



July 5, 2018

Ms. Cathleen Goodwin
State of California Regional Water Quality Control Board
North Coast Region
5550 Skylane Blvd., Suite A
Santa Rosa, CA 95403

Re: Request for One-time Emergency Discharge to Land from the Ukiah Wastewater Treatment Plant

Dear Ms. Goodwin:

As you are aware, the City of Ukiah (City) operates a tertiary wastewater treatment facility that discharges to the Russian River during winter months and to percolation ponds during summer months. There are three existing percolation ponds with a total capacity of 110 million gallons: Ponds 1 and 2 each have a capacity of 27.5 million gallons and Pond 3 has a capacity of 55 million gallons.

The City has recently experienced difficulties with disposal through the percolation ponds because it has been unable to empty the ponds at the end of the summer for maintenance. This has resulted in a decrease in the percolation rate. This year, with the late spring rains, this situation has become urgent and the City is in danger of overtopping the ponds, which would result in a discharge of treated effluent to the Russian River during the discharge prohibition season.

The City owns 14 acres directly north of the wastewater treatment plant that is currently fallow pasture land, illustrated in Attachment 1. The City is requesting to be allowed to temporarily dispose of secondary disinfected effluent on this property through irrigation at agronomic rates beginning as soon as a temporary infrastructure is in place and lasting only until October 15, 2018, when discharges to the Russian River commence. The City believes this practice will be safe, effective and because of the urgent nature of the situation, provides the best strategy for protecting water quality.

This letter and its attachments are intended to demonstrate the urgent and safe nature of this request.

Urgency

The City currently has less than ¼ feet of freeboard on its storage ponds. Pond levels have been rising because influent rates are exceeding the percolation capacity of the ponds. Unless the City can empty and maintain the percolation ponds, this situation will continue to get worse. Current influent rates are approximately 2.2 million gallons per day.

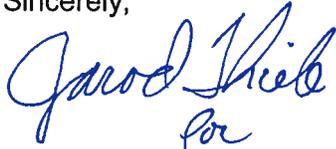
Safety

The City operates a tertiary treatment plant with a design capacity of 7.0 million gallons per day. It has adequate capacity to treat the entire influent stream to tertiary levels if necessary.

The City will operate in accordance with the Irrigation Management Plan, included as Attachment 2. The City will maintain 100-foot setbacks from all waterways and will report monthly the acreage, quantity of water used as well as copies of daily inspection reports.

The City appreciates your consideration of this request and willingness to assist the City in making these temporary modifications to maximize protection of water quality.

Sincerely,

A handwritten signature in blue ink that reads "Sean K. White" with a small "for" written below it.

Sean K. White
Director of Water Resources

City of Ukiah Temporary Emergency Irrigation – Use Area Management Plan

The Use Area Management Plan is intended to provide for protection of public health and water resources when the City of Ukiah (City) is operating in temporary, emergency, irrigation mode.

Potable Water System Protection

The temporary irrigation area will be disconnected from the potable water system. There are no potable water wells within 100 feet of the temporary irrigation area.

Environmental Water Quality Protection

When using the temporary emergency irrigation area the City will:

- Maintain 100-foot setbacks from the Russian River and bordering creeks
- Inspect the irrigation system and repair breaks prior to beginning daily irrigation
- Routinely adjust sprinkler heads to achieve 80% coverage
- Routinely inspect for and remove obstructions that would interfere with free rotation and smooth operation of any sprinkler
- Apply water at agronomic rates based on general guidance provided in Table 2 below
- Refrain from using fertilizer when recycled water is in use
- Inspect the site daily for evidence of runoff
- Cease irrigation if runoff is observed, until it is corrected
- Cease irrigation if windblown spray is being carried off the site, until winds subside
- Limit irrigation to the hours of 7:30 am until 9:00 pm with general supervision by plant staff during normal business hours and with an on-call operator available to return for evening shutdown.

Worker Protection

Workers shall be informed that recycled water is being used for irrigation and reminded of plant protocol for managing tertiary treated effluent. Workers shall be trained in the contents of this use area management plan.

Public Notice

The site is relatively remote, partially fenced and is unlikely to be accessed by the public. The City will place warning signs with the label "Recycled Water – Do Not Drink" in English and Spanish at 500-foot intervals along the property lines. Irrigation will take place generally between the hours of 7:30 am to 9:00 pm, weather permitting. The wastewater treatment plant is staffed from the hours of 7:30 am until approximately 4:00 pm, which allows operations staff to monitor access to the site, during much of the irrigation period, and provide further information to the public. When weather conditions permit irrigation in the late afternoon and early evening, the on-call plant operator will return to shut down the system.

Emergency Procedures

City will stop irrigating in the event of an emergency (fire, earthquake, power loss). City will notify regional board within 24 hours of any event that results in an unplanned shutdown of the irrigation operation.

Agronomic Application

The City's Urban Water Management Plan provides the following information on rainfall and ETo in the City.

Table 1 – Climatic Factors Influencing Irrigation

	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
ETo (in)	0.98	1.58	3.02	4.64	5.98	7.00	7.98	7.03	5.18	3.36	1.42	0.92
Rainfall (in)	5.38	5.70	3.72	2.97	0.83	0.30	0.02	0.00	0.12	1.14	3.97	11.08

The United States Environmental Protection Agency's, (USEPA's) Water Sense Water Budget Tool approach was used to estimate the agronomic application rate. This tool uses the following formula to estimate agronomic application rates:

$$LWRh = RTM \times ((ETo \times KL) - Re) \times A/CU$$

Where:

LWRh = Landscape Water Requirement

RTM = Runtime Multiplier = 1/ Irrigation Efficiency and Irrigation Efficiency = 0.7

ETo = ETo in the area

KL = 0.85

Re = 50% of Rainfall

A = Area in square feet

CU = 1.6043 to convert to gallons

Based on this formula, the agronomic application rate for fodder crops is presented in Table 2. Because this information is based on average rates it provides guidance for the City but is not considered a prescriptive number.

Table 2 Agronomic Rate Estimates

Month	RTM	KL	Eto	Rainfall	Landscape Water Requirement		
					gallons/ square foot	gallons/acre	Million Gallons/month over site
Jan	1.43	0.85	0.98	5.38	-0.93	-	-
Feb	1.43	0.85	1.58	5.7	-0.58	-	-
Mar	1.43	0.85	3.02	3.72	1.13	49,167.2	1.97
April	1.43	0.85	4.64	2.97	2.59	112,814.5	4.51
May	1.43	0.85	5.98	0.83	4.27	186,091.6	7.44
June	1.43	0.85	7.00	0.30	5.21	226,950.2	9.08
July	1.43	0.85	7.98	0.02	6.04	263,094.7	10.52
Aug	1.43	0.85	7.03	0.00	5.33	232,013.1	9.28
Sept	1.43	0.85	5.18	0.12	3.89	169,327.9	6.77
Oct	1.43	0.85	3.36	1.14	2.19	95,414.4	3.82
Nov	1.43	0.85	1.42	3.97	-0.16	-	-
Dec	1.43	0.85	0.92	11.08	-2.76	-	-

CITY OF UKIAH



Irrigation Area
11.03 Acres

City of Ukiah
WWTP

Percolation
Ponds

Secondary Disinfected Effluent ATTACHMENT #1

0 300 600
Feet



This map is a guide. Every reasonable effort has been made to ensure the accuracy of the map and data provided. Parcel lines are not intended to represent surveyed data.