

## 20. Conclusions and Recommendations

### 20.1. Conclusions

Conclusions drawn from a review of this Fountain Creek Watershed section of the 208 Plan include:

- Additional wastewater treatment needs are minimal. Sufficient capacity already exists at most of the wastewater treatment plants.
- Population trends appear to reflect an increase in growth throughout the watershed, an increase in stormwater runoff, and an increase in discharge of treated domestic wastewater.
- Solutions should incorporate a regional approach and framework such as that established through the Fountain Creek Flood Control and Greenway District.
- Primary water quality issues of concern are *E. coli*, selenium and nutrients.

### 20.2. Recommendations

In September 2016, stakeholders from the Arkansas Fountain Coalition for Urban River Evaluation (AF CURE) formed a stakeholder group with the objective of developing a watershed plan to address excess nonpoint sources of *Escherichia coli* (*E. coli*) in Fountain Creek Watershed. The Fountain Creek Watershed-Based Plan was overseen by CDPHE, WQCD Nonpoint Source Program and funded by the Colorado Water Resources and Power Development Authority and AF CURE. The primary water quality parameter evaluated in this Plan is *E. coli*. To meet requirements associated with the Environmental Protection Agency's (EPA's) 9 Elements of a Watershed Plan, this Plan also identifies additional nonpoint source water quality issues in the watershed. The watershed plan recommends the following implementation strategies for proactive load reduction:

1. Human behavior changes
2. Resourcing existing or new programs, and
3. Infrastructure improvements.

Many stakeholders identified the primary E. coli sources of concern and has developed their own implementation plan including current efforts. The results from this plan's data analysis point to the need for additional data collection and analysis. One identified step is to verify locations and ages of onsite wastewater treatment systems throughout the watershed. This will be a large and resource-intensive effort and may require the review of active and inactive wells, mapping infrastructure, obtaining additional water quality data, at a minimum, and reviewing records. Additional next steps include reviewing all available data in the area, evaluating the potential for additional sampling locations in specific locations, and engaging additional appropriate stakeholders. Much of this work will require more resources, so exploring grant opportunities is also high on the implementation priority list.

The Fountain Creek Watershed EPA Nin-Element Plan for Management of E.coli can be found here: [http://www.fountain-crk.org/wp-content/uploads/2019/07/FWC\\_E.Coli-Watershed-Plan\\_FINAL\\_03\\_29\\_19-1.pdf](http://www.fountain-crk.org/wp-content/uploads/2019/07/FWC_E.Coli-Watershed-Plan_FINAL_03_29_19-1.pdf)

Implementation of recommendations contained in the Fountain Creek Watershed Strategic Plan (2009) regarding water quality, sedimentation, and stormwater runoff; flooding and flood control; land use planning; recreation; wildlife; wetlands; agriculture; municipal water supply; and return flows should be considered. The general recommendations and project-specific recommendations regarding bank stabilization and ecosystem restoration contained in the Army Corps of Engineers Watershed Study should also be considered.

#### **20.2.1. Sedimentation**

Assist in developing appropriate stabilization threshold criteria for sediment in the watershed.

#### **20.2.2. Riparian and Wetland Areas**

Critical stream environment zones, floodplains, wetlands, and riparian areas should be protected through zoning or development regulations or acquired through conservation easements, land exchanges, transfer of development rights, or similar resource protection techniques.

#### **20.2.3. Water Quality**

Collaborate in the development of programs and policies to minimize impacts to water quality in the watershed. The Fountain Creek Watershed Environmental Protection Agency Nine-Element Plan for the Management of Escherichia Coli ([http://www.fountain-crk.org/wp-content/uploads/2019/07/FWC\\_E.Coli-Watershed-Plan\\_FINAL\\_03\\_29\\_19-1.pdf](http://www.fountain-crk.org/wp-content/uploads/2019/07/FWC_E.Coli-Watershed-Plan_FINAL_03_29_19-1.pdf)) identified

next steps to help enhance water quality in the Fountain Creek watershed. One step is to verify locations and ages of OWTS throughout the watershed. Additional next steps include reviewing all available data in the area, evaluating the potential for additional sampling locations in specific areas of the watershed, and engaging additional appropriate stakeholders.

#### **20.2.4. Onsite Wastewater Treatment Systems (OWTS)**

Develop maps that overlay existing soil types, topographic features, small areas for leach fields, high water tables, and areas where poor and failed septic system problems have occurred.

Evaluate a mandatory participation program regarding OWTS inspection, repair, and replacement.

Develop an electronic tracking system for OWTS permits that includes location, age of system, size, soil stratigraphy, and depth to groundwater.

Evaluate districts where source water protection plans should be completed.

#### **20.2.5. Permit Coordination and Review**

Develop a timely procedure to review work planned within the floodplain and significant wetland areas so comments and feedback can be given on possible consequences. This can be conducted as part of the Army Corps of Engineers' 401 and 404 floodplain permitting process or as a part of a jurisdiction's grading and erosion-control permitting process. This procedure could be activated for areas identified as having either high erosion and instability problems or high-quality wetlands and for projects that will significantly affect creek flow rates and/or the creek route. The Army Corps of Engineers, the Regional Building Department, local governments, and Colorado Springs Utilities will work together to develop a review process to identify if issuance of a 401 and 404 permit, floodplain permit, and/or grading and erosion-control permit will impact existing high erosion and instability problems or high-quality wetlands or will significantly affect creek flow rates and/or the creek route.

#### **20.2.6. Green Infrastructure**

Host a Green Infrastructure (GI) workshop and develop a GI plan to develop better linkages between water quality, stormwater, transportation, and land use. By integrating disparate planning efforts, synergies can be increased and conflicts decreased between various groups and plans. Development of the plan will link different and sometimes conflicting resource issues and needs by creating solutions that benefit the entire watershed.