

From: [Fernandez, Juliette](#)
To: [Harris, Grant](#); [Radke, Bill](#); [Burck, Peter](#); [Kundargi, Darrell](#); [Baca, Joaquin](#); [Reagan, Steve](#)
Cc: [Harden, Tasha](#); [Walker, Cassandra M](#); [Mcdaniel, Monty K](#)
Subject: Re: SBNWR Water Monitoring Equipment Issue
Date: Friday, March 27, 2020 10:06:15 AM

Thank you to all for helping with this!

From: Harris, Grant <Grant_Harris@fws.gov>
Sent: Friday, March 27, 2020 9:47 AM
To: Radke, Bill <bill_radke@fws.gov>; Burck, Peter <peter_burck@fws.gov>; Kundargi, Darrell <darrell_kundargi@fws.gov>; Baca, Joaquin <Joaquin_Baca@fws.gov>; Fernandez, Juliette <juliette_fernandez@fws.gov>; Reagan, Steve <steve_reagan@fws.gov>
Cc: Harden, Tasha <Tasha_Harden@fws.gov>; Walker, Cassandra M <cassandra_walker@fws.gov>; Mcdaniel, Monty K <monty_mcdaniel@fws.gov>
Subject: Re: SBNWR Water Monitoring Equipment Issue

Hi Everyone,

The well monitoring equipment is planned for pack up and shipping to San Bernardino next Wednesday (4/1). Darrell is unable to generate a "how to" for set up, but sounds like Bill and all are comfortable with establishing the flow meters, and have done much pre-work already. Great news.

Darrell is happy to help answer questions and provide assistance by phone.

I hope this all works out and we're able to acquire the flow data sooner than later.

Grant

From: Radke, Bill <bill_radke@fws.gov>
Sent: Tuesday, March 24, 2020 5:16 PM
To: Burck, Peter <peter_burck@fws.gov>; Harris, Grant <Grant_Harris@fws.gov>; Kundargi, Darrell <darrell_kundargi@fws.gov>; Baca, Joaquin <Joaquin_Baca@fws.gov>; Fernandez, Juliette <juliette_fernandez@fws.gov>; Reagan, Steve <steve_reagan@fws.gov>
Cc: Harden, Tasha <Tasha_Harden@fws.gov>; Walker, Cassandra M <cassandra_walker@fws.gov>; Mcdaniel, Monty K <monty_mcdaniel@fws.gov>
Subject: SBNWR Water Monitoring Equipment Issue

Hi All; I don't think this discussion is being re-kindled, I just think this discussion was never finished because we have been dealing with other emergencies. I am requesting that all the

monitoring equipment be shipped to SBNWR because I have mission essential staff that can be installing this equipment now, and working remotely with Region-2 experts to calibrate or otherwise overcome any installation obstacles. This was always a "group effort" and current circumstances are simply making us consider additional options. I think this is a mission essential task because we seem currently to be unable to either completely understand or adequately document the changing conditions to our aquifer and adequately tie the data to the DHS project. The DHS project is not slowing, and has actually escalated to include another five miles of barrier construction through the Peloncillo Mountains east of the refuge, all to be finished by December 2020.

My anxiety is that FWS may not go back to normal operations for months, while the monitoring equipment sits in boxes unused and with expiring warranties. If we wait, even a few months, by the time we begin monitoring, we may very well have missed the opportunity to clearly document the connection between the DHS project and our lack of pressure/flow from artesian wells. It will have been an important missed opportunity that I think we have the ability to currently address. I certainly agree that our planned monitoring will help us in the long term, but having the ability to collect shorter term data during this construction episode is an opportunity that should not be missed. It will help us understand aquifer changes and related recharge rates relative to a known volume of water withdrawal over a known period of time. It may also help us document who should be funding the (perhaps 1 million dollars) mitigation to ultimately install electricity and adequate pumps on the refuge to prevent fish extinction.

Finally, in anticipation of installing the monitoring equipment as originally planned during mid-March before the pandemic hit us, refuge staff did a lot of pre-work to excavate buried water lines, alter pipe to efficiently accept the equipment, and perform other tasks that now leave our water delivery systems vulnerable to damage from the elements and/or vandalism. Now is a good time to install the equipment and safeguard our well systems.

I think discussion among our focus group is a good idea to evaluate the situation and determine the best path forward to gathering the information needed to help us both in the short-term and in the long-term. I thank all of you for your continued interest and dedication to our problem at San Bernardino NWR. Sincerely, Bill Radke