

**Fountain Creek Watershed, Flood Control and Greenway District  
Citizens Advisory Group**

**Meeting Minutes  
November 14, 2014**

The meeting was held at:  
City of Fountain, City Hall  
116 S. Main Street, 2nd Floor  
Fountain, CO

**1. Call to Order, Establish Quorum and Introductions**

The November 14, 2014 meeting of the Fountain Creek Watershed, Flood Control and Greenway District (FCWD) Citizens Advisory Group (CAG) was called to order by Mr. Jerry Cordova, Vice Chairperson, at 9:30 a.m. A quorum was noted, with the following CAG members in attendance:

Jerry Cordova – Vice Chairperson  
Richard Skorman - CAG Representative to the FCWD Governing Board  
Ferris Frost – Alternate CAG Representative to the FCWD Governing Board  
John Chavez – TAC Chair and Representative to the CAG  
Mary Barber – FCWD Web Manager  
Jack Wallick – CAG Secretary  
Allison Plute  
Tom Ready  
Jordan Vana  
Ross Vincent

**CAG Members not present:**

Dan Henrichs  
Lois Illick  
Irene Kornelly – Chairperson  
Elaine Kleckner

**Also in attendance:**

Larry Small, Executive Director Fountain Creek Watershed District  
Preston Manning, Matrix Engineering  
Dr. Scott Herrman, Dept. of Biology, CSU Pueblo  
Dr. Del Nimmo, Dept. of Biology, CSU Pueblo  
Lisa Godwin, City of Fountain  
Stephanie Thomas, Palmer Land Trust

**2. Approve Agenda of November 14, 2014 Meeting**

**Upon motion duly made, seconded and unanimously carried, the November 14, 2014 Agenda was approved.**

### 3. Approve Minutes of October 10, 2014 Meeting

Upon motion duly made, seconded and unanimously carried, the October 10, 2014 minutes were approved.

### 4. Presentations:

- a. Fountain Valley Watershed Water Quality Studies, Drs. Delwayne (Del) Nimmo and Scott Herrman, Dept. of Biology, CSU Pueblo.** Drs. Nimmo and Herrmann presented the results of their studies of water quality in the Fountain Creek Watershed since 1990. [Ed note: The first 15 minutes of the presentation were unusable because of a microphone/amplifier problem in the recording. Accordingly, the first and second bullets below are based primarily on notes and the handout.]
- Fountain Creek Watershed is Y-shaped, with three main sectors: Upper Fountain, Monument Creek, and lower Fountain, below the confluence. The researchers used four locations in Upper Fountain Creek, five in Monument Creek, and five in Lower Fountain Creek, for a total of 14 monitoring sites.
  - The presenters reported on monitoring activities for invasive species such as quagga/zebra mussels known for fouling intake/output valves and disrupting normal phytoplankton levels in lakes and reservoirs. They also expressed concern about Asian Clams (*Corbicula fluminea*) and Spiny Water Fleas (*Daphnia lumholtzi*) that likewise disrupt aquatic communities. Although there is some dispute about the presence and/or abundance of various invasive species in the Arkansas River and Pueblo Reservoir, they recommended protective measures be in put in place to keep these species out of the Fountain Creek Watershed, including Big Johnson Reservoir, after SDS comes on line. The watershed appears to be clean at this time.
  - Dr. Nimmo spoke on using bryophytes (moss-like water plants) and fish to study water quality in the watershed.
    - Bryophytes bioaccumulate heavy metals, by virtue of their high surface area in contact with the water. Using bryophytes in the 14 sites throughout the watershed, they found surprising, though not hazardous, amounts of mercury, selenium, and other heavy metals.
    - Bioaccumulation studies expanded to fish, and results showed that mercury is ubiquitous in watershed fish, at the level of 20 to 60 parts per billion mercury (calculated on wet weight). This translates to around 300 micrograms per kilogram dry weight, approaching the range of health department concerns about human consumption. Some selenium measurements were as high as 3000 parts per billion, wet weight. [Ed. note: FDA monitoring shows canned tuna ranges from 70 to 900 ppb mercury wet weight.]
    - Studies also showed that more than half of the mercury is held in muscle tissue (the part that is most frequently consumed).
    - Very little mercury or no mercury can be found in the water. It was determined that the food chain is concentrating mercury as it moves up the food chain – a common effect in many environments.

- Dr. Herrmann discussed aquatic macro-invertebrate (insect) studies as indicators of water quality in the watershed. With the help of graduate student Lisa Kellum they are collecting midge larvae in the watershed to determine the overall health of the habitat.
  - Midge larvae and adults constitute a major portion of what fish eat and are thus important to understanding nutrient and heavy metal flow to fish.
  - Whereas previous studies had only found three or four species, indicating low species diversity – a sign of degraded habitat, Drs. Nimmo and Herrmann have found over a hundred distinct species, including at least 20 species new to science.
- Potential sources of mercury in the watershed were discussed. Hypotheses were advanced that primarily identified local and distant coal power plants, although Gold Hill, the coal-fired smelter site in western Colorado Springs, was also pointed out as a potential source of mercury, whether wind or water borne. However, others claimed the ‘cap’ put on the site by the developer is effective on the basis of air monitoring downwind.
  - Mercury in aquatic environments takes two forms: elemental mercury and methyl mercury. The elemental form arrives atmospherically and is subsequently converted to the methylated form by bacteria in shallow aqueous environments. Methyl mercury is far more dangerous to health than elemental, and it makes up more than 95 percent of the mercury reported in the results.
  - Dr. Nimmo spoke on using wind roses (graphical representations of wind direction and intensity, based on observations over time. Wind roses are site specific, and can be found for many locations. These can aid in determining the source of mercury in various parts of the watershed.
  - Isotopic analysis of the mercury in watershed biota could also help determine the source. For example, much of the coal currently being burned is from the Powder River Basin, which would have a different isotopic profile than coal from the Pikeview mines here locally. This study would be expensive.
- Drs. Nimmo and Herrmann proposed a study, to be funded by interested and affected parties, which would continue and expand water quality studies throughout the watershed.
  - They feel it is important to look at brown trout and midge populations following the Waldo Canyon floods, to see what changes the ash-laden runoff and physical habitat disruption may have caused.
  - They requested \$10,000 per year for a two-year study of the watershed. They reminded the CAG that the watershed has been touted as a future crown jewel, though currently in the rough. [1.15.0]

**b. Upper Fountain Creek/Cheyenne Creek Project Update, Preston Manning, Matrix Design Group.**

- [1.19.0] The project is aimed at flood recovery and includes Fountain Creek upstream from the confluence and Cheyenne Creek in southwest Colorado Springs. Both watersheds received heavy damage during the 2013 floods.
  - Fountain Creek was impacted by the Waldo Canyon fire, with the associated sediment issues. Cheyenne Creek was faced with fewer sediment problems, but had a steeper drop and out-dated, undersized infrastructure that constricted the flow through an urban environment.
  - CDOT and the county have performed emergency and short-term repairs, but the

goal of this phase of the project is to assess the issues and design a long-term solution to the problem. These plans can then be submitted for funding through grants opening in February or March.

- Matrix has updated their understanding of the post-fire hydrology of Fountain Creek to reflect denuded soil and vegetative losses. [1.25.0] Starting at Woodland Park, each reach was analyzed for issues and potential solutions. Manitou Springs has its unique issues with small bridges and the outflow from Williams Canyon. [1.30.30]
- Cheyenne Creek has capacity problems with bridges and other structures. Conditions and infrastructure all the way up to the base of Seven Falls and Helen Hunt Falls are under consideration.
- Thus far the project has identified the many different problems in each watershed and is now matching up various solutions and alternatives to each one, seeing how they all work in concert with each other. The project is not at the point of specific plans, such as specifying the size of a new culvert, or designing a new bridge.
- Community forums are planned for December in affected areas. Likely alternatives will be presented and discussed.
- The hoped for construction funding opens this spring, so Matrix is in high gear in order to meet the timeline.

## **5. Reports.**

### **a. Governing Board Meeting.** Larry Small reported on the October meeting of the Governing Board.

- Larry briefed the board on funding options for construction of the Upper Fountain Creek/Cheyenne Creek Project.
  - Flood restoration monies have been made available to a local coalition including the District, Colorado Springs, Utilities, El Paso County, Teller County, Manitou Springs, Green Mountain Falls, Woodland Park, Coalition for the Upper South Platte, and the Pikes Peak Area Council of Governments, becoming known as the Upper Fountain Creek, Cheyenne Creek Coalition. Part of that grant is funding the current assessment and design work. Of the many classifications of funding available, there appear to be programs and money available to fund construction.
  - The coalition is spreading to the northeast, with the Air Force Academy and Black Forest Together, and is applying for a grant to fund a Monument Creek Master Plan.
- Larry proposed a new subcommittee to the Board, the Monetary Mitigation Fund Discussion Committee. The subcommittee would decide what to do with the \$50 million to be received when SDS comes on line.
- The next Board meeting will be December 12.

### **b. TAC Meeting.** Larry reported that the TAC met last Wednesday.

- The TAC is considering how to tailor the Drainage Criteria Manual to District needs.

### **c. Outreach Group.** Jerry reported on the Outreach Group.

- The group met November 10 and discussed the CDPHE grant.
- The next meeting will be December 8, with topics such as money, the speakers bureau, and a media kit.
- Recapping the group's activities, there were nine major events, making well over a thousand personal contacts.

- There is interest in a Frost Ranch Tour.
- Jerry announced his resignation from the City of Fountain and the Citizens Advisory Group, nominating Lisa Godwin of the City of Fountain, GIS Data Manager, as his replacement on the CAG. Jerry will be with the Governor's Office of Information and Technology.

**d. Website and Facebook Page.**

- Mary will continue supporting the website and Facebook page.

**6. Old Business.** There was no old business.

**7. New Business.** There was no new business.

**8. Public Comment.** There were no public comments.

**9. Next Meeting.** The next scheduled CAG meeting will be Friday January 9, 2015 at 9:30 a.m. in the Fountain City Hall, 116 W. Main, second floor meeting room.

**10. Adjourn:**

**Upon motion duly made, seconded and unanimously carried, the meeting adjourned at approximately 11:45 a.m.**