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SCM

SMRCB - DWR
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Please indicate County where your project is located here:

Sonoma

MAIL FORM AND ATTACHMENTS TO:
State Water Resources Control Board
DIVISION OF WATER RIGHTS
P.O. Box 2000, Sacramento, CA 95812-2000
Tel: (916) 341-5300 Fax: (916) 341-5400
http://www.waterboards.ca.gov/waterrights

PETITION FOR CHANGE

Separate petitions are required for each water right. Mark all areas that apply to your proposed change(s). Incomplete forms may not be accepted. Location and area information must be provided on maps in accordance with established requirements. (Cal. Code Regs., tit. 23, § 715 et seq.) Provide attachments if necessary.

- Point of Diversion** Wat. Code, § 1701
 - Point of Rediversion** Cal. Code Regs., tit. 23, § 791(e)
 - Place of Use** Wat. Code, § 1701
 - Purpose of Use** Wat. Code, § 1701
 - Distribution of Storage** Cal. Code Regs., tit. 23, § 791(e)
 - Temporary Urgency** Wat. Code, § 1435
 - Instream Flow Dedication** Wat. Code, § 1707
 - Waste Water** Wat. Code, § 1211
 - Split** Cal. Code Regs., tit. 23, § 836
 - Terms or Conditions** Cal. Code Regs., tit. 23, § 791(e)
 - Other**
- Application 31055 Permit 21198 License Statement

I (we) hereby petition for change(s) noted above and described as follows:

Point of Diversion or Rediversion – Provide source name and identify points using both Public Land Survey System descriptions to ¼-¼ level and California Coordinate System (NAD 83).

Present:

Proposed:

Place of Use – Identify area using Public Land Survey System descriptions to ¼-¼ level; for irrigation, list number of acres irrigated.

Present: T07N R10W Portions of Sections 21,22,27,28

Proposed: Add Dutch Bill Creek from North 1,921,867.812 feet and East 6,282,808.673 feet, within NE 1/4 of the SW 1/4 of Section 21; T07N R10W, MDB&M

Purpose of Use

Present: Municipal, Fire Protection

Proposed: Add fish and wildlife preservation and enhancement

Split

Provide the names, addresses, and phone numbers for all proposed water right holders.

In addition, provide a separate sheet with a table describing how the water right will be split between the water right holders: for each party list amount by direct diversion and/or storage, season of diversion, maximum annual amount, maximum diversion to offstream storage, point(s) of diversion, place(s) of use, and purpose(s) of use. Maps showing the point(s) of diversion and place of use for each party should be provided.

Distribution of Storage

Present:

Proposed:

RECEIVED

8/27/2018

CHK# 764

\$1,000.00

eye.

Temporary Urgency

This temporary urgency change will be effective from to

Include an attachment that describes the urgent need that is the basis of the temporary urgency change and whether the change will result in injury to any lawful user of water or have unreasonable effects on fish, wildlife or instream uses.

Instream Flow Dedication – Provide source name and identify points using both Public Land Survey System descriptions to ¼-¼ level and California Coordinate System (NAD 83).

Upstream Location:

Downstream Location:

List the quantities dedicated to instream flow in either: cubic feet per second or gallons per day:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
							0.2	0.2	0.2	0.2	0.2

Will the dedicated flow be diverted for consumptive use at a downstream location? Yes No
 If yes, provide the source name, location coordinates, and the quantities of flow that will be diverted from the stream.

Waste Water

If applicable, provide the reduction in amount of treated waste water discharged in cubic feet per second.

Will this change involve water provided by a water service contract which prohibits your exclusive right to this treated waste water? Yes No

Will any legal user of the treated waste water discharged be affected? Yes No

General Information – For all Petitions, provide the following information, if applicable to your proposed change(s).

Will any current Point of Diversion, Point of Storage, or Place of Use be abandoned? Yes No

I (we) have access to the proposed point of diversion or control the proposed place of use by virtue of:
 ownership lease verbal agreement written agreement

If by lease or agreement, state name and address of person(s) from whom access has been obtained.

Give name and address of any person(s) taking water from the stream between the present point of diversion or redirection and the proposed point of diversion or redirection, as well as any other person(s) known to you who may be affected by the proposed change.

All Right Holders Must Sign This Form: I (we) declare under penalty of perjury that this change does not involve an increase in the amount of the appropriation or the season of diversion, and that the above is true and correct to the best of my (our) knowledge and belief. Dated at


 Right Holder or Authorized Agent Signature

 Right Holder or Authorized Agent Signature

NOTE: All petitions must be accompanied by:
 (1) the form Environmental Information for Petitions, including required attachments, available at: http://www.waterboards.ca.gov/waterrights/publications_forms/forms/docs/pet_info.pdf
 (2) Division of Water Rights fee, per the Water Rights Fee Schedule, available at: http://www.waterboards.ca.gov/waterrights/water_issues/programs/fees/
 (3) Department of Fish and Wildlife fee of \$850 (Pub. Resources Code, § 10005)

ENVIRONMENTAL INFORMATION FOR PETITIONS

This form is required for all petitions.

Before the State Water Resources Control Board (State Water Board) can approve a petition, the State Water Board must consider the information contained in an environmental document prepared in compliance with the California Environmental Quality Act (CEQA). This form is not a CEQA document. If a CEQA document has not yet been prepared, a determination must be made of who is responsible for its preparation. As the petitioner, you are responsible for all costs associated with the environmental evaluation and preparation of the required CEQA documents. Please answer the following questions to the best of your ability and submit any studies that have been conducted regarding the environmental evaluation of your project. If you need more space to completely answer the questions, please number and attach additional sheets.

DESCRIPTION OF PROPOSED CHANGES OR WORK REMAINING TO BE COMPLETED

For a petition for change, provide a description of the proposed changes to your project including, but not limited to, type of construction activity, structures existing or to be built, area to be graded or excavated, increase in water diversion and use (up to the amount authorized by the permit), changes in land use, and project operational changes, including changes in how the water will be used. For a petition for extension of time, provide a description of what work has been completed and what remains to be done. Include in your description any of the above elements that will occur during the requested extension period.

See Attachment.

Insert the attachment number here, if applicable:

1

Coordination with Regional Water Quality Control Board

For change petitions only, you must request consultation with the Regional Water Quality Control Board regarding the potential effects of your proposed change on water quality and other instream beneficial uses. (Cal. Code Regs., tit. 23, § 794.) In order to determine the appropriate office for consultation, see: http://www.waterboards.ca.gov/waterboards_map.shtml. Provide the date you submitted your request for consultation here, then provide the following information.

Date of Request

8/9/2018

Will your project, during construction or operation, (1) generate waste or wastewater containing such things as sewage, industrial chemicals, metals, or agricultural chemicals, or (2) cause erosion, turbidity or sedimentation?

Yes No

Will a waste discharge permit be required for the project?

Yes No

If necessary, provide additional information below:

Per discussion with Bryan McFadin on August 9, 2018, the NCRWQCB indicated no discharge permit is required for this TUCP.

Insert the attachment number here, if applicable:

Local Permits

For temporary transfers only, you must contact the board of supervisors for the county(ies) both for where you currently store or use water and where you propose to transfer the water. (Wat. Code § 1726.) Provide the date you submitted your request for consultation here.

Date of Contact

For change petitions only, you should contact your local planning or public works department and provide the information below.

Person Contacted:

Date of Contact:

Department:

Phone Number:

County Zoning Designation:

Are any county permits required for your project? If yes, indicate type below. Yes No

- Grading Permit
- Use Permit
- Watercourse
- Obstruction Permit
- Change of Zoning
- General Plan Change
- Other (explain below)

If applicable, have you obtained any of the permits listed above? If yes, provide copies. Yes No

If necessary, provide additional information below:

Insert the attachment number here, if applicable:

Federal and State Permits

Check any additional agencies that may require permits or other approvals for your project:

- Regional Water Quality Control Board Department of Fish and Game
- Dept of Water Resources, Division of Safety of Dams California Coastal Commission
- State Reclamation Board U.S. Army Corps of Engineers U.S. Forest Service
- Bureau of Land Management Federal Energy Regulatory Commission
- Natural Resources Conservation Service

Have you obtained any of the permits listed above? If yes, provide copies. Yes No

For each agency from which a permit is required, provide the following information:

Agency	Permit Type	Person(s) Contacted	Contact Date	Phone Number

If necessary, provide additional information below:

Insert the attachment number here, if applicable:

Construction or Grading Activity

Does the project involve any construction or grading-related activity that has significantly altered or would significantly alter the bed, bank or riparian habitat of any stream or lake? Yes No

If necessary, provide additional information below:

Insert the attachment number here, if applicable:

Archeology

Has an archeological report been prepared for this project? If yes, provide a copy. Yes No

Will another public agency be preparing an archeological report? Yes No

Do you know of any archeological or historic sites in the area? If yes, explain below. Yes No

If necessary, provide additional information below:

Insert the attachment number here, if applicable:

Photographs

For all petitions other than time extensions, attach complete sets of color photographs, clearly dated and labeled, showing the vegetation that exists at the following three locations:

- Along the stream channel immediately downstream from each point of diversion
- Along the stream channel immediately upstream from each point of diversion
- At the place where water subject to this water right will be used

Maps

For all petitions other than time extensions, attach maps labeled in accordance with the regulations showing all applicable features, both present and proposed, including but not limited to: point of diversion, point of redirection, distribution of storage reservoirs, point of discharge of treated wastewater, place of use, and location of instream flow dedication reach. (Cal. Code Regs., tit. 23, §§ 715 et seq., 794.)

Pursuant to California Code of Regulations, title 23, section 794, petitions for change submitted without maps may not be accepted.

All Water Right Holders Must Sign This Form:

I (we) hereby certify that the statements I (we) have furnished above and in the attachments are complete to the best of my (our) ability and that the facts, statements, and information presented are true and correct to the best of my (our) knowledge. Dated at .

Water Right Holder or Authorized Agent Signature

Water Right Holder or Authorized Agent Signature

NOTE:

- **Petitions for Change** may not be accepted unless you include proof that a copy of the petition was served on the Department of Fish and Game. (Cal. Code Regs., tit. 23, § 794.)
- **Petitions for Temporary Transfer** may not be accepted unless you include proof that a copy of the petition was served on the Department of Fish and Game and the board of supervisors for the county(ies) where you currently store or use water and the county(ies) where you propose to transfer the water. (Wat. Code § 1726.)

Temporary Urgency Change Petition
Dutch Bill Creek Flow Augmentation
Camp Meeker Recreation and Park District
Project Description
August 2018

Introduction

Dutch Bill Creek is critically important for coho salmon. It was identified as a Core Focus Area for coho salmon protection and restoration in the National Marine Fisheries Service's (NMFS) Final Recovery Plan for Central California Coast (CCC) Coho Salmon (2012). Dutch Bill Creek has experienced critical shortages of summer baseflows causing loss of rearing habitat for federally endangered coho salmon (*Oncorhynchus kisutch*) and federally threatened steelhead trout (*Oncorhynchus mykiss*).

In 2015, to complement water conservation efforts mandated by the State Water Board, NMFS, the California Department of Fish and Wildlife (CDFW), and the Russian River Coho Partnership asked the Camp Meeker Recreation and Park District (CMRPD) to voluntarily augment stream flow in Dutch Bill Creek. The successful implementation of this project in 2015, and again in 2016, utilized existing water infrastructure to add water to upper Dutch Bill Creek in order to maintain minimum subsistence conditions for juvenile coho salmon and steelhead rearing in the main channel downstream of CMRPD. In connection with the project, CMRPD filed Temporary Urgency Change Petitions (TUCPs) in 2015 and 2016 to modify its existing appropriative water right permit #21198 to temporarily add fish and wildlife enhancement as a purpose of use, and a portion of Dutch Bill Creek as a place of use.

The terms of the 2015 and 2016 TUCPs have since ended, and CMRPD, in partnership with NMFS, CDFW, and the Russian River Coho Partnership, seeks to repeat the releases conducted in 2015 and 2016 by submitting this TUCP for 2018.

Existing Setting

During the recent 2013 -2015 drought, CDFW and NMFS recommended to the State Water Board that Dutch Bill Creek, and three other Russian River tributaries be protected by the Emergency Drought Regulations because they are high conservation priorities for CCC coho salmon. These four watersheds provide critical spawning and rearing habitat for wild populations of state and federally endangered CCC coho salmon. Federally threatened juvenile CCC steelhead also use these four tributaries and require similar rearing habitat and water quality conditions during the summer months. Juveniles of both species can survive relatively low flow conditions in pools in the upper watersheds, provided the pools have sufficient water and stream connectivity to maintain appropriate temperature, dissolved oxygen, and other water quality conditions. During the recent drought, the four tributaries sustained some of the last remaining spring and summer rearing habitat for coho salmon and steelhead in the Russian River watershed.

However, Dutch Bill Creek and the other three tributaries are likely to continue to experience insufficient streamflow to support rearing of juvenile salmonids and other aquatic species throughout the summer season. Low streamflows manifest in a combination of desiccated and intermittent stream reaches with surface water remaining only in isolated pools. Dissolved oxygen levels in the isolated pools quickly decline to levels harmful or lethal to juveniles attempting to rear there. This loss of summer rearing habitat in the context of already impaired conditions and low juvenile and adult

Environmental Information for Petitions – Attachment 1

abundance likely has a negative influence on survival and recovery of the Russian River coho salmon population.

The CMRPD flow augmentation project is being implemented as one of several efforts to improve flow for coho salmon and steelhead in the watershed, including other cooperative instream flow and restoration projects. Of particular interest, CMRPD's neighbor, Westminster Woods Camp and Conference Center (Westminster Woods), recently implemented a water conservation and tank storage project to improve instream flow and recently completed a long-term instream flow dedication under Water Code Section 1707.

2015 and 2016 Temporary Urgency Change Petitions

In August 2015 and July 2016, CMRPD filed temporary urgency change petitions (TUCP) and instream flow dedication petitions (instream flow petition) with the State Water Board requesting approval of a temporary change to water right Permit 21198 (Application 31055) pursuant to California Water Code sections 1435 and 1707. The TUCP and instream flow petition requested the following temporary changes:

- (1) Addition of fish and wildlife preservation and enhancement as a purpose of use;
- (2) Addition of a portion of Dutch Bill Creek to the place of use. The upstream limit is located at North 1,921,868 feet and East 6,282,809 feet by California Coordinate System 1983, Zone 2, being within NE ¼ of SW ¼ of Section 21, Township 7 North, Range 10 West, Mount Diablo Base & Meridian (MDB&M). The downstream limit is located at the confluence of Dutch Bill Creek and the Russian River at North 1,932,731 feet and East 6,272,591 feet within NE ¼ of the SW ¼ of Section 7, Township 7 North, Range 10 West, MDB&M; and
- (3) Dedication of up to 30 acre-feet (af) of water at a maximum diversion rate of 0.2 cubic feet per second (cfs) for Fish and Wildlife Preservation and Enhancement for Instream beneficial use in Dutch Bill Creek. The petitioner indicated a target rate of 0.1 cfs.

The petitions proposed to divert water from the Monte Rio well at a rate ranging from 0.05 to 0.2 cfs under Permit 21198 for release, untreated, from CMRPD's pipeline into Dutch Bill Creek. Water was directed to an existing 7,500 gallon storage tank at the water treatment facility on Alliance Redwoods Conference Grounds, approximately four miles upstream of the Monte Rio Well. A two-inch, above-ground polyethylene pipeline connected to the tank released the water into a rock-lined culvert drainage channel 400 to 450 feet from the tank; the water then flowed into Dutch Bill Creek. An agreement was reached with Alliance Redwoods Conference Grounds to allow the transport of water between the storage tank and Dutch Bill Creek. The target rate of release was 0.1 cfs.

In 2015, the instream flow dedication continued from August 24 through December 9, 2015. The estimated total volume of water released was 16.1 af (See attachment 1A). The temperature of release water ranged from 15.7°C to 19.9°C, remaining less than 18.2°C after September 3. Dissolved oxygen downstream of releases remained above 8 milligrams per liter (mg/l) for the duration of the release period. In 2016, the instream flow dedication continued from August 19 through November 3, 2016. The estimated total volume of water released was 11.95 af (See attachment 1B). Temperature of release water ranged from 15.2°C to 18.9°C. Dissolved oxygen downstream of releases remained above 6.65 mg/l for the duration of the release.

Via this Petition, CMRPD seeks the same temporary changes that were approved in 2015 and 2016.

In addition, as stated in the 2016 TUCP, CMRPD still intends to submit a Petition for Change to permanently add fish and wildlife preservation and enhancement within Dutch Bill Creek as a purpose and place of use of CMRPD's water right under A31055. CMRPD anticipates filing that petition following licensing of that right later this year.

Project Elements

Flow Releases: As soon as possible for a period up to the first substantial rain event (or until flow conditions recover to a minimum of 0.1 cfs), CMRPD will release water from the pipeline at Alliance Redwoods at a rate of (approximately) 0.05 to 0.2 cfs into Dutch Bill Creek. The target rate is 0.1 cfs. Flow enhancements/ releases will begin as soon as the TUCP is approved and extend into December of 2016, or until flow conditions recover to approximately 0.1 cfs. The rate of release will range between 0.05 and 0.2 cubic feet per second with the total volume of water not to exceed 30 af during this period. Actual rates of release will be determined by NMFS, CDFW and CMRPD and shall be based upon instream flow conditions and facilities and permit constraints.

Water Right: CMRPD is a California Water District which provides municipal water services to 365 residences in and around the town of Camp Meeker, California. The water supply is sourced from two wells near the town of Monte Rio that draw underflow from the mainstem Russian River under appropriate water right (Permit #21198).

Permit 21198 was issued to CMRPD on April 27, 2007, pursuant to Application 31055. Permit 21198 authorizes direct diversion of 90 acre-feet per annum (afa) from the Russian River from January 1 to December 31, at a rate of 0.23 cfs. CMRPD does not divert water from Dutch Bill Creek under any basis of right.

The Dutch Bill Creek watershed encompasses an area including the towns of Occidental and Camp Meeker as well as the surrounding rural residences. CMRPD operates an offset well on the Russian River near Monte Rio (Monte Rio well), a transmission main, pump station, and storage tanks. Once diverted at the Monte Rio well, water is transported approximately four miles via a 6-inch transmission main to a water filtration facility in Camp Meeker (near Alliance Redwoods) where it is treated, stored, and subsequently delivered to residences in the CMRPD service area. The transmission main lies within the right-of-way for the Bohemian Highway, which roughly follows Dutch Bill Creek and connects with storage facilities in Camp Meeker and the Town of Occidental. Occidental Community Services District (Occidental) constructed an intertie to the CMRPD water system and currently services 70 customers under contract with Sonoma County Water Agency (SCWA). Occidental also holds a permit that is not in use. Russian River Utility manages the CMRPD and Occidental public water systems. In addition to the water diverted under Permit 21198, CMRPD entered into a water supply agreement with SCWA to purchase water.

Permitting: Rich Stabler, Senior Environmental Specialist with the Sonoma County Permit and Resource Management District has reviewed this proposal and concluded that no element within it warrants regulation via any county authority.

The North Coast Regional Water Quality Control Board (North Coast Regional Board) has responsibility to regulate discharges into waters of the state, and it establishes water quality objectives for Dutch Bill Creek and other water bodies in the Water Quality Control plan for the North Coast Region (Basin

Plan). Relevant water quality parameters for this project include dissolved oxygen, temperature, and specific conductivity. Temperature criteria consist of two parts: The first states that receiving water temperatures cannot be altered unless the alteration will not harm beneficial uses; the second states that receiving water temperatures cannot be altered by more than 5 degrees Fahrenheit (2.8°C).

Bryan McFadin of the Regional Water Board reviewed the monitoring data from the 2015 and 2016 releases, and concluded neither release caused or contributed to any exceedances of water quality objectives defined in the Basin Plan. This conclusion was based on the observation that: (1) receiving water temperature did not exceed an instantaneous temperature of 18°C, a harmful threshold for coho salmon; (2) there was a substantial probability of fish mortality in the absence of the discharge due to drought conditions, and; (3) the change in stream water temperature never exceeded 1.9°C (3.4°F). Water temperature and dissolved oxygen measurements were taken between August 19 and October 17, 2016 (see Figure 1 for temperature data). Each set of measurements included a reading at the polyethylene pipeline outlet, upstream of the discharge and downstream. Discharged water was consistently warmer than stream water and increased stream temperatures on average of 0.6°C. The maximum increase in temperature was 1.9°C on September 16. The temperature spot measurements were generally taken in the early afternoon, but do not necessarily represent daily maxima.

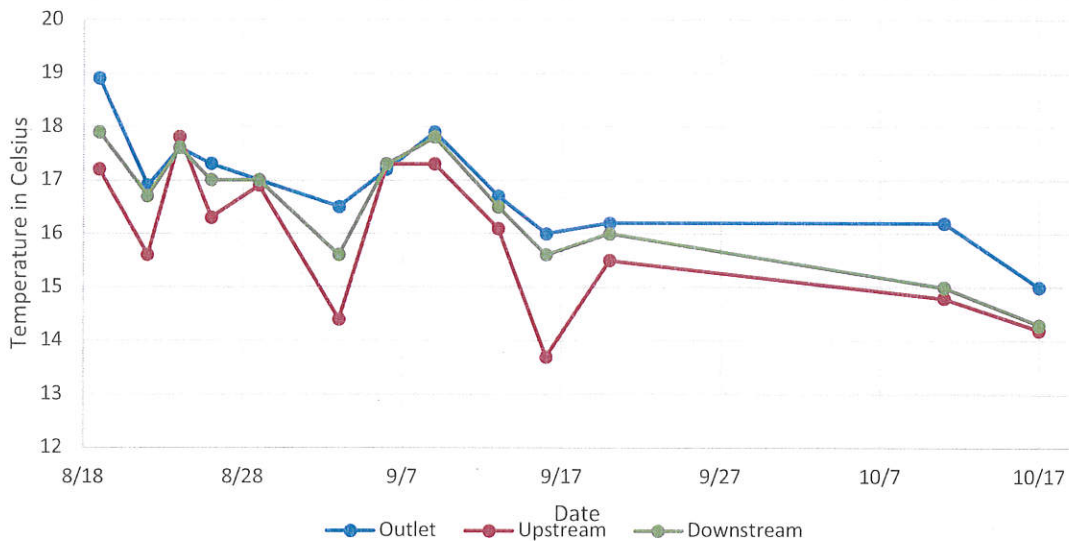


Figure 1. Spot measurements of water temperature associated with flow augmentation in 2016.

Monitoring results from the last two years also indicated water released by CMRPD was never below the minimum dissolved oxygen level of 6mg/l. It is therefore the opinion of the Regional Water Board that no discharge permit is required for this project.

CMRPD may elect to enter into a Voluntary Drought Initiative Agreement with CDFW and/or NMFS, but participation in the VDI program is neither mandatory nor required for the flow release to occur.

Monitoring: Monitoring the effects of flow augmentation on coho salmon and steelhead is necessary to ensure these actions will not inadvertently harm these species. The RRUD will be responsible for implementing continuous flow releases during the agreed upon periods. This will include recording the timing, rate and duration of water releases as well as monitoring water temperature and dissolved

oxygen at the point of discharge. Stream flows will be recorded by the gauge at Westminster Woods and its continued operation will remain during the TUCP term (July through December 2016).

University of California (UC) and Sonoma County Water Agency (SCWA) crews will map surface flow conditions, measure riffle crest depths, and take intermittent measurements of DO and water temperature in all of Dutch Bill (mouth to release point) at weekly intervals before and after the release. UC will communicate with partners at DFW, NOAA and SWRCB on a weekly basis regarding flow conditions. Any water quality concerns that arise from the monitoring will be resolved via communication between CMRPD, NMFS, CDFW and the North Coast Regional Board. CMRPD will subsequently report the results of the consultations with CDFW, NMFS, and the Regional Board to the SWRCB.

Partners: This project is being implemented with the help of multiple parties. They include CMRPD, CDFW, NMFS, NCRWQCB, and members of the Russian River Coho Partnership, Gold Ridge Resource Conservation District, Occidental Arts and Ecology Center, Trout Unlimited, and UC Cooperative Extension/California Sea Grant.

Required Findings of Fact

There is an urgent need to make the proposed change

As of July 2, 2018, surface flow in Dutch Bill Creek below Tyrone Bridge had ceased, with hydraulically disconnected pools remaining. Continuous surface flow remained in the upstream rearing reach and was measured at Westminster Woods on July 11 at 0.16 cfs. Mia van Docto, from Trout Unlimited, compared manual flow estimates from this year to previous records (Figure 2) and suggested that streamflow is lower than summer 2017, and is approaching streamflow conditions similar to those measured during the recent drought (summer 2012 – 2015). This will likely result in streamflow being less than the 0.1 cfs threshold sometime in August. Juvenile coho salmon and steelhead are present in these habitats and will therefore be exposed to degradation of aquatic habitat and subsequent mortality. Given the positive results from the 2015 and 2016 flow enhancements, and similar dry conditions this year, additional flow from the project will likely benefit fish again.

The proposed change may be made without injury to any other lawful user of water

Absent approval of the proposed change, the water to be made available by CMRPD for the proposed instream dedication would either be put to consumptive use within the boundaries of CMRPD's place of use as identified in Permit 21198, or would continue to flow down the Russian River. The Instream flow dedication proposed by the petitioner is a non-consumptive use of water. Water diverted for instream flow purposes from CMRPD's Monte Rio well will re-enter the Russian River approximately 285 feet downstream, after flowing down Dutch Bill Creek, less natural stream conveyance losses. Consequently, only lawful users on the Russian River downstream of the Monte Rio well but upstream of the confluence with Dutch Bill Creek could experience any significant effect or injury from the proposed action. Per Division records, Occidental, under Permit 21214, constitutes the only user that could meet these criteria. Permit 21214, which is junior in priority to CMRPD's permit, authorizes year-round direct diversion of 0.16 cfs, up to 65 afa, of Russian River underflow from an offset well approximately 50 feet downstream of CMRPD's Monte Rio well. Occidental, however, is not yet using the water under Permit 21214, and so will not experience unreasonable effect or injury from the action. Further, SCWA is required per Decision 1610 to maintain flows in the lower Russian River. The amount of this dedication

(maximum rate of 0.2 cfs) is insignificant compared to flow levels maintained by SCWA. There is a risk of riparian water rights holders on Dutch Bill Creek diverting the water intended for instream flow for their own use. According to SWRCB's records, Westminster Woods (Statement of Water Diversion and Use 24280) constitutes the only active water right holder on Dutch Bill Creek downstream of the proposed point of release. In 2015, Westminster Woods implemented a water conservation project that included moving its point of diversion off of Dutch Bill Creek and filing a petition to dedicate the water that was previously used for irrigation under its riparian right to instream use by fish and wildlife.

Accordingly, granting this TUCP and instream flow petition will not result in unreasonable effect or injury to any other lawful user of water.

The proposed change may be made without unreasonable effect upon fish, wildlife, or other instream beneficial uses

The action would enhance fish habitat and other instream beneficial uses in Dutch Bill Creek by augmenting flows for rearing habitat for salmonids. Data from the 2015 and 2016 releases show that increased summer flows consistently improved dissolved oxygen concentrations and reconnected pool habitat, all to the benefit of juvenile coho salmon and steelhead survival and growth.

The 2015 and 2016 releases were monitored extensively. University of California Cooperative Extension/CA Sea Grant (UC) and SCWA mapped wetted habitat, measured riffle crest depths, and took intermittent measurements of dissolved oxygen and water temperature in Dutch Bill Creek downstream of the release point in September of 2015 (not including riffle crest depth) and at weekly to biweekly intervals in the summer of 2016. RRU gathered data on water temperature and dissolved oxygen at the pipe outlet. The Russian River Coho Partnership operated a streamflow gauge at Westminster Woods, downstream of the release point.

In 2015, the gauge showed that flow augmentation from this project substantially improved surface flow (Figure 2). This effort was also a significant contributing factor to maintaining rearing habitat in a wetted condition (Figure 3), despite it being the worst drought condition in recent history. UC's Russian River Salmon and Steelhead Monitoring Program concluded that 76% of the juvenile salmonids observed in Dutch Bill Creek at the beginning of the 2015 rearing season were occupying habitat that remained wetted throughout the summer period.

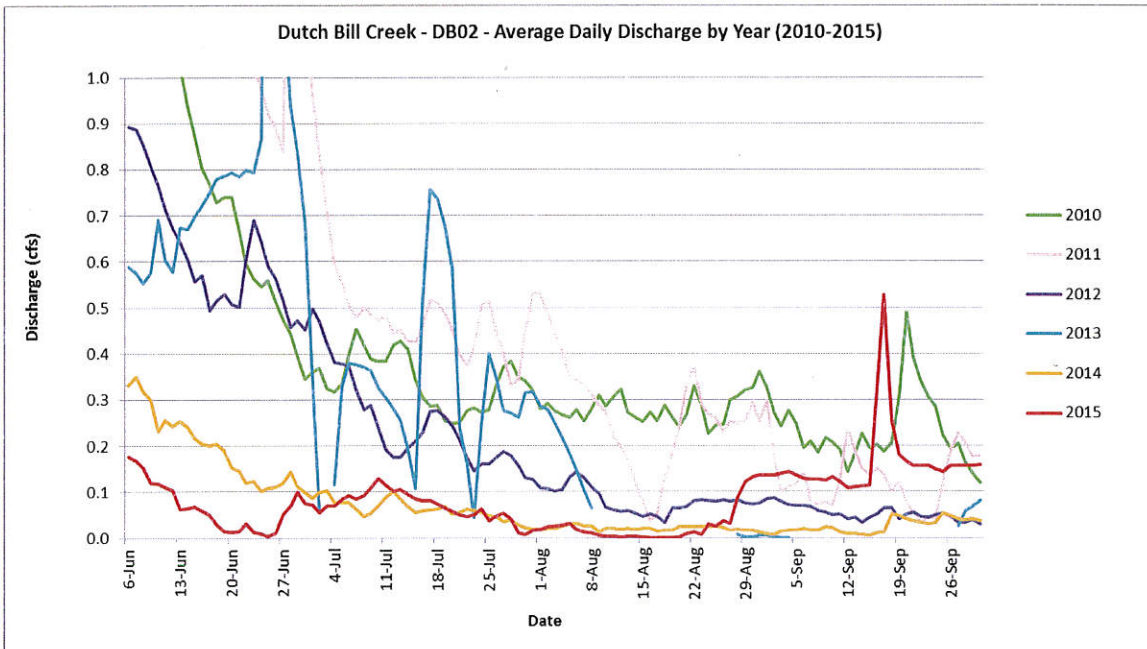


Figure 2. Average daily discharge from June through September for the years 2010 through 2015 in Dutch Bill Creek as measured by the stream gauge at Westminster Woods.

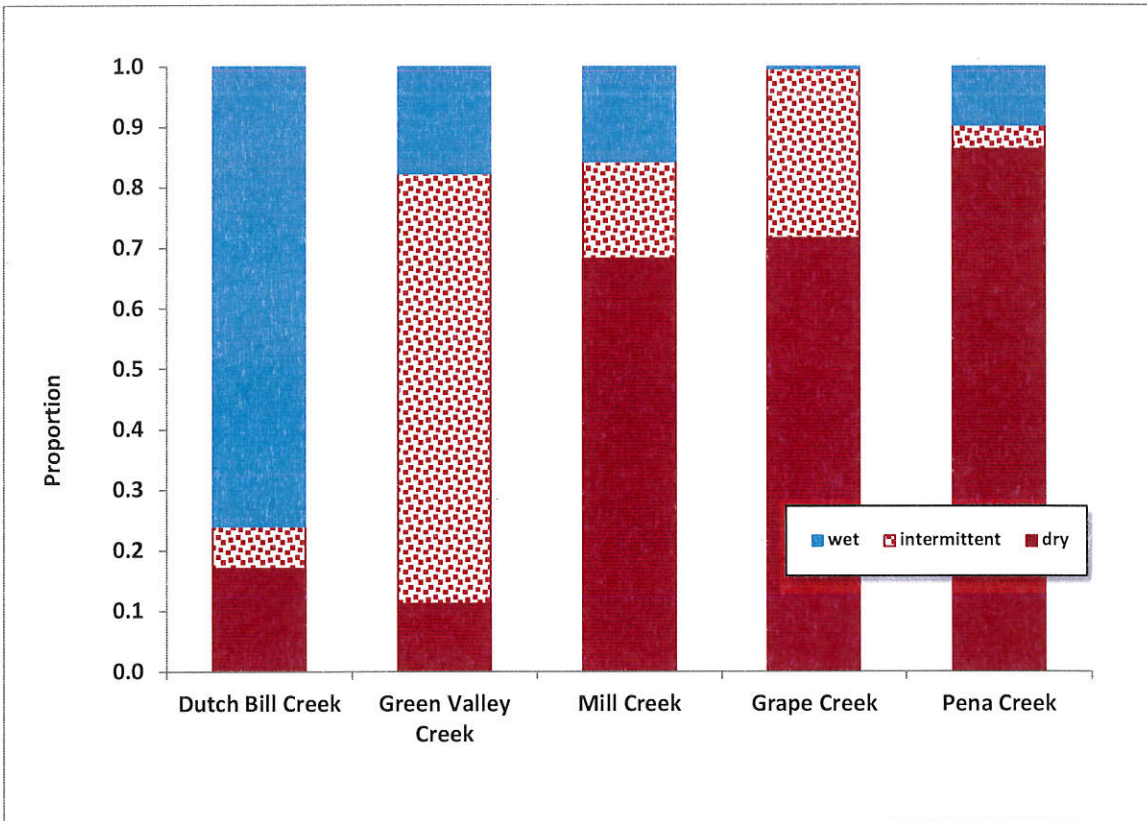


Figure 3. The proportion of juvenile salmonids observed in relation to wet, intermittent and dry stream reaches in five priority streams studied by the Russian River Coho Salmon Captive Broodstock Monitoring Program in the summer of 2015.

UC monitoring conducted before and after the flow release in the summer of 2016 documented improvements in streamflow and fish habitat downstream. Increases in discharge were observed at the measurement site in upper Dutch Bill Creek, approximately 0.5 river kilometers downstream of the release site. Though discharge had been decreasing prior to the release, it peaked and doubled -- going from 0.07 ft³/s to 0.14 ft³/s -- in the week following the release. A notable increase in average riffle depth (from 0.06' to 0.12') in the 30 riffles downstream of the release site corresponded to increased discharge.

Within the 2.4 kilometers downstream of the release site previously dry riffles were observed reconnecting pools. A 91% increase in wetted stream by length was observed in the two weeks following the 2016 flow release. The increase in both riffle depth and wetted stream length resulted in more days of pool connectivity (connection to neighboring habitat units by surface flow). Research done by the UC in select reaches of Green Valley and Dutch Bill creeks indicates that fewer days of hydrologic disconnection between pools correlates to a higher likelihood of survival for juvenile fish.

The extent of wetted stream channel on Dutch Bill Creek almost surely would have been much lower without the additional flow from the CMRPD release. Since the rate of drying is variable and dependent on weather and other seasonal factors, it is impossible to predict with any certainty, but if the stream had continued to dry at the (likely) conservative July/August rate of 4.6% per week, Dutch Bill Creek would have been 56.1% dry on September 22, rather than 37.3%.

Within the week after the release, dissolved oxygen (DO) in pools increased by an average of 18% in the reach of Dutch Bill Creek extending from Perenne Creek (around river kilometer 4.1) upstream to the release point, indicating that improved surface flow and pool connectivity helped to oxygenate pools. The increase in wetted habitat, pool connectivity, and DO observed following the 2016 CMRPD flow release indicates that the additional water provided by the release improved conditions for endangered coho salmon and threatened steelhead trout rearing in approximately 2.5 kilometers of Dutch Bill Creek. Fish that remained in pools of sufficient wetted volume that were reconnected, or that maintained connectivity as a result of the release, received the greatest benefit, as opposed to fish that were already significantly impaired by dry stream conditions. Logic dictates that an earlier release (i.e., before sections of stream went dry, leading to fish mortality) would have benefitted more fish and that more water released over a longer period of time would build a better base flow and allow surface flow to persist for longer.

CDFW, NMFS, the Russian River Coho Partnership, Trout Unlimited, and the Gold Ridge Resource Conservation District have all expressed support for the project. CMRPD consulted with NMFS, CDFW, and the North Coast Regional Board regarding the 2015 and 2016 TUCPs, this instream flow petition, and the effects of the proposed changes. NMFS and CDFW were directly involved with the design of the project.

The proposed change is in the public interest

Dutch Bill Creek is a high-priority watershed for both Central California Coast (CCC) coho salmon – which are listed as endangered under the state and federal Endangered Species Acts – and CCC

steelhead, which are federally listed as threatened. Augmentation of flows in Dutch Bill Creek will alleviate the effect of dry conditions on juvenile coho salmon and steelhead by improving rearing habitat conditions. Moreover, coho salmon in Dutch Bill Creek are critical to the overall viability of wild coho in the Russian River basin. It is in the public interest to enhance protection of the Dutch Bill Creek's salmonid fisheries. Additionally, the use is non-consumptive and the dedicated water would again become available for downstream beneficial uses after passing the dedicated reach of Dutch Bill Creek.

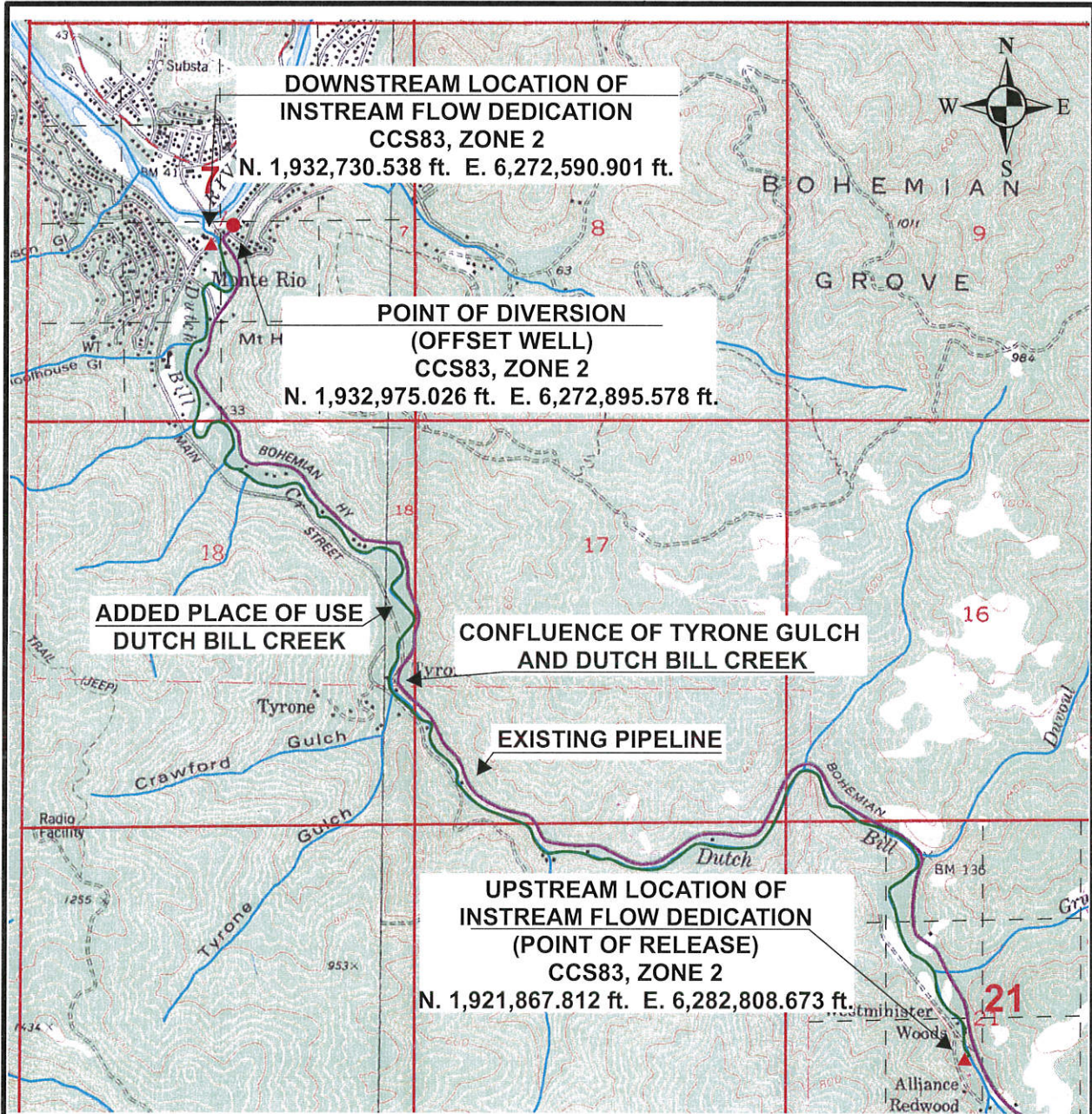
The petition will not increase the amount of water the petitioner is entitled to use

The proposed change does not seek to expand the season, rate or amount of the permit. As discussed herein, the proposed change seeks to temporarily modify the place and purpose of use of CMRPD's existing water right. Pursuant to Permit 21198, CMRPD has until December 31, 2017 to demonstrate complete application of its authorized 90 afa and rate of 0.23 cfs. The highest annual use occurred in 2014 when CMRPD used 59.1 afa, approximately two-thirds of its permitted allotment. The total amount of water to be diverted under this Petition and will not exceed a cumulative diversion of 90 af or 0.23 cfs.

Attachment 1B. CMRPD Flow Release Record 2016

Camp Meeker 2016

Date	Time	Operator	Monte Rio Well		Dutchbill Discharge Meter		Temp & Dissolved Oxygen (tempC/Mg/L)				Notes	
			Meter reading gallons	Production since last read	Production Gall/day	Meter reading gallons	Production Gall/day	Average GPM	Entry	At Creek Entry		Upstream
8/19/2016	2:40 PM	rs	23,320,500.00			12,704,100		18.9/6.16	18.9/7.75	17.2/8.26	17.9/7.76	
8/22/2016	11:20 AM	rs	23,709,100.00	388,600	129,533	12,916,000	70,633	17.0/5.57	16.9/8.07	15.6/7.9	16.7/8.13	start release, 18.9/6.34 before flow starts, measured 48gpm
8/24/2016	5:45 PM	rs	23,990,800.00	281,700	140,850	13,081,000	72,500	17.8/5.62	17.6/7.85	17.8/7.66	17.6/7.84	adjusted flow down
8/26/2016	3:05 PM	rs	24,186,500.00	195,700	97,850	13,156,000	47,300	17.6/5.37	17.3/8.17	16.3/6.50	17/8.27	adjusted flow down
8/29/2016	3:02 PM	rs	24,516,000.00	329,500	109,833	13,322,000	55,467	17.0/5.45	17.0/8.05	16.9/7.92	17.0/8.29	adjusted flow up a tad
9/3/2016	10:05 AM	rs	25,037,700.00	521,700	104,340	13,588,200	53,240	16.7/6.18	16.5/8.10	14.4/7.86	15.6/8.20	
9/6/2016	3:16 PM	rs	25,421,800.00	384,100	128,033	13,766,400	59,400	17.1/5.27	17.2/7.90	17.3/7.51	17.3/7.89	
9/9/2016	4:00 PM	rs	25,703,600.00	281,800	93,933	13,892,100	41,900	18.1/5.55	17.9/7.92	17.3/6.70	17.8/7.71	scheduled power outage on 9/6/2016, no pumping during that time,
9/16/2016	11:09 AM	GP/RS	26,176,700.00	475,100	118,775	14,111,600	54,875	16.9/5.64	16.7/8.03	16.1/7.76	16.5/8.22	
9/20/2016	11:58 AM	GP	26,483,700.00	305,000	101,667	14,268,200	52,200	16.0/5.43	16.0/6.39	13.7/6.88	15.6/6.71	
9/21/2016	12:22 PM	GP	26,950,600.00	466,900	116,725	14,491,500	55,825	16.2/5.50	16.2/6.60	15.5/6.30	16.0/6.65	
9/24/2016	12:30 PM	Jd	27,048,800.00	98,200	98,200	14,548,700	57,200					
9/26/2016	9:31 AM	GP	27,312,700.00	263,900	87,967	14,548,700	0					
9/28/2016	10:52 AM	GP	27,577,300.00	264,600	132,300	14,818,800	270,100					
10/1/2016	2:59 PM	rs	27,799,400.00	222,100	111,050	14,932,300	56,750					
10/17/2016	10:21 AM	rs	29,180,000.00	1,390,600	106,989	15,662,000	56,131	16.7/6.99	16.2/7.88	14.8/6.04	15.0/8.01	rain from 10-14-10-17
10/21/2016	2:33 PM	rs	29,800,300.00	610,300	101,717	15,983,800	321,800	15.2/5.75	15.0/8.08	14.2/8.08	14.3/8.26	
10/28/2016	11:36 AM	rs	30,209,400.00	409,100	102,275	16,215,300	57,875					
11/3/2016	1:02 PM	GP	30,884,800.00	675,400	96,466	16,596,300	54,429					shut off release. final read
11/3/2016			31,156,200.00	271,400	45,233	16,596,300	0					
Totals				7,835,700			3,892,200					
Total in AC Ft				24.05			11.95					



OWNER **CAMP MEEKER RECREATION AND PARK DISTRICT**

SOURCE (POD 1) **RUSSIAN RIVER**

POINT OF DIVERSION

WITHIN **NW 1/4 OF SE 1/4 OF PROJECTED**

SECTION **7, T7N, R10W, MDB&M**

COUNTY OF **SONOMA**

U.S.G.S. QUAD: **DUNCAN MILLS** DATE: **PH. RE. 1981** SCALE: **1:25,000**

STATE OF CALIFORNIA
CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
STATE WATER RESOURCES CONTROL BOARD
DIVISION OF WATER RIGHTS

APPLICATION NO. **31055**

PERMIT NO. **21198**

DATE: 9-2-2015	DRAWN: SHS	CHECKED:
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Note: This map does not constitute a public land survey as defined by California Business & Professions Code section 8726. It has been prepared for descriptive purposes only.



2015 Camp Meeker Flow Release— At the release point



2015 Camp Meeker Flow Release—Water flowing into Dutch Bill Creek

Camp Meeker Recreation and Park District 2018 Petition for Change—Environmental Information Photographs



Left: Rock lined channel used to transmit release water to Dutch Bill Creek. (August 18, 2015)

Right: Same channel with test release (August 28, 2015)

Dutch Bill Creek Before 2015 Flow Release



Dutch Bill Creek After 2015 Flow Release





Dutch Bill Creek habitat upstream of flow release location (August 18, 2015)

Camp Meeker Recreation and Park District 2018 Petition for Change—Environmental Information Photographs



Dutch Bill Creek habitat downstream of the flow release location
May 12, 2011



Dutch Bill Creek habitat downstream of the flow release location
May 12, 2011



Location of Camp Meeker Recreation and Park District point of diversion

January 5, 2018