

November 19, 2008
Minutes-Board Meeting

The regular monthly meeting of the Lower Arkansas Valley Water Conservancy District Board of Directors was held on Wednesday, November 19, 2008 at 10:08 AM, at 801 Swink Avenue, Rocky Ford, CO 81067.

Chairman Singletary announced a quorum was present with Director Mauch being excused.

DIRECTORS PRESENT:

John Singletary-Chairman
Pete Moore-Vice Chairman
Melissa Esquibel-Secretary
Wayne Whittaker -Treasurer
Loretta Kennedy
Lynden Gill

DISTRICT STAFF PRESENT:

Jay Winner-Executive Director
Bill Hancock-Conservation Program Manager
Kim Chavez-Financial Officer
Carla Aragon-Quezada-Administrative Assistant
Bart Mendenhall-Attorney

DIRECTORS EXCUSED:

Leroy Mauch

MOTION TO ENTER INTO WATER ACTIVITY ENTERPRISE:

Director Whittaker moved that the Board convene into the Water Activity Enterprise, seconded by Director Moore. Motion unanimously carried.

At the conclusion of the Water Activity Enterprise meeting Director Moore moved to reconvene the District Meeting at 10:10 A.M., seconded by Director Whittaker. Motion unanimously carried.

INTRODUCTION OF VISITORS:

Chairman Singletary welcomed each of the visitors to the meeting, asked them to introduce themselves and identify the organization which they represent.

VISITORS PRESENT:

Chris Woodka, Pueblo Chieftain; Lola Shrimpl, La Junta Tribune; Rick Kientz, Aurora Water; Alan Ward, Pueblo Board of Water Works; Ken Weber, Pueblo; Dwight Gardner, Senator Salazar's office; Jim Valliant, CSU-CAES; Kelly Roesch, Pure Cycle; Pat Edelmann, USGS; Fred Heckman, Farmer, McClave; Roy Vaughn, BOR; GW Werdel, Larkspur; Keith Goodwin, Otero Co Commissioner; Scott Lorenz, AGUA; Sam Fosdick, AGUA; John Schweizer, Super

Ditch; Mike Bartolo, CSU-Research Center; Sam Fosdick, AGUA; Perry Cabot, CSU; Drew Pritchard, United Precision Engineering; Steve Price, Engineer-Boyle Engineer.

APPROVAL OF MINUTES:

- ❖ *October 19, 2008 Monthly Board Meeting Minutes-* Chairman Singletary asked if the Board members had reviewed the minutes for the October 19, 2008 Board meeting and whether there were any corrections or additions. Director Whittaker moved to approve the minutes for October 19, 2008, seconded by Director Moore. Motion unanimously carried.
- ❖ *October 19, 2008 Work Session Meeting Minutes-* Chairman Singletary asked if the Board members had reviewed the minutes for the October 19, 2008 Work Session meeting and whether there were any corrections or additions. Director Whittaker moved to approve the minutes for October 19, 2008, seconded by Director Moore. Motion unanimously carried.

TREASURER'S REPORT:

Chairman Singletary reported that the financial report for the month of October was included in the Board's Monthly Meeting Packet. Director Whittaker reported October total revenues \$37,067.13 and total expenditures \$284,506.15 with total net <\$247,439.02>. Director Whittaker moved to accept the October Financial Statement, seconded by Director Moore. Motion unanimously carried.

GM REPORT:

General Manager Winner directed Board Directors to Tab (1) one of the board packets. Intergovernmental Agreement for the management and conservation of Fountain Creek (IGA) a draft agreement for Fountain Creek, the initial people that need to sign is between El Paso County and Pueblo County. They do want the Lower District on the board. In three (3) years it will go to the vote of the people of El Paso and Pueblo Co to create a taxing district for Fountain Creek.

General Manager Winner directed Board Directors to Tab (2) two of the board packets. Conservation Easement Oversight Commission applications on land trust will have to go through this completely in front of the Conservation Oversight Commission to see if they are eligible. It will take a long time to put together. We had an Oversight Committee meeting in La Junta and over 150 people attended the meeting.

Attorney Mendenhall gave an update on the Oversight meeting in La Junta stating the Commission wanted to meet down here with some of the people having problems. This gave them a chance to speak up. This was an eye opener for the commissioners.

General Manager Winner stated that next meeting will be on December 11, 2008.

General Manager Winner directed Board Directors to Tab (3) three of the board packets. There are two (2) Vision Statements. One from IBCC states we envision a Colorado that sustainable meets municipal, industrial, agricultural, environmental, and recreational needs by promoting cooperation among all water users. The second is the Roundtable vision which states we envision a Colorado that balances municipal, industrial, agricultural, environmental, and recreational water needs and promotes cooperation among all water uses.

PRESENTATIONS: General Manager Winner introduced Steve Price, Boyle Engineering. Mr. Price did a PowerPoint on Arkansas River Renewable Economic Study.

General Manager Winner introduced Pat Edelmann of United States Geological Survey (USGS). Mr. Edelmann gave a PowerPoint presentation on Arkansas River Basin Development of a Water Quality Plan.

Purpose of the Study

Define infrastructure need to deliver Arkansas River water to potable water customers in/near Monument area

Part 1 – From the Stonewall Springs Gravel Pit

Part 2 – From the La Junta area

Tasks

- Define alternatives
- Estimate conveyance needs
- Identify treatment needs
- Estimate storage needs
- Estimate raw water needed
- Develop conceptual level cost estimates

Estimate Conveyance Needs

Location	Approx. Distance (miles)	# of Pump Stations
Las Animas to Stonewall Springs	70	3
Stonewall Springs to Monument Area	85	6
Las Animas Area to Monument Area	90	4

Estimate Conveyance Needs

Annual Demand (ac/ft/yr)	Alternative	Max Flow (mgd)	Prelim. Pipe Size (inches)
40,000	3	45	54

40,000	4	45	54
30,000	5	35	48
40,000	6	45	54

Identify Water Quality

- Used publicly available data from USGS and STORET
- Quality varies substantially by:
 - Location
 - Season
 - Agricultural practices

Overview of Water Quality

Parameter	<u>Approx. Value for 85th Percentile</u>	
	Stonewall Springs Area	Las Animas Area
TDS	555	1425
Hardness	355 or more	800 or more
Sulfate	240	900

Additional Water Quality Concerns

- Contaminants of Emerging Concern
- Selenium
- Uranium/Radionuclides
- Changes in the future
 - Additional wastewater effluent discharges
 - Changes in agricultural practices
 - Effects of other water projects and changes in water rights

Identify Treatment Needs – Options

- Finished Water Quality Alternatives:
 - Meet existing water quality of utilities in Monument area
 - Meet primary drinking water standards only
- Treatment Alternatives
 - Blend
 - Provide treatment

Identify Treatment Needs

- Sulfate and portions of TDS can be removed only by advanced methods such as RO and electro dialysis
- Softening will provide some removal of TDS
- Supplying water of lesser quality could lead to future issues due to point-of-entry/point-of-use devices (e.g., home reverse osmosis devices)

- Source near Stonewall Springs: Assumed RO for purposes of study. Maybe able to reduce this to lime softening.
- Source near Las Animas: RO will be needed. The Cities of Las Animas and La Junta already have RO for drinking

Treatment Infrastructure

Alternative	Annual Demand (ac-ft/yr)	Water Treatment Plant Capacity (mgd)	
		Advanced	Conventional
3	40,000	45	60
4	40,000	65	0
5	30,000	35	45
6	40,000	30	60

Water Treatment Plant Residuals

- Advanced plant will have RO concentrate to dispose.
- Proposed method is to further treat concentrate with lime softening and 2nd stage RO
- Final residual volume will be 1-3% and is proposed to be lagooned.
- Final residuals may have issues with radioactivity and/or selenium

Storage Infrastructure

- All alternatives use storage near source and near final users.
- Source storage – proves for equalization into Advanced WTP and equalization for deliveries from canal systems. May also provide equalization for water quality and/or treatment
- End storage – provides for equalization of Advanced WTP and conveyance system as well as emergency storage if there are issues with conveyance system.

Estimate Raw Water Needed

- Additional water needed for:
 - Evaporation
 - WTP residuals
- At a demand of 40,000 acre-feet about 50,000 acre-feet of supply is needed
- Needs to be refined in subsequent studies

Conceptual Level Cost Estimates

- Cost include:
 - Installation of pipe (pipe, trench, backfill, etc)
 - Construction of Pump Stations (building, pumps, yard piping, etc)
 - Construction of WTP(s) (building, equipment, yard piping, etc)
 - Construction of Terminal Storage (1 week), where appropriate (dam, outlet, spillway, liner, cover)
 - Cost of Source Storage (dam, outlet, spillway OR Stonewall Springs)
 - Cost of End Storage (dam, outlet, spillway).
- Costs do Not include:

- Land acquisition
- Permitting

Conclusions

- Providing a renewable water supply to the Monument area from the Arkansas River basin is technically feasible.
- This renewable water supply has a reasonable capital cost compared to other, recent Front Range projects.
- O & M costs are high and caused primarily by pumping and treatment needs
- Should look for opportunities to reduce O & M cost

Treatment Infrastructure – Other Consideration

- Bank Filtration – Should be considered as storage areas are identified.
- AOP – Should be considered in conjunction with RO for sulfate/TDS removal.
- GAC and Conventional treatment will not provide any additional advantages over the above as RO is needed for sulfate/TDS removal
- Additional data is needed and an ongoing program should be established

General Manager Winner introduced Pat Edelmann of United States Geological Survey (USGS). Mr. Edelmann gave a PowerPoint presentation on Arkansas River Basin Development of a Water Quality Plan.

Phase I: Objectives

- Synthesize electronically available data and studies
- Identify and prioritize water-quality issues
- Identify information and analytical tools needed to address these water-quality issues and gaps in existing data
- Develop a scope of work to address the priority water-quality issues identified

Arkansas River Survey

- Surveys sent to 6 entities
- 6 entities returned survey (Aurora, Colorado Springs Utilities, LAVWCD, PBWW, SECWCD, UAWCD)
 - 29 Questions
 - Specific to Overarching questions
 - Issues designed to identify basin-wide vs. reach specific
- Evaluated responses
 - Evaluated individual entity rankings
 - Computed medians
 - Super Majority rankings
 - Compared median to USGS ranking

Super Majority Summary of Survey

Multiple “5” ratings:

- Fate and transport of metal enriched water discharged to the Arkansas River
- Discharge of metals on fisheries and stream biology
 - Upstream of Lake Creek
- Urbanization, including stormwater runoff, on water quality and stream biology
 - Pueblo Reservoir
 - All of Fountain Creek

Multiple “4” ratings:

- Reservoir operations affect on water quality and biology
 - Pueblo Reservoir/Twin Lakes?
- Land use changes on water quality
 - Canon City – Pueblo Reservoir
 - Pueblo Reservoir
 - All of Fountain Creek
- Source areas and processes affecting selenium
 - Pueblo Dam to John Martin Reservoir
 - All of Fountain Creek
- Levels of pharmaceutical, endocrine disruptors and emerging contaminants
 - Pueblo Reservoir
 - Lower Fountain Creek – Nevada to Pueblo

General Observations

Water supply and water quality are increasingly becoming lined and in many cases inseparable.

- Important to develop methods and tools for quantitatively predicting the effects that water operations have on water quality (and vice versa).

Many of the issues/questions are either directly/indirectly tied to land use changes, urbanization or changes in water operations.

- Many issues have basin wide importance. It is apparent that studying and addressing key issues in the Fountain Creek and Lower Arkansas Watersheds is a top priority, both for the affected interests in these areas, as well as for the basin as a whole

Baseline data of sufficient quality and quantity, covering a sufficient spatial and temporal range, should be collected before a detailed study is performed to address a particular question/issue.

- May also be important to ensure that a long-term data collection and monitoring program is established for certain constituents so that meaningful analysis/statistics can be performed to establish trends and make comparisons to baseline conditions

Overarching Issues

Many of the issues/questions are directly/indirectly tied to land use changes, urbanization, or changes in water operations.

- Water is the affected by land uses changes (agricultural, urban, etc) on water quality, and what are the corresponding changes to stream biology?
- How do changes in water operations affect water quality?
- What is the cumulative effect on water quality from changes in water operations and land use?

RRPG's Prioritization of "Priority Issues"

Canon City to Las Animas/John Martin Reservoir, including Fountain Creek

- Changes in Land use/effects of urbanization
- Effects of changes in water operations
 - Nutrients
 - Selenium
 - Uranium
 - Salinity
 - E.coli
 - Sediment
 - Emerging contaminants

Pueblo Reservoir

- Changes in reservoir operations affecting water quality and biology
- Effects of urbanization on water quality & biology
 - Nutrients
 - Organic Carbon
 - Selenium
 - Emerging contaminants
 - Algal response

Upper Arkansas (Leadville – Pueblo Reservoir)

- Fate & Transport of metals

Edelmann gave an update on Coal Bed Methane.

General Manager Winner introduced Mike Bartolo, Manager/Research Scientist, Arkansas Valley Research Center. He gave an overall update. He thanked the Lower District for their support.

PRESIDENT'S REPORT: Chairman Singletary mentioned the Election held on November 7, 2008. President - elect Barack Obama hopefully will include some Colorado legislation in his cabinet.

LEGAL REPORT:

Attorney Mendenhall reported that he attended a Super Ditch meeting on October 21, 2008.

Counsel attended a meeting with Conservation Easement donors in Rocky Ford on November 6, 2008 in preparation for the Conservation Easement Commission meeting on November 10, 2008.

Counsel attended a meeting with Conservation Easement donors in Lamar on November 7, 2008.

Counsel attended Conservation Easement Commission meeting held on November 10, 2008 at Otero Junior College.

Counsel continues to work with Bill Hancock to try to get easements ready for closing. He stated it's difficult to get appraisals.

COMMITTEE REPORTS:

Director Kennedy-Personnel: None.

Director Kennedy-Liaison: None.

Director Esquibel-Legal: None.

DIRECTOR'S COMMUNITY REPORT:

Director Esquibel reported that the Highway projects are done from Pueblo to Fowler.

Director Whittaker reported most of harvest is finished. Corn is still green.

Director Moore reported Crowley County is quite.

Director Gill reported harvest is slow drying can't get the corn out yet.

Director Kennedy reported our office is located on Union Street not too far from the explosion. ATF did an amazing job. Pueblo Fire and Police departments moved quickly

Chairman Singletary reported we didn't get much rain, but we'll take what we could get. We received our first frost last night. It was a good year for produce.

PUBLIC COMMENT:

Roy Vaughn of the Bureau of Reclamation gave an update.

ADJOURNED:

Chairman Singletary asked if there were any other matters to come before the Board. Hearing none, motion was made by Director Esquibel, seconded by Director Kennedy to adjourn the meeting. Motion unanimously carried. Meeting was adjourned at 11:25 A.M.


John Singletary

Chairman


Melissa Esquibel

Secretary