Central Point
City Hall
541-664-3321

CITY OF CENTRAL POINT
Study Session Agenda
July 18, 2011

I. MEETING CALLED TO ORDER – 6:00 P.M.

II. DISCUSSION ITEMS

A. Central Point Hazard Mitigation Plan (Holtey)

B. Cross Connection and Backflow Prevention (Samitore)

III. ADJOURNMENT

CENTRAL POINT **Public Works Department** *Stephanie Holtey, Floodplain Coordinator*

MEMORANDUM

July 15, 2011

TO: Mayor Hank Williams
City Council

FROM: Stephanie Holtey, CFM

RE: Central Point Hazard Mitigation Plan

The City is in the final phase of developing a hazard mitigation plan that evaluates potential natural hazards and impacts to the community, and identifies actions to reduce the identified risk. This planning effort is funded by the Federal Emergency Management Agency's (FEMA) Hazard Mitigation Grant Program (HMGP) and has been conducted under the direction of a Hazard Mitigation Advisory Committee that formed in 2007. The purpose of this memo is to brief you on this planning effort in preparation for the upcoming Study Session presentation.

Completion of the Central Point Hazard Mitigation Plan will be a significant achievement for the community. The plan not only promotes awareness of risk, potential losses and risk reduction actions for natural hazards, it also makes the City eligible for Pre-and Post-Disaster Mitigation grant funds from the FEMA that would not otherwise be available. These funds can be used to implement actions identified in the plan to reduce risk.

The plan addresses natural hazards that have the potential to affect the community. These include:

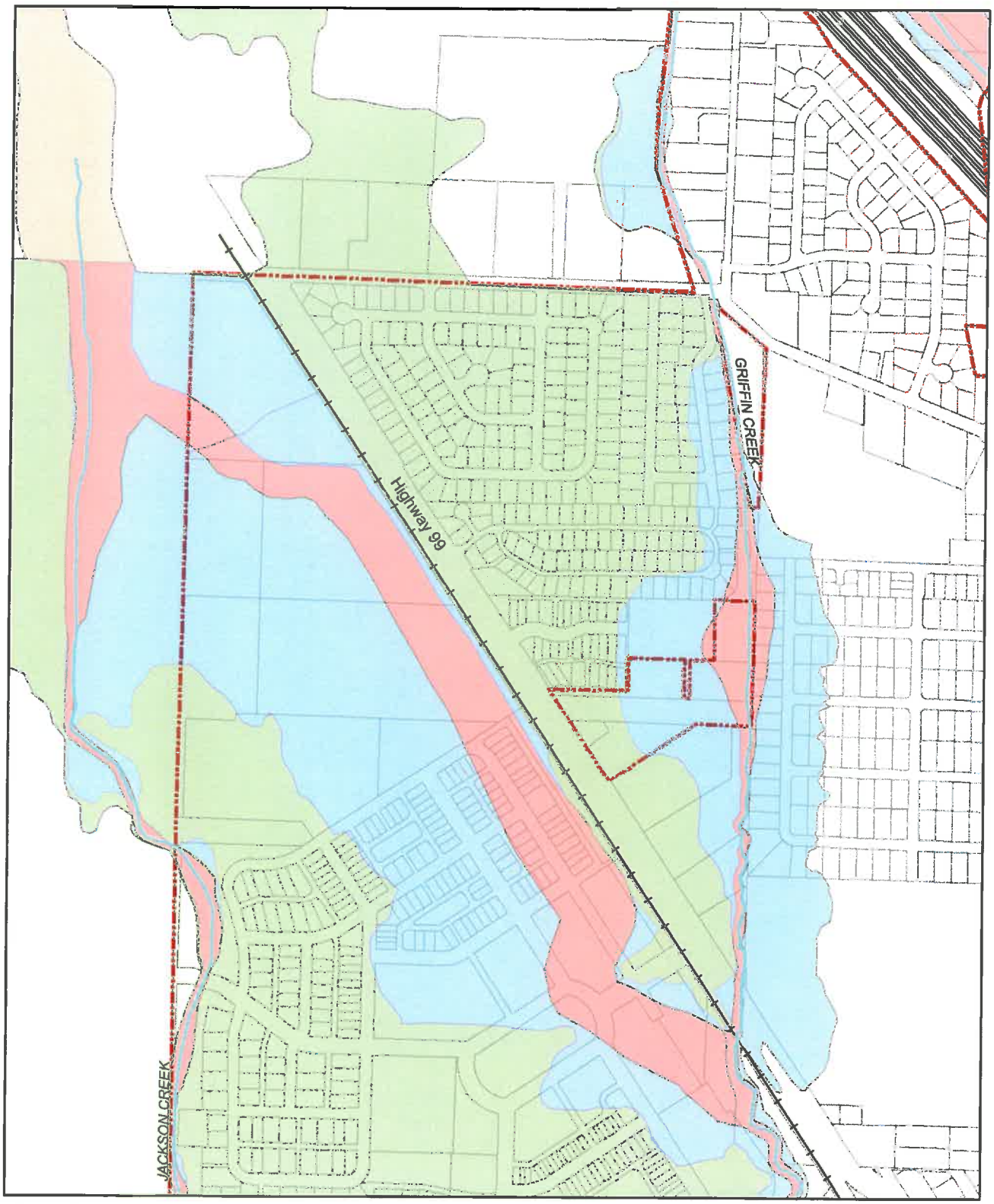
- Floods
- Earthquakes
- Severe Weather
- Other Hazards (Wildland/Urban Interface Fires, Landslides, Volcanic Events, Drought, Subsidence, Expansive Soils, and Sinkholes)

During Monday's study session we will briefly review the project history and the plan's organization. We will focus most of our attention on the hazard chapters and spend most of our time discussing flood hazards as they are represent the most significant risk for the community. I am very excited to share a flood mitigation project that was identified in the planning process on Griffin Creek that, if implemented, will reduce the Griffin Creek floodplain and re-zone many high risk properties to a lower risk hazard designation. Finally, we will go over what to expect in the coming weeks as move from planning to adoption and implementation.

I look forward to presenting the plan and hearing your feedback on the draft plan Monday evening. I've enclosed flood hazard maps for FEMA-mapped hazards, as well s the Emigrant Dam failure inundation zone.

CENTRAL POINT

FEMA-Mapped Floodplains: Griffin and Jackson Creeks, Northwest Portion



Legend

- streams

FEMA FIRM

FLD_ZONE

- A
- AE
- AO
- FLOODWAY
- X
- X-SHADED

Source Information:

FEMA Flood Insurance Rate Map (FIRM)
Jackson County, Oregon and Incorporated Areas
Map and Panel No.: 41029C 1768F, 1769F, 1956F, 1957F
Community No.: 410092
Effective Date: May 3, 2011

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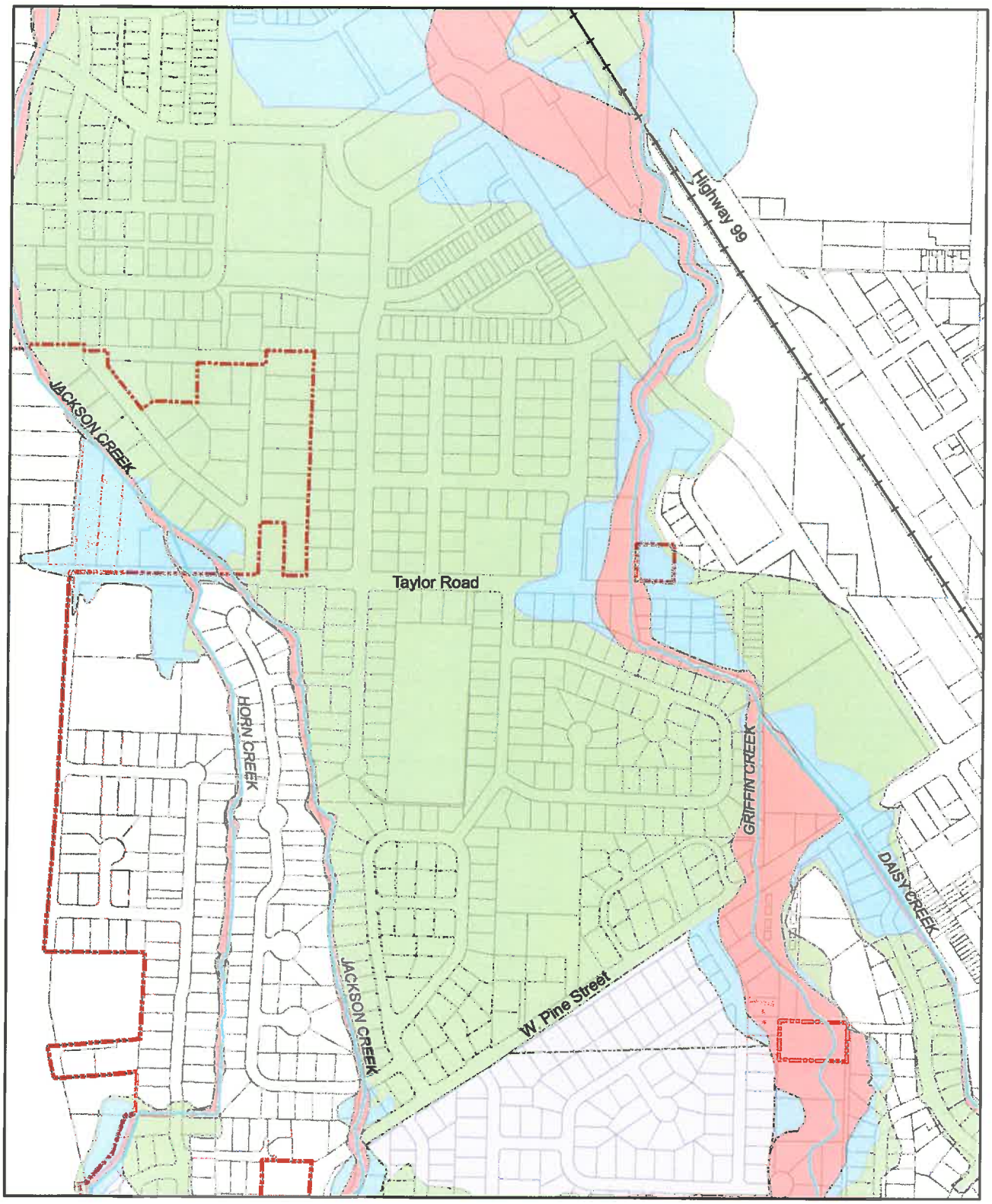
CENTRAL POINT

FEMA-Mapped Floodplains: Griffin & Jackson Creeks, Central Portion



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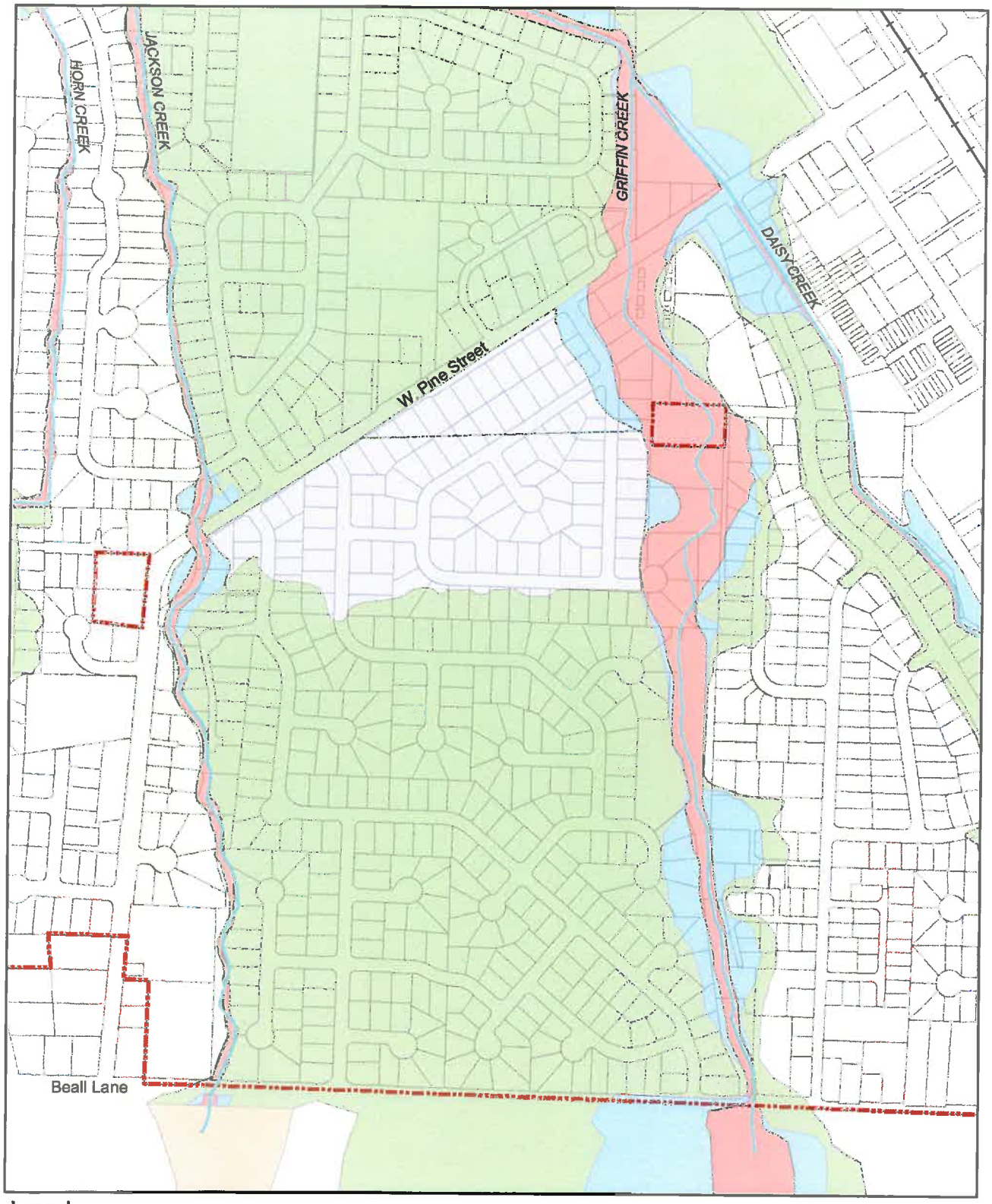
FEMA-Mapped Floodplains: Griffin & Jackson Creeks, Southwest Portion



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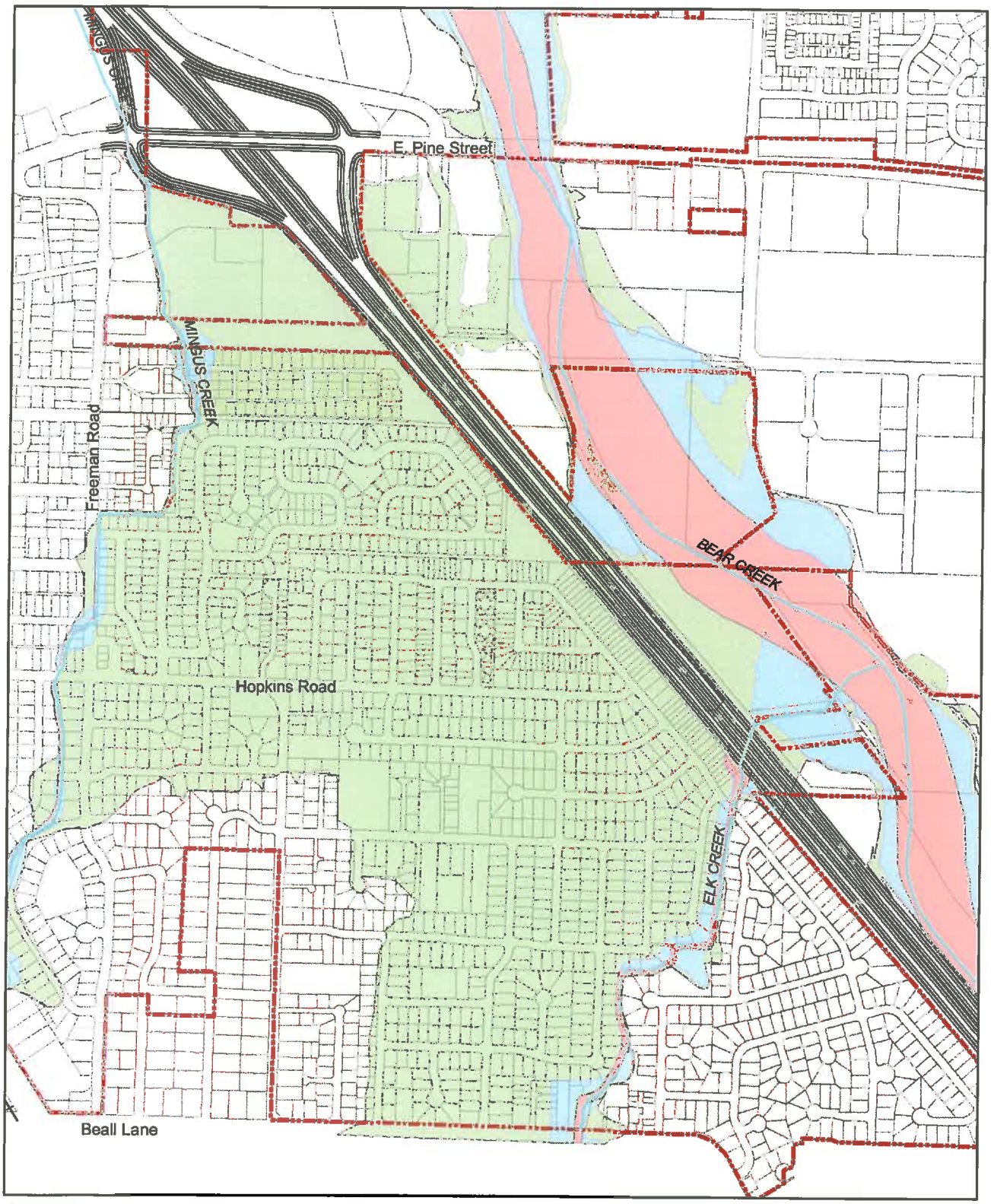
CENTRAL POINT

FEMA-Mapped Floodplains: Mingus, Elk, and Southeast Bear Creeks



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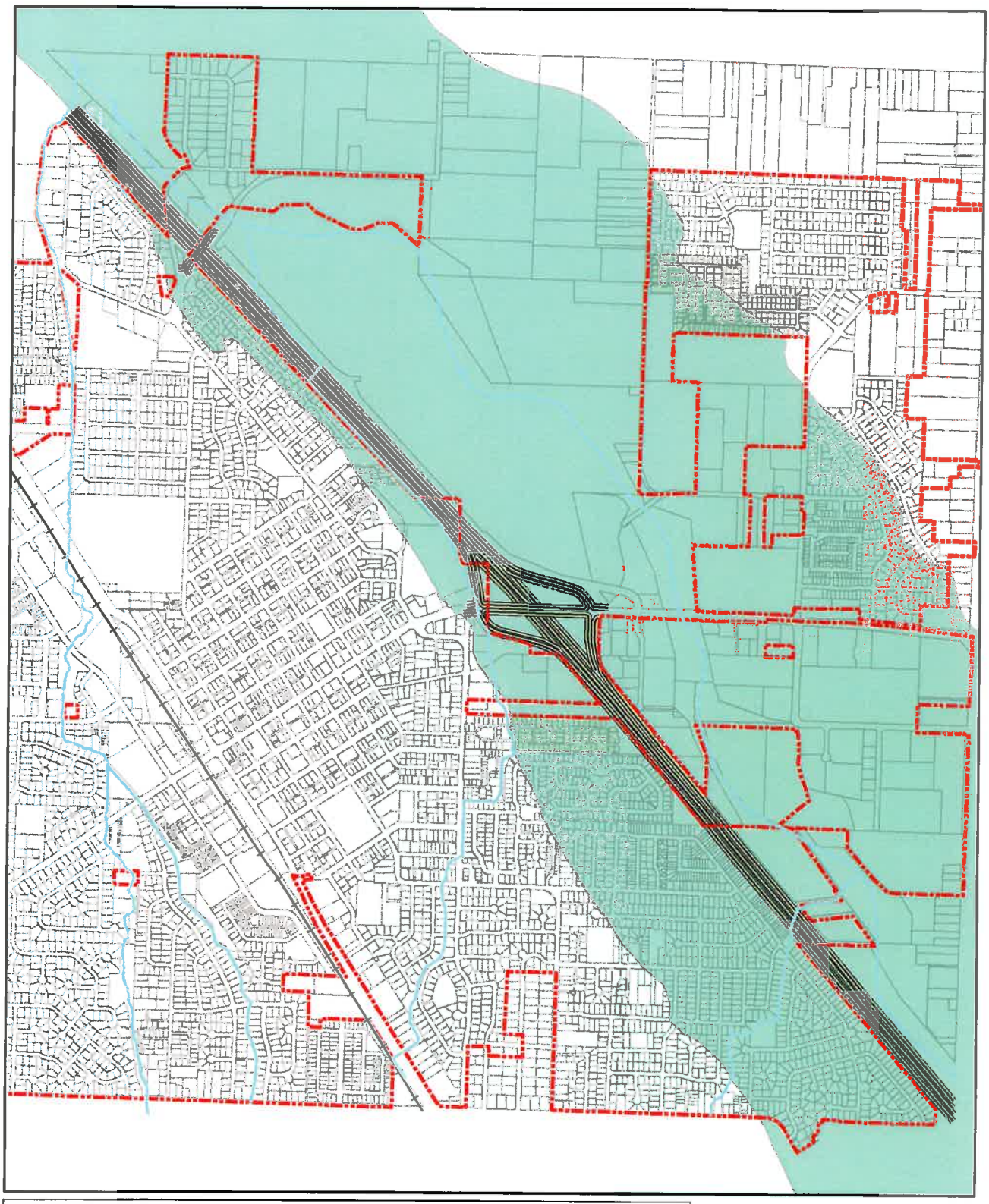
CENTRAL POINT

Emigrant Dam Inundation Zone



Emigrant Inundation Impacts Summary

Comprehensive Plan Land Use Designation	No. Structures	Acreage
Residential	2018	382.3
Commercial	981	115.7
Mixed Use	0	0
Civic/Open Space	1	31.8
Industrial	17	36.6

N

Legend

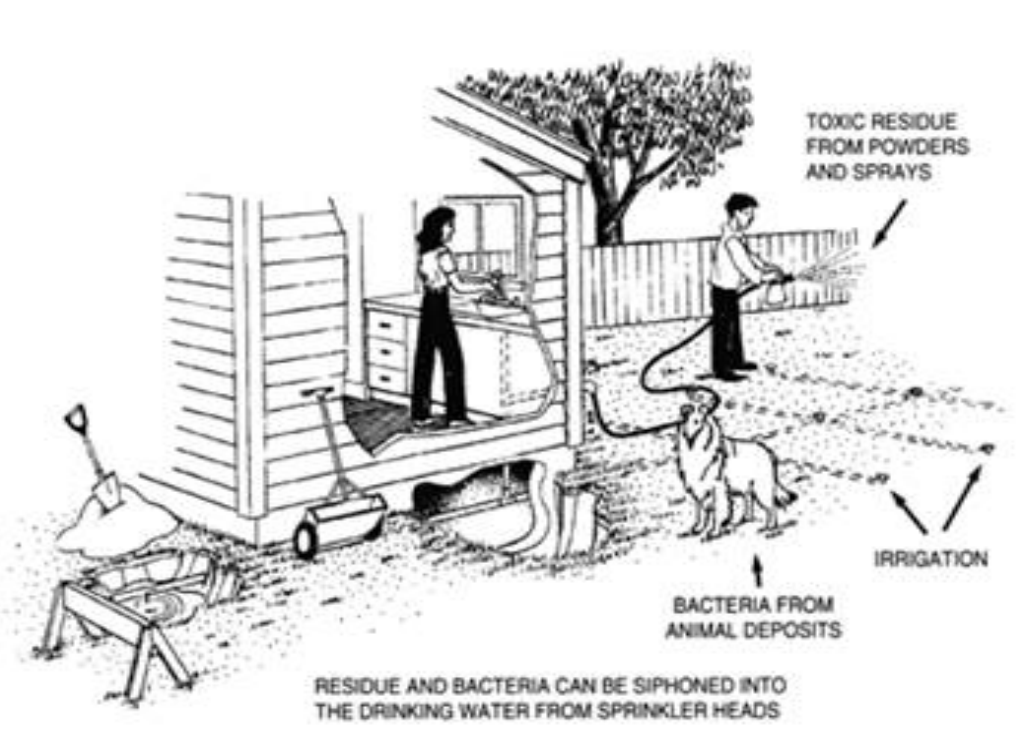
- streams
- emigrant_lake_dam_inundation
- I_5 Freeway

Cross-Connection and backflow prevention

City Cross-Connection & Backflow Prevention Program

- Purpose: Protect drinking water supply from contamination by systems with a potential hazard, such as:
  - Irrigation systems
  - Industrial facilities
  - Commercial facilities
- Program requirements:
  - Back-flow device installation
  - Device testing by owner every year
  - Results provided to Public Works
- Enforcement conducted to bring hazardous facilities into compliance

Residential dangers to City's water system

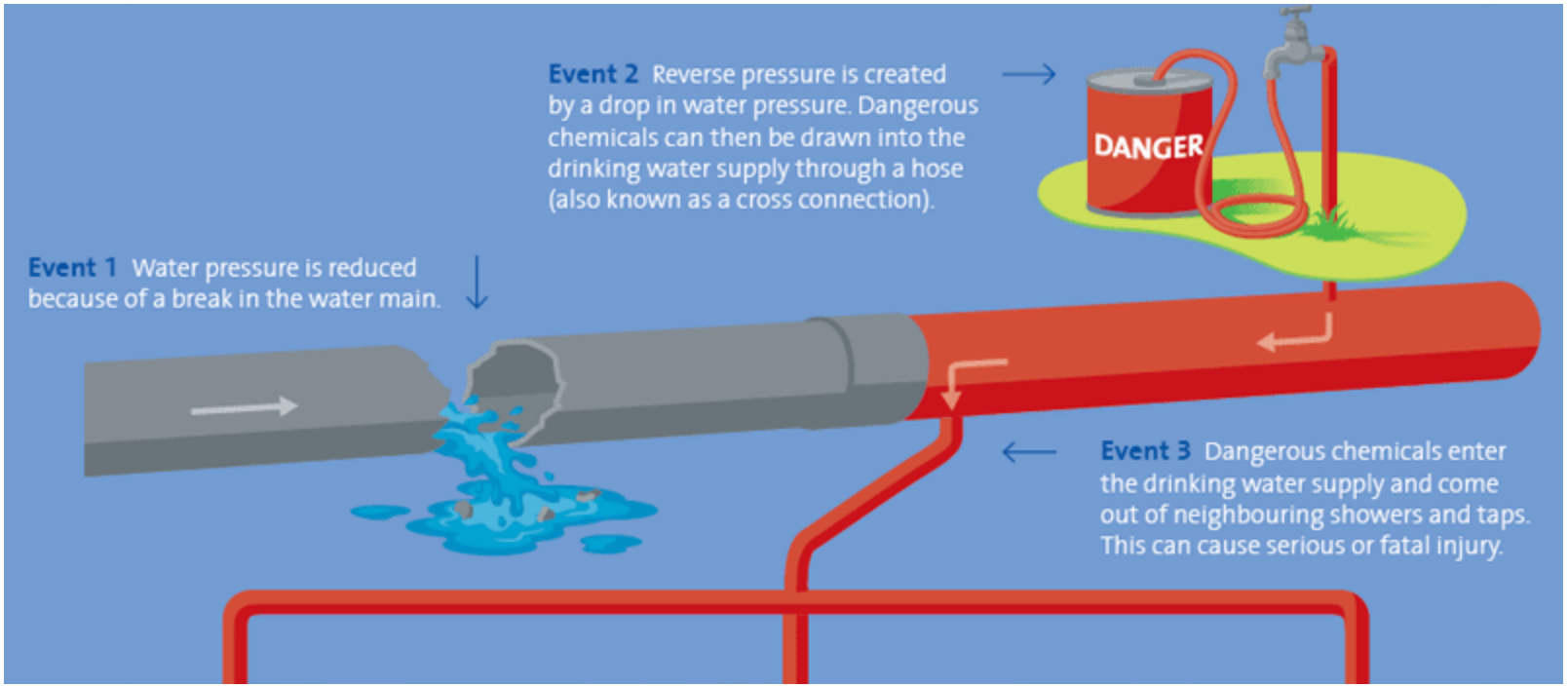


Water may pool in yards where the sprinkler heads are nested and if not protected against backflow the contaminated water may be sucked back into the City's water system.

Backflow/Cross-Connection Basics

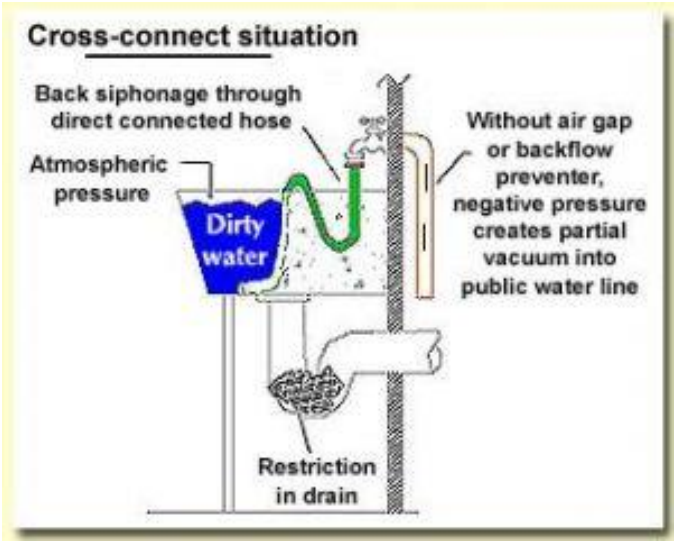
- Contamination occurs as a result of:
  - Backflow into City Supply from:
    - Back-pressure – occurs when pressure in a facility is higher than the City's water system causing water and contaminates to flow back into the City's water system.
    - Back-siphonage – occurs when a drop in the City's water system causes the water to flow in the opposite direction.
  - Cross-connection occurs when a pipe, vessel, or machine containing non-potable fluid, solids, or gas connects to the water system and contaminates the water supply by back-flow.
    - Lawn irrigation systems, swimming pools and hot tubs are common cross-connection sources.
- Industrial, Commercial buildings pose the most significant hazards to water systems.

Back-siphonage



Most common type of cross-connection

Potential Cross Connections



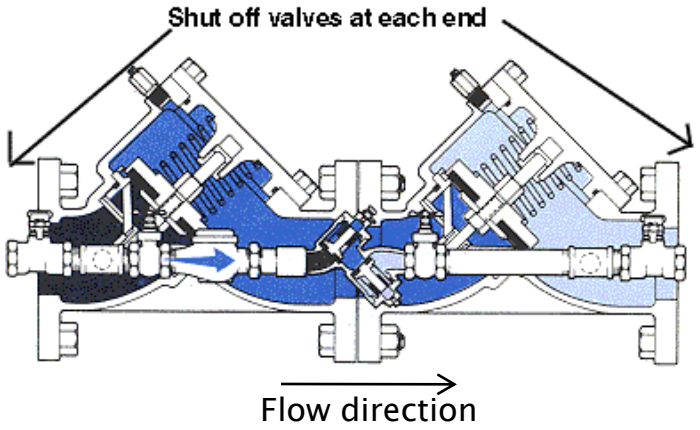
What is a backflow device?

A backflow preventer is a check valve that prevents water from flowing backwards into a water supply line resulting in a contaminated water supply. It prevents your potable water system from getting contaminated.

There are degrees of protection ranging from a vacuum breaker on a garden hose line to reduced pressure zone backflow preventers used in an industrial setting where chemicals are connected to water lines. The most common backflow used is the double check valve assembly backflow used in underground sprinkler system.

The type of backflow to use and where it's installed depends on the application and the threat level.

Why do we have to test backflows

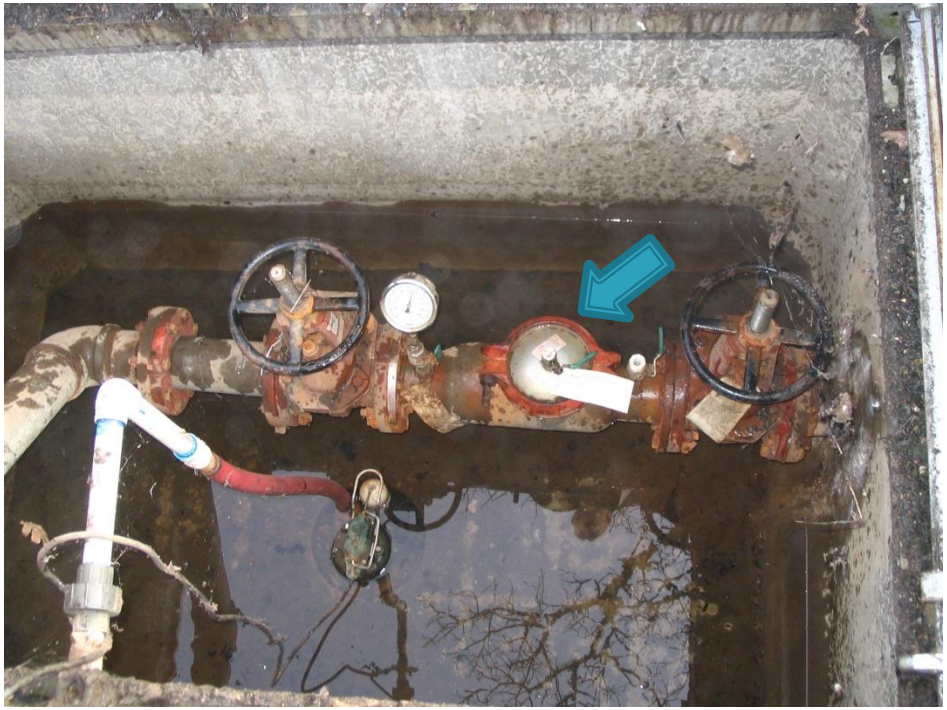


Typical Double Check Valve Backflow Prevention Assembly

Because the Assemblies have springs and flaps that open and shut several hundred times a day it must be tested annually to make sure it continues to operate properly.

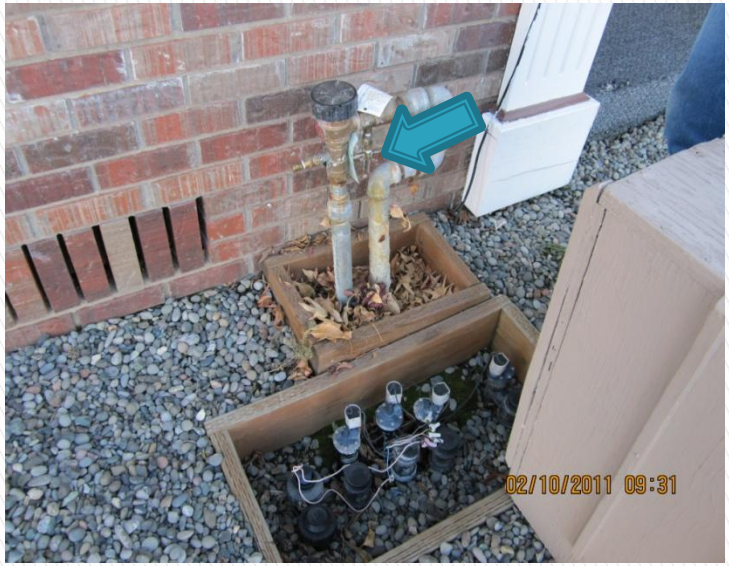
OAR 333961-070 & CP Ordinance 13.20.060

Backflow Units



Typical fire suppression and fire vault units with backflow preventers

Ericson Air Crane



Conger Morris

Albertsons

Commercial Backflow units

Municipal Responsibilities

It's the Law. Statewide mandates exist across the country which require every municipality to operate and maintain an effective backflow program. OAR 333-061-0065 Public water systems shall be operated and maintained in a manner that assures continuous production and delivery of potable water….

Contamination can be very costly . The cost to clean and repair the damage from a cross connection contamination can be very expensive.

Providing clean safe water to the residences. It is essential to have and keep the publics trust that the water they drink is safe and clean.

City of Central Point Backflow Program Status

- Backflow Program began in 1980
- The program is still is growing, but only about 40% of all backflows get tested annually.
  - 1995 there were less than 100 known tested units
  - 2001 there were 735
  - 2005 there were 1625
  - 2010 there were 1936
- Currently there are approximately 5,300 backflows in the City (commercial and residential).
- Public Works aims to increase the annual testing to 80% or better by the end of 2012,
  - This is achieved by using better software and GIS mapping to track facilities and compliance

How to pay for this

- Options
  - A. Ordinance Revision for city to test if in non-compliance.
  - Additional Fee like the MWC

Questions/Discussion