

10/9/2014

Representative Randy Fischer
200 East Colfax
Denver, CO 80203

Dear Representative Fischer and Other Members of the
Colorado Legislature's Interim Water Resources Review Committee,

On behalf of Save The Poudre: Poudre Waterkeeper, please find our comments on the July 31, 2014 Draft South Platte Basin Implementation Plan (SP-BIP) by the Metro Basin Roundtable and the South Platte Basin Roundtable.

Our comments cover a broad range of thoughts on this planning process and the specific draft we reviewed. Some parts of the plan were quite good, especially those dealing with non-consumptive use. We particularly liked the ideas regarding conjunctive use between surface and alluvial aquifers, if done in a manner that makes maximum use of our rivers as conveyances. Other parts were not to our liking.

To summarize the high-level points we wish to get across:

- The Plan should NOT endorse any specific water supply projects
- The State should NOT fund any water supply projects.
- The process did not include key stakeholders like Save The Poudre.
- The Plan SHOULD focus on alternatives to water diversions, not new dams/reservoirs.
- The Plan SHOULD focus on river restoration.
- The State should NOT fast-track permitting.
- We suggest several areas that warrant updated information or correction.
- We suggest several areas that are ripe for positive legislative action or further study.

A. First, Do No Harm

As this draft SP-BIP report has only partially revealed, taking water out of Colorado's rivers has already proven quite harmful. Our rivers have been greatly altered¹. Of the 38 native plains fish known to exist in Colorado in the late 1800s, six are extinct and another 13 are either endangered, threatened, or of special concern. In other words, half of our fish species are either going or gone. Forty three percent of Colorado's amphibian species are imperiled and 70% of historical mussels have been eliminated. At least one mayfly is extinct and others are rapidly dwindling. The draft report's Table 2-11 lists many of these resources, and others, that are of immediate concern in the South Platte basin. (Too bad it doesn't list the extinct species!)

¹ With liberties from Ellen Wohl, 2009. *Of Rocks and Rivers*. 288 pp.

Not only have we taken water out of our rivers but we have polluted them at the same time. Twenty five pesticides have been found in South Platte basin surface waters and another 15 in groundwater. DDT can still be found in fish tissue and river sediments even though it was banned in 1972. White suckers in the South Platte have both male and female reproductive glands. Water in half the groundwater wells sampled by USGS had nitrate concentrations exceeding drinking water standards, and Fort Morgan has to import drinking water because their children were dying of Blue Baby syndrome. We have literally poisoned the well – and our rivers – and now we don't even have enough good river water left to dilute that pollution much of the time. It is shocking to look at Figure 4-1 in Appendix E that shows the extent of impaired waters (the so-called 303d list)!

And the real irony is that now that many of our ecosystems have been so degraded, Environmental Impact Statements such as the Moffat Collection System are writing them off. The Corps of Engineers is saying, in effect, that the environment is in such bad shape already that additional water depletions would not cause any further harm². How can we even talk about taking more water out of our rivers when doing so is largely responsible for the situation we are in?

The legislature would be well advised to not support building more large dams, and instead concentrate on how to sustain our population on what we have now, impose penalties on those who continue to do harm, and offer incentives to those who show us how to do more while taking less. The legislature should also work to make sure that “beneficial” uses of water are truly beneficial across the full spectrum of our natural environment.

The remainder of our comments directly address the content of the SP-BIP.

B. A Chicken in Every Pot

The draft plan says that it “defines a framework for meeting the future water quantity and quality needs of agriculture, businesses, communities, the environment, and recreational uses in the South Platte Basin.” But on a pretty thorough reading, it really isn't at all clear that the document does that. Instead, the draft suggests that the “framework” will supply all the water for projected growth while simultaneously protecting agriculture, recreation and the environment – even to the point of implying that a goal is to “restore ecosystems to sustainable and resilient levels” (p 2-20). Frankly, it's not until the reader digs down that he or she comes to understand that (1) the drafters are lobbying for every single water development proposal that is now or might someday be on the drawing boards; (2) that there are ideas about protecting agriculture from “buy and dry” but not necessarily any money to pay for that, nor sufficient legal carrots or sticks to ensure the result; and (3) though there are priceless environmental goods and services to protect, the fact is that we are already losing that war and, again, there is little to no money to pay for protection, much less restoration or rehabilitation.

Though it would be nice to believe that the draft plan can do everything for everybody, we simply don't believe it. We are not saying that there are not some good ideas in here regarding agriculture and the environment, conjunctive use between surface and alluvial aquifers for one. The “plan” appears to boil down to “trust us and let us build more reservoirs” and the rest of the plan will just fall into place. We certainly hope that the legislature does not trust that kind of excessive optimism.

² Letter from Glenn Casamassa, US Forest Service, to the Rena Brand, US Army Corps of Engineers, dated June 9, 2014, with comments on the Final Environmental Impact Statement for the Moffat Collection System. 10 pp.

C. Level the Playing Field among Competing Interests

1. The draft plan maintains that it is seeking a “balanced solution”, yet in our reading, there are several instances that seem quite unbalanced. For example, by and large, this draft uses the terms “Agricultural and Water Demands” as distinct from “Environmental and Recreational Needs”. Though there are variants throughout the document, the distinction between *demands* and *needs* struck us as telling. The bias is clear that people *demand* water whereas fish and wildlife only *need* it – they are in no position to *demand* it.
2. We would like to see the evidence for the statement (p 5-3), “Beyond conservation, reuse, and modest expansion projects, the default is the dry-up of hundreds of thousands of acres of some of Colorado’s most productive agricultural land; a result that is not preferred by the South Platte Basin.” If there is evidence for such a preference, is there similar evidence for the corollary, “Beyond conservation, reuse, and modest expansion projects, the default (build more IPPs) is extensive negative impacts to hundreds of miles of some of Colorado’s most beautiful rivers and streams; a result that is not preferred by the South Platte Basin”?
3. The draft report clearly expresses the projected water supply “gap” for M&I and SSI (self-supplied industrial). And although the plan makes numerous allusions to the need to supply more water as streamflows or lake levels for the environment and recreation, we are given no quantification for those needs (demands). Why not? How large are they?
4. The draft report attempts to make a case that the permitting process is too slow. It says one objective is to “Advocate for improvements to federal and state permitting processes, without decreasing environmental protections.” Given the declining state of our environment, wouldn’t it be better to state “Advocate for improvements to federal and state permitting processes that also *increase* environmental protections”? (We note that the US Forest Service and other agencies requested a 90-day extension to review the 11,000+ page Environmental Impact Statement for Moffat but was only given 45 days.)

We urge the Legislature to stand up for the recreational and environmental *demands* and insist that no one sector be assumed to be dominant -- or minimized in the equation.

D. What’s the End Game?

One thing that has never been clear to us is, what would the *next* plan call for after all the remaining untapped water is developed (assuming that actually happens)? In other words, let’s suppose projects like NISP and more trans-mountain projects all get built; what happens after 2050, especially given essentially exponential population growth? We believe that rather than remove the remaining water from our rivers, turning off the spigot for the remaining goods and services they provide like water quality, recreation, etc., let’s do those “next things” now, like leap-frogging to cell phones in Africa. Yes, some of the non-consumptive mechanisms may cost more up front, but if the demand from growth is truly there, then let growth pay its own way.

The draft plan says that our South Platte basin cities are “national leaders” in sustainability. Okay. If that’s true, let’s see them really lead. Let’s see what sustainability really means because we are up against quite an array of limitations. What we seem to be “sustaining” right now is making species go extinct, removing wetlands at an ever more rapid pace, and poisoning our drinking water wells. Unfortunately these are indeed

the “measurable outcomes” from policies we have repeatedly been told in the past were “No/Low Regret” options. If we keep doing what we have been doing and expect different results, that’s just plain stupid. We can do better.

The draft plan implies that “after current IPPs are implemented” (as if they all will be, even though the full suite of impacts, especially cumulative impacts, has not yet been determined!), all the water that remains will be of lower quality and likely require advanced water treatment processes. Regarding this, first we note that there are already examples of reverse osmosis working quite well in Colorado. Second, we note that, although brine disposal may indeed be an issue, we should not rule out this technology solely due to cost. Some beneficial technologies will be more expensive, but can be paid for with monies saved through conservation.

E. Factual and Evidentiary Issues

1. Figure 3-9 is a map intended to show dry-up locations in the South Platte basin. As best as we can tell, the dry-up locations on the Cache la Poudre River are not indicated on this map. There are at least seven periodic dry up locations on the Poudre, depending on the specific hydrologic conditions³: (1) at Watson Lake during the irrigation season and winter, (2) below the Little Cache and Taylor and Gill Ditches during winter, (3) below the Larimer and Weld Canal during winter, (4) below the Timnath Reservoir Inlet during winter, (5) below the Fossil Creek Reservoir Inlet during the irrigation season and winter, (6) below the Greeley Ditch during the irrigation season and winter, (7) below the Ogilvy Ditch during the irrigation season. We would encourage the authors to more thoroughly inventory this situation.
2. The draft report states (p 5-8) that building [large] integrated projects comprised of new Colorado River supply, agricultural transfer and new storage help to minimize impacts. We question the validity of this statement and ask for proof. Oddly, the draft plan in the next paragraph asks that we support small scale supply projects, presumably in contrast to large “integrated” projects. We are not sure what to make of this dichotomy, but do wish to point out that a recent report by Western Resource Advocates, *A Better Future for the Poudre River*⁴, lays out a small-scale strategy for meeting the water needs of 15 towns and water districts while also preserving the Poudre River along with the communities and businesses that depend on a healthy river.

We urge the legislators to familiarize themselves with this document.

3. The draft report states (p 5-16) that “The majority of Basin water providers are relying on the application of conservation savings to improve overall system resiliency (i.e. demand hardening and drought reserves) instead of applying it towards supply for additional population and/or demand increases.” Many experts in the water conservation field do not agree that demand hardening is indeed an issue. Instead, they maintain that both technology and behavior remain subject to increasing efficiency, even in the face of prolonged drought. It is uneconomical to require more storage than truly necessary because conservation remains significantly cheaper at one-quarter the price of alternative dry year drought measures⁵. In fact, the CWCB’s most recent conservation study deflated the demand

³ Northern Colorado Water Conservancy District, see http://www.savethepoudre.org/docs/the_dam_truth.pdf

⁴ <http://www.westernresourceadvocates.org/water/nisp.php>

⁵ e.g., <http://www.westernresourceadvocates.org/water/fillingthegap/ftgcons.pdf>

hardening argument by stating, “based on the current state of knowledge, concerns about demand hardening are not a sound argument against implementing long-term water conservation programs.”

We urge the legislature to treat arguments of “demand hardening” with some skepticism and endeavor to learn the facts.

4. It is puzzling that the draft report concludes that the “realistic” level of water conservation is the SWSI 2010 Medium level instead of the high level (p 4-15). It should be clear from SWSI that the high level essentially obviates the need for most or all of the major diversionary IPPs and only amounts to a 1% per year reduction in gpcd – which is really business as usual.

The legislature should insist that SWSI high conservation levels be instituted statewide, or at least in the S. Platte and Metro areas.

5. We are pleased to see progress on the environmental and recreational focus area mapping (Appendix B). We had been puzzled as to why the lower mainstem Poudre River (Area 23 in the previous mapping, Figure 1; Area 25 in the current mapping, Figure 2) was only listed as habitat for plains fishes. The previous mapping had ignored the well-developed coldwater recreational fishery that is prominent in the uppermost ~10 miles of that reach. We very much support the change because recent (2010) inventories conducted by Division of Parks and Wildlife personnel clearly show more man-hours of fishing effort (and fish caught per hour) in this stretch than upstream in the Cache la Poudre Canyon, a surprising finding⁶. We hope that the recreation and environmental effort continues to evolve, but if it remains relegated to only a mapping effort, with no true “teeth,” then it will all have been for naught.
6. The draft plan uses a hypothetical example by stating (p D-2) “Project X may decrease flows in Stream Y by 10 CFS during the period May-Sep”. Though there is nothing wrong with this statement *per se*, we must call the legislator’s attention to the fact that if built, the Northern Integrated Supply Project (NISP) would, by contrast, decrease flows in the Cache la Poudre River by up to 1000 CFS during the period May-July. What may seem insignificant in one example can be stunning in the real world; beware looking through rose-colored glasses!
7. The legend for Figure 8 in Appendix D seems to indicate that it is showing the diversions along the Cache la Poudre River (in addition to the Josh Ames diversion that was removed). Perhaps we don’t understand the intent of the figure because there are actually something like 16 diversion structures along the river from the mouth of the canyon to I-25, whereas this figure seems to show only about five. Also, we were not sure what the purple dots were meant to represent. This figure needs clarification.
8. Considering the “focus area mapping” described in Appendix B, it would appear that the segment-by-segment approach is not at a fine enough scale to adequately represent the variety of resource amenities, not to mention water infrastructure or status (e.g., dry-up points, gages, wildlife resources, water quality issues). For example, stakeholders such as Save The Poudre are not likely to find much solace in knowing that a resource may be found somewhere in a 40-mile segment, but not know where exactly that resource lies in relation to a proposed impact – or restoration – proposal. If this kind of mapping is continued, careful thought should go into determining what resolution would prove effective..

⁶ Kurt Davies, Colorado Division of Parks and Wildlife, personal communication, January 2012

F. Towards a Positive Legislative Agenda

For Legislative Action

1. Fully fund and staff the various Colorado agencies that are on the front line of environmental protection, including Division of Parks and Wildlife, Division of Water Resources, Ground Water Commission, State Board of Examiners of Water Well Construction and Pump Installation Contractors, Water Quality Control Division, Water and Wastewater Facility Operators Certification Board.
2. Safety Factor -- The draft plan mentions water supply safety factors in section 5.2.1.3, stating that “A large safety factor for conservation reduces the potential water available to meet new demand, forcing water providers to develop other sources of supply.” This may be true in one sense, but sidesteps a more fundamental issue: using realistic drought criteria. Most Colorado municipalities (and some water districts) plan for a 1-in-50 drought. In essence, this means that homeowners and businesses should, on average, expect no significant interruption or restrictions in treated water delivery 49 out of 50 years. In our opinion, such a stringent 1-in-50 drought criterion is not attuned to our semi-arid environment. Revising the criterion to plan for a 1-in-30 drought would, we believe, far better match our environmental setting and be accepted by the public and most businesses. (Appropriate contracts may be allowed for existing businesses with demonstrated hardships; alternately, insurance would be a reasonable market-based solution, just as it is for agriculture.) Importantly, the effect of such a policy revision would be to “require” far less storage than is called for today and would save vast quantities from evaporative waste.

Therefore, the State of Colorado should mandate a drought threshold no stricter than a 1-in-30 criterion.

For Legislative Study

1. Is it possible to have too much storage in a river basin – to be past the point of being beneficial? At some point the increase in evaporative losses due to increased reservoir surface area more than offset any gains in firm yield associated with additional surface storage.

A study of U.S. river basins by Hardison⁷ suggests that safe yield reaches a maximum when the ratio of storage to average annual renewable supply is in the range of 1.6 to 4.6. By this criterion, the point of negative returns may have already been reached in three major basins -- the Lower Colorado, the Upper Colorado, and the Rio Grande, where the ratios of storage to average renewable supply are now within this range.⁸

The question becomes, is this the case for the South Platte basin? If you consider both storage in the basin as well as gravity- or pump-fed trans-basin storage such as Granby and Shadow Mountain, the answer may well be Yes.

⁷ Hardison, C.H. 1972. Potential United States water-supply development. J. Irrigation and Drainage Division, Proceedings of the Am. Soc. of Civil Eng. September, 1972, pages 479-492.

⁸ <http://www.gcrio.org/CONSEQUENCES/spring95/Water.html>

The Legislature should commission a study of allowable yield to storage for all of Colorado's basins with the objective being to define the conditions beyond which new exposed-to-the-air reservoir storage no longer qualifies as a beneficial use because all (or many) senior users would be injured if more reservoir storage were built. Building more storage that actually reduces overall yield would certainly not be "beneficial use".

[Note that such a consideration would not apply to aquifer storage and recovery.]

2. We often hear how efficiently we use water in the South Platte basin. For example, the draft report refers more than once to the oft-stated "fact" that water is used perhaps seven times before it leaves Colorado. In reality, of course, what is meant is that water is diverted perhaps seven times with large proportions continuing as return flows. Though these return flows may indeed be re-diverted, and also help support a variety of off-stream wetlands, they also are one of the prime causes of water pollution, especially for nitrogen, phosphorus and selenium. With galloping technological improvements in agricultural efficiency, there is a clear opportunity to divert less, keep more in the stream, and still support abundant agricultural and wetland productivity.

The legislature has been working on this (witness the vetoed SB 14-023) but it can and should revisit the issue, and not just for the west slope. We must continue to make progress in improving agricultural efficiency in ways that secure maximum beneficial use without further harming water quality or property rights.

3. Though we do not know the full suite of facts regarding the Tamarack Recharge Project on the plains near Nebraska, we have heard that early research suggests that it may not be capable of delivering the South Platte water required under our interstate obligations. This may well be a case where the numeric models suggested one outcome but Mother Nature is actually showing something very much different.

The legislature might be wise to seek expert counsel regarding what the science suggests and have a backup plan in place before any new and expensive interstate litigation is initiated

4. The draft BIP talks at length about constraints and challenges for creating new storage or related infrastructure, for protecting agricultural production and the economy, and protecting or enhancing environmental and recreational resources. By contrast, scant attention has been given to how the presumed growth in municipal and industrial demand might be better managed. Yes, the document mentions "smart" growth, and "more integrated land use and water supply planning," but it largely ducks the issue by saying that appropriate and effective land use management levers are outside the authority of the water providers.

Clearly this area is ripe for legislative investigation and action. We have a few good precedents (such as HB 08-1141 that governs the need to have an adequate supply of "wet" water before a local government can grant a development permit) all under the general banner of CRS 29-20-103: "The general assembly hereby finds and declares that in order to provide for planned and orderly development within Colorado and a balancing of basic human needs of a changing population with legitimate environmental concerns, the policy of this state is to clarify and provide broad authority to local governments to plan for and regulate the use of land within their respective jurisdictions."

What might be some avenues ripe for enlightened legislative intervention if the local governments do not step up to the plate? What qualifies as matters of statewide concern and what are simply local issues? Let us suggest the following areas of inquiry for the legislature:

- a. It is our understanding that not all communities are enforcing HB-1141 and some communities are skirting the law by identifying unsustainable groundwater sources as their “sustainable” supplies. Clearly this is not what the legislature intended. What can be done about it?
- b. If it is undesirable for municipalities and other water providers to “buy and dry”, especially when wetlands would be dried, then the state legislature could put limits on those water withdrawals. We do have similar precedents regarding, for example, Thornton’s requirements to revegetate previously irrigated land for dry-land protection and production.
- c. Restrictions can be put in the way of growth literally on top of productive farm land. More broadly, what are the costs of working to reduce the growth rate? Is that in itself a no regret policy? In essence, almost anything that raises the cost of supplying municipal and industrial water will serve to curb demand. If we need to pay for years of environmental degradation, then fees and levies will be necessary. If water providers need to pay to mitigate beyond what had previously been found necessary, then so be it.

In conclusion, there is material in the draft report that we can build upon to craft a state water plan, but building large new reservoirs that further deplete our rivers and harm our flora and fauna is NOT the direction Colorado should go.

Thank you for taking the time to reflect on our comments on the SP-BIP; we hope that they are taken as constructive input on what is a rather daunting task. If you would like any additional input from us, please just let us know.

Sincerely,

/s/ John Bartholow

For Save The Poudre: Poudre Waterkeeper

cc: CWCB, SP-RT