

## MEMORANDUM

July 31, 2015

TO: Mike Gibson, Chairman  
Rio Grande Basin Round Table

CC: Rep. Ed Vigil, Vice Chairman  
Colorado Legislative Water Resources Review Committee

FROM: Charles Spielman & Nicole Langley  
With primary data and project suggestions by permission from Eric Harmon and  
With support and/or contributions from Ed Nielsen, John Noffske, Cory Off, and  
Kirk Thompson

July 3, 2015



HOME THE MIX IN-DEPTH LITWIN EVENTS THE BEATS DONATE

## Waiting for Chapter 10: What's the plan in the state water plan?

Water board vice chair: "I don't feel the need for any of us to get hung up on the *plan* piece of this thing."



# State Water Plan

“It’s a nice compendium of issues and subject matters of all things water in Colorado, but it’s not an action plan.... It doesn’t set an agenda for what Colorado needs to do in order to meet the challenges facing the state.”

Jim Lochhead, CEO

Denver Water

# RGB Water Plan

“It’s a nice compendium of issues and subject matters of all things water in **the SLV**, but it’s not an action plan.... It doesn’t set an agenda for what the **Roundtable** needs to do in order to meet the challenges facing **the Basin** .”

Some Interested Citizens

# BASIN'S TOP PRIORITY

“The Rio Grande Inter-Basin Roundtable has determined that the single, most critical water issue confronting the Rio Grande Basin is the current unsustainable management of surface and ground water. The RGBRT has made the decision that water activities that address this issue be favorably considered for funding from the Water Supply Reserve Account, SB 2005 -179 (WSRA Funds)...”

*Mike Gibson to CWCB*

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CONSULTANTS IN  
HYDROGEOLOGY AND  
WATER RESOURCES

April 19, 2015

900-PB



Rio Grande Basin Water Plan – M & I Subcommittee  
Attn: Ms. Nicole Langley

Re: Rio Grande Basin Water Plan hydrogeology and  
ground water related projects and activities

## With permission – and with our thanks ....

### **Eric Harmon:**

“As context for your consideration of my comments, you should know that my firm, HRS Water Consultants, Inc., has ongoing contractual relationships with the Colorado Division of Water Resources / CWCB for the RGDSS and the Ground Water Rules, and the National Park Service (Great Sand Dunes). HRS also represents public water suppliers, private water user groups, irrigationists, and others in the San Luis Valley. In addition, HRS, at times in the recent past, has acted in a consulting capacity on ground water related activities on behalf of RGWCD, Conejos WCD, Rio Grande County Commissioners, and others in the basin. **The comments and thoughts offered in this letter are my own, and do not represent the opinions, thoughts, or positions of any individual or entity that my firm represents now, or has represented in the past.”**

**Eric Harmon**

**Comments on  
Charlie Spielman's  
memorandum of  
April 15, 2015**

“The overriding impression I sense from Mr. Spielman’s memorandum is frustration at a long process that appears, as yet, to offer little in the way of specific direction for a Rio Grande Basin Water Plan.

From my own, admittedly brief, review of the draft Rio Grande Basin Water Plan (DiNatale Water Consultants, “DWC”, 7/31/2014) I generally agree with this view.

I find it disappointing that the majority of the draft document is devoted to developing an overview and background for the basin, with relatively little emphasis on the immediate and overriding issue:

**how to address and correct unsustainable water use in the San Luis Valley. “**

**Eric Harmon**

“In addition, the majority (although not all) of the projects identified in Section 6 of the draft [BIP] document do not address what I consider key issues:

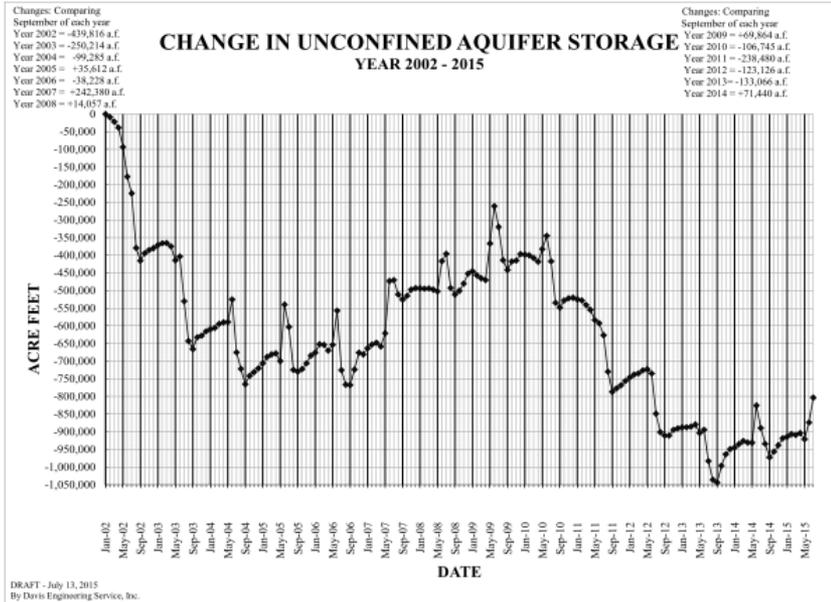
- **What data or studies are needed** to fill major data gaps, or gaps in our understanding, of the San Luis Valley aquifers in terms of ground water recharge, discharge, and interactions between ground water and surface water?
- **What baseline of information, and what ongoing measurements or monitoring,** will provide the best and most robust understanding that can be incorporated into the RGDSS ground water model (or a successor model in the future) and efforts at achieving aquifer sustainability.”

## Eric Harmon

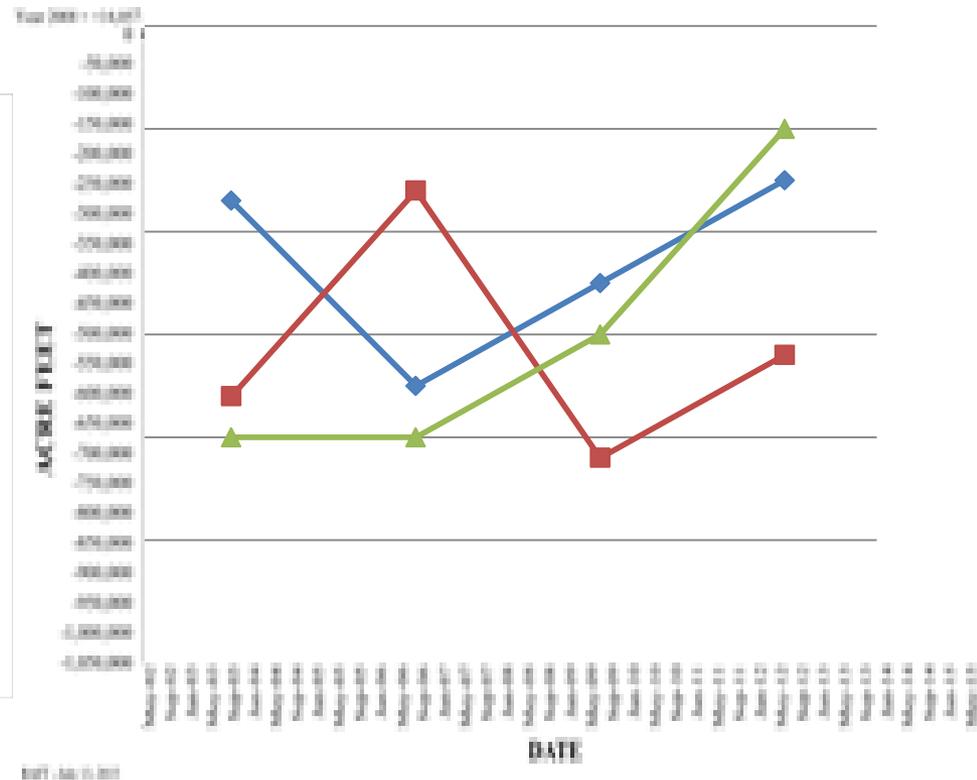
Mr. Spielman's memorandum contains a "starter list" of tasks and projects, in several categories. In regard to geology and hydrology, several suggestions are made as to studies and projects needed, and a model of the ground water system. Having been involved in the RGDSS development and refinement process since its inception, I can say that **these components, tools, and documentation, for the most part, already exist.** However, the fact that there is still a call for these basic documents and studies suggests **that some of the RGDSS documents and tools are so technical or complex that it is difficult for even a well-informed and interested public to understand their content and workings.** Or, perhaps, it may be that many of the RGDSS documents are simply too **hard to find.** It appears to me from Mr. Spielman's list, and also from my participation in public presentations, peer review meetings, and various forums on the RGDSS over the past 17 + years, that **there may be a need for an improved documentation and communication process.**

# What is known? Not known?

## Unconfined Aquifer Storage

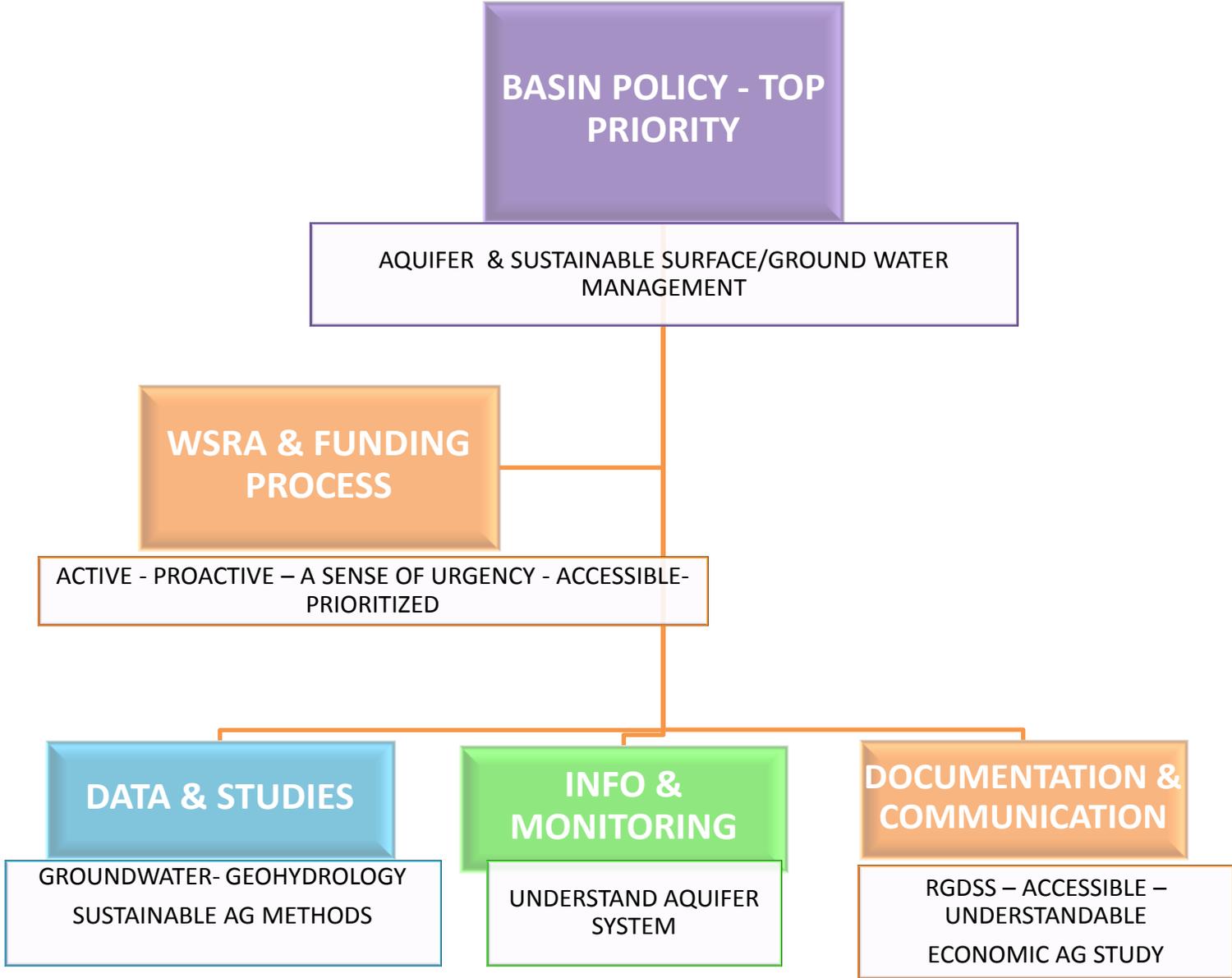


## Confined Aquifer Storage?



# Rio Grande Basin Action Plan

April to August, 2015



PRLIMINARY PROJECT LIST - RGB ACTION PLAN 2015-2016				
SUGGESTED INITIATION SCHEDULE	CATEGORY	PROJECT DESCRIPTION	PROPONENT OR AGENCY	COMMENTS
2015-Q3	GEOL/HYDRO	INSTITUTE PROGRAM TO REQUIRE GEOPHYSICAL LOGGING OF ALL NEW OR REWORKED WATER OR MONITOR WELLS	DIV 3 WATER ENGINEER	RGBRT TO RECOMMEND THIS PROGRAM BE INSTITUTED BY COLO STATE ENGR. Funding to help support compliance
2015-Q3	GEOL/HYDRO	PREPARE AN INVENTORY REPORT W/ MAPS SHOWING STREAMFLOW & WATER STORAGE IN RGB	DIV 3 WATER EGR , RGBRT, & SLVWCD, ETC	COOPERATIVE PROJECT BY ENTITIES LISTED, AS BACK-GROUND FOR OTHER STUDIES
2015-Q3	WATER STORAGE	INCREASE STORAGE CAPACITY IN TRUJILLO MEADOWS RESERVOIR	CONEJOS WATER CONSERVANCY DISTRICT	TOTAL PROJ EST COST IS \$15.5MM; EST COST IN 2015 IS \$1.0MM FOR INIT. STUDIES
2015-Q3	WATER STORAGE	MOUNTAIN HOME RESERVOIR DAM OUTLET REPAIR	TRINCHERA IRRIGATION CO	TOTAL PROJ EST COST IS \$500,000; \$270,000 in 2015 & \$230,000 in 2016
2015-Q4	GEOL/HYDRO	DEVELOP AND CARRY OUT PROGRAM TO IMPROVE ACCURACY OF DRILLER'S LOGS	CONSULTING GEOL. FIRM	SEEK/SELECT/FUND GEOL. CONS. FIRM TO EXECUTE PROG
2015-Q4	GEO/HYDRO	PRODUCE A COMPREHENSIVE MAP OF BLUE CLAY OCCURRENCE ALL ACROSS EGB	GEOL. CONS. VARIOUS FIRMS & ENTITIES	COORDINATE STAKEHOLDER INPUT, ADMINISTER/FUND RESEARCH PROJECT
2015-Q4	AGRICULTURE OPERATIONS	CONDUCT A COMPREHENSIVE & IN-DEPTH STUDY OF THE RGB ECONOMY W/ EMPH. ON AG SECTOR	MONTE VISTA ECONOMIC DEV CORP	PROVIDE FUNDING/SUPPORT FOR STUDY & INCORPORATE INPUT FROM MANY CONTRIBUTORS; Local expertise and modeling resources used to reduce cost.
2016-Q1	GEOL/HYDRO	CONDUCT A COMPREHENSIVE STUDY OF GROUND WATER INFLOW AROUND VALLEY RIM	GEOL. CONS. FIRM	SEEK/SELECT/FUND GEOL. CONS. FIRM TO EXECUTE PROGRAM.
2016-Q2	GEOL/HYDRO	CONDUCT A COMPREHENSIVE STUDY OF WATER GAIN/LOSS FROM CANALS ALONG VALLEY PERIMETER	GEOL. CONS. FIRM	PROVIDE SEEK/SELECT/FUND GEOL. CONS. FIRM INCLUDE OTHER AREAS, PROVIDE ADMIN SUPPORT IF NEEDED
2016-Q2	GEOL/HYDRO	UNDERTAKE PROGRAM OF INSTALLING PIEZOMETERS TO MONITOR FLUCTUATIONS IN CONFINED AQUIF.	FOLLOWING LEAD OF CONEJOS WATER USERS ASSOC, OTHER STAKEHOLDERS & HYDOL. CONS. FIRM	PROVIDE SEEK/SELECT/FUND HYDROL. CONS. FIRM, INCLUDE OTHER AREAS, PROVIDE ADMIN SUPPORT IF NEEDED
2016-Q3	WATER DEVELOPMENT/ MGMT	INVENTORY ALL RESERVOIR SITES & RESERVOIRS IN RGB; INVESTIGATE OPER, ECON, & LEGAL FEASIBILITY OF CONSTR./ENLARGING RESERVOIRS	HYDROL. CONS. FIRM	SEEK/SELECT/FUND HYDROL CONS. FIRM TO EXECUTE PROGRAM. 1 YR PROGRAM
2016-Q3	AGRICULTURE OPERATIONS	CONTINUE INVESTIGATION OF WAYS TO REDUCE AG WATER USE. (SOIL QUALITY, DRIP IRRIGATION, DIFFERENT CROPS, MAGNETIZED WATER, ETC.)	WATER USERS CONSERVANCY DISTRICTS, ETC	SEEK OUT NEW PROJECTS PROVIDES ADMIN/FUNDING ASSISTANCE, PROVIDES COMMUNITY OUTREACH & TECHNICAL INREACH, ASSISTS IN RESEARCH, DOCUMENTATION, REPORTING, ADMINISTRATION

# Rio Grande Basin Action Plan Request

Support the Action Plan

Support/Join the Working Group

Anticipate Request for Funding