In October 1993, Council Resolution 93-144 adopted the Drinking Water Quality Policy (Attachment A). The purpose of the policy is to ensure the continuous delivery of high quality drinking water to Fort Collins Utilities’ (Utilities) customers. This 20th annual report is a requirement of the Drinking Water Quality Policy and summarizes the actions taken in support of policy goals during 2013.

These photos were taken by Pollution Control Laboratory staff while monitoring the Cache la Poudre River at Lincoln Street, before and after the 2013 flooding event.

September 4, 2013.

September 18, 2013

This report was compiled by the Regulatory and Government Affairs Division with contributions from:

- Environmental Services Division
- Water Field Operations
- Water Production Division
- Water Resources Division
GOAL #1: The City will provide water services that meet or exceed customer expectations for quality, quantity and reliability.

CUSTOMER SURVEYS
To gauge customer satisfaction with their water service, residential customers are surveyed periodically. The following chart demonstrates the percentage of customers who gave Utilities a grade of “B” or higher in six drinking water categories.
RELIABILITY, CAPACITY, AND REDUNDANCY

Utilities owns and operates an 87 million gallons per day capacity drinking water treatment facility 24 hours a day, seven days a week to ensure a continuous supply of high quality drinking water is delivered to our customers. Utilities’ staff is available at all times to respond to customer complaints and concerns regarding drinking water quality and reliability of service.

The treatment plant has multiple systems and processes in place to provide high reliability with low risk of failure. Most of these systems and processes are related to redundancy. For example, Utilities has two water sources, three raw water pipelines, multiple chemical storage tanks, delivery systems, treatment trains, filters, and storage reservoirs.

Utilities also has a robust asset management and preventative maintenance program, which helps ensure the continual provision of safe drinking water to the community, and that standards are met for community firefighting and emergency activities.

These chemical feed pumps are part of the overall redundancy plan to provide high reliability.
GOAL #2: The City will protect and maintain high water quality in the development of all codes, policies, plans and specifications related to the acquisition, production and delivery of water services to its customers.

DISTRIBUTION SYSTEM MAINTENANCE

Maintenance of Utilities’ water distribution system includes fire hydrant inspections, flushing the distribution system, identification of leaks, the repair of main breaks, and exercising water valves.

- Every year, Utilities staff inspects approximately 1/3 of all fire hydrants. This includes a 10-point checklist, aimed to ensure the hydrant is in proper operating condition. In 2013, 1269 of the 3617 hydrants were inspected. Additionally, 80 hydrants were repaired.

- Flushing of the distribution piping, via fire hydrants, is performed every year on approximately half of the city to maintain water quality.

- 12,502 valves help control the flow of water in the distribution system. In 2013, staff exercised and inspected 2897 valves to help ensure proper operation. Additionally, 370 valves were repaired.

- 11 water distribution system improvement projects that replaced 8447 feet of water main that had become maintenance problems.

- 302 new backflow assemblies at commercial accounts were inspected.

<table>
<thead>
<tr>
<th>Type of Main Break</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>hole from corrosion</td>
<td>27</td>
</tr>
<tr>
<td>longitudinal crack</td>
<td>60</td>
</tr>
<tr>
<td>circumferential crack</td>
<td>5</td>
</tr>
</tbody>
</table>

Of the 92 main breaks, 43 occurred after normal business hours.
PARTNERSHIP FOR SAFE WATER

The Water Treatment Facility earned their 15th consecutive Director’s Award as a member of the Partnership for Safe Water.

The director’s award is awarded to top-tier water plants that have demonstrated the commitment to providing superior quality water to their customers, beyond the requirements of the United States Environmental Protection Agency (USEPA) regulations.

The Partnership is an alliance of six drinking water organizations including the USEPA. This voluntary program strives to enhance water quality through continuous optimization of treatment processes. Operators, managers and administrators are provided self-assessment and optimization tools to improve performance above and beyond current and proposed regulatory levels.

GOAL #3: The City’s water supply, treatment, storage, delivery and laboratory facilities will be planned, designed, constructed, maintained, staffed and operated to assure safe, reliable and cost-effective service to the residents of Fort Collins and all those served by the City’s water utility.

CERTIFIED LABORATORY
The City of Fort Collins is required to comply with State and Federal drinking water standards. These standards mandate that a certified laboratory perform all regulatory compliance testing. The City’s Water Quality Lab staff provides state-certified regulatory compliance testing and reporting for Utilities as well as ten other regional water agencies.
State-of-the-art ICP-MS (inductively-coupled plasma mass spectrometry) and GC-MS (gas chromatography) systems provide speed, accuracy and versatility, in serving the needs of both the Water Quality and Pollution Control Labs as well as Utilities in general. In addition, chemists from both labs are certified by the Colorado Department of Public Health and Environment (CDPHE) to test and report potential metals contaminant data measured on the ICP-MS instrument.

Situated behind chemist Samantha Voss is the WQL’s newest GC mass spectrometer.

The City’s Water Quality Lab first achieved Certification in bacteriology testing in 1978. Since that time the lab has gained certified status for a large array of water quality tests. Certified status is achieved through a multi-step process, including:

• The successful completion of formal written applications
  The application process includes documentation regarding the qualifications of lab staff, training, equipment, quality assurance documentation, facilities and budget as well as proof of successful analysis of “unknown” performance audit samples each year.

• Performance audit tests
  These annual audits involve analysis of samples from USEPA and other providers that contain unknown quantities of unknown constituents. This rigorous approach covers an array of parameters and weeds out possible reporting of false positive and false negative results.

• Periodic on-site CDPHE inspections
  Evaluation of lab staff includes review and verification of their formal educational qualifications, lab training, and lab-related work experience as well as hands-on demonstration of laboratory skills. In addition, details of written and actual test methods and procedures are audited to ensure “to-the-letter” compliance with required EPA specifications. Certification inspections also include review of the lab’s budget, equipment, facilities and work processes.
STATE CERTIFIED OPERATORS
The water treatment facility operators are all certified by CDPHE as certified water professionals. All ten operators, plus the plant superintendent and plant manager, have earned the highest level of classification as Class A.

WATER QUALITY COMPLAINTS
In 2013, the City received 39 drinking water quality complaints, equating to a rate of 1.15 per 1,000 customers. Based on the most recent QualServe report from the American Water Works Association, 49 other participating utilities had a median number of technical water complaints of 5.31 per 1,000 customer accounts. The “best” quartile rate observed by other participating utilities was 2.06 per 1,000; at 1.15 per 1,000, the City was “better than the best”.

ASSET MANAGEMENT
In 2013, Utilities continued risk forecasting efforts within its water production and distribution asset base. The Asset Management risk forecast is a process to evaluate the condition of the equipment, piping, and facilities; the types of risks associated with the system and determinations as to timeline for mitigation.
Some 2013 progress highlights:

- Staff implemented an impressed current cathodic protection system for underground piping.
- Staff updated the capital improvement plan (CIP) for the water fund. This included reviewing all planned projects for the water fund (both distribution and treatment facility projects) for timing and cost of the projects. The CIP was used to draft offers for the 2015-2016 Budgeting for Outcomes process.
- Staff implemented a new enterprise asset management system for the water treatment facility. This system replaced the existing maintenance tracking program that had been in use for many years. This required considerable staff time.
- Staff developed a model for prioritizing replacement of each segment of pipe in the distribution system. This model includes reviewing material type, age, consequence of failure, and number of main breaks for each pipe in the system and establishing a quantitative process for selecting pipes for replacement.

**ENVIRONMENTAL MANAGEMENT SYSTEM**

The Water Treatment Facility has established a formal Environment Management System (EMS) that has been certified to conform to the ISO 14001:2004 standard.

A key aspect of this EMS is reduction in energy usage and greenhouse gas footprint. In support of this, the facility is participating in the Colorado Industrial Energy Challenge, sponsored by the Colorado Governor’s Energy Office and the U.S. Department of Energy.

The facility also conducted technical energy audits and engineering studies whose recommendations yielded significant reductions in energy usage, and cost savings; even in the face of rising treated water demands.
ENVIRONMENTAL LEADERSHIP PROGRAM

The Environmental Leadership Program (ELP) is a statewide environmental recognition and reward program administered by CDPHE’s Sustainability Program.

The ELP offers benefits and incentives to members that voluntarily go beyond compliance with state and federal regulations, and who are committed to continual environmental improvement.

As the result of process improvements and the ISO 14001:2004 certification of the EMS, the facility was recognized as an ELP Gold Leader in 2013.
RESOLUTION 93-144
OF THE COUNCIL OF THE CITY OF FORT COLLINS
ADOPTING A DRINKING WATER QUALITY POLICY
FOR THE CITY

WHEREAS, the City Council has previously adopted an Environmental Management Plan; and

WHEREAS, the Plan calls for the creation of a formal policy regarding City standards for drinking water; and

WHEREAS, the citizens of Fort Collins want and expect high quality drinking water; and

WHEREAS, a Water Board/City Council committee established by the Council has drafted a drinking water quality policy; and

WHEREAS, the draft drinking water quality policy has been reviewed by the City’s Water Board, Natural Resources Advisory Board, and Planning and Zoning Board, and recommended by each for adoption by the City Council; and

WHEREAS, representatives of the Fort Collins-Loveland Water District, East Larimer County Water District and the North Weld County Water District have also reviewed the draft policy and are supportive of its adoption by the City Council.

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF FORT COLLINS as follows:

Section 1. That the Council hereby establishes and adopts the following drinking water quality policy for the City of Fort Collins:

Preamble: The people of Fort Collins established the City’s water system to assure the effective delivery of services vital to the health and well being of the community.

Goals: The City will provide water services that meet or exceed customer expectations for quality, quantity and reliability. The City will protect and maintain high water quality in the development of all codes, policies, plans and specifications related to the acquisition, production and delivery of water services to its customers. The City’s water supply, treatment, storage, delivery and laboratory facilities will be planned, designed, constructed, maintained, staffed and operated to assure safe, reliable and cost-effective service to the residents of Fort Collins and all those served by the City’s water utility. The City will achieve these goals through:

- Effective Management
- Pro-active Monitoring and Testing
- Protecting, Developing, and Preserving Water Resources
- Advancing Treatment Technology and Operations
- Operating and Maintaining the Water Distribution System
- Assuring the Quality of Water Service
Coordinating Drinking Water and Wastewater Treatment Management
Cooperating with Other Water Providers and Users
Annual Reporting

Effective Management: The City will regularly collect information to understand its customers' valid requirements, realize their expectations, and to evaluate customer satisfaction regarding the quality of water services. The City will use the knowledge and experience of its personnel in decision making processes for the planning, capital improvement, and operation and maintenance of water treatment and distribution systems.

Pro-active Monitoring and Testing: Timely and accurate information regarding the safety and quality of our community's drinking water is critical for future planning as well as to safeguard the health and well being of the people. The City will provide water quality monitoring, testing and information services to protect the drinking water and wastewater treatment systems, to respond to customer concerns and requirements related to water quality, to meet current operational needs, to anticipate planning and design needs, and to meet or exceed the requirements of the Safe Drinking Water Act and its amendments.

Protecting, Developing, and Preserving Water Resources: The City will protect raw water sources from contamination or any other activities that would diminish the quality of water provided to customers, or that would result in increased treatment costs. The acquisition and development of future water supplies and the improvement of existing water supplies will be consistent with the goals of the City's water quality policy.

Advancing Treatment Technology and Operations: The City will develop and adhere to water quality standards, treatment practices and procedures that provide the highest level of health protection that can be realistically achieved. The City will actively pursue opportunities for process and system improvements that protect and enhance the quality and reliability of water service and water quality, while reducing long term costs to its customers.

Operating and Maintaining the Water Distribution System: The water distribution system will be planned, designed, constructed, operated and maintained to protect water quality, to safeguard the long term health of the community, to protect present and future customers from excessive financial burden, and to provide continuous supply and sufficient pressure to meet fire protection requirements while maintaining service to individual customers.

Assuring the Quality of Water Service: The City will ensure that water system materials, components, processes and operations are sufficiently safe and dependable to avoid foreseeable situations that might jeopardize water quality, and will respond quickly and effectively to unforeseen problems. The City will take reasonable and prudent measures to protect against the accidental or willful contamination of the water or destruction of any part of the water system.
Coordinating Drinking Water and Wastewater Treatment Management: The City will optimize drinking water systems and processes in order to reduce negative impacts on wastewater treatment systems and processes, and thus promote the efficiency and environmental protection provided by both systems.

Cooperating with Other Water Providers and Users: The City will pursue cooperative efforts with other water providers and users that are consistent with these water quality policies, enhance water quality in the basin, and produce desirable long term benefits for the community.

Annual Reporting: The Water and Wastewater Utility Director will provide the City Manager, Water Board and City Council with an annual water quality report for the purpose of providing an update on the goals and strategies included in the City's water quality policy.

Passed and adopted at a regular meeting of the Council of the City of Fort Collins held this 5th day of October, A.D. 1993.

[Signature]
Mayor

ATTEST:

[Signature]
City Clerk