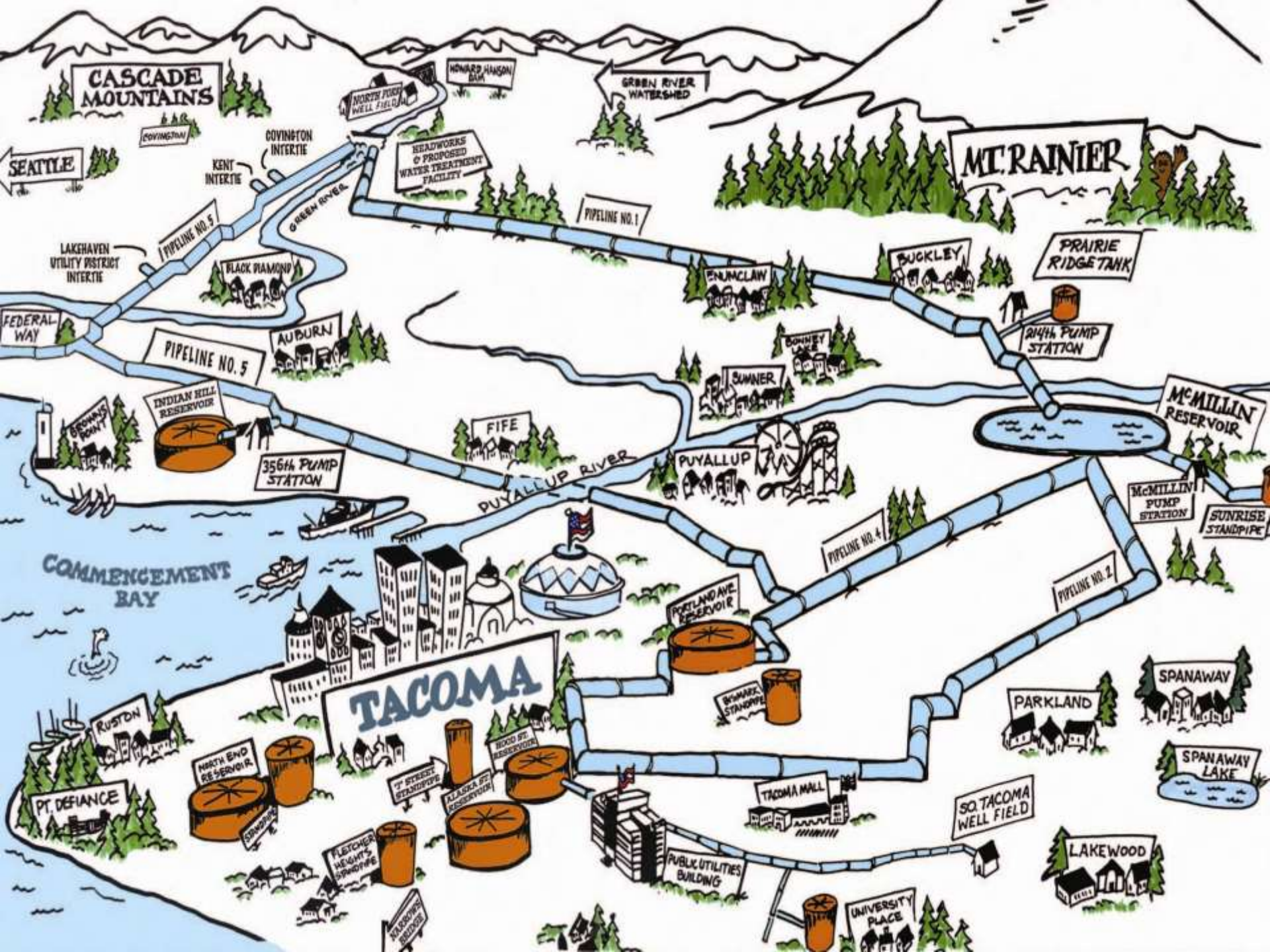


History Tacoma Water



Our Mission:

- Protect public health by providing high quality water service.
- Make home life more enjoyable and economic development possible through quality and reliability of service.
- Act in a socially and environmentally responsible manner.
- Make Tacoma a better place in which to live and work.



CASCADE MOUNTAINS

MT. RAINIER

SEATTLE

GREEN RIVER WATERSHED

NORTH POOK WELL FIELD

HONARD HANSON DAM

COVINGTON

COVINGTON INTERTIE

KENT INTERTIE

HEADWORKS & PROPOSED WATER TREATMENT FACILITY

PIPELINE NO. 1

PIPELINE NO. 5

GREEN RIVER

BLACK DIAMOND

ENMACLAW

BUCKLEY

PRAIRIE RIDGE TANK

LAKEHAVEN UTILITY DISTRICT INTERTIE

FEDERAL WAY

PIPELINE NO. 5

AUBURN

BONNEY

SUMNER

214th PUMP STATION

BROWNS POINT

INDIAN HILL RESERVOIR

356th PUMP STATION

FIFE

PUYALLUP

McMILLIN RESERVOIR

McMILLIN PUMP STATION

SUNRISE STANDPIPE

COMMENCEMENT BAY

PUYALLUP RIVER

PIPELINE NO. 4

PIPELINE NO. 2

TACOMA

PORTLAND AVE. RESERVOIR

BISMARCK STANDPIPE

PARKLAND

SPANAWAY

SPANAWAY LAKE

RUSTON

MARY END RESERVOIR

FLETCHER HEIGHTS STANDPIPE

WOOD ST. RESERVOIR

ALASKAN ST. RESERVOIR

TACOMA MALL

SO. TACOMA WELL FIELD

PT. DEFIANCE

PUBLIC UTILITIES BUILDING

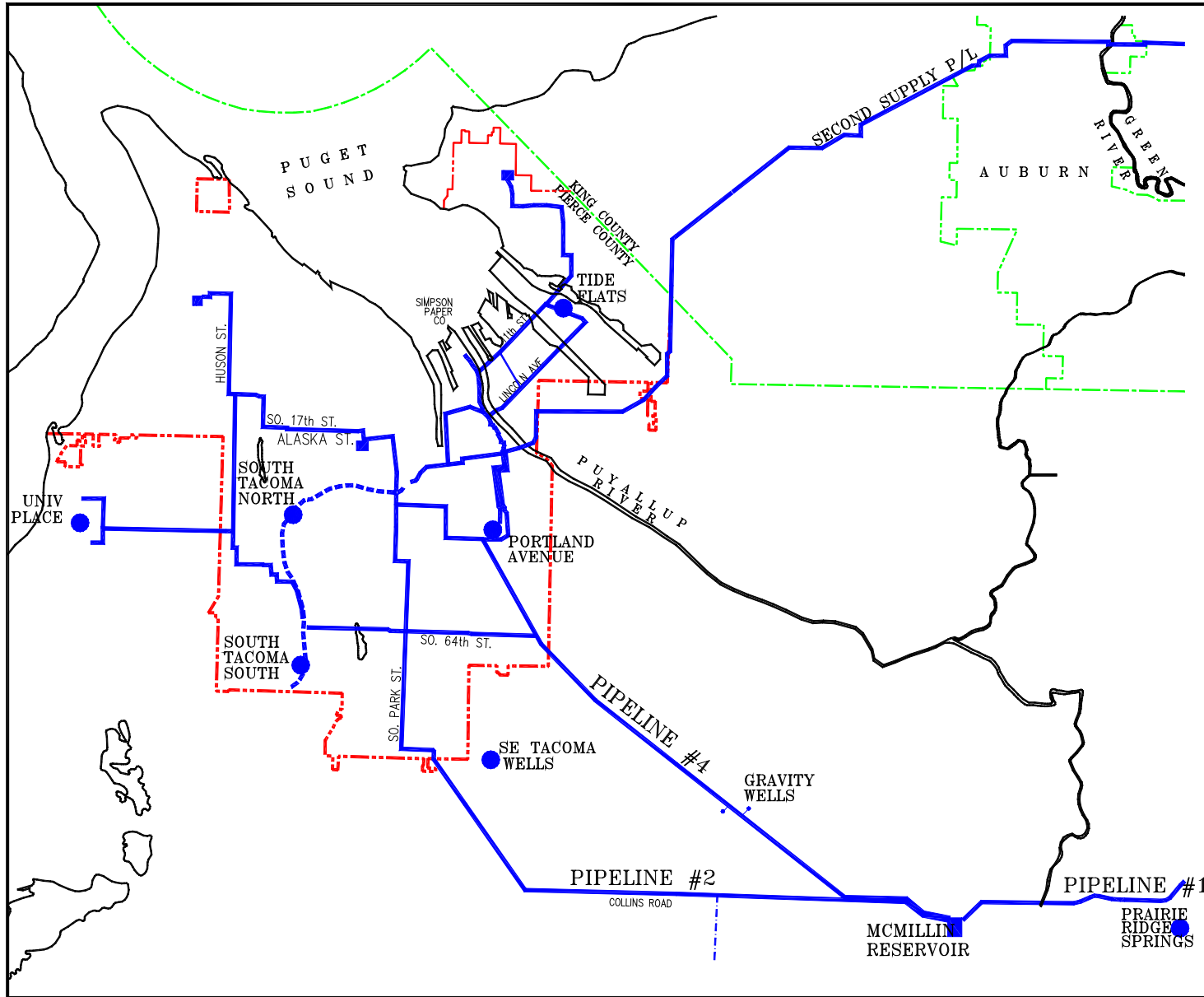
UNIVERSITY PLACE

LAKWOOD

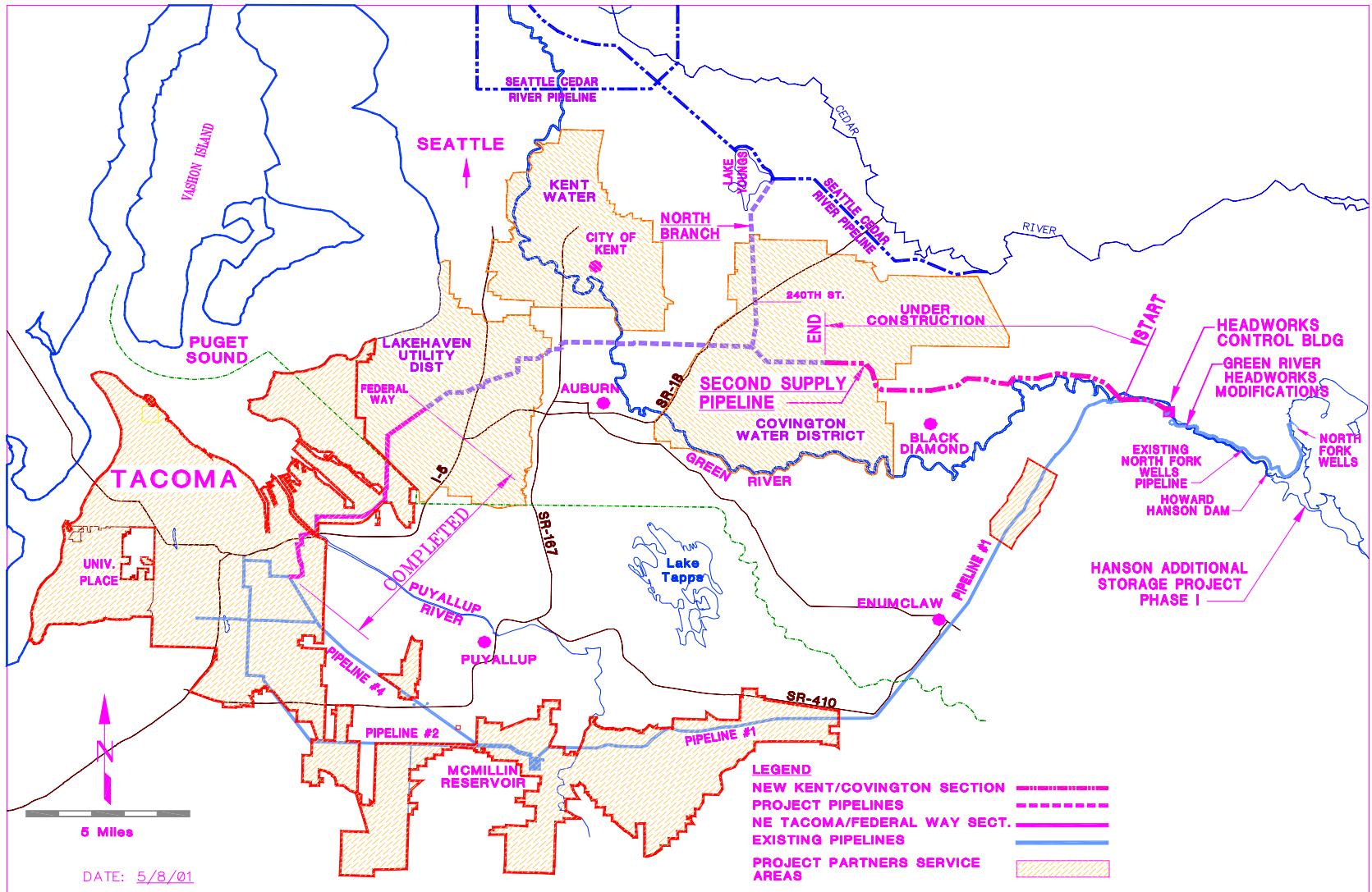
HARBOR RESERVOIR

Tacoma's System

- **Tacoma Water Facts**
 - 105,000 Service Connections
 - Over 1400 Miles of Main
 - ▶ 2" to 96" Diameter
 - 11,000+ Hydrants
 - Max available supply of 168 MGD.
 - 256 Employees



How did Tacoma get such a good water system?



History

- Early Tacoma had plenty of locally available drinking water.



Downtown Tacoma – 1880's

The town keeps growing

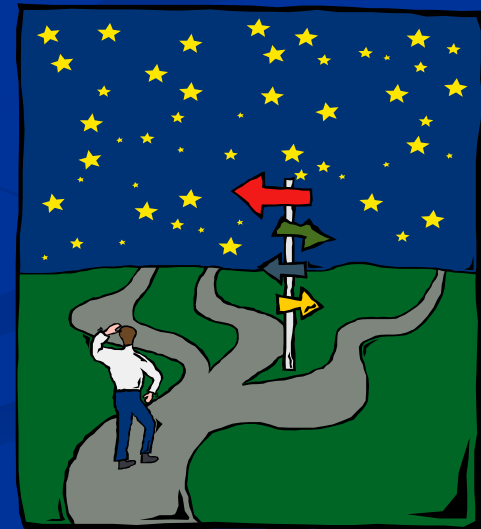


You are on your own

- Small water systems began serving localized areas of town
- None of these systems adequately met drinking water or fire protection needs
- Typhoid was common
- Fires regularly destroyed groups of wooden structures (fire of 1873)
- Citizens demanded a real water system

A Snapshot of Local Water History...

- Through the late 1800's, Tacoma residents suffered with unreliable, unsafe water. Typhoid was common.
- In 1893, dissatisfied Tacoma residents voted to buy the largest privately operated water system.
- Problems remained, and worsened, as little money was available to upgrade the system.
- There was also indecision about choosing a new source.



- The Tacoma Hotel was built for travelers arriving on the Northern Pacific Railroad
- Development would stop without a municipal Water system; City fathers and citizens alike were dissatisfied with their water service



- In 1893, dissatisfied Tackman's voted to buy the water system. (Tacoma Light & Water)
\$1,750,000
- Problems remained, and worsened.
- Hired first Superintendent
- The new water system was not keeping up with Tacoma's growth
- By the early 1890's quality & quantity were both inadequate

Original Hood Street Reservoir

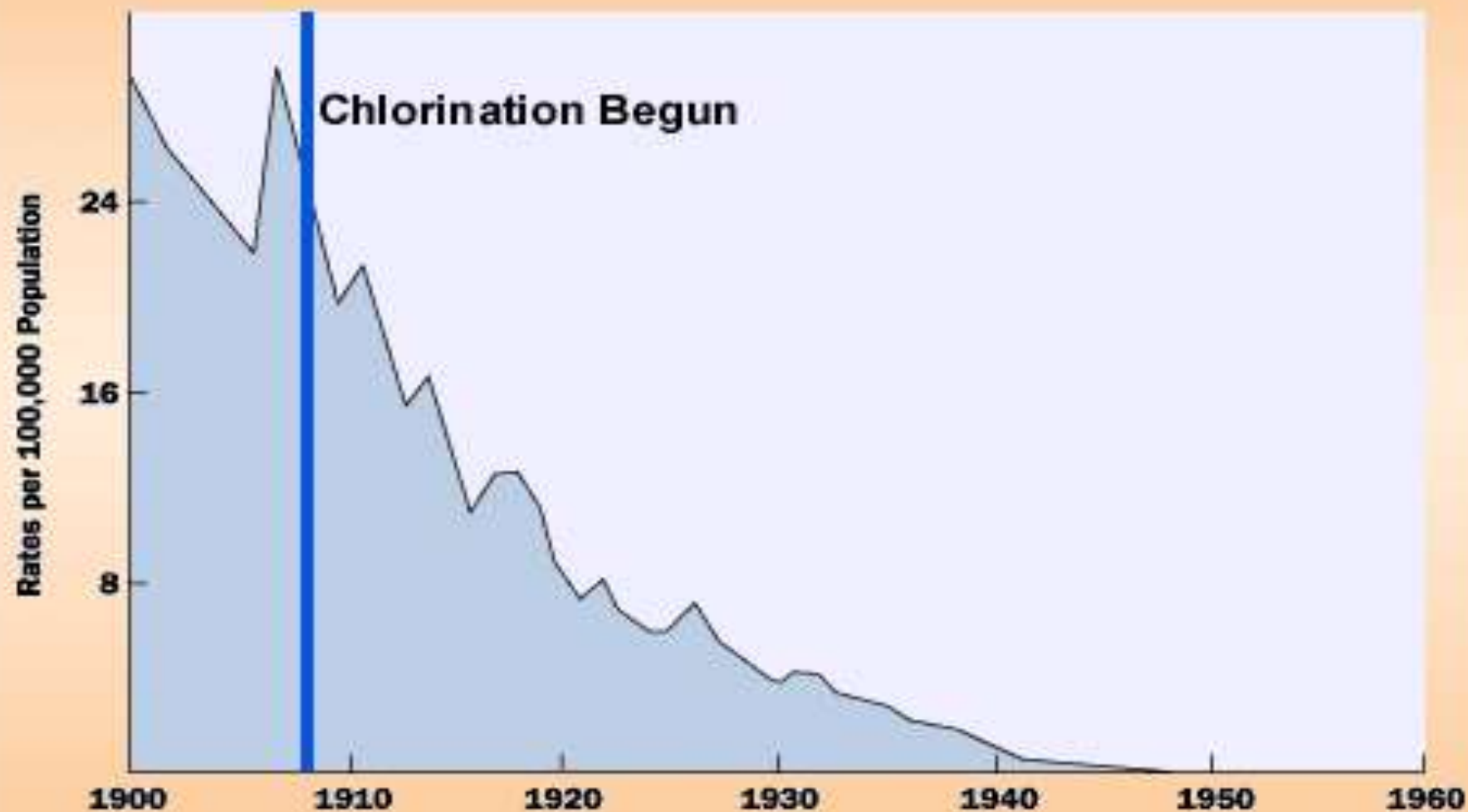




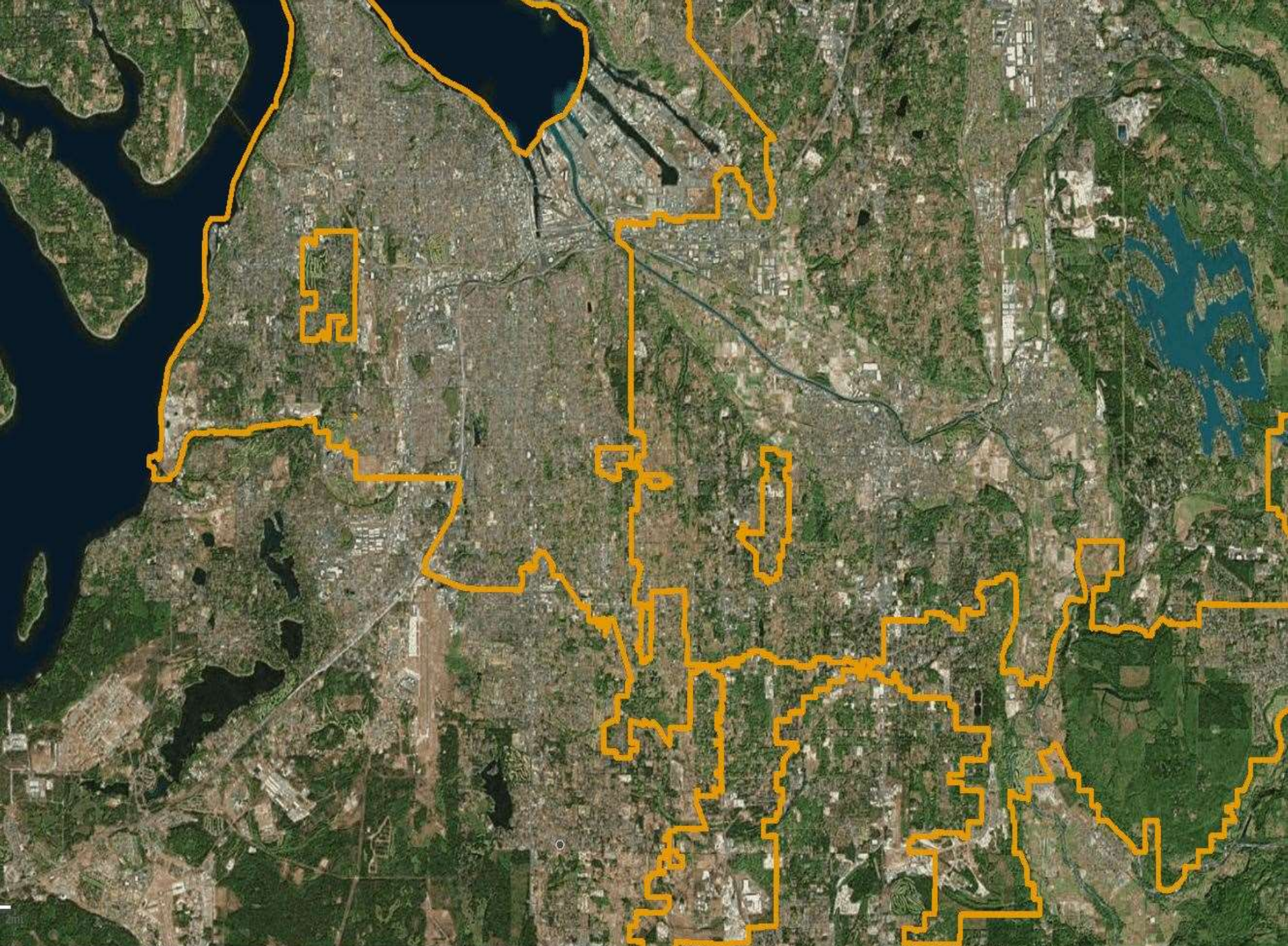




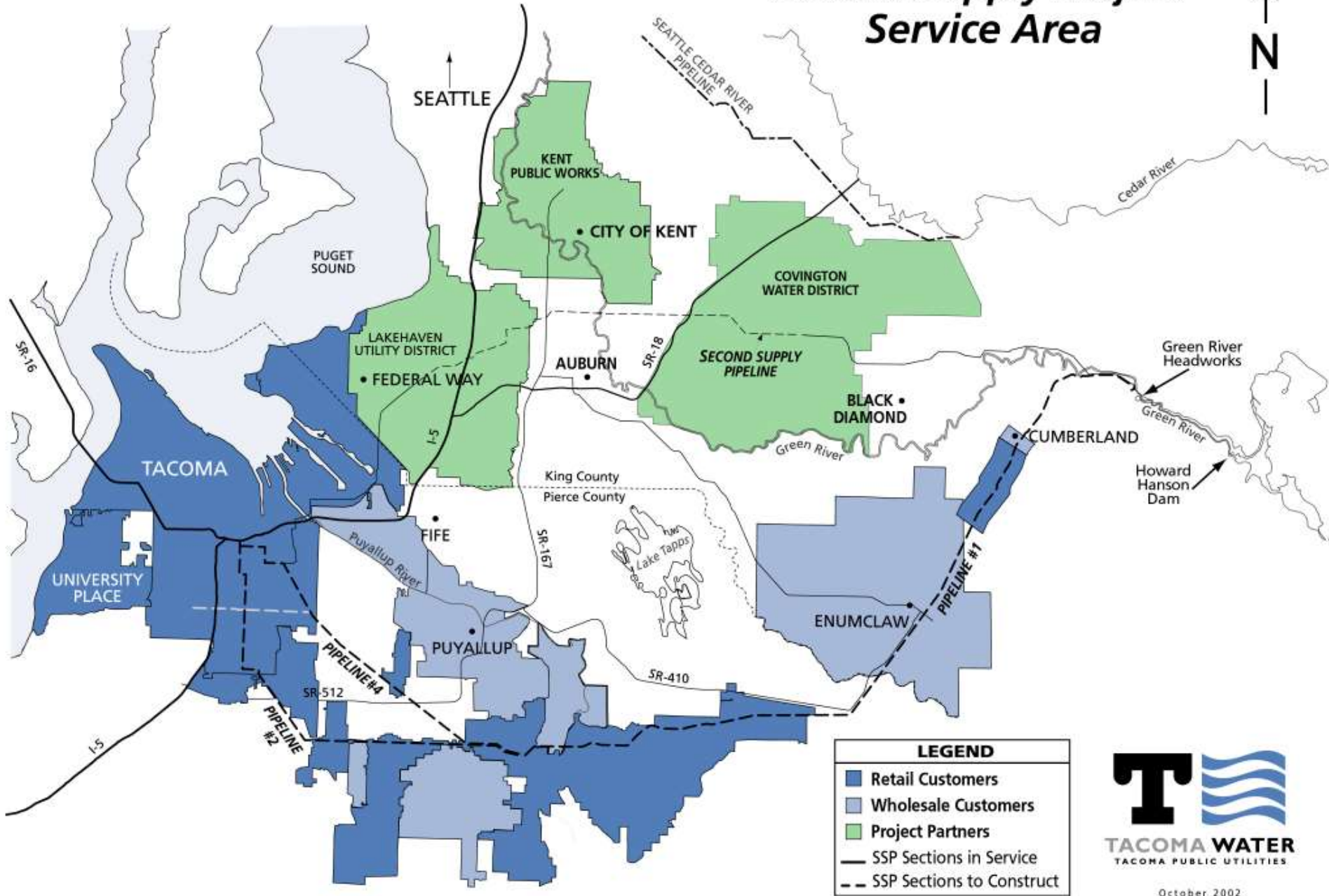
Death Rate for Typhoid Fever United States, 1900-1960



Source: U.S. Centers for Disease Control and Prevention, Summary of Notifiable Diseases, 1997.



Second Supply Project Service Area





Tacoma The Latecomer

- The Green River watershed had considerable development by 1913
- Local and State Health rules allowed Tacoma some control
- Landowners were uncooperative
- Additional chlorination equipment installed



Reproduction of T... ..



145T







Caretaker's House, Mt. William Reservoir 1914









12/16/2011 09:36



Photo by Skytech Aerial Photos - Oct 2010

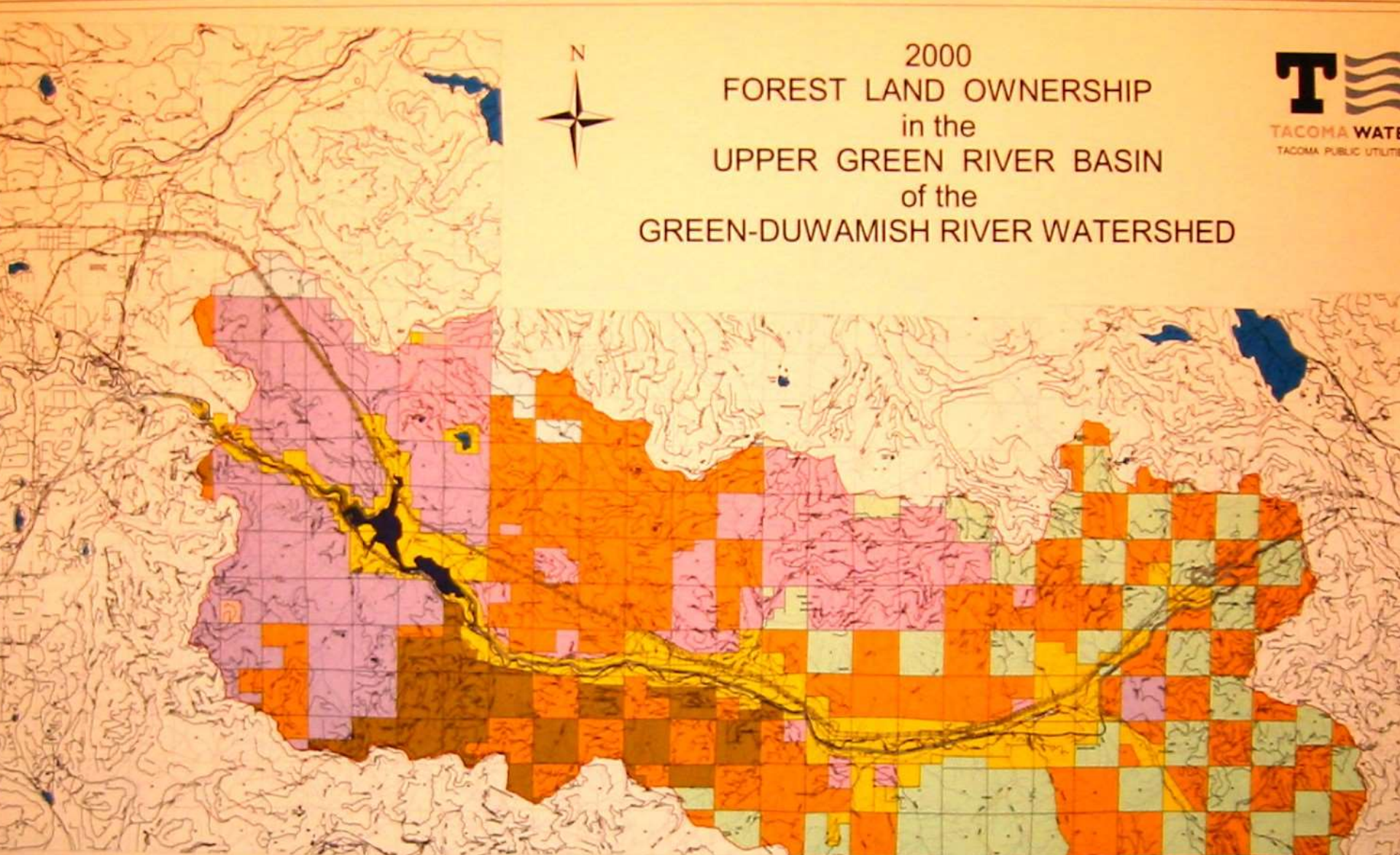


The Green River Watershed

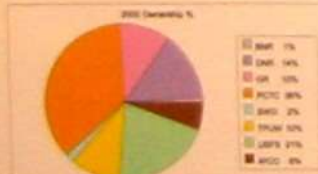
Tacoma The Latecomer

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2000
FOREST LAND OWNERSHIP
in the
UPPER GREEN RIVER BASIN
of the
GREEN-DUWAMISH RIVER WATERSHED



LEGEND
Elevation Contour Interval
50 Feet
Road
Stream
Water Body
Boundary
City
County
State



- 0-10%
- 10-20%
- 20-30%
- 30-40%
- 40-50%
- 50-60%
- 60-70%
- 70-80%
- 80-90%
- 90-100%

Forest Land Owner Average

Owner	Acres	Percentage	Percentage
Dr. Andy Gorge of Engineers	478	0.7	0.0
Bohlinger Northern Forest Co.	408	0.6	0.0
Black Hill	300	0.4	0.0
Siemata Properties	10	0.0	0.0
County of King	4780	7.0	0.0
John Associates	3000	4.4	0.0
King Creek Timber Co.	1070	1.5	0.0
King Hill Development Corp.	500	0.7	0.0
City of Seattle Water	980	1.4	0.0
City of Tacoma Water	1990	2.8	0.0
Willam	1000	1.4	0.0



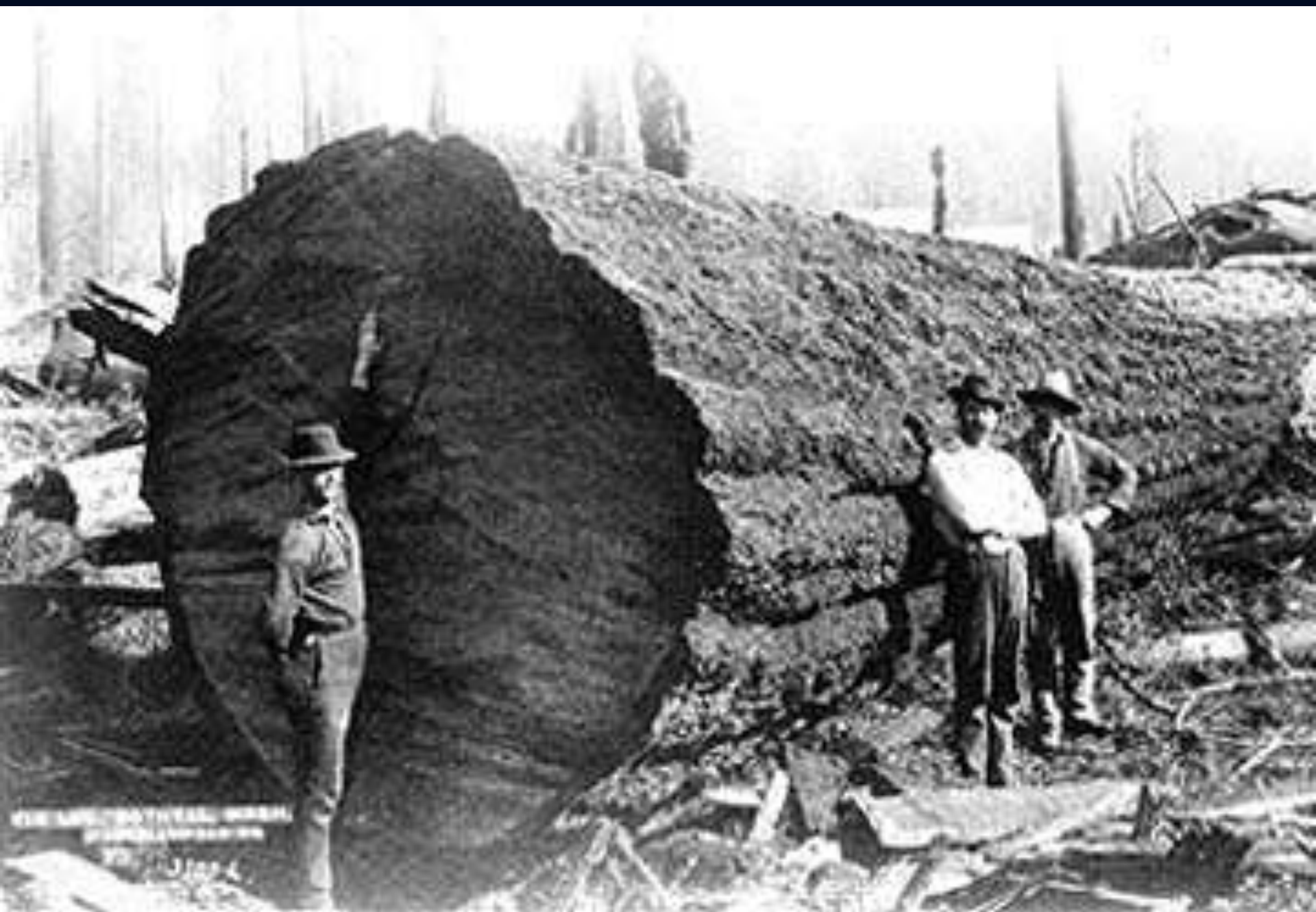




FAMOUS
1933

HALL & HOFF
LITTON
KILLAM
1933

377
K45



THE LARGEST LOG EVER CUT
IN THE WORLD
AT
JAN 4





Replacing City of Tacoma
Gravity Pipe Line - 1924.











11-86

TACOMA GROWS
WHERE WATER GOES!



City Water Division

Foster-Kleiser



Laying Ditch for 20" C.I. Pipe on So. 7th St. with





TACOMA MUNICIPAL WATER WORKS
SOUTH TACOMA PUMP STATION

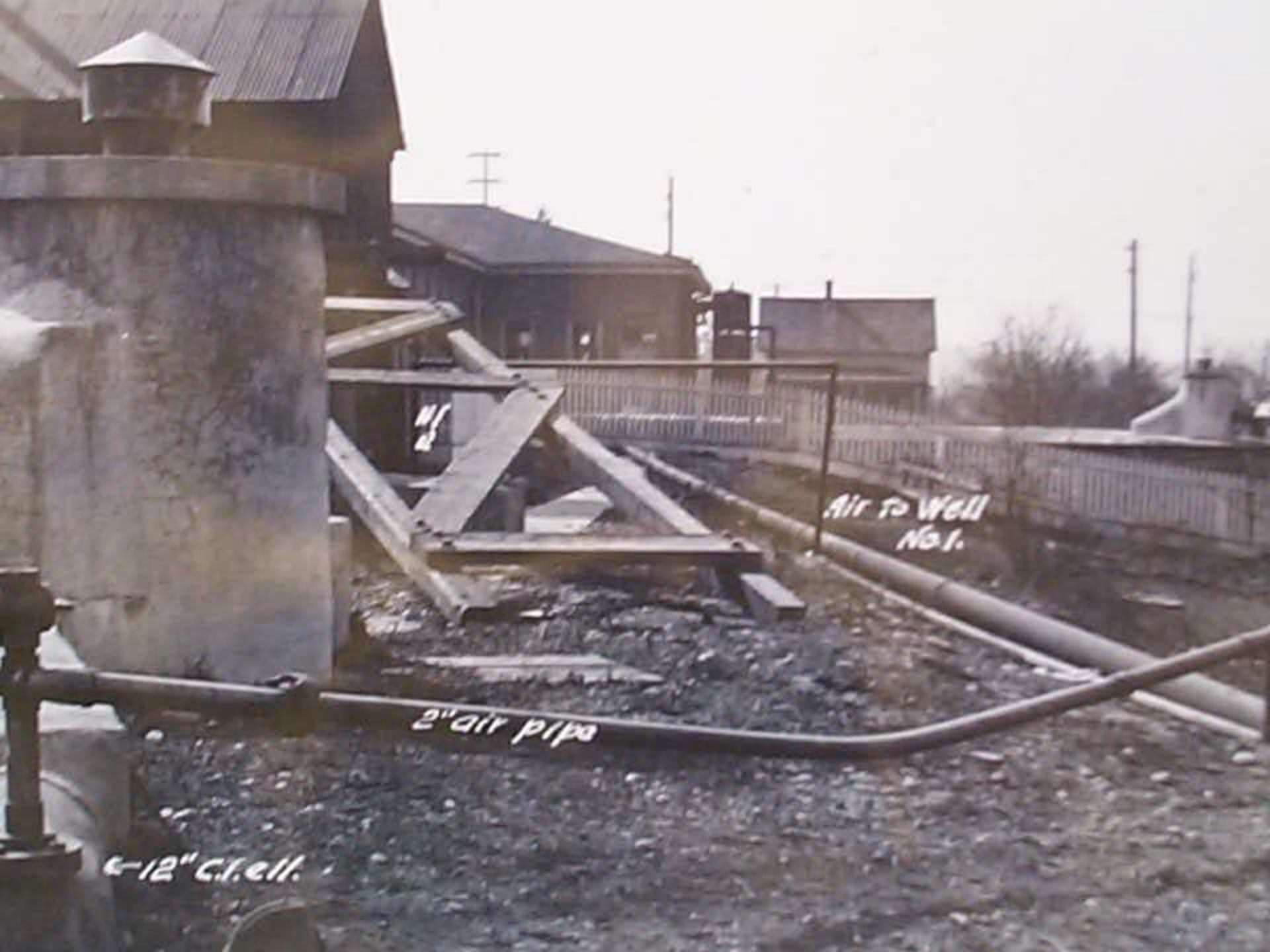


WATER

TACOMA

CITY OF





Air to Well
No. 1.

2" air pipe

6-12" c.f. ell.



26-Hallat - Well 5A - Discharge Flume













20" C.I. Pipe for "K" St Job Summer































Green River Watershed (Now...)

- 231 square miles
- Uninhabited
- Landowners
 - Forest Service
 - State of Washington
 - Timber Companies
 - Army Corps of Engineers
 - BNSF Railroad
 - Bonneville Power
 - Tacoma Water



Cooperation

- With Landowners
 - Helps maintain controlled access
 - Landowner Agreements
 - Tacoma will:
 - patrol watershed
 - cite trespassers
 - Install gates as necessary
 - Landowner agree to:
 - Follow watershed rules to protect water quality

Cooperation (Cont.)

- Muckleshoot Indian Tribe
 - Agreement for 1st & 2nd diversion water rights
 - Access for:
 - Hunting
 - Game management
 - Cultural & ceremonial activities
 - Fish Hatchery
 - Land in the watershed
- Dept. of Fish & Wildlife
 - Permit hunt
 - Game Management
 - Year-around enforcement

Second Supply Project

Project Description

A major regional water supply project that delivers additional water from the Green River to Tacoma and three South King County utilities. The value of environmental enhancements included in the project is over \$75 million. Principal project elements are:

- ◆ Green River Headworks Diversion improvements and additions
- ◆ Second Supply Pipeline (34 miles)
- ◆ Headworks water treatment facilities
- ◆ Howard Hanson Dam Additional Storage - Phase 1
- ◆ Numerous environmental enhancement projects

- ◆ Total Cost about \$221 million



Green River Filtration Facility⁷⁹
July 15, 2014























- What's Next
- AMI
- Asset Management
- Supply Infrastructure Replacement
- Lead Gooseneck Project
- Mobile Tools
- Planning, Scheduling, Improving
- System & Knowledge Transfer



The Story Continues