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August 6, 2008

Gary Spackman
Water Management Division Administrator
Idaho Department of Water Resources
PO Box 83720
Boise, ID 83720-0098

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DEPARTMENT OF
WATER RESOURCES

RE: Response to Internal Memo from John Lindgren Regarding Application for Transfer
Nos. 72674 and 74088, in the Name of Comore Development.

Dear Mr. Spackman:

This letter is in regards to Application for Transfer Nos. 72674 and 74088, in the name of Comore Development, Inc., ("Comore"). We have been trying to work with the Department for over three years to finalize these transfer, which is a condition of two approved water right permits: 25-14166 and 25-14167. The transfer was submitted in response to a stipulation entered into between the applicants and the original protestants, Twin Falls and North Side Canal Companies.

Most of the history of these transfers was provided in a previous letter to Director David Tuthill, by Mr. Kent Foster, dated July 16, 2007, and since there have been developments since that time, we feel a recounting of the history of these transfers is important.

Comore Development is owned by the Skidmore family of Idaho Falls, who have been responsible for the development of an upscale group of subdivisions known as Comore Loma in the foothills south and east of Idaho Falls. The Skidmores have been developing property since the early 1970s. Their construction company is Skidmore Construction, Inc.; the development company is Comore Development, Inc.; and a water company to hold the water rights and own and operate the diversion and delivery system was created several years ago as Comore Loma Water Company. Over the years, as additional water was needed in connection with the development of more lots, Comore Development generally would file an Application for Water Right Permit and after the well was drilled, delivery system installed, and the license issued, would assign the water right to Comore Loma Water Company. This approach has been or will be used in connection with Water Right Nos. 25-7040, 25-7042, 25-7161, 25-7578, and 25-7652.

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Department of Water Resources
Eastern Region

Established in 1896

Then, in March and April of 2004, Applications for Permit Nos. 25-14166 and 25-14167 were filed by Comore Development in the usual course of business as described. Both were protested by North Side and Twin Falls canal companies. Because of their development schedule, Comore entered into an agreement with the canal companies to change the applications to seek inside water use only, which the companies agree is non-consumptive, and then for Comore to purchase within two years other groundwater rights to supply outside irrigation water, and to apply for transfer of the place of use and point of diversion when such rights were acquired.

As you know, valid groundwater rights which can be used for outside water and irrigation in connection with residential development are not plentiful. After significant effort, the Skidmores were able to persuade Mr. Brad Foster, who had acquired land west of Blackfoot from Thayne Gneiting and Richard Polatis, to sell them some water rights. Mr. Foster agreed to sell 100 acres of water right from the Gneiting land in 2005, and we filed the first Application for Transfer, which was numbered 72674 in November of that year.

A company formed by Mr. Foster's family, Black Rock, LLC, agreed to sell the balance of a groundwater right on the Polatis land west of Blackfoot, to Comore. It is for about 238 acres and could be sufficient to accommodate Comore's needs for outside water for some time to come. As you can well imagine, substantial sums have been paid by Comore for both the Gneiting and Polatis rights.

After the second Application for Transfer (No. 74088) was filed, we were informed that we needed to perform an injury analysis using the "New Transfer Tool" and provide that information with our applications. Mr. Foster previously indicated his reluctance to do so. First, Mr. Foster provided a colored map showing the location of the affected Comore land with the description of all of the points of diversion. The proposed place of use was wholly outside the official boundary of the ESPA. Quoting from Section 3, Subsection 12 of the "Transfer Memo", it states that "the applicant must submit an attachment to the application that sets forth the time history of calculated depletions (transient to study state) to reaches of the Snake River that are hydraulically-connected to the ESPA using or based on the Department's current groundwater model for the ESPA", but only "if the application for transfer proposes to move the point of diversion from a water right to divert and use groundwater from one location to another within the Eastern Snake Plain Aquifer" (emphasis added). Thus, Mr. Foster's initial argument was simply that the transfer memo, by its very terms, would not be necessary in the transfers filed by Comore because the transfers would move water from the ESPA outside of the ESPA.

Second, Mr. Foster expressed some concern that advice from IDWR officials to use the transfer tool node that was “closest to the ESPA.” Mr. Foster stated simply that boundaries are normally considered to mean something in the law, and it is somewhat arbitrary to require someone to use the closest node in a given situation. Mr. Foster asked if the use of the closest node would be required one, three, five, ten, or perhaps 25 miles away. Because of this uncertainty, Mr. Foster argued additionally that an analysis under the transfer tool was not appropriate.

Third, Mr. Foster stated that in our own transfer tool analysis, we noted that results from the nodes near the extreme eastern edge of the ESPA produced what appear to be inaccurate results. As such, Mr. Foster expressed his concern that use of either the old transfer tool or the new transfer tool would apparently require the loss or perhaps taking of so much of the water rights purchased by Comore as to make the very substantial price paid for them completely unreasonable.

Fourth, Mr. Foster noted that the transfers would move water rights from the Blackfoot area, which is much closer to springs that feed American Falls Reservoir, to an area outside of the ESPA. These transfers would therefore help reduce pumping in areas deemed sensitive by IDWR in the Surface Water Coalition water calls.

Lastly, Mr. Foster suggested that the Department publish the Applications for Transfer to determine if there would be any protestors to the transfer. Mr. Foster also generally expressed his frustration as to the use of the transfer memo, the constantly changing rules being promulgated by Department personnel, and the general uncertainty and difficulty we have as counselors to our clients to provide them with sound advice as to how to resolve their water rights issues.

Approximately one month after Mr. Foster sent his letter to the Director, you responded with a letter dated September 13, 2007. In that letter, you instructed your staff to submit a depletion analysis using the ESPA transfer tool and then to provide copies of the Department’s simulation to us for comment and/or rebuttal. In addition, you stated that notice of the applications for transfer should be published prior to any reduction of the water right to be transferred. Thirdly, you noted that the published notice sent to all interested parties should expressly state that the quantities of the transfers have not been adjusted to prevent possible reach losses simulated by the ESPA model. In your letter you stated

“following publication, the filing of possible protests, and Department assessment of the accuracy and applicability of model simulations, the Department will complete

its determination of whether the applications for transfer should be approved, denied, or approved with conditions.”

On October 1, 2007, Dave Carlson of the Eastern Region office of IDWR forwarded to Kent Foster the Department’s ESPA analysis of the Comore Development transfers. As suspected, the analysis predicted a significant effect on certain reaches of the Snake River, which would likely result in substantial reductions in the water right amount to be transferred.

After receiving this analysis, Comore employed the services of Clearwater Geosciences, LLP, of Idaho Falls, Idaho, to provide a professional and specific analysis of whether or not the proposed transfer would injure any other water users if approved. The detailed report was completed in January 2008, and a copy was provided to the Department of Water Resources shortly thereafter. Generally speaking, Clearwater Geosciences noted discrepancies between actual measured data and data contained in the model. An analysis based on actual data showed that the transfers would not cause injury to other water right holders, which is at odds with the Transfer Tool results.

Then, on April 2, 2008, we received a notice from IDWR that the applications for transfer would be published on April 10th and April 17th, 2008, in the Idaho Falls Post Register. The application was published accordingly, and after the protest period had ended, no protests were received by the Department. Since we then had not yet received any response to Clearwater Geosciences’ injury assessment, and since the transfers had been advertised, we had assumed that the Department had agreed with the analysis prepared by professional engineers Tom Wood and Robert Podgorney of Clearwater Geosciences. In your letter dated September 13, 2007, you specifically provided or allowed us to provide some rebuttal to the ESPA transfer tool analysis. We provided such rebuttal, and the transfers were advertised as required by Idaho law. In your closing paragraph of that letter, which we have quoted above, you stated that the Department would complete its determinations as to whether the transfers should be approved, denied, or approved with conditions. The Department did none of the above three.

Instead, in May 2008, we were forwarded an internal memo prepared by Mr. John Lindgren and addressed to Aaron Marshall, with copies to Jeff Peppersack, Alan Wiley, Shawn Vincent, and Rick Raymondi. The subject of the memo was to be an analysis of whether or not the injury assessment provided by Clearwater Geosciences was adequate to address any injury concerns resulting from the transfer. The actual text of the memo was less than half a page, and made very broad and generalized assertions responses to the detailed analysis provided by Clearwater

Geosciences. Once this document was forwarded to us, we provided it to Clearwater Geosciences for their review.

Enclosed with this letter is a copy of a letter addressed to me from Clearwater Geosciences in response to the memo from Mr. Lindgren. Specifically, the memo rebuts every alleged weakness in Mr. Lindgren's short memo. As you can see in the letter, Mr. Wood and Mr. Podgorney stress the fact that they have relied on actual measured data in the Comore area in their analysis. In doing so, they have determined that the model is somewhat inaccurate when used in these specific transfers. Much to their surprise, they had hoped that the information we had provided to the Department could perhaps be used by the Department to better calibrate and refine its model. You can perhaps understand our frustration when instead, the analysis was essentially dismissed with a half-page memo.

As you can see from Clearwater Geosciences' response, our level of frustration is high. We have worked to provide the Department with information that is requested, yet for some reason, we simply cannot provide the information the Department desires to finalize these transfers. In a touch of irony, Comore received today two letters from Deborah Gibson of your office informing us that the proof due notice on Permit Nos. 25-14166 and 25-14167 are due by October 1, 2008. Obviously, because of where we are at with the transfers, we will have to ask for an extension. Nevertheless, these letters have simply reminded us that we have been at this for over three years, and the patience of Comore and its consultants are wearing thin.

We request you review our response to Mr. Lindgren's memo and thereafter finalize the transfers. Based upon our review of this response, and my limited understanding of hydrogeology, it appears that their analysis is sound and the transfers should be approved. We note additionally that the criticism made by Mr. Wood and Mr. Podgorney relates to the scale at which the transfer tool is used not the Transfer Tool itself. From an aquifer wide perspective, Mr. Wood and Mr. Podgorney state that, in their view, "it is a fine representation of aquifer flow at the scale of the entire aquifer. However, small transfers, especially near the boundary of a model, are not accurately represented in its current configuration.

We have expressed on a number of occasions that we would rather work these issues out with the Department rather than resorting to litigation which is why we expended our time and effort in preparing the rebuttal documents. But, this back and forth between us and the Department simply cannot continue for an undefined period of time.

Gary Spackman
Water Management Division Administrator
Idaho Department of Water Resources
August 6, 2008
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Please be advised that my client has instructed me that if there is any further dismissal of the information we have provided to you, we are to move this process into litigation. While doing so is something Mr. Foster and myself have hoped to avoid, we have simply gotten to a point where we have no other choice in the event the Department maintains its current position.

If you have any questions, please feel free to contact us at your earliest convenience. Additionally, Mr. Wood and Mr. Podgorney have provided their phone numbers on the last page of their letter, and are happy to answer any questions regarding their analysis. It is our hope to receive a prompt response to the information we have provided, and we will follow up with the Department in a few weeks to determine where you are at in the review of our information and the continued processing of the transfer applications. Please note that we have provided a copy of this letter to Ernie Carlsen and Dave Carlson of the Eastern Region office of IDWR, and further, feel it is appropriate to provide a copy to Director Tuthill, so that he is aware of the situation as he had been written directly by Mr. Foster previously.

Best Regards,



Robert L. Harris
HOLDEN, KIDWELL, HAHN & CRAPO, P.L.L.C.

Enclosure

c: Ernie Carlsen
Dave Carlson
Director Tuthill
Comore Development
Clearwater Geosciences (w/o enclosures)



August 4, 2008

Mr. Rob Harris, Esq.
Holden, Kidwell, Hahn, and Crapo, PLLC
1000 Riverwalk Drive, Suite 200
PO Box 50130
Idaho Falls, ID 83405

SUBJECT: Response to April 4th, 2008 IDWR memo from John Lindgren to Aaron
Marshal *Injury Assessment of Groundwater Impacts for Proposed Water Rights Transfer
Comore Loma Subdivision*"

Dear Mr. Harris:

We would like to take this opportunity to respond to a number of statements made in the IDWR memo "Per your request regarding the report Injury Assessment of Groundwater Impacts for Proposed Water Rights Transfer Comore Loma Subdivision" dated April 4th, 2008, written by John Lindgren. Mr. Lindgren made a number of statements challenging our injury assessment and concluded, "It is not appropriate to use an uncalibrated model to evaluate the water rights transfer for the Comore Loma Property." We found it interesting that in his memo Mr. Lindgren did not acknowledge the extensive data that supported the analysis, and so we feel it is appropriate at this time to respond to his statements and cite field data that supports our analysis. Hard data, such as measured water levels that differ radically from the model's predicted water levels, cannot be brushed aside with the "calibrated" IDWR model because at best, models are imperfect representations of reality. The data are indisputable and show the IDWR's model calibration in this area of the aquifer is very poor. Application of the model, without the modifications we have made, would be invalid for the Comore Loma Transfer. Without the State's imperfect model and the blind reliance upon its validity in all circumstances, we clearly show that this transfer has no adverse impacts on other users. If the modifications to the ESPAM we have made to improve aquifer representation in the subject area are accepted, then again no injury is caused by this transfer. We consider the State's position in defending the use of the model for this small transfer over a few tens of miles near the model boundary scientifically untenable. And furthermore, it is unfortunate that these comments focus only on the modeling aspects of our report. We did a significant amount of work collecting and analyzing real geology, water temperature, water chemistry, and water level data in our injury analysis that should really be the focus of our argument with the State. In our report we discuss how insignificant the injury predicted by the ESPAM is in terms of actual impacts that might possibly be caused, even if we assume the model is correct. The impacts could not be measured with any means currently available at the river reaches under consideration. Furthermore, the predicted impacts are at the limits of numerical accuracy in the model itself.



Issue 1. Mr. Lindgren's statement "The area involved and the contributing source of groundwater from outside the modeled area are assumed to be tributary to 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 Eastern Snake Plain Aquifer." [emphasis added]

Mr. Lindgren's asserts that the waters outside the model boundary, to the east of Comore Loma are **ASSUMED** to be tributary to the Eastern Snake Plain Aquifer (ESPA), however, this is contrary to the design and summary documents of the model published by the IDWR and its contractors. Numerous IDWR and IWRRI reports state that in this area, recharge to the aquifer is trivial. Specifically, the location of the model boundary was selected to minimize inflow to the model domain. Mr. Lindgren is mistaken in his assumption that the model represents water to the east as being tributary to the ESPA because there is no mechanism for the Eastern Snake Plain Aquifer Model (ESPAM) to deliver water from outside the model east of Comore Loma. We show conclusively in our report that the groundwater flow direction in the vicinity of Comore Loma is perpendicular to the model boundary, yet the model, has this edge represented as a no-flow boundary, with the flow direction parallel to the boundary. Figure 1 below is reprinted from our original analysis and has been modified to more clearly demonstrate this fact. The black line on the figure represents the model boundary, which, as we discussed above, is considered a no-flow boundary, yet the groundwater flow direction (shown with the blue arrows) points directly across the boundary. Groundwater flows in the direction of the hydraulic gradient (the direction of the blue arrows on Figure 1), and so if the water to the east of the model domain is in fact tributary to the ESPA, why does the model boundary treat it as a no flow boundary? The water simply cannot get into the model domain. The Department's own model does not support Mr. Lindgren's Issue 1 and, therefore, this comment is not valid. Our report shows how the Department's model can be modified and improved to better represent reality and when this is done, the transfer causes no injury.

Issue 2. Mr. Lindgren's statement "The report also contends that the ESPAM does not account for subterranean contributions of groundwater 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."

Mr. Lindgren's assertion that our report contends that the ESPAM does not include subterranean flow is true at the local scale only. We state that the ESPAM does not account for underflow from the mountain front to the east of Comore Loma, which it does not. However, we are confused as to how Mr. Lindgren construed this to mean that we said no underflow is represented anywhere in the ESPAM. It is well documented that there are specific areas at the boundaries of the model where underflow is tributary. As a matter of fact, we employed these same flux boundary conditions in our modeling runs using the ESPAM. The nearest location where underflow is specified in the ESPAM is nearly 10 miles away from Comore Loma. Figure 2 below is a reprint of Figure 22 from



IWRRI Technical Report 06-002 (Cosgrove et al., 2006), showing the locations of specified underflow. Figure 3 shows the specified flux cells near the Comore Loma property.

The ESPAM report (Cosgrove et al., 2006), when discussing underflow from tributary basins, stated (p. 35) "Because tributary underflow is subsurface flow, it is difficult to estimate." Further there is no discussion in the document of how underflow is calculated, located, or allocated to the ESPAM. We went through the effort to collect the necessary data, that being hydraulic head and aquifer test data, and then calculated very conservative and reasonable estimates for underflow. From their published reports, it is not possible to know how IDWR estimated the location and volumes for underflow. As Mr. Lindgren stated, their values were simply "determined by the Eastern Snake Hydrologic Modeling Committee", accurately represents poor documentation to the calculation of underflow.

In conclusion, we are in agreement with Mr. Lindgren's Issue 2, although we do not see it as an issue. The ESPAM has certain flux boundaries, usually coincident with rivers or streams where subterranean water can enter the model domain. We also agree that the calculation of the underflow flux is poorly documented and hard to trace other than to say it is the "best estimate of the total unmeasured underflow to the aquifer" as determined by the Eastern Snake Hydrologic Modeling Committee. No other response is necessary to this issue.

Issue 3. *Mr. Lindgren's statement "The use of this boundary condition supplies a "new source" of water for the diversion.....the proposed modification to the ESPAM boundary puts no limits on the inflow ..."*

Mr. Lindgren overstates the obvious. Anytime a flux boundary is put into a model, water can move into the model, that is the point of the flux boundary. He is wrong about the limitations on inflow. The inflow is limited by the aquifer transmissivity and the hydraulic gradient, just like the flux boundaries for the ESPAM. The modifications we made do not create any "new water", they simply improve the modeled representation of the aquifer and better match the available data. We improved the ESPAM so that it more accurately represents reality. Four lines of data including, the hydraulic gradient, the water chemistry, the geology and the water temperature indicate that water from the mountains to the east flow into the ESPA near Comore Loma, yet the model doesn't account for it. Mr. Lindgren's assertion that the water to the east is tributary to the ESPA supports our assertions and the data.

As to the assertion that our modification places no limits on the inflow into the ESPA, that is simply not the case. Our report clearly demonstrated (see page 28) that the potential volume of water that is likely entering the ESPA from the mountains to the east is on the order of 57,000 acre-ft/year per linear mile of the model boundary. This estimate was based on Darcy's Law and field measurements of water levels and aquifer tests. We intentionally kept the model modifications conservative, with the final result only allowing approximately 970 acre-ft/year to enter the model domain.



We are perplexed at the State's resistance to improving the model to better represent the flow of water in the aquifer. Clearly, the model was built and designed to simulate the flow of water in a 11,000 square mile aquifer. It is not reasonable to think that a water transfer of only a few tens of miles near the aquifer boundary can be represented accurately in the ESPAM without modification using local data. We wish that Mr. Lindgren would focus on the real data and the real modeling that we did, rather than making sweeping generalizations about the grand ESPAM. No model is perfect and it is healthy and prudent to continuously improve and refine a model as new information becomes available.

Issue 4. Mr. Lindgren's statement "It is not appropriate to use an uncalibrated model to evaluate the water rights transfer for the Comore Loma Property."

Again, Mr. Lindgren is overstating the merits of the ESPAM as a calibrated model, especially at the scale important for the Comore Loma Transfer. The ESPAM was calibrated at the scale of the model domain, some 11,000 sq miles, to water levels in about 1009 aquifer wells. This is very few wells at the scale of the aquifer and cannot possibly be rigorous enough for the purposes of the Comore Loma transfer, in fact, page 101 of the ESPAM report states "*the ESPAM is a regional model and is not intended for predictions of impacts to individual springs. A regional model is limited to replicating broad-scale heterogeneity in the physical system and cannot replicate localized heterogeneities.*" Figure 4 shows the locations of IDWR's calibration points for the steady-state version of the ESPAM (reprinted from Figure 55 in IWRI Technical Report 06-002). The nearest calibration point is over 10 miles away from Comore Loma.

We show in our report that the water table in the vicinity of the Comore Loma property, based on measured water levels in wells, flows in a northwesterly direction, which is perpendicular to the model boundary. The ESPAM predicts a southwesterly flow direction parallel to the model boundary and perpendicular to the measured groundwater flow direction. We also document how the ESPAM water table elevation is 300 feet lower than the actual water table. This miss-match between the "calibrated" ESPAM and real data indicates either a serious flaw in the model "calibration" and/or a problem with the conceptual model used to build the numerical simulation. Figure 5 shows the groundwater map of the ESPAM and the flow direction and the water table map based on well measurements.

The mismatches between flow direction and water table elevation are serious and render the ESPAM nearly useless for the Comore Loma Transfer, but the problems could be corrected by simple modifications to the ESPAM. Consider Darcy's Law:

$$Q = K A \frac{dh}{dl}$$

This is the governing equation of groundwater flow and a simple analysis shows a way to correct the head mismatch represented by the ESPAM. Keeping the hydraulic conductivity (K) and aquifer thickness (which when multiplied by the width of a model



Clearwater Geosciences, LLP
Ground Water Development and Exploration

cell gives the area (A)) constant, increasing the flux (Q) across the boundary will force the gradient (dh/dl) to increase, thereby raising the predicted water levels along the model boundary. Notice that in order to increase the elevation of the ESPAM water table more flux must come from the mountain front to the east (just as we have been arguing all along).

The "calibration" of the ESPAM that Mr. Lindgren refers to is only valid at the full scale of the model and when considered at the scale of the Comore Loma Transfer it lacks scientific rigor. We find that Issue 4 is without merit at the scale of a few tens of miles.

In summary, we have shown that use of the ESPAM for the Comore Loma Transfer is inappropriate. Further, we have identified at least two serious calibration issues that call into question the validity of the ESPAM in this area. For the record we state that in general the model is a fine representation of aquifer flow AT THE SCALE OF THE ENTIRE AQUIFER. However, small transfers, especially near the boundary of the model, cannot be accurately represented in its current configuration. We made improvements to the ESPAM to better represent the aquifer conditions. If the State does not like the modifications we have made to improve the ESPAM, then we suggest that the model be ignored for this case and the assessment of injury be based on field data and standard equations of groundwater flow. The real issue is not in the technical details of the model, but in doing a true and correct assessment of injury for this proposed transfer.

We hope this information is helpful; please feel free to call if you have any questions (Rob 208-520-9361 or Tom 208-589-5555).

Sincerely,

Robert K. Podgorney, Ph.D., P.G.
Thomas R. Wood, Ph.D., P.G.



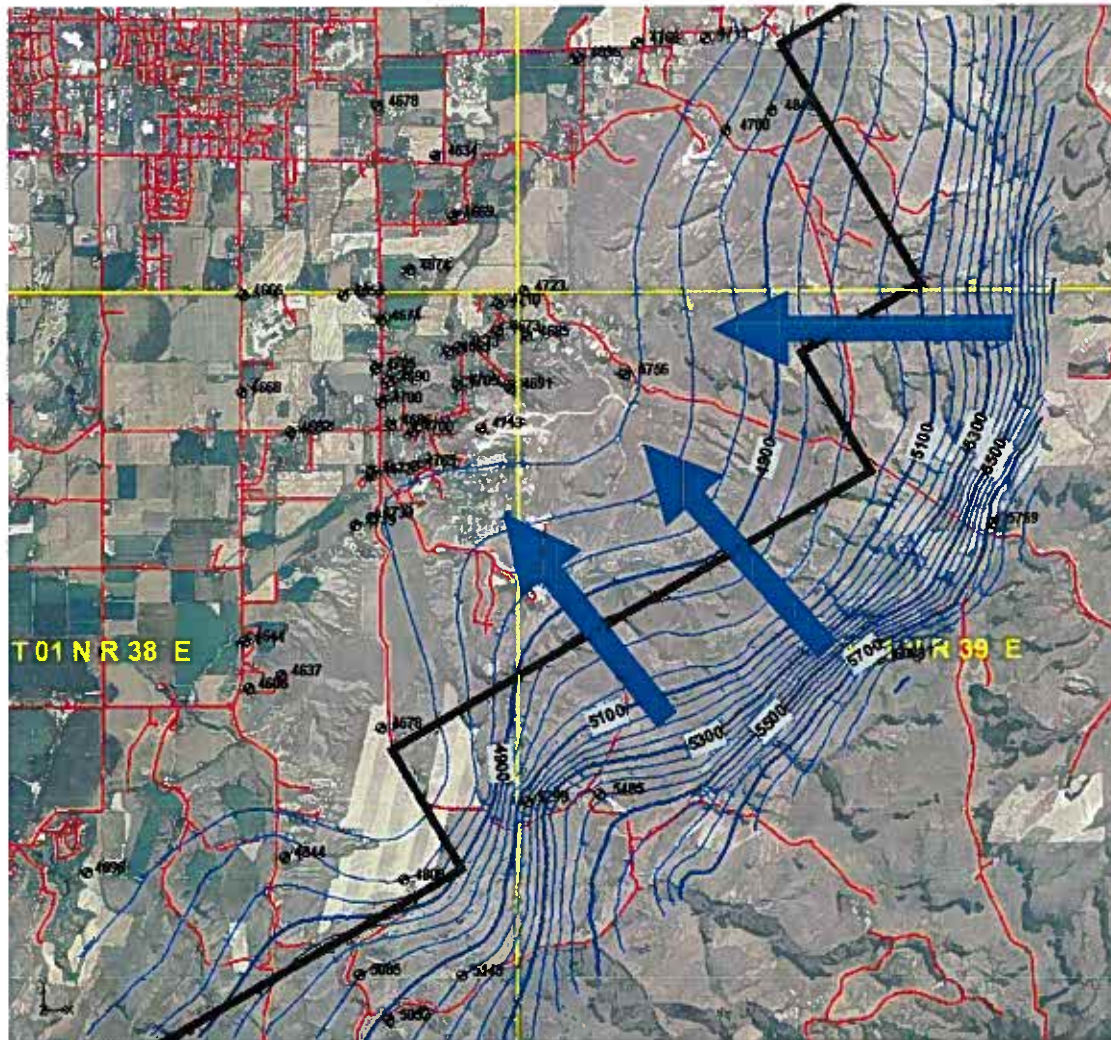


Figure 1. Groundwater elevation contours (blue lines) and inferred flow directions (blue arrows) based on actual field measurements. The heavy black line represents the model boundary, which is setup as a no-flow condition.

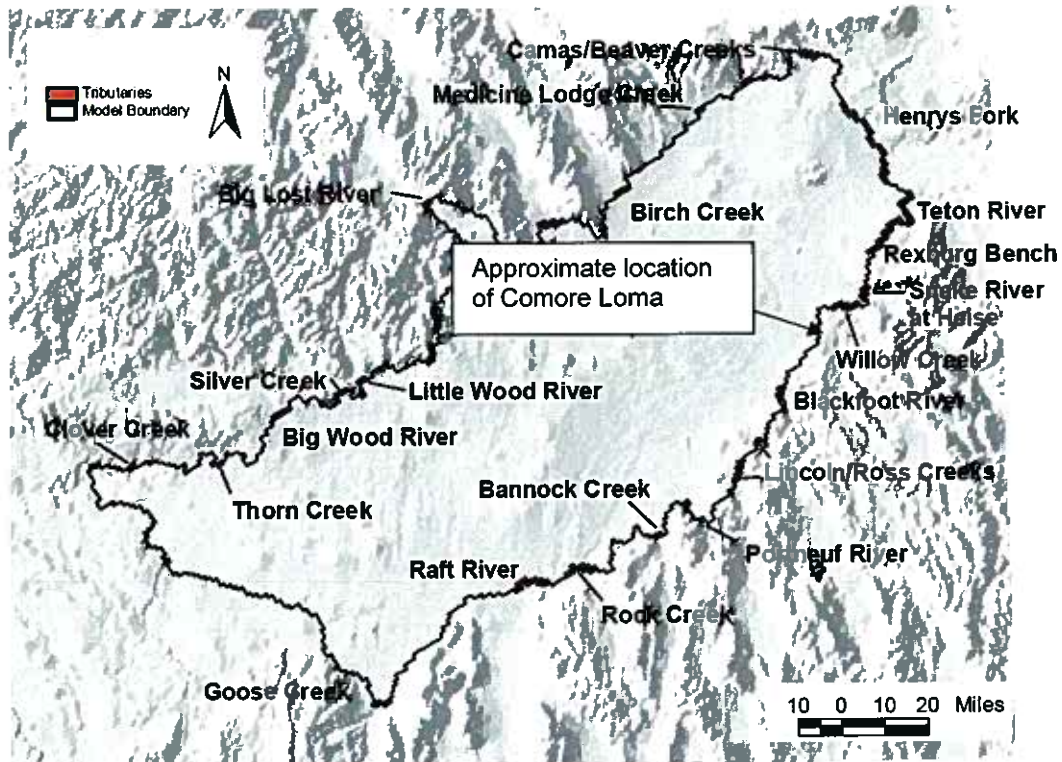


Figure 22. Specified flux tributary underflow locations.

Figure 2. Location of model cells representing specified flux into the ESPAM. Approximate location of Comore Loma shown for reference. Reprinted from IWRRI Technical Report 06-002 (Cosgrove et al., 2006).

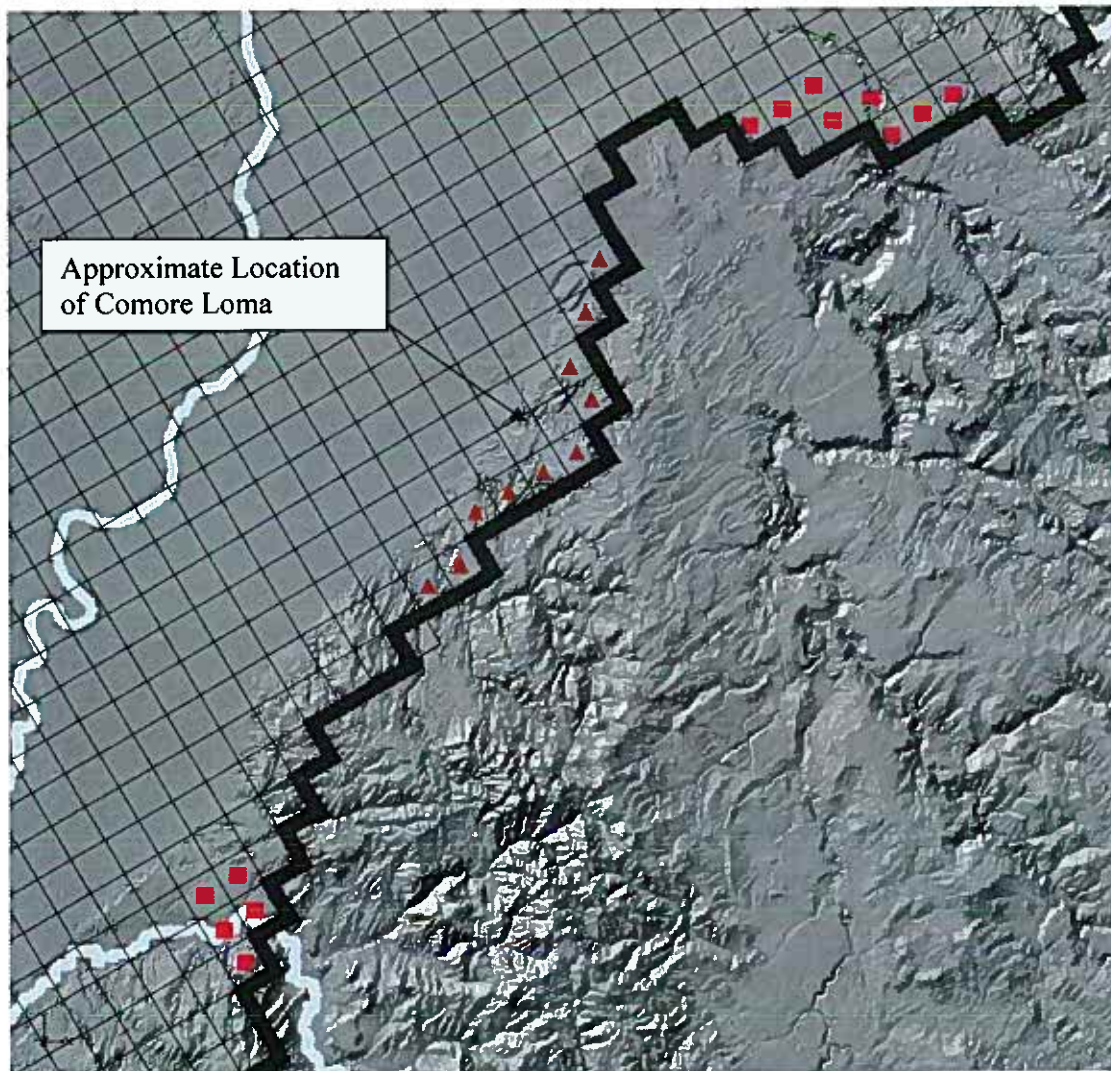


Figure 3. Detail location map showing the locations of specified flux cells (squares) and the location of the model cells converted to general head boundaries (triangles).

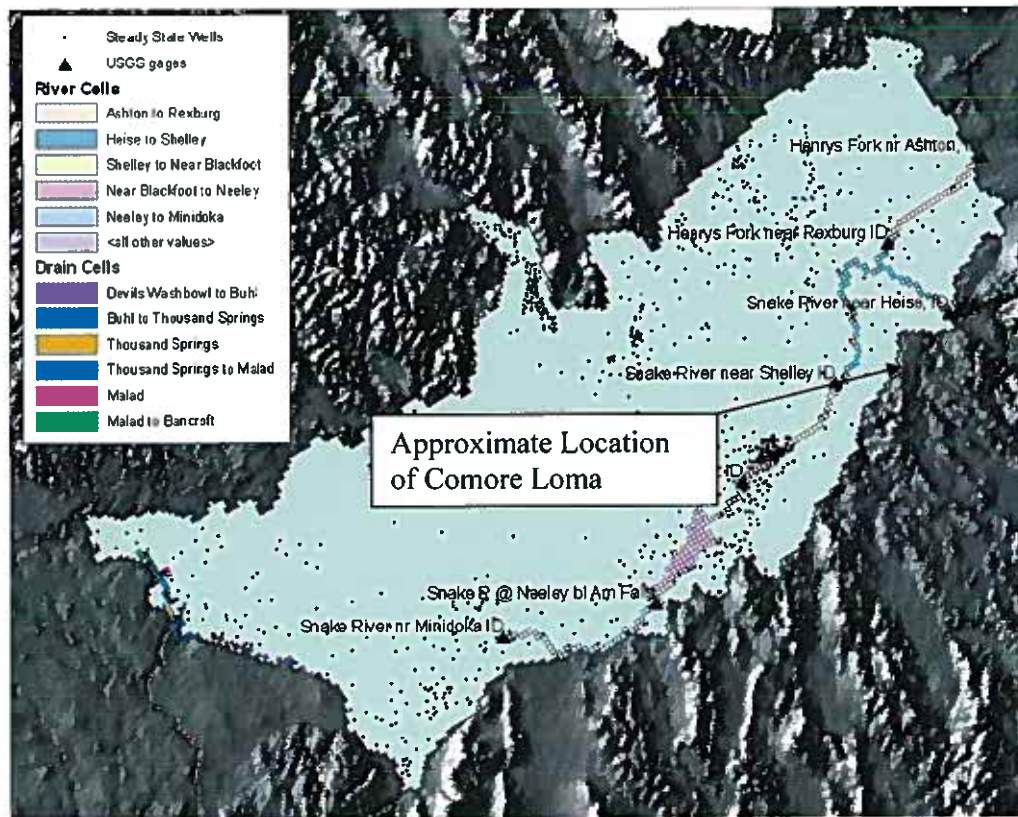


Figure 55. Location of steady state calibration water level targets.

Figure 4. Reprint of Figure 55 from IWRRI Technical Report 06-002 (Cosgrove et al., 2006) showing the location of steady state calibration water level wells (small black dots). The approximate location of Comore Loma is shown with the arrow. As can be seen, there are no calibration wells even remotely in the vicinity of Comore Loma. This significantly reduces the chances of the model correctly representing aquifer conditions near Comore Loma.

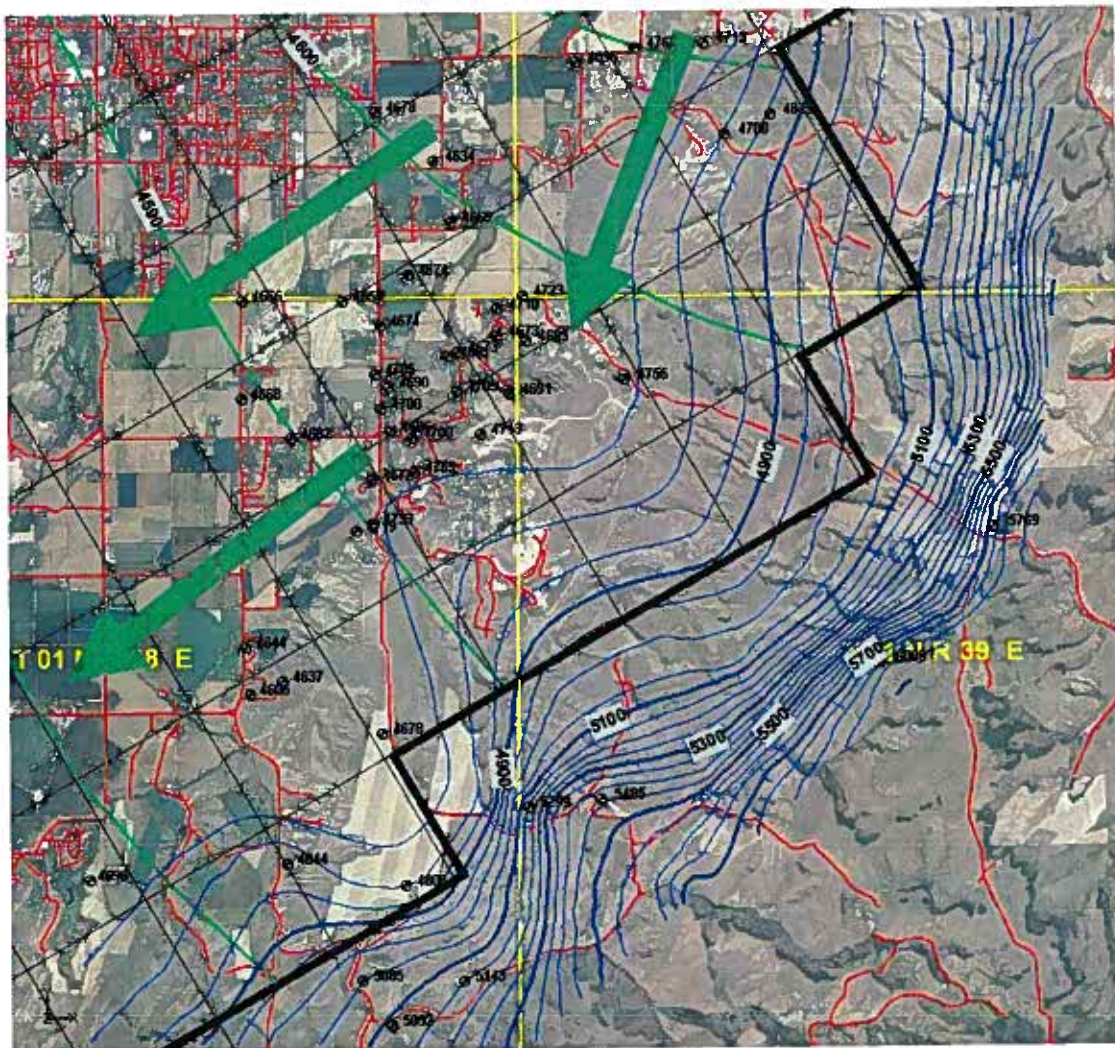


Figure 5. Comparison of actual measured water levels and those predicted by the ESPAM in the vicinity of Comore Loma. Note the extremely large discrepancy, with measured values approximately 4,900 ft AMSL along the model boundary, while the model predicts values on the order of 4,600 ft AMSL, a 300 foot discrepancy!