

Skaggs, Pam

From: Marshall, Aaron
Sent: Monday, April 07, 2008 2:13 PM
To: Carlsen, Ernie; Carlson, Dave; Skaggs, Pam
Subject: FW: Re: Comore Development ESPA Transfer Spreadsheet Review

Attachments: Comore Loma Mem 4-4-08.pdf

Good afternoon all,

Attached is the IDWR hydrology staff review memo from John Lindgren of *Injury Assessment of Groundwater Impacts for Proposed Water Rights Transfer Comore Loma Subdivision*. In sum, his direction is to use the ESPAM and the "Transfer Tool" to evaluate impacts of ground water diversions and necessary mitigation for those impacts. Please let me know if there is any additional review or information needed from hydrology staff.

Aaron

From: Lindgren, John
Sent: Friday, April 04, 2008 11:00 AM
To: Marshall, Aaron
Cc: Peppersack, Jeff; Wylie, Allan; Vincent, Sean; Raymondi, Rick
Subject: Re: Comore Development ESPA Transfer Spreadsheet Review

Aaron,
Here is a memo addressing the Comore Loma Development and the use of ESPAM for water rights transfer.
If have any questions please give me a call.
John L.



Comore Loma Mem
4-4-08.pdf (1 ...

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MEMO

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Date: April 4, 2008

To: Aaron Marshal

From: John Lindgren 

cc: Jeff Peppersack, Allan Wylie, Sean Vincent, Rick Raymondi

Subject: Per your' request regarding the report *Injury Assessment of Groundwater Impacts for Proposed Water Rights Transfer Comore Loma Subdivision*

A portion of the report cited above questions whether it is appropriate to use the Eastern Snake Plain Aquifer Model (ESPAM) or the updated "Transfer Tool" to evaluate the water right transfers for the Comore Loma Subdivision. It also suggests modifying the ESPAM to allow additional groundwater underflow across the model boundary up gradient from the Comore Loma Property. These parts of the report are addressed in this memo.

Conceptual Model

The conceptual model of the subsurface and description of the regional geological and hydrological setting for the area as described in the report are consistent with the assumptions made in constructing the ESPAM. The area involved and the contributing source of groundwater from outside the modeled area are assumed to be tributary the Eastern Snake Plain Aquifer. No information is supplied in the report that would require us to conclude that waters being diverted are not tributary to the Easter Snake Plain Aquifer. Figure 1 provides a Location map.

The report also contends that the ESPAM does not account for subterranean contributions of ground water from outside the model. ESPAM does include the estimates of tributary underflow at specified flux model boundary cells. The location and magnitude of this tributary underflow was determined by the Eastern Snake Hydrologic Modeling Committee to be the best estimate of the total unmeasured underflow to the aquifer.

Aquifer Model

The report suggests using a Modflow General Head Boundary (GHB) to modify the ESPAM boundary east of Comore allowing the new diversion to induce inflow across the boundary. The use of this boundary configuration supplies a "new source" of water for the diversion. Without recalibrating ESPAM this is simply providing theoretical mitigation by assuming increased underflow. Furthermore, the proposed modification to the ESPAM boundary puts no limits on the inflow and thus, provides no protection for existing water rights in the area.

It is not appropriate to use an uncalibrated model to evaluate the water rights transfer for the Comore Loma Property. ESPAM and the "Transfer Tool" presently are the best tools available to evaluate the impacts of groundwater diversion and the mitigation of its impacts on the critical reaches of the Snake River.

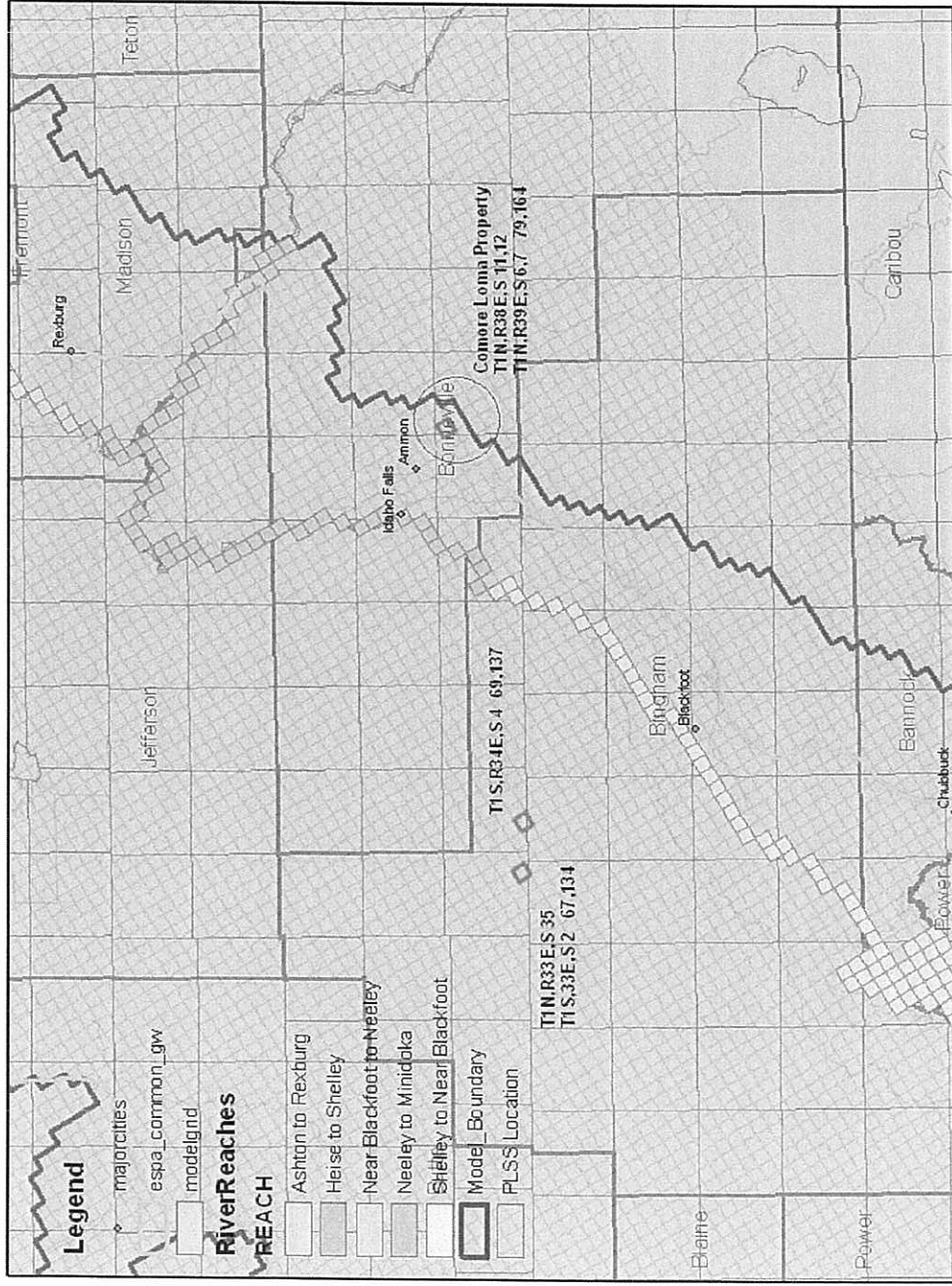


Figure 1. Location map for Comore Loma water rights transfer