



EDMUND G. BROWN JR.
GOVERNOR



MATTHEW RODRIGUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

State Water Resources Control Board

Division of Drinking Water

February 15, 2016

Mr. Gerald Huckaby, Board President
Elk County Water District
P.O. Box 54
Elk, CA 95432

INSPECTION RESULTS AND DOMESTIC WATER SUPPLY PERMIT - ELK COUNTY WATER DISTRICT PUBLIC WATER SYSTEM ID#2300514

Dear Mr. Huckaby,

On January 8, 2015, the State Water Resources Control Board, Division of Drinking Water (Division) staff conducted an inspection of the distribution and treatment facilities of the Elk County Water District public water system. As a result of this inspection, the Division has issued a new Domestic Water Supply Permit for the operation of Elk County Water District public water system. The new Permit is enclosed. The Permit contains legally binding conditions based on the requirements of the California Code of Regulations (CCR) and the California Health and Safety Code (CHSC). The General Regulatory Requirements Section in the Permit provides conditions for commonly encountered water System issues for a water system, but is not a complete listing of the requirements. Comprehensive drinking water related statutes and regulations can be found on our website at:

http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Lawbook.shtml.

Please be aware that the water system is legally responsible to meet all permit conditions and all the applicable requirements in the CCR and CHSC. If you have questions regarding the permit provisions or the regulations, please contact Joy Wildflower at (707) 576-2818, or me at (707) 576-2145.

Sincerely,

Sheri Miller, P.E.
District Engineer
Mendocino District

Enclosure: Domestic Water Supply Permit 02-03-16P2300514

c: Mendocino County Environmental Health, Planning

FELICIA MARCUS, CHAIR | THOMAS HOWARD, EXECUTIVE DIRECTOR

STATE OF CALIFORNIA

DOMESTIC WATER SUPPLY PERMIT

Issued To

Elk County Water District

For the Operation of the

**Elk County Water District
Public Water System**

Public Water System No. 2300514



PERMIT NUMBER: 02-03-16P2300514

DATE OF ISSUE: February 15, 2016

WHEREAS:

1. Section 116525(a) of the California Health and Safety Code requires that no person shall operate a public water system unless he or she first submits an application to the Division and receives a permit as provided in this chapter.
2. Section 116525(c) of the California Health and Safety Code authorizes the State Water Resources Control Board, Division of Drinking Water to renew, reissue, revise or amend any domestic water supply permit whenever the Division deems it to be necessary for the protection of public health, whether or not an application has been filed.
3. The State Water Resources Control Board- Division of Drinking Water deems it necessary for the protection of public health to reissue a domestic water supply permit for the operation of the Elk County Water District public water system.
4. The legal owner of Elk County Water District public water system is the Elk County Water District. The Elk County Water District, therefore, is responsible for compliance with the most current statutory and regulatory drinking water requirements and the conditions set forth in this permit.
5. The Elk County Water District public water system is located at 7001 S. Highway 1, Elk, CA 95432 in Mendocino County. The service area includes approximately 244 customers served through 104 active connections.

And WHEREAS:

1. The State Water Resources Control Board- Division of Drinking Water has evaluated all of the pertinent information about the Elk County Water District and has conducted a physical investigation of the water treatment plant and distribution facilities on January 8, 2015.
2. The California State Water Resources Control Board – Division of Drinking Water has the authority to issue domestic water supply permits pursuant to Health and Safety Code Section 116540. The Division may impose permit conditions, requirements for system improvements, and time schedules as it deems necessary to assure a reliable and adequate supply of water at all times that is pure, wholesome, potable, and does not endanger the health of consumers.

THEREFORE: The State Water Resources Control Board, Division of Drinking Water has determined the following:

1. The Elk County Water District public water system meets the criteria for and is hereby classified as a community water system.
2. Provided the following conditions are complied with, the Elk County Water District should be capable of providing water to consumers that is pure, wholesome, and potable and in compliance with statutory and regulatory drinking water requirements at all times.

THE ELK COUNTY WATER DISTRICT IS HEREBY ISSUED THIS DOMESTIC WATER SUPPLY PERMIT TO OPERATE THE ELK COUNTY WATER DISTRICT PUBLIC WATER SYSTEM.

The Elk County Water District public water system shall be operated in compliance with the following permit conditions:

1. Elk County Water District public water system shall be operated in such a manner as to comply with all state laws applicable to public water systems, including, but not limited to, the California Safe Drinking Water Act as contained in Division 104 of the California Health and Safety Code, the California Code of Regulations (CCR) and any regulations, standards or orders adopted thereunder.
2. Elk County Water District shall only use the water supply sources and associated treatments given below to supply water to its potable water distribution system:

Approved Source	Type	Approved Treatment
WELL 01	Standby	1. Ozone 2. Polymer coagulant 3. Static Mixing 4. Contact Flocculation Tank 5. Dual Media Filtration 6. Aeration 7. Disinfection (NaOCl)
WELL 04	Active	

3. The District shall contact the Division at least one week prior to putting Well-01 back into service. Once Well-01 is back online, initial perchlorate monitoring and all other overdue chemical monitoring shall be brought up to date.
4. The surface water treatment plant is classified as direct filtration, per Section 64651.30 of the California Code of Regulations. As such, this plant is credited with 99 percent (2.0-log) removal of *Giardia lamblia* cysts and 90 percent (1-log) removal of viruses through filtration when operating in compliance with the performance standards contained in Title 22, Chapter 17 of the CCR and the conditions of this permit.
5. The surface water treatment plant has a maximum capacity of 0.061 MGD (42 gpm).
6. An application for an amended domestic water supply permit shall be submitted to the Division if any of the following changes are made (Section 64556, Title 22, CCR):
 - a. Modification of water supply including adding a new source, changing status of existing source or altering a source such that the quantity or quality of supply could be affected.
 - b. Any addition or change in treatment including design capacity or process.
 - c. Addition of a new distribution reservoir of 100,000 gallon capacity or greater.
 - d. Expansion of the existing service area by 20% or more of the number of service connections specified in the most recent permit or permit amendment.

SURFACE WATER TREATMENT PLANT— PERFORMANCE STANDARDS, TURBIDITY MONITORING AND FILTER OPERATIONS

7. Raw water source, before any treatment, shall be monitored for bacteriological content at least once per month (Section 64655, Title 22, CCR).
8. Raw water turbidity shall be measured a minimum of once per day.
9. The treatment process shall not be bypassed at any time.
10. Coagulation and flocculation shall be used at all times when the plant is operational (Section 64660(b)(9), Title 22, CCR).
11. The combined filter effluent turbidities of water shall be monitored continuously and values recorded at 15-minute intervals at all times the water treatment plant is producing water intended for human consumption.
12. Turbidity compliance is based on continuously monitored and recorded combined filter effluent turbidity and shall be equal to or less than 0.3 NTU in 95% of the measurements taken each month based on discrete 4-hours monitoring.
13. The turbidity level of the combined filter effluent shall not exceed 1.0 NTU for more than eight consecutive hours while the plant is in operation.
14. The turbidity level of the individual filter effluent water from each filter shall not exceed 1.0 NTU while the plant is in operation. If the maximum individual filter effluent turbidity exceeds 1.0 NTU, for any circumstances, the Elk County Water District must notify the Division within 24-hours.

15. Filter loading rates shall not exceed 3.0 gallons per minute per square foot (gpm/ft²) on the multimedia filters under pressurized conditions. The filter loading rate may be increased with approval from the Division (Section 64660 B, Title 22, CCR).
16. Annual filter inspections shall be completed in each multimedia filter in accordance with the approved Operations Plan.
17. Backwash rate for media filters shall be performed in accordance with the approved Operations Plan.

SURFACE WATER TREATMENT PLANT— DISINFECTION REQUIREMENTS

18. The Surface Water Treatment Plant shall provide continuous disinfection treatment sufficient to ensure that the total disinfection treatment processes provide a minimum of 1.0-log inactivation of *Giardia* cysts and 3.0-log inactivation of viruses, in addition to the removals obtained through filtration.
19. The water entering the distribution system shall not contain a disinfectant residual of less than 0.2 mg/L for more than four (4) hours in any 24 hour period.
20. The following parameters shall be monitored and recorded to ensure compliance with disinfection requirements: pH, temperature, free chlorine residual in the water leaving the surface water treatment plant clearwells, and tank volume (if applicable).
21. The residual disinfectant concentrations of samples collected from the distribution system shall be detectable in at least 95% of the samples taken each month, during each and every two consecutive months that the plant supplies water to the public. The presence of heterotrophic plate count (HPC) of 500 CFU/mL or less may be substituted for a detectable residual.

SURFACE WATER TREATMENT PLANT— RELIABILITY REQUIREMENTS

22. Alarm devices to provide warning of coagulation, filtration and disinfection failures shall be installed, maintained and tested. All devices shall warn a person designated as responsible for taking corrective action, or have provisions to shut the plant down until corrective action can be taken. (Sections 64659, Title 22, CCR)
23. The alarms must be tested monthly and alarm test data shall be reported to the Division in a monthly report.

SURFACE WATER TREATMENT—DOCUMENTATION AND REPORTING REQUIREMENTS

24. The System shall maintain accurate and complete operational records. The records shall be retained for no less than three years, and shall include but not be limited to the following:
 - a. The results of all treatment process, raw and finished water quality monitoring conducted
 - b. Filter maintenance and inspection dates and results
 - c. Quantity of water produced, plant flow rates, filtration rates, hours of operation and backwash rates

- d. Dates and description of major equipment and process failures and corrective actions taken

25. The water treatment plant shall be operated in accordance with an operations plan approved by the Division. The operations plan must clearly describe the procedures to be used to produce optimal quality water (Section 64661, Title 22, CCR).

The operations plan shall consist of step-by-step procedures of the routine tasks of how and when to operate each unit process, laboratory procedures; procedures used to determine chemical dose rates; records; the treatment plant performance monitoring program, unit process equipment maintenance program, filter media inspection and evaluation program, filter wash system inspection and evaluation program, operating personnel, including numbers of staff, certification levels and responsibilities; response to plant and watershed emergencies; and reliability features.

26. A watershed sanitary survey shall be completed for each source every five years (Section 64665, Title 22, CCR).
27. Monthly reports on the operation of the surface water treatment facilities are to be submitted to the Division by the tenth day of each month (Section 64664, Title 22, CCR). The report shall be signed by the chief water treatment plant operator, plant superintendent or other person directly responsible for the operation of the water treatment plant. Treatment plant records shall be retained for not less than three years.

IMPROVEMENTS TO BE COMPLETED BY A STIPULATED DEADLINE

28. The District shall properly cap Well-03 and submit photographic documentation no later than **March 31, 2016**.
29. The District shall submit an updated Operations Plan no later than **August 31, 2016**.
30. The District shall submit an Asset Management Plan (or asset master plan) to the Division by **December 31, 2016** with, at a minimum, the following elements addressed:
- Adequate backup power is available at both the water treatment plant and the pump station in distribution;
 - Replacing or refurbishing the 30,000 gallon storage tank in the distribution system; and,
 - Inventory of the water system components, estimated remaining life of the components and plans to replace aging components.

SYSTEM SPECIFIC REQUIREMENTS

31. The treatment plant shall produce no more than 42 gallons per minute with both pressure vessels online or with a maximum filter loading rate of 3.0 gpm/ft² without specific written approval from the Division.
32. The filters shall be manually surfaced washed during each backwashing event. Documentation of manual surface wash, including date and time, shall be recorded in the operations daily log and included in the monthly report to the Division.

33. Treatment plant effluent shall be monitored for bromate on a quarterly basis while the ozone is in operation. Quarterly monitoring shall be conducted the same month each quarter. Laboratory results shall be submitted to the Division via electronic data transfer.
34. Treatment plant effluent shall be monitored for iron, manganese and color on a quarterly basis. Quarterly monitoring shall be conducted the same month each quarter. Laboratory results shall be submitted to the Division via electronic data transfer. The running annual average concentration for iron, manganese and color shall not exceed each respective maximum contaminant level.
35. The distribution system supplied by asbestos-cement pipeline shall be sampled and analyzed for asbestos content once every nine years. (Section 64432.2, Title 22, CCR)

GENERAL REGULATORY REQUIREMENTS

36. Notify the Division within 24 hours if:
 - a. If there is an event that the water system is aware of that may affect the ability of the treatment plant to produce safe, potable water.
 - b. If the *E. coli* level in the raw water exceeds 1,000 MPN/100 mL.
37. A State certified treatment and distribution operator shall be responsible for operation of the public water system. (Section 63650.85, 63765, 63770, 64413.5, and 64413.7, Title 22 of the CCR)
38. Bacteriological and chemical monitoring shall be performed in accordance with Chapter 15, Title 22 of the CCR, and in accordance with the requirements of the Division. Specifically:
 - a. The distribution system shall be sampled for bacteriological water quality in accordance with, the water system's approved bacteriological sampling plan. (Article 3)
 - b. All raw water sources, prior to any treatment, shall be sampled in accordance with the chemical monitoring requirements. (Section 64432(e), Title 22, CCR).
39. Disinfection Byproduct monitoring shall be performed in accordance with Chapter 15.5, Title 22, of the CCR, and in accordance with the requirements of the Division.
40. Lead and Copper monitoring shall be performed in accordance with Chapter 17.5, Title 22, of the CCR, and in accordance with the requirements of the Division.
41. A program for the protection of the domestic water system against possible backflow flow from premises having dual or unsafe water systems shall be maintained in accordance with the cross-connection regulations. (Sections 7583 – 7605, Title 17, CCR).
42. An annual report shall be submitted to the Division on the status and condition of the domestic water system.

43. Records of all water quality and system water outage complaints received, both written and verbal, shall be maintained. Records shall include corrective action taken and shall be retained for a period of five years for Division review. (Section 64453, Title 22, CCR)
44. A Consumer Confidence Report shall be prepared and delivered to the system customers by July 1 of each year for the previous calendar year. Each Consumer Confidence Report shall contain data collected during, or prior to, the previous calendar year. (Section 64480 – 64482, Title 22, CCR)
45. No chemical, material, lubricant, or product shall be used in the production, treatment or distribution of drinking water that will be added to or in contact with the drinking water unless it has been certified as meeting the specifications of American National Standard Institute/NSF International (ANSI/NSF) Standards 60 (direct additive) or 61 (indirect additive). (Sections 64590 and 64591, Title 22, CCR)
46. All improvements to the water system shall be made in accordance with the California Waterworks Standards (Chapter 16, Title 22, CCR).

This permit supersedes all previous domestic water supply permits issued for this public water system and shall remain in effect unless and until it is amended, revised, reissued, or declared to be null and void by the California State Water Resources Control Board – Division of Drinking Water. This permit is non-transferable. Should the Elk County Water District public water system undergo a change of ownership, the new owner must apply for and receive a new domestic water supply permit.

This permit shall be effective as of the date shown below.

**FOR THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD –
DIVISION OF DRINKING WATER**



Sheri K. Miller, P.E.
District Engineer
Mendocino District - Drinking Water Field Operations Branch

2-15-2016

Date

2300514/Permit-9
02-03-16P2300514/JMW

