

**South Platte Basin Roundtable Meeting**  
**Tuesday, May 10, 2011**  
**Loveland, Colorado**  
**The Ranch, Larimer County Fairgrounds & Events Complex**  
**First National Bank Exhibition East Hall**  
**4 pm – 8:30 pm.**

Please contact Lisa McVicker at [mcvicker1@q.com](mailto:mcvicker1@q.com) with any changes or corrections.

**Standard Reports**

--**IBCC Report:** Mike Shimmin: Handout; Next meeting is in June.

Mike's comments: one of main comments during the last meeting was that it is time to move quickly and to attain something tangible. Good portion of meeting spent discussing subcommittee reports; all of these subcommittees have met multiple times and discussed topics:

--new supply development; IPPs; conservation; ag transfer; education and outreach;

--each subcommittee focused on how to take that piece and refine it and move forward to implement it;

--all of these are works in progress.

--DNR working on all of these parts to refine portfolio tool by June meeting.

--One reason this is important to our roundtable is that one of the tasks of each roundtable is to build own portfolio; Mike acknowledges Harold Evan's request and that Mike is working on this and all roundtables will be working on this with the assistance of the portfolio tool.

--Schedule: Next IBCC meeting: June 23 in Glenwood Springs; in September in conjunction with IBCC meeting on Sept 13 & 14 in Grand Junction.

--IBCC continues to move forward on specifics; general level has been necessary to obtain consensus; now time to get consensus on tangible work items.

1) Review of Statewide Summit: Table Discussions outlined goals

--implementation of "shovel ready" projects;

--develop water project plans to get them "shovel ready";

--use the roundtables to guide this process form a regional approach.

--Continue to build trust between basins and stakeholders

--Use our current resources strategically and in a prioritized manner.

--**CWCB report:** Eric Hecox: Will be meeting in Durango on May 17 & 18; will include May 16 tour of Dolores/Animas La Plata project; (ALP project); there is water available for purchase; another item will be presentation from group working on Wild and Scenic Designation; this group has been working on coming up with alternative to Wild and Scenic designation; piece of this will be instream flows and thus CWCB will meet on this item. Other items on the agenda; agenda is posted on CWCB website. Will be discussing grants, loans, policies, fish and wildlife mitigation issues.

--Jim Yahn: Update on Statewide Funds: April: South Platte Basin Account: \$239,339; State Wide Account \$3,789,000

--Gary Barber request for WSRA funds: \$5000

--Eric Hecox: We need good applications by July; deadline is middle of July.

**--Roundtable Discussion: Sean Cronin**

Has been on roundtable for a little over a year; has had questions about why are we here. Has reserved questions until now. Email "new guy's perspective": what are our tasks, etc.

In short, the discussion leads to our processes and our organization; what triggered this was our March meeting in taking a position on IPPs; how do we take a position; referred to bylaws on quorum, etc. The take away from this is that new people on the board would benefit from an orientation. Jim Yahn brought up that it would be useful to have an orientation not only for the new members but the older members as well. For example: Mission. Harold Evans, our "historian," was able to bring this up.

Mission:

--Seems that this mission supports that the roundtable should take a position on IPPs.

--if that is the case, which of us are able to vote; do we have a quorum; who is participating.

--Was informed that different basins have taken different approach.

--Therefore, this seems like a good time to take a step back and see where we have come in the last six years.

--Suggests that an orientation process would trigger this and encourage discussion. It is clear from the governor's office that the roundtables are being looked at to moving forward. Therefore seems that it would be appropriate to take a look to see if we are well positioned to do these things.

--Harold Evans: good to keep in mind, the enabling legislation that sets out our tasks; this was very specific in terms of our tasks and our membership; this is still the foundation. You bring up a good point about orientation. What we need is a handout that we can give our new members: legislation, mission statement (Dec 13, 2005); bylaws; etc. Thus, the things that the Act asks us to do, we have done.

McVicker: Question for Eric Hecox: Would this be something that your office could help us with? Bylaws, etc.

Eric Hecox: Yes, we used to put out something more general; but yes, we could put something together if you tell us what pieces you might want.

McVicker: I think that Sean's emails and Harold's responses would be a great starting point.

Sean C.: Would be useful to hear from the other participants from the last 6 years.

Harold: Would be useful to provide the documents that we have already produced; much of this is in final report. Seems like an orientation manual would be so useful. PDF format would be useful. I find that going to the CWCB website is difficult unless you know the exact document; I find that retrieving anything from the website is difficult. The new report on South Platte Basin Needs Assessment Report is clear; but to find older documents difficult.

Todd: Difficult interface with IT folks.

Harold: Todd D. can help find documents.

Sean the Commissioner: Maybe a history of what has been accomplished would be useful. Historical perspective would be useful. Time table.

Jim Yahn: I would be happy to do some of this. Would do this previous to the meeting.

Eric Hecox: In terms of documentation, the SWSI 2010 Basin Report will answer much of these questions. The Basin report will have a good part of the material that would answer your questions.

Harold: Agrees that the new Basin report has many of these questions.

Jim Yahn: Thanks to Jim because it brought to light many issues that we need to pay attention to. For example, non-voting members. For example, the membership on the web needs updating.

Harold Evans: This illuminates one of the problems from the start: limited staff (DNR or CDM), no budgets, but we have really done this on a shoe string.

Sean C.: From the bylaws: recording secretary is to do it, but DNR does it.

Mike S.: From the risk of getting an assignment☺, one thing we need to do is to meet and answer questions; would like to reiterate the usefulness of a handbook. State started doing this with citizen commissions—for example, groundwater commission. The assignment I would like to ask for you to accept is to make a list of the documents that you think should be in the document. What set of things would you like to see that you or anyone coming after you would like to see: procedural documents, etc. all in one place. I know that those of us who have been here since the beginning we assume much. For example, the IBCC bylaws, I did not have those even until a few months ago. So it would be good to bring this all together and to pay attention to the documents. Also, if we need to revise our bylaws than we should put this on a future meeting. Quorum, for instance, always worries me. Tonight's meeting is the first meeting that we do not have a quorum. As an attorney, I always make a mental check for quorum when we are voting on something. Over time, our numbers are dwindling. There are 52 people on our roundtable. Sean raised the question, for example, if you miss a certain amount of meetings, you are replaced. But, no, as Harold points out, the legislation says that the other entities appoint the members; we do not have control over this. But these are all good issues that we should revisit after 6 years and these are good comments and good suggestions and we would appreciate if you took the time to make a list.

Sean C.: I would be happy to do that.

Rich Belt: New industrial Rep says he would be glad to assist.

Harold: Motion on November 15, 2005: Move to adopt bylaws as presented giving scribe the authority to make procedural changes.

Mike Shimmin: November 25, 2005.

Sean C.: Online the bylaws are November 15, 2005

Jim Yahn: Website says we have 51 members, 1/3 is 17; tonight is 16.

Harold: But at the annual meeting, majority is a quorum. We have annual meetings in January.

Todd D.: Please feel free to work with on this.

### **SWSI 2010 Basin Report: Todd Doherty/CDM (Sue Morea)**

--Document was delivered today and can be found at CWCB website.

--Sue Morea will walk through the detail.

--Todd asks for feedback over the next few weeks so that the report can be finalized.

--What is in it and what still needs to get in it:

--Pulled in: alternative transfers, all ag grants; description of ag grants in South Platte;

--In intro, ag economy contribution to state from Bill Jerke's presentation;

--Task orders and updated to SWASI 2010.

--Elaborate supply availability section;

--First cut from conclusion of task orders; path forward....

--Water supply reserve account grants that the Roundtable has approved: summary and amounts;

--Also talked about highlighting certain projects; these still needs to be done.

Yet to be done:

--nonconsumptive; will also get on website;

--Upper Mtn County Reports—summary here but not full report; report will be included tonight.

--Education section from Headwaters Magazine

--Discussion on how other basins are dependent on South Platte; but do not have anything yet.

North Platte wanted to write up how they are dependent on the South Platte so when this is finished for North Platte will bring this in because this will be another basin writing on dependency on south Platte.

Walk through:

- Intro: Economic efficacy of South Platte economy.
- Section 2 &3:
- Changes in Section 4: Consumptive Needs Assessment;
- Section 5: South Platte specific
- Section 6: South Platte water availability.
- Figures are in back but will be integrated in finished document.

From previous meeting and things that others had agreed to write up; we do have short descriptions:

- Joe Frank will write up something on Ovid Reservoir
- Dave Mettles will write up certain items.
- Adam will write up something on Republican.
- Greg/Matt from DU: combine all wetlands projects into one section and write something up on these.

Sue suggests looking at short description that is already part of the document.

How should we get comments or edit?

Meet before next meeting?

We will pull in final comments within the next few weeks.

Harold: Suggest that we send this out to roundtable again with request to send comments back to Todd. With a quick review, it looked to me that there were a few things we need to emphasize a bit more; for example, Denver Metro use of effluents. This will be substantial and we need to emphasize this. Guess is that there will be a much more senior call regime; and thus this needs to be fleshed out so that everyone understands the impact of this. This is just one section that jumped out at me.

Sue: The Metro report will be on the website tomorrow and reuse and conservation will be highlighted in the Metro report. Might be smart to play off of these. Might be smart to migrate into ours.

McVicker: Send out with short deadline for comments.

Sue: Let's send it out with an email with what is left to do and put a deadline of two weeks. Comments will be directed to Todd.

Jim Yahn: Next meeting is June 14, 2011. So you would have two weeks to incorporate all the changes. Thus deadline for comments would be May 24; two weeks to June 7, then final draft before meeting.

Harold Evans: Encourage all roundtable members to look at nuances; important to keep in mind special interests. Lots of info in this report; important to focus on what sets this apart.

Sue: Please craft conclusions of where you want to go.

John Stencil: RE: North Platte Rancher; TWright Dickenson at Summit from Yampa/White spent several minutes talking about the cattle and sheep from that basin coming to our basin. Thus, T Wright Dickenson would be a good source for emphasizing the importance of South Platte.

Mike Shimmin: Can you send us a word process able document because I cannot tell you what I would edit in a PDF copy. Text even without the figures would help.

Sue: We will send out two icons: one a PDF and one with just text that you can redline.

Todd D.: Jim Yahn, will you work on path forward?

Harold: 7.1: South Platte Strategies Overview?

Sue: In Section 6, see conclusions from task order. Yes, in Section 7, we really want to focus on what you see in future. Statement about conservation strategy; good place to talk about reuse of the river; etc.

Jim Y: Is this what you were thinking, Todd?

Harold: We have not ever really had a discussion as a roundtable about the topic of where we go from here. Maybe good topic for June.

Sue: Can just present conclusion of growth of population and need for sustainability of Ag. Can be general.

Eric Hecox: Looks like in last meeting you were discussing some of these issues .

Harold: Seems like Sue has incorporated these in Section 6. Thus wondering what you are looking for in Section 7.

Mike Shimmin: Real challenge is that it could take us a 4 hour meeting to come up with a one page summary of where we are going from here.

Sue: This could include writing a general review of portfolio.

Harold: Would be a good starting point if you and Todd were to write a summary that would set off Section 7.

Todd: Section 6 really tells the challenges of the basin right now. The insert of 7.1 is a general overview of how we might meet these challenges of future water demand.

Sue: The work on alternative transfer methods comes from CWCB alternative transfer methods. Will also include discussion on need for portfolio.

Harold: Discusses quantifiable numbers of gap: need 91,700 acres to achieve this; rotational fallowing to achieve this, you would need 917,000 acres to reach this. None of the studies have quantified this. Does anyone think that we can get this? No, given that there are only 645,000 acres. So what is the realistic handle of how we are going to solve this? And one of the challenges of alternative ag transfers is how to get there.

Eric Hecox: Yes, we agree with these numbers.

Sue: We can add something about this in strategies. So we can highlight this that alternative ag transfer is not a “silver bullet” and thus the IBCC portfolio approach is what we want to highlight.

Jim Yahn: Also, this report does not mention the Metro and this affects us as well.

Julio Iturreria: I don’t believe that anyone really knows what can be quantified from any of these options.

Mike Shimmin: Troubling that this report will not include some of these strategies.

Eric Hecox: Opines that we are not giving ourselves credit for all the work we have done; this report can say clearly that we have not come to an agreement of what our actions will be but we can conclude that there are a variety of options that we are considering. So the report can clearly say that our portfolio will include a mix of options.

Sue: Conclusions in Section 6.5 can lead to these. We can clearly show that status quo is not an option, and then articulate how we will look at a portfolio approach.

Eric Wilkinson: I think that we are better off not painting a rosy picture that we have solutions; I do not think we have solutions; conservation, yes, but others not given. Look for example to IPPs: at 60-70% completion looks very optimistic. There is nothing that has been defined from West Slope...IPPS... nothing has been defined. Ag dry up or alternative to Ag dry up needs to be illustrated in the report and there needs to be a discussion of the challenges to Ag dry up. Seems like Ag dry up and conservation are the placebos to make people think there are solutions and there are no solutions. We do not want anyone to think that there are solutions. We have an 110,000 ac ft gap (this is an optimistic figure)..and this is after passive conservation.

Harold Evans: Those of us who are water providers cannot find the water on assumptions.

Sue: If everyone agrees with what Eric W. says, I will highlight a figure that illustrates the comments made by Eric W.

Mike Shimmin: Would like to emphasize what Eric W is saying; what we say in this strategy overview must emphasize that all “four legs of the stool” must be there and if we take any leg of the stool away, there will be no hope for having anything. In the IBCC meeting, we all agreed that all four strategies

must be in place. We know that the conservation groups are saying that this is not the case so we need to be very strong in emphasizing that all four strategies must be there.

Janet Bell: Also important to emphasize the agricultural economy contributes to this state. What I recall from the summit was the importance of being specific. Must spell out each “leg of the stool” and what it contributes.

Mike Shimmin: Suggestion: We need to look at this in two sections: what we know today and what we plan to work on in the near future; have timing problem; won’t be laying out quantitative aspects of a report until second part of this year. We need to make clear we will be working on quantitative piece.

Eric Wilkinson: Path Forward piece needs to outline the risks of not being able to make full benefit of the portfolio. We must put storage in this picture and this need to be stated emphatically and clearly. Can’t have conservation, IPPs, alternatives to Ag dry up, without storage.

Harold E.: It is not just the impact on the ag economy in this area, it is the entire state.

### **Upper Mountain Counties Need Assessment**

Bert Weaver: Introduces Hal Simpson, Mike Smith, CDM and Ralf Topper of review committee. Would like to thank the support of the Roundtable and the Metro Roundtable for the support.

--McVicker: Is study on website?

--Eric Hecox will confirm.

Hal Simpson gives overview; begins with acknowledgements Bert, Lisa, Janet Bell, Forest Whitman, Walt Knudsen: steering committee to present this study to South Platte and Metro. \$130,000 study, between Metro and South Platte. CCWCB WSRA funds.

--technical advisory committee: Ralf Topper and staff of DNR; water commissioners;

--study completed in late 2010.

Study area: Gilpin, Clear Creek, part of Park County, part of JeffCo, crystalline bedrock aquifer.

--Six objectives:

- 1) Estimate future populations from 2010-2050;
- 2) Interview of upper mtn county water providers that serve central supply
- 3) Try to identify any demands related to tourism (ski areas, etc)
- 4) Look at existing improved and unimproved lots that have been identified in counties to determine water demands.
- 5) Look at existing water supply
- 6) Look at long-term sustainability

--Population projections: project population up through 2050: low, medium and high of potential growth:

128,000 – 148,000 from 82,000 in 2010.

--Future water demands, including tourism: (self supply demands: these are wells on individual lots)

--Demand for areas served by central water systems: 3900 acft per year; 5700-6800 acft in 2050

--Water supply related to wells: using DWR databases; determined number of wells: commercial, domestic, household use only—

--Big driver is domestic and household only—usage protected at ¼ acft per year;

--domestic well density—figure shows density in each county

--weighted demand per county: .38 acft per residential partial per year; looking at number of platted 22,000 lots that could have a well—demand: 8300 acft per year. Current demand for platted and improved lots: 9200 acft/per year.

--looking ahead and looking at current study area—also looks at mining, ag, and lots.

--impact of growth on these zoned parcels: 1600 additional units – 21,460 units for high growth.

Park County: 27,000 –but minimum lot size and projected growth: need 57,000 to 61,000 so don't have enough land to meet projected growth. Additional growth would move elsewhere. No room for additional growth.

Total water demands from this study:

Current demand: 13,300 acft:

Future demand: 20,000 up to 22,000 acft

How sustainability of water resource:

How much is being recharged in crystalline aquifers

--good info in that Turkey Creek watershed has extensive information; detailed studies in this area that provided a quantitative basis and were able to extend this to the entire study area.

--also utilized much of Ralf Topper's information from previous studies.

--best way to determine how much of recharge is going into the aquifers is based on precipitation as well as the kind of materials of the aquifers; classify the geology and using information to figure out how much of this water is getting into the crystalline aquifers.

--we took the Clear Creek watershed, used base line estimates to determine how much of this flow was coming from base flow—discharges from aquifer into surface water system—then compare these with data based – to find a good measure on what is coming out of aquifer; using this methodology, we were within 25% of base flow analysis. We attributed this to fact that we were using this during winter.

--Equilibrium system: water going in is equal to water going out.

--One of the elements was average annual precipitation; used some of the work from University of Oregon to show long term averages to fill in gaps between data points.

--15"-43" of precip; higher averages from snow in higher elevations;

--Ralf Topper's study: type of rock is key: geologic classification gives a clue of how much water is getting into ground.

--Looking first at water budget: most of precip that falls on ground is lost to evap; does not contribute to ground water system; 86% of the precip is gone (supporting vegetation, for example); evapotranspiration.

--Direct runoff – what actually goes directly into the streams –averages .5 %. Surface water flow more; remainder of this water goes into base flow system—deeper portion of the aquifer—deep ground water component—around or below stream level and has longer term storage.

--Fate of precip: diagram illustrates what water is available to wells.

--Most wells are tapping into deep ground water reservoir;

--Most wells that are for household use, means that CU is small—20% of the water that is pumped is used; the rest goes back into the system.

--Schematic of water flow in fractured, crystalline-rock terrain illustration. The storage space that is available is where rock is open and fractured.

--Water shortages in mountains: portion has to do with well construction and placement.

--At the top of the crystalline rocks, water moves through more permeable material, and as it moves deeper, it will discharge into regional stream systems like Clear Creek. Thus, if you are sitting away from the stream system, you will have a drop over the year. The regional streams are like a hinge point.

--Taking a look at land that is potentially developable, we considered only the footprint of these developable lands—looking for sustainability especially of water quality.

--Amount of recharge: 60,000 acft per yr. Not all of this is developable because part of it is going into deep reservoir and cannot be used later in year.

--Study looks at sustainability and base flow. Proximity to regional streams, thus, allows for higher base flow recharge.

--Thus, farther away from the stream means that only the deep reservoir water is available for use.

--During Spring melt period is the only time for excess precip in the system that allows for recharge event. This will be depleted by mid-summer.

--Aquifer sustainability: water supply—water demands—water quality (circular)

--Sustainability: “ability to use aqisystems to meet current and future needs without mining the aquifer and without significant degradability of the water.” Do not want to use more water than is being recharged into the aquifer. Fundamentally: don’t exceed the amount of recharge and don’t degrade the quality of the water.

--By developing deeper zones, will have storage area.

--Pumped water allocation: looked at Turkey Creek studies on consumptive use: close to 20% loss for wells. For example, plants on leach field use water in evapotranspiration. Thus, this is almost like a closed loop. Important implications on degradation of water quality; heavy development in parts of Park County for instance show nitrates in some of the wells.

--Demand/Recharge Ratio: How much of the recharge on a particular parcel of land is being used: defined two endpoints: worse case: unsustainable: pumping and consumptive use on individual lot would be equal to the amount that is recharged. I.e.: small lot size, small recharge on foot print.

--Figure and map with demand/recharge ratio: shows only private lots, not public lands or industrial areas. High demand areas are near Bailey and near Black Hawk/Central City area.

--Future scenarios: because we don’t know where development will occur: assumed lot size of 12 acres; conditions are similar to current. Worst case scenario: development of 2 acre lot size: see significant increase of unsustainability.

#### Conclusions:

--Growth expected to continue; population will increase;

--water demand will be met by ground water supplies;

--definition of sustainability relates to lot size;

--in these areas that are near non-sustainable conditions, need to consider specifics.

Available on clear creek site and will be available on CWCB site: [www.co.clear-creek.co](http://www.co.clear-creek.co)

#### Questions:

--Janet Bell: Would like to give acknowledgement to Dave \_\_\_\_\_ of USGS for Turkey Creek study and focus on evapotranspiration.

--Mike Smith: Yes, this USGS data was excellent.

Mike Shimmin: 86% of precipitation is consumed through evapotranspiration; and only 14% becomes available for use? Yes, correct. Also, when you add all this, see an increase of about 12,000 ac ft by 2050? Yes. Mike wants to emphasize that these are all exempt wells and that therefore these are all outside of the system and that it is important to make sure that we show this as another demand on the South Platte system.

Eric Hecox will make sure that it is on the website.

Janet Bell: Emphasizes that exempt wells do indeed cause injury to senior users and that this use is something that must be concluded.

--Bert Weaver expresses thanks to South Platte for support.

#### **Colorado River Water Availability Study: AECOM; AMEC; LRE**

Purpose is to explain status of study; asking for input and comments.

Ray Alvarado: Board directed staff to finalize availability study and to affirm outreach and to address comments.

Outreach: Comment/Response Workshops; engage stakeholders. We will take all individual comments from basin roundtables and individuals; these will go into a response matrix and will be published on CWCB site. These responses will be online with all comments.



Analysis Refinements:

Refine Climate Projection Selection

Refine Temp/Precip Data Sets

Result-Refined Basin Runoff Hydrology

Refine CDSS Model

Result-Refined CDSS Hydro/Operations

Reporting Refinements

Schedule: Outreach Round 2 by November 2011; Report: December 2011

Example: Discussion: Modeling Approach: CDSS

Comments: Suggested dry-year Moffat system bypasses

- concern with Plateau Creek natural flows

- concern with endangered fish flow demands

- concern with CIR-based irrigation demands

- Questions regarding CIR methodology

- Instream flow impact presentation

Response: Meetings scoped to clarify data/operations

Jim Yahn asks if the study looked at history specifically: study looked back to paleohistory, but looking also at climate adjustment in future.

Website: <http://cwc.state.co.us>

Contact Information: Ray Alvarado [ray.alvarado@state.co.us](mailto:ray.alvarado@state.co.us)

General comments: More clarification was requested.

Meeting adjourned.

Next meeting: June 14, 2011