



Chatfield

Watershed Authority

2011 Annual Report

The Chatfield Watershed Authority promotes protection of water quality in the Chatfield Watershed for drinking water supplies, recreation, fisheries, and other beneficial uses.



2011 Chatfield Watershed Tour





To Our Readers from the Chatfield Watershed Authority Co-Chairs....

Thank you for your interest in the 2011 water quality activities and programs of the Chatfield Watershed Authority. This Chatfield Watershed Authority 2011 Annual Report presents highlights of water quality conditions and Authority efforts in the last year. We are pleased to report a number of successes for the year!

- 💧 Chatfield Reservoir met total phosphorus and chlorophyll-a water quality standards during the growing season, July – September.
- 💧 Building off of the 319 Grant for the Chatfield Watershed Plan, two new project grants were awarded to promote water quality protection in our watershed and reduce nonpoint sources which comprise 80% of the nutrient load to the Reservoir.
 - Colorado Watershed Restoration Grant from CWCB for stream restoration and habitat improvements along Massey Draw near the Ken Caryl Ranch Equestrian Center
 - Healthy Rivers Fund Grant from CWCB for Plum Creek Water Quality Characterization and Nonpoint Source Identification.
- 💧 New synergies were developed with future grant partners such as Ducks Unlimited and Natural Resources Conservation Service.
- 💧 The Authority hosted a tour of the watershed and Chatfield Reservoir with the Colorado Water Quality Control Commission and watershed stakeholders, highlighting opportunities, challenges and our watershed vision.

Our challenge and focus for 2012 will be the development of a Chatfield Watershed Plan and continuing to generate additional funds to implement important nonpoint source projects.

Continued protection of water quality in the Chatfield Basin is vital to the Authority and to the citizens of Colorado. We invite you to participate in and support our efforts in the achievement of watershed health.

Sincerely,

Larry Moore
Co-Chair



Kevin Urie
Co-Chair





The *2011 Chatfield Report* is the annual water quality summary status report presented by the Chatfield Watershed Authority to communicate the health of Chatfield Reservoir and its watershed, highlighting information required by the Colorado Water Quality Control Commission in Control Regulation #73.

Chatfield Watershed Authority

www.chatfieldwatershedauthority.org

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 Larry Moore, Roxborough Water & Sanitation District

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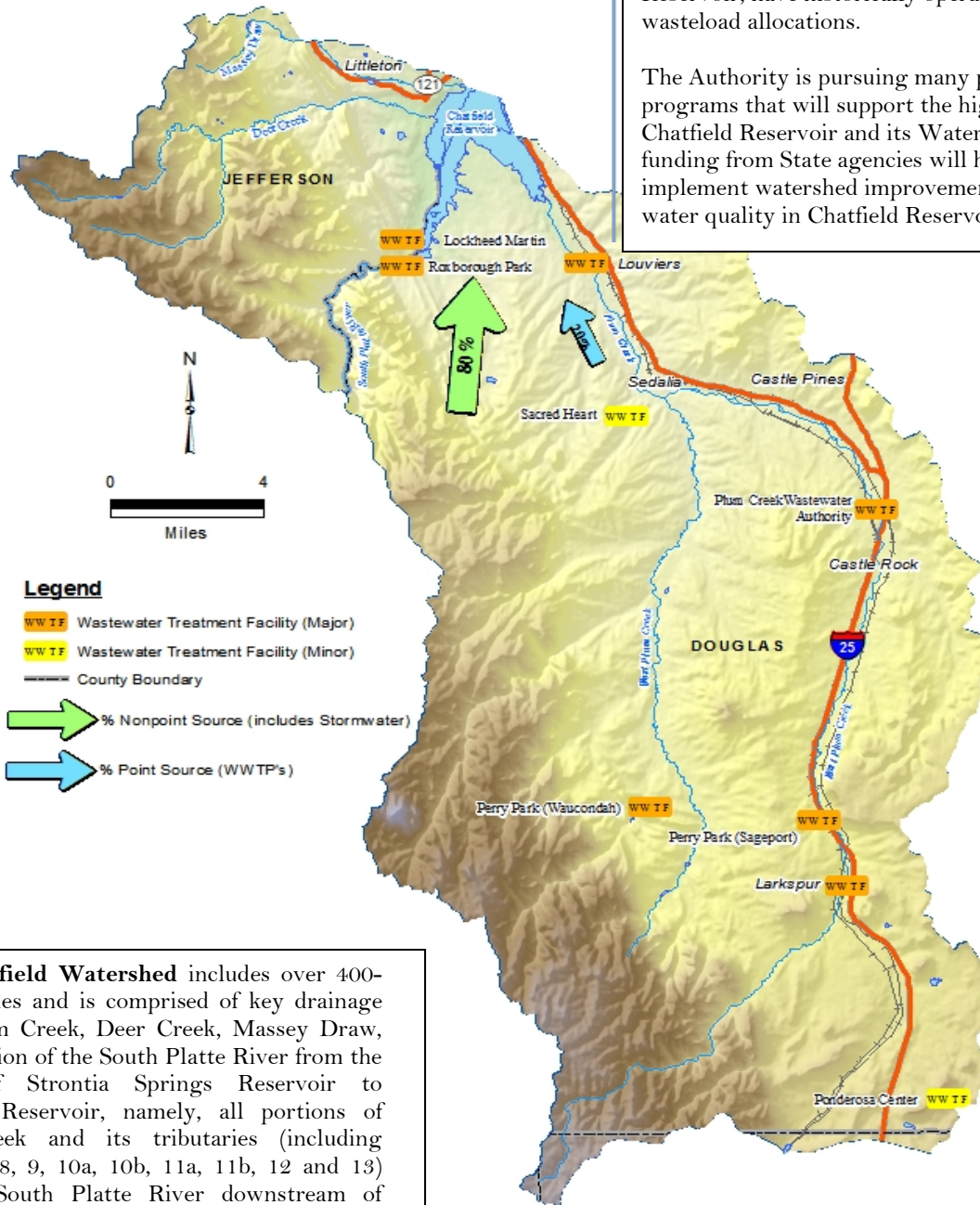
Priority Projects

Where Do You Focus Limited Resources to Reduce Phosphorus Loading to Chatfield Reservoir?

Limited resources need to focus on nonpoint source reductions, primarily in Plum Creek, to maintain the health of the watershed and its reservoir.

In 2011, approximately 80% of Total Phosphorus loading into Chatfield Reservoir came from non-point sources in the Watershed. Wastewater treatment plants (WWTPs), approximately 20% of the phosphorus load to Chatfield Reservoir, have historically operated within their wasteload allocations.

The Authority is pursuing many projects and monitoring programs that will support the high water quality in Chatfield Reservoir and its Watershed. Recent grant funding from State agencies will help us continue to implement watershed improvements aimed at improving water quality in Chatfield Reservoir even further.



The Chatfield Watershed includes over 400-square miles and is comprised of key drainage areas Plum Creek, Deer Creek, Massey Draw, and a portion of the South Platte River from the outfall of Strontia Springs Reservoir to Chatfield Reservoir, namely, all portions of Plum Creek and its tributaries (including segments 8, 9, 10a, 10b, 11a, 11b, 12 and 13) and the South Platte River downstream of Strontia Springs Reservoir outfall (including segments 6a, 6b, and 7).

Reservoir Regulatory Compliance with Water Quality Standards

During 2011 the chlorophyll and phosphorus concentrations in Chatfield Reservoir were well below the water quality standards established by the Water Quality Control Commission (Commission).

The water quality standards for Chatfield Reservoir adopted by the Commission are as follows:

- Chlorophyll-a (Chl-a) standard of 10- $\mu\text{g/L}$ with an assessment threshold of 11.2- $\mu\text{g/L}$
- Total phosphorus (TP) standard of 30- $\mu\text{g/L}$, with an assessment threshold of 35- $\mu\text{g/L}$

These water quality standards are during the growing season (July through September), and include a one-in-five year exceedance frequency.

“Looking ahead, our primary focus is to protect the water quality in the Chatfield Reservoir through on-going planning and implementation of water quality monitoring and projects.”

~Larry Moore, co-chair of the Chatfield Watershed Authority

As shown in Figure 1, the growing season average for chlorophyll a of 4.65 $\mu\text{g/L}$, was well below the 10 $\mu\text{g/L}$ standard. Figure 2 provides a historical perspective of the Chl-a growing season average. Over the 29 year period of record, the reservoir has met the new Chl-a standard 86 % of the time.

Figure 1. Monthly 2011 Chlorophyll-a Concentration in Chatfield Reservoir

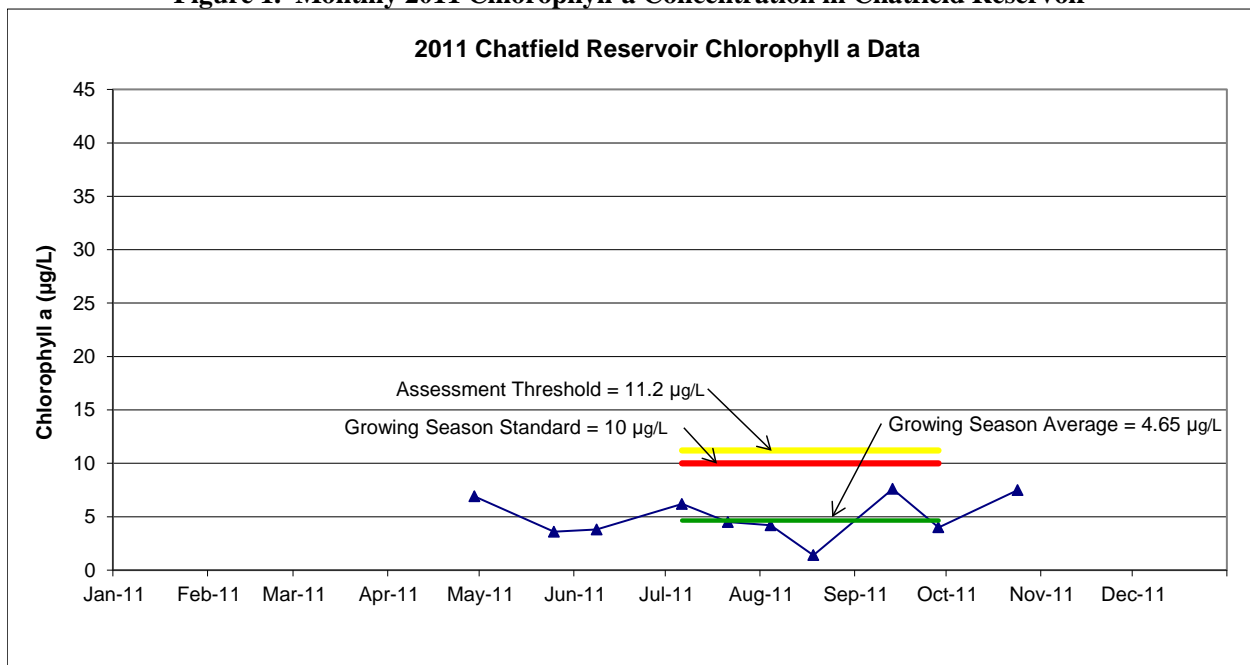
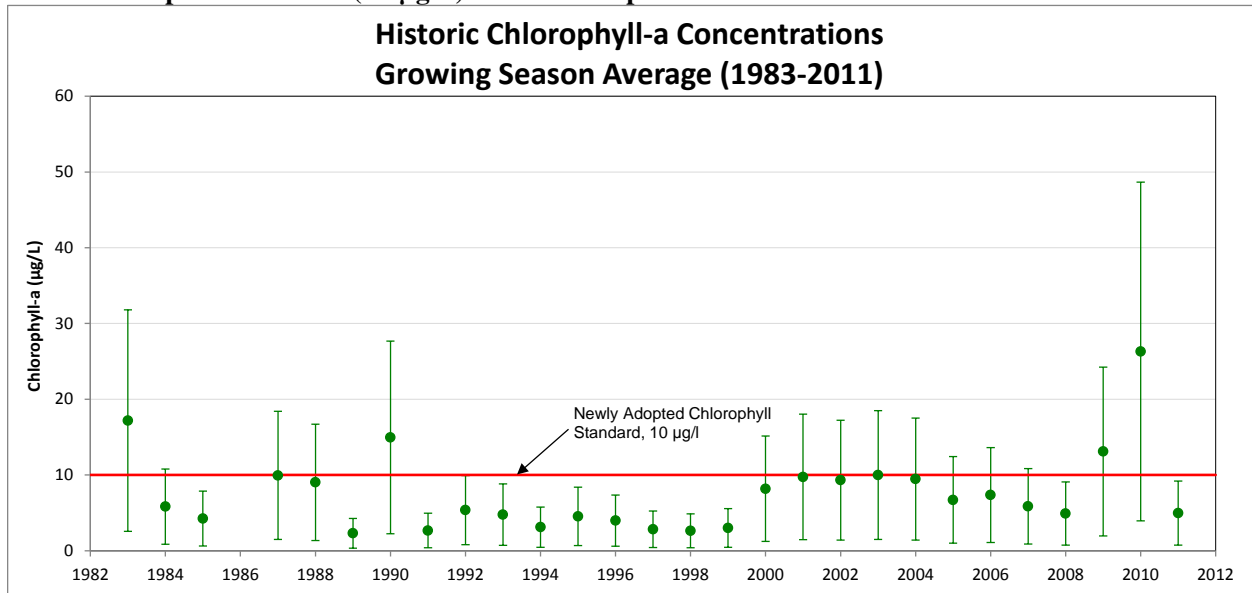


Figure 2. Historical Perspective of Chl-a Growing Season Compliance 1983 to 2011. Points on plot depict Chl-a average concentration during the July to September compliance period. The error bars represent 85% confidence intervals around the mean. The solid red line represents the new standard adopted June 2010 (10- $\mu\text{g/L}$) used for compliance evaluation.



During 2011, the new Total Phosphorus standard was met with a growing season average of 12.0- $\mu\text{g/L}$ (Figure 3). Figure 4 provides a historical perspective of the Total Phosphorus growing

season average. Over the 29 year period of record, the reservoir has met the new Total Phosphorus standard 75 % of the time.

Figure 3. Monthly 2011 TP Concentration in Chatfield Reservoir

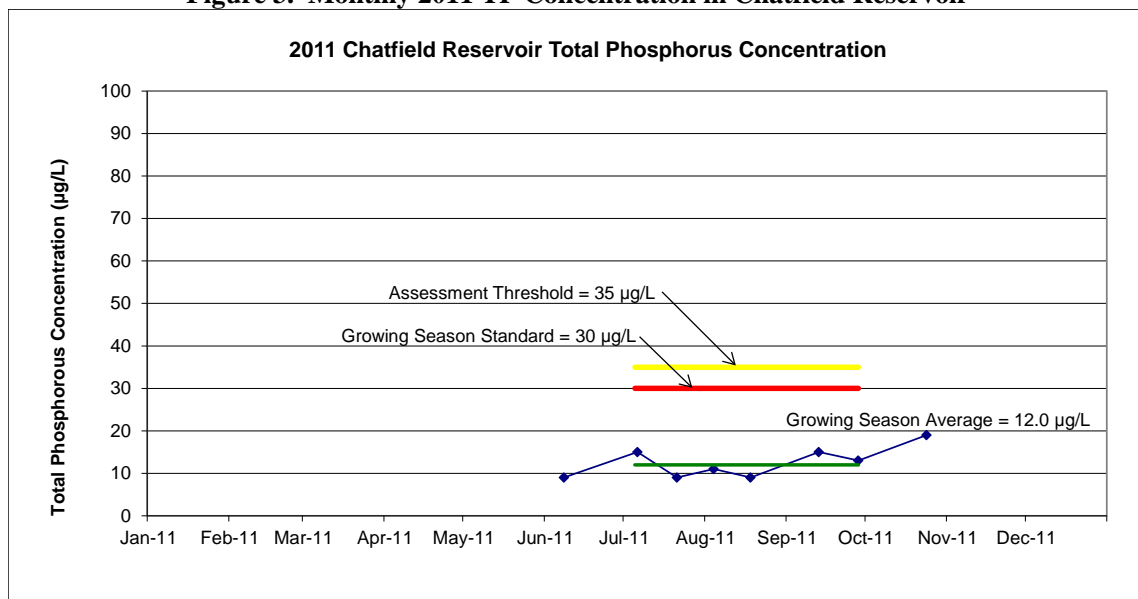
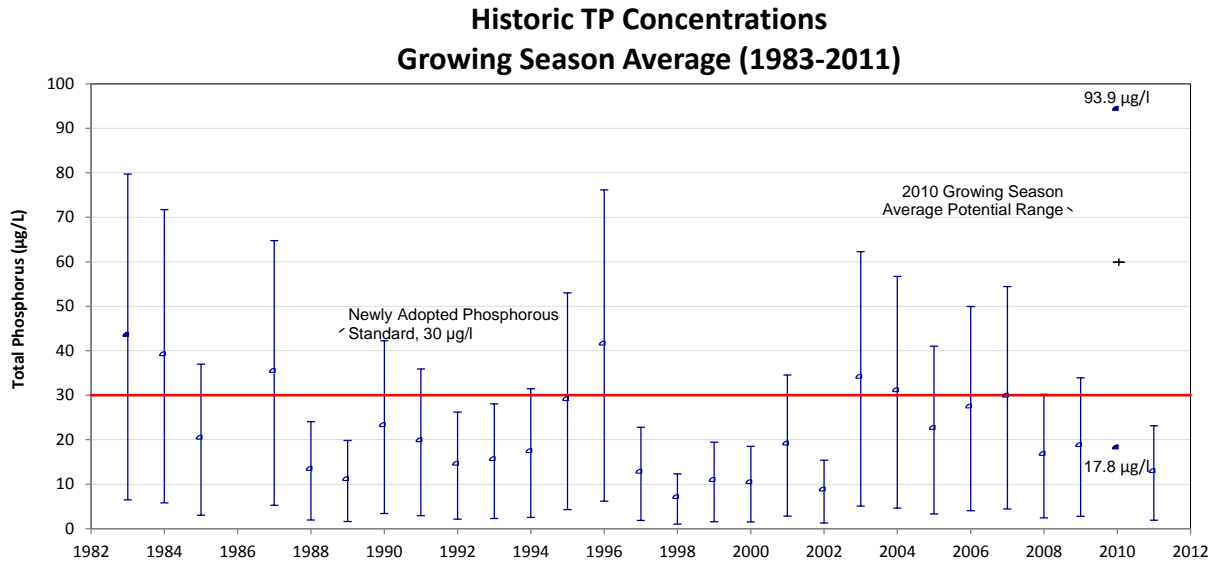


Figure 4. Historical Perspective of TP Growing Season Compliance 1983 to 2011. Points on plot depict TP concentration during the July to September compliance period. The error bars represent the 85% confidence intervals around the mean. The solid red line represents the new standard adopted June 2010 (30- $\mu\text{g/L}$) used for compliance evaluation.



Monitoring Program

The Authority monitors water quality and flows within the Reservoir and Watershed. Data collected in the Reservoir and its inflows characterize water quality and determine regulatory compliance. The constituents (Table 2) are monitored monthly, plus twice monthly reservoir sampling during the July through September growing season. All water quality data is made available on the Authority's website, located at www.chatfieldwatershedauthority.org. Surface water samples are collected at four locations as depicted in Figure 4.

- South Platte River at Waterton Road,
- Plum Creek at Titan Road,
- South Platte River below Chatfield, and
- Chatfield Reservoir.

The Authority also conducts monitoring at project locations within the watershed to measure water quality improvement or environmental benefits associated with newly constructed nonpoint source projects. Recently, the Authority conducted baseline water quality monitoring at one of the stream restoration project sites along Massey Draw, near the Ken Caryl Equestrian Center. Stream restoration and water quality improvements are anticipated at this site. In 2012, post-construction monitoring will measure project effectiveness in reducing nutrient and sediment loads from this drainage that flows directly to Chatfield Reservoir.

Figure 3. 2011 North Massey Draw Stream Restoration improvements



Figure 4. Chatfield Watershed Sampling Sites



Table 2. Chatfield Water Quality Monitoring Parameters

Field Parameters	Nutrients	Wet Chemistry
Temperature, degrees C*	Chlorophyll-a, µg/L	Alkalinity, mg/L
pH (s.u.)	Total Phosphorus, mg/L	Total Suspended Solids, mg/L
Specific Conductance, µS/cm	Ortho Phosphorus, mg/L	
Dissolved Oxygen, mg/L*	Nitrite + Nitrate-nitrogen, mg/L	
Secchi Depth, meters	Ammonia Nitrogen, mg/L	
Instantaneous Flow (Rivers and Creeks), cfs	Total Nitrogen, mg/L	
	Phytoplankton (# of organisms/ml)	

* Chatfield Reservoir measurements include depth profile measurements in addition to epilimnion.

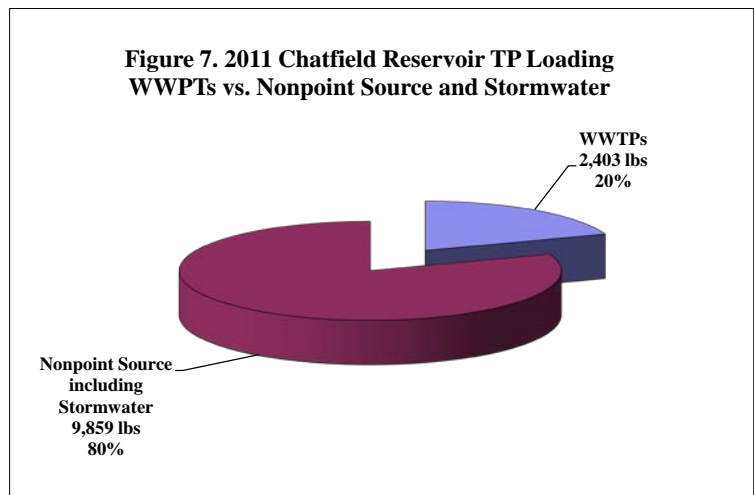
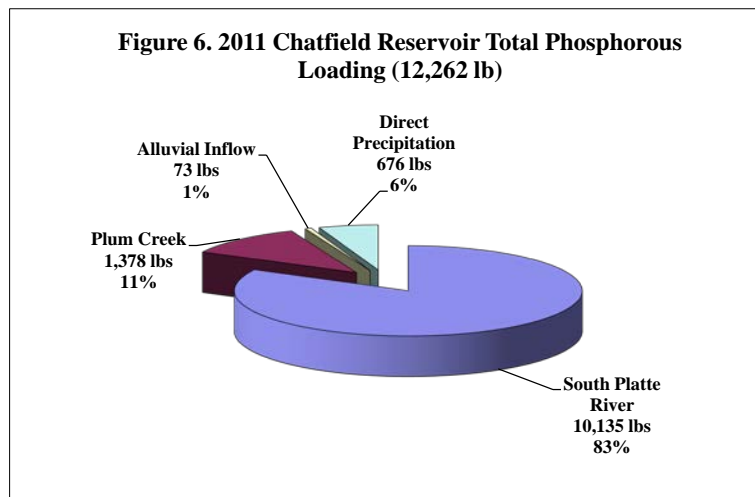
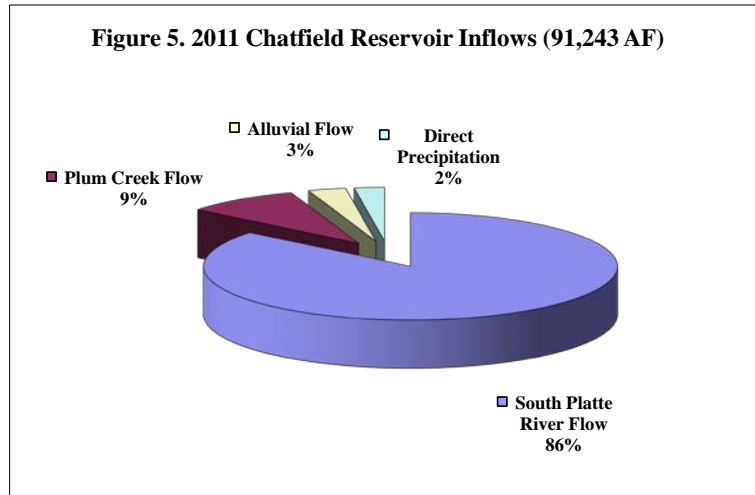
Compliance with the TMAL

In 2011, the TP load to the reservoir from all inflow sources, including alluvial flow and precipitation, was calculated at 12,262 pounds. This is well below the 19,600 pounds TP established under the new TMAL in Control Regulation #73.

In 2011, inflows to Chatfield Reservoir totaled 91,243 acre-feet (AF) and were less than the median inflow of 100,860 AF. The South Platte River contributed the majority of the inflow, or 86%. Plum Creek contributed approximately 9% of the inflow to the reservoir. Other unmeasured inflows to the reservoir are estimated to be less than 4% of the total inflow and include Deer Creek, Massey Draw, direct surface runoff, direct precipitation, and alluvial inflow (Figure 5).

In 2011, of the 12,262 pounds TP load, Plum Creek contributed an estimated 11% (1,378 pounds) of the TP load to the reservoir. The South Platte River contributed 86% of the TP load, or 10,135 pounds (Figure 6). Extreme high flows in the South Platte basin in July of 2011 resulted in higher phosphorus loads in the South Platte River.

The majority of TP load to the reservoir was from nonpoint sources and stormwater, contributing 80%, or 9,859 pounds of the TP load. WWTP's contributed 20% of the load to the reservoir, or 2,403 pounds (Figure 7).



Wastewater Treatment Plants

Table 3 summarizes the twelve wastewater treatment plants (WWTPs) in the Chatfield watershed, nine which are located and discharge to the Plum Creek sub-watershed. Two WWTPs discharge to the South Platte River. Lockheed Martin discharges to the South Platte alluvium upstream of the Chatfield Reservoir and also to Littleton/ Englewood WWTP located downstream of the reservoir. Roxborough Water and Sanitation maintains its WWTP and discharge permit but currently all of its wastewater is conveyed to Littleton/ Englewood WWTP.

In 2011, recorded TP discharges from WWTPs were 2,403 pounds or about 32% of the allowable total discharge allocation. Wasteload allocations for Sacred Heart and the Centennial Law Enforcement Training Center were awarded pursuant to the Authority Trading Program.



Compliance with Permits

WWTPs monitor their effluent discharges for compliance with their individual permits and compliance with Regulation #73. Every discharger in the Chatfield Watershed with a TP allocation fully complied with their TP concentration limits and TP wasteload allocation in 2011.

The Authority remains concerned with Bell Mountain Ranch Metropolitan District, located south of Castle Rock, which treats Denver basin aquifer groundwater from the Arapahoe formation for drinking water supply purposes and discharges backwash from the water treatment plant into a tributary to East Plum Creek. The discharge amount permitted is 28,000 gallons per day but there is presently no phosphorus allocation for the discharge. Historic data indicate elevated phosphorus concentrations of the discharge and Bell Mountain does not have a wasteload allocation or phosphorus credits. Bell Mountain Ranch has been advised by the Authority to secure a wasteload allocation through the Trading Program or modify water treatment processes to eliminate TP in the discharge.

Site Location Approval and Wastewater Plan Amendments

No site applications or wastewater plan amendments were submitted in 2011.

Table 3. Wastewater Treatment Facilities in Chatfield Watershed

Allocation Sources	Wasteload Allocation (Pounds per Year)	2011 Point Source Total Pounds
Plum Creek Wastewater Authority	4,256	2,259.6
Perry Park Water and Sanitation District: Waucondah	365	81.2
Perry Park Water and Sanitation District: Sageport	73	33.3
Lockheed Martin Space Systems Company	1,005	14.2
Town of Larkspur	231	6.3
Centennial Law Enforcement Foundation	30 ⁵	5.6
Ponderosa Center	75 ³	2.3
Louviers Water and Sanitation District	122	0
Roxborough Water and Sanitation District	1,218	No Discharge 1
Jackson Creek Metropolitan District	50 ⁴	No Discharge 1
Sacred Heart Retreat	15 ²	0.04
South Santa Fe Metro District	21 ⁶	No Discharge 1
Reserve/Emergency Pool	52	Not Used
Total Phosphorus Wasteload	7,533	2,403

Notes:

1. No discharge of wastewater effluent in the Chatfield watershed.
2. Temporary five-year phosphorus allocation of 15 pounds for inclusion in discharge permit; allocation obtained from Roxborough Water and Sanitation District.
3. Ponderosa Center water quality credits are subject to completing a trade project pursuant to the Authority Trading Program.
4. Jackson Creek Metropolitan District received point source allocations through trades pursuant to the Authority Trading Program. Jackson Creek has a transfer agreement of 50 pounds with Roxborough Water and Sanitation District.
5. Centennial Law Enforcement Foundation water quality credits are subject to completing a trade project pursuant to the Authority Trading Program.
6. South Santa Fe Metropolitan District received a point source allocation of 21 pounds through trade pursuant to the Authority Trading Program.



South Platte River Inflow to Chatfield Reservoir.

Regulated Stormwater Sources

Colorado’s stormwater permit program requires control of stormwater runoff in all Phase I and Phase II municipal separate storm sewer systems (MS4) entities. Phase I and II MS4s in the Chatfield Basin include:

- Douglas County
- Jefferson County
- Town of Castle Rock
- City of Littleton
- Castle Pines Metropolitan District
- Colorado Department of Transportation

MS4 permits are based on requirements to develop programs that meet six minimum control measures, and many of these programs involve the implementation of best management practices in order to reduce pollutants discharged to the maximum extent practicable. The six minimum control measures Phase II permittees are required to meet include:

- Public education and outreach on stormwater impacts
- Public participation and involvement
- Detection and elimination of illicit connections and discharges
- Construction site stormwater runoff control
- Post-construction stormwater management in development and redevelopment
- Pollution prevention/good housekeeping for municipal operations

Water Quality Review of Land Use Applications

The Authority is a referral agency for land use applications for Douglas, Jefferson and Castle Rock and as such, provides review and comments on potential water quality impacts associated with proposed applications prior to construction. In 2011 the Authority reviewed land use applications from referral agencies, providing a water quality review of applications

and recommendations. Formal comments were prepared for projects from Perry Park, Douglas County, Castle Pines Village, and the Colorado Department of Transportation. Table 4 on the following page summarizes information about the 2011 Phase II MS4 activities in the Chatfield watershed.



“Our challenge and focus for the next decade will be to generate additional funds to implement important nonpoint source projects in the Watershed. With our collaborative efforts and partnerships, we aim to get the support needed to move these necessary projects forward. Watershed planning and funding are essential to promote water quality in our watershed and reservoir in order to keep the water safe for everyone.”

~ Kevin Urie, co-chair of the Chatfield Watershed Authority

Table 4. Summary of 2011 MS4 Programs for Inspections and Enforcement Actions

Land Use Agency	Permit Inspection Actions			Permit Enforcement Actions		
	Illicit Discharges	Construction	Post Construction	Illicit Discharges	Construction	Post Construction
Douglas County	41	746*	0	6	353**	0
Jefferson County	3	561	14	3	56	0
Town of Castle Rock	156 Outfall 8 Hotline	1034 GESC 1144 DESC	110	9	941	23
Castle Pines Metropolitan District	0	0	0	0	0	0
City of Littleton	0	0	3	0	0	0

* October 2010 through September 2011

** All levels of violations are included

The following is a summary of 2011 MS4 Education & Outreach Programs in the Watershed:



Douglas County

- Spring Up the Creek in conjunction with Castle Rock
- Various open space events

Jefferson County

- Interactive booths at public events
- Stormwater article in County's e-newsletter
- Household chemical waste drop off
- National Flood Insurance Program's Community Rating System

Town of Castle Rock

- Monthly Ads
- Spring Up the Creek
- Household Chemical Roundup

Castle Pines Metropolitan District

- Annual Creek clean up with Castle Rock and Douglas County
- International Storm Water Training Course for Operations Crew



City of Littleton

- Information booth at Earth Day, Arapahoe Community College, Arapahoe County Fair, Western Welcome Week Festival Day and Would Water Monitoring Day
- Four Littleton report newspaper articles
- Household Hazardous Waste and Lawn & Garden brochures updates
- Monthly newspaper ads on water pollution prevention



2011 Chatfield Watershed Tour

A Watershed View of Collaboration, Vision, Challenges, and Opportunities in the Chatfield Watershed

The half day Watershed Tour for the Water Quality Control Commission and stakeholders, was hosted by the Chatfield Watershed Authority. Protecting the water quality in Chatfield Reservoir by managing the pollutants that enter the Chatfield Watershed was the focus of the tour. The tour began at the US Army Corps of Engineers, Tri-Lakes Project Office with a spectacular view of the reservoir. The tour highlighted several areas and topics in the watershed including;

- Massey Draw stream restoration and ecosystem improvements
- North Massey Draw stream restoration improvements at Ken Caryl Ranch Masters Association
- Plum Creek stream restoration improvements in the Town of Castle Rock
- The Chatfield Reservoir storage reallocation and Paul Grundemann Memorial at the Chatfield Reservoir Marina
- Plum Creek nonpoint source management in the Chatfield Watershed
- Wastewater treatment in Plum Creek
- ISDS contributions and conversion opportunities along the Plum Creek Corridor
- Biological nutrient reduction at the Plum Creek Wastewater Authority



Tour participants observe stream restoration improvements along Massey Draw



The WQCC observes nitrogen and phosphorus removal at the Plum Creek Wastewater Authority.

Larry Moore, Co-Chairman of the Authority spoke of the importance of future focus on nonpoint sources of nutrient contaminants in the watershed. These nonpoint sources, which account for about 80% of nutrient load problem, come from nutrients derived from livestock manure, pet wastes, aged/unmaintained septic systems, runoff of excess fertilizers from residential or agricultural land, and sediment from eroding stream banks into the water supply.

Co-Chairman of the Authority Kevin Urie and Authority Manager Julie Vlier spoke of Authority's strategies for improving the water quality in Chatfield Watershed and the importance of outreach efforts to educate the public on priority projects in Chatfield Watershed. With collaborative efforts and partnerships, the Authority will aim to get the support needed to move these essential projects forward. These projects are listed in detail on the back page of this report.

Recommendations for Improving Water Quality

In 2011, the Authority reached out to new grant partners and received grants in 2011 to leverage our limited funding from membership dues.

Chatfield Watershed Plan - Section 319 Grant

The Authority was proud to be the grant recipient and foresee this Watershed Plan as providing a roadmap for our path in pursuing watershed health. Efforts to finalize the Watershed Plan began in 2011 and will continue in 2012. Two key components of the watershed planning effort will be:

- Stakeholder involvement, fostered through public meetings that will be conducted to educate the public on watershed information, partnerships, and watershed priorities, and
- Addressing water quality issues in the watershed to meet water quality standards and targets.

The watershed plan will be developed in accordance with US EPA's "Nine Elements of a Watershed Plan" that incorporates the following:

- Building partnerships
- Characterizing the watershed
- Identifying projects
- Developing an implementation program

"Looking ahead, our primary focus is to protect the water quality in the Chatfield Reservoir through on-going planning and implementation of water quality monitoring and projects."

~Larry Moore, co-chair of the Chatfield Watershed Authority

Stream Restoration Along Equestrian Area in North Massey Draw - CWCB Stream Restoration Grant

In collaboration with one of our new members, Ken Caryl Ranch Master Association, the Authority was awarded a grant through the Colorado Water Conservation Board Stream Restoration Grant program for stream improvements along an upper reach of Massey Draw that flows directly into Chatfield Reservoir. The project objectives are:

- Improve water quality by stabilizing streambed and bank conditions and controlling runoff from manure laden pasture areas adjacent to the project site.
- Reduce sediment load to Chatfield Reservoir, thereby increasing the storage capacity life of this popular front range reservoir.
- Reduce flooding and runoff from the Ken-Caryl Ranch Equestrian Center.
- Mitigate unsafe conditions for open space visitors by reshaping unstable stream banks and highly degraded channel.

The project commenced in November, 2011 and the Authority was able to collect water quality data for four months prior to construction. Project completion is scheduled for April, 2012. Water quality sampling will resume, providing critical information in evaluating the benefits of stream restoration projects to reduce nutrient loading to Chatfield Reservoir.



Plum Creek Water Quality Characterization

Other Grant Pursuits in the Watershed

CWCB Healthy Rivers Fund Grant – The Authority was awarded this grant from the CWCB. Grant funds will be utilized to characterize and identify pollutant sources in the Plum Creek Basin in Chatfield Watershed. Objectives of this water quality monitoring project include understanding pollutant sources, developing control strategies to reduce pollutant loading to Chatfield Reservoir, and promoting decision-making on where to focus limited resources on future priority NPS project in the Plum Creek basin.

NRCS Conservation Innovation Grant – The Authority is working with Ducks Unlimited and Douglas County to pursue a grant with the NRCS that will incentivize water quality trading credit markets and nutrient reductions on agricultural lands in the Chatfield Watershed. This project will allow Chatfield Watershed Authority to demonstrate the effectiveness of the Trading Program (Program) in agricultural areas. As proposed, the demonstration project

will provide the state with more assurance in the quality of credits being generated and traded. We anticipate using the CIG funds to better refine certification and reporting systems for nonpoint source trades and investigate establishment of a registry and reporting systems that provide transparency to potential buyers.

Board Membership Supports Water Quality Improvements

The Authority's primary income remains annual dues from Authority members. In 2011, dues totaling \$142,000 financed implementing activities required in the Control Regulation, including water quality programs. We rely on leveraging dues income with in-kind member support to keep our programs going with limited financial resources (i.e. watershed monitoring program implemented by Denver Water and Town of Castle Rock serving as fiscal agent of grant applications). Our new member outreach program continues to be successful, as we welcome the Chatfield Reallocation Water Providers as Board members.

Future Issues on the Horizon

The overarching challenge for the Authority into the future will be to manage nonpoint source and stormwater impacts with funding constraints. The Authority is committed to implementing improvements in the basin targeted towards phosphorus reduction and watershed health. We believe some of our 2012 activities will support long term funding available for water quality projects.

Implementing Additional Nonpoint Source and Stormwater Control Strategies

With additional funding and commitment on grant requests, the Authority can make great strides in targeting the most effective controls to reduce phosphorus. Projects like those summarized on the next page will improve water quality and reduce sediment and phosphorus loading in the watershed and reservoir while providing a riparian habitat amenity.

List of Chatfield Watershed Priority Projects



1. Chatfield Watershed Plan

- Finalize project implementation plan and contract with US EPA for Section 319 grant.
- Kickoff project and build partnerships.
- Characterize the watershed.
- Identify projects to promote water quality protection.
- Implement program and projects.

2. North Massey Draw Stream Restoration at the Equestrian Center

- Finalize construction of stream stabilization measures to reduce sediment and phosphorus loading from horse stables.
- Conduct monitoring to quantify nonpoint source improvement.
- Report improvements to CWCB and WQCC.

3. Plum Creek Water Quality Monitoring and Source Characterization

- Contract with CWCB for Healthy River Funds Grant.
- Implement monitoring program in accordance with Sampling and Analysis Plan.
- Analyze data and identify potential sources and projects to control NPS loading.

4. Stream Restoration and Trading Incentives with Agricultural Community

- Fund project in coordination with Douglas County, Ducks Unlimited, NRCS, and CWCB South Platte Roundtable.
- Implement demonstration projects with agricultural users in the study area to restore degraded channels and reduce nonpoint source nutrient, sediment and E.coli loads from livestock and stables.

5. West Plum Creek ecosystem improvements

- In coordination with Colorado Parks and Wildlife, install drop structures to stabilize stream reaches in West Plum Creek.
- Create pools that promote Johnny darter fisheries habitat and reduce sediment and nutrient load.

6. Convert ISDS along the US 85 corridor to conventional wastewater treatment

- Identify funding sources for collection system, sewer conversion, and wastewater improvements in areas with ISDS (i.e., Town of Sedalia, South Santa Fe Commerce Center, Law Enforcement Training Center, and Titan Road Industrial Park).
- Construct sewer improvements.
- In coordination with Douglas County, consider development of ordinances regarding prohibition of ISDS in the floodplain or environmentally sensitive areas in the watershed.

7. Sediment control and streambank stabilization along East Plum Creek

- In coordination with Town of Castle Rock, implement stream restoration improvements along reaches of East Plum Creek that are highly erosive and require streambank stabilization.
- Integrate educational features to project.

8. Implement shoreline erosion control management strategies around heavily accessed portions of Chatfield Reservoir

- Identify funding source(s).
- Stabilize disturbed access areas along shoreline with impervious pavement, vegetation and other engineered products.
- Demonstrate erosion control effectiveness from different engineered applications.



Authority Members:

Patrick O'Connell, Jefferson County
Steve Boand, Douglas County
Bob Deeds, City of Littleton
Tim Friday, Town of Castle Rock
Kevin Urie, Denver Water
Matt Krimmer, Town of Larkspur

Larry Moore, Roxborough Water & Sanitation District
Diana Miller, Louviers Water & Sanitation District
Martha Hahn, Plum Creek Wastewater Authority
Father Ed Kinerk, Sacred Heart Retreat
Paul Dannels, Castle Pines Metro District
Tim Grotheer, Centennial Water & Sanitation District
Diana Miller, Perry Park Water & Sanitation District
Ronda Sandquist, Jackson Creek Metropolitan District
Doug Lohrey, Ponderosa Retreat & Conference Center
RC Hanisch, South Santa Fe Metro District
Harold Smethills, Dominion Water & Sanitation District
Steve Miller, Centennial Law Enforcement Facility
Chris Pacetti, Ken Caryl Ranch Master Association
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Associate Members:

Warren Brown and Hope Dalton,
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Control Division
Jay Skinner, Paul Winkle, and Jamie Anthony, Ken Brink,
Colorado Parks and Wildlife
Chris Sturm, Colorado Water Conservation Board
Timothy Rose, United States Army Corps of Engineers
Carol Ekarius, Coalition for the Upper South Platte
Jeff Shoemaker, Greenway Foundation
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