

4. Regional Policies

One of the requirements of the 208 Plan (40 CFR Section 130.6 and WQCC Policy #98-2) is to recommend strategies and solutions to address point and nonpoint source problems to protect public health and the environment. This section describes seven regional policy statements for issues identified as affecting water quality in the region and is intended to provide a common and consistent basis to approach water quality planning and decision making in the region. Each issue contains 1) a policy statement; 2) a description of the purpose and importance; 3) a summary of current applicable local, state, and federal regulations and policies; 4) objectives of the policy; and 5) implementation recommendations. The policy statements are designed to guide and promote integrated solutions within each watershed to improve water quality in the region. It will primarily be the responsibility of PPACG, wastewater operating agencies and management agencies/associations, watershed groups, and governmental entities to implement the recommendations and integrate them into future planning efforts.

Specific technical recommendations are also made in each of the individual watershed sections. The seven issues addressed are:

- Land Use Planning and Development
- Riparian and Wetland Areas
- Source Water Protection for Public Water Supplies
- Flooding and Stormwater and Management
- Agriculture and Silviculture
- Wastewater Treatment Facilities
- Onsite Wastewater Treatment Systems

Implementation recommendations discussed in this section are applicable to all watersheds, although some recommendations are already being implemented. Recommendations contained in each section are consistent with federal and state regulations regarding water quality and focus on direct and indirect impacts to water quality. Projects should be reviewed for consistency and conformity with these recommendations. Specific recommendations unique to each of the individual watersheds are contained in each of the watershed-specific sections.

4.1. Land Use Planning and Development

4.1.1. Policy Statement

The surface and groundwaters of the region shall be protected from development and design practices that could cause significant degradation of existing water quality or impair the designated uses of the streams; those currently not in compliance will be brought into compliance as soon as it is technically and financially feasible.

4.1.2. Purpose and Importance

The purpose of this policy is to ensure a balance exists between the protection of water quality and land use (specifically development and design practices) and to minimize potential conflicts between the two. Individuals exercising their private property rights should not endanger public health and welfare and the right to enjoy and use common natural resources such as high-quality water and aquatic life.

Land use practices have impacts on water quality. The water pollutants of concern with respect to land use practices include sediment, nutrients, animal wastes, heavy metals, petroleum products, salts, pesticides, temperature, Biological Oxygen Demand (BOD), and the loss of natural protection against these pollutants (such as loss of wetlands and riparian vegetation). These pollutants are nonpoint source in origin (i.e., they typically enter the waterbody via diffuse runoff) and involve a wide variety of landowners, both urban and rural.

Generally, it is more cost effective to prevent water quality impacts through proper planning practices than to treat water quality impacts. This recognition is important because limited funds are available in the prevention and treatment of water quality impacts. The most effective way of addressing land use impacts on water quality is through the development, consistent application, and enforcement of local regulations and incentives to minimize water quality problems from runoff. Most of the implementation recommendations consist of BMPs, both structural and nonstructural. BMPs prevent or minimize the entry of pollutants into the region's ground and surface waters.

4.1.3. Summary of Policies and Practices

All local governments require a complete drainage plan for new developments. The requirements of each drainage plan differ, and although there are no state requirements

(Colorado Revised Statutes do authorize municipalities and counties to consider such requirements), most drainage plans consider on- and off-site drainage improvements, assume full development of any proposed development upstream, and place all costs of improvements on the developer.

The City of Colorado Springs and El Paso County have Drainage Criteria Manuals to regulate development practices and contain requirements for grading disturbances greater than one acre. The City's Drainage Manuals were revised in 2013.

Strategies to improve land use planning and development practices and improve water quality should be considered by cities and counties. This includes adoption and implementation of low-impact development (LID) practices, adopting smart growth principles, and promoting green infrastructure, energy star housing, and Leadership in Energy and Environmental Design (LEED) criteria for nonresidential structures. Cities and counties also require specific setbacks—although the distance differs in each community—from streams and wetlands. The City of Colorado Springs' 2016-2020 Strategic Plan outlined the following City Roles to reach objectives outlined in the plan to include:

- Update the City's Comprehensive Plan (which was accomplished in 2018), and develop a 10-year facilities master plan, which is not completed to date.
- Improve environmental sustainability of City infrastructure and assets.
- Commit to developing a sustainable and resilient stormwater system which maximizes the utilization of existing infrastructure, while implementing policies and procedures that facilitate preventive maintenance of systems.
- Collaborate with the Infill and Revitalization Steering Committee to support and incentivize infill and manage growth/sprawl by restructuring development fees and agreements.
- Modernize development review processes internally, and evaluate regulations, fees and rules, using best practices, in cooperation with other entities outside City government who are involved in the process.

The City and El Paso County are working together on revising and updating the City's Annexation regulations.

4.2. Objectives

The objectives of the policy are:

- To minimize site disturbance on lands adjacent to surface waters, wetlands, and riparian environments in order to protect water quality;
- To ensure activities such as development, mineral extraction, solid waste disposal, agriculture, and all other land use practices do not cause significant deterioration of water quality or significantly disturb the region's surface waters and groundwaters;
- To minimize the creation of new impervious cover throughout the region to enable continued groundwater contribution to streamflow during low flow conditions, and to minimize flooding impacts from increased stormwater runoff. For example, the City of Colorado Springs has a Streamside Development Overlay Zone to regulate existing and new development along waterways. In addition, the Hillside Area Overlay Zone has specific conditions for development;
- To advise local governments in guiding future growth and development activities to areas where impacts on water quality will be minimized and/or controllable. El Paso County is working a county-wide Master Plan to replace their existing small area plans and bring the county current in their zoning regulations for existing and new development. This process is expected to take two years, 2019-2021;
- To enhance public knowledge of the importance of maintaining vegetative cover, and to develop policies such as streamside setbacks, which restrict certain types of development in order to protect and/or enhance water quality;
- To advise local governments where current and possibly future areas of high erosion, sedimentation, and degraded water quality exist; and

- To develop and recommend methods to stabilize streambeds and banks, protect against flooding (or against flood damages), and restore and maintain stream health.

The City of Colorado Springs and El Paso County have initiated various code updates and plan revisions but the overall regional coordination for development still needs encouragement. The only regional approach El Paso County initiated was the Water Master Plan (2018). More regional work needs to be done respective to stormwater.

4.3. Implementation Recommendations

The following implementation steps are recommended:

1. Local governments should adopt horizontal building setbacks from all stream channels, floodplains, wetlands, and other riparian areas. These setbacks should consider the following: soil permeability and erodibility (soil type); slope; cover conditions; intensity of adjacent land use; quality of existing riparian habitat; and threatened and endangered species.
2. Siting and construction of roads and highways should be done in a manner that considers and minimizes water quality impacts.
3. Modification of stream channel cross-sections and encroachment should be accomplished in a manner that prevents negative stream channel impacts upstream and downstream after modification.
4. Minimization and disconnection of impervious surfaces created by construction of parking lots, buildings, roads, vegetation, and soil removal and by other development activities are recommended to ensure groundwater recharge and to reduce the amount of runoff and pollutants. The greatest restrictions on impervious cover are recommended for groundwater recharge areas of regional importance and areas of high precipitation where groundwater recharge will have the highest contribution to groundwater supplies and surface water base flows.
5. Local governments should coordinate with the Colorado Parks and Wildlife (CPW) in the assessment of site-specific and cumulative impacts of

subdivision development on aquatic and wildlife habitats. These assessments should be used to minimize impacts to the aquatic environment and related habitats. Efforts to protect water quality provide additional benefits to wildlife, such as habitat protection.

6. Local governments should identify floodplains, geologic hazard areas, wildlife habitats, wetlands, riparian areas, and significant agricultural lands and should recommend areas in need of protection.
7. Identify and promote land use and development BMPs that mitigate negative impacts to water quality.
8. Preserve open space and agriculture with a coherent system of conservation easements.
9. Remove regulatory barriers and provide selective incentives for low-impact development, sustainable design, and green building to improve water quality and compliance with water quality standards.
10. Develop watershed-wide criteria, regulations, and policies as appropriate to each jurisdiction, to ensure water quality protection.
11. Work with counties and cities to determine potential water quality impacts and concerns of proposed projects.

4.4. Riparian and Wetland Areas

4.4.1. Policy Statement

Riparian areas and wetlands should be protected from degradation of water quality or activities that impair their function.

4.4.2. Purpose and Importance

The purpose of this policy is to promote the protection of wetlands and to recognize their importance in watershed health. Wetlands and riparian areas are critical to the support and diversity of many flora and fauna; they stabilize stream banks and act as a buffer strip to reduce stormwater runoff and reduce damage from erosion, sedimentation, and flooding. Properly located and designed wetlands can also help increase property values and tourism and can provide environmental education opportunities. Wetlands and riparian areas are

critical to consider in reducing water volume because they act as energy and water absorbers by spreading out and diffusing fast-flowing floodwaters, thus mitigating and minimizing the amount of damage. They act as natural filtration devices to trap harmful water quality pollutants and sediments, and they improve water quality.

There are four different categories of wetlands present throughout the watersheds in the three-county Region—peatlands, marshes, wet meadows, and riparian.

4.4.3. Summary of Regulations and Policies

Section 404 of the CWA regulates the discharge or placement of dredged or fill material into waters and wetlands of the United States. Activities that may be regulated under Section 404 include infrastructure development, draining or filling of wetlands, channel and waterway modification, maintenance and repairs, and construction of dams or levees for water resource development. The program is administered by the U.S Army Corps of Engineers (ACOE) with review by other federal agencies.

Pursuant to Section 404(e) of the CWA, the ACOE has the authority to issue general permits on a nationwide basis for any category of activity involving discharges of dredged or fill material if the activities in that category are similar in nature and have minimal adverse environmental effects, individually or cumulatively. Nationwide permits (NWPs) are a type of general permit issued by the ACOE and are designed to authorize, with little or no delay or paperwork, certain activities having minimal individual or cumulative adverse effects on the environment (see 33 CFR Section 330.1 for policies concerning NWPs).

There are several other federal statutes that may be applicable to wetlands and wetlands creation. These include the federal CWA, National Environmental Policy Act, Endangered Species Act, and wetland banking programs. Related state statutes that may apply include Colorado groundwater law and potential water rights issues.

4.5. Objectives

The objectives of the policy are to:

1. Provide a coordinated regional approach regarding the review of 401 and 404 permits for filling or otherwise altering wetlands.
2. Compare information with existing plans and information concerning high riparian and wetland habitats.

3. Activities occurring in designated areas should be reviewed and coordinated with other agencies.
4. Prepare and release a comprehensive inventory and assessment of all wetland and riparian areas in each of the watersheds contained in the three-county region.

Develop a pilot project using an existing wetland to demonstrate the ability of wetlands to filter pollutants.

4.6. Implementation Recommendations

The following implementation steps are recommended:

1. Critical stream environment zones, floodplains, wetlands, and riparian areas should be protected through zoning or acquired through conservation easements, land exchanges, transfer of development rights, or similar resource protection techniques.
2. Wetlands disturbance should be minimized. If disturbance is unavoidable, mitigation measures, such as preventing direct runoff, detention or infiltration of site runoff, and construction of new wetlands or enhancement of existing “poor quality” wetlands should be employed to achieve no net loss of wetlands.
3. Plans for public or private infrastructure and investments should avoid floodplains, wetlands, riparian areas, steep erodible slopes, and geologic hazard areas to the maximum extent practicable (MEP).
4. Section 401 and 404 permits should be reviewed for consistency with local comprehensive and watershed plans to determine potential impacts to streams, critical riparian and wetland areas; and the potential to cause erosion and sedimentation problems.
5. Develop and distribute a plan for each watershed that includes prioritized opportunities for protecting, enhancing, and creating new riparian and wetlands areas along with their associated functions.
6. Inventory existing wetland and riparian areas, and evaluate their conditions

and functionality, and list their desired future conditions and functionality.

7. Encourage development of projects that use reclaimed water to restore or enhance riparian vegetation.

4.7. Source Water Protection for Public Water Supplies

4.7.1. Policy Statement

The surface and groundwaters of the region shall be protected from potential threats, such as pesticides, fertilizers, road de-icing, and other contaminants to ensure water supply sources are not contaminated.

4.7.2. Purpose and Importance

This policy is to promote protection and prevent possible future impairments caused by improper use and over-application of chemicals and the improper locating of septic systems. These problems can cause high nutrient levels in the groundwater, degrade surface water quality, and cause exceedances of water quality standards so drinking water is unsafe. Management of these activities must be addressed at many levels and involves cooperation between local governments; landowners; and domestic, municipal, and industrial water and wastewater treatment plants.

4.7.3. Summary of Regulations and Policies

CDPHE has completed a source water assessment for all special districts that are drinking water providers in Colorado. The reports for all the districts are listed by county (El Paso, Teller, and Park counties) and are available at:

<https://drive.google.com/file/d/1jMHmA8l4CX1cm8oeSQpAi5tEHuC7bu1/view>

The purpose of these reports is to assess potential susceptibility of each public drinking water source to contamination and to develop recommendations for protective actions that can be taken to protect these sources. No statutory authority has been given to CDPHE to force the adoption or implementation of source water protection measures. Implementation authority will remain the responsibility of local governments.

Regulations and policies that influence source water protection include activities related to stormwater, OWTS and agriculture (e.g., fertilizer use, livestock management, pest management, and irrigation).

Other source water protection concerns are improperly maintained and functioning septic systems that can have source water and drinking water implications. Each county health department has OWTS regulations that discuss the setback requirements and other information pertaining to OWTS. The OWTS setbacks from wells range from 100 to 300 feet. Some counties are in the process of conducting studies to determine potential water quality implications from improperly maintained septic systems.

4.8. Objectives

The objectives of the policy are to:

- Encourage the appropriate amount, scheduling, and application of pesticide, fertilizer, and road de-icing and friction applications to protect the region's water quality.
- Encourage proper storage, transportation, and handling, both during normal and emergency operations, of pesticides, fertilizers, road sanding materials, and hazardous chemicals used in the region.
- Provide ongoing education and maintenance regarding septic systems and adherence to county OWTS regulations regarding appropriate setbacks for septic system installation.

4.9. Implementation Recommendations

The following implementation steps are recommended:

- Education efforts should be encouraged in cooperation with the Natural Resources Conservation Service and State Extension Service to inform the public and other users of fertilizers and pesticides concerning the appropriate use, and alternatives to the use, of these materials.
- Application of road de-icing and friction materials should be conducted throughout the region in accordance with the following recommendations:
- Sanding materials and chemical application rates should be the minimum necessary to obtain safe and efficient operation of streets, roads, and highways. Sanding materials should be removed as soon as

possible to prevent pollution of both watersheds and airsheds and applied only when snow and ice cannot be removed by blading, plowing, or when mitigated by sanding.

- Measures should be taken to minimize and mitigate the use of sand and chemicals especially in and adjacent to environmentally sensitive areas including streams, lakes, ponds, wetlands, aquifer recharge areas, and flood-prone areas.
- Local governments should enact regulations to require public storage and handling of hazardous materials be conducted in accordance with the following general guidelines:
 - All materials should be kept in appropriate containers and/or under cover, well protected from precipitation and stormwater flows.
 - All storage areas should be kept clean of spilled material.
 - Handling and moving of materials should be limited as much as possible.
 - Hazardous materials should not be stored on potential aquifer recharge areas, unstable slopes, flood-prone areas, and other geologic hazard areas.
 - Storage, handling, and transporting of large amounts of hazardous materials should be tracked and monitored throughout the region by the local fire departments or designated emergency response providers.
 - Entities that depend on ground and surface waters for domestic water supplies should develop appropriate protection programs, such as a wellhead or surface water protection program, pursuant to Section 1428 of the Safe Drinking Water Act.
 - Municipalities should evaluate the need to develop a watershed ordinance to protect water supply sources.
 - The communities and solid waste disposal facilities in the region

should encourage responsible disposal of household hazardous wastes (oil, paint, acids, pesticides, etc.), waste minimization, and source reduction programs, through public education and outreach.

4.10. Stormwater and Urban Runoff

4.10.1. Policy Statement

Minimize water quality degradation caused by stormwater and urban runoff and provide technical assistance to local governments to fulfill NPDES stormwater permit requirements.

4.10.2. Purpose and Importance

The effective management of stormwater and urban runoff is critical due to their potential to affect stream water quality, riparian zone habitat and wetlands, flood conveyance capacity, and sediment loading and transport. Hydrologic impacts from urbanization can cause water quality problems, aggregation/ degradation of stream channels, increased temperature, and sedimentation, which can have a corresponding effect on aquatic habitat, groundwater recharge and streamflow.

NPDES Stormwater Program Phase I and II practices are discussed in more detail in the nonpoint source section of each watershed. The 208 Plan supports the ongoing efforts by cities and counties in maintenance of their NPDES permits. A list of cities and counties required to have NPDES permits is shown below:

4.11. Table: Cities and Counties required to have NPDES Permits

NPDES Permit	Chico Creek Watershed	Fountain Creek Watershed	Upper Arkansas Watershed	South Platte/Upper South Platte Watershed
Phase I	None	City of Colorado Springs	None	None
Phase II	None	El Paso County, Manitou Springs, Fountain, Monument, Fort Carson, USAF Academy, City and County of Pueblo ¹	None	None

¹The City and County of Pueblo are not within the PPACG Planning Area

4.11.1. Summary of Policies and Regulations

Although not all communities have specific criteria regarding detention, its importance is mentioned in their planning policies. There are no specific federal or state laws or regulations mandating stormwater detention. However, state statutes require counties to adopt subdivision regulations requiring developers to submit maps and plans (where applicable) for facilities to control stormwater more than historic runoff levels.

Counties are also required by state statute to include provisions governing standards and technical procedures applicable to storm drainage systems and detention facilities in their subdivision regulations. Similar requirements do not extend to municipalities.

All governments require an erosion control plan that outlines methods for reducing soil erosion during construction and grading of land. All governments have some policy addressing erosion control, but the level of requirements varies across the watershed.

General requirements include an erosion control plan to be approved prior to the commencement of construction. More specific policies address requirements for temporary and permanent sediment control facilities, protection of land cover for long construction periods, and security required until construction is completed and inspected.

Industrial facilities, including most manufacturers, mining, transportation facilities, power plants, landfills, wastewater treatment plants, and recyclers that discharge water, must be covered by a state stormwater discharge permit.

Within the region, some counties and cities have developed a stormwater utility or enterprise to meet the need of improving the quality of streams and creeks and prevent flooding. Most of the stormwater utilities and enterprises require residents to pay a tax or fee based on the amount of impervious surface area. While no state or federal laws or regulations mandate the establishment of stormwater utilities, several state statutes do grant the authority to establish local improvement districts and give direction to local governments seeking to create stormwater utilities.

In some municipalities and counties, the costs are offset for the developer only if regional facilities are constructed as part of the development. Jurisdictional drainage planning for new development is authorized under CRS, pertaining to county and municipal planning and zoning.

4.12. Objectives

The objectives of the policy are:

- To promote water quality as an important consideration in making decisions on the location and extent of areas to be served by public and private facilities and services.
- To maintain and improve existing structural controls and encourage the use of nonstructural controls such as stormwater quality control planning, landscaping and vegetative practices, and general education programs in managing stormwater.
- Adoption of stormwater management policies based on sound engineering principles.
- Use Low Impact Development (LID) techniques to reduce peak flows and runoff volume to stabilize channel forming flows.

4.12.1. Implementation Recommendations

For areas not covered under a current NPDES permit, the 208 Plan recommends the implementation of the following strategies to ensure consistency with the stormwater and urban runoff policy statement:

- Stormwater detention, retention ponds, or other BMPs should be required to minimize flooding, maximize infiltration, and minimize water quality impacts from impervious surface contaminants. Common structural BMPs used are: stormwater detention and retention ponds, methods to minimize directly connected impervious surface areas, and irrigated grass buffer strips. Common nonstructural BMPs used are: stormwater quality-control planning, adoption of criteria and standards, illicit discharge controls, and general education programs.
- Direct discharge of stormwater to a lake, stream, or drainage way should be minimized.
- Erosion and sedimentation control plans should be required for areas

of one acre or larger and should show proper measures for controlling erosion and reducing sedimentation. These plans, when required, should be completed prior to the start of any work and include all proposed excavation, filling, and grade work for improvements.

- Where the potential for water quality impacts exist, the following requirements should be applied to any land use activity (some of these practices are currently being applied or partially applied by some of the cities and counties in the region).
- Disturbance management and revegetation plans should be developed when necessary and should include details of vegetation disturbance (schedule, area involved, equipment to be used, etc.) and a description of all measures to be taken during and following disturbance to minimize water quality impacts, including monitoring to determine effectiveness of the measures taken.
- Timing of disturbance: whenever possible, disturbances should be planned to occur at those times of the year when water quality impacts will be minimized. For example, disturbances immediately prior to or during the winter season may require more mitigation before the site can be revegetated.
- Area controls: consideration should be given to limiting the area of disturbance which occurs at any one time, particularly in locations where water quality impacts may be severe, such as on moderate to steep slopes having soils with low permeability.
- Equipment: methods for vegetation disturbance should be selected to minimize water quality impacts.
- Stabilization during disturbance: soil erosion controls and protection of surface waters should occur promptly after vegetation disturbance.
- Monitoring during disturbance: regular inspections should be made of a disturbed site to ensure the operation is in conformance with

grading and erosion control and that water quality impacts are being controlled to the maximum extent practicable.

- Post-disturbance monitoring: inspections of the disturbed site after completion of the operation are necessary to ensure measures to control water quality impacts are effective and to determine if remedial actions are required.
- Financial assurances should be secured to ensure erosion control plans, including prompt and successful revegetation of disturbed areas, are implemented.
- Building restrictions on slopes greater than 30% should be considered as a means of limiting the water quality impacts of soil disturbance (e.g., Colorado Springs Hillside Area Overlay Zone).

4.13. Agriculture and Silviculture

4.13.1. Policy Statement

Agriculture and silviculture activities should prevent degradation of water quality and ensure the long-term viability and natural succession of the system.

4.13.2. Purpose and Importance

Agriculture and silviculture include the cultivation of cropland (including grains, vegetables, and orchards), raising of livestock, and harvesting of forest products. The primary pollutant issues from agriculture are related to sediment, salinity, and fertilizers. Over-application of fertilizers to cropland may lead to increased nitrate levels in groundwater and nutrient-enriched surface runoff.

Silviculture plays an important role in ecosystem health by maintaining the number of trees, thus reducing the severity of forest fires. This is especially important in areas that are in and border Forest Service and Bureau of Land Management land where fuels reduction activities are critical.

4.13.3. Objectives

The objectives of the policy are to:

- Encourage the minimization of agricultural pollutants entering streams.

- Recognize and protect irrigated agriculture as an important groundwater recharge mechanism for sustaining stream flows during critical low-flow periods.
- Recognize forest management practices that minimize fire fuel buildup and control wildfires, diseases, and insect infestations as a viable long-term water quality management strategy.
- Ensure compatibility of investment policies for public facilities with other environmental protection programs (e.g., floodplain protection).

4.13.4. Implementation Recommendations

The following implementation steps are recommended:

- Forests should be thinned and maintained to prevent and reduce the severity of forest fires in the future.

BMPs for agricultural activities are recommended to minimize water quality impacts from these activities. These are discussed in the Colorado Nonpoint Source Program 2012 Management Plan:

<https://www.colorado.gov/pacific/cdphe/2012-nonpoint-source-management-plan>

Another good resource for agriculture groundwater protection programs is the “Agricultural Chemicals and Groundwater Protection Program,” which is a joint program involving the Colorado Department of Agriculture, Colorado State University Extension, and CDPHE:

<https://www.colorado.gov/pacific/agconservation/groundwaterprotection>

4.14. Wastewater Treatment Facilities

4.14.1. Policy Statement

Decisions to locate wastewater treatment systems, interceptors, and lift stations will be made in a manner that protects water quality and recognizes the protection of floodplains, geologic hazard areas, wildlife habitats, wetlands, and agricultural land.

4.14.2. Purpose and Importance

The purpose of this policy is to ensure public facilities are located and constructed with consideration for minimizing water quality impacts, while recognizing financial limitations. The communities of the region are extremely supportive of protecting water quality through the funding of well-constructed, -operated, -and maintained water and wastewater treatment facilities. Careful planning of public infrastructure is needed to assure maximum public benefit is attained with available funds.

PPACG supports necessary public wastewater treatment infrastructure needs as stated in the 208 Plan and supports implementation and funding of public wastewater collection and treatment needs as identified in the point source sections of each of the watersheds. PPACG will assist the designated management agencies with any technical assistance necessary.

If it is economically feasible, wastewater service will be provided in regional and sub-regional publicly owned wastewater treatment facilities, and smaller privately-owned facilities will be avoided. The potential negative impacts from smaller wastewater treatment facilities are:

- Reliability;
- Disposal of industrial wastes and sludge; and
- Potential cost of technology required to meet stream standards.

4.14.3. Summary of Regulations and Policies

Federal and state regulatory requirements have strengthened compliance of wastewater discharge facilities. The goal of the 1972 legislation of the CWA was the “restoration and maintenance of the chemical, physical and biological integrity of the Nation’s waters.” This act established regulatory requirements for wastewater dischargers that are amended and updated. Control strategies are required to achieve these standards if they are not being met. Specific numeric standards are established by CDPHE based on the water quality classifications and standards of the creeks the facilities discharge to.

The review of site applications must conform to and be consistent with PPACG’s 208 Plan and CDPHE WQCC Regulation #22, Site Location and Design Approval Regulations for Domestic Wastewater Treatment Works. Two documents used in the review of site applications are:

- CDPHE WQCD WPC-SA, Guidance Document for the Site Location and Design Approval Regulations for Domestic Wastewater Treatment Works; and

- CDPHE WQCD Policy WPC-DR-1, State of Colorado Design Criteria for Domestic Wastewater Treatment Works.

These documents can be found at:

<https://www.colorado.gov/pacific/cdphe/wq-guidance>

<https://www.colorado.gov/pacific/cdphe/wq-design-criteria-potable-water-systems-policies>

The health departments of El Paso, Teller, and Park counties each have OWTS regulations that are applicable for septic systems that are 2000 gallons per day or greater. The CDPHE WQCC has On-site Wastewater Treatment System Regulation, Regulation #43, which was updated in 2018:

<https://www.colorado.gov/pacific/cdphe/water-quality-control-commission-regulations>

4.15. Objectives

The objectives of the policy are to:

- Ensure adequate treatment facilities to collect, treat, and dispose of anticipated types and quantities of wastewater;
- Ensure the discharge of any water pollutants from wastewater treatment facilities, industrial or commercial processing activities, or mine waste tailings ponds meets the assigned conditions of its discharge permit so as to comply with stream standards as established by the Colorado Water Quality Control Commission;
- Ensure issuance of new permits and modified permits are consistent with the information contained in the 208 Plan;
- Support and encourage local governments and water providers to implement strategies and promote programs that encourage increasing the use of non-potable water, including the reuse of properly treated wastewater, increasing wise use of water, and requiring long-term water conservation efforts;
- Ensure development of solid waste disposal sites, including residuals from wastewater treatment, is conducted in accordance with sound

conservation practices, giving consideration to potential pollution problems inherent in proposed sites;

- Ensure the waste load allocations for point source discharges are met throughout the region through upgrading of existing treatment facilities and planning and construction of new facilities as required;
- Recommend regional cooperation, when deemed cost-effective and when practical alternatives exist, to avoid the proliferation of individual wastewater treatment facilities and/or wastewater treatment agencies;
- Ensure wastewater treatment facilities are properly operated and maintained by a certified and responsible operating entity.

4.15.1. Implementation Recommendations

The following implementation steps are recommended:

- All site applications for the region, prior to being submitted to CDPHE, will include a coordinated review by the Water Quality Management Committee, PPACG staff, and appropriate management agencies within the watershed. The site application will be reviewed against the 208 Plan, CDPHE WQCC Regulation #22, and other appropriate local and state regulations and policies.
- PPACG staff will review proposed changes to applicable CDPHE water quality standards, regulations, or policies affecting the review of site applications and discharge permits.
- OWTS greater than 2,000 gallons per day should connect to a designated management agency's wastewater system if it is economically and technically feasible. OWTS systems of less than 2,000 gallons per day that serve homes or small businesses should be encouraged to connect to a designated agency's system when it becomes accessible and continue to be reviewed by the local county health department where it will be constructed.

- Lift stations must provide enough emergency storage capacity at peak flow for the specific entity to respond to an emergency, and either fix the problem or remove the wastewater through trucks.
- Municipalities, counties, utilities, and other water providers should promote local water conservation and use of non-potable water by supporting appropriate educational efforts and ordinances. Support further research to determine strategies found to be effective in other cities and counties.
- Where site conditions require wastewater collection and central treatment, efforts should be made to consolidate treatment plants. Consideration, however, needs to be given to protection of instream flows, wastewater reuse opportunities, and water rights obligations. Every effort should be made to consolidate management agencies and special district boundaries where possible and financially feasible. At a minimum, proper long-term operation and maintenance should be provided by a responsible operating entity.
- Full compliance with the Colorado Operator Certification Act should be required. The state should emphasize the legal responsibility of the plant owner and should support the plant operator with timely repairs and reimbursement for operations. The state should promptly begin enforcement actions for chronic poor operation of treatment facilities.
- Biosolids generated by municipal and industrial wastewater treatment plants should be managed in accordance with applicable state or federal permits and Certificates of Designation.
- Encourage the reuse of biosolids as a primary application on crop and pastureland, land reclamation sites, nurseries, commercial landscapes, and re-use of treatment plant effluent. Efforts to beneficially use biosolids should be supported by local governments where financially feasible.

4.16. Onsite Wastewater Treatment System (OWTS)

4.16.1. Policy Statement

OWTS should be located in a manner that protects groundwater and surface water quality and recognizes geological constraints; and should be properly operated and maintained.

4.16.2. Summary of Regulations and Policies

The CDPHE WQCD regulates the discharge of wastewater from all septic systems with design capacities greater than 2,000 gpd. PPACG is also required to review the site applications for these systems and make recommendations to CDPHE prior to their review. The health departments of El Paso, Teller, and Park counties each have OWTS regulations that are applicable for septic systems of less than 2,000 gpd and are required to be approved by the local health department. These regulations are adopted pursuant to the Colorado On-site Wastewater Treatment Systems Act, updated in 2012, and the CDPHE WQCC On-site Wastewater Treatment System Regulation, Regulation #43, updated in 2018. This Colorado statute and CDPHE WQCC regulation are found at:

<https://www.colorado.gov/pacific/cdphe/wqcc-regulations-and-policies-and-water-quality-statutes>

The CDPHE WQCD website regarding OWTS is:

<https://www.colorado.gov/pacific/cdphe/clean-water-site-wastewater-treatment-systems>

4.16.3. Objectives

The objectives of this policy are to:

- Ensure proper operation and maintenance of onsite wastewater treatment systems;
- Ensure systems are installed by a certified installer; and
- Ensure surface water and groundwater quality are being protected.

4.16.4. Implementation Recommendations

The following implementation steps are recommended:

- Make certain all site applications for wastewater systems that are over 2,000 gallons per day are reviewed and are consistent with applicable

county and state OWTS regulations;

- Require an analysis of costs associated with hookup to a central wastewater treatment facility;
- Ensure the system will be properly operated and maintained and will not exceed the maximum treatment capacity if future growth is planned;
- Require thorough state, regional, and local reviews of all proposed subsurface disposal systems. These systems are a growing problem in the region, and with reduced federal funding for centralized facilities, these OWTSs are likely to see increased use.
- Make sure location, depth, installation, operation and maintenance of systems and other information is put into a central database tracking system.

Teller County, due to its alpine setting and unique geologic setting, presents several problematic issues with regard to Onsite Wastewater Systems. These problems are the result of very low temperatures experienced in winter, deeper levels of ground freezing, rapidly draining soils, and low-level permeability bedrock (TST, 2001).

Teller County has existing regulations governing the lot sizes suitable for installation and use of OWTS and individual wells. This is addressed in the 200-foot setback requirement between a well and an OWTS system. These setbacks also have an effect on the minimum lot size. TST (2001) concluded that continued reliance on onsite wastewater treatment systems barring future technological changes that significantly advance the effectiveness and the ease of use for such systems, will result in continued degradation of water quality. The remediation of groundwater already contaminated by OWTS operations will be extremely difficult and expensive to accomplish. The type of contamination and the rate of degradation are usually controlled by the lot sizing and the density of the subdivision.

Several subdivisions in Teller County (Forest Glen, Navajo Mountain Mesa, and Highland Lakes) have reported high nitrate levels in the groundwater, and this may be caused by septic system contamination.

More information regarding the reports completed for Teller County regarding groundwater

supply and the effects of septic systems on water quality can be found under the Water Quality Analysis Section of the Upper Arkansas Watershed.