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**Minutes  
City of Fort Collins  
Futures Committee Meeting  
Regular Meeting  
CIC Room, City Hall  
300 LaPorte Ave  
July 14, 2014  
4:00–6:00pm**

**Committee Members Present:**

Wade Troxell, Chair  
Gerry Horak  
Bruce Hendee  
Darin Atteberry  
Gino Campana

**Committee Members Absent:**

None

**City Staff:**

Dianne Tjalkens, Admin/Board Support  
Kevin Gertig, Utilities Executive Director  
Jeff Mihelich, Deputy City Manager

**Invited Guests:**

Michael Cohen, Pacific Institute  
Judy Dorsey, Brendle Group  
Becky Fedak, Brendle Group

**Community Members:**

Kevin Jones, Fort Collins Area Chamber of Commerce

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**Wade Troxell called meeting to order: 4:00pm**

**Approval of May and June Minutes:**

Gerry moved to approve May 12 and June 9 minutes. Wade seconded. Motion passed unanimously, 4-0-0. Gino arrived after vote.

**Think Tank Item 16: Water Security**

**Water Security—Kevin Gertig and Donny Dustin, City of Fort Collins**

Kevin and Donnie presented answers to questions on raw water. Kevin said staff is working with Greeley on phase 3 of mulching to mitigate results of the High Park Fire. The conditions on the

river are that the ash has been scoured out and areas that have been mulched are growing new foliage that will prevent erosion. There have been mud slides with significant rain fall, but they have been minimal in impact. Staff will brief Council tomorrow night. They are still using the pre-sediment basin and collecting data. Donny said we have been using 70% of average prior to the fire from the Poudre. We are in monsoon season. We are using as much water as we can from the river now and saving CBT to get us through the rest of the year. It can be rented back to the agricultural community if unused. Joe Wright is as full as is CBT.

Donnie gave a presentation on changes to ditch company share acceptance and raw water rights. He said the City has raw water requirements in place. Developers can hand over water rights or cash in lieu. The previous City code allowed water right banking, to receive credit to use later. Shareholders avoided paying assessments and the City acquired shares in advance of the need to use them. Benefits to the City of this system have diminished because we have acquired the shares needed for future use. Additional water rights are not effective without storage. The utility is approaching build out. Donnie showed a chart of ditch shares that are currently owned by the utility in various companies and projections of what will be owned by 2040. The remaining 20% ownership is Poudre School District, HP, and other large entities.

#### **Comments/Q & A:**

- Would it make sense to allow banking with a fee? It is not simple to buy exact shares and apply them to exact project needs.
- The utility does not need many more rights. There could be a community benefit to bank rights.
- Suppose we get another new brewery?
- Even with projected growth of that nature, we are not in need of more rights. We need storage. Many of the water rights come in only in the summer.
- Does that take us to a build out population of 250,000.
- It takes us to a build out of the water utility, to a population of about 165,000. The districts outside the City will have to cover the remaining growth.
- How are we working with them?
- There has not been much discussion in that area yet.
- It is important to know who owns the rest of the rights, so we know the possibilities.
- To what extent are we comfortable with the future of the non-utility part of the community, outside the City limits? What is our responsibility? What happens if a project happens there and we don't have the water resources for it?
- There may be a community benefit outside the utility benefit that should be explored.
- Without storage it is hard to supply water on a consistent basis. We have done well with planning and have our water rights in place. With what we project for storage, we have adequate funds. The tri-districts have their own water resources planning. These ditches are small in the Poudre basin. What others are acquiring are bigger ditch companies.
- We should have a City advocate for our water future as it relates to the entire City.
- We've served our customers, but we need to understand how prepared the outlying areas are to provide water in the GMA.
- We have to look out for all of Fort Collins.
- The tri-districts could present at Futures Committee to discuss their planning.

- Someone needs to be thinking about where we are trying to head overall, including the GMA, to make sure we are doing our job now for the citizens of the future.
  - The water rights we have are decreed specific for us and it would be difficult to use them for the tri-districts.
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### **Water Conservation Strategies—Michael Cohen, Pacific Institute**

Michael provided materials from Western Resource Advocates. The Pacific Institute was founded in 1987 and is based in California. It is a non-profit research center funded by grants. The Colorado River Basin municipal deliveries report shows that there is a down trend in water use, not just per-capita, but total water use as well. A challenge, however, is that many cities receive water from many providers. Many cities have specific goals around reducing per capita use and have experienced decreased demand across the board. Looking at population projections to determine use is problematic. Total water use in the U.S. went down 1% between 2000 and 2005. In Westminster there was a study completed to show what rates are compared to what they would have been without conservation. Some conclusions were that conservation and efficiencies led to rates being ½ of what they would have been and the city avoided construction of an additional water treatment plant. Tools available to encourage conservation are rates and budgets, rebates, retrofits, social norming, land use planning, and performance contracting. Rebates for shower heads have a short term payback, as do many other items. For retrofits, there are cities that have retrofit upon resale requirements. Rebates are voluntary, while retrofits are compulsory. Many communities are facing running out of water before build out. Peaking demands come in the summer when everyone turns on the sprinkler. Regarding social norming, City of Fort Collins has contracted with Water Smart. When you get a reminder that you are using more water than your neighbor, you start changing behaviors. The benefit is that it puts use in context. A pilot study showed a ten percent reduction in use through this method. The main area of use is landscaping. There is a social convention that turf is desired. Many communities have demonstration gardens for alternative landscaping and there are ordinances in other areas to encourage different landscaping. Some examples are that Las Vegas bans turf in new housing; Aurora gives a connection fee credit for installing xeriscaping on new construction; and other areas give rebates for removing existing turf. Performance contracts have also assisted in reductions in water, electricity, and carbon emissions. Overall, there are various tools to reduce demand, there is an increasing focus on outdoor use, and there are embedded energy benefits from conservation.

### **Comments/Q & A:**

- Is it a general practice to overestimate the demand projections?
- Utilities never want to be in a position to not be able to meet demand. To avoid rationing, they overestimate need.
- Fort Collins has tiered rates.
- People tend to respond to changing rates.
- Do changes in toilets and shower heads actually make a difference when indoor use is a small percentage of total use?

- In Fort Collins indoor use is significant. Water budgets use total number in household and size of lot to create a water budget on which rates are based. Going over the budget increases the rate, which is the effectiveness of that method, as opposed to standard tiers.
- In standard tiers large properties are penalized. This takes into account property size.
- One takes into account the context and the other could be more punitive, i.e. more effective.
- How do you determine what gets water and what does not?
- Budgets can get rationed down over time.
- It has been studied in Fort Collins.
- Tiers take into account members in households and medical exemptions. Budgeting is the next level.
- We don't take household numbers and medical exemptions into account in our tiered rates.
- We need storage for drought. We are highly dependent on CBT and need a place to put our water rights.
- There is debate in the community about a realistic target for water storage.
- Does the billing statement have reports to customers?
- We have a BFO offer for that, but we have been successful in identifying leaks and contacting individual owners to take care of them.
- We have one utility in the City for electric, but three for water which can make this more challenging.
- We've made headway in parkways and medians for landscaping and water use.
- The shoulder areas are still a challenge. We have to plant trees on shoulders and trees need water. We are making progress in medians.
- We get calls when we have overages in medians and other public areas.
- How does urban agriculture figure into this?
- Watering gardens uses the same amount of water as turf, but has broader community benefit. Urban gardens use more water than farms.
- How often do you see soil amending as a tool? We have a policy to amend the soil for water consumption.
- When you are establishing native landscapes, it is better not to amend the soil because it invites noxious weeds.
- Do we have an incentive for people converting from bluegrass to xeriscaping?
- Not at this time. We will work with people who are making the change.
- That is a barrier for people, to continue to pay the water bill or pay \$30,000 to convert.
- We could have a requirement and do education as developers write design guidelines.
- Or we could have less water dedication if there is different landscaping.
- There are also lower consumption turfs, but they are not durable enough for parks and high use areas.

#### **DO 16: Next Steps**

- None discussed.

## **NetZero Water**—Judy Dorsey and Becky Fedak, Brendle Group

NetZero Water’s vision is to make Colorado the center for thought leadership in “net zero” water planning. It is a triple helix model and the project is being implemented by a number of engineering groups. There is a technical advisory group that consists of eight partners including CSU, Colorado Water Conservation Board, etc. This paradigm integrates water quantity and quality. We need sustainable water management that is more holistic. Water is driving economic and sustainable development around the globe. System interfaces are energy, water and climate. Water abundance pathways include revamping agricultural practices, industrial practices, and indoor and outdoor use. The climate change snapshot for Fort Collins predicts warmer summers and impacts to stream flows and earlier spring runoff. The goal is to operate as a NetZero Water city. If we look at minimum precipitation we can see places for improvement. The City can implement a water smart-grid. There is a lot of opportunity in waste elimination as well. Net Zero Water aims to prepare communities in a coordinated, synergistic, and ecologically sound manner.

Becky said the planning process includes determining the baseline, identifying strategies, analyzing strategies, aggregating into scenarios, setting milestones, and measuring progress. First they must determine the methodology for defining a water footprint. Strategies will be around water efficiency, irrigation, water quality and trading credits. The analysis will include risk assessment, minimum flows, and financials. Some external impacts are on climate, land use, disadvantaged populations, and in-stream flows. At the building scale, the Brendle Group Site has used the planning model. The water quality footprint is based on stormwater runoff. Some strategies to reduce impact are to reduce use though efficiency, maximize reuse and recycling, minimize stormwater runoff, and generate markets for water quantity and quality trading credits. The goal is that the analysis will inform policy change down the road. At Brendle, the water quantity footprint includes efficiency, established landscaping, grey water, rainwater harvesting, water supply credits, etc. They analyze average precipitation and dry conditions. The water quality footprint is about reducing the impervious area to reduce runoff. They installed rain gardens to disconnect downspouts from running into alleys. Porous pavement would also help reduce runoff. To grow their building portfolio, they are working with Brighton and Adams County on a pilot project. The city and county will jointly pilot the NZW template and use six sites within the City limits. The test is how to blend a portfolio to achieve net zero. There could be various tiers so people have goals to move toward. Woodward campus had three goals: net zero for the site, zero process water discharge, and meet the City’s low impact development standard for stormwater. She showed a graph of their baseline and goal. Using xeric approaches could reduce outdoor water use by 75%. Indoor use could have been reduced more if the process had begun before the building planning stage. They are looking at higher education campuses, ski areas, and FortZED as well for scaling. Judy added that Palo Alto is renewing their climate action plan and Brendle is proposing they become a pilot for NetZero Water. Fort Collins may be interested in their RFP structure. Some of the strategies presented today will be integrated into Fort Collins’ Climate Action Plan.

### **Comments/Q & A:**

- Loveland allows sites to buy part of ponds. There are sites that could be good for building and others that are good for detention ponds.
- There are benefits in aggregating.
- What can you do today with grey water?

- Hand washing can be applied to outdoor irrigation. How to move hand washing water to toilets is still under development.
- Can you pipe rainwater to use it?
- Regulations are still being worked out. As stands, legally you must use the water within 72 hours, and rain gardens must be at least 10 feet from the building.
- Is the utility working with Brendle on their new building development?
- What we found is that to do this right, and make it an anchor building, some areas will cost more. As we get further in design we want to push the envelope.
- The Power House is an example of what more funding can do.

#### **DO 16: Next Steps**

- This work will be incorporated into the Climate Action Plan and is part of our economic health strategies, through cluster work.
- We could have a follow up discussion on this topic. A lot of what Brendle brought up is being tackled in City departments.
- There could be a Channel 14 program relating all parts of the discussion.
- Full Circle may be a good follow up.
- How could we have more places uses ditches and raw water for irrigation? It ties into Nature in the City and would reduce what needs to go through the water treatment plant, which impacts our ability to provide water to the tri-district and GMA areas in the future. Adding Natural Areas around the City requires water and could use the ditches.
- Bruce can go through minutes from last two meetings and pull specific topics and actions to discuss further for BOB2, BFO, or other policy.
- You could look at parks and HOA detention ponds as well as golf courses. Maybe the City can look at programs that incentivize converting to native grasses.
- If we used raw water for Collindale Golf Course, it would open capacity at Warren Lake.
- There is an opportunity to look at this further as we talk with Parks and Recreation next meeting.
- We could discuss policy as well as all open City lands. We can digest what we've heard in the last two meeting in a half hour discussion.
- Stormwater detention ponds distributed around the City are a good thing. What else would be a good idea for the next 30 years?
- Bruce will send out a synopsis and allow time at the next meeting to discuss policy.
- Brendle would like to differentiate various types of water. You must find the sweet spot between centralized and decentralized assets to address functionality.

#### **Link to Prezi Presentation:**

[http://prezi.com/ve6ra\\_b-hpv6/?utm\\_campaign=share&utm\\_medium=copy](http://prezi.com/ve6ra_b-hpv6/?utm_campaign=share&utm_medium=copy)

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*Meeting adjourned by Wade Troxell at 6:19pm.*