

2. Introduction

2.1. Background

The Pikes Peak Area Council of Governments (PPACG) was designated by the Governor of the State of Colorado and the EPA in 1974 as the regional water quality management planning agency for the Pikes Peak region. This is referred to as Colorado State Management Region IV and is a three-county region containing El Paso, Teller, and Park counties. The Pikes Peak region is unique because it includes portions of two different drainage basins – the South Platte River Basin and the Arkansas River Basin.

As the designated water quality planning agency, PPACG is required to prepare and update a Regional Water Quality Management Plan to address regional water quality issues under Section 208 of the CWA. This plan is commonly referred to as the 208 Plan and, as defined in state and federal law, it is a planning document, not a regulatory document. Previous updates to the 208 Plan were completed in 1978, 1981, 1984, 1985, 1989, 1999, 2003, 2007 and 2010. The 2019 208 Plan update supersedes the 2010 update and reflects the dynamic nature and changing conditions in the region.

2.2. Plan Overview

The 208 Plan is used to address water quality and environmental-related issues and to recommend implementation strategies to restore impaired rivers and streams. It is developed through a regional cooperative planning effort which involves representatives from local municipalities and counties, special districts, and state and federal agencies. This process is continuous and iterative.

The 2019 update of this plan follows the watershed approach initially taken in the 2010 Water Quality Management Plan and includes information specific to the five watersheds located within the two river basins in the Pikes Peak Planning Region:

- Within the South Platte River Basin: this includes the South Platte Headwaters Watershed and the Upper South Platte Watershed, which will be discussed together due to their similarities; and
- Within the Arkansas River Basin: this includes the Upper Arkansas Watershed, the Fountain Creek Watershed, and the Chico Creek Watershed, which will each be discussed separately.

The watersheds located within this three-county region are extremely diverse in terms of water quality issues, geology, climate, and topography, and the information considers the diversity within and between each of the five watersheds.

Watershed boundaries were determined by the U. S. Geological Service (USGS) based on a national system of Hydrologic Unit Codes (HUC), which provide a common framework for delineating watersheds and their boundaries (USEPA, 1995).

2.3. Hydrologic Unit Code Watershed Name

11020003	Fountain Creek Watershed
10190001	South Platte Headwaters Watershed
10190002	Upper South Platte Watershed
11020004	Chico Creek Watershed (no active monitoring stations)
11020002	Upper Arkansas Watershed

The watershed strategy is based on the premise that issues are more effectively resolved at a watershed level where factors affecting both upstream and downstream users can be assessed and allows integration of programs and concerns. Information and issues that overlap between watersheds are described in the Introduction; Regional Water Quality Assessment; Regional Policies; and Environmental, Social, and Economic Impacts of the Plan. Population projections contain population forecasts by county for each of the districts. Specific information unique to each of the watersheds is described in individual Watershed Plans, which contains:

- Introduction and overview;
- Water quality analysis;
- Point source dischargers;
- Nonpoint source assessment;
- Management activities and associations; and
- Conclusions and recommendations.

2.4. Section 208 Planning Requirements

This plan will serve to document, inform, and guide water quality-related activities based on a

comprehensive understanding of the critical issues, and is being developed to be consistent with the requirements of Section 208 of the CWA, which states the plans must include but not be limited to the following (CDPHE, 2013):

- The identification of treatment works necessary to meet the anticipated municipal and industrial waste treatment needs over a 20-year period, including treatment requirements, necessary wastewater collection and urban stormwater runoff systems, financial arrangements, and relationship to potential land use;
- The establishment of construction priorities for such treatment works and time schedules for initiation and completion of all treatment works;
- The identification of regulatory programs used for waste management and to manage discharge facilities;
- The period of time necessary to carry out the plan; the costs of carrying out the plan within a specific timeframe; and economic, social, and environmental impacts of carrying out the plan;
- Processes to identify nonpoint sources of pollution including agriculture, silviculture, legacy mining, the control and disposal of residual waste, and the disposal of pollutants on land or in subsurface excavations to protect ground and surface water quality; and
- The identification of management and operating agencies to carry out appropriate portions of a water quality management plan.

2.5. Management Agency Overview

The management agency structure of the 208 Plan is critical for protection of the surface and ground waters of the region. It recognizes the existing governmental and regulatory framework and allows decisions and management at the most appropriate level of control. One requirement of the 208 Plan is to identify roles for management agencies and operating agencies responsible under the law as implementers of the 208 Plan.

Within the Pikes Peak region, both water quality management associations and general-purpose local governments act as water quality management agencies. Once designated by the

Governor and approved by the EPA, functional responsibility for carrying out all or part of the water quality management plan is legally assigned to that entity. Most of the management agencies in the 208 Plan were established in the 1970s and are comprised of local governments and special districts. The focus of these agencies has been primarily point-source issues and concerns.

The designation of management agencies establishes part of the legal basis for delegation of entities with the authority and ability to implement the recommendations of the 208 Plan; however, the authority to make changes to the regulations rests with the Water Quality Control Commission (WQCC).

2.6. Management Groups

The 208 Plan is organized into the following management group structure. Organizations within each of these groups are listed in the water quality management associations and watershed planning groups section for each of the watersheds.

Wastewater Operating Agencies—Operating agencies own and run wastewater treatment facilities and are responsible for the control, collection, treatment, and discharge of wastewater within their district boundaries or service area boundaries. Wastewater operating agencies within Park, Teller and El Paso Counties will be identified within their respective watersheds. Operating agencies are responsible for specific pollution control activities and have individual National Pollution Discharge Elimination System (NPDES), or Colorado Discharge Permit System (CDPS) discharge permits. Smaller wastewater treatment plants with design capacities of 50,000 gallons per day (gpd) (or 0.05 million gallons per day(mgd)) are described in the plan but not recognized as designated operating agencies.

Management Agencies/Associations—Water Quality Management Associations and/or Agencies (WQMAs) are comprised of individual municipal governments, watershed associations and authorities, general-purpose governments, and special districts responsible for wastewater planning and activities that affect water quality. These agencies (collectively or individually) have the ability to carry out the provisions of Section 208(c)(2) of the CWA and are also responsible for review and recommendations regarding site applications and water quality issues. The current WQMAs in the Pikes Peak region primarily consist of special districts that focus on point source issues within each of their respective areas. In the absence of a designated management agency for each watershed, a county, municipality, or other management agency is designated those powers until one is formed. The authorities given to

the management agency according to the CWA are:

- Implement the point and nonpoint features of the 208 Plan;
- Manage wastewater treatment works and related facilities effectively;
- Design, construct and operate wastewater treatment works and related facilities;
- Accept and utilize grants or other funds from other sources for waste treatment management processes;
- Raise revenues, including the assessment of waste treatment charges;
- Assure each participating community pays its proportionate share of treatment costs;
- Incur short- and long-term indebtedness;
- Refuse to receive wastes from any municipality or subdivision that does not comply with the provisions of the CWA; and
- Accept industrial wastes for treatment.

The locations of the WQMAs were historically based on service area or political boundaries and therefore do not correspond with watershed or subwatershed boundaries. The basic philosophy that guided the structuring of management agencies was composed of three major elements (PPACG, 1989):

- Whenever existing management agencies can be used to properly perform a management function, they should be used.
- The provision of services at the most local level of government is considered to be, in most cases, the ideal combination of efficiency and representation of people.
- A degree of overall coordination and planning is required in order to maximize the performance of existing agencies and service providers.

Land Use Authority—This remains with the towns, cities, or counties responsible for oversight of water quality concerns regarding land use in their jurisdictions, unless this power is given to a special district.

Watershed Groups and Organizations—These are agencies or organizations that address water quality concerns but are not given any specific authorities under the 208 Plan. Most of the watershed groups in the region primarily address nonpoint source issues and concerns.

2.7. Roles and Responsibilities

2.7.1. Pikes Peak Area Council of Governments (PPACG)

PPACG serves as a regional forum for the identification, discussion and resolution of water quality management issues confronting local communities. PPACG will continue to:

- review, update, and amend the 208 Plan;
- support and participate in watershed-based water quality planning processes;
- encourage and assist local governments in developing and reviewing regulations and policies that address water quality issues;
- facilitate intergovernmental agreements that will further watershed water quality planning;
- provide technical support in development of water quality improvement projects;
- review water quality standards and state policies and regulations that affect water quality;
- assist with the development and implementation of nonpoint source and stormwater control programs conducted by local governments;
- assist designated management and operating agencies; and
- review site applications and discharge permits to assure discharges to a stream segment are treated in accordance with the approved 208 Plan. Work with stakeholders to determine if existing water quality standards and classification designations are appropriate;
- Make recommendations to the WQCC on proposed changes to stream classifications and standards; and
- Apply for grants or other funding mechanisms to strengthen existing policies and regulations or capital improvement projects to help

achieve compliance with water quality standards.

PPACG recognizes the pressing concerns for nonpoint source issues in the region and the need to take an active and lead role in building towards long-term solutions. PPACG seeks to build public awareness of water quality management issues through public education.

PPACG will update the 208 Plan every five years, with amendments being processed on an as-needed basis but not more frequently than one every six months. The requirements to amend the 208 Plan shown in Appendix B are made in accordance with the Clean Water Act and Colorado Water Quality Control Act.

2.7.2. Water Quality Management Committee (WQMC)

Members of the WQMC assist with water quality planning issues and development of the 208 Plan and give advice and recommendations on the 208 Plan. Representation on the WQMC includes special districts, military installations, and representatives of El Paso, Teller and Park counties. WQMC members review requirements for 208 Plan amendments and propose changes to wastewater discharge permits, site applications, stream classification/standards, and any other projects impacting water quality. The Site Application Review Committee (SARC), a subcommittee of the WQMC, reviews and makes recommendations on all site applications in the Pikes Peak region. This includes new wastewater treatment facilities, expansion of existing facilities, lift stations and interceptors.

2.8. State and Federal Regulations and Programs

2.8.1. Federal Clean Water Act (CWA)

The CWA was originally enacted in 1972, with amendments in 1977, 1981, and 1987, to restore and maintain the chemical, physical, and biological integrity of the nation's waters. The 1987 amendments to the CWA authorized states to develop and implement nonpoint source pollution management programs. This act also required states to establish water quality standards that protect the beneficial uses of a waterbody and assign a numerical or a narrative statement describing the maximum concentrations of various pollutants.

Under the CWA, wastewater treatment plants are required to meet specific discharge standards set by the Environmental Protection Agency (EPA) before treated effluent is discharged. Under NPDES, facilities are required to sample and monitor discharges for contaminants such as suspended solids, dissolved organic matter, bacteria, pH, residual chlorine, oil and grease, heavy metals, and cyanides to make certain the contaminant levels are

reduced to legally acceptable levels prior to discharging the wastewater.

Responsibility for carrying out the NPDES Program under Section 402 of the CWA, which includes review and issuance of NPDES stormwater and wastewater permits, is under the authority of the Colorado Department of Public Health and Environment (CDPHE). The issuance of these permits must be consistent with the 208 Plan.

2.8.2. Section 404, Dredge or Fill Permits

Section 404 of the CWA requires permits to be issued for the discharge of dredge or fill material to streams/creeks and waters of the United States. These permits are issued by the U.S. Army Corps of Engineers (ACOE) and are also required if wetlands are impacted through dredge or fill material or use of heavy equipment.

The ACOE can issue several different types of permits: Letter of Permission, Individual Permits, General Permits—Nationwide and Regional, Emergency Permits, and After-the-Fact Permits. PPACG reviews the issued permits for consistency with watershed plans and the 208 Plan to ensure they do not cause water quality degradation or impacts to downstream communities.

2.8.3. Colorado Department of Public Health and Environment (CDPHE) Regulations and Policies

The importance of the 208 Plan in addressing regional water quality impacts is reflected in existing state policies. The Colorado Water Quality Control Act (CRS Sections 25-8-101 through 25-8-702) provides the policy directive to conserve, protect, maintain, and improve, where necessary and reasonable, the quality of state waters.

The CDPHE is the delegated permitting authority for the NPDES permit program, including wastewater and stormwater permits for all areas except federal facilities. The EPA is the permitting authority for any federal facility, including military installation permits, which include Fort Carson and the USAF Academy, located in the Fountain Creek watershed. These permits must address all federal and state water quality standards and regulations.

A Guide to Colorado Programs for Water Quality Management and Safe Drinking Water, WQCC Policy #98-2, presents policy direction for regional water quality planning agencies and the content of Section 208 Water Quality Management Plans, as stipulated in Section 208 of the CWA. PPACG works cooperatively with other organizations and councils of governments that border our 208 Planning Region on studies and activities within our watersheds. More information can be found at: https://drive.google.com/file/d/18Tbk_kKdR-

[PeGvlwHQDbjET8jByrqU4t/view](https://www.colorado.gov/pacific/cdphe/wqcc-policies)

The Water Quality Control Commission is the administrative agency responsible for developing water quality policy in Colorado that implements the Colorado Water Quality Control Act. The WQCC adopts water quality classifications and standards for surface and ground waters of the state, as well as various regulations aimed at achieving compliance with those. The 208 Plan is consistent with state regulations and policies, including the NPDES permit program requirements.

2.8.4. Site Applications

As the planning agency for the region, PPACG is required to review site applications and discharge permits. The requirements for site applications are contained in WQCC Regulation #22, Site Location and Design Approval Regulations for Domestic Wastewater Treatment Works, this document and in other CDPHE policies and guidance documents. This includes:

- Regulation #22 – Site Location and Design Approval Regulations for Domestic Wastewater Treatment Works; and
- WPC-DR-1 – Design Criteria for Domestic Wastewater Treatment Works.

This information can be found at:

<https://www.colorado.gov/pacific/cdphe/waterqualitycontrol-commission-regulations>

<https://www.colorado.gov/pacific/cdphe/wqcc-policies>

PPACG and the WQMC review all site applications and make a recommendation to the PPACG Board of Directors for action prior to review by the CDPHE. The procedures PPACG uses to review site applications are shown in Appendix A. A list of all site applications reviewed and approved since the last update of the 208 Plan in 2010 is shown in Appendix D.

2.9. Statewide 208 Plan

The CDPHE approved the Statewide Water Quality Management Plan in June 2011 that provides a framework for water quality planning based on federal regulation at Section 130.6 of Title 40 of the Code of Federal Regulations (40 CFR 130.6). The Statewide 208 plan discusses Division programs and activities associated with the following specific elements defined in 40 CFR 130.6: water quality management agencies; effluent limitations; TMDLs;

municipal and industrial waste treatment; nonpoint source management and control; water quality management plan implementation measures; dredge and fill; and ground water.

The Statewide 208 Plan also provides a comprehensive look at water quality across the entire state as well as more specific water quality information for the seven river basins in the state. This comprehensive water quality information is compiled from a number of information sources.

The Division has since transitioned to a more resource efficient method for providing state-scale planning information through the Watershed Rapid Assessment Program (WRAP) on Colorado State University's Environmental Resource Assessment and Management System (eRAMS) platform. .

The WRAP tool is used to extract, organize, and analyze data and information at various statewide, regional, and watershed scales for readily available geospatial characteristics as well as water quantity and quality. These characteristics include current and historic land use, population, climate, climate projections, stream flow, and stream water quality. The integrated assessment of watershed health is then broken down into six primary attributes: landscape condition, habitat, hydrology, geomorphology, water quality, and biological conditions. Utilizing the extracted data, the WRAP tool calculates a number of indicators for these attributes (for example, median summer nitrate concentration as an indicator of water quality) to create an overall summary of the watershed condition. This overall condition can then be used at a state-wide scale to identify and prioritize management actions similar to the basin plan sections of the 2011 Statewide 208 plan.

2.10. Stormwater Management

Colorado is authorized by the EPA to administer the NPDES program, including stormwater discharge permits. Colorado's permit program is known as the Colorado Discharge Permit System (CDPS) and is the state equivalent of the NPDES permit program. The state generally follows the federal rules for stormwater permitting but uses state application forms and requires permit fees. Whenever feasible, the implementation of green infrastructure should be utilized to reduce the negative environmental impacts of stormwater runoff. The EPA defines green infrastructure as "management approaches and technologies that utilize, enhance, and/or mimic the natural hydrologic cycle processes of infiltration, evapotranspiration and reuse" (USEPA, 2008). It incorporates vegetation and natural resources as much as possible in development and redevelopment. Green infrastructure has several benefits, including reduced

runoff, groundwater recharge, improved air quality, better aesthetics, reduced costs, reduced impacts on climate change, and improved water quality.

2.11. Plan Implementation

Recommendation and implementation of policies and protection strategies require the support of all local governments and stakeholders. All recommendations contained in the 208 Plan are consistent with the goals and objectives of the CWA, Colorado Water Quality Act, and regional watershed programs. A description of the roles and responsibilities of the agencies and organizations is included in the plan.

The service area boundaries shown in the 208 Plan reflect a 20-year planning horizon and may or may not be the same as the district or jurisdictional boundaries. Potential changes to the service area boundaries are reflected in the future needs assessment of each of the watershed sections.