

Anderson, Skyler@Waterboards

From: Will Harling <will@mkwc.org>
Sent: Thursday, April 21, 2016 3:40 PM
To: Petruzzelli, Kenneth@Waterboards
Cc: Barbara Brenner; Murano, Taro@Waterboards; Henriouille, Diana@Waterboards; Anderson, Skyler@Waterboards; Feiler, Stormer@Waterboards; Margaret Tauzer - NOAA Federal; Kerry Fuller; Rocco Fiori; L. Joey Howard
Subject: Re: Stanshaw Scope of Work - Questions from Water Rights Division and North Coast Regional Water Quality Board
Attachments: SWRCB MMR Questions w Answers.docx

Sorry for the delay in responding. Here are my brief answers to inform future talks.
 Will

On Wed, Apr 20, 2016 at 4:08 PM, Will Harling <will@mkwc.org> wrote:

Hi Kenneth et al,

We had a good field review today up at Marble Mountain Ranch with engineer Joey Howard, geologist Rocco Fiori, electrician Pavel Nalezek, and Doug Cole. I shared your list of questions with the group and will work on written responses by noon tomorrow.

Thanks,

Will

On Wed, Apr 20, 2016 at 9:13 AM, Petruzzelli, Kenneth@Waterboards <Kenneth.Petruzzelli@waterboards.ca.gov> wrote:

Barbara –

In your letter dated April 15, 2016, you stated that the Coles were meeting with their engineering and implementation teams today to discuss and approve designs for the outfall point. The Division and the Regional Board have a number of questions about the scope of work and, in light of the meeting today, I wanted you to have the questions available. Also, I still believe it would be productive for us to go over these questions in a meeting or conference call. If you are open to meeting, please let me know so we can set up some dates.

Here are the questions from staff -

Water Right Division questions

- 1) The numeric consumptive use rate of 0.31 CFS (excludes hydropower water) reported by Mr. Cole is not supported by the Division. The Division would like to point out that .31 CFS over a 24-hour period is approximately 200,000 gallons of water per day. Based on the Division's field visits to the

Ranch, the Division does not support that MMR uses that amount of water daily. Task # 5 in the Summary of Work (SOW) states that there will be a Water Efficiency Study performed (Study). The Division is interested in reviewing and commenting on the Study in order to determine what a reasonable daily use of water at the ranch is.

- 2) The two documents cite different amounts of water that will be diverted via the 6-inch pipes. On page 2 of the PDF titled Marble Mountain Pipeline the Q value = 0.35 CFS. In the document titled “40710 Revised SOW for Additional Funds _Task six Revision” (SOW) in the second paragraph of section Task # 6 it states that the pipeline is sized to convey 0.31 CFS. The two documents are reporting a different volume of water will be diverted in the 6-in pipe.

- 3) Under Task # 6 in the SOW the following is stated – “This pipe is sized to convey consumptive flows (0.31 cfs), or 10% of Stanshaw Creek flow at the Point of Diversion (POD), (whichever is less), to MMR between May 15-October 31. In Order for MMR to accomplish this by-pass flow schedule, MMR will need to know what the flow is in Stanshaw Creek at the POD on a daily occurrence. Furthermore, how will MMR measure the amount of water diverted when they are restricted to 10 percent of the stream flow? In order to maintain compliance with the bypass requirement, MMR will need to measure the daily flow rate of Stanshaw Creek and have the ability of reducing the water diverted at the POD accordingly. The head gate will need to accommodate the reduced diversion rate to the 6 –inch pipe from 0.31 CFS to 10 % of the instantaneous flow in Stanshaw Creek.

- 4) Under Task # 6 in the SOW the following is stated. “Additionally, a short term modification to the MMR water system will be an engineered design for the outflow to Irving Creek from the MMR ditch where a head cut is causing active erosion into Irving Creek.” The Division would like some elaboration of this statement. What exactly will be done? When will water diverted be returned to Stanshaw Creek? Is the “short term modification” needed so that construction can begin to return water back to Stanshaw?

- 5) The document gives the reader the impression that between May 15-October 31 that water for hydropower will not be diverted, is that true?

Water Quality questions

- 1) Who did the Coles speak to at the USFS and what was provided from the USFS stating that changing the ditch location was not an acceptable option? Please have this decision provided in a written format signed by a USFS representative.

- 2) Where did the 6 inch temporary pipe size come from? We would like an analysis of how the size was determined and a detailed, written explanation of how summer flows will be controlled in regard to limiting the 6 inch pipe in the event it is necessary to do so to ensure adequate by pass flows.
- 3) Is the 10% of flow recommendation from NMFS for all users on Stanshaw or for only the Coles? Our impression is that it was the former.
- 4) The Restoration and Monitoring Plan described does not appear to have been submitted to the Regional Board or State Board for review and approval based upon the timeline and task milestones provided by the Coles. In addition, the Region does not see a discussion of permits required or any reference to conditional approvals of designs by the Regional Water Board or Division. Please have the Coles provide the designs for the pipe installation, including any necessary limitations during construction to mitigate impacts, and a complete list of all permits 1) required, 2) they have applied for, 3) and those permits received that allow them to conduct this scope of work of 1) preparing the ditch through excavation 2) installing the pipe and of 3) installing a temporary culvert fix at the outfall of the ditch into Irving Creek.
- 5) The proposed interim fixes are likely costly and do not appear to meet expectations in terms of reducing impacts and stabilizing –restoring streams. The Region is curious as to whether there has been a biological assessment of the existing ditch habitat value and the species that are occupying the ditch? What does DFW think about this?
- 6) Will the plans be submitted to the North Coast Regional Water Board and Division of Water Rights for review and approval prior to submission to other agencies for required permits and approvals to conduct the scope of work?
- 7) How have the Coles addressed CEQA through the scope of work they appear to have conducted and are intending to conduct?
- 8) As the water use analysis is incomplete, how have the Coles determined that the 6 inch pipe is appropriate, and how has the project design been influenced by the potential to develop efficiencies in the system?
- 9) Have any alternatives been considered in terms of 1) planning to put the water back into Stanshaw Creek; and 2) project alternatives to control erosion and diversion of the ditch? If not, why were these alternatives not considered and why was the preferred alternative chosen?

Ken Petruzzelli, Attorney III

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Hi All,

To inform our call coming up I, Will Harling, have provided brief answers based on my understanding of where we are right now to the SWRCB's questions. Please note that these answers have not been vetted by the Cole's or their legal staff, and are subject to change.

Sincerely,
Will

Water Right Division questions

1) The numeric consumptive use rate of 0.31 CFS (excludes hydropower water) reported by Mr. Cole is not supported by the Division. The Division would like to point out that .31 CFS over a 24-hour period is approximately 200,000 gallons of water per day. Based on the Division's field visits to the Ranch, the Division does not support that MMR uses that amount of water daily. Task # 5 in the Summary of Work (SOW) states that there will be a Water Efficiency Study performed (Study). The Division is interested in reviewing and commenting on the Study in order to determine what a reasonable daily use of water at the ranch is.

Response: We expect to complete a water efficiency study by July. We will share it with partners.

2) The two documents cite different amounts of water that will be diverted via the 6-inch pipes. On page 2 of the PDF titled Marble Mountain Pipeline the Q value = 0.35 CFS. In the document titled "40710 Revised SOW for Additional Funds _Task six Revision" (SOW) in the second paragraph of section Task # 6 it states that the pipeline is sized to convey 0.31 CFS. The two documents are reporting a different volume of water will be diverted in the 6-in pipe.

Response: I made an error characterizing the flows for the 6 inch pipe for consumptive use. The pipe is sized to convey water to MMR allowed under the NMFS instream bypass flow requirements, which start out around 0.6cfs in late May and go to 0.2 cfs in September.

3) Under Task # 6 in the SOW the following is stated – "This pipe is sized to convey consumptive flows (0.31 cfs), or 10% of Stanshaw Creek flow at the Point of Diversion (POD), (whichever is less), to MMR between May 15-October 31. In Order for MMR to accomplish this by-pass flow schedule, MMR will need to know what the flow is in Stanshaw Creek at the POD on a daily occurrence. Furthermore, how will MMR measure the amount of water diverted when they are restricted to 10 percent of the stream flow? In order to maintain compliance with the bypass requirement, MMR will need to measure the daily flow rate of Stanshaw Creek and have the ability of reducing the water diverted at the POD accordingly. The head gate will need to accommodate the reduced diversion rate to the 6 –inch pipe from 0.31 CFS to 10 % of the instantaneous flow in Stanshaw Creek.

Response: It takes about four hours to take flow measurements and proportion the 10% into the MMR ditch. To take flows and adjust the diversion every day would be an incredible expense of time and energy. MKWC proposes taking flows every two weeks starting May 1st and created a recession graph of flows to predict what the flow will be by the next measurement in two weeks and apportioning the flows to MMR to be at or below 10% of the predicted flows at that time, avoiding any time when MMR will be diverting more than the 10% amount.

4) Under Task # 6 in the SOW the following is stated. "Additionally, a short term modification to the MMR water system will be an engineered design for the outflow to Irving Creek from the MMR ditch where a head cut is causing active erosion into Irving Creek." The Division would like some elaboration of this statement. What exactly will be done? When will water diverted be returned to Stanshaw Creek? Is the "short term modification" needed so that construction can begin to return water back to Stanshaw?

Response: We would like to work with SWRCB to agree upon a simple engineered design to stop erosion at this site. Engineer Joey Howard has a design using culverts with log supports to stop erosion at this site until this section of the ditch is no longer used (anticipated within the next 2-3 years). We can share this immediately.

5) The document gives the reader the impression that between May 15-October 31 that water for hydropower will not be diverted, is that true?

Response: Currently there is no hydro system sized to the amount of flow available during this time period at MMR. MMR owners are looking into options for smaller scale hydro now.

Water Quality questions

1) Who did the Coles speak to at the USFS and what was provided from the USFS stating that changing the ditch location was not an acceptable option? Please have this decision provided in a written format signed by a USFS representative.

Response: From Six River NF Lands and Minerals Officer George Frey (4/21/16 in email to Doug Cole): To my knowledge the Forest Service has not provided a written opinion on the possibility of changing the alignment of the ditch. The subject was discussed at the MCWC headquarters meeting 1/14/2016 which I attended via telephone. I believe I raised verbal concerns at the 1/14/2016 meeting that we would prefer to work with the existing alignment instead of disturbing 0.54 miles of new ditch line, 0.12 miles of new penstock line and unknown amount of new access road. Such a change would require a permit as it is off the historic pre Forest Service alignment. I have not seen a written proposal on the location or design of a new ditch/penstock alignment.

2) Where did the 6 inch temporary pipe size come from? We would like an analysis of how the size was determined and a detailed, written explanation of how summer flows will be controlled in regard to limiting the 6 inch pipe in the event it is necessary to do so to ensure adequate by pass flows.

Response: See Joey's explanation for the pipe calcs. Basically to not be limited by pipe size and still be able to convey flows allowed under the NMFS flow requirements, we would need a 6" pipe. Summer flows will be controlled by manually proportioning flows every two weeks in conjunction with manual flow measurements conducted by MKWC and cross checked by MMR who also has a swiffer meter.

From Joey Howard 4/21/16: I simplified the pipe calcs and assumed the pipe is flowing full in new plastic pipe and at a constant slope from the point of diversion to the forebay. I used Hazen-Williams equation - Manning's is suitable for open channel flow, but not generally used for closed conduit flow. The pipe design for a flow of 0.35 cfs assumed open channel flow. For closed conduit flow (pressure flow), a 4 inch diameter pipe will convey 0.19 cfs, and a 6 inch diameter pipe will convey 0.55 cfs over a distance of 3200 feet and vertical drop of 13.3 feet. Assuming we wanted to get 0.31 cfs through a 4 inch diameter pipe, it would require a vertical head increase of over 20 feet over a distance of 3200 feet.

3) Is the 10% of flow recommendation from NMFS for all users on Stanshaw or for only the Coles? Our impression is that it was the former.

Response: My impression it was for the latter. But I am sure NMFS can answer this on the call.

4) The Restoration and Monitoring Plan described does not appear to have been submitted to the Regional Board or State Board for review and approval based upon the timeline and task milestones provided by the Coles. In addition, the Region does not see a discussion of permits required or any reference to conditional approvals of designs by the Regional Water Board or Division. Please have the Coles provide the

designs for the pipe installation, including any necessary limitations during construction to mitigate impacts, and a complete list of all permits 1) required, 2) they have applied for, 3) and those permits received that allow them to conduct this scope of work of 1) preparing the ditch through excavation 2) installing the pipe and of 3) installing a temporary culvert fix at the outfall of the ditch into Irving Creek.

Response; I believe the Cole's said the Restoration Monitoring Plan would be done by July. I thought the progress report was due April 15th, which was submitted. Based on our initial research we do not think a permit is needed for pipe installation in an existing ditch. George Frey had this to say on the subject(4/21/16 in email to Doug Cole): In general the Forest Service considers basic maintenance of the historic existing ditch to not require a permit. This would include placing a pipe within the ditch. Changing the outflow of the ditch line into Irving Cr would need to be reviewed. If it's within the existing water flow channel and further protects the channel from erosion then it would be considered maintenance of the historic line and not in need of a permit.

5) The proposed interim fixes are likely costly and do not appear to meet expectations in terms of reducing impacts and stabilizing –restoring streams. The Region is curious as to whether there has been a biological assessment of the existing ditch habitat value and the species that are occupying the ditch? What does DFW think about this?

Response: This appears to be the SWRCB's opinion. These interim fixes are the only way conceivable given the current timeline to meet the NMFS bypass flow requirements and provide minimal water to maintain basic functions at MMR. All the additional requirements being placed on the Coles to do assessments and studies are impossible in the timeframes required for action in the SWRCB's documents released December 2015. If there are other possible solutions to this issue please let us know.

6) Will the plans be submitted to the North Coast Regional Water Board and Division of Water Rights for review and approval prior to submission to other agencies for required permits and approvals to conduct the scope of work?

Response: We do not believe this will be required for laying the pipe in an existing ditch. If this is not the case, please let us know.

7) How have the Coles addressed CEQA through the scope of work they appear to have conducted and are intending to conduct?

Response: From George Frey (4/21/16 in email to Doug Cole): CEQ is the California Environmental Quality. It is the State's environmental regulations. On Federal lands we follow the National Environmental Policy Act. I have no knowledge what CEQ requires of you on federal lands.

And neither do we....please let us know.

8) As the water use analysis is incomplete, how have the Coles determined that the 6 inch pipe is appropriate, and how has the project design been influenced by the potential to develop efficiencies in the system?

Response: See discussion in previous answers.

9) Have any alternatives been considered in terms of 1) planning to put the water back into Stanshaw Creek; and 2) project alternatives to control erosion and diversion of the ditch? If not, why were these alternatives not considered and why was the preferred alternative chosen?

Response: We are in crisis mode to meet the timelines placed on us by NMFS instream flow requirements and the time since the SWRCB docs came out, and the availability of funding to do this work. We anticipate the alternatives to be developed and submitted to partners for review by July, 2016.