021 and 10/18/2021), and in accordance with the manufacturer's site-specific instructions, the appropriate control measures, and the narrative standard in Regulation 31.11(1) that "state surface waters shall be free from substances attributable to human-caused point source or nonpoint source discharge in amounts, concentrations or combinations … which are harmful to the beneficial uses or toxic to humans, animals, plants, or aquatic life."

  Chemicals deemed acceptable for use in waters that will or may be discharged to waters of the State are acceptable only when used in accordance with all state and federal regulations, and in strict accordance with the manufacturer's site-specific instructions.

- **Lift Stations**

  There are no lift stations in the service area.

- **Compliance Review**

  A review of the previous permit monitoring history from the previous permit term (June 2015 through December 2020) indicates exceedances of the following permit limits:

  Effluent Flow – The permitted effluent flow was exceeded in April 2016, May 2016, April 2018, April 2019, and June 2019. There was no communication to the division during the previous permit term that explained the cause of

these exceedances. However, the facility has been carrying out efforts to reduce Infiltration/Inflow in the collection system and not exceed its approved design capacity, as stated in the WQCD Final Report Exhibit C, *Evidence in Support of a Discharger Specific Variance for the Town of Oak Creek for Nitrate*.

Total Inorganic Nitrogen – T.I.N. concentrations in the discharge were exceeded in August 2016, January 2020, February 2020, July 2020, and November 2020. In a letter to the division (dated November 10, 2016), the permittee communicated that the facility was putting into action a process to denitrify the effluent.

Note that the Discharge Specific Variance for T.I.N. was approved by the WQCC on December 14, 2020.

In accordance with 40 CFR Part 122.41(a), any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

Basis of Certification Limitations:

- **Stream Segment Information**
  The discharge is to the Oak Creek, within Segment 07 of the Yampa Sub-basin, Upper Colorado and North Platte River Basin, found in the Classifications and Numeric Standards for the Upper Colorado and North Platte River Basin (Regulation No. 33). Segment COUCYA07 is reviewable and is classified for the following beneficial uses: Recreation Class P, Aquatic Life Cold 1, Water Supply, and Agriculture.

  Low Flow Determination

  The Colorado Regulations specify the use of low flow conditions when establishing water quality based effluent limitations, specifically the acute and chronic low flows. The acute low flow, referred to as 1E3, represents the one-day low flow recurring in a three-year interval, and is used in developing limitations based on an acute standard. The chronic low flow, 30E3, represents the 30-day average low flow recurring in a three-year interval, and is used in developing limitations based on a chronic standard.

  To determine the low flows available to the Oak Creek WWTF, a flow gage measurement upstream of the facility should be used. However, no flow gages are available on Oak Creek upstream of the facility. Since flow data upstream from the Oak Creek WWTF is not available, the analysis conducted in the previous permit was referred to in this permit renewal. The division also conducted a watershed ratio with flow data from USGS Station 09239500 (Yampa River at Steamboat Springs, CO), located on Oak Creek approximately 20 miles downstream from the facility, for a period of record from 1/1/2000 to 7/12/2021. The local water commissioner was contacted for additional information on the low flows for Oak Creek upstream of the facility. Diversion ditches located upstream from the Oak Creek WWTF may divert most stream flows during the irrigation season (June- August). For these months the division determined a low flow of 0.1 cfs.

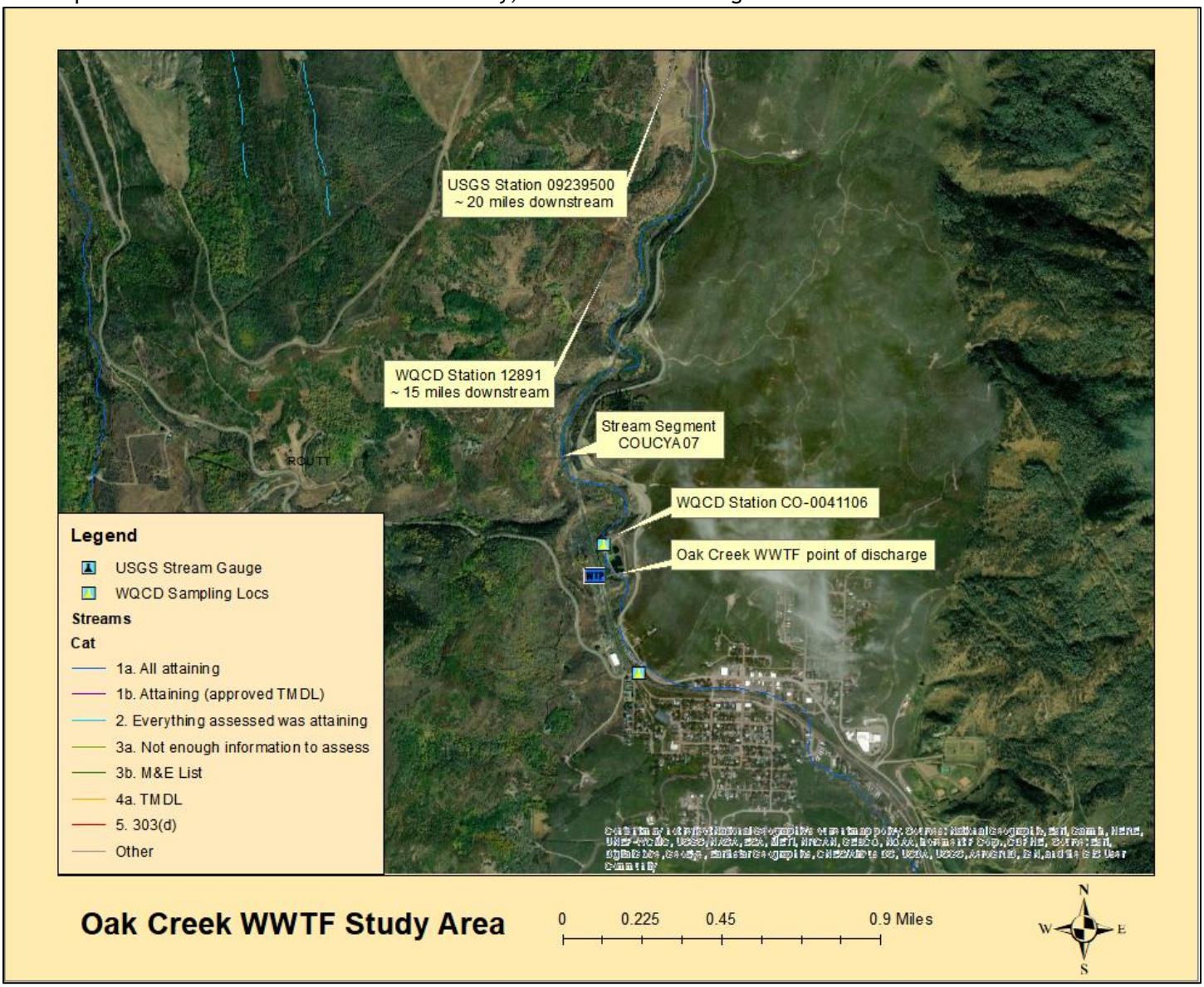
  The Oak Creek WWTF may choose to record continuous stream flows upstream of the facility discharge so that a low flow determination using upstream gage data can be conducted at a future analysis. Based on the low flow analysis described previously, the upstream low flows available to the Oak Creek WWTF are presented in Table 1.

Table 1
Low Flows for Oak Creek at the Oak Creek WWTF

Low Flow (cfs)	*Annual*	*Jan*	*Feb*	*Mar*	*Apr*	*May*	*Jun*	*Jul*	*Aug*	*Sep*	*Oct*	*Nov*	*Dec*
1E3 Acute	0.1	1.0	1.0	1.0	3.0	3.0	0.1	0.1	0.1	1.5	2.0	2.0	1.0
7E3 Chronic	0.1	1.0	1.0	1.0	3.0	3.0	0.1	0.1	0.1	1.5	2.0	2.0	1.0
30E3 Chronic	0.1	1.0	1.0	1.0	3.0	3.0	0.1	0.1	0.1	1.5	2.0	2.0	1.0

The ratio of the 30E3 low flow of Oak Creek to the Oak Creek WWTF design flow is 0.26:1.

The map below includes the location of the facility, stations and receiving stream.



- **Technology Based Standards**

The limitations for Total Ammonia, Total Residual Chlorine (TRC), and *E. coli* for this certification were determined as outlined in Part I.B.1 of the general permit.

The limitations for BOD_5, oil and grease and total suspended solids are from Regulation 62, which apply to all discharges that would be covered under this General Permit. Additionally, the percent removal requirements for BOD_5 and TSS apply as noted in Part I.B.1 of the general permit.

WQCC Regulation No. 85, the new Nutrients Management Control Regulation, includes technology based effluent limitations for total inorganic nitrogen and total phosphorus that currently, or will in the future, apply to many domestic wastewater discharges to State surface waters. These effluent limits for dischargers are to start being implemented in permitting actions as of July 1, 2013, and are shown in the two tables below:

Effluent Limitations Table at 85.5(1)(a)(iii)
For all Domestic Wastewater Treatment Works not identified in subsections (a)(i) or (ii) (in Reg. 85) and discharging prior to May 31, 2012 or for which a complete request for preliminary effluent limits has been submitted to the Division prior to May 31, 2012, the following numeric limits shall apply:

Parameter	Parameter Limitations	
	Annual Median [1]	95th Percentile [2]
Total Phosphorus	1.0 mg/l	2.5 mg/l
Total Inorganic Nitrogen[3]	15 mg/l	20 mg/l

1 Running Annual Median: The median of all samples taken in the most recent 12 calendar months.
2 The 95th percentile of all samples taken in the most recent 12 calendar months.
3 Determined as the sum of nitrate as N, nitrite as N, and ammonia as N.

Effluent Limitations Table at 85.5(1)(b)
For New Domestic Wastewater Treatment Works which submit a complete request for preliminary effluent limits to the Division on or after May 31, 2012, the following numeric limits shall apply:

Parameter	Parameter Limitations	
	Annual Median [1]	95th Percentile [2]
Total Phosphorus	0.7 mg/l	1.75 mg/l
Total Inorganic Nitrogen[3]	7 mg/l	14 mg/l

1 Running Annual Median: The median of all samples taken in the most recent 12 calendar months.
2 The 95th percentile of all samples taken in the most recent 12 calendar months.
3 Determined as the sum of nitrate as N, nitrite as N, and ammonia as N.

Requirements in Reg. 85 also apply to non-domestic wastewater for industries in the Standard Industrial Class 'Major Group 20,' and any other non-domestic wastewater where the facility is expected, without treatment, to discharge total inorganic nitrogen or total phosphorus concentrations in excess of the numeric limits listed in 85.5 (1)(a)(iii). The facility must investigate, with the Division's approval, whether different considerations should apply.

All permit actions based on this fact sheet will occur after the July 1, 2013 permit implementation date of Reg. 85. Therefore, total inorganic nitrogen and total phosphorus effluent limitations potentially imposed because of Reg. 85 must be considered. However, also based on Reg. 85, there are direct exemptions from these limitations for smaller domestic facilities that discharge less than or equal to 1 million gallons per day (MGD), or are a domestic facility owned by a disadvantaged community.

Delayed implementation (until 12/31/2027) is also specified in Reg. 85 to occur for domestic WWTFs that discharge more than 1 MGD, and less than or equal to 2.0 MGD, or have an existing watershed control regulations (such as WQCC Reg.'s 71-74), or where the discharge is to waters in a low-priority 8-digit HUC.

For all other larger domestic WWTFs, the nutrient effluent limitations from the two tables above will apply, unless other considerations allowed by Reg. 85 at 85.5(3) are utilized to show compliance with exceptions or variances to these limitations.

The Division will consider this WWTF to be an existing WWTF, as this facility was discharging and permitted prior to May 31, 2012. Also, since the design capacity of the Oak Creek WWTF is 0.25 MGD, the facility is not currently required to address the new technology based effluent limits as of 7/1/2013.

However, the Division does not intend these results to discourage the Oak Creek WWTF from working on nutrient control with the other dischargers within the Yampa River watershed. These dischargers upstream and downstream of the Oak Creek WWTF have the potential to create future nutrient issues in Oak Creek. The Division encourages these entities to all work together to create the most efficient and cost effective solutions for nutrient control in the Yampa River watershed.

- **Water Quality Standards**

Limitations for metals and inorganics are based on the water quality standards specific to stream segment COUCYA07. For organic parameters, the aquatic life, water supply, and water + fish limits will be applied.

Metals
Note that for many of the metals, the standards relate to the hardness of the receiving stream. Hardness data for Oak Creek were obtained from WQCD Station 12891 (Oak Creek at 22 Rd Abv Yampa River), located on Oak Creek approximately 15 miles downstream from the Oak Creek WWTF, for a period of record from March 2010 through April 2012. The mean hardness is 241 mg/l, based on 7 samples, with the TVS calculations provided in Table 2.

Table 2 **TVS-Based Metals Water Quality Standards for COG589159** Based on the Table Value Standards Contained in the Colorado Department of Public Health and Environment Water Quality Control Commission *Regulation 33*			
Parameter	***In-Stream Water Quality Standard***		***TVS Formula: Hardness (mg/l) as CaCO3 = 241***
Cadmium, Dissolved	Acute	5.9 µg/l	$[1.136672-0.041838\ln(\text{hardness})]e^{(0.9151(\ln(\text{hardness}))-3.1485)}$
	Acute	3.7 µg/l	$[1.136672-0.041838\ln(\text{hardness})]e^{(0.9151(\ln(\text{hardness}))-3.6236)}$
	Chronic	0.82 µg/l	$[1.101672-0.041838\ln(\text{hardness})]e^{(0.7998(\ln(\text{hardness}))-4.4451)}$
Trivalent Chromium, Dissolved	Acute	1171 µg/l	$e^{(0.819(\ln(\text{hardness}))+2.5736)}$
	Chronic	152 µg/l	$e^{(0.819(\ln(\text{hardness}))+0.5340)}$
Hexavalent Chromium, Dissolved	Acute	16 µg/l	Numeric standards provided, formula not applicable
	Chronic	11 µg/l	Numeric standards provided, formula not applicable
Copper, Dissolved	Acute	31 µg/l	$e^{(0.9422(\ln(\text{hardness}))-1.7408)}$
	Chronic	19 µg/l	$e^{(0.8545(\ln(\text{hardness}))-1.7428)}$
Lead, Dissolved	Acute	166 µg/l	$[1.46203-0.145712\ln(\text{hardness})][e^{(1.273(\ln(\text{hardness}))-1.46)}]$
	Chronic	6.5 µg/l	$[1.46203-0.145712\ln(\text{hardness})][e^{(1.273(\ln(\text{hardness}))-4.705)}]$
Manganese, Dissolved, AQ	Acute	4002 µg/l	$e^{(0.3331(\ln(\text{hardness}))+6.4676)}$
	Chronic	2211 µg/l	$e^{(0.3331(\ln(\text{hardness}))+5.8743)}$
Nickel, Dissolved	Acute	985 µg/l	$e^{(0.846(\ln(\text{hardness}))+2.253)}$
	Chronic	109 µg/l	$e^{(0.846(\ln(\text{hardness}))+0.0554)}$
Selenium, Dissolved	Acute	18.4 µg/l	Numeric standards provided, formula not applicable
	Chronic	4.6 µg/l	Numeric standards provided, formula not applicable
Silver, Dissolved	Acute	9.2 µg/l	$\frac{1}{2}\ e^{(1.72(\ln(\text{hardness}))-6.52)}$
	Chronic	0.34 µg/l	$e^{(1.72(\ln(\text{hardness}))-10.51)}$
Uranium, Dissolved	Acute	6333 µg/l	$e^{(1.1021(\ln(\text{hardness}))+2.7088)}$
	Chronic	3956 µg/l	$e^{(1.1021(\ln(\text{hardness}))+2.2382)}$
Zinc, Dissolved	Acute	303 µg/l	$0.978e^{(0.8525(\ln(\text{hardness}))+1.0617)}$
	Chronic	775 µg/l	$e^{(2.140(\ln(\text{hardness}))-5.084)}$

Total Inorganic Nitrogen

According to the Rationale for *Classifications, Standards and Designations of the Upper Colorado River Basin and North Platte River*, stream segment COUCYA07 is designated a water supply.

Effective December 31, 2022 Regulation 31 requires implementation of a nitrate water supply standard of 10 mg/l (as Total Inorganic Nitrogen) in segment COUCYA07, regardless of the presence or the location of domestic water supply wells within the segment. This is based on the results of the June 2016 Water Quality Control Commission (WQCC) hearing, during which the WQCC repealed footnote 4 to Table II (Inorganic Parameters) of Regulation 31 with an effective date of December 31, 2022. The removal of footnote 4 will result in a requirement to calculate permit limits to implement the nitrate water supply standard of 10 mg/l for any discharge to a segment designated as water supply, and to apply the standard either at the point of discharge or, where a mixing zone is allowable, at the end of the mixing zone. The WQCC chose the delayed effective date to allow time to thoroughly evaluate the receiving water below outfalls to determine whether there is an actual existing Water Supply use and to propose modifications of the segments or standards, if warranted.

An evaluation of the Division of Water Resources Colorado's Decision Support System and other mapping resources indicates that there is least one drinking water well and/or surface water intakes identified on Oak Creek that are used for water supply located downgradient from the facility discharge location, as follows:

Well Permit No.	Description
119352	Domestic use, depth 12 ft.; well located approximately 15 ft. from Oak Creek and 5 miles downstream from the Oak Creek WWTF

Thus, the T.I.N. standard is further evaluated in this analysis. Note that the previous permit (issued 4/30/2015) included a numeric limitation for T.I.N.

T.I.N. Discharge Specific Variance (DSV)
As described above, a discharger specific variance for the Town of Oak Creek WWTF for T.I.N. was adopted by the Water Quality Control Commission on December 14, 2020. The AEL for T.I.N. is 15 mg/l (daily max.). In accordance with Regulation 31.9(5)(a), a DSV must comply with an initial (interim) effluent limitation which, at a minimum, must represent the level currently achieved at the time the variance is approved. Effluent data submitted by the Oak Creek WWTF during the previous permit term indicates a maximum discharge concentration for T.I.N. of 18 mg/l. Therefore, the initial (interim) limitation for T.I.N. is 18 mg/l.

Water Supply-Specific Standards
According to the Rationale for Classifications, Standards and Designations of the *Classifications and Numeric Standards for Upper Colorado River Basin and North Platte River (Planning Region 12)*, stream segment COUCYA07 is designated a water supply. The standard for dissolved manganese, dissolved iron, and sulfate for water supply segments is calculated as the greater of ambient water quality as of January 1, 2000, or the numeric in-stream standard (50 µg/l for manganese, 300 µg/l for iron, and 250 µg/l for sulfate). Per division practice, ambient water quality as of January 1, 2000, for manganese is the 85th percentile of data as listed in the Assessment Unit database from January 1995 to December 1999 if there are at least 10 data points. If there are less than 10 data points from January 1995 to December 1999, then the date range expands from January 1995 to December 2004 to capture 10 data points. If 10 data points are not captured in this date range, the data range expands further from January 1995 to December 2009. Therefore, based on available data the standards have been determined as follows: dissolved manganese 110 µg/l, based on 11 sample points (1995-1999); dissolved iron 300 µg/l, based on numeric in-stream standard; sulfate 250 µg/l, based on numeric in-stream standard.

Nutrients
Total phosphorus and chlorophyll a standards apply only above the facilities listed at 33.5(4); therefore, these standards do not apply to Oak Creek WWTF at this time.

- **Ambient Water Quality Determination**

Total Residual Chlorine (TRC)
There are no point sources discharging total residual chlorine within one mile of the Oak Creek WWTF. Because chlorine is rapidly oxidized, in-stream levels of residual chlorine are detected only for a short distance below a source. Ambient chlorine concentration is therefore zero.

E. coli
There are no point sources discharging *E. coli* within one mile of the Oak Creek WWTF. Thus, WQBELs were evaluated individually for this certification. Data were gathered from WQCD Station 12892 (Oak Creek at Rd 27), located on Oak Creek approximately ½ mile upstream form the facility, for a period of record from August 2006 through June 2007.

Total Inorganic Nitrogen (T.I.N.)
To assess upstream water quality for T.I.N., data were gathered from WQCD Station 12892 (Oak Creek at Rd 27), located on Oak Creek approximately ½ mile upstream form the facility, for a period of record from August 2006 through June 2007.

Metals
Data were gathered from WQCD Station 12892 (Oak Creek at Rd 27), located on Oak Creek approximately ½ mile upstream from the facility. For dissolved cadmium, dissolved copper, dissolved iron, total recoverable iron, dissolved lead, dissolved manganese, dissolved selenium, dissolved silver, dissolved zinc, and sulfate, the period of record used in this analysis was from August 2006 through June 2007. For total recoverable arsenic and dissolved arsenic, the data available was from a period of record from March 1999 through February 2002.

Ambient water quality data was not available for total recoverable cadmium, trivalent dissolved chromium, total recoverable trivalent chromium, dissolved hexavalent chromium, total recoverable lead, mercury, total recoverable molybdenum, dissolved nickel, total recoverable nickel, and uranium. For those parameters, the ambient water quality is determined to be zero until such data becomes available.

Available ambient water quality data upstream from the Oak Creek WWTF is presented in Table 3.

Table 3
Ambient Water Quality for Oak Creek Upstream of the Oak Creek WWTF

Parameter	*Number of Samples*	*85th Percentile*	*Mean*	*Maximum*	*Chronic Stream Standard*
E. coli (#/100 ml)	5	159	63	194	205
Total Inorganic Nitrogen as N (mg/l)	5	0.13	0.066	0.33	10
As, TR (µg/l)	1	0	0	0	0.02
As, Dis (µg/l)	9	0	0	0	340
Cd, Dis (µg/l)*	5	0	0	0	0.82
Cu, Dis (µg/l)*	5	0	0	0	19
Fe, Dis (µg/l)	5	138	116	150	300
Fe, TR (µg/l)	4	496	473	500	1000
Pb, Dis (µg/l)*	5	0	0	0	6.50
Mn, Dis (µg/l) (Water Supply)	5	52	35	52	110
Mn, Dis (µg/l) (Aquatic Life)	5	52	35	52	2211
Se, Dis (µg/l)*	5	0	0	0	4.6
Ag, Dis (µg/l)*	5	0	0	0	0.34
Zn, Dis (µg/l)*	5	0	0	0	270
Sulfate (mg/l)	5	103	60	210	250

* When sample results were below detection levels, the value of zero was used in accordance with the Division's standard approach for summarization and averaging purposes.

- **Pollutants of Concern**

Pollutants of concern may be determined by one or more of the following: facility type; effluent characteristics and chemistry; effluent water quality data; receiving water quality; presence of federal effluent limitation guidelines; or other information. Parameters evaluated in this analysis may or may not appear in a permit with limitations or monitoring requirements, subject to other determinations such as a reasonable potential analysis, mixing zone analyses, 303(d) listings, threatened and endangered species listings or other requirement as discussed in a permit rationale.

There are no site-specific in-stream water quality standards for BOD_5 or $CBOD_5$, TSS, percent removal, and oil and grease for this receiving stream. Thus, assimilative capacities were not determined for these parameters. The applicable limitations for these pollutants can be found in Regulation No. 62 and will be applied in the permit for the WWTF.

The following parameters were identified by the Division as pollutants to be evaluated for this facility:

- Total Residual Chlorine
- *E. coli*
- Nitrate/T.I.N.
- Ammonia
- Temperature
- SAR and EC
- Metals and Cyanide
- Sulfate, Sulfide, and Chloride
- Radium 226 & 228

Minor domestic facilities are typically not expected to have high concentrations of metals in the discharge; however, the Oak Creek WWTF receives filter backwash from the drinking water treatment plant. This activity has the potential to contribute metals and other contaminants to the wastestream. Therefore, metals and cyanide are further evaluated in this analysis. During assessment of the facility, nearby facilities, and receiving stream water quality, no additional parameters were identified as pollutants of concern.

- **Water Quality Based Effluent Limitations (WQBELs)**

  Chlorine: Because chlorine is rapidly oxidized, in-stream levels of residual chlorine are detected only for a short distance below a source. The limitations for Total Residual Chlorine (TRC) for this certification were determined as outlined in Part I.B.3 of the General Permit COG589000. Ambient chlorine was assumed to be zero and a dilution ratio of 0:1 was selected in Tables 5a and 5b of the referenced document.

  ***E. coli*:** The limitations for *E. coli* for this certification were determined as outlined in Part I.B.3 of the General Permit COG589000. Ambient *E. coli* was assumed to be zero and a dilution ratio of 0:1 was selected in Table 4b of the referenced document.

  Temperature: A WQBEL for temperature can only be calculated if there is representative data, in the proper form, to determine what the background Maximum Weekly Average Temperature and Daily Maximum ambient temperatures are. As this data is not available at this time, the temperature limitation will be set at the water quality standard and will be revisited in the future when representative temperature data becomes available.

  T.I.N.: An acute nitrate standard of 10 mg/l is assigned to the receiving stream segment. Because nitrite and ammonia can also form nitrate, compliance with the nitrate standard is achieved through implementation of a Total Inorganic Nitrogen (T.I.N.) limit. T.I.N. effectively measures nitrate and its precursors, including nitrite and ammonia.

  Radium 226 & 228: As specified in *The Basic Standards and Methodologies for Surface Water* (Regulation 31), "radioactive materials in surface waters shall be maintained at the lowest practical level. In no case shall radioactive materials in surface waters be increased by any cause attributable to municipal, industrial, or agricultural practices or discharges" as to exceed the stipulated concentration of 5 pCi/l. The numeric standards for this pollutant are the same as those in the federal drinking water standards and are based on 30-day average value (chronic). Reverse osmosis treatment may be a source of Radium 226 & 228 in the wastestream received by the wastewater treatment plant.

  Uranium Range: Because dissolved uranium assimilative capacities are calculated based on a range of standards, *The Basic Standards and Methodologies for Surface Water* requires further evaluation. Specifically, the regulations state that "Control requirements, such as discharge permit effluent limitations, shall be established using the first number in the range as the ambient water quality target, provided that no effluent limitation shall require an "end-of-pipe" discharge level more restrictive than the second number in the range." Because the WQBEL for dissolved uranium has been calculated to be less than the second number in the range of standards, the second standard would instead be substituted as the WQBEL, pursuant to the regulations.

  Arsenic: For Total Recoverable Arsenic WQBEL, the limit calculated in the table below will become effective on 1/1/2025, following the expiration of the temporary modification on 12/31/2024.

  The Water Quality Control Commission's regulations state that current conditions be maintained and existing uses protected during the duration of a temporary modification. Per Reg. 31.7(3), "the adoption of a temporary modification recognizes current conditions while providing an opportunity to resolve the uncertainty." Similarly, Regulation 31.7(3)(d) states that "In order to protect existing uses, the operative value during the time of the temporary modification will be set to represent the current condition of the waterbody." For existing discharges, the commission has further directed the division to protect the current conditions by determining limitations or other conditions "based on an assessment of the level of effluent quality reasonably achievable without requiring significant investment in facility infrastructure (e.g., based on past facility performance)." Reg. 31.9(4)(c). Therefore, consistent with WQCD Clean Water Policy 13 (Permit Implementation Method for Narrative (Current Condition) Temporary Modifications) and current division practice, the division will require monitoring for Total Recoverable Arsenic until data are available to establish an effluent limit.

  The chronic and acute WQBELs are presented in Tables 4a and 4b, respectively.

Table 4a Chronic WQBELs						
Parameter	***Q_1 (cfs)***	***Q_2 (cfs)***	***Q_3 (cfs)***	***M_1***	***M_3***	***M_2***
Temp MWAT (°C) Apr-Oct	0.1	0.39	0.49	NA	18.3	***18.3***
Temp MWAT (°C) Nov-Mar	0.1	0.39	0.49	NA	9.0	***9.0***
As, TR (µg/l) [(A)]	0.1	0.39	0.49	0	0.02	***0.025***
Cd, Dis (µg/l)	0.1	0.39	0.49	0	0.82	***1.0***
Cr+3, Dis (µg/l)	0.1	0.39	0.49	0	152	***191***
Cr+6, Dis (µg/l)	0.1	0.39	0.49	0	11	***14***
Cu, Dis (µg/l)	0.1	0.39	0.49	0	19	***24***
Fe, Dis (µg/l)	0.1	0.39	0.49	138	300	***342***
Fe, TR (µg/l)	0.1	0.39	0.49	470	1000	***1136***
Pb, Dis (µg/l)	0.1	0.39	0.49	0	6.5	***8.2***
Mn, Dis (µg/l) AQ	0.1	0.39	0.49	52	2211	***2765***
Mn, Dis (µg/l) WS	0.1	0.39	0.49	52	110	***125***
Mo, TR (µg/l)	0.1	0.39	0.49	0	150	***188***
Hg, Tot (µg/l)	0.1	0.39	0.49	0	0.01	***0.013***
Ni, TR (µg/l)	0.1	0.39	0.49	0	100	***126***
Ni, Dis (µg/l)	0.1	0.39	0.49	0	109	***137***
Se, Dis (µg/l)	0.1	0.39	0.49	0	4.6	***5.8***
Ag, Dis (µg/l)	0.1	0.39	0.49	0	0.34	***0.43***
U, TR (µg/l) [(B)]	0.1	0.39	0.49	0	16.8-30	***30***
U, Dis (µg/l) [(C)]	0.1	0.39	0.49	0	3956	***4970***
Zn, Dis (µg/l)	0.1	0.39	0.49	0	270	***339***
Chloride (mg/l)	0.1	0.39	0.49	0	250	***314***
Sulfate (mg/l)	0.1	0.39	0.49	103	250	***288***
Sulfide as H2S (mg/l)	0.1	0.39	0.49	0	0.002	***0.0025***
Radium 226 & 228 (pC/l)	0.1	0.39	0.49	0	5	***6.3***
(A) The WQBEL for As TR calculated herein will become effective on 1/1/2025, after the expiration of the temporary modification date of 12/31/2024.						
(B) The first number in the 16.8-30 µg/l range is a strictly health-based value, based on the Commission's established methodology for human health-based standards. The second number in the range is a maximum contaminant level, established under the federal Safe Drinking Water Act that has been determined to be an acceptable level of this chemical in public water supplies, taking treatability and laboratory detection limits into account. Control requirements, such as discharge permit effluent limitations, shall be established using the first number in the range as the ambient water quality target, provided that no effluent limitation shall require an "end-of-pipe" discharge level more restrictive than the second number in the range. Therefore, the limit for TR Uranium will be set to 30 µg/l.						
(C) The final chronic limit (health-based) for total recoverable uranium is more stringent that the chronic limit for dissolved uranium, and therefore the TR uranium limit may be applied in the final permit.						

Table 4b Acute WQBELs						
Parameter	***Q_1 (cfs)***	***Q_2 (cfs)***	***Q_3 (cfs)***	***M_1***	***M_3***	***M_2***
Temp Daily Max (°C) April-Oct	0.1	0.39	0.49	NA	24.3	***24.3***
Temp Daily Max (°C) Nov-March	0.1	0.39	0.49	NA	13.0	***13.0***
Total Inorganic Nitrogen as N (mg/l)	0.1	0.39	0.49	0.13	10	***13***
As, Dis (µg/l)	0.1	0.39	0.49	0	340	***427***
Cd, TR (µg/l)	0.1	0.39	0.49	0	5	***6.3***
Cd, Dis (µg/l)	0.1	0.39	0.49	0	3.7	***4.6***

Cr+3, TR (µg/l)	0.1	0.39	0.49	0	50	***63***
Cr+6, Dis (µg/l)	0.1	0.39	0.49	0	16	***20***
Cu, Dis (µg/l)	0.1	0.39	0.49	0	31	***39***
CN, Free (µg/l)	0.1	0.39	0.49	0	5	***6.3***
Pb, TR (µg/l)	0.1	0.39	0.49	0	50	***63***
Pb, Dis (µg/l)	0.1	0.39	0.49	0	166	***209***
Mn, Dis (µg/l)	0.1	0.39	0.49	52	4002	***5015***
Ni, Dis (µg/l)	0.1	0.39	0.49	0	985	***1238***
Se, Dis (µg/l)	0.1	0.39	0.49	0	18.4	***23***
Ag, Dis (µg/l)	0.1	0.39	0.49	0	9.2	***12***
U, Dis (µg/l)	0.1	0.39	0.49	0	6333	***7957***

Ammonia: The monthly limitations for ammonia were determined as outlined in Tables 6a (chronic) and 6b (acute) Part I.B.3 of the general permit COG589000. Note that the chronic 30E3 and acute 1E3 dilution ratio is 0:1.

- **Agricultural Use Parameters (SAR and EC):**

Since the Oak Creek WWTF receives filter backwash, agricultural use parameters must be considered.

Section 31.11(1)(a)(iv) of The Basic Standards and Methodologies for Surface Waters (Regulation No. 31) includes the narrative standard that State surface waters shall be free of substances that are harmful to the beneficial uses or toxic to humans, animals, plants, or aquatic life. The interpretation of these conditions (i.e., "no harm to plants" and "no harm to the beneficial uses") and how they were to be applied in permits were contemplated by the Division as part of an Agricultural Work Group, and culminated in the most recent policy entitled Implementing Narrative Standards in Discharge Permits for the Protection of Irrigated Crops (hereafter the Ag Policy).

Based on information provided by the local water commissioner, Oak Creek is used for irrigation water. The evaluation of the suitability (i.e., quality) of irrigation water is complex and involves the detailed understanding of the interactions of plant tolerances, soil types, and agricultural management practices. Irrigation water has two properties – salinity and sodicity – that can have concurrent impacts on the irrigated crop beneficial use. The Division has thus determined that two parameters, specifically electrical conductivity (EC) and sodium absorption ratio (SAR), are the best parameters to regulate in discharge permits to control levels of salts to minimize both the loss of irrigated crop yield and the sodium hazard.

In order to establish "standards" and limits for EC and SAR, the Division must: (1) determine the most sensitive crop usually grown in the area downstream from the discharge and determine the corresponding EC of irrigation water (EC_w) threshold value for no reduction in yield below100%; and (2) determine the SAR based on the EC_w value, with consideration of existing water quality, to prevent the exceedance of the SAR.

Electrical Conductivity: The electrical conductivity (EC) is also known as specific conductance, conductance, conductivity, or specific conductivity. Crops have varying sensitivity to electrical conductivity. Studies have established the maximum conductivity in the water in the root zone that will result in no reduction of crop yield. This value is referred to as the EC saturation extract or EC_e. However, the EC_e is not the same as the EC of the irrigation water (EC_w). The EC_w is the maximum conductivity in the irrigation water that will result in no reduction in crop yield.

The EC_w that is used in the development of permit limits is determined based on the most sensitive of the EC_w's for the crops grown in the area. Based on available information from the local water commissioner for waters originating from Oak Creek and used for crop irrigation, alfalfa (hay) was determined to be the most sensitive crop.

For Oak Creek, the EC limit is calculated using the following mass balance equation:

$$M_2 = \frac{M_3 Q_3 - M_1 Q_1}{Q_2}$$

Where,

Q_1 = Upstream low flow (1E3 or 30E3)
Q_2 = Average daily effluent flow (design capacity for domestic wastewater treatment facilities)
Q_3 = Downstream flow (Q_1 + Q_2)
M_1 = In-stream background pollutant concentrations at the existing quality
M_2 = Calculated WQBEL
M_3 = Water Quality Standard, or other maximum allowable pollutant concentration

The data used and the resulting calculations of the EC limit, M_2, are set forth in Table 5 below. Note that in accordance with the Ag Policy, the EC limit will be imposed as a chronic (30-day average) limit and therefore chronic low flows were used together with 85th percentile EC concentrations when calculating the limit. The used EC_w threshold for alfalfa was 1.3 mg/l.

Table 5
Electrical Conductivity (EC)

Parameter	*Q_1 (cfs)*	*Q_2 (cfs)*	*Q_3 (cfs)*	*M_1 (mg/l)*	*M_3 (mg/l)*	*M_2 (mg/l)*
EC, dS/m	0.1	0.39	0.49	0.8	1.3	***1.4***

Note that in the figure below at an EC value of 0.36 or less, the SAR must be 0. In order to achieve a 0 SAR, any treatment process would have to eliminate all sodium, which is virtually impossible. Therefore, a minimum EC at 0.36 will be considered.

SAR – SAR means Sodium Adsorption Ratio, which is a representation of the relative proportion of sodium cations to calcium and magnesium cations (also known as the "sodium hazard"). The equation for SAR follows:

$$SAR = \frac{Na^{+}}{\sqrt{\frac{Ca^{++} + Mg^{++}}{2}}}$$

The values for sodium (Na^+), calcium (Ca^{++}) and magnesium (Mg^{++}) in this equation are expressed in units of milliequivalents per liter (meq/l). Generally, data for sodium, calcium and magnesium are reported in terms of mg/l, which must then be converted to calculate the SAR. The conversions are:

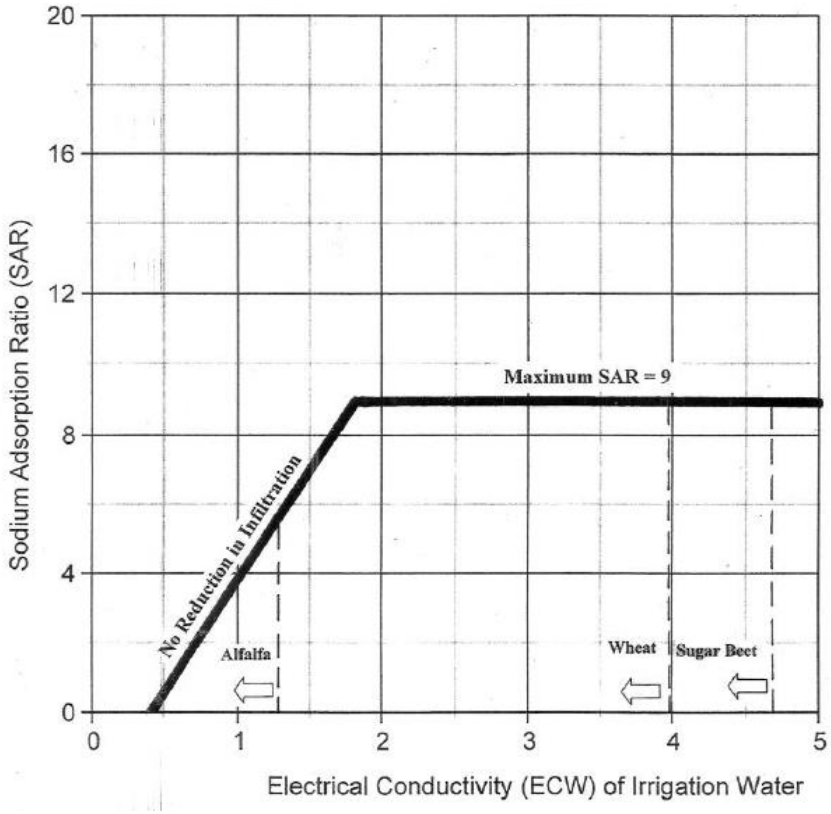
$$\text{meq/l} = \frac{Concentration\ in\ mg/l}{Equivalent\ weight\ in\ mg/meq}$$

Where the equivalent weights are determined based on the atomic weight of the element divided by the ion's charge:

Na^+ = 23.0 mg/meq (atomic weight of 23, charge of 1)
Ca^{++} = 20.0 mg/meq (atomic weight of 40.078, charge of 2)
Mg^{++} = 12.15 mg/meq (atomic weight of 24.3, charge of 2)

The SAR standard is established using the SAR/EC equation, shown graphically in the figure below, which is reproduced herein from the Ag Policy. Specifically, the WQBEL calculated for EC_w was used to establish a SAR standard of 58.6. Since the allowable SAR value is tied to the actual EC of the effluent, the EC/SAR equation (SAR = (7.1 * EC) – 2.48) will be the SAR limit in the permit, however the allowable SAR of the effluent will be capped at the value above or 9, whichever is less. Therefore, the SAR will be capped at 9.

Relative Rate of Water Infiltration as Affected by EC_w and SAR with Modification to Show Upper Limit for SAR = 9



- **Antidegradation**

Because the receiving water is reviewable, an antidegradation evaluation must occur. The facility is entitled to use the discharge requirements (effluent loading to stream) that were occurring because of this discharge as of September 30, 2000. The facility is also allowed to have antidegradation based (AD) limits from the tables in Part I.B.1 of the general permit. The facility will be given the less stringent of these requirements, as part of the determination of AD effluent limits for the discharger under this certification.

The Water Quality Control Commission has completed a final action for *The Basic Standards and Methodologies for Surface Water, Regulation 31* which became effective January 1, 2017. The final action exempts dissolved iron, dissolved manganese, and sulfate from antidegradation consideration on the basis that this level of protection extends to standards that protect "fishable/swimmable" uses, and not water supply uses. Dissolved iron, dissolved manganese and sulfate are based on secondary Safe Drinking Water Act criteria and are not surrogates for any swimmable criteria, and are therefore exempt from further antidegradation review. This permit certification has been developed in conformance with this final action.

Significance Tests for Temporary Impacts and Dilution

The ratio of the chronic (30E3) low flow to the design flow is 0.26:1, and is less than the 100:1 significance criteria. Therefore, this facility is not exempt from an AD evaluation based on the dilution significance determination test, and the AD evaluation must continue.

For the determination of a new or increased impact and for the remaining significance determination tests, additional calculations are necessary. Therefore, at this point in the antidegradation evaluation, the Division will go back to the new or increased impacts test. If there is a new or increased impact, the last two significance tests will be evaluated.

New or Increased Impact and Non Impact Limitations (NILs)

To determine if there is a new or increased impact to the receiving water, a comparison of the new WQBEL concentrations and loadings verses the concentrations and loadings as of September 30, 2000, needs to occur. If either the new concentration or loading is greater than the September 2000 concentration or loading, then a new or increased impact is determined. If this is a new facility (commencement of discharge after September 30, 2000) it is automatically considered a new or increased impact.

Note that the AD Guidance document includes a step in the New or Increased Impact Test that calculates the Non-Impact Limit (NIL). The permittee may choose to retain a NIL if certain conditions are met, and therefore the AD evaluation for that parameter would be complete. As the NIL is typically greater than the ADBAC, and is therefore the chosen limit, the Division will typically conclude the AD evaluation after determining the NIL. Where the NILs are very stringent, or upon request of a permittee, the Division will calculate both the NIL and the AD limitation so that the limitations can be compared and the permittee can determine which of the two limits they would prefer, one which does not allow any increased impact (NIL), or the other which allows an insignificant impact (AD limit).

The non impact limit (NIL) is defined as the limit which results in no increased water quality impact (no increase in load or limit over the September 2000 load or limit). The NIL is calculated as the September 2000 loading, divided by the new design flow, and divided by a conversion factor of 8.34. If there is no increase in design flow, then the NIL is equal to the September 2000 permit limitation.

If the facility was in place, but did not have a limitation for a particular parameter in the September 2000 permit, the Division may substitute an implicit limitation. Consistent with the First Update to the AD Guidance of April 2002, an implicit limit is determined based on the approach that specifies that the implicit limit is the maximum concentration of the effluent from October 1998 to September 2000. If this data is unavailable, the Division may substitute more recent representative data, if appropriate, on a case by case basis. Note that the AD requirements specify that chronic values should be used in the AD review; however, where there is only an acute standard, the acute value should be used. Thus, for determining implicit limitations for chronic standards, the 30 -day average effluent values are used, while for acute standards, the daily maximum values are used. Note that if there is an increase in design flow, the implicit limit/loading is subject to recalculation based on the increased design flow. For parameters that are undisclosed by the permittee, and unknown to the Division to be present, an implicit limitation may not be recognized.

This facility was in place as a discharger prior to September 30, 2000, therefore the new or increased impacts test must be conducted. As the year-round design flow of this facility has decreased, the equations for the NIL calculations are shown below.

For total residual chlorine and total ammonia, the limitations as of September 2000 were used in the evaluation of new or increased impacts. In accordance with the Division's practice regarding *E. coli*, an implicit limit for *E. coli* is determined as 0.32 times the permit limit for fecal coliform.

For total inorganic nitrogen, total recoverable iron, dissolved manganese, and dissolved zinc, data prior to 2000 were not available. Therefore, effluent data submitted by the facility between June 2015 and May 2017 were determined to be adequate and were used to determine the implicit limitations.

For dissolved arsenic, total recoverable arsenic, total recoverable cadmium, dissolved cadmium, total recoverable trivalent chromium, dissolved trivalent chromium, dissolved hexavalent chromium, dissolved copper, free cyanide, total recoverable lead, dissolved lead, total recoverable molybdenum, total mercury, total recoverable nickel, dissolved nickel, dissolved selenium, dissolved silver, total recoverable uranium, chloride, sulfide, sulfate, and Radium 226 & 228, there are no effluent data available; therefore, the Division may include monitoring requirements in the permit so that data can be collected in order to make a determination of an implicit limit.

Calculation of Loadings for New or Increased Impact Test

The equations for the loading calculations are given below. Note that the AD requirements outlined in The Basic Standards and Methodologies for Surface Water specify that chronic numeric standards should be used in the AD review; however, where there is only an acute standard, the acute standard should be used. Thus, the chronic low flows will be used later in this AD evaluation for all parameters with a chronic standard, and the acute low flows will be used for those parameters with only an acute standard.

Previous permit load = $M_{permitted}$ *(mg/l)* × $Q_{permitted}$ *(mgd)* × *8.34*
New WQBELs load = M_2 *(mg/l)* × Q_2 *(mgd)* × *8.34*

Where,

$M_{permitted}$ = September 2000 permit limit (or implicit limit) **(mg/l)**
$Q_{permitted}$ = design flow as of September 2000 **(MGD)**
Q_2 = current design flow (same as used in the WQBEL calculations)
M_2 = new WQBEL concentration **(mg/l)**
8.34 = unit conversion factor

Calculation of Non-Impact Limitations

As of September 30, 2000 this facility had a design flow of 0.80 MGD (March through June) and 0.25 MGD (July through February). The design flow of this facility is 0.25 MGD (year-round). To determine if new or increased impacts are to occur, the September 2000 permit concentrations need to be adjusted for this new design flow. The equations are shown below.

September 2000 permit load = $M_{permitted}$ × $Q_{permitted}$ × *8.34*
Non Impact Limit (NIL) = September 2000 permitted load ÷ New Design Flow ÷ 8.34

What? so really just concentration?

Where,

$M_{permitted}$ = September 2000 permit limit or implicit limit **(mg/l)**
$Q_{permitted}$ = September 2000 design flow **(MGD)**
Q_2 = new or current design flow **(MGD)**
8.34 = Unit conversion factor

Table 6 shows the results of these calculations and the determination of a new or increased impact.

Table 6
Determination of New or Increased Impacts

Pollutant	*Sept 2000 Permit Limit or Implicit NIL*	*Sept 2000 Permit Load (lbs/day)*	*NIL or Implicit NIL*	*New WQBEL*	*New WQBEL Load (lbs./day)*	*New or Increased Impact*
E. coli (#/100 ml) [1]	1920	4003	1920	205	427	No
TRC (mg/l) [1]	0.015	0.010	0.015	0.011	0.023	No
Total Inorganic Nitrogen as N (mg/l) [2]	14	93	14	13	27	No
NH_3, Tot as N (mg/l) Jan [1]	28	187	28	3.5 [3]	7.3	No
NH_3, Tot as N (mg/l) Feb [1]	28	187	28	3.1 [3]	6.5	No
NH_3, Tot as N\(mg/l) Mar [1]	28	187	28	2.2 [3]	4.6	No
NH_3, Tot as N (mg/l) Apr [1]	28	187	28	1.9 [3]	4.0	No
NH_3, Tot as N (mg/l) May [1]	28	187	28	2.4 [3]	5.0	No
NH_3, Tot as N (mg/l) Jun [1]	28	187	28	3.0 [3]	6.3	No
NH_3, Tot as N (mg/l) Jul [1]	9.1	61	9.1	2.3 [3]	4.8	No
NH_3, Tot as N (mg/l) Aug [1]	9.1	61	9.1	1.9 [3]	4.0	No
NH_3, Tot as N (mg/l) Sep [1]	11	73	11	2.3 [3]	4.8	No
NH_3, Tot as N (mg/l) Oct [1]	11	73	11	3.1 [3]	6.5	No
NH_3, Tot as N (mg/l) Nov [1]	28	187	28	3.1 [3]	6.5	No
NH_3, Tot as N (mg/l) Dec [1]	28	187	28	2.6 [3]	5.4	No
As, TR (µg/l)	NA	NA	NA	0.025	0.000052	Yes
As, Dis (µg/l)	NA	NA	NA	427	0.89	Yes

Cd, TR (µg/l)	NA	NA	NA	6.3	0.013	Yes
Cd, Dis (µg/l)	NA	NA	NA	1.0	0.0027	Yes
Cr+3, TR (µg/l)	NA	NA	NA	63	0.13	Yes
Cr+3, Dis (µg/l)	NA	NA	NA	191	0.4	Yes
Cr+6, Dis (µg/l)	NA	NA	NA	14	0.029	Yes
Cu, Dis (µg/l)	NA	NA	NA	24	0.05	Yes
CN, Free (µg/l)	NA	NA	NA	6.3	0.013	Yes
Fe, TR (µg/l) [2]	590	3.9	590	1136	2.4	Yes
Pb, TR (µg/l)	NA	NA	NA	63	0.13	Yes
Pb, Dis (µg/l)	NA	NA	NA	8.2	0.017	Yes
Mn, Dis (µg/l) AQ [2]	179	1.2	179	2765	5.8	Yes
Mo, TR (µg/l)	NA	NA	NA	188	0.39	Yes
Hg, Tot (µg/l)	NA	NA	NA	0.013	0.000027	Yes
Ni, TR (µg/l)	NA	NA	NA	126	0.26	Yes
Ni, Dis (µg/l)	NA	NA	NA	137	0.29	Yes
Se, Dis (µg/l)	NA	NA	NA	5.8	0.012	Yes
Ag, Dis (µg/l)	NA	NA	NA	0.43	0.009	Yes
U, TR (µg/l)	NA	NA	NA	30	0.063	Yes
U, Dis (µg/l)	NA	NA	NA	4970	10	Yes
Zn, Dis (µg/l) [2]	20	0.13	20	339	0.71	Yes
Chloride (mg/l)	NA	NA	NA	314	655	Yes
Sulfide as H_2S (mg/l)	NA	NA	NA	0.0025	0.0052	Yes
Radium 226 & 228 (pC/l)	NA	NA	NA	8.3	0.013	Yes
Note that loading for *E. coli* cannot be calculated but for comparison purposes this approach is sufficient.						
[1] The implicit NILs are based on the limitations imposed on the discharge permit effective as of September 2000.						
[2] Implicit NILs were determined using discharge data submitted by the facility.						
[3] The WQBELs for this parameter were determined as outlined in Part I.B.3 of the general permit COG589000.						

As shown in the table above, there are no new or increased impacts to the receiving stream based on the new WQBELs for *E. coli*, TRC, T.I.N., and ammonia (all months), and for these parameters the AD evaluation is complete and the WQBELs are the final result of this analysis.

For dissolved manganese (aquatic life) and total recoverable iron, there are new or increased impacts and in accordance with regulation, the permittee has the option of choosing either the NILs or ADBACs. Because the ADBACs are generally more stringent than NILs, the Division assumes that the permittee will choose NILs rather than ADBACs, and therefore the Division will stop the AD evaluation at this point and assign the NILs to the permit. The permittee may request ADBAC limits. If the permittee does request ADBAC limits, the Division will proceed with the completion of this Antidegradation Analysis. Note that for TRC, the ADBAC limitation that corresponds to the streamflow-to-facility flow ratio of 0.26:1 is 0.0017 mg/l, as established in General Permit COG589000.

For dissolved zinc, there are new or increased impacts and in accordance with regulation, the permittee has the option of choosing either the NILs or ADBACs. Normally, the Division would assign the NILs as permit limitations, or prescribe monitoring to determine the appropriate implicit limitations as necessary. However, in this case, the NILs are very stringent and therefore the Division will automatically calculate the ADBACs for comparison.

For those parameters where there is not a NIL (either implicit or explicit) the AD Guidance allows for the collection of data to determine an implicit limitation. Therefore, the permittee will be required to conduct "monitoring only" for: dissolved arsenic, total recoverable arsenic, total recoverable cadmium, dissolved cadmium, total recoverable trivalent chromium, dissolved trivalent chromium, dissolved hexavalent chromium, dissolved copper, free cyanide, total recoverable lead, dissolved lead, total recoverable molybdenum, total mercury, total recoverable nickel, dissolved nickel, dissolved selenium, dissolved silver, total recoverable uranium, chloride, sulfide, sulfate, and Radium 226 & 228.

The final two significance determination tests (bioaccumulative and concentration) need to be applied, to determine if AD limits are applicable. For the bioaccumulative test, the determination of the baseline water quality (BWQ), the baseline water quality loading (BWQload), the threshold load (TL) and the threshold load concentration (TL conc) needs to occur. For the concentration test, the BWQ, significant concentration thresholds (SCT) and antidegradation based average concentrations (ADBACs) need to be calculated. These calculations are explained in the following sections, and each significance determination test will be performed as the necessary calculations are complete. The AD low flow may also need to be calculated when determining the BWQ for an existing discharger (as of Sept. 2000) when upstream water quality data are used.

Determination of Baseline Water Quality (BWQ)

The BWQ is the ambient condition of the water quality as of September 30, 2000. The BWQ defines the baseline low flow pollutant concentration, and for bioaccumulative toxic pollutants, the baseline load. The BWQ is to take into account the influence of the discharger if the discharge was in place prior to September 30, 2000. In such a case, data from a downstream location should be used to determine the BWQ. If only upstream data is available, then a mass balance equation may be applied, using the facilities effluent data to determine the BWQ. If the discharge was not present prior to September 30, 2000, then the influence of that discharge would not be taken into account in determining the BWQ. If the BWQ has already been determined in a previous WQA AD evaluation, it may not need to be recalculated as the BWQ is the water quality as of September 30, 2000, and therefore should not change unless additional data is obtained or the calculations were in error.

Consistent with current Division procedures, the BWQ concentrations for dissolved zinc should be established so that it can be used as part of an antidegradation review.

This discharger was in place as of September 30, 2000, and therefore the BWQ will include the influence of the discharger. Data was collected at WQCD Station CO-0041106 (Town of Oak Creek north of town off Hwy 131), located less than one mile downstream from the Oak Creek WWTF, were determined to be representative of fully mixed condition downstream from the facility, without other influences, and thus the data were used to determine the BWQ concentrations. Since the data were collected downstream of the discharge, it takes into account the contribution of the facility.

Currently, it is the Division's approach to evaluate five years of ambient water quality data, if available, for the five years prior to September 30, 2000, when determining the BWQ. Data from this location were collected in March 1999. The ambient water quality data are summarized in Table 7a.

Table 7a
Ambient Water Quality Data Summary for AD Period

Parameter	*Number of Samples*	*85th Percentile*	*Mean*	*Location*
Zn, Dis (µg/l)	2	24	23	Downstream

The BWQ concentrations based on these data, represented by the 50th percentile for total recoverable metals and total metals, the geometric mean for coliforms, and the 85th percentile for dissolved metals and other pollutants, are summarized in Table 7b.

Table 7b
BWQ Concentrations for Potential Pollutants of Concern Based on Downstream Ambient Water Quality Concentrations

Pollutant	*BWQ*	*WQS*
Zn, Dis (µg/l)	24	270

In cases where the BWQ concentration exceeds the water quality standard, the calculated BWQ concentration must then be set equal to the water quality standard.

Bioaccumulative Significance Test

Parameters associated with the bioaccumulative significance test are not parameters of concern for this facility. This section is therefore omitted.

Determination of the Antidegradation Based Average Concentrations

Antidegradation based average concentrations (ADBACs) are determined for all parameters except ammonia, by using the mass-balance equation, and substituting the SCT in place of the water quality standard, as shown in the following equation:

$$ADBAC = \frac{SCT \times Q_3 - M_1 \times Q_1}{Q_2}$$

Where,

Q_1 = Upstream low flow (1E3 or 30E3 based on either the chronic or acute standard)
Q_2 = Current design capacity of the facility
Q_3 = Downstream flow (Q_1 + Q_2)
M_1 = Current ambient water quality concentration (shown above
SCT = Significant concentration threshold

The ADBACs were calculated using the SCTs, and are set forth in Table 7c.

Table 7c
SCTs and ADBACs

Pollutant	*Q_1(cfs)*	*Q_2 (cfs)*	*Q_3 (cfs)*	*M_1*	*SCT*	*ADBAC*
Zn, Dis (µg/l)	0.1	0.39	0.49	0	61	77

Concentration Significance Tests

The concentration significance determination test considers the cumulative impact of the discharges over the baseline condition. In order to be insignificant, the new or increased discharge may not increase the actual instream concentration by more than 15% of the available increment over the baseline condition. The insignificant level is the ADBAC calculated above. If the new WQBEL concentration is greater than the ADBAC, an AD limit would be applied. This comparison is shown in Table 7d.

Table 7d
Concentration Significance Test

Pollutant	*New WQBEL*	*ADBAC*	*Concentration Test Result*
Zn, Dis (µg/l)	339	77	Significant

For dissolved zinc, the WQBELs are greater than the ADBACs and therefore, the concentration test results in a significance determination, and the antidegradation based effluent limitations (ADBELs) must be determined.

Antidegradation Based Effluent Limitations (ADBELs)

The ADBEL is defined as the potential limitation resulting from the AD evaluation, and may be either the ADBAC, the NIL, or may be based on the concentration associated with the threshold load concentration (for the bioaccumulative toxic pollutants). ADBACs, NILs and TLs have already been determined in the AD evaluation, and therefore to complete the evaluation, a final comparison of limitations needs to be completed.

Note that ADBACs and NILs are not applicable when the new WQBEL concentration (and loading as evaluated in the New and Increased Impacts Test) is less than the NIL concentration (and loading), or when the new WQBEL is less than the ADBAC.

Where an ADBAC or NIL applies, the permittee has the final choice between the two limitations. A NIL is applied as a 30-day average (and the acute WQBEL would also apply where applicable) while the ADBAC would be applied as a 2 year rolling average concentration. For the purposes of this analysis, the Division has made an attempt to determine whether the NIL or ADBAC will apply. The end results of this AD evaluation are in Table 8 below, including any parameter that was previously exempted from further AD evaluation, with the final potential limitation identified (NIL, WQBEL or ADBAC).

Table 8
Final Selection of WQBELs, NILs, and ADBACs

Pollutant	*NIL or Implicit NIL*	*New WQBEL*	*ADBAC*	*Chosen Limit*
E. coli (#/100 ml)	1920	205	NA	WQBEL
TRC (mg/l)	0.015	0.011	NA	WQBEL
Total Inorganic Nitrogen as N (mg/l)	14	13	NA	WQBEL
NH3 as N, Tot (mg/l) Jan	28	3.5	NA	WQBEL
NH3 as N, Tot (mg/l) Feb	28	3.1	NA	WQBEL
NH3 as N, Tot (mg/l) Mar	28	2.2	NA	WQBEL
NH3 as N, Tot (mg/l) Apr	28	1.9	NA	WQBEL
NH3 as N, Tot (mg/l) May	28	2.4	NA	WQBEL
NH3 as N, Tot (mg/l) Jun	28	3.0	NA	WQBEL
NH3 as N, Tot (mg/l) Jul	9.1	2.3	NA	WQBEL
NH3 as N, Tot (mg/l) Aug	9.1	1.9	NA	WQBEL
NH3 as N, Tot (mg/l) Sep	11	2.3	NA	WQBEL
NH3 as N, Tot (mg/l) Oct	11	3.1	NA	WQBEL
NH3 as N, Tot (mg/l) Nov	28	3.1	NA	WQBEL
NH3 as N, Tot (mg/l) Dec	28	2.6	NA	WQBEL
As, TR (µg/l)	NA	0.025	NA	WQBEL
As, Dis (µg/l)	NA	427	NA	WQBEL
Cd, TR (µg/l)	NA	6.3	NA	WQBEL
Cd, Dis (µg/l)	NA	1.0	NA	WQBEL
Cr+3, TR (µg/l)	NA	63	NA	WQBEL
Cr+3, Dis (µg/l)	NA	191	NA	WQBEL
Cr+6, Dis (µg/l)	NA	14	NA	WQBEL
Cu, Dis (µg/l)	NA	24	NA	WQBEL
CN, Free (µg/l)	NA	6.3	NA	WQBEL
Fe, Dis (µg/l)	NA	342	NA	WQBEL
Fe, TR (µg/l)	590	1136	NA	NIL
Pb, TR (µg/l)	NA	63	NA	WQBEL
Pb, Dis (µg/l)	NA	8.2	NA	WQBEL
Mn, Dis (µg/l) WS	NA	125	NA	WQBEL
Mn, Dis (µg/l) AQ	179	2765	NA	NIL
Mo, TR (µg/l)	NA	188	NA	WQBEL
Hg, Tot (µg/l)	NA	0.013	NA	WQBEL
Ni, TR (µg/l)	NA	126	NA	WQBEL

Ni, Dis (µg/l)	NA	137	NA	WQBEL
Se, Dis (µg/l)	NA	5.8	NA	WQBEL
Ag, Dis (µg/l)	NA	0.43	NA	WQBEL
U, TR (µg/l)	NA	30	NA	WQBEL
U, Dis (µg/l)	NA	4970	NA	WQBEL
Zn, Dis (µg/l)	20	339	77	ADBAC
Chloride (mg/l)	NA	314	NA	WQBEL
Sulfide as H2S (mg/l)	NA	0.0025	NA	WQBEL
Sulfate (mg/l)	NA	288	NA	WQBEL
Radium 226 & 228 (pC/l)	NA	6.3	NA	WQBEL

For dissolved manganese (aquatic life) and total recoverable iron, the NILs have been established for this facility. The NILs were selected as they are less stringent than the ADBACs. However, the facility has the final choice between the NILs and ADBACs, and if the ADBAC is preferred, the permit writer should be contacted.

For dissolved zinc, the ADBACs have been established for this facility. The ADBACs were selected as they are more stringent than the WQBELs and less stringent than the NILs, or perhaps due to the application as a two-year rolling average. However, the facility has the final choice between the NILs and ADBACs, and if the NIL is preferred, the permit writer should be contacted.

- **Antibacksliding:**

  As the receiving water is designated Reviewable, and the Division has performed an antidegradation evaluation, in accordance with the Antidegradation Guidance, the antibacksliding requirements in Regulation 61.10 have been met.

- **TMDL**

  This stream segment is not on the State's 303(d) list, and therefore TMDLs do not apply.

- **Salinity – Colorado River Basin Regulations**

  As the discharge is to the Colorado River basin, overall limits for TDS are required at either an incremental increase of 400 mg/l above the flow weighted average of the raw water supply, which may be waived in the case where the salt loading reaching the mainstem of the Colorado River is less than 1 ton per day, or 366 tons per year. Otherwise a demonstration that it is not practicable to attain the 400 mg/l limit must be performed. See Regulation 61.8(L)(vi) for more information.

  Based on previous information, the 400 mg/l incremental increase, 1 ton per day or 366 tons per year criteria can be met and therefore report only requirements will be required during this permit term.

- **Narrative Standards**

  Section 31.11(1)(a)(iv) *of The Basic Standards and Methodologies for Surface Waters* (Regulation No. 31) includes the narrative standard that State surface waters shall be free of substances that are harmful to the beneficial uses or toxic to humans, animals, plants, or aquatic life.

- **Whole Effluent Toxicity**

  For this facility, chronic WET testing has been determined to be applicable based on the instream waste concentrations of 61%.

  IWC = [Facility Flow (FF)/(Stream Chronic Low Flow (annual) + FF)] X 100%

  The flows and corresponding IWC for the appropriate discharge point are:

Permitted Feature	Chronic Low Flow, 30E3 (cfs)	Facility Design Flow (cfs)	IWC, (%)
001	0.1	0.39	80%

In accordance with Division policy, for those discharges where the chronic IWC is greater than 9.1% and the receiving stream has a Class 1 Aquatic Life use or Class 2 Aquatic Life use with all of the appropriate aquatic life numeric standards, chronic conditions will normally apply. Where the chronic IWC is less than or equal to 9.1, or the stream is not classified as described above, acute conditions will normally apply.

The IWC for this permit is 80%, which represents a wastewater concentration of 80% effluent to 20% receiving stream. This IWC correlates to chronic WET testing. The fact sheet and the permit will contain additional information regarding the type of WET testing applicable to this facility.

- **Sludge Treatment and Disposal**

The treatment facility consists of aerated lagoons. According to information submitted by the permittee, sludge removal occurred in 2008. If sludge is removed from the lagoons for any reason, it must be disposed of in accordance with local, State and Federal regulations.

1. EPA General Permit

   EPA Region 8 issued a General Permit (effective October 19, 2007) for Colorado facilities whose operations generate, treat, and/or use/dispose of sewage sludge by means of land application, landfill, and surface disposal under the National Pollutant Discharge Elimination System. All Colorado facilities are required to apply for and to obtain coverage under the EPA General Permit.

2. Biosolids Regulation (Regulation No. 64, Colorado Water Quality Control Commission)

   While the EPA is now the issuing agency for biosolids permits, Colorado facilities that land apply biosolids must comply with requirements of Regulation No. 64, such as the submission of annual reports as discussed later in this rationale.

- **Infiltration/Inflow**

Inflow is water, other than wastewater, that enters a sewer system from sources such as roof leaders, cellar drains, yard drains, area drains, foundation drains, drains from springs and swampy areas, manhole covers, cross sections between storm drains and sanitary sewers, catch basins, cooling towers, storm waters, surface runoff, street wash waters or other drainage. Inflow does not include, and is distinguished from, infiltration. (40 CFR 35.2005 Definitions)

Infiltration is water other than wastewater that enters a sewer system (including sewer service connections and foundation drains) from the ground through such means as defective pipes, pipe joints, connections, or manholes. Infiltration does not include, and is distinguished from, inflow. (40 CFR 35.2005 Definitions)

In its Statement of Basis, Reg. 33.66(B), the Commission noted: “Currently, there is significant seasonal variability in influent flows to the wastewater treatment plant that is believed to be due to groundwater inflow and residential sump pump contributions to the Town of Oak Creek’s collection system. During the term of this variance, the Town of Oak Creek will be taking steps to reduce groundwater inflow, which will reduce influent volume.”

Additionally, in the Rulemaking Hearing (December 2020-Exhibit C), it was noted: “In addition to achieving permit limits for TIN, the wastewater treatment plant currently exceeds its design capacity one to two months per year, due to excess inflow. Excess flows reduce the hydraulic residence time in the treatment plant, which hinders treatment performance. For this reason, the town also needs to invest in repairs to the collection system to reduce infiltration and inflow. There is a high degree of uncertainty in annual costs due to the unknown scope of repairs to the collection system needed to address the town’s problems with infiltration and inflow. The division recommends prioritizing limited resources toward reducing infiltration and inflow first, which will make it more economically feasible to upgrade treatment to achieve TIN permit limits.”

It was also noted in Exhibit C that in 2016 the Town of Oak Creek completed maintenance to its collection system, which reduced peak flows. However, peak flows exceeded the 0.25 MGD capacity of the treatment plant as recently as June 2019. Exhibit C notes that the facility purchased equipment to video-inspect the sewer lines during spring runoff to identify areas of infiltration, and that the Town of Oak Creek plans to inspect 25% of its collection system each year for the next four years and to reline sewers and seal manholes where inflow is identified. In addition, it is noted that the town has been installing water meters in all the residences; and that although the town prohibits connecting sump pumps to the sanitary sewer, it is suspected that some of the infiltration is coming from residential sump pumps.

An I/I study requirement that includes specific benchmarks to repair potential I/I in the collection system has been added to the permit. Flow data submitted by the facility from January 2015 through December 2019 shows large increases of influent flows during April and May, which may be indicative of groundwater infiltrating the collection system during the spring runoff. Additionally, effluent flows are significantly greater than inflows most of the year, which may be due to large cracks or gaps that allow groundwater to enter the collection system. Flow data from January 2020 through December 2020 show less variability in influent and effluent flows than in previous years (2015-2018). However, there was a noticeable spike in influent and effluent flows in April 2020, and the design capacity of the treatment plant was exceeded in that month.

- **Reasonable Potential Analysis**

Using the assimilative capacities contained in this fact sheet, an analysis must be performed to determine whether to include the calculated assimilative capacities as WQBELs in the permit. This reasonable potential (RP) analysis is based on the Determination of the Requirement to Include Water Quality Standards-Based Limits in CDPS Permits Based on Reasonable Potential, dated December, 2002. This guidance document utilizes both quantitative and qualitative approaches to establish RP depending on the amount of available data.

A qualitative determination of RP may be made where ancillary and/or additional treatment technologies are employed to reduce the concentrations of certain pollutants. Because it may be anticipated that the limits for a parameter could not be met without treatment, and the treatment is not coincidental to the movement of water through the facility, limits may be included to assure that treatment is maintained.

A qualitative RP determination may also be made where a federal ELG exists for a parameter, and where the results of a quantitative analysis results in no RP. As the federal ELG is typically less stringent than a limitation based on the WQBELs, if the discharge was to contain concentrations at the ELG (above the WQBEL), the discharge may cause or contribute to an exceedance of a water quality standard.

To conduct a quantitative RP analysis, a minimum of 10 effluent data points from the previous 5 years, should be used. The equations set out in the guidance for normal and lognormal distribution, where applicable, are used to calculate the maximum estimated pollutant concentration (MEPC). For data sets with non-detect values, and where at least 30% of the data set was greater than the detection level, MDLWIN software is used consistent with Division guidance to generate the mean and standard deviation, which are then used to establish the multipliers used to calculate the MEPC. If the MDLWIN program cannot be used, the Division's guidance prescribes the use of best professional judgment.

For some parameters, recent effluent data or an appropriate number of data points may not be available, or collected data may be in the wrong form (dissolved vs total) and therefore may not be available for use in conducting an RP analysis. Thus, consistent with Division procedures, monitoring will be required to collect samples to support a RP analysis and subsequent decisions for a numeric limit. A compliance schedule may be added to the permit to require the request of an RP analysis once the appropriate data have been collected.

For other parameters, effluent data may be available to conduct a quantitative analysis, and therefore an RP analysis will be conducted to determine if there is RP for the effluent discharge to cause or contribute to exceedances of ambient water quality standards. The guidance specifies that if the MEPC exceeds the maximum allowable pollutant concentration (MAPC), limits must be established and where the MEPC is greater than half the MAPC (but less than the MAPC), monitoring must be established. Table 9 below contains the calculated MEPC compared to the corresponding MAPC, and the results of the reasonable potential evaluation, for those parameters that met the data requirements.

Although metals are typically not evaluated for minor facilities, the Oak Creek WWTF receives filter backwash from the Oak Creek water treatment plant. This activity has the potential to contribute metals to the effluent

discharged by the wastewater treatment plant. Therefore, an RP determination for metals is discussed in the text below.

Table 9 Reasonable Potential Analysis						
Pollutant	30-Day Average			Daily Maximum		
	MEPC	(MAPC) WQBEL	Reasonable Potential	MEPC	(MAPC) WQBEL	Reasonable Potential
Total Inorganic Nitrogen as N (mg/l)				20	13	Yes
Fe, Dis (µg/l)	465	342	Yes			
Fe, TR (µg/l)	1001	590	Yes			
Mn, Dis (µg/l) (WS)	369	125	Yes			

E. coli - The limitation for *E. coli* is based upon the WQBEL established in General Permit 589000, as described in this fact sheet. A qualitative determination of RP has been made as the treatment facility has been designed to treat specifically for this parameter.

Previous monitoring, submitted by the permittee during the previous permit term indicate that this limitation can be met and is therefore imposed upon the effective date of the permit.

Total Residual Chlorine - The limitation for TRC is based upon the WQBEL established in General Permit 589000, as described in this fact sheet. A qualitative determination of RP has been made as chlorine may be used in the treatment process. This limitation is more stringent than the previous limit and the permittee may not be able to consistently meet this limitation. Therefore, a compliance schedule has been added to the permit to give the permittee time to meet this limitation. The interim limitations are the limitations in the previous permit term.

Ammonia - The limitations for ammonia is based upon the limitations established in General Permit 589000, as described in this fact sheet. A qualitative determination of RP has been made as the treatment facility has been designed to treat specifically for this parameter.

Previous monitoring, submitted by the permittee during the previous permit term, indicate that this limitation can be met and is therefore imposed upon the effective date of the permit.

Total Inorganic Nitrogen - On December 14, 2020, Water Quality Control Commission (WQCC) adopted a DSV for the Town of Oak Creek for T.I.N. The variance is set to expire on 6/30/2026. The DSV specifies an alternative effluent limitation (AEL) of 15 mg/l (acute).

The RP analysis for T.I.N. was based upon the WQBEL of 13 mg/l, as described above, and it is imposed to protect downstream water supplies.

Based upon previous monitoring, the permittee may not be able to consistently meet the WQBEL limitation of 13 mg/l; therefore, a compliance schedule, effective after the expiration of the DSV, has been added to the permit to give the permittee time to meet this limitation.

In accordance with Regulation 31.9(5)(a), a discharger specific variance must comply with an initial effluent limitation which, at a minimum, must represent the level currently achieved at the time the variance is approved. Reg. 33.66(B) states: "The commission adopted a DSV for Yampa River Segment 7 (COUCYA07) for total inorganic nitrogen (TIN) that represents the highest degree of protection of the classified use that is economically feasible for the Town of Oak Creek. The AEL is an acute (1-day) concentration of 15 mg/L, which is to be achieved by the end of the variance through implementation of the selected alternatives. The DSV requires that the Town of Oak Creek's TIN effluent concentrations do not exceed the current condition at any time during the variance. To ensure that the requirements of the DSV do not result in any lowering of currently attained ambient water quality, the commission relies on the implementation of numeric initial effluent limits to be developed in a method consistent with the division's policy for current condition temporary modifications (Clean Water Policy 13)." Consistent with Clean Water Policy 13, "In order to better protect current conditions and existing uses, the division will establish

numeric effluent limits (limits) for many existing dischargers, rather than simply monitoring requirements… For parameters measured through monthly averages (chronic limits), if an existing discharger's discharge shows reasonable potential (RP) under Water Quality Permitting Policy CW-1 to cause or contribute to an instream exceedance of the underlying water quality standard at issue, the division will commonly establish a limit based on the maximum representative value reported by the permittee through DMRs or Regulation 85 reporting over the previous 5 to 10 years."

As shown in the RP table above, a determination of reasonable potential has been made for T.I.N. concentrations in the discharge that may cause or contribute to instream exceedances of water quality standards. Therefore, in accordance with CW Policy 13 and current division practice, an initial limitation for T.I.N. has been established for the Town of Oak Creek WWTF. The initial limitation determination was made based on data submitted by the facility between June 2015 and December 2020. This dataset shows that the highest discharge concentration for T.I.N. was 18 mg/l. Therefore, the initial limitation of 18 mg/l is the limitation for the duration of the compliance schedule "Activities to Meet Total Inorganic Nitrogen Alternative Effluent Limitation", to give the permittee time to meet the AEL of 15 mg/l. Upon expiration of the DSV, a second compliance schedule, "Activities to Meet Total Inorganic Nitrogen Final Limits" has been included in the permit certification to give the permittee time to meet the WQBEL-based limitation of 13 mg/l.

In accordance with Reg. 33.66(B), if it remains unfeasible for the facility to meet the T.I.N. WQBELs, a subsequent variance may be appropriate.

Dissolved Arsenic, Total Recoverable Arsenic, Total Recoverable Cadmium, Dissolved Cadmium, Total Recoverable Trivalent Chromium, Dissolved Trivalent Chromium, Dissolved Hexavalent Chromium, Dissolved Copper, Free Cyanide, Total Recoverable Lead, Dissolved Lead, Total Recoverable Molybdenum, Total Mercury (low level), Total Recoverable Nickel, Dissolved Nickel, Dissolved Selenium, Dissolved Silver, Uranium, Chloride - There was no effluent data available to perform a RP analysis for the parameters listed. The facility receives filter backwash from the water treatment plant; therefore, the potential exists for these parameters to be present in the effluent at concentrations that exceed water quality standards. Monitoring has been added to the permit to conduct an RP analysis at the next permit renewal. The monitoring requirement for these parameters is effective immediately. For these parameters, after a minimum of two years of collected data, the permittee may submit a permit modification application for a reduced monitoring frequency analysis in accordance with Regulation 61 and WQP-20 (*Baseline Monitoring Frequency Policy*).

Dissolved Iron – The RP analysis for dissolved iron was based upon the WQBELs of 342 µg/l (30-day avg.), as described in the analysis above. With the available data, the normal program was used to determine the appropriate statistics to establish the MEPC. The MEPC was greater than the MAPC, therefore limitations are required. Based upon previous monitoring, the permittee is able to consistently meet this limitation; therefore, this limitation is effective upon the effective date of the permit.

Total Recoverable Iron – The RP analysis for total recoverable iron was based upon the NIL of 590 µg/l (30-day avg.), as described in the analysis above. With the available data, the log-normal program was used to determine the appropriate statistics to determine the MEPC. The MEPC was greater than the MAPC, therefore limitations are required. Based upon previous monitoring, the permittee may not be able to consistently meet this limitation, and a compliance schedule has been added to the permit to give the permittee time to meet this limitation. During the duration of the compliance schedule the interim chronic limitation for this parameter will be set to the WQBEL of 1136 µg/l (30-day avg.). The interim limitation is effective immediately.

Dissolved Manganese (Water Supply) – The RP analysis for dissolved manganese was based upon the WQBEL of 125 µg/l (30-day avg.), as described in the analysis above. With the available data, the normal program was used to determine the appropriate statistics to determine the MEPC. The MEPC was greater than the MAPC, therefore limitations are required. Based upon previous monitoring, the permittee may not be able to consistently meet this limitation, and a compliance schedule has been added to the permit to give the permittee time to meet this limitation. During the duration of the compliance schedule, the interim limitation of 217 µg/l, which is the highest discharge concentration reported in the previous term.

Dissolved Manganese (Aquatic Life) - The RP analysis for dissolved manganese (aquatic life) was based upon the NIL of 179 µg/l (30-day avg.) and the WQBEL of 5015 µg/l (daily max.), as described in the analysis above. With the available data, the log-normal program was used to determine the appropriate statistics to determine the MEPC. The MEPC was less than half of the MAPC and therefore limitations are not necessary at this time. However, monitoring is included for future RP analysis.

Sulfate - A qualitative RP analysis was conducted as there was not effluent data for sulfate to conduct a quantitative RP analysis. The potential exists for this parameter to be present in the effluent due to the addition to the use of sulfur dioxide in the treatment process. Therefore, limitations are required at this time. With the available dilution, the limitations for sulfate is 288 mg/l (30-day avg.). This limitation is imposed upon the effective date of the permit.

Sulfide – A qualitative RP analysis was conducted as there was not effluent data to conduct a quantitative RP analysis. The potential exists for this parameter to be present in the effluent due to the use of sulfur dioxide in the treatment process. Therefore, limitations are required at this time. With the available dilution, the limitations for sulfide is 0.0025 mg/l (30-day avg.). This limitation is imposed upon the effective date of the permit.

Dissolved Zinc - The RP analysis for dissolved zinc was based upon the ADBAC of 77 µg/l (2-year rolling avg.), and the WQBELs of 339 µg/l (30-day avg.) and 447 µg/l (daily max.), as described in the analysis above. With the available data, the MDLWIN program was used to determine the appropriate statistics to determine the MEPC. The MEPC was less than half of the MAPC and therefore limitations are not necessary at this time. However, monitoring is included for future RP analysis.

Radium 226 & 228 - There was no effluent data available to perform a RP analysis for Radium 226 & 228, therefore a qualitative determination of RP has been made. Due to the filter backwash that the facility receives from the water treatment plant and the influence of geologic sources of radionuclides in groundwater that may enter the collection system via inflow/infiltration, the potential exists for this parameter to be present in the effluent. Monitoring is required, effective immediately, to conduct an RP analysis at the next permit renewal.

Electrical Conductivity (EC) – The calculated chronic limit for EC in deciSiemens per meter (dS/m), as set out in the EC/SAR Section above, is established as a 30-day average limit. Due to the treatment of concentrated filter backwash by this facility, a qualitative determination of RP has been made. A reporting requirement had been added to the permit to be able to perform a quantitative RP analysis in the next renewal.

Sodium Absorption Ratio (SAR), Adjusted SAR – The capped limit for SAR is set out in the WQA, and is established as a 30-day average limit. Note that the SAR limit may change based on the actual EC of the effluent, as based on the SAR/EC equation (SAR = (7.1 * EC) – 2.48), which is the limitation expressed in the permit. Note that the maximum SAR is capped at the value of the SAR/EC equation using the calculated EC limit of 9, whichever is less.

High bicarbonate concentrations also adversely affect plant growth because bicarbonate combines with calcium and magnesium and will precipitate out of solution, lowering the amount of available calcium. For this reason, the effluent SAR will be calculated as the adjusted SAR, which takes into account the amount of bicarbonate in the effluent. The SAR limit is expressed as a Pass/Fail limit, and the permittee will be required to determine the SAR limit based on the above equation. The permittee will report the adjusted SAR of the effluent, and determine whether this value meets the allowable SAR as determined by the equation (or the capped value).

Due to the treatment of filter backwash, a qualitative determination of RP has been made as the facility is expected to contain sodium, calcium and magnesium in the discharge.

There is no data available regarding the presence/absence or quantification of this parameter in the discharge. Since the potential exists for this parameter to be present, monitoring has been added to the permit.

Reporting of the effluent Ca, Mg, Na, and HCO_3 will be required for confirmation of calculations. See the *Definition of Terms* section in the permit certification for detailed instructions on how to calculate the adj SAR using the HCO_3 and Ca concentrations.

Whole Effluent Toxicity (WET) Testing – For this facility, chronic WET testing has been determined to be applicable based on the instream waste concentrations calculated above.

The discharge is expected to contain metal concentrations from the filter backwash wastestream treated by the facility; therefore, a qualitative Reasonable Potential has been determined for WET testing. WET testing is expected to occur such that every month of the year is represented as equally as possible; thus, following the frequency specified in the permit certification, a WET test should be performed for each calendar month.

The requirements for WET testing are being implemented in accordance with Division policy, *Implementation of the Narrative Standard for Toxicity in Discharge Permits Using Whole Effluent Toxicity* (Sept. 30, 2010). The permittee should read the WET testing section of Part I of the permit carefully, as this information has been updated in accordance with the Division's updated policy, Implementation of the Narrative Standard for Toxicity in Discharge Permits Using Whole Effluent Toxicity (Sept 30, 2010). The permit outlines the test requirements and the required follow-up actions the permittee must take to resolve a toxicity incident. The permittee should also read the above mentioned policy which is available on the Permit Section website. The permittee should be aware that some of the conditions outlined above may be subject to change if the facility experiences a change in discharge, as outlined in Part II.A.2. of the permit. Such changes shall be reported to the Division immediately.

- **Parameter Speciation**

Total / Total Recoverable Metals (EXCEPT Arsenic)
For standards based upon the total and total recoverable methods of analysis, the limitations are based upon the same method as the standard.

Total / Total Recoverable Arsenic
For total recoverable arsenic, the analysis may be performed using a graphite furnace, however, this method may produce erroneous results and may not be available to the permittee. Therefore, the total method of analysis will be specified instead of the total recoverable method. An August 19, 1998 EPA memo states that the terms "total metals" and "total recoverable metals" are synonymous. Total metals and total recoverable metals are used to describe methods of hard mineral acid digestion.

Total Mercury
Until recently there has not been an effective method for monitoring low-level total mercury concentrations in either the receiving stream or the facility effluent. Monitoring for total mercury has been accomplished as part of past permit conditions and analytical results have all been found at less than detectable levels. However, detection levels only as low as 0.2 ug/l have been achieved, versus a total mercury limit of 0.011 ug/l. To ensure that adequate data are gathered to determine reasonable potential, and consistent with Division initiatives for mercury, quarterly effluent monitoring for total mercury at low-level detection methods will be required by the permit.

Dissolved Metals / Potentially Dissolved
For metals with aquatic life-based dissolved standards, effluent limits and monitoring requirements are typically based upon the potentially dissolved method of analysis, as required under Regulation 31, *Basic Standards and Methodologies for Surface Water*. Thus, effluent limits and/or monitoring requirements for these metals will be prescribed as the "potentially dissolved" form.

Dissolved Iron and Dissolved Manganese
The dissolved iron and chronic manganese standards are drinking water-based standards. Thus, sample measurements for these two parameters must reflect the dissolved fraction of the metals.

Cyanide
For cyanide, the acute standard is in the form of "free" cyanide concentrations. Historically, analytical procedures were not readily available for measuring the concentration of free cyanide in a complex effluent therefore the Division required weak acid dissociable cyanide to be reported instead. Even though methods are now available to measure free cyanide, weak acid dissociable cyanide will be still required as this analytical procedure will detect free cyanide plus those forms of complex cyanide that are most readily converted to free cyanide. Therefore, ASTM (American Society for Testing and Materials) analytical procedure **D2036-09, Method C,** will be used to measure weak acid dissociable cyanide in the effluent.

TR Trivalent Chromium/Total Chromium
For total recoverable trivalent chromium, the regulations indicate that standard applies to the total of both the trivalent and hexavalent forms. Therefore, monitoring for total recoverable chromium will be required.

Dissolved Hexavalent Chromium
For hexavalent chromium, samples must be appropriately buffered. Dissolved concentrations will be measured rather than potentially dissolved concentrations.

- **Monitoring Reduction Evaluation**

  Based upon the discharge data submitted by the permittee from June 2015 through December 2020, the facility is eligible for reduced monitoring for dissolved iron, dissolved manganese (aquatic life), and dissolved zinc. For these parameters, the monitoring frequency will be set to Quarterly.

  The quarterly monitoring frequency for mercury is imposed consistent with the Divisions' recent initiative to include Quarterly monitoring for mercury because of the changes in analytical procedure that will allow total mercury to be quantified at much lower concentrations.

- **Reporting**

  1. Discharge Monitoring Report – The permittee must submit Discharge Monitoring Reports (DMRs) on a monthly basis to the Division. These reports should contain the required summarization of the test results for all parameters and monitoring frequencies shown in Part I.B.1 of the permit certification.

  2. Additional Reporting –

     a. Infiltration/Inflow - Requirements for an I/I study are included in the permit certification. The reporting requirements pertinent to I/I issues included in *Exhibit C-7 Final Monitoring and Timeline Recommendations for Oak Creek* have been incorporated in the I/I Special Study.
     b. Total Inorganic Nitrogen – A compliance schedule to meet the T.I.N. Alternative Effluent Limit of 15 mg/l is included in the permit certification. The reporting requirements pertinent to T.I.N. improvements included in *Exhibit C-7 Final Monitoring and Timeline Recommendations for Oak Creek* have been incorporated in the compliance schedule.

  3. Special Reports – As described in *Exhibit C-7*, the Town of Oak Creek WWTF must collect and submit data as part of its DSV. This data is critical for understanding T.I.N. reduction at different stages of the treatment process and evaluating potential improvements. A report that includes results of *Phase I and Phase II Sampling* must be submitted to the division annually and it may be in the form of a spreadsheet.

     Phase I and Phase II Sampling Plan Locations and Descriptions are included below. See *Exhibit C-7* for additional details.

Phase I Sampling Plan Locations and Descriptions

Sample Location Name	Sample Location Description	Sample Parameter(s) - Sampling Method(s)	Sample Frequency for Baseline and Internal Recycle Conditions
A	At raw water influent, prior to where the recycle stream re-enters.	TKN Total Alkalinity Temperature Nitrite* Hach DR900 measurement or laboratory grab or composite sample.	Baseline: Total Alkalinity once per month. All other parameters twice per week, for 15 days, at least 3 full days between sampling. Internal Recycle: Total Alkalinity once per week. All

		Optionally, total phosphorus - Hach DR900 measurement or laboratory grab or composite sample.	other parameters twice per week, for 60 days, at least 3 full days between sampling.
B	After the anaerobic pond but before the first aerobic pond.	Nitrate Total Alkalinity Temperature DO Nitrite* Hach DR900 measurement or laboratory grab sample. (A nitrate value of 0.8-1.0 mg/L indicates optimal nitrate removal)(A DO level in this location of 0 mg/L is indicative of anoxic environment) Optionally, total phosphorus - Hach DR900 measurement or laboratory grab or composite sample.	Baseline: Total Alkalinity once per month. DO once per week. All other parameters twice per week, for 15 days, at least 3 full days between sampling. Internal Recycle: Total Alkalinity and DO once per week. All other parameters twice per week, for 60 days, at least 3 full days between sampling.
C	After the MBBR at the end of the recycle stream closest to the anaerobic pond.	Ammonia Nitrate Temperature DO Nitrite* Hach DR900 measurement or laboratory grab or composite sample	Baseline: DO once per week. All other parameters twice per week, for 15 days, at least 3 full days between sampling Internal Recycle: Total Alkalinity and DO once per week. All other parameters Twice per week, for 60 days, at least 3 full days between sampling
D	In settling pond effluent.	Nitrate Temperature Nitrite* Hach DR900 measurement or laboratory grab or composite sample Optionally, total phosphorus - Hach DR900 measurement or laboratory grab or composite sample.	Baseline: Twice per week, for 15 days, at least 3 full days between sampling Internal Recycle: All other parameters Twice per week, for 60 days, at least 3 full days between sampling
*Nitrite sampling frequency can be reduced to once per month if data determines that nitrite conversion to nitrate is stable independent of site location seasonal changes.			

Phase II Sampling Plan Locations and Descriptions

Sample Location Name	Sample Location Description	Sample Parameter(s) - Sampling Method(s)	Sample Frequency
A	At raw water influent, prior to where the recycle stream re-enters.	TKN, Total Alkalinity, Temperature and Nitrite*- Hach DR900 measurement or laboratory grab sample. Optionally, total phosphorus - Hach DR900 measurement or laboratory grab sample.	Twice per week, for 2 years, at least 3 full days between sampling.
B	After the anaerobic pond but before the first aerobic pond.	Nitrate, DO, Temperature and Nitrite*- Hach DR900 measurement or laboratory grab sample. (A nitrate value of 0.8-1.0 mg/L indicates optimal nitrate removal)(A DO level in this location of 0 mg/L is indicative of anoxic environment) Optionally, total phosphorus - Hach DR900 measurement or laboratory grab sample.	Twice per week, for 2 years, at least 3 full days between sampling.
C	After the NH3 MBBR but before the NO3 MBBR.	Ammonia, Nitrate, temperature DO and Nitrite*- Hach DR900 measurement or laboratory grab sample	Twice per week, for 2 years, at least 3 full days between sampling
D	After the NO3 MBBR but before the settling pond.	Nitrate, temperature DO and Nitrite*- Hach DR900 measurement or laboratory grab sample	Twice per week, for 2 years, at least 3 full days between sampling
E	In settling pond effluent.	Nitrate, Total Alkalinity, Temperature and Nitrite* - Hach DR900 measurement or laboratory grab sample Optionally, total phosphorus - Hach DR900 measurement or laboratory grab sample.	Twice per week, for 2 years, at least 3 full days between sampling
*Nitrite sampling frequency can be reduced to once per month if data determines that nitrite conversion to nitrate is stable independent of site location seasonal changes.			

General Information:

- **Permit Action Fees** : The Annual Fee for this certification is $1427 [Category 22, Subcategory V-D for Domestic Wastewater per CRS 25-8-502] and is invoiced every July. Do Not Pay This Now.

- **Changes to the Certification** - Any changes that need to be made to the certification page – changes in outfalls, monitoring requirements, etc., must be submitted using the "Permit and Certification Modification form" available on our website: coloradowaterpermits.com, and signed by the legal contact.

- **Discharge Monitoring Report (DMR)** forms will be mailed out within the next month. Reports must be submitted **monthly** as long as the certification is in effect. The permittee shall provide the Division with any additional monitoring data on the permitted discharge collected for entities other than the Division. This will be supplied to the Division within 48 hours of the receipt of the data by the permittee. If forms have not been received, please contact the Division at 303-692-3517.

- **Sampling Requirements** Sampling shall occur at a point after treatment, or after the implementation of any Best Management Practices (BMPs). If BMPs or treatment are not implemented, sampling shall occur where the discharge leaves control of the permittee, and prior to entering the receiving stream or prior to discharge to land. Samples must be representative of what is entering the receiving stream.

- **Termination requirements** This certification to discharge is effective long term, even though construction and dewatering discharge are only expected for approximately three months. For termination of permit coverage, the permittee must initiate this by sending the "CDPS Permits and Authorization Termination Form." This form is also available on our web site and must be signed by the legal contact.

- **Certification Records Information** The following information is what the Division records show for this certification.

  For any changes to Contacts – Legal, Local, Billing, or DMR – a "Notice of Change of Contacts form" must be submitted to the Division. This form is also available on our web site and must be signed by the legal contact.

Facility: Oak Creek WWTF — RouttCounty
Industrial Activities — SIC Code 4952

Legal Contact *Receives all legal documentation, pertaining to the permit certification. [including invoice; is contacted for any questions relating to the facility; and receives DMRs.]*

David Torgler, Town Administrator — Phone number:
Oak Creek Town of — tom@townofoakcreek.com
PO Box 128 — Email:
Oak Creek,CO 80467 — dave@townofoakcreek.com

Facility Contact *Contacted for general inquiries regarding the facility*

Tom Holliday, PW Director — Phone number: 970-736-2459
Oak Creek Town of — Email:
PO Box 128 — tom@townofoakcreek.com
Oak Creek CO 80467

Billing Contact

Ali Moore Deputy Clerk — Phone number: 970-736-2422
Oak Creek Town of — Email:
PO Box 128 — lali@townofoakcreek.com
Oak Creek, CO 80467

DMR Contact

Tom Holliday, PW Director — Phone number: 970-736-2459
Oak Creek Town of — Email:
PO Box 128 — tom@townofoakcreek.com
Oak Creek, CO 80467

DIVISION USE ONLY	
G04	Sewage Sludge/Biosolids Annual Program Reports
G09	Sewer Overflow/Bypass Event Reports
G2A	General Permit Reports [Notices of Intent to discharge] (NOIs)
G2B	Notices of Termination (NOTs)
G3A	DMRs: Regular Submission Frequency

EIAF
CTGG1 NLAA 202400002299

OPTION LETTER #1

SIGNATURE AND COVER PAGE

State Agency Department of Local Affairs (DOLA)	**DLG Portal Number** EIAF-A-00261	**Option Letter CMS Number** 193274
Grantee Town of Oak Creek	**Previous CMS #(s)** 186106	
Project Number and Name EIAF A-0261 Oak Creek Water & Wastewater System Engineering Evaluation	**Grant Amount** Initial Award: $25,000.00 Option Letter #1 08/01/2024: $0.00 **Total Grant Amount: $25,000.00**	
DOLA Regional Manager **Kate McIntire, (970) 744-0760, (kate.mcintire@state.co.us)** **DOLA Regional Assistant** **Nichole Robillard, (970) 473-4947, (nichole.robillard@state.co.us)**	**Prior Grant Agreement Expiration Date** August 31, 2024	**Current Grant Agreement Expiration Date** December 31, 2024

THE PARTIES HERETO HAVE EXECUTED THIS OPTION LETTER

Each person signing this Option Letter represents and warrants that he or she is duly authorized to execute this Option Letter and to bind the Party authorizing his or her signature.

STATE OF COLORADO
Jared S. Polis GOVERNOR
Colorado Department of Local Affairs

DocuSigned by:
By: _____
0920A67707B9482...
Maria De Cambra, Executive Director

Date: 8/1/2024 | 7:19 PM MDT

ALL CONTRACTS REQUIRE APPROVAL BY THE STATE CONTROLLER

CRS §24-30-202 requires the State Controller to approve all State contracts. This Option Letter is not valid until signed and dated below by the State Controller or delegate.

STATE CONTROLLER
Robert Jaros, CPA, MBA, JD

DocuSigned by:
By: Beulah Messick - DOLA
090ACD88A721474...
Beulah Messick, DOLA Controller Delegate

Effective Date: 8/14/2024 | 9:57 AM MDT

1) **OPTIONS:** Choose all applicable options listed in §1 and in §2
   - ☒ a. Option to extend *(use this option for Extension of Time)*
   - ☐ b. Change in the Grant Award Amount within the current term *(use this option for an Increase or Decrease in Grant Funds, including Supplemental funding awards)*
   - ☐ c. Budget Line Adjustment(s) – reallocation of awarded Grant Funds to Budget Line(s) *(use this Option to redistribute existing Grant Funds between budget lines)*

2) **REQUIRED PROVISIONS**. All Option Letters shall contain the appropriate provisions set forth below:

   a. For use with Option 1(a): In accordance with **Section 2(A)** of the original Intergovernmental Grant Agreement between the State of Colorado, acting by and through the Colorado Department of Local Affairs**,** and the **Town of Oak Creek**, the State hereby exercises its option for an additional term beginning **September 01, 2024** and ending on **December 31, 2024**. Tables in **Sections 4.3 and 4.5.2** of **Exhibit B** are deleted and replaced with the following:

Milestone/Performance Measure:	**By:**
Provide DOLA with Project Timeline.	Within 30 days after the Effective Date of the subcontract(s).
Provide DOLA a copy of the completed Implementation Plan.	At Project Closeout.
Submit Quarterly Pay Requests	**See §4.5.2 below**
Submit Quarterly Status Reports	**See §4.5.2 below**
Submit Project Final Report	March 31, 2025

Quarter	Year	Due Date	Pay Request Due	Status Report Due
3rd (Jul-Sep)	**2023**	**October 30, 2023**	**Yes**	**Yes**
4th (Oct-Dec)	**2023**	**January 30, 2024**	**Yes**	**Yes**
1st (Jan-Mar)	**2024**	**April 30, 2024**	**Yes**	**Yes**
2nd (Apr-Jun)	**2024**	**JULY 15, 2024***	**Yes**	**Yes**
3rd (Jul-Sep)	**2024**	**October 30, 2024**	**Yes**	**Yes**
4th (Oct-Dec)	**2024**	**January 30, 2025**	**Yes**	**Yes**

***State fiscal year runs July 1 – June 30 annually. Grantee must request reimbursement for all eligible costs incurred during a State fiscal year by July 15 annually.**

   b. Reserved for use with Option 1(b).

   c. Reserved for use with Option 1(c).

3) **Effective Date**. The effective date of this Option Letter is upon approval of the State Controller or **August 01, 2024**, whichever is later.

THE REST OF THIS PAGE INTENTIONALLY LEFT BLANK

AGREEMENT FOR SERVICES BETWEEN AQUAWORKS DBO, INC. AND CLIENT

3252 Williams Street, Denver, CO 80205 | (303) 477-5915 | www.AquaWorksDBO.com

PROJECT	Drinking Water & Wastewater Treatment Improvements Planning
CLIENT	Town of Oak Creek
LOCATION	Routt County, Colorado
DESCRIPTION	Assist the Town with addressing the requirements of its wastewater treatment discharge permit and potable water system limits by planning for proposed improvements.
TYPE OF SERVICE	Planning & Preliminary Engineering
CLIENT REP	Ms. Mary Alice Page-Allen
PROJECT NUMBER	3479
PREPARED BY	Adam Sommers, P.E.

SCOPE OF SERVICES

1. Review AquaWorks' Water and Wastewater System Review Letter Report with customer and contract operator.
2. Determine what activities identified in the Letter Report are the Town's priorities. Items that can be evaluated include, but are not limited to, prepare Site Application for previously completed improvements at WWTP, review I&I issues, look into iron and manganese, review status of ammonia violations, potable water losses, evaluate membrane skid performance, look into turbidity issues at WTP.
3. Address the top priorities for the Town.
4. Respond to upcoming and missed compliance schedule requirements.
5. Provide the CDPHE updates the Town is making to address meeting the limits.
6. Provide preliminary recommendations for the treatment systems.
7. Any other services requested by client.

BUDGET FOR SERVICES

CONTRACT TYPE	Time and Materials
NOT TO EXCEED FEE TOTAL	$50,000

Payment Terms and Conditions

1. Subconsultant expenses, fees, and additional services not specified within the scope of services which are required either directly by the client, its agents, or otherwise incurred in the performance of this agreement will be billed as additional services, according to the enclosed terms.
2. Changes in scope will require additional compensation to AquaWorks DBO according to existing or extended terms, or existing standard hourly rates in lieu of a written agreement for additional services.
3. Invoicing will be performed monthly or as close as practical. The invoiced amount is due within 30 days of receipt, after 30 days an interest charge of 1.5% per month or portion thereof will be incurred.

FEE SCHEDULE

HOURLY FEES

PRINCIPAL/SENIOR PROJECT MANAGER	$ 225/hr
PROJECT MANAGER	$ 215/hr
SENIOR ENGINEER	$ 195/hr
SENIOR PROJECT ENGINEER	$ 185/hr
PROJECT ENGINEER	$ 175/hr
WORD PROCESSING/ ADMINISTRATIVE	$ 65/hr

OTHER DIRECT CHARGES

MILEAGE	Current IRS Rate

REIMBURSEABLE EXPENSES

(Subject to actual cost) May include, but are not limited to:

- Additional outside professional services provided beyond those stipulated in the scope of work
- Additional copies of reports, drawings, etc. beyond those stipulated in the scope of work
- Postage, courier fees, and shipping
- Other owner-approved, project-related purchases

ACCEPTANCE AND AUTHORIZATION

CLIENT'S DESIGNATED REPRESENTATIVE		AQUAWORKS DBO DESIGNATED REPRESENTATIVE	
Company:	Town of Oak Creek	Company:	AquaWorks DBO, Inc. 3252 Williams Street Denver, CO 80205
Name:	Mary Alice Page-Allen	Name:	Adam Sommers
Title:	Interim Town Administrator/Clerk	Title:	President
Signature:		Signature:	
Date:		Date:	8/14/2024

Signature indicates that individual is qualified as the Client's representative to enter into an agreement for services.
Notice to Proceed: Provide by returning acceptance and authorization, to be effective as of date of signature.

A. CONTRACTOR shall be responsible for the acts, errors and omissions of itself and its employees, consultants, agents, and any other persons employed or retained on behalf of CONTRACTOR in connection with the Project and for the acts, errors and omissions of the Project's owners and users. Within the limitations of the Colorado Constitution and statutes, CONTRACTOR agrees to indemnify, hold harmless, and defend the OWNER and its directors, officers, employees, agents, and attorneys for the actions, errors and omissions of CONTRACTOR and CONTRACTOR'S employees, consultants, agents, and any other persons employed or retained on behalf of CONTRACTOR in the performance of this Contract and for the acts, errors and omissions of the Project's owners and users. The parties recognize that the OWNER is a governmental entity subject to the provisions of the Colorado Governmental Immunity Act, C.R.S. § 24-10-101, et seq. Neither Party waives, and both Parties are relying upon, the immunities, limitations of liability and protections of that Act.

B. At its sole cost CONTRACTOR, or at CONTRACTOR's cost shall purchase and maintain in effect through Project completion insurance which will protect it and the OWNER from claims which may arise out of, result from or be related to CONTRACTOR'S performance of the work on the Project, whether such performance be by itself or by anyone directly or indirectly retained or employed by CONTRACTOR or by anyone for whose acts, errors, or omissions any of them may be liable. Such insurances required herein shall be written for limits of liability as follows:

Commercial General Liability:
i) Bodily Injury and Property Damage: $2,000,000 each occurrence/$2,000,000 aggregate
II)Personal Injury: $2,000,000 each occurrence/$2,000,000 aggregate

Workers' Compensation and Employer's Liability:
i) Compensation: Statutory
ii)Employer's Liability:
$100,000 each accident
$100,000 disease – each employee
$500,000 disease – policy limit

C. The Commercial General Liability and Commercial Automobile Liability policies required hereunder shall include the OWNER named as primary, non-contributory, additional insured. If CONTRACTOR'S SUBCONTRACTOR is providing the necessary insurance CONTRACTOR shall also be named as primary, non-contributory, additional insured. CONTRACTOR shall supply the OWNER with a certificate of each insurance policy required herein at least thirty (30) days prior to the estimated commencement date, unless otherwise agreed upon by the parties. The certificates of insurance shall evidence that the premium has been paid and contain a valid provision or endorsement that the policies may not be canceled, terminated, changed, or modified without thirty (30) days written notice to the OWNER.

D. Neither CONTRACTOR nor OWNER intend by this Contract to create a multi-year fiscal obligation of either Party. All financial obligations of the Parties are subject to appropriation of funds in years subsequent to the current fiscal year.

Client Services. AquaWorks DBO through and by its officers, employees and subcontractors is an independent consultant and agrees to provide client, for its sole benefit and exclusive use, consulting services set forth in this proposal. No third party beneficiaries are intended by this Agreement.

Payment Terms. Client agrees to pay AquaWorks DBO's invoice within 30 days. Client agrees to pay a service charge of 1.5% per month or the allowable legal rate, including reasonable attorney's fees and expenses if collected through an attorney. No deduction shall be made from AquaWorks DBO's invoice for retainage.

Standard of Care. AquaWorks DBO's services under this Agreement will be performed in a manner consistent with that degree of care and skill ordinarily exercised by members of the same profession currently practicing under similar circumstances in the vicinity of the project. No other warranties, express or implied are made.

Insurance. AquaWorks DBO maintains insurance to statutory and professional standards for comparable work of this type in this area at the time of service.

Limitation of Liability. In recognition of the relative risks and benefits of the project to both the Client and AquaWorks DBO, the risks have been allocated such that the Client agrees, to the fullest extent permitted by law, to limit the liability of AquaWorks DBO and its subconsultants to the Client and to all construction contractors and subcontractors on the project for any and all claims, losses, costs, damages of any nature whatsoever or claims expenses from any cause or causes, so that the total aggregate liability of AquaWorks DBO shall to be limited to $1,000,000 per occurrence or $2,000,000 aggregate. This limitation applies to all claims of any kind arising out of this agreement.

Site Operations. Client will arrange right-of-entry to the property for the purposes of performing project management, studies, review of existing conditions and evaluations pursuant to the agreed services. Client represents that it possesses necessary right-of-entry authority, permits, and licenses required for its activities at the site.

Documents. AquaWorks DBO will furnish Client the agreed upon number of written reports, plans, and supporting documents as identified in the scope. These instruments of service are furnished for Client's exclusive use and reliance, but not for advertising or other type of distribution, and are subject to the following:

a. Client shall furnish documents or information reasonably within Client's control and deemed necessary by AquaWorks DBO for proper performance of its services. AquaWorks DBO may rely on Client-provided documents in performing the services under this Agreement; however, AquaWorks DBO assumes no responsibility or liability for their accuracy. Client provided documents will remain the property of the Client, but AquaWorks DBO may retain one confidential file copy as needed to support its report or designs.

b. Removed.

c. Upon Client's request AquaWorks DBO's work product may be provided on electronic or digital media. By such request, Client agrees that the written copy provided to the Client shall be the official base document. AquaWorks DBO makes no warranty or representation to Client that the electronic or digital copy is accurate or complete, but will correct in good faith any omissions or errors brought to AquaWorks DBO's attention by the Client during the course of this Agreement. Any modifications of such electronic or digital copy by Client shall be at Client's sole risk and without liability to AquaWorks DBO. Such electronic or digital copy is subject to all other conditions of this Agreement.

Opinions of Cost. If requested, AquaWorks DBO will use its experience on similar projects to provide opinions of cost for construction as appropriate based on reasonably available data, AquaWorks DBO's designs, or AquaWorks DBO's recommendations. Such opinions are intended primarily to provide information on the order of magnitude or scale of such costs and are not intended for use in firm budgeting or negotiation unless specifically agreed otherwise, in writing with AquaWorks DBO. Client understands actual costs of such work depend heavily on regional economics, local construction practices, material availability, site conditions, weather conditions, contractor's skill, and many other factors beyond AquaWorks DBO's control.

Credit for Work. Client agrees to the best of ability to give appropriate credit to AquaWorks DBO in any publicity releases, awards, submissions, publications, and identification in on-site signs which identify other professionals and/or contractors working on this project.

Governing Law. This Agreement shall be governed by and interpreted in accordance with the laws of the State of Colorado. Any claim or dispute arising out of this Agreement shall be brought in the courts of Routt County, State of Colorado.

Confidentiality. AquaWorks DBO will maintain as confidential any documents or information provided by the Client and will not release, distribute or publish same to any third party without prior permission from Client, unless compelled by law or order of a court or regulatory body of competent jurisdiction.

Priority over Form Agreement/Purchase Orders. The parties agree that the provisions of these terms and conditions shall control over and govern as to any form writings signed by the Parties, such as Client Purchase Orders, Work Orders, or other agreement forms, and that such forms may be issued by Client to AquaWorks DBO as a matter of convenience of the Parties without altering any of the terms or provisions hereof.

Survival. All provisions of this Agreement for indemnity or allocation of responsibility or liability between Client and AquaWorks DBO shall survive the completion of services and/or the termination of this agreement.

Severability. In the event that any provision of this Agreement is found to be unenforceable under law, the remaining provisions shall continue in full force and effect.

Assignment. This Agreement cannot be assigned by either party without prior permission of the other.

Integration. This Agreement, the attached documents and those incorporated herein constitute the entire Agreement between the parties and cannot be changed except by a written instrument signed by both parties.

Consequential Damages. Neither Client nor AquaWorks DBO shall be liable to one another for incidental, indirect, indirect, or consequential damages rising out of AquaWorks DBO's services under this Agreement. This mutual waiver of damages includes, but is not limited to, claims for loss of use, rent, income, profit, financing, business and reputation, claims for delay damages and damages due to either party's termination under this agreement.

Claims. In the event of a dispute, Client agrees to make claim against AquaWorks DBO as a corporate entity only and not against any individual employee, owner, officer, director, or agent of AquaWorks DBO.

Unilateral Changes. If Client makes any unilateral modifications to this Agreement, such shall not become part of this Agreement and shall not be enforceable unless and until initialed by an authorized representative of Consultant.

Job Site Safety. Client agrees that the Contractor is solely responsible for job site safety and for health and safety precautions required by regulatory agencies. AquaWorks DBO shall have no obligation to direct or control the Contractor's job site activities or the means and methods of construction and shall have no liability for job site safety.

Time for Performance. AquaWorks DBO shall perform services under this Agreement in a timely manner, consistent with the exercise of independent, professional judgment. AquaWorks DBO shall not be responsible for delays in completion of its services caused by Client or third parties.

Termination. Either Client or AquaWorks DBO may terminate this Agreement without cause upon 10 days written notice to the other party. AquaWorks DBO may terminate this Agreement within 7 days after a demand for payment of outstanding invoices. Upon termination, AquaWorks DBO shall be paid for all outstanding services performed through the date of termination.

Dispute Resolution. The parties agree that any claim or dispute arising out of their respective obligations under this Agreement shall be subject to voluntary mediation as a pre-condition to the initiation of legal proceedings. Mediation shall be conducted pursuant to the construction industry rules of the American Arbitration Association within 30 days of a demand thereof.

Exclusions. The following services, including those which are not considered normal or customary Basic Services are not included in the Scope of Services. Additional or Supplemental Services beyond the above Scope of Work shall be performed only upon mutual agreement in writing between AquaWorks DBO and Client.

a. Services resulting from significant changes in the extent of the Project or its design including, but not limited to, changes in size, complexity, Client's schedule, or character or construction or methods of financing; and revising previously accepted studies, reports, design documents or Contract Documents when revisions are due to causes beyond AquaWorks DBO control.
b. Water rights investigations, consulting, or certification.
c. Furnishing the services of land surveying, geotechnical, geological, or hydrogeological consultants.
d. Land use or regional (council of governments) planning documents including, but not limited to, 208 plans and amendments, 1041 permit, and zoning amendments.
e. Permit or application fees of any kind, including CDPHE fees or County or City permit fees.
f. Services of an Attorney and associated fees.
g. Bidding or construction engineering services.

COMMUNICATION FORM

DATE: August 22, 2024
ITEM: Oak Creek Fire Protection District Comment Letter – Proposed Impact Fees
ATTACHED: OCFPD Letter, 6/26/2024
Draft Town-OCFPD Comment Letter, 8/22/2024

BOARD ACTION:
_X_ ACTION ITEM
____ DIRECTION REQUESTED
____ INFORMATION

REQUEST OR ISSUE: Consideration of approval of comment letter in response to notification that the Oak Creek Fire Protection District will be considering the adoption and implementation of an impact fee schedule on new construction

RECOMMENDED ACTION: That the Board provide feedback, comments and finalize the comment letter in response to notification that the Oak Creek Fire Protection District will be considering the adoption and implementation of an impact fee schedule on new construction

BACKGROUND INFORMATION: In follow-up to the joint meeting with the Town Board and OCFPD Board on August 12, 2024, the Town Board indicated they would provide written comments on the proposal to adopt and implement impact fees on new construction.

FISCAL IMPACTS: To be determined.

LEGAL ISSUES: To be determined.

CONFLICTS OR ISSUES To be determined.

SUMMARY AND ALTERNATIVES: As the OCFPD moves to implement impact fees, the Town Board and community are learning how this will impact new construction costs, housing and commercial development and the ability for the OCFPD to provide adequate services.

3 024

June 26, 2024

David Torgler, Town Administrator/Clerk
Town of Oak Creek
129 Nancy Crawford Blvd.
Oak Creek, CO 80467

Sent via Certified U.S. Mail and via email to clerk@townofoakcreek.com

Re: Notice Pursuant To SB24-194 Of The Oak Creek Fire Protection District Board of Directors' Intent To Adopt An Impact Fee Schedule

Mr. Torgler:

This notice is being provided in accordance with Section 3 of Colorado Senate Bill 24-194, to advise you that the Oak Creek Fire Protection District ("District") Board of Directors ("Board") intends to adopt a Resolution establishing an impact fee schedule.

The impact fee schedule that Board intends to adopt will be established at levels no greater than necessary to defray the reasonable impacts on the District's existing capital facilities that are directly related to proposed construction within the District's jurisdiction. Such impact fee levels have been determined by the District's June 2024 Impact Fee Support Study conducted by RPI Consulting, and accepted by the Board. Pursuant to the Impact Fee Support Study, the maximum fees that may be established as part of the proposed impact fee schedule are:

Impact Fee per Residential Unit	$5,695
Impact Fee per 1,000 sq. ft. Nonresidential Floor Area	$10,442

The Board will consider adoption of the impact fee schedule at a public meeting to be conducted at 6:30 p.m. on Monday, August 26. In accordance with Section 3 of SB24-194, the Town has the opportunity to submit comments regarding the proposed impact fee schedule prior to the public meeting at which adoption of the impact fee schedule will be considered. Please direct the Town's comments to the Board at:

Board of Directors, Oak Creek FPD
131 E. Main Street
P.O. Box 152
Oak Street, CO 80467

If the Town does not wish to submit comments, the District also would greatly appreciate receiving a brief response to that effect, which may be provided by signing on the line below and returning a copy of this letter to the District. Otherwise, the District will consider a lack of any response by the time of the public meeting as "no response". If you have any questions regarding this matter, please contact me at 970-761-8141. Thank you.

Sincerely,

Brady Glauthier, Fire Chief

Town of Oak Creek does not wish to submit comments:

_____

Name:_____ Title:_____

Date:_____

5473512.3

129 Nancy Crawford Boulevard
P.O. Box 128
Oak Creek, CO 80467
(970) 736-2422
clerk@townofoakcreek.com

DRAFT

August 22, 2024

Board of Directors
Oak Creek Fire Protection District
PO Box 152
Oak Creek, CO 80467

Re: Notice of Intent to Adopt An Impact Fee Schedule

Dear President Park & Board Members:

Thank you for your recent attendance at our joint meeting to provide information and discuss the Oak Creek Fire Protection District's (OCFPD) correspondence related to your upcoming consideration of the adoption of an impact fee schedule on new, permitted construction. The meeting was highly informative, and it reaffirmed our mutual goals of understanding and properly responding to the needs of our community.

As was discussed at the meeting, the Oak Creek Board of Trustees (Board) is submitting this letter to follow-up on some points and concerns discussed at the meeting and to urge additional and thoughtful consideration on these topics. These include:

- Addressing the economic impacts that an impact fee will likely have on affordable and workforce housing by waiving or significantly reducing the fee on qualified affordable or workforce housing units;
- Consider alternatives to assessing impact fees, e.g. dedication of land to OCFPD;
- Develop a consistent, transparent and documented process and checklist(s) to assure an equitable evaluation when setting the appropriate fee on a case-by-case basis and do so prior to implementing the program; and
- Re-evaluate the impact fee schedule and structure on no less than a bi-annual basis, particularly over the first 5-6 years of the program.

We appreciate your efforts to understand the needs of the community and the wide-ranging efforts that OCFPD takes in providing emergency response services in these challenging times of current and future anticipated growth. Thank you for continuing efforts.

Sincerely,

Melissa Dobbins, Mayor

MD:map

xc:file

COMMUNICATION FORM

DATE: August 22, 2024
ITEM: Resolution 2024-009 – Whistle Hill Alley
ATTACHED: Resolution 2024-009

BOARD ACTION: _X_ ACTION ITEM
____ DIRECTION REQUESTED
____ INFORMATION

REQUEST OR ISSUE: Review and consideration for approval and authorization to sign Resolution 2024-009, A Resolution Adopting the Road Name of Whistle Hill Alley

RECOMMENDED ACTION: That the Board approve and authorize the signing of Resolution 2024-009, A Resolution Adopting the Road Name of Whistle Hill Alley

BACKGROUND INFORMATION: While the sale and occupancy of the A-Frame house on the north side of town and accessed via this alley, along with the existing house currently addressed from Lincoln Avenue, a road name is needed to assure that emergency response service providers and others can locate these homes.

FISCAL IMPACTS: None known.

LEGAL ISSUES: None known.

CONFLICTS OR ISSUES: None known.

SUMMARY AND ALTERNATIVES: As stated above.

STATE OF COLORADO)
) ss
COUNTY OF ROUTT)

RESOLUTION 2024-009

A RESOLUTION ADOPTING THE ROAD NAME OF WHISTLE HILL ALLEY

WHEREAS, in accordance with standards and practices throughout Routt County, road names and addresses on roads and buildable lots are to be assigned so as to improve the efficiency of locating a property by use of a unique street name and address; and,

WHEREAS, existing, proposed or constructed roads which provide or are proposed to provide access to two or more buildable lots should be identified by a unique road name so as to clearly identify and distinguish such road from every other road in Routt County; and

WHEREAS, it has been determined by Town staff that it is appropriate that the platted alley delineated on the attach Exhibit A hereto should be named.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF TRUSTEES OF THE TOWN OF OAK CREEK, COLORADO:

Section 1. That the platted alley delineated on attached Exhibit A shall be named WHISTLE HILL ALLEY

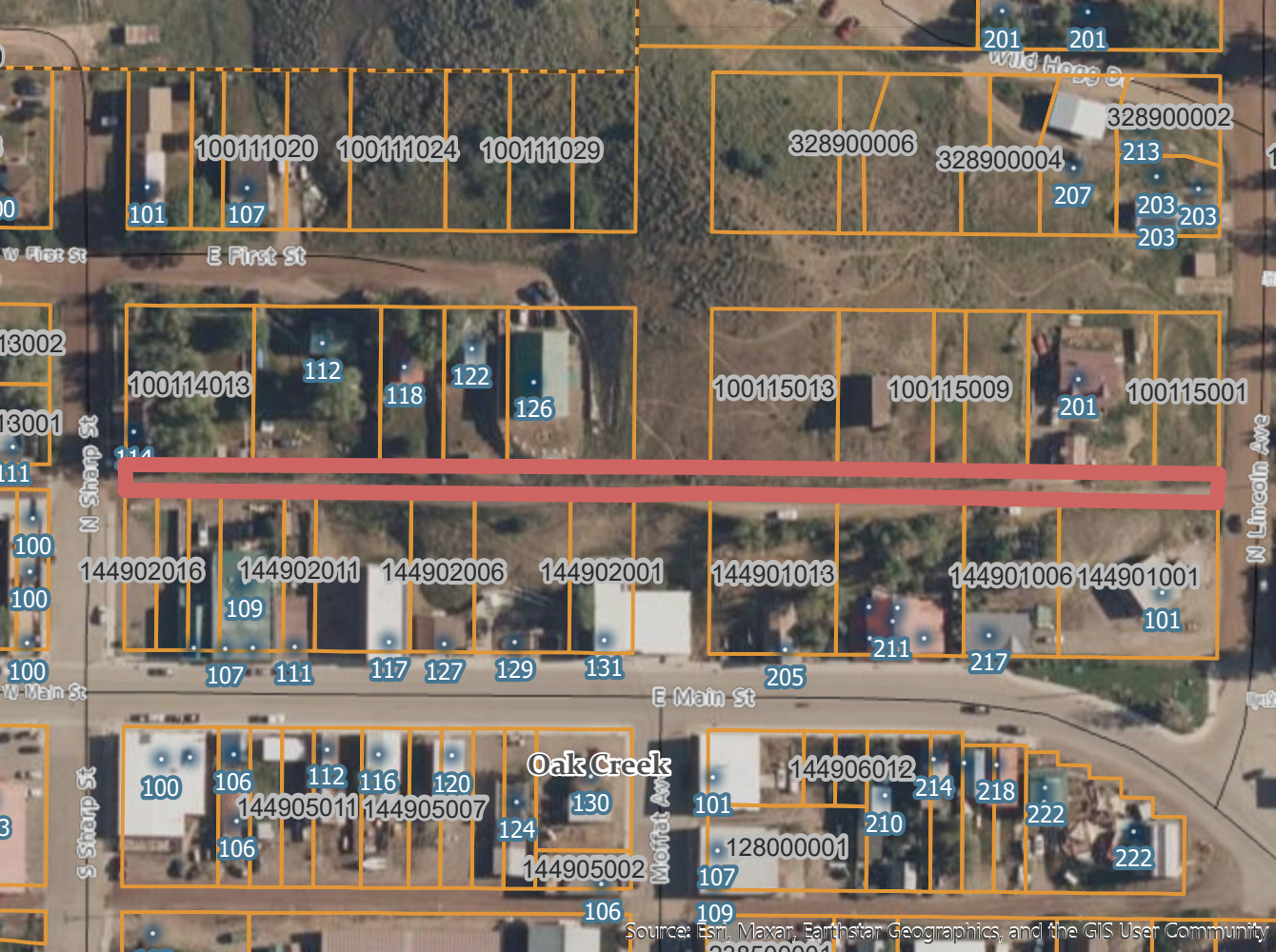
Section 2. The resolution shall take effect immediately.

PASSED, ADOPTED, AND APPROVED this 22nd day of August, 2024.

_____
Melissa Dobbins
Mayor

ATTEST:

_____
Mary Alice Page-Allen
Interim Town Administrator/Clerk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N Sharp St
N Lincoln Ave
144902016
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Oak Creek
S Sharp St
Moffat Ave
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Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

COMMUNICATION FORM

DATE: August 22, 2024
ITEM: Approval to Hire Custodial Work at Step 9

BOARD ACTION: _X_ ACTION ITEM
____ DIRECTION REQUESTED
____ INFORMATION

REQUEST OR ISSUE: Consideration of approval to hire a part-time Custodial Worker at Step 9 ($20.34/hr) of the 2024 Salary Schedule beginning August 26, 2024

RECOMMENDED ACTION: That the Board authorizes the hiring of a part-time Custodial Worker at Step 9 ($20.34/hr) of the 2024 Salary Schedule beginning August 26, 2024

BACKGROUND INFORMATION: Since mid-April of this year, the Town has been seeking a part-time custodian to clean Town-owned facilities including Town Hall, Police Department offices and local parks' facilities. We have received an application from a qualified individual with a wage request equivalent to Step 9. Town staff would like to proceed in filling this vital position within the organization.

FISCAL IMPACTS: The wage rate is equivalent to what was being paid to the employee that left in April and is budgeted accordingly.

LEGAL ISSUES: None known.

CONFLICTS OR ISSUES: None known.

SUMMARY AND ALTERNATIVES: This position needs to be filled as soon as possible. Given the difficulty in finding a qualified employee at a lower rate of pay, it is appropriate to move forward as staff is recommending.

COMMUNICATION FORM

DATE: August 22, 2024
ITEM: Community Donation – Oak Creek Labor Day – OC Neighbors Corp

BOARD ACTION: _X_ ACTION ITEM
____ DIRECTION REQUESTED
____ INFORMATION

REQUEST OR ISSUE: Discussion and consideration of request to provide community support financial assistance for liability insurance costs in an amount not to exceed $1002 to OC Neighbors Corp for 2024 Oak Creek Labor Day events

RECOMMENDED ACTION: That the Board consider the request to provide community support financial assistance for liability insurance costs in an amount not to exceed $1002 to OC Neighbors Corp for 2024 Oak Creek Labor Day events

BACKGROUND INFORMATION: Representatives of OC Neighbors Corp made a request of the Town to assist with their liability insurance costs at a recent meeting. As the matter was not on the agenda for action at that time, the Town Board instructed them to return with their request so action could be considered and undertaken.

FISCAL IMPACTS: Various non-profit entities make funding requests to the Town and such are funded under the Community Support line item. Sufficient funding is available at this time to provide up to $1002 as requested.

LEGAL ISSUES: None known.

CONFLICTS OR ISSUES: None known.

SUMMARY AND ALTERNATIVES: The request for funding in the amount of $1002 will assist the non-profit organization organizing the Oak Creek Labor Day events in covering liability insurance costs.

COMMUNICATION FORM

DATE: August 22, 2024
ITEM: Non-Conforming Lot Determination – 113 W First Street
ATTACHED: Brian Ripley Email
Letter, 8/17/2024

BOARD ACTION:
_X_ ACTION ITEM
_____ DIRECTION REQUESTED
____ INFORMATION

REQUEST OR ISSUE: Ratification of determination of a non-conforming lot as building for a property located at 113 W First Street, Oak Creek

RECOMMENDED ACTION: That the Board ratify the determination that the property located at 113 W First Street (Assessors PIN 100113008) is a buildable non-conforming lot in accordance with the letter of August 17, 2024.

BACKGROUND INFORMATION: Reference the letter of August 17, 2024 attached hereto for the background information on this matter.

FISCAL IMPACTS: None known.

LEGAL ISSUES: A determination of whether a property meets the standards to be built upon must be made prior to obtaining any additional land use approvals.

CONFLICTS OR ISSUES: To be determined.

SUMMARY AND ALTERNATIVES: See above information as well as the information in the attached letter.

Gmail

Town Clerk <clerk@townofoakcreek.com>

Non-Conforming Lot Determination Letter

Brian Ripley <brian.ripley@theagencyre.com> Sat, Aug 17, 2024 at 1:26 PM
To: "clerk@townofoakcreek.com" <clerk@townofoakcreek.com>

Hello Mary Alice,

I hope this email finds you well and you are having a good summer!

I have a client interested in the property located within the town limits of Oak Creek. The legal description of the property is:

North One Half of the lot numbered 8, in block numbered 13, in First Addition to Oak Creek

Attached you will find the Deeds showing the split of the property dating back to 1936. The Deeds can be found in book 179 page 528 and book 142 page 31 recorded with Routt County.

I am requesting a non-conforming lot determination letter ratified by the Town of Oak Creek for this property.

Please let me know if anything else is needed and/or the next steps so that I can assist my client.

Thank you very much!

BRIAN RIPLEY

m: 970 688 1464

Brian Ripley at TheAgencyRE.com

THE **AGENCY** - STEAMBOAT

A Global Marketing and Sales Organization

2 attachments

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143K

8664381_98213431_docimage_actual.pdf
128K

TOWN OF OAK CREEK

P.O. Box 128 • Oak Creek, Colorado 80467 • (970) 736-2422

August 17, 2024

Brian Ripley
The Agency - Steamboat

via email brian.ripley@theagencyre.com

RE: Non-conforming Lot Determination
Property at 113 W First Street, Oak Creek
Assessors PIN 100113008

Dear Brian:

You have requested that the Town of Oak Creek review the information you have submitted to the Town with regard to the above referenced property, and whether such meets the criteria of a non-conforming lot that can be built upon pursuant to Section 17.08.06, Non-conforming lots, Oak Creek Land Use Code (Code) as such is written and currently effective.

The information you provided includes a Deed recorded November 18, 1936 in Book 179 at Page 528 (Deed). The legal description shown on the Deed is:

> The north one-half of the Lot numbered 8, in Block numbered 13, in First Addition to Oak Creek, situated in Routt County, Colorado.

Section 17.08.06, Non-conforming lots, Code states that:

> A non-conforming lot may be approved for building or other use provided other relevant requirements are met, including by way of example but without limitation, setbacks, access or other requirements (see Lot, buildable definition) if it is determined that said lot, parcel, tract or area of land was lawfully established prior to the effective date of this code or subsequent amendment to it. No non-conforming lot determination shall be effective until ratified by the Town Board at a public meeting.

The Oak Creek Land Use Code was initially adopted and effective on August 16, 1983. Documentation has been provided that shows that the lot as described above is the same as the legal description shown on the Deed recorded on November 18, 1936.

Based on this information, it is my determination that the lot located at 113 W First Street, Assessor's Parcel Identification No. 100113008 was lawfully established prior to August 16, 1983 and is a non-conforming lot that may be built upon, subject to the following:

1. All relevant requirements shall be met, including any applicable land use change approvals needed, prior to any construction or change of use on the site.
2. This determination is ratified by the Oak Creek Board of Trustees.

If you have any questions, please don't hesitate to contact me.

Sincerely,

Mary Alice Page-Allen
Interim Town Administrator/Clerk

:map

xc: file

Ratified by the Oak Creek Board of Trustees on the 22nd day of August, 2024.

Melissa Dobbins, Mayor

Attest:

Mary Alice Page-Allen
Interim Town Administrator/Clerk

570253
Page: 1 of 2
09/26/2002 01:57
Kay Weinland Routt County, CO QCD R 11.00 D 0.00

A298-10
R298-04

QUITCLAIM DEED

THIS QUITCLAIM DEED, Executed this 10 day of Sept , 02 (year),

by first party, Grantor, Warren Parsons

whose post office address is PO Box 531

to second party, Grantee, Rene Dupont

whose post office address is P.O. Box 6533

WITNESSETH, That the said first party, for good consideration and for the sum of Dollars ($) paid by the said second party, the receipt whereof is hereby acknowledged, does hereby remise, release and quitclaim unto the said second party forever, all the right, title, interest and claim which the said first party has in and to the following described parcel of land, and improvements and appurtenances thereto in the County of Routt , State of Colorado to wit:

The north ½ of lot 8, Block 13, First addition to Oak Creek, in the County of Routt and State of Colorado

If your state requires 8 ½" x 11" forms, cut off the bottom of this page at the dotted line.

Kay Weinland Routt County, CO QCD R 11.00 D 0.00
570253
Page: 2 of 2
09/26/2002 01:57

IN WITNESS WHEREOF, The said first party has signed and sealed these presents the day and year first above written. Signed, sealed and delivered in presence of:

Patricia Harshman
Signature of Witness

Patricia Harshman
Print name of Witness

Signature of Witness

Print name of Witness

Warren Parsons
Signature of First Party

Warren Parsons
Print name of First Party

Signature of First Party

Print name of First Party

State of Missouri }
County of Stone
On September 10, 2002 before me, Glenda Klein
appeared WARREN PARSONS
personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.
WITNESS my hand and official seal.

GLENDA G. KLEIN
Notary Public - Notary Seal
STATE OF MISSOURI
Stone County
My Commission Expires: Oct. 1, 2005

Glenda G Klein
Signature of Notary

Affiant _____Known_____Produced ID
Type of ID _____
(Seal)

State of }
County of
On before me,
appeared
personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.
WITNESS my hand and official seal.

Signature of Notary

Affiant _____Known_____Produced ID
Type of ID _____
(Seal)

Signature of Preparer

Print Name of Preparer

Address of Preparer

If your state requires 8 ½" x 11" forms, cut off the bottom of this page at the dotted line.

No. 69420 QUIT-CLAIM DEED.—The C. F. Hesebat Blank Book & Litho. Co., Denver, Colo. 33577

This Deed, Made this 24th day of May in the year of our Lord one thousand nine hundred and twenty-three between Jeanette Berg Wagner, sole heir-at-law of Henry Wagner, deceased,

of the County of Routt and State of Colorado, of the first part, and James L. Hoyt

of the County of Routt and State of Colorado, of the second part;

WITNESSETH, that the said party of the first part, for and in consideration of the sum of

One and no/100---------- Dollars,

to the said party of the first part, in hand paid by the said party of the second part, the receipt whereof is hereby confessed and acknowledged, has remised, released, sold, conveyed and quit-claimed, and by these presents does remise, release, sell, convey and quit-claim unto the said party of the second part, his heirs and assigns forever, all the right, title, interest, claim, and demand which the said party of the first part has in and to the following described premises situate, lying and being in the County of Routt and State of Colorado, to-wit:

Lot Eight (8) in Block Thirteen (13) of First Addition to the Town of Oak Creek according to the recorded plat thereof.

TO HAVE AND TO HOLD the same, together with all and singular the appurtenances and privileges thereunto belonging or in any wise thereunto appertaining and all the estate, right, title, interest and claim whatsoever of the said party of the first part, either in law or equity, to the proper use, benefit and behoof of the said party of the second part, his heirs and assigns forever.

IN WITNESS WHEREOF, The said party of the first part has hereunto set her hand and seal the day and year first above written.

Signed, Sealed and Delivered in the Presence of

Jeanette Berg Wagner (SEAL)

(SEAL)

(SEAL)

(SEAL)

STATE OF COLORADO, } ss.
County of Routt }

I, -- a Notary Public in and for said County, in the State aforesaid, do hereby certify that Jeanette Berg Wagner, sole heir-at-law of Henry Wagner, deceased, who is personally known to me to be the person whose name is subscribed to the foregoing Deed, appeared before me this day in person, and acknowledged that she signed, sealed and delivered the said instrument of writing as her free and voluntary act, for the uses and purposes therein set forth.

Given under my hand and notarial seal this -- day of May A. D. 1923

My commission expires December 20, 1924.

(SEAL) (Mary Emma Bell, Notary Public, Routt County, Colo.)

Mary Emma Bell
Notary Public.

Filed for record this 23rd day of January A. D. 1925 at 10:00 o'clock A. M.

J. D. Crawford, Recorder.

By ---------- Deputy.

No. 109618 WARRANTY DEED.—The C. F. Hoechst Blank Book & Litho. Co., Denver, Colo. 131887

This Deed, Made this sixth (6) day of November in the year of our Lord one thousand nine hundred and thirty-six (1936), between Jas. L. Hoyt

of the County of Routt, and State of Colorado, of the first part, and Sam Began

of the County of Routt, and State of Colorado, of the second part:

WITNESSETH, That the said part y of the first part, for and in consideration of the sum of

One and no hundreths ---------- DOLLARS,

to the said part y of the first part in hand paid by the said part y of the second part, the receipt whereof is hereby confessed and acknowledged, ha s granted, bargained, sold and conveyed, and by these presents do es grant, bargain, sell, convey and confirm unto the said part y of the second part, his heirs and assigns forever, all the following described lot or parcel of land, situate, lying and being in the County of Routt, and State of Colorado, to-wit:

The north one-half of the Lot numbered 8, in Block numbered 13, in First Addition to Oak Creek, situated in Routt County, Colorado.

TOGETHER with all and singular the hereditaments and appurtenances thereunto belonging, or in anywise appertaining, and the reversion and reversions, remainder and remainders, rents, issues and profits thereof; and all the estate, right, title, interest, claim and demand whatsoever of the said part y of the first part, either in law or equity, of, in and to the above bargained premises, with the hereditaments and appurtenances.

TO HAVE AND TO HOLD the said premises above bargained and described, with the appurtenances, unto the said part y of the second part, his heirs and assigns forever. And the said Jas. L. Hoyt part y of the first part, for his heirs, executors and administrators, do es covenant, grant, bargain and agree to and with the said part y of the second part, his heirs and assigns, that at the time of the ensealing and delivery of these presents he was well seized of the premises above conveyed, as of good, sure, perfect, absolute and indefeasible estate of inheritance, in law, in fee simple, and ha s good right, full power and lawful authority to grant, bargain, sell and convey the same, in manner and form aforesaid, and that the same are free and clear from all former and other grants, bargains, sales, liens, taxes, assessments and incumbrances of whatever kind or nature soever; -

and the above bargained premises, in the quiet and peaceable possession of the said part y of the second part, his heirs and assigns, against all and every person or persons lawfully claiming or to claim the whole or any part thereof, the said part y of the first part shall and will WARRANT AND FOREVER DEFEND.

IN WITNESS WHEREOF, The said part y of the first part ha s hereunto set his hand and seal the day and year first above written.

Signed, Sealed and Delivered in Presence of

Jos. C. Sharp (SEAL)
Justice of the Peace.

Jas. L. Hoyt (SEAL)

(SEAL)

(SEAL)

STATE OF COLORADO,
County of Routt } ss.

I, Jos. C. Sharp, a Justice of the Peace ~~Notary Public~~ in and for the said County, in the State aforesaid, do hereby certify that Jas. L. Hoyt

who- personally known to me to be the person whose name is subscribed to the annexed Deed, Appeared before me this day in person and acknowledged that he signed, sealed and delivered the said instrument of writing as his free and voluntary act, for the uses and purposes therein set forth.

Given under my hand and -- seal, this 6th day of November, A. D. 193 6.

(SEAL) My Commission expires -- ~~A. D. 193-~~

Jos. C. Sharp (SEAL) ~~Notary Public~~
Justice of the Peace.

Filed for record this 18th day of November, A. D. 193 6, at 10:00 o'clock A. M.

J. D. Crawford, Recorder.

By Deputy.