
From: Garwin Yip - NOAA Federal <garwin.yip@noaa.gov>
Sent: Monday, May 8, 2017 9:28 AM
To: Jeffrey Rieker
Cc: Brycen.Swart@noaa.gov; Eric Danner
Subject: Re: Draft Reclamation modeling workplan
Attachments: 2016-11-04 DRAFT ReclamationWorkplan.pdf

Jeff,

Apologies for the delay in sending over initial comments on Reclamation's draft modeling plan. The plan, as written, is OK, in general, and is a good starting point to frame up the need to revisit the model(s) used for the Shasta/Trinity complex. Questions that should be answered or addressed as we work towards the various tasks within the plan include the following:

- One of the key objectives of this effort is to better inform and support the February forecast and associated decision making.
- All inputs into the model and outputs from the model should be explicit and documented (which feeds into the next point).
- The model should be built/run on a platform that we can independently run?
- The model should produce uncertainty estimates and identify joint probabilities of risk.
- The resulting model should be relatively easy to work with and be able to run multiple scenarios in a relatively short amount of time.
- The model should be complement the NMFS-SWFSC's modeling efforts

See below for additional initial comments from Eric Danner (NMFS-SWFSC)

-Garwin-

Garwin Yip

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From: Eric Danner - NOAA Federal <eric.danner@noaa.gov>
Date: Wed, Jan 18, 2017 at 12:05 PM
Subject: Draft Reclamation modeling workplan
To: Garwin Yip <Garwin.Yip@noaa.gov>

Garwin,

Here is the SWFSC input regarding the USBR Draft Workplan for Shasta and Trinity Division Seasonal Operational Water Temperature Modeling.

Overall the workplan is very general, which may be out of necessity in the early stages. Without certain details it is difficult to evaluate some parts, such as how uncertainty will be estimated and how models will be assessed during calibration. The workplan only considers seasonal planning, without any reference to long-term (climate) planning.

There is nothing included about addressing uncertainty associated with TCD / operational issues.

There are some overlaps with the SWFSC modeling efforts, but they have included a technical advisory group and stakeholder outreach component that could have potential advantages.

Specific comments:

Page 1, In the introduction and objective section, it would be nice to see a sentence directly stating the objective of the report. Could also explicitly state that all subsections/components of framework will be incorporated into a document. This is stated on page 12, but it would be nice to know this upfront.

Page 1, background section states that base model of HEC-5Q simulates Sacramento River at one mile increments. Double check this as I thought base version simulates river as series of nodes (control points) which are typically located at gages, diversions, or tributaries and not evenly spaced at one mile increments.

Page 5 tasks, would be useful to define 'Gather information on existing tools' more. E.g. will model performance data be compiled to understand biases between models and how that might impact downstream models?

Page 6 deliverables. Would be useful to explicitly state that a document describing the selection criteria will be developed. This seems to be a very important step that would benefit from peer review. I think this is the plan, but not directly stated in this section.

Page 8 deliverables. Could be useful to identify important data gaps and include recommendations for areas that could use additional data sources after all available sources have been identified and assessed.

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From: "Rieker, Jeffrey" <jrieker@usbr.gov>
Date: November 14, 2016 at 4:47:02 PM PST
To: Maria Rea - NOAA Federal <maria.rea@noaa.gov>
Cc: Garwin Yip - NOAA Federal <garwin.yip@noaa.gov>, PABLO ARROYAVE <parroyave@usbr.gov>, Ronald E Milligan <RMilligan@usbr.gov>, "Michelle Banonis" <mabanonis@usbr.gov>
Subject: Re: Draft Reclamation modeling workplan

Maria, Garwin,

I wanted to check in to see if you've had a chance to review the draft workplan in greater detail since we last talked on Thursday. We're hoping to speak about this with some of our CVP stakeholders this week, so we wanted to see if you had any initial thoughts, reactions, concerns, or wanted to discuss the document/plan in more detail.

Thanks,
Jeff

Jeffrey Rieker
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On Fri, Nov 4, 2016 at 6:17 PM, Maria Rea - NOAA Federal <maria.rea@noaa.gov> wrote:
Thank you, Jeff. We will take a look next week.

Sent from my iPhone

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From: **Rieker, Jeffrey** <jrieker@usbr.gov>
Date: Fri, Nov 4, 2016 at 4:42 PM
Subject: Draft Reclamation modeling workplan
To: "'[Maria.rea@noaa.gov](mailto:maria.rea@noaa.gov)'" <maria.rea@noaa.gov>
Cc: Garwin Yip - NOAA Federal <garwin.yip@noaa.gov>, PABLO ARROYAVE <parroyave@usbr.gov>, Ronald E Milligan <RMilligan@usbr.gov>, Michelle Banonis <mabanonis@usbr.gov>

Maria,

As has been discussed recently, attached is a draft workplan that Reclamation has been developing on a new/revised framework for modeling water temperature for operations on the Sacramento River. As you'll see in the document, the concept is to have a comprehensive plan that uses a phased approach.

To date we've been in discussions with the Sacramento River Settlement Contractors on the approach, but we're planning to discuss it with a wider group of CVP contractors on November 17. We're hopeful that we could get any initial feedback you might have by the beginning of that week (November 14). As you and others from NMFS review the document, feel free to let us know if you have questions, would like to discuss, or would like additional information.

Thanks,
Jeff

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