

APPENDIX I

**Fountain Creek Vision Task Force
Land Use and Environment Working Group
Meeting Summaries**

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**Fountain Creek Vision Task Force
Land Use and Environment Working Group
February 23, 2007
Final Meeting Summary**

Attendance

Carol Baker, Mary Barber, Mike Bonar, Rusty Cochran, Scott Cowan, Dennis Darrow, Mike Drabing, Doug Fitzgerald, Ferris Frost, Bryan Johnson, Juniper Katz, Sarah Keith, Jim McGannon, Heather Maio, Dennis Maroney, Rex Miller, Bob Miner, Jonathan Moore, Kevin Moore, Jim Munch, Jerry Pacheco, Gary Rapp, Sandy Rayl, Tom Ready, M.L. Richardson, Lisa Ross, Frogard Ryan, Kirsta Scherff-Norris, Mark Vigil, Meifen Wang, Pat Wells, Tim Williams, Heather Bergman, and Helen Littrell Smith

Action Items

Juniper Katz	Send sentence about task force support for GOCO grant proposal to Heather for distribution to and review by the Consensus Committee.
Keystone	Talk with Rich Muzzy about getting maps of the watershed to refer to during meetings.

Meeting Objectives

- Hear presentations about two planned actions/activities in the watershed
- Ask questions as needed to gain knowledge needed to move forward with prioritization of issues
- Prioritization of land use/environment issues

Panel Presentations: Planned Actions/Activities in the Watershed

Two organizations were invited to present information on planned activities in the Fountain Creek watershed. The purpose of these presentations was to update the group on upcoming actions that may impact the watershed and the work of the Task Force.

Great Outdoors Colorado (GOCO) Legacy Grant Proposal

Presentation: Jonathan Moore, Colorado Open Lands (COL)

- Colorado Open Lands recently finished a planning grant with GOCO to look at the Fountain corridor; broadened the partnership to include The Nature Conservancy, El Paso County, Pueblo County and Colorado State Parks; and came up with the Peak to Prairie approach. They are hoping to bring in broader participation, including cities (Colorado Springs, Pueblo, Fountain), water districts, etc.
- The Peak to Prairie planning grant is available for download on COL's website at: www.coloradoopenlands.org

- The overarching goal of the grant is private land conservation: landscape-scale conservation work, preserving as much as 50-70,000 acres of land in the next three years.
 - Can play a critical role in preserving key agricultural properties, potential recreation properties, and key wildlife habitat properties, to name a few.
 - Often look to work with agricultural producers as well
- Would like to bring a private component to the arena this task force is operating in and provide private landowners with incentives to preserve the habitat of their land through conservation easements. Would work on developing practical solutions with the landowner.
- Now have the opportunity to protect 10-12 key anchor properties that can possibly be linked together.
- It would be good to shape development patterns from a resource perspective
- Landscape grants are due March 23; the GOCO grant request will be around \$6-8 million
- Need to identify sources for matching money (around 25% of grant total) to GOCO funds in order to receive the grant money; need to be extremely creative to come up with those funds.
- Grant concepts are due to GOCO in March, funding notification will take place in mid-summer 2007, and the money is distributed in early 2008.
- State Parks was asked to be a part of the grant and is 100% in support of it. Part of what they are trying to do is set aside open space for trails. Part of what State Parks wants to do is preserve the agricultural way of life by creating and using a park as an educational tool to illustrate what ranching means (hay rides, chuck wagon cook-offs, etc.).

Question/Answer

- This study seems to be bound by a certain area that doesn't go farther north than Highway 24. Are you a member of the Colorado Coalition of Land Trusts?
 - The study does not generally go north of Highway 24 because of the need to key in on an area with the greatest opportunity to be effective and have an impact. This particular project has a boundary, but the organization is generally open to address other areas across the state. To the second question, yes, Colorado Open Lands is a member of the Colorado Coalition of Land Trusts. Their website is: www.cclt.org.
- Is there coordination between COL and county open space entities?
 - Yes; El Paso County's plan was recently updated to reflect work we are doing in the area.
 - There is a need to facilitate a discussion between Colorado Open Spaces and Pueblo City Council to bring them up to speed on the grant.
- What does this project mean for this working group?
 - How much would protecting private land help with the impervious surfaces problem?
 - It won't fix any of the problems, but it can help a little.
 - Other benefits are scenic value, flood absorption, community separator (perhaps with trail connecting), it allows for independent community identities, wildlife habitat (migratory bird habitat specifically, but also fish and mammals), and it preserves agriculture and agriculturalists (ranching way of life).

- Do you address the structure of floodplains? Does it go to the boundary of the 500-year floodplain?
 - The easements we are looking at will help us define floodplains; it really depends on the property.
- An advantage of purchasing natural lands might be the opportunity to remove malfunctioning septic systems in the property.
 - COL is not actually purchasing any property; they purchase the conservation easements (development rights), so they play no direct role in managing the property. This is the beauty of the system, but does not allow for those types of improvements.
- One participant noted that a danger associated with conservation easements is that they do not preclude utilities from coming through the property. With the “Super Slab” highway coming through, it’s something to think about.
- How can the Fountain Creek Vision Task Force help accomplish this project?
 - A letter of support from this group
 - Funding is the critical piece needed—25% matched funds (about \$1.5 million); local government contributions are particularly helpful
 - Other letters of support
 - Communicate support of the project to the communities
 - Private money is also helpful
 - To give money to the project, contact Juniper Katz at 303-988-2373.
- Is the Natural Resources Conservation Service (NRCS) funding any projects?
 - COL would go through the NRCS grant application process for those properties that fit their mission. The other projects that don’t fit the mission of the NRCS are what COL needs funding for.
- In the grant concept paper, Juniper has noted that the Fountain Creek Vision Task Force supports private land protection, and she asked the group whether they feel that is a fair statement.
 - This actually needs to be decided by the Consensus Committee,. Juniper will send the sentence to Heather, who will send it to the group for approval.
- In the 25% matching funds, does landowner donation count as match?
 - Donation of land does not count, as matching funds have to be a cash match.
- Is Working Landscapes a part of this?
 - Yes, not actively on this particular project but overall as an organization.

Lafarge Gravel Pit Plans

Presentation: Kevin Moore, Mark Vigil, M.L. Richardson, and Rusty Cochran; Lafarge North America

- Sundance property proposal overview
 - Currently have permit operating in the area, and there are roughly four years of reserves left at the current site. The site supplies materials into Pueblo, Fountain, and Colorado Springs and employs about 20 people. Lafarge is looking to replace that site with the proposed site.
 - The overall goal is to mine a natural resource and reclaim it—it is a temporary use. At the end of a project, water storage, lakes, land for development, etc. are created.

- Lafarge has been in El Paso County since 1959, with approximately 190 permanent employees in the county.
- Proposal
 - Gravel property lease with Sundance Investments for approximately 745 acres
 - Plan to mine 437 acres, timing based on market conditions
 - Continue to supply aggregate customers in El Paso County
 - Plan to reclaim affected acreage for agricultural uses and water storage at the end of the project
- Lafarge Sundance lease
 - The site is approximately five miles south of Fountain along the west side of Fountain Creek.
 - Access to the site will be onto I-25 using Exit 122.
 - Plant sites will encompass about 30 acres.
- There have been some wetlands identified on the property and they are being investigated; there seems to be no connectivity to the rivers thus they likely won't qualify as wetlands.
- Mining will proceed in phases with 20-30 acres mined per year.
- Concurrent reclamation will involve contouring and reseeding the disturbed land.
- Each major phase of mining represents 5 to 10 years.
- Project will result in the creation of two water storage ponds totaling 270 acres; remainder of the site will be returned to agricultural uses.
- Potential sources of water for long-term augmentation of water storage ponds have been identified.
- Plan to have monitoring wells on site to track natural seasonal fluctuations and potential impacts.
- There is a mitigation plan to offset potential impacts to groundwater.
- Setbacks from natural drainages flowing through site--minimum of 200-foot mining offset from any off-site structures, adjacent wells, and Fountain Creek (riparian area)
- Water
 - Best management practices
 - Settling ponds, berms, containments, silt fencing, etc.
 - Recycling water
 - Controlled discharge locations
 - State discharge permit
 - Daily monitoring, monthly sampling
 - Groundwater monitoring and mitigation plan
 - Piezometers (well monitors) (monthly water levels, semi-annual water quality testing)
 - Mitigation efforts (recharge trenches, mitigating water needs with dewatering water)
- Air: Adhere to Colorado Department of Public Health and Environment permits
- Noise/light
 - Light directed to minimize off-site impacts
 - Use of berms to shield noise and light
- Traffic
 - 750 total truck trips per day (design maximum)

- Will utilize Old Pueblo Road to I-25; majority of traffic will travel to/from the north immediately onto I-25
- Access permits from County and Colorado Department of Transportation (CDOT)
- Visual
 - Screening berms along I-25, north side of plant, and southern boundary of site
 - Natural riparian area along eastern boundary

Question/Answer

- State Parks would like to make a deal to use reclaimed water ponds for recreational use. Can you leave 270 acres of open water instead of covering it back up? Secondly, regarding highway access, there are a few railroad tracks there. Is CDOT requiring you to hold a permit for that?
 - Regarding the water rights issue: reclamation of the site is mostly going back to agricultural use. Water storage tanks are actually sealed vessels that will keep water from coming in or out, water in those areas will have to be dedicated through water rights through the landowner.
 - Regarding traffic: Lafarge is meeting with CDOT and El Paso County on that issue. There is other development going on in the area that CDOT would like them to work with to improve access.
- Is the restoration plan filed?
 - Yes
- Can the restoration plan preclude invasive species (Russian olive and tamarisk)?
 - Through permitting, have to put up a performance bond for the reclamation site. There is a seed/weed control program that is a part of the project during mining and during the reclamation process.
- Is there anything proposed in the reclamation plan around flooding?
 - Working with the county they have identified the 100-year floodplain which is illustrated on the project map. The idea is to keep the storage ponds away from that floodplain. They are conducting a floodplain study for mining and reclamation activities.
- What is the average depth of water and depth of digging?
 - Water is 10-12 feet; gravel averages 27 feet.
 - The water will be used in processing; typically no chemicals enter the water in that process
 - There is a recharge trench to bring aquifer back up to previous levels
 - Water storage will be constructed via slurry wall to create a natural barrier
- Is it critical to have the plant on this property?
 - The quality of aggregate at this site will exceed state/county requirements for construction.
 - It is important to have the plant on site because the aggregate needs to be washed of the clay and there is less impact and truck traffic if the plant is on site. We are also proposing to have concrete and asphalt plants on site.
- For the water you are using, are you accounting for an increase in stream flows in Fountain Creek? Secondly, do 750 trucks/day mean a 24-hour operation schedule?
 - County requires that stream flow be addressed in the floodplain study.

- The typical operation hours will be 6 a.m. – 5 p.m. Lafarge is asking for the ability to operate 24 hours/day because a lot of major construction projects operate at night, and they will need to be able to ship products to those projects at night.
- How much water will be required per year?
 - 220 acre feet is the anticipated consumption; have current lease with the City of Fountain for 330 acre feet.
 - Landowner has existing water rights that might be an additional source of water
- How many yards/tons are being taking off the site over the life of the project?
 - 15 million tons of sand/gravel
- Do you have any liability for erosion into the creek?
 - Liability is handled through state permits and the stormwater plan. Plan to have small berms around excavated areas to prevent runoff.
- What does this mean for the work of the task force?
 - How does this relate to easements, conservation of wildlife, noise/light pollution?
 - This may be the first of many gravel pits; want to figure out how to interact with this one
 - Visual impact from I-25 and adjacent areas
 - Not long-term, when mining is done all structures, equipment will be removed
 - With choice to not mine mountains, aggregate becomes increasingly rare
 - What is the potential for a conservation easement on the site post-operation?
 - Property owners are open to that idea
 - Would like to see approval be on the condition of a public trail corridor
 - State Parks would like to work with Lafarge when they start putting berms up to make them attractive, trees for birds, camping, etc.

Prioritization of Environment/Land Use Issues

Participants were asked to identify which issues this working group should pursue at its next meeting. The follow options were provided:

- Wetlands: there is major land use along creek that has impacts on water in the watershed
 - Do we have this information or do we need to gather it?
 - Ferris is working on a map of wetlands in the watershed
- Increased urbanization covers the other topics on the list; land use development is also related.
 - Suggest getting maps from PACOG related to increase in impervious areas as a start; there are land use issues separate from water quantity issues.
 - Agree with the bigger issue of urbanization in terms of where we anticipate development; look at Monument to Woodland Park to Pueblo—these areas that appear open are strategically being invested in with an eye towards development.
 - How can urbanization best enhance the ecosystem services in the watershed?
 - Education, planned land use is important.
 - Figure out what development is planned and anticipated impact in watershed for next meeting
 - Suggest speaking in general terms rather than specifics because of confidentiality issues
 - Suggest looking at open space plans as well as development plans

- Recommend looking at how planning for development can be done in a positive way and how this group can impact ecosystems in the watershed in a positive manner.
- Who do we want to present at our next meeting?
 - Pueblo City/County
 - City of Fountain
 - El Paso County
 - Colorado Springs
 - Palmer Lake
 - Monument
 - Teller County
 - Fort Carson
- Jim Munch, Bob Miner (volunteered by group) Sarah Keith, Dave Smesrud, and Mary Barber agreed to help develop the panel for the next meeting.

Next Steps

The next Environment and Land Use Working Group meeting will be held on **Thursday**, March 22 from 2-5 p.m. The meeting will be held at the Pueblo County Conference Room, which is a free-standing building at 1001 N. Santa Fe in Pueblo.

**Fountain Creek Vision Task Force
Land Use and Environment Working Group
March 22, 2007
Final Meeting Summary**

Attendance

Todd Ahlenius, Hal Alguire, Carol Baker, Mary Barber, Scott Cowan, Doug Fitzgerald, Ferris Frost, Kim Headley, Bill Healy, Bryan Johnson, Juniper Katz, Sarah Keith, Loretta Kennedy, Irene Kornelly, Rex Miller, Jim Munch, Jerry Pacheco, Julie Pearson, Kae Rader, Gary Rapp, Jane Rawlings, Tom Ready, Jane Rhodes, Kirsta Scherff-Norris, Richard Skorman, Dave Smedsrud, Ryan Tefertiller, Parry Thomas, Barbara Vidmar, Tim Williams, Jay Winner, Chris Woodka, Meggan Yoest, Heather Bergman, and Helen Littrell Smith

Action Items

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| Meggan Yoest | Put images from presentation into a PowerPoint and send to The Keystone Center for posting to the Fountain Creek website. |
| Meggan Yoest | Connect Tom Ready with the person to whom the Task Force can send comments/input about the La Farge gravel pit. |
| Ryan Tefertiller | Send links to information in presentation to Keystone to be circulated or posted for the group. |
| Ferris Frost and Mary Barber | Set up panel to present information about wetlands at the next working group meeting: definition, where do they exist, functions, creation. |
| Ferris Frost, Richard Skorman, and Bryan | Set up a panel to present to the Consensus Committee on the three imminent development projects, including the various planning |

Johnson departments to talk about their processes.
Richard Skorman Work with El Paso County to get a heads up about development projects in the works.
Keystone At the beginning of future working group agendas, ask for updates on known development projects in the watershed.

Meeting Objectives

- Hear presentations about anticipated land use and development in several jurisdictions in the Fountain Creek watershed
- Discuss anticipated developments and possible implications for the watershed with local land use planning experts to ensure a sound understanding of this issue
- Determine if/how to move forward with this issue

Panel Presentations on Anticipated Development in the Fountain Creek Watershed

El Paso County, Meggan Yoest

Note: We expect this presentation to be posted on the Watershed Study website. Questions should be directed to Meggan Yoest at (719) 520-7940.

- The presentation highlighted future and anticipated development in unincorporated El Paso County. Meggan shared a map of the major development applications currently underway, which are mostly residential.
- Eldorado Village: 2.5 acre subdivision intended to move density away from Fort Carson; La Farge is a part of this project.
- Rolling Hills Ranch (8,577 units), Lorson Ranch (7,000 units), Carriage Meadows (161 units), Cuchares Ranch (400+ units), Painted Sky (700 residential + some commercial)
- Ute Pass: Pyramid Mountain and Chipita Ranch; water will come from the Cascade Metro District
- Cimarron Hills: Claremont Ranches, Wilshire, Jessica Heights, Hannah Ridge
- Cathedral Pines (161 units)
- Forest Lakes, Black Forest Reserve, Sanctuary in the Pines, Meridian Ranch
- In 2006, there was an overall decrease in the amount of building permits due to the decline in the housing market.
- Meggan agreed to put the images from her presentation into a PowerPoint and send to The Keystone Center so it can be posted to the Fountain Creek website.

Fort Carson, Hal Alguire

Note: We expect this presentation to be posted on the Watershed Study website. Questions should be directed to Hal Alguire at (719) 526-3415.

- Construction is focused on land use to support the growth of the facility.
- There is construction happening throughout the cantonment area to support mission operations.
- Base Realignment and Closure (BRAC) construction: \$526 million from June 2006 – September 2009
 - Division Headquarters complex: \$104 million
 - Heavy brigade facilities: \$341 million
 - Evans Army Community Hospital alteration and consolidated clinic: \$81 million

- Anticipating the arrival of an additional 4,000 soldiers at Fort Carson from the 1st Brigade of the 4th Infantry.
- The biggest project in the cantonment area is the Digital Multipurpose Range Complex (D/MPRC), most of which is in Pueblo County.
- Community and housing facilities
 - The Army privatized housing units in 1999, and GMH Military Housing LLC is the contractor for these projects.
 - Building 401 additional family housing units
 - A lot of these projects will get pushed out time-wise
- Army/Air Force Exchange Services development will include retail areas, museum, car wash, kennel
- Strategic Mobility includes a facility to process soldiers prior to and after deployment just south of the Colorado Springs airport.
- All construction is built to the LEED® Silver standard.

City of Fountain, Dave Smedsrud

Note: We expect this presentation to be posted on the Watershed Study website. Questions should be directed to Dave Smedsrud at (719) 322-2022.

- The comprehensive plan was updated in August of 2006.
 - It established an overall framework that provides guidance to community decision makers.
- Establishing planning boundaries
 - The Three Mile Plan provides the right to comment on development occurring within three miles of Fountain's jurisdictional lines.
 - The urban growth boundary defines an area the city may be willing to serve if there is clear economic benefit to city.
 - The urban services boundary defines an area where the city shall provide at least three services. The city will likely serve this area in the next 10-15 years because it is anticipated that this is where the most immediate development will happen.
- Land uses
 - Zoning: Developing an annexation plan for unincorporated enclaves to determine whether to bring them into the city.
 - Future land use: The anticipated growth of Fountain will be to the south, east, and northeast of the city.
- Greenfrastructure plan
 - "Greenfrastructure" is a term to include any infrastructure that is green/environmentally-sound.
 - Fountain has unique opportunities for wetland protection and other ecosystem enhancement because it is at the confluence of Fountain and Jimmy Camp Creeks.
- Local measures to protect watershed
 - Fountain was the first government entity to require that post-development runoff be limited to historic rates. Fountain also enacted a stormwater detention policy in the early 1980s.
 - Discourage filling or modification of floodway or flood fringe.
 - Prudent Line: New structures have to be set back at least 100 feet from the 100-year floodplain, which gives the creek room to move.

- The city is considering low-impact development standards to reduce impacts from runoff. Low-impact development involves runoff water dispersement (landscaped areas, parks, etc.) instead of funneling it to a detention pond and putting it back in the creek.
- The city requires an environmental assessment study for new development. The developer must study hydrologic conditions and the impact associated with the development.
- Several large ranches are in Fountain's urban growth area. Kane Ranch and a portion of Norris Ranch have petitioned for annexation.
- Fountain's population has grown an average of 7% per year since 2000. It is expected to continue with the influx of additional troops at Fort Carson.
- Most of the city's commercial growth is at the northern end of the city.

Pueblo City/County, Kim Headley and Jim Munch

Questions should be directed to Kim Headley at (719) 583-6100 or Jim Munch at (719) 553-2242.

- The south end of the Fountain Creek watershed is at the north end of Pueblo County.
- The comprehensive plan was adopted in 2002, and it has been undertaken in a manner that evaluates population threshold rather than a specific timeframe.
 - Looked to accommodate a population of 200,000 people. The current population is around 150,000 people.
 - It is anticipated that Pueblo County may reach a population of 200,000 around the year 2030. The comprehensive plan will need to be reconsidered when the population gets close to 200,000.
- Anticipate that growth will continue in Pueblo West, which is receiving 58-60% of Single Family building permits; that has been the trend for the past six to eight years. It is also anticipated that there will be growth to the northwest of the university.
- The proximity between Pueblo West and Fort Carson is important; Pueblo wants to assist the Army in some of the protection of the land surrounding Fort Carson through conservation leases and easements.
- Some of the land in Chico Basin is being managed cooperatively with The Nature Conservancy. [Facilitator's Note: Questions were raised during and after this meeting about the accuracy of this statement. Representatives from Pueblo are investigating this and the results of that effort will be reflected in the final meeting summary.]
- Wildlife: The most intense wildlife density and diversity in the Pueblo portion of the Fountain Creek Watershed is in the riparian area along Fountain Creek, and to some extent to the east of the creek.
- The City and County jointly plan for development. The city adopts the plan separately, but generally the two entities work closely together and they have inter-governmental agreements to allow for the discussion of plans.
- There has been flooding in past years in Fountain Creek. Some of the last undeveloped lands in the Fountain Creek corridor are between Colorado Springs and Pueblo, and the pressure to build will likely occur in that area.
- Most of Pueblo's growth has been in the south corridor, and they are now seeing an aggregated Colorado Springs/Pueblo housing market.
- Pueblo is also seeing an increase in anticipated development

- Water is scarce and some people north of Pueblo (outside the city) are asking Pueblo for water. Pueblo would prefer growth to occur within the city and to see smart growth happening along the Fountain Creek corridor. They are willing to share in the duties of preserving open space along the corridor, but they don't want to be the only entity working on that.

Colorado Springs, Bill Healy and Ryan Tefertiller

Questions should be directed to Bill Healy at (719) 385-5358 or Ryan Tefertiller at (719) 385-5382.

- Colorado Springs is a sizeable community; it is larger in land area and population than Miami, St. Louis, and Cincinnati.
- Demographics
 - There are 10,000 permits issued per year. Of those, there are 1,500 major applications per year.
 - The city has a population of 400,000 people and is growing by 1.3% per year, compared to a regional population of 575,000
 - By 2030, the city's population is anticipated to be slightly larger than 500,000; the region is anticipated to be slightly larger than 800,000 at the same time.
 - Colorado Springs anticipates a downward shift of the city's population as a percentage of the region as growth occurs outside the city--from 69% to 63% (current to 2030); would like to focus growth within the city
 - Two-thirds of the population increases are net natural increase (more births than deaths)
 - One-third is from people moving into the area
- BRAC decision: base closures have impacted the population to some degree
 - 5,000 of the dwelling units are on the base
 - 1,000 single family homes are off the base
 - There are 4,500 off-base apartment units in Fountain, southern Colorado Springs, and Pueblo.
 - There is high vacancy in Colorado Springs now, and it is well-suited to meet the immediate off-base housing needs.
- Growth
 - Mostly in the north and east
 - Estimated that there are 30,000 open land acres, of which 10,000 are in-fill acreage surrounded by or close to existing urban uses.
 - Since 1990, the city land area has grown by 5%. Since 1980, it has grown 206%. This growth trend indicates that land area expansion is diminishing
- Recent and potential annexations
 - Flying Horse Ranch: 1,600 acres
 - Allison Valley: 460 acres
 - Woodman Corridor: 830 acres
 - Sterling Ranch (potential)
 - Tory Ranch: 740 acres
 - Island annexations
 - Have tended towards no annexation without property owner support
 - Typically can't come to agreements with property owners
 - Can't ensure fiscal neutrality to taxpayers in island annexation

- Other activities
 - Confluence of Monument and Fountain Creeks: Colorado Department of Transportation (CDOT) is studying Highway 24 as an option for an expressway. The city is working with CDOT on planning for a greenway along Fountain Creek.
- Urban renewal projects
 - Gold Hill Mesa: cap tailings with good soil to prevent tailings from entering the creek
 - Southwest downtown is being redeveloped
 - N Nevada: “Imagine Downtown” process; in 10-15 years there will be investment opportunities and large high-rises coming to downtown.
 - Transit is doing well
 - City Council stormwater rate approval is creating funding opportunities for stormwater enhancement.
- Proposed Streamside Overlay Changes
 - Streamside Overlay Ordinance was adopted in 2002(*Note: Information on this is posted on the website.*)
- Goals:
 - Improve relationship of land uses along the creek with the creek itself
 - Increase interaction between users and residents to promote stewardship
- Environmental issues
 - Riparian habitat
 - Positively influence water quality and quantity
- Trying to simplify/clarify ordinance, improve implementation. Went to Planning Commission and presented proposed changes. Commission encouraged interaction, coordination, and communication with stakeholder groups. Going back to Commission on May 3.
- Ryan will send links to Keystone to information to be circulated or posted for the group

Question/Answer and Group Discussion

ALL

- What is going on as far as ensuring that developments (specifically Highway 24) mitigate runoff?
 - City of Pueblo: Have funding from the Governor’s office for smart planning. Once annexed, subdivisions are required to be developed according to city regulations using low-impact development. Trying to address that issue with a joint planning grant from the State of Colorado.
 - Pueblo County: Looking at incorporating low-impact concepts (slowing down and spreading out flow). Currently require that post-development flows do not exceed historic, non-development flows.
 - City of Fountain: There is a code around low-impact stormwater development that isn’t being enforced across the region. There is an educational component that needs to happen.
 - Colorado Springs: Streamside ordinances, floodplain, different layers of plans and ordinances are in effect.
 - El Paso County: We have the same drainage criteria as Colorado Springs under the MS4 state permit and similar guidance around releasing to historic rates.

El Paso County

- Where is El Paso County getting water from for these developments?
 - Security and Whitefield Utilities
- Is there any concern about too much urban development happening? Water/well rights—is there concern that groundwaters will be depleted?
 - The long-range planning budget was the first to go into a budget crisis. They are working to update the comprehensive plan. Regarding water, the Squirrel Creek watershed is getting involved in reviewing planning. There is a concern and they are trying to work with local people.

Fort Carson

- Is Gate 19 inevitable?
 - Gate 19 is located west of I-25 and South of Butts Army Airfield and is currently not in use.
 - It is being considered as a possible way to get on and off of Fort Carson.
 - The airfield is important to Fort Carson, and access in that location would be good.
- If the gate is opened and the airfield isn't developed, would people use the gate as a better way to go south (to Pueblo or Fountain, for example)?
 - Today, if you use Gate 19 through the airfield, it would take longer to get north.
 - If Gate 20 is really clogged, Gate 19 might be a relief option.
- Is the aviation field coming to Butts?
 - There has been a lot of back and forth on that; it is unknown at this point.
- Looking for 1.5-2 mile buffers around the expansion in conservation easements and other forms; the main concern is populations to the east (Fountain) and the southeast (Pueblo West).

Fountain

- You showed a continuation blue line on one of your maps—that was Powers Boulevard at mile marker 123, which is where Clear Springs Ranch is located. Why did that get stopped?
 - Powers Boulevard: CDOT hired URS to do a feasibility analysis. They studied 10-12 corridors and the corridor selected came in at mile marker 123. CDOT doesn't have the funding for it at this time.
- How many units are in development?
 - Improved & platted: around 5,500

Colorado Springs

- Regarding the streamside ordinance changes, is the ordinance going to be weakened?
 - We don't have consensus among all of the parties on how the modifications should occur, nor what should and should not be modified. The biggest concern is how the overlay zone relates to the floodplain; we are trying to focus the overlay zone to improve development along the stream. Instead of planners trying to implement a floodplain fill restriction, the floodplain manager would review the plans. We are also retaining buffer areas and riparian protection. Putting restrictions in the floodplain code would encourage consistency.
- The Council of Neighbors and Organizations (CONO) opposed changes to remove the floodplain from the definition of the overlay zone (removal of 42% of 100-year floodplain). The challenge is to get that operation moved to the regional building department now that the Floodplain Administrator job has been eliminated. There is work to be done to make this understandable and comprehensive.

- We have gone to the Planning Commission and have to go back. In the mean time, we will work to try to address CONO's concerns. It is a proposal at this point, and we are trying to satisfy as many people as possible. A new staff report with further modified ordinances will be available at the end of April/early May.

Next Steps

- Is this the information the working group was looking for?
 - We have a good foundation in anticipated residential development, but some areas are looking at heavy industrial development and I don't think we have that piece yet.
- Pueblo and El Paso County have been approached about a potential power plant, and it has been approved in El Paso County at Squirrel Creek (Invenergy). It has a 40-year duration and will be a 450 kilowatt gas turbine plant. The idea behind this is that the best place to put a utility is in an existing utility corridor. Xcel put out an RFP that Invenergy responded to and the municipal planners had little input. The power plant is still waiting for final approval from the Board of Commissioners. A lot of conditions have been placed on the power plant around a water plan, conditions around grading, etc.
- Regional sewage treatment facility: Being considered for land purchased from Hannah Ranch, north of Hanover Road, lower Fountain Metro Sewage Disposal District. It has been on books for a while, and Colorado Springs is proposing their own treatment facility.
 - Have current capacity to handle treatment for 10-12 more years. Still planning on building a regional treatment facility.
- Commercial and office industrial (C&OI) lands in Colorado Springs: reducing emissions to improve air quality is a goal of the development of these types of lands. We have a 20-year build-out plan with a 200-year excess supply of C&OI lands. Trying to figure out where we can support the transfer back to other land uses of C&OI lands. There are heavy industrial demands in the I-25 corridor.
- Fountain: At the end of the power plant's 40 years it is supposed to return to a natural state. The energy company is into renewable energy, and the plant answers short-term need, and long-term power will be transferred in. Regarding the treatment plant, there is a need date where a new plant will have to come online.
- Does it worry people that the vision of this Task Force isn't at the table with some of the development going on? A lot of land use planning is happening, and I am concerned that we won't have the ability to incorporate these developments into our vision if we wait too long.
 - We don't always know what is coming down the development pipeline, and we don't feel like we have a voice in impacting what happens. There is a need to get into the planning loop to get ahead of future development.
 - Maybe this task force should work with land use planning commissions and send comments when a project is coming through the pipe.
 - I am impressed with the level of cooperation between the City and County of Pueblo. Can it happen in El Paso County and Colorado Springs?
 - It depends on the level—there is a lot of staff-to-staff cooperation currently going on; any time development is within three miles of Colorado Springs or Fountain, the various staff members work together on that planning.
 - Denver has a lot of intergovernmental agreements. One recommendation coming out of Fountain's annexation plan is to approach El Paso County with an intergovernmental agreement regarding land use, transportation, and utilities.

- Has the La Farge gravel pit been approved?
 - Not yet; Meggan will connect Tom Ready with the person who the Task Force can send comments/input to.
 - Suggest having one major interchange rather than two within a mile of each other (re: gravel pit and Powers Boulevard) and get ahead of the process.
- How do we make this information exchange about upcoming major land uses happen more often?
 - Find out what is imminent (gravel pit, power plant, wastewater treatment facility) and find out what their process is and how to influence those processes.
- What about enforcement? Are there people enforcing permits, planning?
 - Not really—staffing is an issue; but municipalities are trying to find creative solutions to that problem, such as holding the builder accountable to following mandates.
 - A community monitoring program is an option to get at this issue.
- El Paso County’s budget crisis has impacted staff levels in the planning department. When recommendations come in, there is no staff to implement or consider them.
- At the beginning of future working group agendas, Keystone will ask for updates on known projects.

WHAT NEXT?

- The Water Quality Working Group created a small task group to come up with specific ideas on addressing runoff problems. The Water Quantity Working Group decided to investigate what is required in various communities to control runoff and minimize water quantity concerns. What make sense for this working group? This working group could choose to focus on dealing with the three imminent land use projects coming up, but that might be for the Consensus Committee to undertake.
 - Suggest having a panel present to the Consensus Committee on the three imminent projects and have the various planning departments there as well to talk about their processes.
 - Ferris Frost, Richard Skorman, and Bryan Johnson will work with Keystone to put this panel together.
 - Richard Skorman will also work with El Paso County on getting a heads up about development projects in the works.
- See the role of this working group as being to implement what the Consensus Committee comes up with
- Think we need to learn about one of our other top issues while this other panel is going on so we don’t get too far behind.
 - Wetlands: need definition, where do they exist, functions, creation.
 - Ferris Frost and Mary Barber will help put together a panel on this topic.
- Next meeting
 - The next meeting will be on Friday, April 27 from 2:00 p.m. – 5:00 p.m. Venue TBD (depending on whether the State Parks headquarters building is ready).

**Fountain Creek Vision Task Force
Land Use/Environment Working Group
April 27, 2007**

Final Meeting Summary

Attendance

Carol Baker, Mary Barber, Mike Bonar, Anita Culp, Katy Fitzgerald, Ferris Frost, Juniper Katz, Steve Kettler, Carole Lange, Walter Lawson, Jim Munch, Jerry Pacheco, Gary Rapp, Jane Rawlings, Tom Ready, Krista Scherff-Norris, Richard Skorman, Ryan Tefertiller, Paul Thomas, Patrick Wells, Tim Williams, Niki Koszalka, and Heather Bergman

Panel Presentations

National Resources Conservation Service – Katy Fitzgerald

- ❖ Hydrophytic vegetation, soils, and hydrology define a wetland. A hydric soil is a soil that formed under conditions of saturation, flooding or ponding long enough during the growing season to develop anaerobic conditions in the upper portion. The vegetation in a wetland is predominantly a plant community that is water tolerant. Some of these types of vegetation include bulrush, spikerush, saltgrass, willow, and cattails.
- ❖ There are different definitions for wetlands. ACE defines a wetland as an area inundated or saturated for at least 5% of the growing season in most years. The Food Security Act defines a wetland as an area inundated for at least seven consecutive days during the growing season. Field indicators for wetlands include watermarks, drift lines, sediment deposits, and drainage patterns.
- ❖ There are several different types of wetlands including riverine (floodplain) wetlands, playas, and wet meadows. Wetland functions are filtration, water storage, habitat, and groundwater recharge.
- ❖ Less than 3% of the surface area of Colorado was originally wetlands. Of that 3%, approximately 40 to 60% of the original wetlands area has been lost. This equals approximately 1-3 million acres. The loss of wetlands, in Colorado, is greater proportionately to the losses in other habitats. Over 75% of native species are dependent on wetland and riparian habitat for a portion of their lifecycle.
- ❖ There are varied impacts to wetlands from development, agriculture and ranching, and water demands.
 - In terms of development, Colorado has one of the highest growth rates in the west. This comes with an increased demand on watershed resources and increases in impervious areas. Big box stores often seek out marginal lands due to low land values and small mitigation costs.
 - In terms of agriculture and ranching, wetlands are often altered to improve drainage or for water storage. Some grazing patterns can influence vegetation structure and diversity within and adjacent to basins, resulting in sedimentation and reduced wildlife value. Tillage through seasonal basins or adjacent to wetlands often results in sedimentation. Irrigation practices have often created wetland features on the landscape.
 - In terms of water demands, growth in populations means increased water usage. Agricultural practices are becoming more efficient and tilled acreage is increasing. There is invasive vegetation such as the tamarisk species that is utilizing more water than the native species.

- ❖ Restoration is very site specific. Restoration for riparian areas can include channel alteration and stabilization. Native vegetation plantings, invasive species control, and graze management can also help restore riparian areas. Restoration of wetlands can include filling of water concentration pits and grazing management. Additionally, installation of water control structures and water level management can aid in restoring wetlands.
- ❖ Some landowner programs that may be of interest to the Fountain Creek Vision Task Force are Wildlife Habitat Incentive Program (WHIP), Environmental Quality Incentive Program (EQIP), Wetland Reserve Program (WRP), Partners for Fish and Wildlife (PFW) and Colorado Habitat Incentive Program (CHIP).

U.S. Fish and Wildlife Service – Steve Kettler

- ❖ The technical definition criteria for wetland plants are that they need to tolerate prolonged periods of saturation. For soils, the technical wetland definition is that there is evidence of regular or prolonged periods of inundation to develop anaerobic conditions. In addition, for hydrology, the technical wetlands definition is that there are flooded or saturated soils for a significant period of the growing season.
- ❖ A wetland is a transitional area between uplands and water that make up a very small proportion of the landscape. Wetlands are very important for wildlife.
- ❖ The functions of a wetland range from biological, biogeochemical, and hydrological. Wetlands provide flood flow alteration in terms of short- and long-term surface water storage. Wetlands also reduce erosion through sediment stabilization and reduce flood damage through energy dissipation. Wetlands help to keep water clean by assisting in sediment, toxicant, and nutrient retention. Groundwater discharge/recharge, transformation, and cycling of elements are also functions of wetlands. The biological functions provided by wetlands include maintaining wildlife communities, distribution, and connectivity across the landscape.
- ❖ Wetlands are often cheaper in the long-term than building and maintaining infrastructure. Wetlands prove to be a benefit for wildlife, recreation, agriculture, aesthetics, and land uses. Wetlands provide a vast opportunity for outdoor education as well as active and passive recreation (hunting, hiking, open space, and bird watching). The value of wetlands is the goods and services that they provide. It is important for society to recognize the importance of wetlands.
- ❖ New York City researched filtration systems and found the estimated cost to be from \$2 to \$8 billion dollars. Alternatively, the cost to purchase land to maintain a functioning watershed, including wetlands, was estimated at \$250-\$300 million.
- ❖ Every 2.7 miles of coastal wetlands can reduce storm surges by about one foot.
- ❖ Congaree Hardwood Swamp in South Carolina removes the quantity of pollutants from the watershed equal to a \$5 million treatment plant.
- ❖ One acre of wetland can store 1-1.5 million gallons of water.
- ❖ Some potential partners in watershed and wetland work are DOW Chemical Company, Fish and Wildlife Service (FWS), Rocky Mountain Bird Observatory (RMBO), Colorado Natural Heritage Program (CNHP), National Resource Conservation Service (NRCS), Audubon Society, Colorado Open Lands, and The Nature Conservancy.
- ❖ Additional information is available from the following websites and resources:
 - <http://www.epa.gov/owow/wetlands/>

- <http://www.nmfs.noaa.gov/habitat/habitatconservation/publications/introfinal.pdf>
- CNHP biological & wetland inventories for Pueblo and El Paso Counties
- <http://www.cnhp.colostate.edu/reports.html>
- Tryon Creek Watershed - Portland, Oregon

[Facilitator's note: Mary Barber from Ft. Caron provided the following link for further information on wetlands. <http://www.colorado.gov/oemc/publications/index.htm> (scroll down to the end of the page).]

U.S. Army Corps of Engineers (ACE) – Anita Culp

- ❖ The Clean Water Act (CWA) has jurisdiction over "waters of U.S." which includes lakes, rivers, streams, intermittent streams, and wetlands. ACE defines wetlands in terms of saturated soils during the growing season and a predominance of wetland plants.
- ❖ In the Fountain Creek Watershed, typical wetlands are cattail and bulrush marshes, wet meadows of grasses and grass-like plants, and stands of willow shrubs. The makeup of wetlands in the Fountain Creek Watershed for El Paso County are open water and marshes make up 2.5 square miles, shrublands make up 2.5 square miles, wet meadows make up 5 square miles, and wetlands associated with streams make up 10 square miles.
- ❖ Wet meadows are found in the prairies in northern and northeastern El Paso County. As you go south into Pueblo County, the land becomes more arid and there are fewer wet meadows. Willow shrublands are found throughout the watershed along many streams. Marshes are found throughout the watershed, often along streams. Fountain Creek has a large cottonwood forest and an understory of willow shrubs. The cottonwood forest is filled with pockets of small to large marshes.
- ❖ Colorado Springs, as the largest urban area, has an evolving wetland resource. The increase of urbanization has enabled Fountain Creek to develop with willow shrubs lining the banks. This is not a regular or normal occurrence. Marshes fair less well with urbanization. More water carried by the stream often means downcutting of the streambed and the drying out of adjacent wetlands.
- ❖ Filling a wetland or stream requires a Section 404 permit under the CWA. Nationwide permits are issued at the national level and are available for use with little or no paperwork. Authorized fills include small fills (road crossings or pipelines), small- to medium-sized bank protection projects, and maintenance or rehabilitation of existing structures.
- ❖ Large fills require a Section 404, Individual Permit under the CWA. Typical large fill projects are developments, large bank protection projects, and stormwater control projects. Once an individual permit application is received, ACE must do an Alternatives Review and an Environmental Assessment. A public notice is also issued to solicit comments.
- ❖ Developments usually need an Individual Permit and the permitting issues are flood control and stormwater control. Most developments are required to meet certain stormwater and flood protection standards. This usually involves modifying streams since the easiest way to meet the standards is to hard line the stream banks. Many drainage basin planning studies actually recommend this kind of waterway modification. Wetlands serve several functions related to lessening of flood damage. Wetlands away from streams can act as sponges, absorbing snowmelt or rainfall and keeping the water from rushing quickly into a stream. Wetlands along streams can act as buffers, slowing

down water, allowing the water to spread out and become shallower, and holding the ground in place so that the ground is not eroded. Other permitting issues with developments are loss of wetlands and loss of natural streams. Most developers try to maximize developable land, and this usually involves straightening streams and filling in adjacent wetlands.

- ❖ Depending where in the watershed you are, wetlands (especially wet meadows) either are groundwater discharge points or recharge areas. In the upper watershed prairies, wet meadows and wetland channels are discharge points. They feed lower stream sections creating live streams on the prairie where none would otherwise be. Along Fountain Creek below Fountain, wetlands can be both discharge and recharge areas. During flood flows when water goes out of bank, the many small marshes located within the riparian woodlands, fill up with water.
- ❖ Bank protection projects greater than 1,000 linear feet (lf) usually require an Individual Permit, and land reclamation is often included in the project. The permitting issues at hand are stopping bank or bed erosion, loss of stream meandering with hard lining, loss of bank vegetation, and cutting off the stream from the floodplain including cutting off hydrologic support of adjacent or nearby wetlands
- ❖ Stream-modification projects include straightening channels to protect structures, building grade control structures to stop streambed elevation drop or build back streambed elevations, building drop structures to dissipate energy from increased flows, and building detention ponds to moderate flood flows. Most stream-modification projects require an individual permit. The permitting issues are the impacts to the ordinary high-water flow, loss of natural stream meandering, and protection or restoration of streambed elevations. This can be beneficial to streambank or streamside wetlands, in theory. In practice, the energy that is dissipated at the grade or drop structure causes erosion at the structure and makes it difficult for wetland vegetation to re-establish itself. Grouted structures are especially bad.
- ❖ In the ACE public interest review, weight is given to any drainage basin planning study that has been approved by a county or city. If the study is more than 10-20 years old, less weight may be given to it. It is difficult for ACE to deny a permit for channelizing and hard lining a stream. Watershed plans or goals would be a helpful product give to ACE. If there is an approved plan recommending preservation of wetlands or preservation of floodplains, this helps ACE evaluate proposed developments or stream modification projects and help us to preserve wetlands.

Wetlands Subgroup

- ❖ A wetlands subgroup was created to explore the potential role of wetlands in the Fountain Creek watershed. The subgroup is comprised of Ferris Frost, Tim Williams, Mary Barber, Juniper Katz, Carol Baker, Kirsta Scherff-Norris, and Frogard Ryan.
- ❖ The group identified several questions that would need to be answered before the wetlands discussion can proceed. It was agreed that it would be helpful to invite a wetlands creation and restoration expert to an upcoming meeting so the group can get clarity on some the issues surrounding wetlands creation. The questions the group identified are:
 - Is there a template for wetlands creation at the watershed scale?
 - What lands along Fountain Creek are suitable for wetlands creation or expansion?

- What are the different functions of numerous small wetlands versus a few larger ones?
- What are the limitations of creating and maintaining wetlands?
- What in the watershed would accommodate or facilitate wetlands?
- How can wetlands be integrated with development?
- What are the impacts to the water from wetlands?
- What types of vegetation are necessary for wetlands?
- ❖ The Wetlands Subgroup will schedule a meeting to brainstorm wetlands visioning and the strategic and political issues surrounding wetlands. The Wetlands Subgroup plans to make a presentation at the June 1, 2007 Land Use/Environment Working Group meeting.

Land Use/Environment Goals from the Consensus Committee

The group reviewed and revised the goals for land use and the environment that were drafted by the Consensus Committee. The updated goals for this group, which will be forwarded to the Consensus Committee for review are:

- Create a common land use vision, including a vision for recreation and other activities in the watershed
- Establish common land use policies
- Preserve, maintain, and enhance ecosystem services

**Fountain Creek Vision Task Force
Land Use/Environment Working Group
Final Meeting Summary
June 1, 2007**

Attending

Carol Baker, Elise Bergsten, Doug Fitzgerald, Ferris Frost, Bill Healy, Kim Headly, Juniper Katz, Jane Rhodes, Gary Rapp, Kirsta Scherff-Norris, Ryan Tefertiller, Tim Williams, Niki Koszalka and Heather Bergman

Action Items

Juniper Katz	Will contact KC Swanson and Tom Ready regarding Front Range Trail/recreation planning
Tim Williams	Will produce a map showing past, present and future ideas for the watershed including proposed and current wetlands
Juniper Katz	Has map information through 2006 and will send it to Tim
Tim Williams	Volunteered to find out Front Range Trail/recreation planning from Pueblo, El Paso County and Fountain
Ryan Tefertiller	Volunteered to find out Front Range Trail/recreation planning from City Park
Juniper Katz	Will arrange with Claudia Brown from Biohabitat for a presentation on wetlands
Heather Bergman, Carol Baker, the Technical Advisory Committee, and the Army Corps of Engineers	Will draw out a chart showing what the timeline of different projects and studies are

Carol Baker, Kim Headly,
and Bill Healy
Gary Rapp

Will ask the Army Corps of Engineers to consider wetlands

Volunteered to track progress of the Fountain Creek Vision Task Force in regards to ecosystem services being integrated with land uses

Wetlands Visioning

- ❖ The Fountain Creek Vision Task Force should incorporate wetlands into its plan. Part of the Fountain Creek strategic plan includes solutions to excess erosion, sedimentation, water quality concerns, and flooding. Another part of the Fountain Creek strategic plan is a Front Range Trail along Monument and Fountain Creeks with amenities for recreation, education and wildlife viewing.
- ❖ According to the Land Use/Environment working group meeting of April 27, 2007, wetlands can help clean containments from the water, attenuate flooding, and help regulate erosion and sedimentation. For wetland creation, there would need to be a diversion with a valve at the front end, it would need to be determined how and when the valve would be switched so water could go off course and into a wetland. The wetland would act like a sponge and there would be specific plants to treat specific pollutants. The wetland would have to be a certain distance from the creek so that the water would infiltrate in the required 72-hour period.
- ❖ Off-channel and on-channel wetlands could be used for erosion prevention, sedimentation control, water quality improvements, and flood attenuation. Approximately 100 acres of wetlands could attenuate 3500-5500 cubic feet per second (cfs) of water in over one hour.
- ❖ There are E. coli problems with higher flows. There could be wetland vegetation around the creek that work to uptake E. coli. It would need to be determined if the channel capacity is reduced by vegetation. The vision is outside of the main stem. The concern in regards to the reduced channel capacity is more for large shrubs and trees than small plants.
- ❖ If the Southern Delivery System (SDS) preferred plan were chosen it could go hand in hand with wetlands creation.
- ❖ The idea of wetlands creation being dependent on the preferred option of SDS caused a debate. There were uncomfortable feelings that they were being lumped together.
- ❖ Three of the SDS alternatives include a return flow pipeline. This would result in base flows being reduced. The wastewater return flows reduce some of the pollutants in the creek. There would be less water available for plants. Currently, 80% of base flow is wastewater. The SDS return flow pipeline would not replace existing return flows. It would remove all return flows. The Environmental Impact Statements (EIS) will look at what the impacts will or will not be due to the pipeline.
- ❖ Wetlands will attract and support birds and other wildlife. The wetlands sub-working group would like to see existing wetlands and riparian areas protected, enhanced, and new wetlands created with in the watershed as much as practicable. The wetland and riparian areas would be designed to create healthy ecosystems to attract wildlife, support it, and improve watershed health. Wetlands would also create environmental and wildlife experience opportunities, provide adequate water to maintain wetlands, and consider current and future landowner plans. The wetlands sub-working group would like to

create a collaborative process with appropriate stakeholders. This group could capitalize on available studies/data, including the Army Corps of Engineers (ACE) study. It will be imperative that the group considers how to best utilize available Federal and State funds for both capital and operations/maintenance needs.

- ❖ The stakeholders could include but are not limited to Fountain Creek Vision Task Force, ACE, the Technical Advisory Committee (TAC), Colorado Water Conservation Board (CWCB), Colorado State Parks, Colorado Open Lands (COL) and other land trusts, State representatives, private landowners and developers, Fort Carson, Sierra Club, Division of Wildlife (DOW), Ducks Unlimited, Rocky Mountain Bird Observatory, watershed counties, cities and area governments, watershed stormwater management authorities, Audubon Society, Trout Unlimited, Xcel, Open space and parks, Natural Resources Conservation Service (NRCS), Recycling Coalition, and conservation districts (Central and Turkey Creek).
- ❖ There is a \$600,000 Request for Proposal (RFP) that Lower Arkansas Utilities and Colorado Springs Utilities create a Corridor Master Plan (CMP) for Fountain Creek. Included in the CMP are measures to improve watershed health, trail opportunities, and collaboration with stakeholders. The CMP will also provide an implementation strategy including a timeline, budget and funding sources. Some frustration was voiced over the spending of \$600,000 on another study and plan. It would be better to see the money go toward implementation. The \$600,000 for the CMP is money that belongs to Colorado Springs Utilities. They will decide how the money is spent and if it is available for implementation or planning.
- ❖ There needs to be a mapping project including proposed and current sites for wetlands. Also included in this mapping are all nature centers, trails, landowners, and infrastructure of the watershed.
- ❖ It is important to know what plan is doing what, when the timing is and what type of collaboration are they interested in. The Fountain Creek Vision Task Force needs to know this so that it can leverage some implementation of its own ideas. There will be some convergence and some divergence between groups. It would be a shame to overlap studies with the CMP, ACE, the TAC and the Fountain Creek Vision Task Force. Heather Bergman, Carol Baker, the TAC, and a representative of ACE need to sit down and draw out a chart. There will have to be much collaboration with the groups. The concern is more that if there is duplication, the community will consider this a waste of money and their support will wane. The public's money should not be spent on studies that are not feasible or useful. It is important the wetlands conversations continue for the next few months. It is important to open the communication between the Fountain Creek Vision Task Force, ACE, CSU and Lower Arkansas Utilities. It would be beneficial to see all the light bulbs go off and begin to work together.
- ❖ The Wetlands sub-working group suggests that a wetland plan is created. In addition, it is suggested that coordination occurs with the CMP and investigation of funding opportunities. Finally, it is suggested that COL and other land trusts be supported in their current work to protect existing wetlands/riparian areas as well as new possible sites. The wetland plan is more detailed than the CMP. The Wetlands sub-working group would like to see the Intergovernmental Agreement (IGA) be signed by nine parties rather than two.
- ❖ The Wetlands sub-working group sees the timeline as follows:

- Land Use/Environment meeting on Wetlands: April 27, 2007
 - Wetlands sub-working group meetings: May 9 and May 29, 2007
 - Lower Arkansas/Springs Utilities initial meeting: May 18, 2007
 - Land Use/Environment second meeting on wetlands: June 1, 2007
 - RFP release: June 14, 2007
 - Recommend to Consensus Committee: July 20, 2007 (?)
 - Final input for Colorado Open Lands: August 1, 2007
 - Award contract for Corridor Master Plan: August 7, 2007
- ❖ Claudia Brown from Biohabitat is interested in discussing wetlands with the Fountain Creek Vision Task Force. Biohabitat works with ecorestoration and creates plans similar to the visioning of the Task Force. Alan Carpenter is willing to go to the properties of Ferris Frost and Jay Winner to see if wetlands are appropriate for their properties.

Questions/Answers

It seems that, at times, it is safer to do smaller things higher up in the watershed. Would wetlands work on the tributaries?

Flood attenuation would not be as effective but some of the other wetland uses could be helpful. There are elevated levels of E. coli in Monument Creek. Where there is already development, there is less opportunity to create wetlands. In the upper watershed, it tends to be drier, which would be less effective for vegetation. It would be best to focus between Colorado Springs and Pueblo. There must be enough water to support wetlands.

Does ACE deal with restoration?

Historically, ACE deals in flood control, bank stabilization and channelization. However, they have incorporated restoration recently.

Would it be better for the Consensus Committee or the Wetlands sub-working group to approach ACE?

It would be beneficial to get the Consensus Committee behind the idea of wetlands. The approach to ACE from the Consensus Committee could have more influence than coming from a sub-working group. There is a hope that after presenting the wetlands proposal to ACE that they will want to incorporate the ideas into their study.

Would Biohabitat present material on wetlands in general?

Claudia, from Biohabitat is willing to present material to the Consensus Committee that is specific to the Fountain Creek watershed.

In terms of getting water to the wetlands, would this not be an intrusion of water rights?

There may be the need to purchase water rights. It may be contentious to purchase water rights from people who have to feed crops. There are people who offer CSU the opportunity to purchase their water rights regularly.

Is ACE a viable funding source?

Kim Headly, Carol Baker and Bill Healy will ask ACE to consider the wetlands. A member of the TAC group suggested that all the money in the ACE study has yet to be allocated to specific tasks. It is not important how the information is conveyed to ACE just that it is. It would be

helpful because ACE is a funding source. They now have incorporated environmental restoration as one of their funding issues.

How can the Fountain Creek Vision Task Force initiate a better “cross walk” with ACE in terms of what each group is doing?

A group should go to ACE to bring ideas and ask questions. It is important to gather more information as to what they are planning and working on. If ACE is in the process of an EIS, they may have to do an environmental assessment for projects. The time to procure funding is during the construction and environmental assessment phases. The Fountain Creek Vision Task Force needs to get its ideas and projects involved at that point. In terms of community involvement, the Fountain Creek Vision Task Force has better participation than the TAC. It is important that ACE knows what the desires of the community are. The Outreach Committee is producing a power-point production for the Fountain Creek Vision Task Force. This could be a good tool to use with ACE. Before anything is discussed with ACE, there needs to be approval by the Consensus Committee. Carol Baker, Bill Headly, and Kim Headly will contact ACE before the next Consensus Committee to see if ACE will meet with the Fountain Creek Vision Task Force. This then can be put up for vote with the Consensus Committee.

In the tributaries, are there some wetlands that could be observed?

There are many wetlands in the system that could be observed. Some have been infiltrated by invasive species. There are wetlands in the upper reaches of tributaries. Landowner participation is very important for wetlands as well as flow regime. There are existing wetlands but recreating wetlands that have dried up would be a recipe for failure.

What kind of sedimentation and maintenance issues are there with constructed wetlands?

This is more of a question for Biohabitat. There may have to be some human maintenance because there is no natural system for cleaning them up.

Is there a way to convert woody riparian vegetation to herbaceous vegetation?

No. One critical aspect of a healthy watershed is having the woody plants, not only for the health of the stream but also for wildlife especially raptors and fish. Cattails and grasses can come back to the watershed if there is removal of tamarisks. There has been work to replant cottonwoods. They are great for bank stabilization especially when they are not in the channel. If there is a need for physical removal or planting there may not be a need to fund all of these things. There are environmental groups are dying to get out and get their hands dirty.

Return flows, in terms of transbasin waters, in a pipeline could be diverted. Would this be harder with native waters?

The EIS is covering native and non-native return flow. There is less evaporation with the pipeline. Currently there is not a plan to have exchanges along Fountain Creek but there will be exchanges on the Arkansas. Thirteen percent of the water in the Arkansas is transbasin water, meaning that it comes from outside of the basin. CSU has the right to exchange the water to extinction. Only 4.1% of the water is used by Colorado Springs, the rest is used in agriculture.

When CSU buys transbasin water rights, is it always included that the water will go to farmers after it is used? Alternatively, can CSU use it for what they feel is beneficial? Do we have the right to use it for beneficial uses?

CSU can use it to extinction through exchanges. If CSU uses it for wetlands, they lose what is consumed by the vegetation or through evaporation. CSU would owe the missing water to someone. It would probably more efficient to purchase agricultural rights if available.

In terms of the Land Use/Environment group, who is addressing recreation, the Front Range Trail, fishing, etc?

KC Swanson, a representative from Colorado Springs State Parks has lots of information regarding the Front Range Trail. He would be excited for COL to assist with the project. He feels that it is a top financial priority for his area but there is no money being allocated for the project. There is a hope that COL can work to find if people are interested in easements and in having the trail go through their lands. KC Swanson would be happy to receive information from the Fountain Creek Vision Task Force. He would also like assistance in planning the Front Range Trail from the Fountain Creek Vision Task Forces. The CMP also has plans to assist in the Front Range Trail project. Having a trail and outdoor amenities is part of the CMP. The more the Fountain Creek Vision Task Force can assist with ideas and planning, the more money is available for implementation.

Could the Fountain Creek Vision Task Force bring in someone from the Front Range Trail to show what is in place, where there are gaps, and how the Task Force can help in the process?

There was a discussion with KC Swanson about water quantity in regards to maintaining the floodplain. There is a plan in Colorado Springs for a park with Colorado Springs and El Paso County. Perhaps there should be a panel discussion from all the cities and counties to verify what if any plans are on the table.

What is the difference between a watershed authority and a regional planning authority?

An authority is a mechanism to provide funding and to sign off on all regulatory initiatives. In terms of the Fountain Creek Vision Task Force, the authority would be more coordinating than funding. The authority would have a coordinating role as it affects Fountain Creek and funding.

Next Steps

- ❖ It would be great for the Task Force to have a map that could be rolled out and where new ideas or plans could be shown. There have been several presentations from groups with land use plans for the watershed. Tim Williams offered to produce the map. Juniper Katz has map information up to 2006 and plans to forward it to Tim. There are items that would need to be layered on to the mapping with existing information.
 - Existing parks and trails
 - Land Uses
 - Private and public lands; ownership
 - 100 year floodplain
- ❖ The Front Range Trail is a good starting point for recreation. This does not have to be the sole focus of the land use/environment group. In terms of recreation, Tom Ready has a host of ideas regarding Fountain Creek and the Front Range Trail. It is a good place to

do brainstorming but does not seem to have any funding. The Trust for Public Land (TPL) has passed a bill to raise taxes without there being an actual tax increase. This could offer funding or support to ideas. It is necessary to understand what each community has planned for trails. To do this, there will need to be a discussion and sharing of ideas among the cities and counties. Tim Williams volunteered to find out information from Pueblo, El Paso County and Fountain. Ryan Tefertiller will find out information from City Park. Juniper Katz will contact KC Swanson to see if he or another staff person would be willing to talk to the group. She will also contact Tom Ready in regards to being a panelist.

- ❖ Juniper Katz will arrange with Claudia from Biohabitat to give a presentation regarding creation, maintenance and visioning of wetlands. Questions that the group would like Claudia to answer are as follows:
 - What if the water level is lifted above floodplain?
 - What are the human maintenance needs?
 - Are woody plants or herbaceous plants better when dealing with wetland function?
 - Once a wetland is created what is the environmental education needed to help with the wetland to be successful?
 - What is the cost in terms of plan and creation?
 - How long does the process of plan and creation take?
 - There would be various hypothetical questions in regards to SDS and if it changes the flow regime.
 - Could there be some real world examples show to the group?
 - Once a wetland is created, is there a differential in terms of cost in regards to location?
- ❖ Gary Rapp will track the progress of the Fountain Creek Vision Task Force in regards to ecosystem services being integrated with land uses.

**Fountain Creek Vision Task Force
Land Use/Environment Working Group
June 29, 2007
Final Meeting Notes**

Attending

Carol Baker, Elise Bergsten, Claudia Browne, Dennis Darrow, Ferris Frost, Mark Glidden, Juniper Katz, Brian Kay, Sarah Keith, Carole Lange, Bob McGregor, Nancy Preevy, Gary Rapp, Kirsta Scherff-Norris, Vince Sortman, Casey Swanson, Ryan Tefertiller, Tim Williams, Niki Koszalka, and Heather Bergman

Action Items

Claudia	<ul style="list-style-type: none">▪ Send Kirsta Sheriff-Norris and Ryan Tefertiller the Boulder report on buffers.▪ Send CAP link to Heather
Heather	Ask the Army Corps about a deadline for getting feedback from this group.
Tim	Send Heather the link to the Greenway trail map.

Presentations

Wetlands in Fountain Creek (Claudia Browne, Biohabitats, Inc.)

- ❖ Biohabitats, Inc. is an applied ecology firm whose scope of work includes conservation planning, ecological restoration, and regenerative design.
- ❖ Wetlands may be located along the edges of streams and ponds, as well as on hill slopes and in depressions. Wetlands and stream corridors represent a small percentage of the Colorado landscape. Wetlands are about one percent of the landscape but support 80% of all vertebrate wildlife and more non-bird species than any other habitat area.
- ❖ The value of wetlands includes ecological processes, cultural/historical significance, recreational uses, and economic benefits. The functions of wetlands include water quality, stream bank stabilization, flood flow alteration, and habitat restoration.
- ❖ The Society of Ecological Restoration (SER) is a premier entity regarding ecological restoration. Restoration implies that the natural processes and functions of an ecosystem are self-sustaining.
- ❖ The tools used by in eco-restoration are restoring hydrology, revegetation, placing structures, and realigning channels (natural channel design).
- ❖ Biohabitats projects include:
 - **Warms Springs wetland in South Park, Colorado** This is a former peat mine. The surface material was scraped away. It is very dry and devoid of vegetation. It is considered a wetland mitigation project. Ground water monitors were installed for a year. It was a confirmed hunch that irrigation was the “fly in the ointment.” Engineers came up with a piping plan to put surface water underground. The soil was regrated to create a substrate for the plants, allowing groundwater to flow over the pipe and fill the lower levels of the created wetland.
 - **Rock Creek in Ignacio, Colorado** This project dealt with a lot of eroding sediment. There was a hairpin turn in the meander with increased sediment. Biohabitats helped to realign the chamber and created an oxbow to create a wetland for storage.
 - **Nine Mile Run in Pittsburg** This project involved opening an underground pipe to daylight to create wetlands through the valley. There was also ground water monitoring and creating some depression areas that could hold the groundwater. The City of Pittsburg paid for the design, and ACE paid for the construction.
 - **Howards Branch, Maryland** This was a severely eroded channel, so small check dams were installed, the land was grated to create pockets, and the whole valley floor was re-hydrated. The channel needed to be brought back to the surface. The project was a bit controversial as there was no distinct channel, and some groups felt there should be. The dams are typically made of cobble (stones that are 3-6 inches in diameter) centered around boulder-sized sandstone pieces. This makes a large dbump that is not visual, like a gradual speed hump. The approach is to use natural design and resources/materials found in the area.
- ❖ Wetlands projects like these can be done in urban or rural areas.
- ❖ The City of Boulder has a wetland protection ordinance, including a regulated buffer setback on waterways. The wetlands are mapped and protected. There are over 100 wetlands in the city, and the City is doing evaluations of them. Greenways can be developed as an incentive to restore and protect wetlands. There often is the need for habitat maintenance crews. The City of Boulder recognized the need for a stewardship role. These stewards deal in small-

scale restoration projects, weeding, replanting, etc. The City of Boulder is strategic in picking the sites that they choose.

- ❖ In planning a project, it is important to know for what you are planning.

Questions and Answers

What is a buffer?

A buffer is a transition zone of aquatic and upland habitat. The width of buffer depends on what the goal is. The buffer is the area between the aquatic resource and the built environment. Municipalities often struggle with buffer zones especially when not managed by one entity.

Do the City of Boulder's buffers vary by stream width?

Yes, every buffer is different. The function of each buffer depends on the stream. Currently there are many theories about different buffers for different classes of streams. The buffer around small channels should be bigger, because small channels are more sensitive. Buffers can vary in widths, depending on function. Fifty meters is the minimum.

What is the goal for the buffer?

The goal will determine what the width of the buffer. For Fountain Creek, it would be important to determine the goal and then determine the buffer.

- ❖ Hog Island was an Environmental Protection Agency (EPA) project in Michigan. It was considered an under-performing island. There were stakeholder and visioning meetings. These meetings got people to come together to find a common language about what they care about and to prioritize what it means for restoration possibilities and timelines. The result was an ecological restoration master plan.
- ❖ The Jamaica Bay project needed lots of coordination and stakeholder meetings. This helped to strategize what mix of tools will help them get more “bang for the buck.” It is important to go back and look at the historical context and what the potential of the watershed is. Groups can use a strategy from The Nature Conservancy to do a threats analysis to determine why the system is impaired. There are great tools available. Including the Conservation Action Plan (CAP). Ranking tables are used to help prioritize goals.
- ❖ The Delaware City project dealt with revitalization, organization, and improvement of historic and cultural attractions to draw new residents and visitors.
- ❖ The Biohabitats approach is a stakeholder visioning process, evaluation and planning, design and construction. How a site is evaluated depends on what the group wants to do. Education starts early. Restoration is a good way to bring people together. Out of stakeholder workshop comes a visioning strategy. There is quite a bit of collaboration in the design process, creating the future, the final design drawings, and installation/construction oversight. Wildland Restoration Volunteers (WRV) has over 100 projects. They are good at organizing people, are safety conscious, are talking about seeding new organizations in other areas, and could be a good fit for this area. WRV tends to work best on one-day projects.

Does Biohabitats work with grant money?

Sometimes. We are willing to help clients however we can, and we are always aware of ongoing work and efforts to pay for projects with grants.

Do you have any thoughts on what to do about sediment?

The first thing that has to be determined is where the wetland is situated in the floodplain and how much sediment there is. There is a way to create a wetland farther from the Creek using a less sediment-heavy tributary. It is important to look for opportune places to create a wetland. Fountain Creek has lots of sediment, baseflow, and stormflow. There is a lot of sediment in the floodplain. You need to look for areas that have the best potential for wetlands to survive without getting inundated with sediment. A reservoir system could help hold sediment back. Sediment loads as in Fountain Creek are not a deal breaker for wetlands.

Is the Corps willing to look at our vision and incorporate it into their recommendations?

(Response from a member of the wetlands sub-team.)

The wetlands sub-team met with ACE. Recreation is not the goal for the Corps, but they are interested in wetlands. They will start coming to Consensus Committee meetings, starting with the July meeting. Our impression was that they are willing to try to work with us. ACE does not have the authority to create wetlands. Rehabilitation and creation are not the same thing.

Do you look at source controls for runoff and connect that to habitat restoration?

Biohabitat gets very involved in this. In Jamaica Bay, part of their strategy is to use best management practices (BMPs). Mapping the function of wetlands in Boulder, the wetlands just were not looking better even with all the BMPs. The areas that were already developed were contributing so much to the problem. They determined that you need to have someone monitoring the resources and enforcing the BMPs. BMPs are not a silver bullet.

Can we use runoff from new developments to create wetlands?

Some of the buffer studies show that the developed areas had less sediment than undeveloped areas. The more water that can be captured where it falls, the better.

What techniques do you use to integrate runoff into streams?

This is typical of all urban areas. Urban areas take rainfall and get it into the channel quicker than in the past. The channel is not used to that water, which causes erosion. The best way is to stop that water at the source, at the impervious areas—to get it into the ground and recharge groundwater. Of course, the types of soils and structures all make a difference. The ideal is to create some sort of infiltration (sand filtering, rock filtering, etc.). Infiltration trenches (vegetated swales) and vegetation are very important.

Are there any issues with water rights?

This is a big deal in Colorado. I am not sure how to get around this issue. I think you have to put water rights into the mix. Maybe you could get an in-stream right to sell. It is tricky.

Have you been able to infiltration techniques at the homeowner level?

Yes, we have worked with people to create rain gardens at the bottom of their drainpipes. This helps with infiltration.

What is your failure rate, and do you avoid projects due to difficult circumstances?

We would have to do some research to find out if a wetland can or cannot work in a certain situation. Wetlands seem to be more stable than streams, and they generally seem to do fine. Work in urban area streams does have a higher failure rate.

We do not generally see complete project failures, but from time to time we do see a bank fall out. Our projects are guaranteed for a certain period. At some point, projects turn into maintenance and stewardship endeavors. One of biggest challenges is that everyone wants open space, but it is not always clear who is going to take care of it. Engaging of the community is important and requires a long-term relationship.

Are restoration and creating wetlands different projects?

Yes, but you can do both.

Group Discussion

- ❖ The group determined that it would be useful to get into some of the specific goals for wetlands, but decided that it would be best to do that in a small group.
- ❖ There was discussion about waiting until the recommendations from the Army Corps study become available, but it was agreed that the group can set its own goals in the absence of this information.
- ❖ Several participants felt that it might be useful to identify some areas on a map and set some goals, and then bring these to the public for a discussion. Then, a revised wetlands vision could be presented to the Army Corps for inclusion in the Fountain Creek Watershed Study.
- ❖ The group decided to do some wetlands goal setting at its July meeting. Although it might be good in the long term to provide goals for the whole watershed, it was agreed that goals should first be identified for the Fountain Creek corridor.
- ❖ For a public meeting, the matrix, bar graph, and chart that Biohabitats demonstrated might be useful to get the public involved. Keystone's electronic polling technology could be used.
- ❖ Wetlands banking might also be an interesting idea to pursue. El Paso County may have information about this.

Current Recreation Planning in the Watershed (Tim Williams, City of Pueblo and Pueblo Area Council of Governments)

Tim Williams provided and explained a variety of maps of the Fountain Creek Watershed. These maps included data from Colorado Springs, Fountain, the City of Pueblo, and Pueblo County. Tim indicated that a few other entities in the watershed would like to participate in the mapping effort, but they do not have GIS capabilities. Tim is working on getting data from El Paso County.

After some discussion of the maps, the group asked Tim to prepare more maps for the July meeting. If possible, these maps should include maps of:

- Key invasive species
- Floodplains
- Major projects
- Southern delivery system alternatives

- Public and private lands
- Biodiversity
- Aggregation or degradation of stream banks

Additionally, the group requested that Tim do some groundtruthing of some of the questionable trails on the recreation map and, if possible, provide some composite maps with multiple GIS layers on them so that people could look at two elements together (like floodplains and biodiversity).

Next Meeting

The next meeting of this group will be July 19th from 9 a.m. to noon in Colorado Springs.

**Fountain Creek Vision Task Force
Land Use and Environment Working Group
July 19, 2007
Final Meeting Summary**

Attending

Carol Baker, Mary Barber, Dennis Darrow, Ferris Frost, Brian Kay, James Kulbeth, Carole Lange, Dennis Maroney, Jim McGannon, Gary Rapp, Sandy Rayl, Tom Ready, Kathleen Reilly, Lisa Ross, Kirsta Scherff-Norris, Ryan Tefertiller, Parry Thomas, Paul Thomas, Tim Williams, Niki Koszalka, and Heather Bergman

Action Items

Ferris Frost and Tom Ready	Meet to discuss comments on the Lafarge gravel pit project
Lisa Ross	Prepare outfall map information for Colorado Springs
Tim Williams	<ul style="list-style-type: none"> • Prepare outfall map information for Pueblo • Contact Fountain regarding outfall map information • Send Heather maps from today’s meeting for posting on the website

New and Pressing Issues in the Watershed

A participant expressed ongoing concerns about the proposed Lafarge concrete batch plant and asphalt facility and its potential impacts to the Fountain Creek watershed. Ferris Frost and Tom Ready are going to meet to discuss possible additional comments on the gravel pit. These comments will not be submitted on behalf of the Task Force.

Review and Discuss Maps: Tim Williams

The group reviewed a variety of maps to identify possible opportunities for wetlands creation. These maps focused on land ownership, biodiversity, floodplains, existing wetlands, and recreation opportunities. Based on this very high-level examination of the maps, the group identified a series of sites to explore and discuss as options for wetland creation or protection:

- ❖ **Williams Creek** has many wetlands and is currently being studied. CSU is talking about putting a return flow reservoir and may do some wetlands repair. One option for wetlands locations is Williams Creek on the Frost Ranch.

- ❖ **Pueblo Springs Ranch** is about 2,400 acres. There are attempts to keep development out of floodplains and migration paths. The work is pro low-impact development. Pueblo Springs Ranch is also looking to complete wetlands.
- ❖ **Jimmy Camp Creek** is expected to be very well protected.
- ❖ **Banning Lewis Ranch** is also not expected to see much development. New easement properties could have a stipulation as to whether or not wetlands could be created. Research would need to be done to determine if wetlands could be created on properties that already have conservation easements.
- ❖ **At Exit 128 near Fountain**, there are currently wetlands.
- ❖ An opportunity to restore wetlands could be rebuilding **the 60-acre pond on the Greenview Trust in Pueblo** to 47 acres.
- ❖ Some other wetlands restoration opportunities are **treatment facilities** in the watershed, **the Rhodes property at the old Pinon Bridge**, the area around the **current Pinon Bridge**, **Fort Carson at I-25 and route 85**, and **Fountain Mutual Ditch**.

Determining where the most stable and non-stable areas of Fountain Creek are is an important first step in deciding where to create viable wetlands in and around Fountain Creek. This information will be available in the Fountain Creek Watershed Study. It would also be helpful to look at a map to assess what kinds of birds an area would attract and build wetlands to attract the kinds of birds that people are interested in watching. Entities that may be helpful in this effort include Ducks Unlimited, The Nature Conservancy, and The Audubon Society.

Additional Discussion on Wetlands

- ❖ There needs to be research to see if there are wetlands that could be preserved.
- ❖ It is important to note that not all wetlands can be all things. The group will need to prioritize what they want individual wetlands to do. Overall, the group identified the following priorities for wetlands in the watershed: wildlife habitat, water quality improvement (filtering), recreation, flood control, education/interpretation, and open space protection.
- ❖ Some participants stated that wetlands are dynamic and cannot be forced to achieve a particular function. At any given time, a single wetland will achieve all of the goals, and at other times, it will achieve fewer of the goals.
- ❖ It may be necessary to get more site-specific to decide on a wetlands function.
- ❖ The group expressed an interest in pursuing the matrix-based scoring that was mentioned at a previous meeting by the wetland expert.
- ❖ The consultants who are hired for the Fountain Creek Corridor Master Plan (FCCMP) may be able to come to a future meeting and provide expert knowledge on wetlands creation.

Next Steps

- ❖ The Colorado Department of Transportation (CDOT) has hired a team to assess 5 miles of the Fountain Creek watershed and work with other groups to prepare land use goals for that area. CDOT has offered to come talk to the Land Use/Environment Working Group to share what they have done. Carol Baker will work with CDOT to find an appropriate presenter for the next meeting.

- ❖ The group agreed that existing stormdrain outfalls could be good places to build wetlands. The group will examine this possibility at its next meeting. Tim Williams and Lisa Ross will work together to build an outfall map for the watershed.
- ❖ Heather Bergman will check in with Claudia Browne of Biohabitats to discuss how to proceed on goal prioritization for wetlands.

**Fountain Creek Vision Task Force
Land Use and Environment Working Group
August 23, 2007
Final Meeting Summary**

Attending

Carol Baker, Mary Barber, Dennis Darrow, Dirk Draper, Ferris Frost, Mark Glidden, Merle Grimes, Juniper Katz, Brian Kay, Carole Lange, Mark Morland, Larry Patterson, Gary Rapp, Kirsta Sherff-Norris, Ryan Weston, Tim Williams, Jay Winner, Meggan Yoest, Niki Koszalka, and Heather Bergman

Action Items

Mark Glidden	Look at the hydrology of moving a stream and the implications to the Fountain Creek Watershed
Juniper Katz, Tim Williams, Brian Kay, Carol Baker, Lisa Ross, Meggan Yoest	Work with Heather to put together a panel on local governments' plans for wetlands protection and creation in the watershed

Land Use Visioning and Planning in the Highway 24 Corridor (Along Fountain Creek)

Dirk Draper from CH2MHill shared with the group the vision options for improvements to Highway 24 from I-25 to Manitou Springs (through Colorado Springs). The Highway 24 project is funded by the Colorado Department of Transportation (CDOT), and its objective is to improve road capacity on the highway from I-25 to Manitou Springs. Part of the vision for this corridor is the creation of a greenway along Fountain Creek. Due to the complexity of this project, details from Dirks presentation are not included here, but are available from CH2MHill. (Contact Heather Bergman for more information.)

Questions and Answers about the Highway 24 Project

What would it take to get the highway out of the floodplain?

This is a public safety issue. There were hydrologic studies done along the area. There are seven bridges through the corridor. We looked at the bridges to determine how high they had to be raised or what had to be done to get them out of the 100-year floodplain. CDOT is trying to get the entire highway out of the floodplain, not just the bridges. They are looking at the flood storage capacity and raising the whole highway to get it out of the floodplain. CDOT sees this as a master plan, a long-term vision, and realizes it will take a long time to implement. CDOT will need partners to see this vision to completion.

Are the images on the maps what the planned final product will look like?

Many parts of the maps are hypothetical or options. There is very little likelihood that in 30 years the corridor will look exactly like the visioning maps. Some elements may stay the same, and some may change drastically.

How do you plan to mitigate the noise problems?

This question has not been answered yet. CDOT is receiving mixed messages. Some areas want noise mitigation, some do not. This issue will be further worked on in 2008.

One of the options would put the river between people and several businesses. How do the businesses feel about this separation?

There have not been comments on this topic yet. If there are one or two businesses, potentially it could decrease sales. If there are enough businesses with easy access across the river, there should be no issue with decreased productivity.

What are the stream stability and erosion implications of moving the Creek?

We have not assessed these implications yet. There is the understanding that there will be implications.

How did you address the wildlife movement in each option?

When the project started, there was a meeting with the Colorado Division of Wildlife (DOW). The first comment was how to make the barriers permeable. Six months ago, DOW said that the movement of animals has started to go more up to the mountains. Their suggestion was to have permeable barriers. DOW felt that without permeable barriers, there would be lots of small game as road kill on the highway.

Are the road improvements three lanes both ways?

There will be one lane added where it goes from two lanes to three.

Does CDOT see the transportation mandate of this highway for automobiles?

Part of this goal is to accommodate alternative forms of transportation. As identified by the map, this includes a park and-ride at 31st Street. There are also opportunities to provide trails.

When is the environmental analysis going to begin?

The environmental analysis is to begin in 2008. The scheduled time for completion of the roadway alternative is the end of the year. The environmental analysis will cover only one concept or option.

Where is the project going from here in terms of funding?

CDOT does not have the funding for this project. If CDOT were to fund it, it would have to wait until 2035 (due to backlog of projects). Because the highway is west of 31st Street, CDOT will play less of a funding role on the east side. CDOT is currently exploring ownership maintenance of the greenway and funding opportunities for the greenway. They are looking for funding opportunities.

Following the question and answer session, the group agreed that this was a useful presentation, as it demonstrates the ability of people to come together to create a vision. Because the Highway 24 project does affect Fountain Creek, the group expressed an interest in being engaged in the process and possibly sharing its own great ideas about the Highway 24 corridor with CH2MHill.

Mapping/Visioning for Wetlands

The group reviewed maps of outfalls of urban stormwater drains in both El Paso and Pueblo Counties and identified several possible opportunities for wetlands creation. After this exercise, it was agreed that the group would benefit from brief presentations from local governments about where their current plans for protection and/or creation within their jurisdictions. Juniper Katz, Tim Williams, Brian Kay, Carol Baker, Lisa Ross, Meggan Yoest will work with Heather to put together a panel for this meeting.

**Fountain Creek Vision Task Force
Land Use Environment
September 27, 2007
Final Meeting Summary**

Attending

Carol Baker, Chris Butler, Anita Culp, Dennis Darrow, Ferris Frost, Duane Greenwood, Mark Johnston, Brian Kay, Irene Kornelly, Dennis Maroney, John Mihelich, Gary Rapp, Kirsta Scherff-Norris, Ross Vincent, Tim Williams, Niki Koszalka, and Heather Bergman

Action Items

Tim Williams	Invite all the municipal and county planners to a meeting to discuss land use planning criteria
Heather Bergman	Contact Cynthia Peterson and invite her to discuss the AWARE movie at the next meeting.

Presentations on Some Wetlands Studies and Plans in the Watershed

US Army Corps of Engineers (Anita Culp)

- ❖ The US Army Corps of Engineers (Army Corps) has finished identification of wetlands in the watershed. The Army Corps gave this information to the Technical Advisory Committee (TAC) along with a GIS map. When a wetland is “clicked,” more information about the specific wetland will appear.
- ❖ The study is now in the plan formulation process. The TAC asked the Army Corps to identify wetland sites for ecosystem restoration, flood control, and channel stability. The Army Corps identified 40 sites and is currently narrowing these down to the 10 requested by the TAC. All wetlands sites are oxbow restorations from the City of Fountain South. An oxbow is a bow-shaped bend in a river, or the land embraced by it.

Questions and Answers

Does the floodplain line up with the identified wetlands?

Mostly, the floodplain does align with the wetlands. Some of the smaller wetlands are not in the 100-year floodplain. As a result, they may not have much flood-control influence.

How might that affect Low Impact Development (LID)?

One of the strategies for LID is to use and preserve existing wetlands. It is unclear how large of a role and what timing functions the wetlands have in the watershed.

Pueblo City (John Mihelich)

- ❖ Pueblo wanted to think about developing their own wetlands. Most of the proposed wetland areas have continual flow except one. The proposed wetland without the flow can be lowered enough to have the groundwater flow through it.
- ❖ There was a proposed wetland at between Highway 47 and Highway 50. A large amount of sediment and trash collects in this wetland.
- ❖ There is another proposed area outside of Walmart, draining the golf course, with a lot of water flowing through it. If there is slower drainage and the land is flatter, there is a better chance for wetlands to occur. This is all within the 100-year floodplain. There are many drains for the mall and other large box stores. These drains put runoff almost directly into Fountain Creek.
- ❖ Another proposed area is behind Highway 25 and Fountain Creek. There is a large triangular wetland, including a large buffer strip. Detaining and draining the large supply of water is an option. There is a trash rack on the east side of the levy but there is no other treatment for trash and sediment. By removing sediment, Pueblo would like to enhance the wetlands.

Questions and Answers

Are there plans to put these wetlands in?

The City of Pueblo's plan is to think about putting in the wetlands. The City Pueblo is also thinking about what functions the wetlands would serve and what level of maintenance is involved at the potential sites.

El Paso County (Mark Johnston)

- ❖ In its wetland efforts, El Paso County would like to achieve a county wetlands bank, conservation easements, and wetlands mapping.
- ❖ Mitigation Banking
 - A mitigation bank can take a repository of credits. An individual bank can only work on one impact, one bank site. An aggregate bank can work on many impacts but only one bank site. An umbrella bank can work on many impacts and many bank sites. El Paso County chose the umbrella bank.
 - Umbrella wetland banking includes numerous mitigation sites, allows adding and withdrawing of credits, and pre-mitigation of wetland impacts. The county umbrella bank serves a countywide mitigation program for county projects, multiple mitigation projects under a single plan, pre mitigation of wetlands impacts, and identifying important wetland resources. The Army Corps collaborates with the county umbrella bank as well as other sponsors.
 - The three mitigation sites El Paso County is currently looking at are Cibrowski, Dot Lake and the Drake Lake wetlands.
- ❖ Conservation Easements
 - Conservation easements are a non-development easement. El Paso County holds 29 easements covering over 2200 acres. Monitoring the easements occurs annually. Conservation easements provide wetlands and development buffers, protect open space, and protect trails and recreation.
- ❖ Mapping Wetlands
 - El Paso County had the national wetlands inventory maps.

Questions and Answers

Does the county own the land?

The county owns the Dot Lake site and the Drake Lake site. Though privately owned by the County, Cibrowski expressed interest in a wetland and perhaps an easement.

What is the duration of the easement?

The duration of an easement is forever.

How does the mitigation bank work?

If the county has a project, which will ultimately destroy wetlands, the “cost” is enhancing another area. Through the bank, there are established ratios. For example, the destruction of an acre means there is creation of another acre in a designated area.

Does the mitigation have to be in the same watershed?

If possible, it is encouraged. The ratio of enhancement is usually a bit larger within the watershed. If there is not an available area within the watershed, it is preferred to find one within the same ecosystem. If not within the same ecosystem, it is preferred to find one within the same county.

Do you consider the function of the destroyed wetland when attempting to find an area for enhancement of a wetland?

Yes, ideally. Using the best professional judgment determines functionality. The Army Corps is collaborating with Colorado Department of Transportation (CDOT) to work on a methodology to determine wetlands functions.

Does wetland development outside of the floodplain cause a problem?

Not sure overall, but the mitigation banks in El Paso County are outside of the floodplain.

Why were the selected areas for enhancement beyond the Fountain Creek watershed?

The areas selected were because it is a lot easier to receive permission to alter land when it is a county owned property.

City of Fountain (Duane Greenwood)

- ❖ The City of Fountain has been working with improving the LID guidelines and standards. They would like to utilize full spectrum drainage. Full spectrum drainage is detaining a larger volume of water and letting it trickle out over 70 hours instead of the typical 40. This allows more sediment and pollutants to come out, allows for more flood control, and keeps the hydrology at or below historic levels.
- ❖ There is lots of potential for supporting the creek bank and the wetlands along the drainage channel, in and around development, where it drains in to the Creek. There is a great oxbow restoration opportunity south of the regional park.
- ❖ The City is currently trying to protect the floodplain and wetlands. The City is actively trying to get GOCO grants to acquire properties. The city supported the Peaks to Prairie application with Colorado Open Lands, hoping to acquire the green lands at the confluence of Jimmy Camp and Fountain Creeks.

- ❖ The City of Fountain has a drainage basin planning study for Jimmy Camp Creek. They have yet to establish one for Fountain Creek.

Questions and Answers

Is there a general capacity of the detention ponds?

There is an amount, it is regulatory and a city ordinance. Any development has to discharge their flow at historic levels regardless of the rainfall.

Do the full spectrum detention facilities take more maintenance?

Yes, the opening for the drainage outlet is smaller so they need cleaning more often.

If the sediment fills up, do you check it for pollutants?

We have not, at this point.

How much water can be handled and at what point to you exceed capacity?

The requirements state they have to be built for a 2-year to a 100-year flood event. This is a 100-year design.

Fountain Mutual Ditch Company (Brian Kay)

- ❖ Southern Delivery System (SDS) will look for 25 acres of wetlands to mitigate their impacts.
- ❖ The Fountain Mutual Ditch begins at the Vegas Treatment Center. The reduction of flows occurs by diverting water into storage containers. Fountain Ditch owns the water within Johnson Reservoir and the county owns the surrounding lands. This is a potential wetland site. Fountain Mutual Ditch Company, in an attempt to think out of the box, is primarily looking at private-owned property.
- ❖ Discussions occurred about maps and potential wetland opportunities.
- ❖ There is a potential urban park site on the south side of Johnson Reservoir with ball fields and other types of turf fields. There was a 200-acre site, to the east of Glen, offered but it was too wet. A large pond, 20 to 30-acre surface area, exists at this site with wetlands surrounding it.
- ❖ Around Jimmy Camp, the developers have moved the earth. This has created about a 200-foot wide drainage basin. It could be a potential site for holding ponds. As the Fountain Mutual Ditch goes south, it connects with the Chilcott Ditch and diverts water out of Fountain Creek and into William Creek Reservoir. In the past, there has been a discussion of lining the ditch with concrete to increase flow. This is also a good spot for a potential wetland.
- ❖ Another potential site for a wetland is west of William Creek.

Questions and Answers

How much water would these additions need?

They would need the same amount of water that SDS carries up from Pueblo Reservoir.

Would this decrease sediment?

If we could divert water out at Vegas, it would help with sediment problems further down Fountain Creek.

SDS Wetlands Mitigation (Carol Baker Colorado Springs Utilities (CSU))

- ❖ The total impacted wetland acres from SDS would be either 35 or 89 acres. These numbers would depend on the implemented version of SDS. The permanently impacted acres of wetlands will be 1.4 to 24.6 acres.
- ❖ The priority for the location of mitigated wetlands would be near the site of the impacted wetland, if appropriate. This would need also to be functional for operation and maintenance access, public access, and water supply. For wetlands priority, SDS would look to city property, public property, and finally private property. SDS is also considering wetland banking.
- ❖ The wetland mitigation ratio depends upon functionality of the impacted wetland and the distance of the new wetland from the original. The cost of wetland mitigation is \$50,000 to \$100,000 per acre. This cost estimate is dependant on size, location, and function of the wetland. It does not include land cost and construction.

Questions and Answers

With SDS coming down Williams Creek to Fountain Creek, what would more water mean and would this ruin the existing wetlands?

There would be areas where reinforcement is necessary and there will be wetland impacts to Williams Creek.

How is the review of alternatives going?

The Bureau of Reclamation is currently looking at impacts. The release of a draft Environmental Impact Statement is expected in the first quarter of 2008.

Next Steps

- ❖ The Land Use and Environment group decided to table the visioning process for wetlands until the mapping, produced by THK and Parry Thomas, is completed. The completion of the mapping is in March or April.
- ❖ There could be a Low Impact Development (LID) brainstorming session for general ideas. It would need to be determined if the ideas are functional for this area.
- ❖ There are different development techniques and it is important to preserve the drainage corridors so they are consistent with the differing techniques. The use of schematic drawings could also help. Some of the drainage from developments may help create and or support wetlands.
- ❖ Production of maps showing recreational trails and ideas including the Front Range Trail are due for completion at the end of October. The Land Use Environment group decided to wait, until the maps are completed, to work on recreational and park planning.
- ❖ The Land Use Environment group felt there was significant traction with the idea of the development of criteria using the Better Site Design handbook. A start would be to preserve the drainage corridors and open space. This may lead into schematics of development and drainage. It would be good to look at how development and drainage relate to wetlands and perhaps agriculture as well. There is room for improvement. Changes will make regulations better and friendlier toward the watershed. City and county planners need personal invitations to attend a meeting about criteria improvements.

- ❖ Tim Williams will convene a group of city and county planners to begin to assess land use planning needs in the watershed. Heather Bergman will speak with Cynthia Peterson and invite her to discuss LID from AWARE's perspective at the next meeting.

**Fountain Creek Vision Task Force
Land Use/Environment Working Group
October 25, 2007
Final Meeting Summary**

Attending

Carol Baker, Mary Barber, Dan Bare, Chris Butler, Dennis Darrow, Mark Glidden, Amber Jack, Juniper Katz, Brian Kay, Sarah Keith, Carole Lange, Cynthia Petersen, Nancy Prieve, Kirsta Scherff-Norris, Ryan Tefertiller, Ross Vincent, Niki Koszalka, and Heather Bergman

Next Steps

Cynthia Petersen	Email Heather Bergman the published data from the Connecticut development on measured improvements from Low Impact Development (LID)
Cynthia Petersen	Research (and email to Heather Bergman) any entities that provide incentives or rewards for using LID
Rich Muzzy	Provide the Land Use/Environment Working Group an update on the Policy Review Workshop
Tim Williams and Dennis Maroney	Tim Williams and Dennis Maroney will work on combining the LID group and the policy review group.
Carol Baker	Contact and invite the tamarisk technician to present at the next meeting
Juniper Katz and Kirsta Sherff-Norris	Contact representatives from the Department of Wildlife (DOW) and The Nature Conservancy (TNC) to present on wildlife issues at the next meeting
Heather Bergman	Send Zoomerang survey to participants and draft into writing groups

New and Pressing Issues in the Watershed

- ❖ Colorado Open Lands got a small grant from State Parks to coordinate trail planning in the watershed. Juniper Katz (Colorado Open Lands) will offer potential alignment and envision the options with the Task Force in mind.
- ❖ The Greenway Foundation meeting and tour of the South Platte River is November 5, 2007.

LID Methods (Cynthia Peterson, Addressing Water and Natural Resource Education (AWARE))

- ❖ Development affects water cycles with various degrees of runoff. Urban environments and impervious areas cause more runoff than what occurs under undisturbed, natural conditions.
- ❖ A reduction in groundwater infiltration causes less filtration of pollutants and contaminants. This will also produce reduced stream flows in dry weather.
- ❖ Increased velocity and increased flow of runoff cause stream degradation.
- ❖ LID ideals include:
 - Maintaining the goal of "predevelopment hydrology"

- Managing runoff close to the source through small, cost-effective landscape features
- Relying on non-conventional strategies rather than conventional end-of-pipe strategies
- Integrating stormwater controls throughout the landscape, including rooftops, streetscapes, parking lots, sidewalks, and medians
- ❖ Disconnected areas of imperviousness, which allow for infiltration, cause reductions in impacts.
- ❖ Using the Natural Resources Inventory (NRI), a statistical survey of land use and natural resource conditions and trends on U.S. non-federal lands, is an important step.
- ❖ Some good LID practices are clustering developments, having the same number of building sites but with less impervious surface, considering riparian buffers, making streets more narrow, building pocket parks with sidewalks only on one side, providing adjoined reinforced grass to double as roadway for emergency vehicles, and disconnecting sidewalks from the street.
- ❖ Other LID techniques include
 - Using porous pavers/pavement: plastic reinforcing grid protects grass and stabilizes soil
 - Zoning a parking area for regular shopping, not for the day after Thanksgiving
 - Shifting gutters so that runoff is not directed at driveway
 - Creating ribbon driveways
 - Redeveloping to remove existing impervious areas
 - Landscaping naturally, including xeriscaping, using native plants, and saving/amending topsoil to re-establish porosity
 - Planting a substantial tree cover to reduce volume and velocity of runoff and minimize heat effect
 - Growing roof gardens

Questions and Answers

Is there a development in Colorado encompassing all of the LID techniques?

No, there is not a development that has done all of them. Stapleton has some.

Is there a measurement of improvements with use of LID techniques?

In Connecticut, a development did LID and traditional techniques for development. Included were separate stormwater systems coming off the different sites. Cynthia Petersen will email the published data to Heather Bergman. The Center for Watershed Protection also has data on LID.

Are there any examples of local governments, states, or other entities that provide incentives or rewards for using LID techniques?

There are a number of communities, especially in coastal areas, looking to fast track LID strategies. The communities are giving credit at building sites. Cynthia Petersen will also research this and get back to Heather Bergman. The Belmar redevelopment in Lakewood developed a fee in addition to regular taxes to pay for the development, which is utilizing LID techniques. If the Fountain Creek Vision Task Force were interested in LID, the Regional Development Building would be willing to host a meeting and have the architect available too.

Is the Environmental Protection Agency (EPA) measuring the runoff from the green roof in Denver?

The EPA is measuring the runoff.

Developed Technology and Modeling for LID (Chris Butler)

- ❖ Some basic axioms of model selection
 - Select a model to suit the problem; do not fit the problem to the model
 - Select as simple a model as possible
 - Do not force a model to do something for which it is not intended
 - Select a model that can be supported by reliable data
- ❖ Available Models
 - TR-20/TR-5t5. JEC-HMS
 - Developed by USDA and Army Corp of Engineers
 - Intended for large storm events
 - Lumped parameters applicable to large drainage areas
 - Single event simulation
 - Unable to evaluate micro-scale BMPs
 - No pollutant generation and removal capabilities
 - Not suitable for LID
 - SWMM (EPA Stormwater Management Model)
 - Best suited for urban hydrology and water quality simulation
 - Robust conveyance modeling
 - Wide applicability to large and medium watershed hydrology
 - Commonly used version (v. 4.4h) can be “adapted” to simulate LID controls using generic removal functions
 - HSPF (Hydrologic Simulation Program – FORTRAN)
 - EPA program for simulation of watershed hydrology and water quality
 - Produces time history of the quantity and quality of runoff from urban or agricultural watersheds
 - Best suited for rural hydrology and water quality simulation
 - Data intensive, lumped parameter model
 - Wide applicability to large watershed hydrology
 - Models effects in streams and impoundments
 - BMPs simulated as reductions in pollutant load
 - Latest beta version (v. 5) capable of simulating some LID BMPs
 - Not recommended for LID, except at a large scale
 - SLAMM (Source Loading and Management Model)
 - Evaluates pollutant loadings in urban areas using small storm hydrology
 - Heavy reliance on field data
 - 6 land uses (residential, commercial, industrial, highway, etc.)
 - 14 source area types (sidewalks, roofs, parking, turf, unpaved areas, etc.)
 - 8 BMP types (infiltration, biofiltration, swales, pervious pavement, ponds, etc.)

- Calculates runoff, particulate, and pollutant loading for each land use and source area
 - Routes particulate loadings through drainage system, to BMPs and outfalls
 - Prince George's County BMP Model
 - Uses HSPF to derive flow, pollutant loads
 - Applies flow and loads to LID BMPs
 - Two generic BMPs: storage/detention, channel
 - Simulates flow processes in each BMP
 - Water quality processes simulated as first-order decay and removal efficiency
 - MUSIC
 - Simulates hydrology, water quality (TSS, TN, TP, debris)
 - Scale from city blocks to large catchments
 - Aimed at planning and conceptual design of SWM systems
 - User-friendly interface
 - Event or continuous simulation
 - Sources: urban, agriculture, and forest
 - BMPs: buffers, wetlands, swales, bioretention, ponds, GPT (gross pollutant traps)
 - Pollutant removal by first-order kinetics
 - Australia default parameters from worldwide research
 - Extensive output statistics
 - LIFE (Low-Impact Feasibility Evaluation Model)
 - Specifically developed by CH2M HILL to simulate LID micro hydrology
 - Models water quantity (volume, peak flows) and water quality
 - Physically-based, continuous simulation
 - New development and redevelopment
 - Numerous controls: bioretention, green roofs, rainwater cisterns, pervious pavements, and infiltration devices
 - Optimization module balances competing priorities
 - Drag-and-drop user friendly interface, GIS linkage

Questions and Answers

Is there a validation on the LIFE system?

Not here, but validation occurred back east.

Is there a model completed on a watershed the size of Fountain Creek?

Not here, large-scale modeling occurred in Maryland.

What model would be used for an area the size of Jimmy Camp Creek?

SLAMM would be the best option.

Are there data needs for the models and how is the data recovered?

Completion of hydraulic analysis is necessary before modeling.

Which model works for a huge area?

SWMM is the best for bigger area.

Land Use Planning Criteria/Policy Review (Tim Williams)

- ❖ The group initially discussed how LID principles sometimes conflict with current principles of land use planning, civil engineers, and public works departments.
- ❖ Communities are more interested in receiving LID options instead of packages.
- ❖ Tools for implementing LID/smart growth
 - Implementing annexation agreements
 - Changing regulation/policies
 - Collaborating and cooperating
 - Initiating discussions at pre-application meetings
 - Encouraging with economic rewards
 - Touring of examples on the ground in Colorado
 - Having code evaluations and changes
 - Continuing with education and outreach
 - Explaining the economic benefits to developers and developing a handout or information to pass out
 - Getting cities, counties, and various agencies to discuss issues
 - Writing comprehensive plan
- ❖ Limitations/barriers to the LID/smart growth process
 - Existing regulation by cities and counties makes the process cumbersome
 - Funding opportunities: trying to get grants or other funding to develop a demonstration project
 - Re-working development codes is a huge task
- ❖ Watershed coordination is important.
- ❖ Rich Muzzy will give an update on policy review workshop to the Land Use/Environment Working Group.

Questions and Answers

Are the techniques available for cities, counties, and the watershed as a whole?

Yes.

Who is going to make sure the rules will be followed and is there currently sufficient monitoring/compliance?

The control inspector makes sure entities follow the rules. There is a reduced stormwater fee if maintenance of the area occurs.

Is LID useful at any size storm?

A 500-year event is containable with LID. The engineering community struggles with what size storm is too big to be contained by LID.

Working Group Progress to Date

- ❖ The Fountain Creek Vision Task Force applied for the Colorado Water Conservation Board (CWCB) grant. To accept that money, the Land Use/Environment Group needs to record and produce the current conditions/needs assessment document. Heather Bergman will send a Zoomerang survey around to the group and, from the information received, draft writing

teams. When writing the current conditions/needs assessment document, it is important to include:

- Thinking of the watershed as an asset and an amenity
- Creating a greenway connector between the communities
- Providing recreation opportunities
- Providing commuting opportunities
- Protecting wildlife, for its own sake and as an indication of ecosystem health
- Maintaining the viewshed

Next Steps

- ❖ Tim Williams and Dennis Maroney will work on combining the LID group and the policy review group.
- ❖ The Land Use Environment Working Group determine that it must work on the goals of LID.
- ❖ Heather Bergman will work on writing groups for the final project for CWCB grant application.
- ❖ The Land Use Environment Working Group wants to invite a tamarisk removal technician. Carol Baker will work to bring the technician in for the next meeting.
- ❖ In January, the working group would like to hear more about the Peak to Prairie work and more on the Greenway connector including Tom Ready’s vision of campgrounds. Also in January, the working group would like to hear transportation presentations from Pike Peak Area Council of Governments (PPACG) and Pueblo Area Council of Governments (PACOG).
- ❖ Juniper Katz and Kirsta Scherff-Norris will contact a representative from the Department of Wildlife (DOW) and The Nature Conservancy (TNC).

**Fountain Creek Vision Task Force
Land Use/Environment Working Group
November 30, 2007
Final Meeting Summary**

Attending

Carol Baker, Chris Butler, Stephanie Carter, Steve Cooley, Dennis Darrow, Gary Dowler, Ferris Frost, Mary Jaurequi, Juniper Katz, Sarah Keith, Irene Kornelly, Carole Lange, Greg Langer, Dennis Maroney, Bob Miner, Rich Muzzy, Cynthia Peterson, Gary Rapp, Scott Rappold, Sandy Rayl, Tom Ready, Lisa Ross, Kirsta Sherff-Norris, Ryan Tefertiller, Tim Williams, Niki Koszalka, and Heather Bergman

Action Items

Tom Ready	Present the vision of State Parks to the Land Use and Environment Working Group (at February meeting)
Low Impact Development Criteria Task Group	Update the Land Use and Environment Working Group on the Low Impact Development (LID) document reflecting land use issues

New and Pressing Issues in the Watershed

- ❖ Colorado Springs Utilities (CSU) considered the community input on a wastewater treatment center near Clear Springs. Rather than building this facility, CSU now plans to put in pump stations and utilize the existing wastewater treatment plants. The Lower Fountain Wastewater Treatment Facility is still under consideration and moving forward.
- ❖ Xcel Energy Company bought out the Invenergy Power Plant and all plans for the original plant are off the table.
- ❖ Andersen consulting is doing the FEMA floodplain study on Fountain Creek.
- ❖ The Great Outdoors Colorado (GOCO) legacy will announce the awardees on Monday. Colorado Open Lands is expected to receive a significant award for work along Fountain Creek.
- ❖ Lower Arkansas Conservancy District recently discussed a plan to lease water in the Fountain Creek Area.
- ❖ Fremont County voted to become part of the Upper Arkansas Conservation District.

Low-Impact Development Criteria Task Group (LIDCTG) Update (Tim Williams)

- ❖ The LIDCTG met to discuss Low Impact Development (LID) in the Fountain Creek watershed.
- ❖ The goal of adopting LID practices in the Fountain Creek watershed is to develop and implement strategies (such as the use of best management practices (BMPs) appropriate for the watershed) to:
 - Address the discharge of pollutants from new development and redevelopment projects, and/or
 - Maintain or restore hydrologic conditions at sites to minimize the discharge of pollutants and prevent in-channel impacts associated with increased imperviousness.
- ❖ Adopting LID strategies will achieve, or help to achieve, many of the goals identified by the Fountain Creek Vision Task Force.
- ❖ Important considerations about LID include the need to:
 - Focus on areas of greatest potential for improvement in the watershed
 - Build on opportunities that may be common to several communities
 - Identify low-hanging fruit or those activities that can be most quickly or easily undertaken
 - Recognize unique community needs, allowing each community to adopt some or all of the proposed regulations
 - Create a watershed-wide entity that could be helpful in implementing and promoting LID in the Fountain Creek watershed
- ❖ Recommendations from the LID group:
 - Explore LID opportunities throughout the land use process
 - Formulate watershed-based drainage criteria
 - Develop criteria that each community could choose from to incorporate into their existing criteria
 - Encourage watershed coordination to look at opportunities for collaboration and cooperation
 - Develop an education and outreach effort
 - Incorporate economic incentives

- Develop a master list of LID resources and a map of examples in the watershed and/or Colorado
- Research grants or other funding entities to develop an LID demonstration project in the watershed

The Land Use Environment Working Group discussed these recommendations, made observations, and offered comments and suggestions including:

- The importance of developing an outreach and educational proponent of LID
- The need for tangible information and a list of the potential outcomes
- The intersection of the goals for LID and the goals of the Army Corps of Engineers study
- The inclusion of benchmark standards from the Center for Watershed Development and the LID Center
- The need to identify cities or entities that are upgrading drainage systems or retrofitting to better utilize LID
- The need to add green building and smart development elements as well (The LIDCTG will work to update this document and will present a revised version at the January meeting.)

Tamarisk Removal (Top Cut Dirt Works and Restoration LLC, Andrew (EZ) Zanghi)

- ❖ Top Cut Dirt Works and Restoration have 20 years' experience moving dirt and doing project-specific and restoration work.
- ❖ There are lots of kinds of tamarisks and cottonwoods along Fountain Creek.
- ❖ Top Cut Dirt Works and Restoration uses large machinery to remove and incinerate unwanted vegetation. In order to eliminate damage done by a broken fuel line, the machines use vegetable oil. The machines also have rubber tracks to eliminate further damage to the surrounding areas.
- ❖ Tree disposal is usually an issue, as landfills cannot handle them. Top Cut Dirt Works and Restoration burns the trees in an air burner and it makes disposal much easier.

Questions and Answers

What do Top Cut Dirt Works and Restoration charge?

The charge is by the hour, and a client only is charged when the machines are running.

Does Top Cut Dirt Works and Restoration work with the state weed boards?

No, Top Cut Dirt Works and Restoration has only worked with the counties.

Do you selectively cut down some trees and leave others?

Yes, the natural vegetation remains.

When dealing with the small plants that come back after cutting down the tamarisk trees, what do you do?

After cutting down the tree, spraying the stump is necessary. It takes 2-3 years of spraying new growth so the tamarisks do not return. After cutting down the Tamarisk, it needs spraying. The window for spraying is within three minutes.

If the tamarisk is cut down and sprayed, are there repercussions of this chemical in the watershed?

Yes, the chemical can damage the watershed. Nothing will grow where the spraying occurs.

If there is an island of tamarisk in the middle of the stream, can your machinery remove these?

Yes, the machinery can remove it.

Wildlife in the Watershed (Gary Dowler, Department of Wildlife (DOW))

The Lower Cheyenne Creek Stream Rehabilitation was the last project DOW worked on. The principles and ideas generally will work from stream to stream.

- ❖ In response to a draft project plan provided by the Colorado Department of Transportation, DOW recommended several changes to maintain habitat and water quality:
 - Increasing number of rock weir structures and decrease height from 1-2 feet
 - Placing more emphasis on revegetation
 - Placing additional 6-8 inch cobble
- ❖ Project timetable:
 - Permitting started in 1999-2000
 - Rehabilitating the stream started in fall of 2003
 - Revegetating started in the spring 2004
- ❖ Additional details:
 - The rock weirs are made out of boulders about 2-3 tons each.
 - Small structures allow fish to travel upstream to find suitable spawning areas and allow small fish to go back downstream.
 - The self-cleaning pools provide a hydrological source for riparian vegetation and allow fish to live in them when there is no flow.

Questions and Answers

How much did this specific project cost?

Approximately \$50,000 - \$80,000.

How many cubic feet per second (cfs) is it designed to hold?

It is designed for 0-500 cfs.

Was there a cost difference when the plan changed from a two-drop structure to a five-drop structure?

There was a slight cost increase. The first plan called for grouting structures, most of the cost increase was absorbed by the estimated and unused cost for grouting.

Is this being implemented in other places in Colorado by DOW and Department of Transportation (CDOT)?

There are a few other projects done with CDOT but not very many. DOW does a lot of this kind of work throughout state.

This project is through an urbanized area. Has work been done to mitigate the water quality from urban runoff?

DOW looks at water quality and flows. There is no control over the flows. DOW works within the parameters and tries to design structures to fit into the current conditions.

Was a fish bypass instead of the drop structure ever considered?

There is not a whole lot of data available to find out what it would take to design and build a fish ladder for fish that do not get larger than three inches long. The velocity that the fish can tolerate would have to be determined. It is the interstitial spaces between boulders allowing fish through the structure.

Is DOW working on other projects on Fountain Creek?

DOW and US Geological Survey (USGS) work with inventory and sampling the fish that live in Fountain Creek. There is annual monitoring of these populations. There is a minimum of 4000 fish per mile. It is hard to accurately count and give an estimated population.

Are the 12 fish species downstream of Colorado Springs native?

Most are native.

Ideally, what is important for fish?

Fish need clear cool water, pools, and for streams to reach a steady state of stabilization (volume and water quality).

Additional Questions for DOW about Wildlife in the Fountain Creek Watershed

What are the general corridor issues of wildlife in the Fountain Creek watershed?

Animals use any corridor they can to navigate from point A to point B. When there is barrier, like Colorado Springs, the animals are stuck at a dead-end and there are confrontations with humans occur. The watershed remaining contiguous and open will be the best option for the wildlife.

Is Fountain Creek a quality habitat for amphibians?

There is some degradation to amphibian habitat and flooding events remove the desired habitat.

What are the importance of the corridor for migrating birds and the impact of noxious weeds?

The salt cedar and tamarisk create a monoculture, which causes a problem for many migrating birds. It creates a biological desert. The salt cedar and the tamarisk do not provide much of a benefit for living creatures.

What terrestrial species is of most concern?

The flood events and tamarisk are reducing the population of wild turkeys.

How is the badger habitat and population?

As with any top-level predators, there are fewer badgers due to more development. If there are large populations of prairie dogs, there are plenty of badgers. The belief is that as a development is developed, the species of animals relocate them selves.

Next Steps

- ❖ The Land Use Environment Working Group agreed to have a joint meeting with the Water Working Group in January to start strategizing.
- ❖ In February, Tom Ready will present to the group on the State Parks vision for the watershed. The group is also interested in having presentations on a greenway connector and sustaining agriculture.