KITSAP PUBLIC UTILITY DISTRICT

Kingston Community Advisory Council

October 11, 2023

KPUD Staff

Dave Epperson
Director of Operations

Tom Colby, Ph.D.
Hydrogeologist

Stephanie Hall
Telecom Business Dev & Community Relations

Contents

Water

- KPUD's Role in Kitsap County
- Water Resource Management
- Logging and Climate
- Regional Infrastructure/Water System Info
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Telecommunications

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- KPUD Fiber Optic Network
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KPUD Water Role

Growth Management Act – 1990

- Required Kitsap County to develop a comprehensive plan to include 14 goals to manage population growth (RCW 36.70A.020)
  - "(10) Environment. Protect and enhance the environment and enhance the state's high quality of life, including air and water quality, **and the availability of water**."

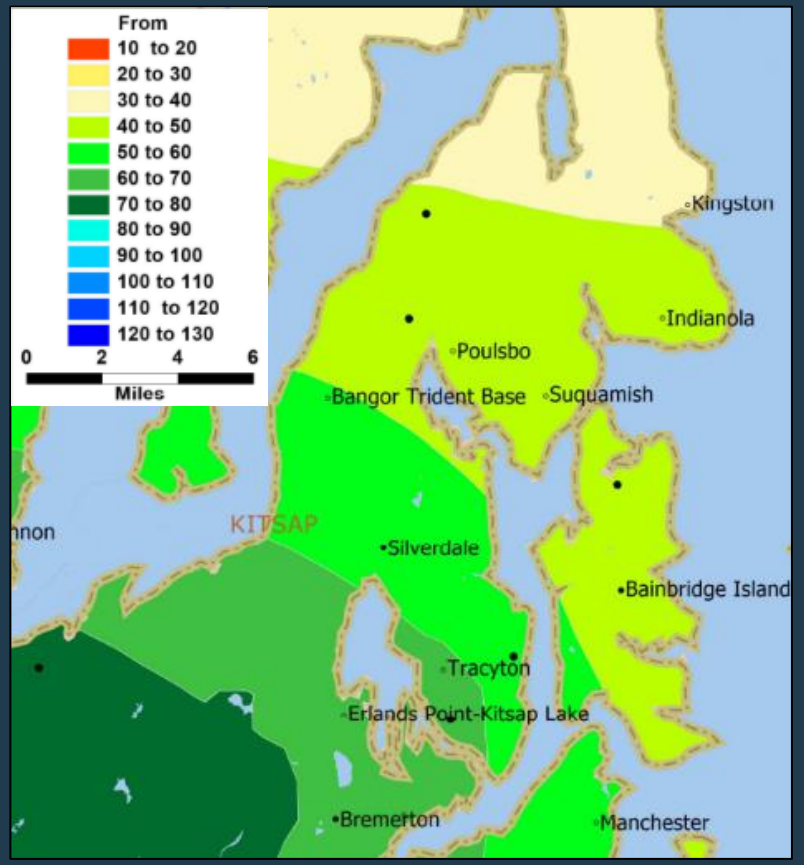
Memorandum of Understanding KPUD and Kitsap County – 1994

- "…the County recognized that KPUD is responsible for the technical, managerial, financial, operational and support services which are needed to provide satisfactory water resource management including development, protection, supply, and utility service."
- "The County designates that the District will serve as the technical lead agency for the County in proposing, planning, coordinating, and providing **regional water resource management and supply service**."

Precipitation Data

28 Stations in <u>Kitsap County</u>

- 17 KPUD stations (5-minute data)
- 11 sites by volunteers



Streamflow Data

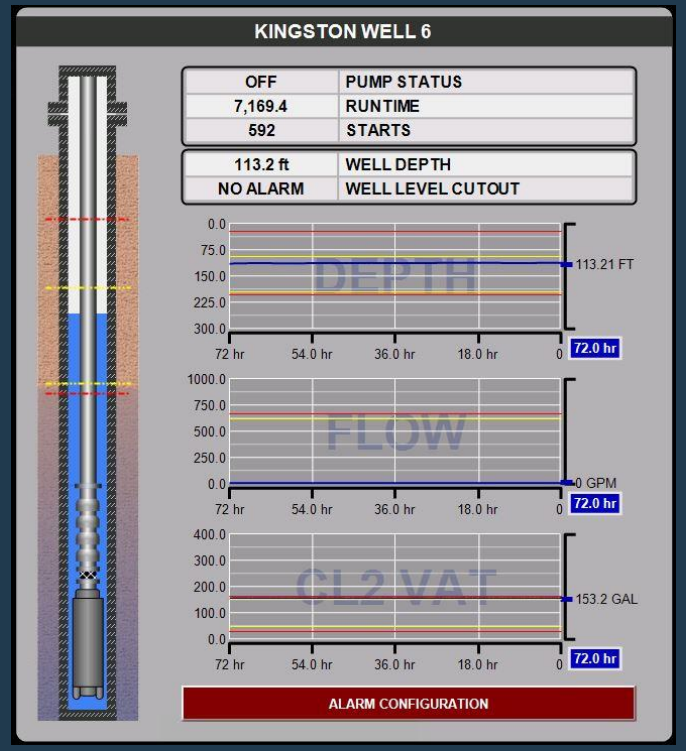
28 streams with 10 stations providing real-time telemetry (15-min data)

Groundwater Levels

Collect data from ~120 wells throughout Kitsap County

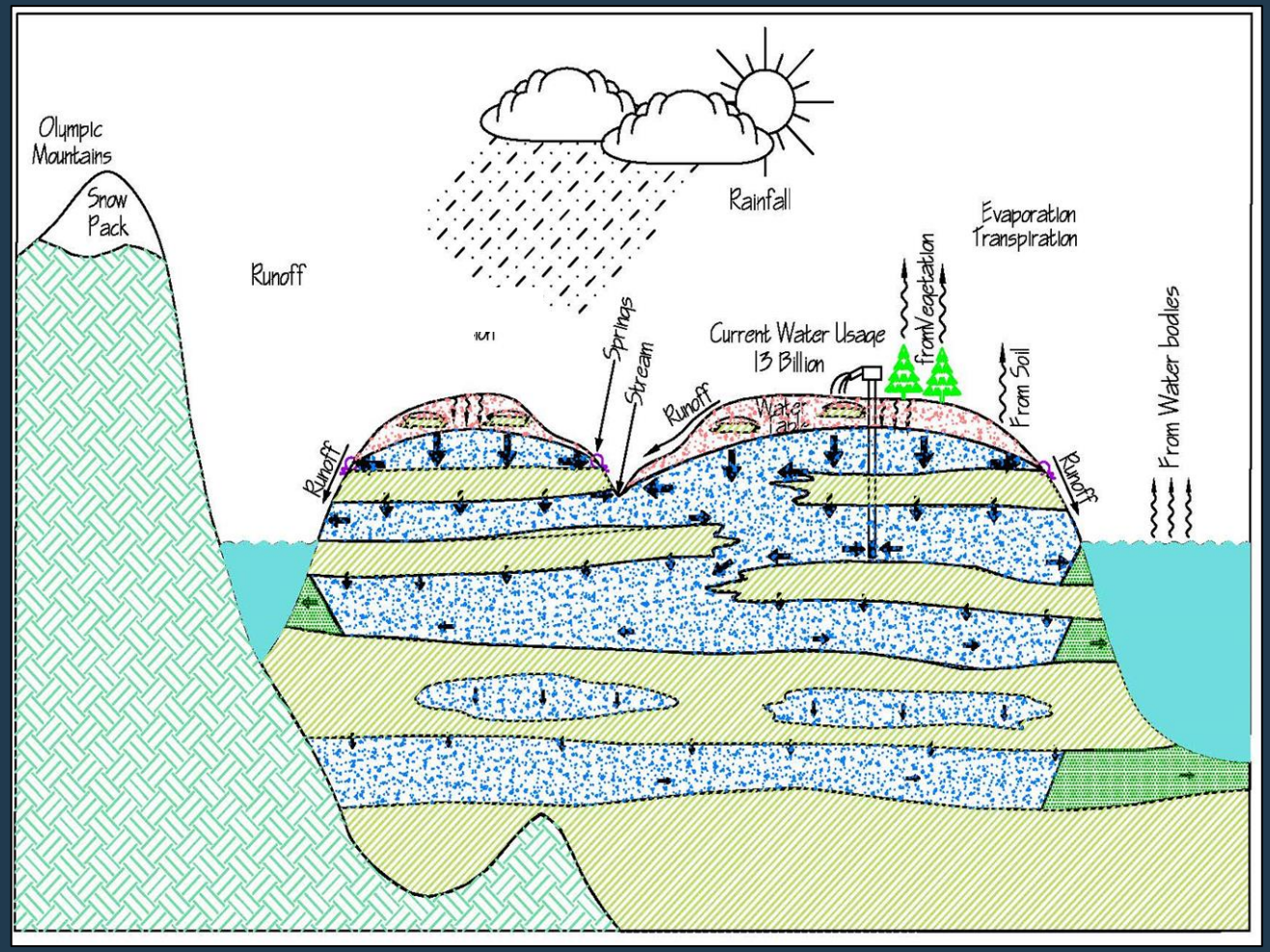
Manual Measurements

Transducers and Telemetered Wells

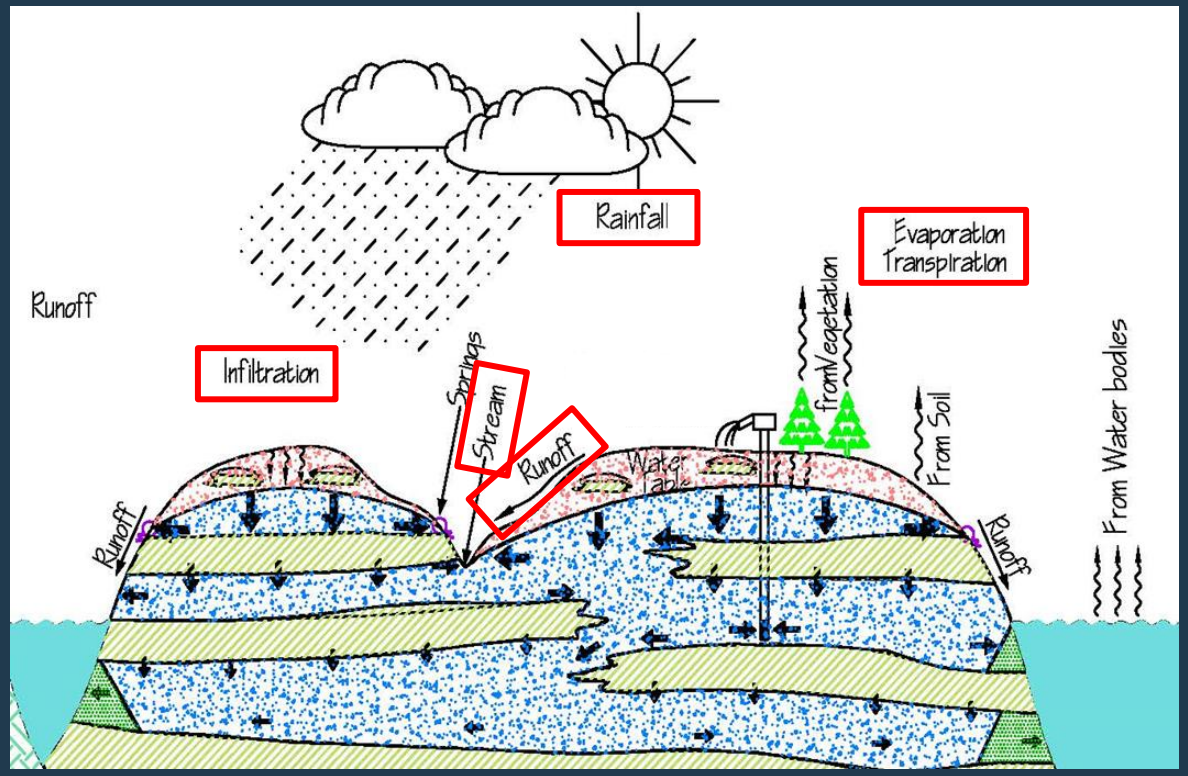


Resource Management

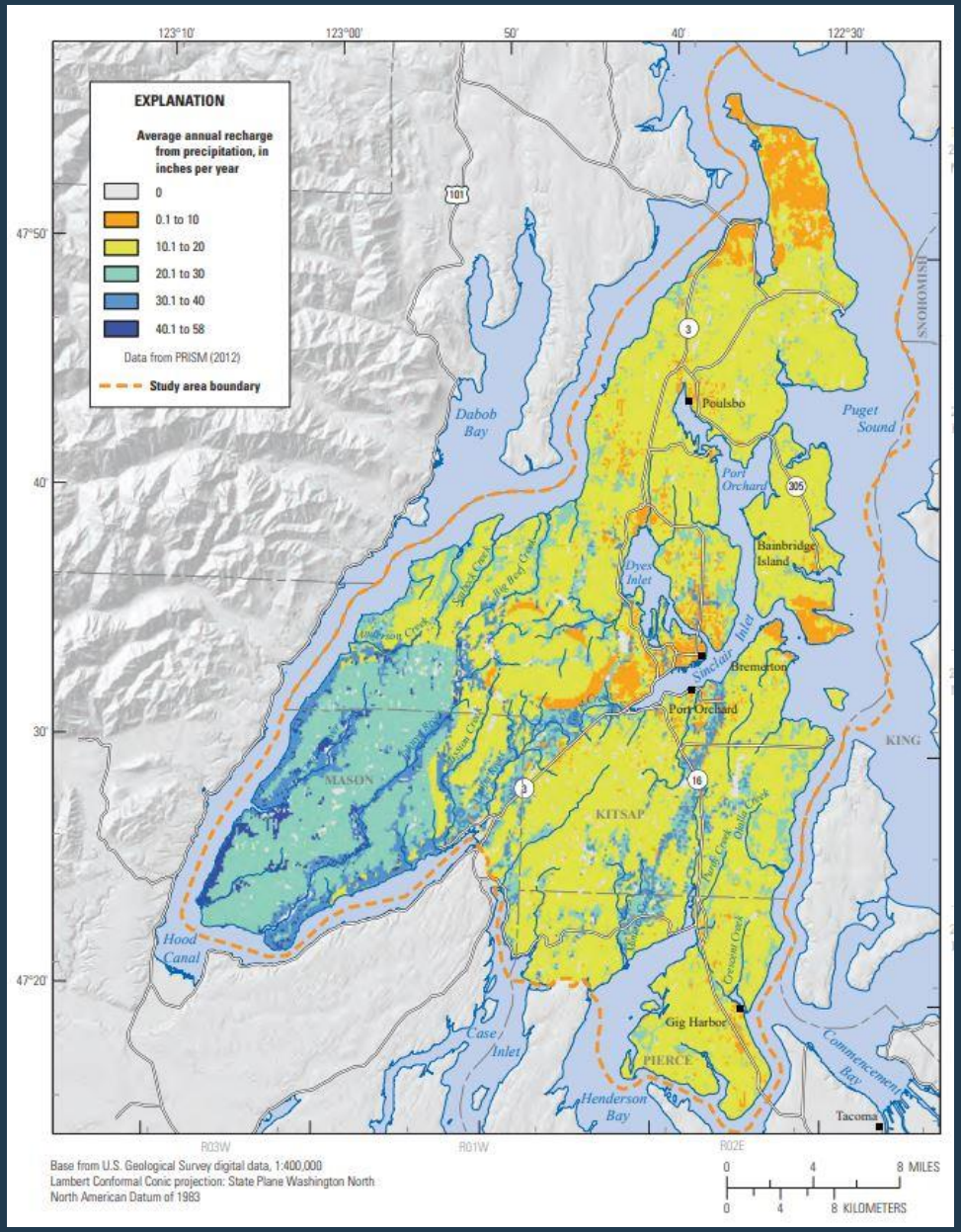
Informed management of water resources in Kitsap County



Aquifer Recharge



Roughly 1/3 to 1/2 of annual precipitation becomes recharge

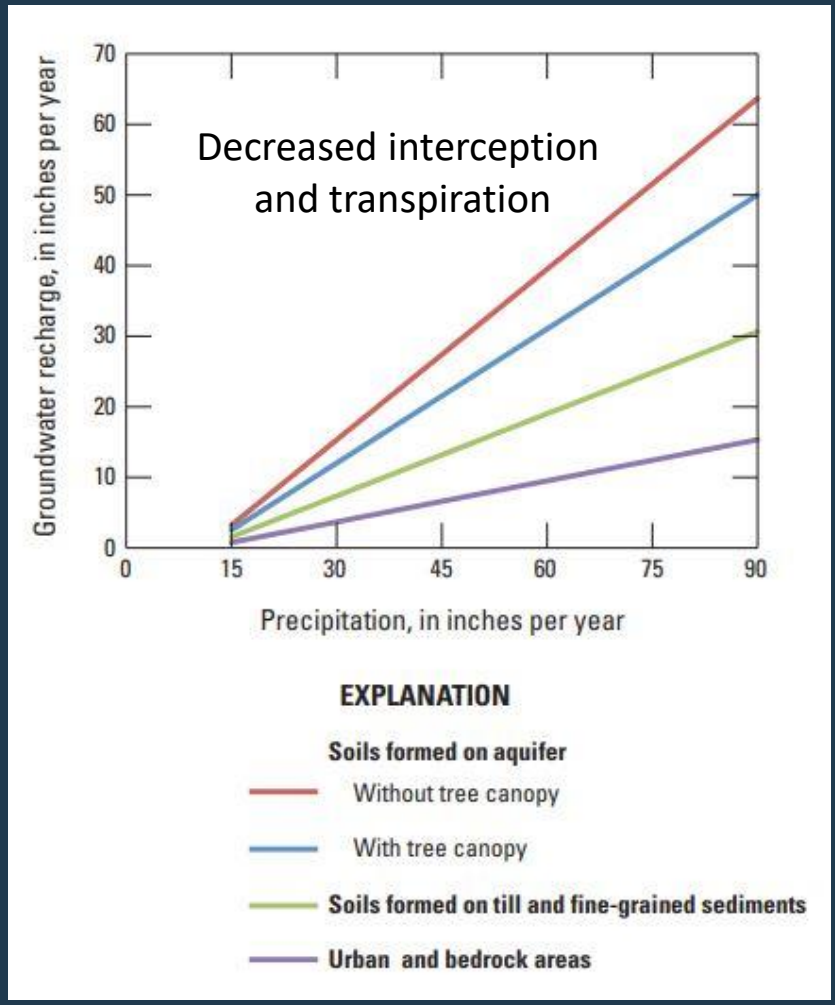


USGS (2014)

Logging Impacts to Recharge

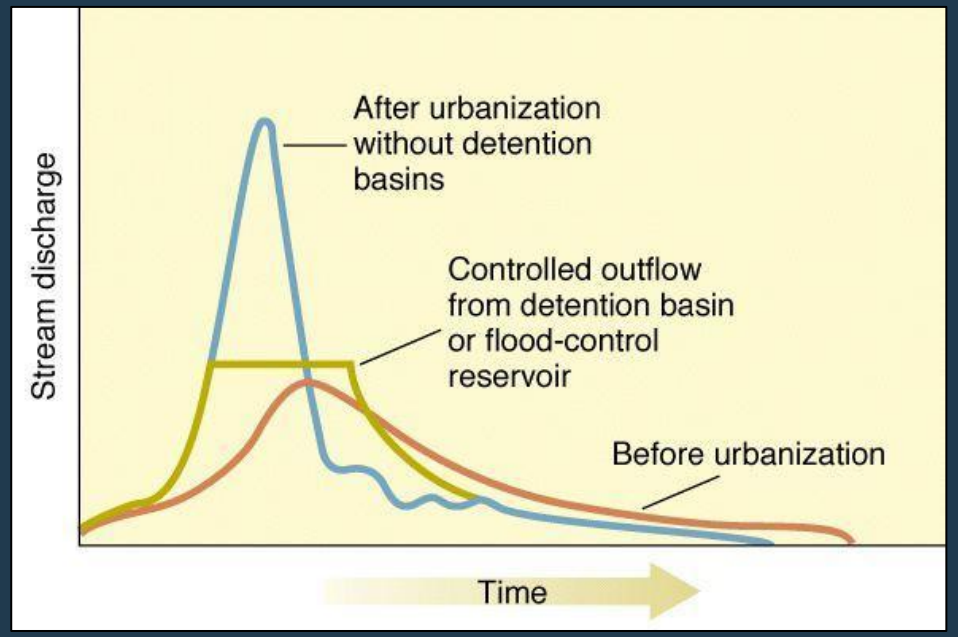
1905, photo by Darius Kinsey (Library of Congress)

Increased recharge with removal of tree canopy.
What about development?

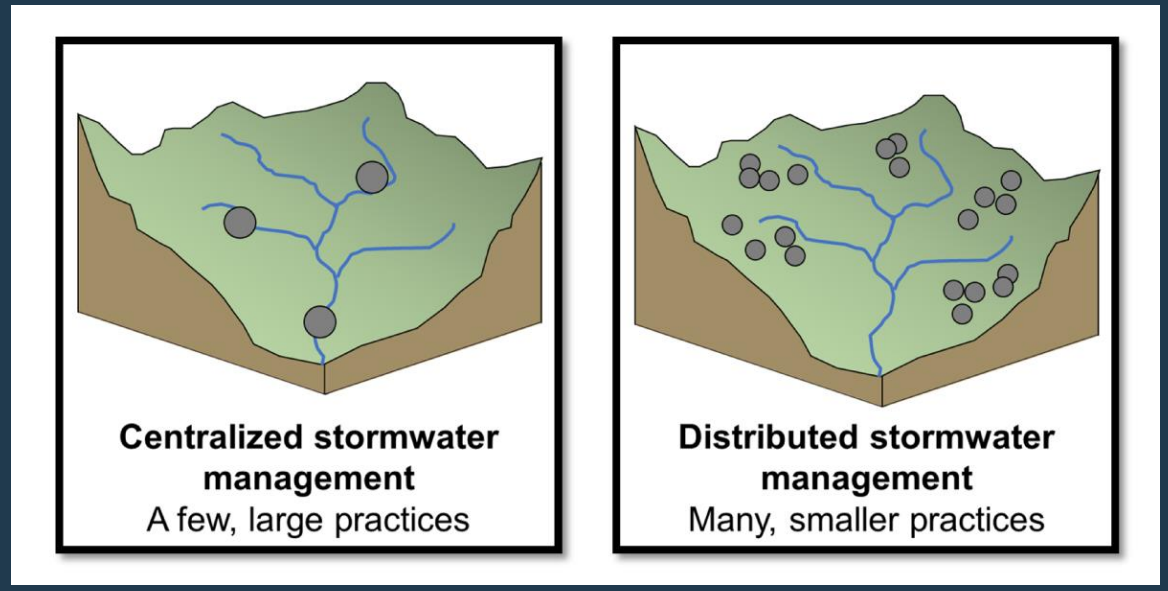


USGS (2014)

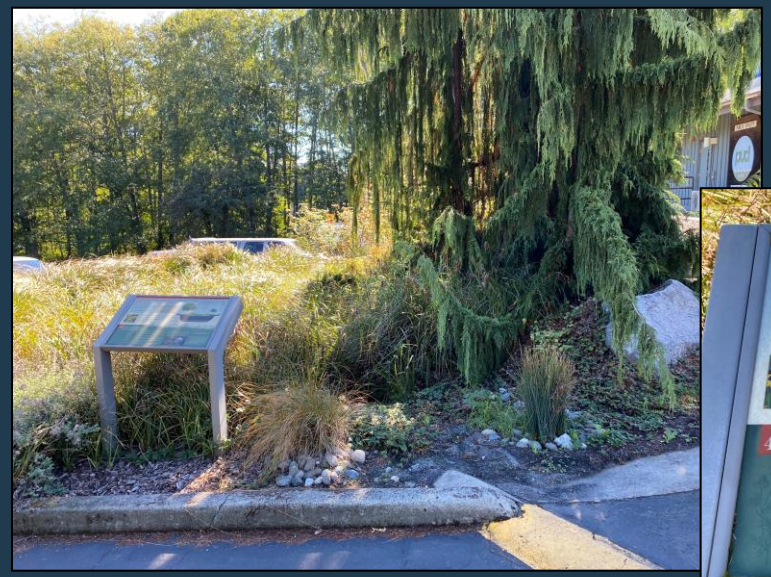
Stormwater Management



Shoal Creek Conservancy



USGS



KPUD, Finn Hill Office

Climate Change in PNW

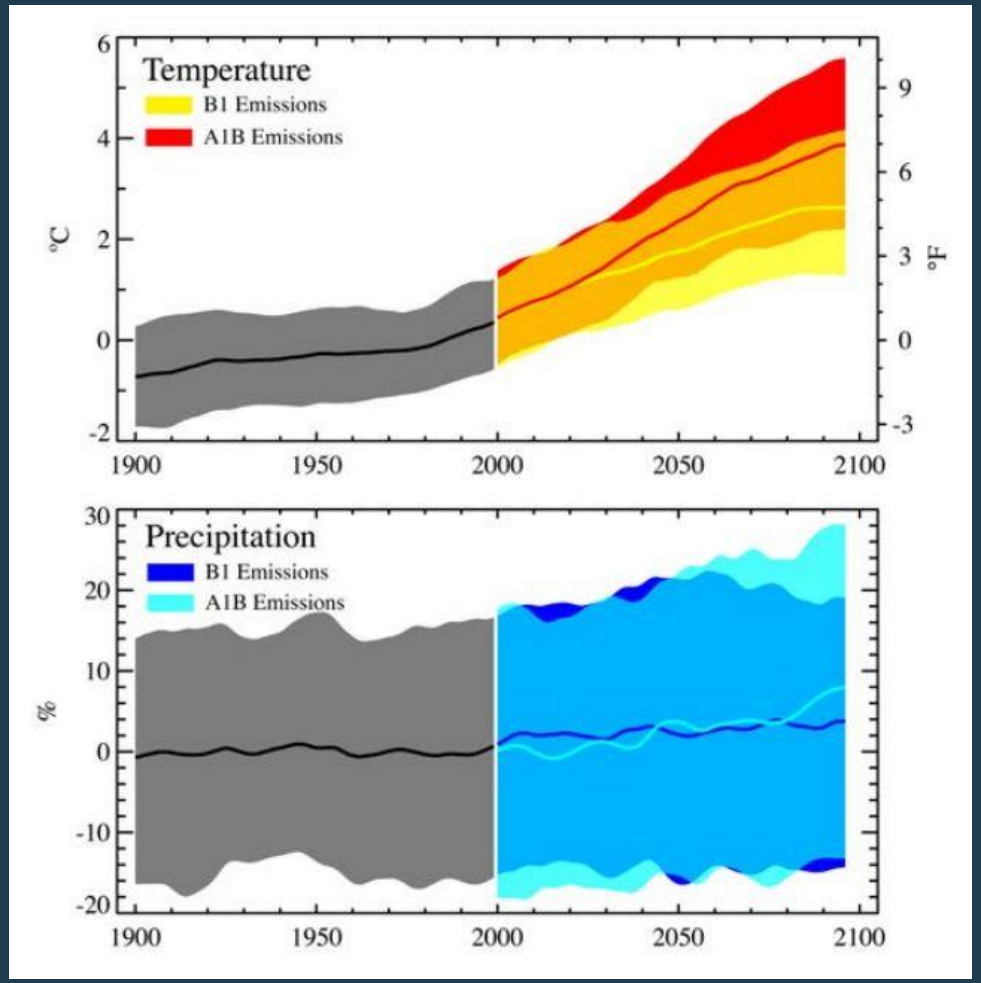
Increased temperatures

- Rising snowline, more precipitation as rain

Little to no change in annual precipitation

- Less summer rain, more fall/winter/spring rain

Recharge in Kitsap County??

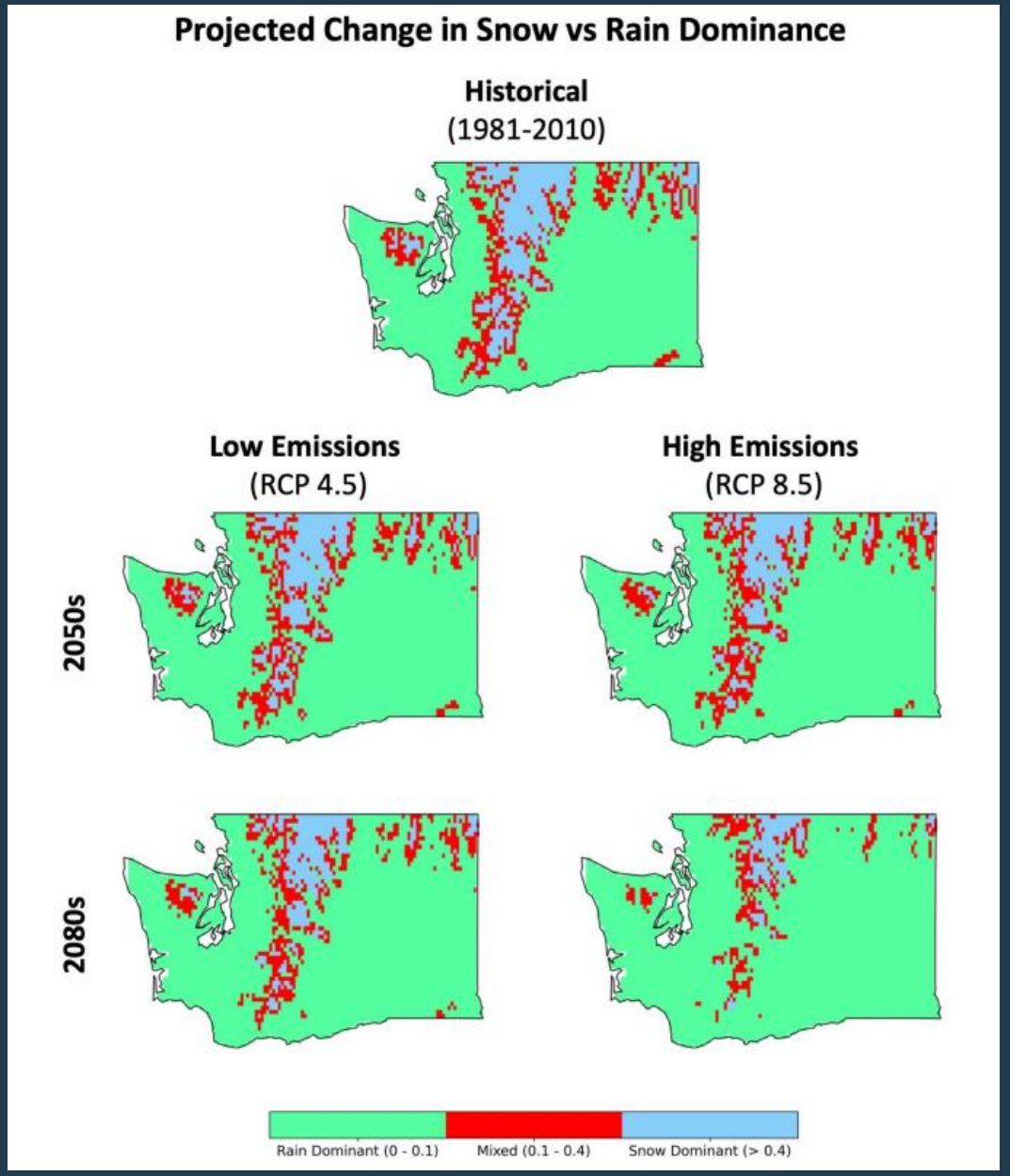


Littell et al. (2009)

Water Resource Impacts

Increase in rain-dominated basins

- No change to Kitsap County



Yoder & Raymond (2022)

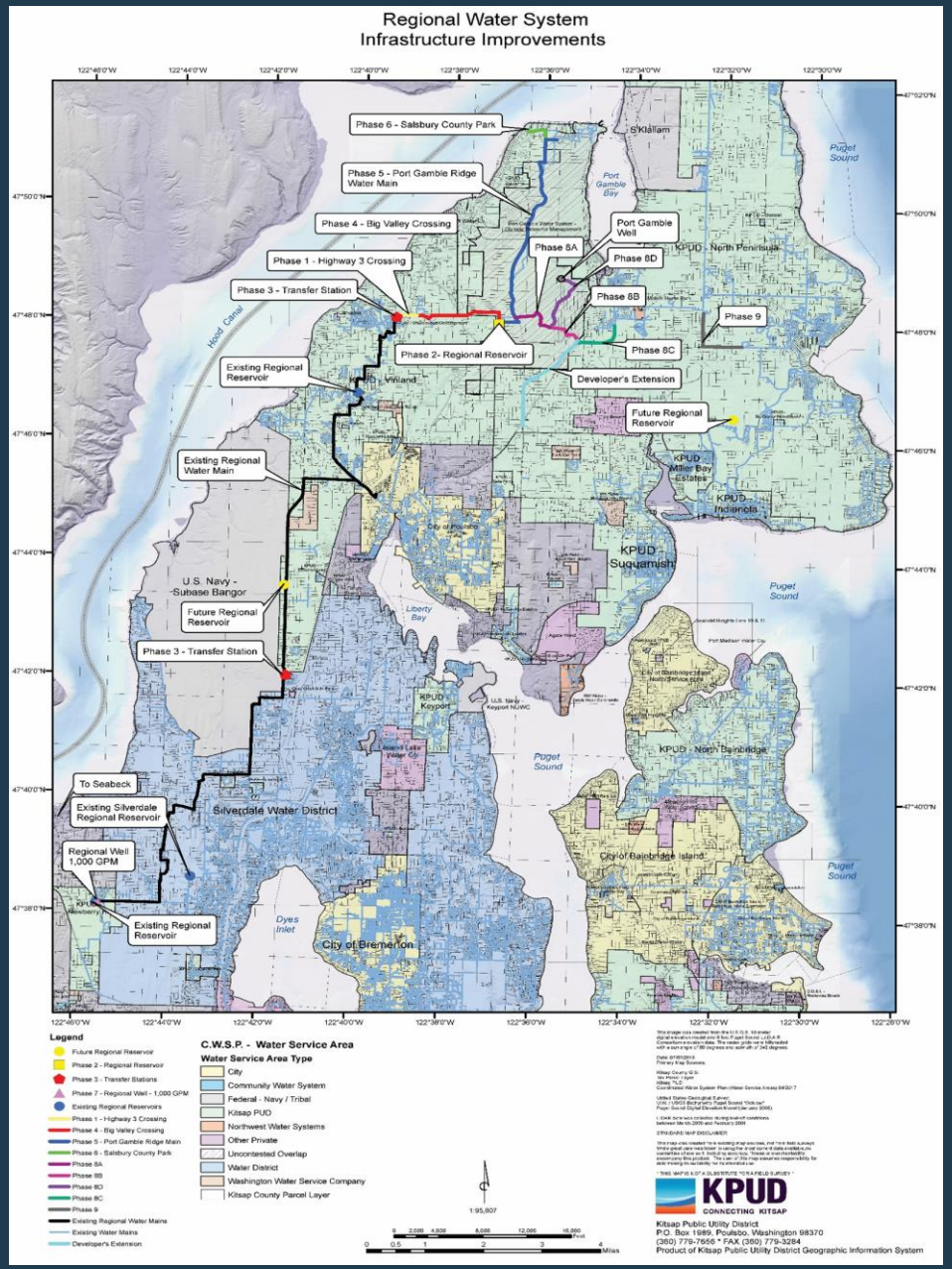
Water Resource Impacts

Changes in summer streamflow

- Decreased flow in snow-dominated basins (less snowpack and early melt)
- Little to no change in Kitsap County

Change in low-flow in 2080s compared to 1980-2009

Yoder & Raymond (2022)


Regional Water System
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Phase 5 - Port Gamble Ridge Water Main
Phase 4 - Big Valley Crossing
Phase 1 - Highway 3 Crossing
Phase 3 - Transfer Station
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KPUD Miller Bay Estates
KPUD Indianola
KPUD Suquamish
KPUD Keyport
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City of Bainbridge Island
Silverdale Water District
City of Bremerton
S'Klallam
KPUD - North Peninsula
Hood Canal
Puget Sound
Port Gamble Bay
Liberty Bay
Dyes Inlet
Legend
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KPUD
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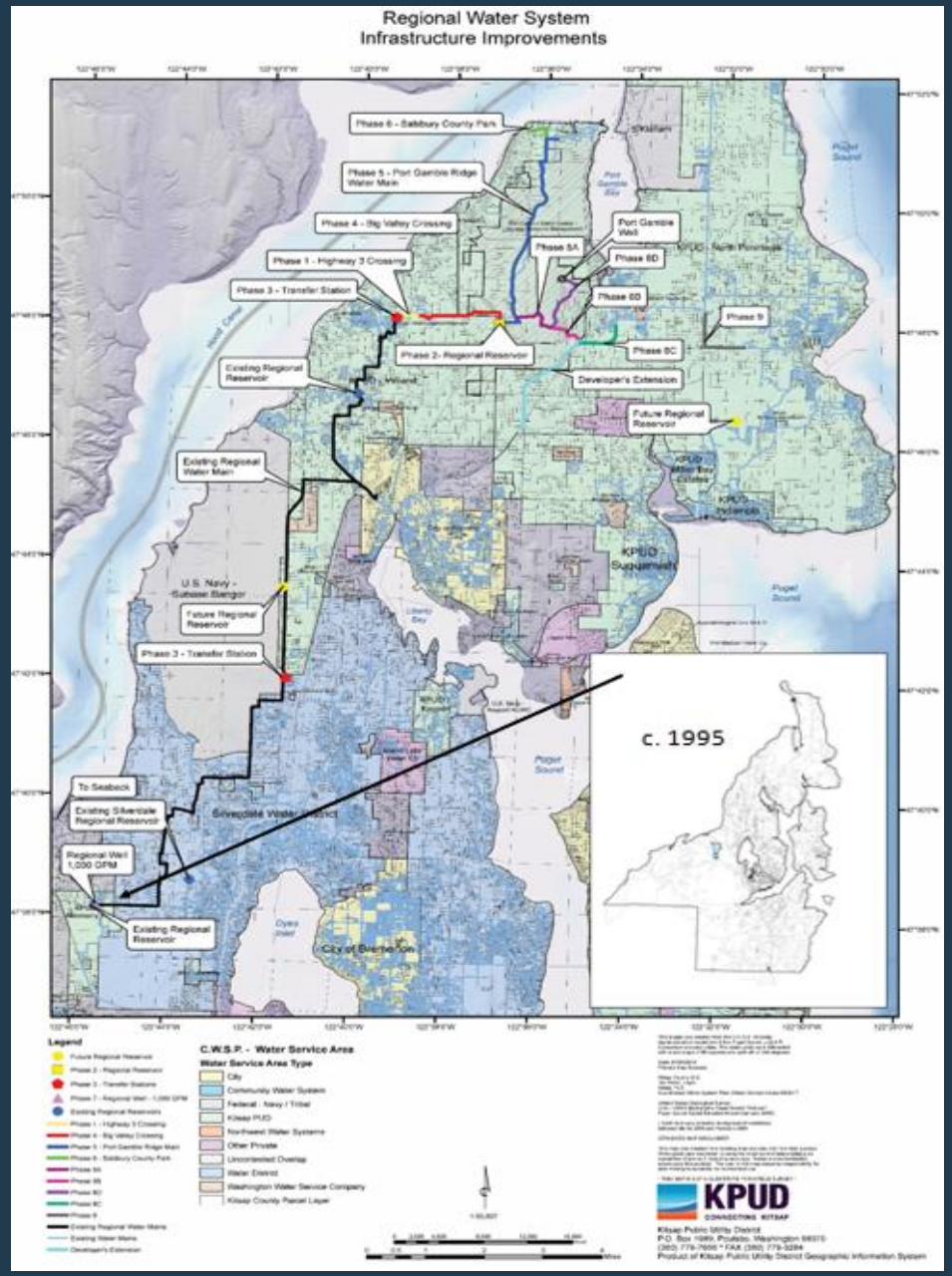
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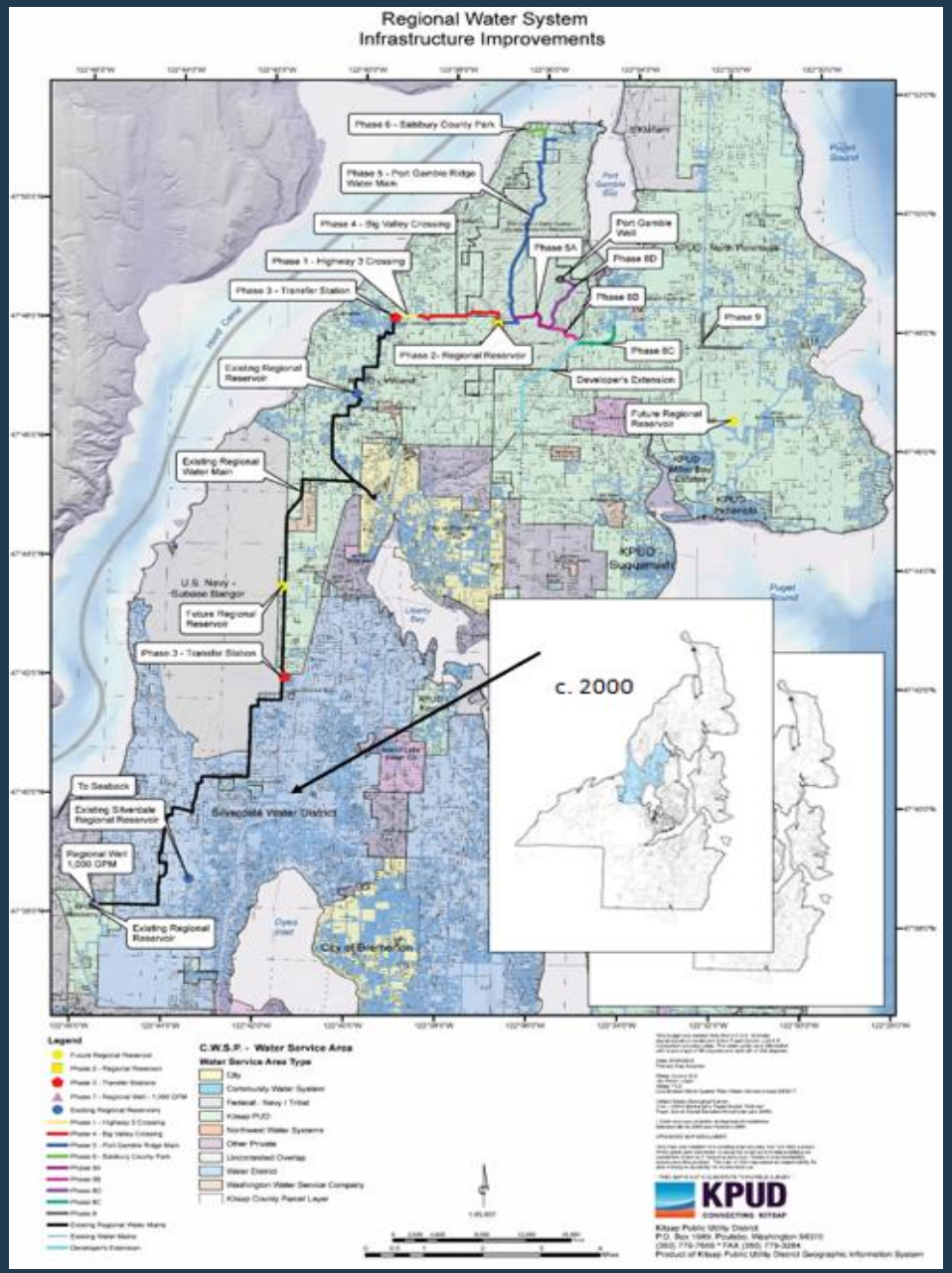
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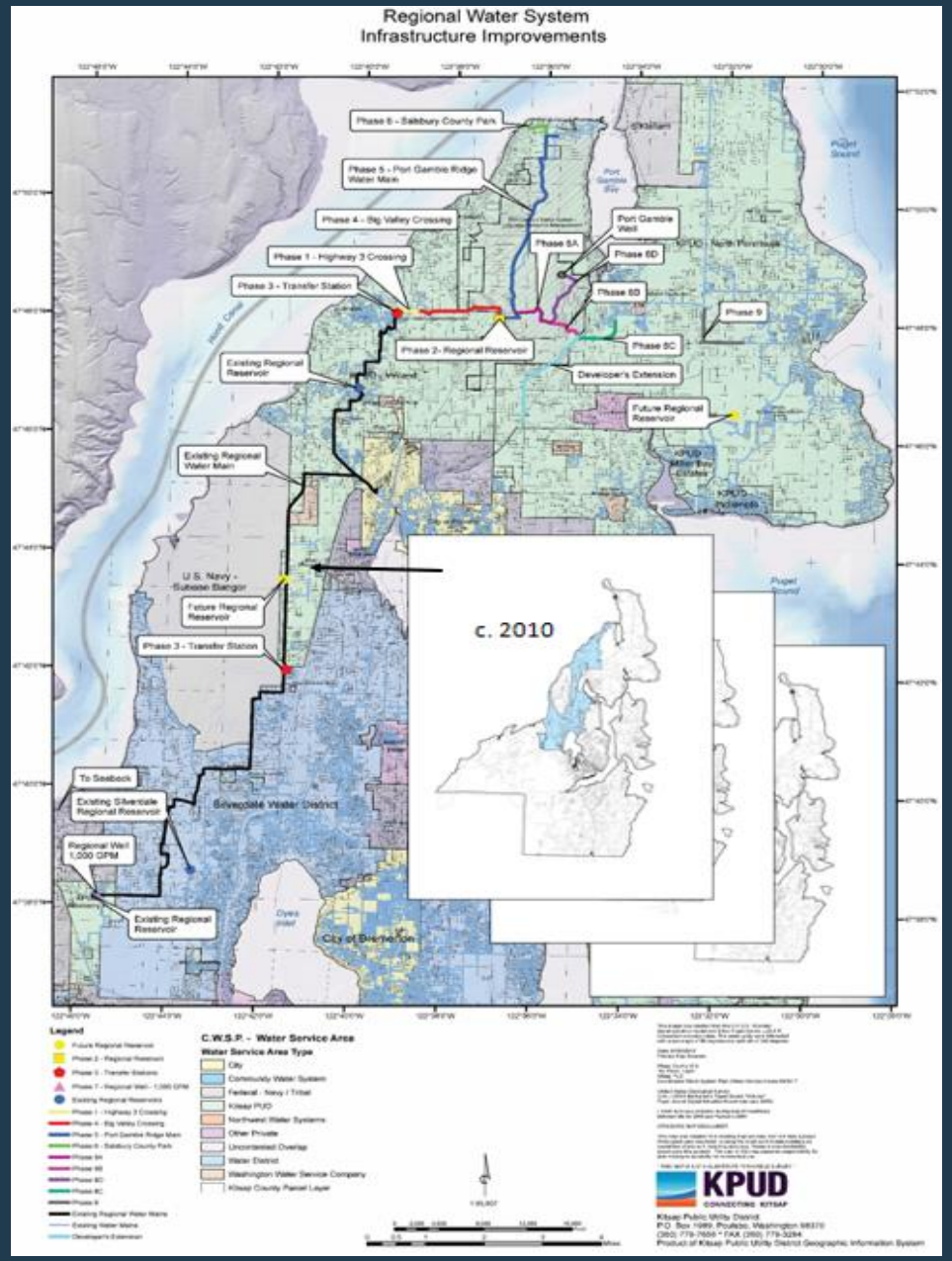
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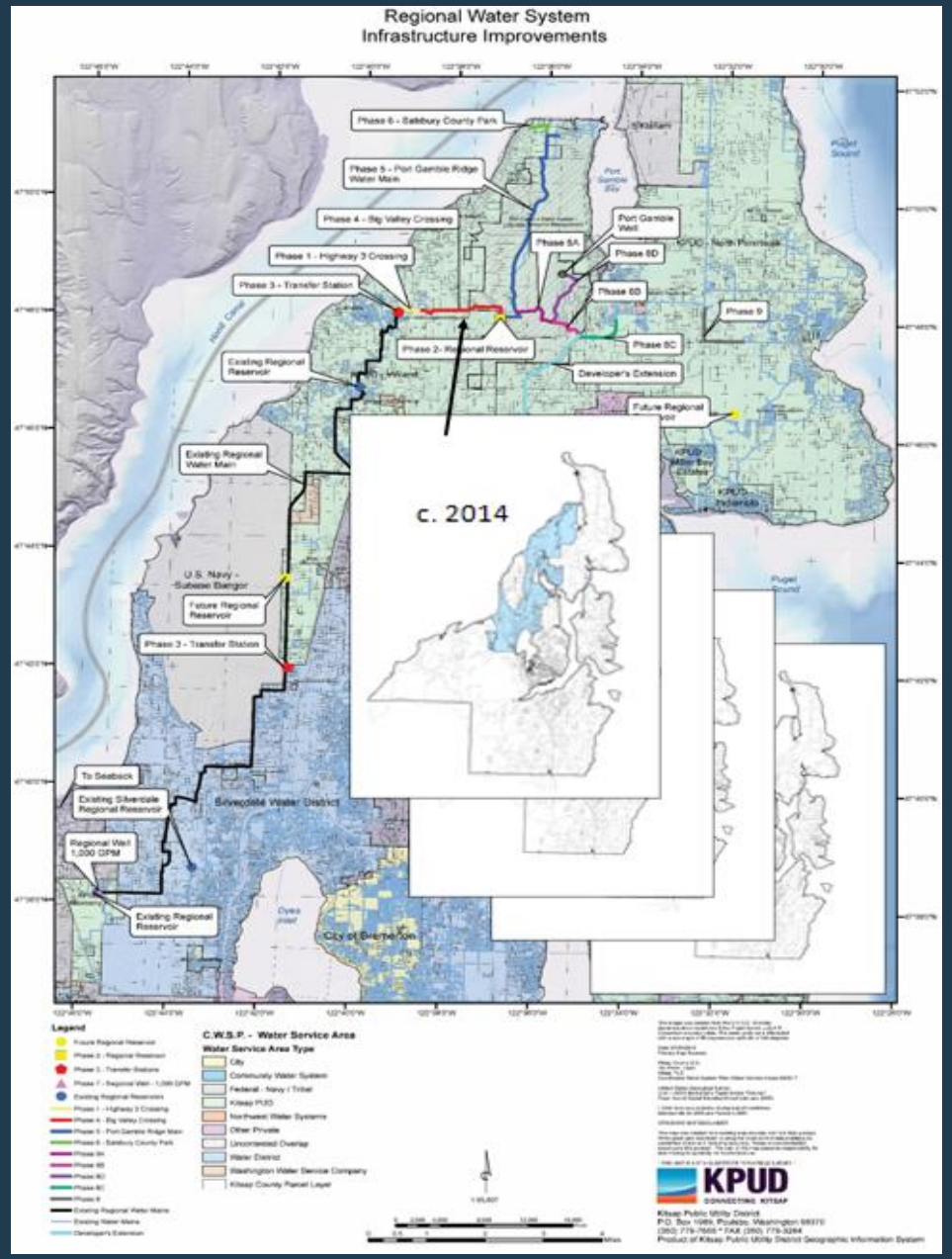
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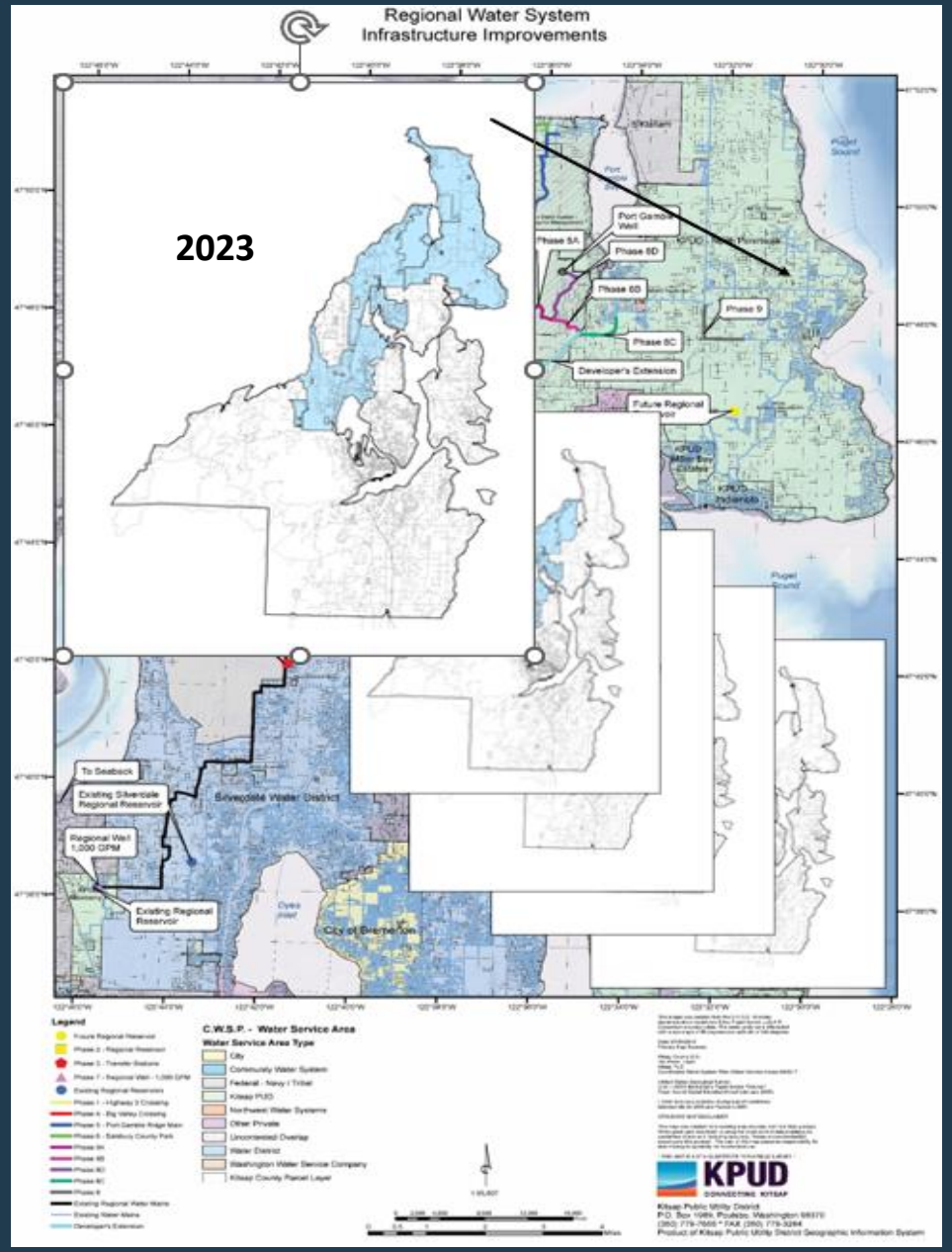
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North Peninsula Water System

North Peninsula Water System

- Serves Gamblewood, Hansville and Kingston communities

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North Peninsula Water System

- Serves Gamblewood, Hansville and Kingston communities
- Can also provide water to the Indianola water system

North Peninsula Water System

- Serves Gamblewood, Hansville, and Kingston communities
- Can also provide water to the Indianola water system
- 8 existing groundwater wells can produce ~2,500 GPM, serving ~5,700 ERUs

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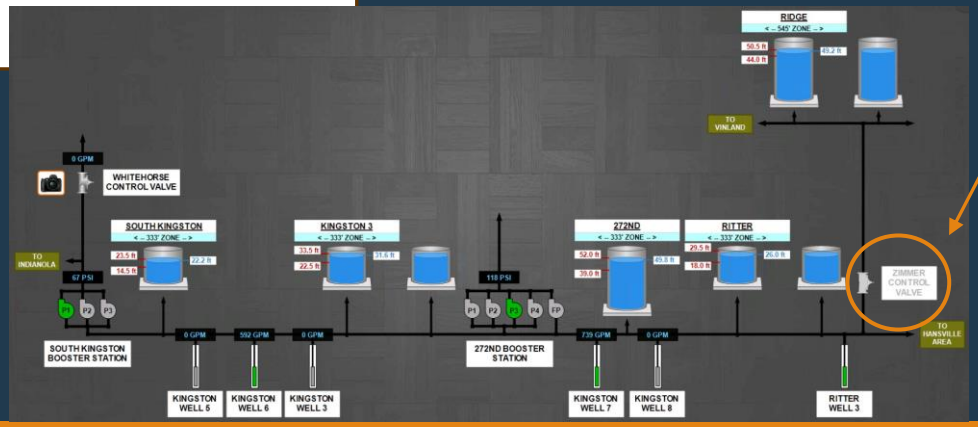

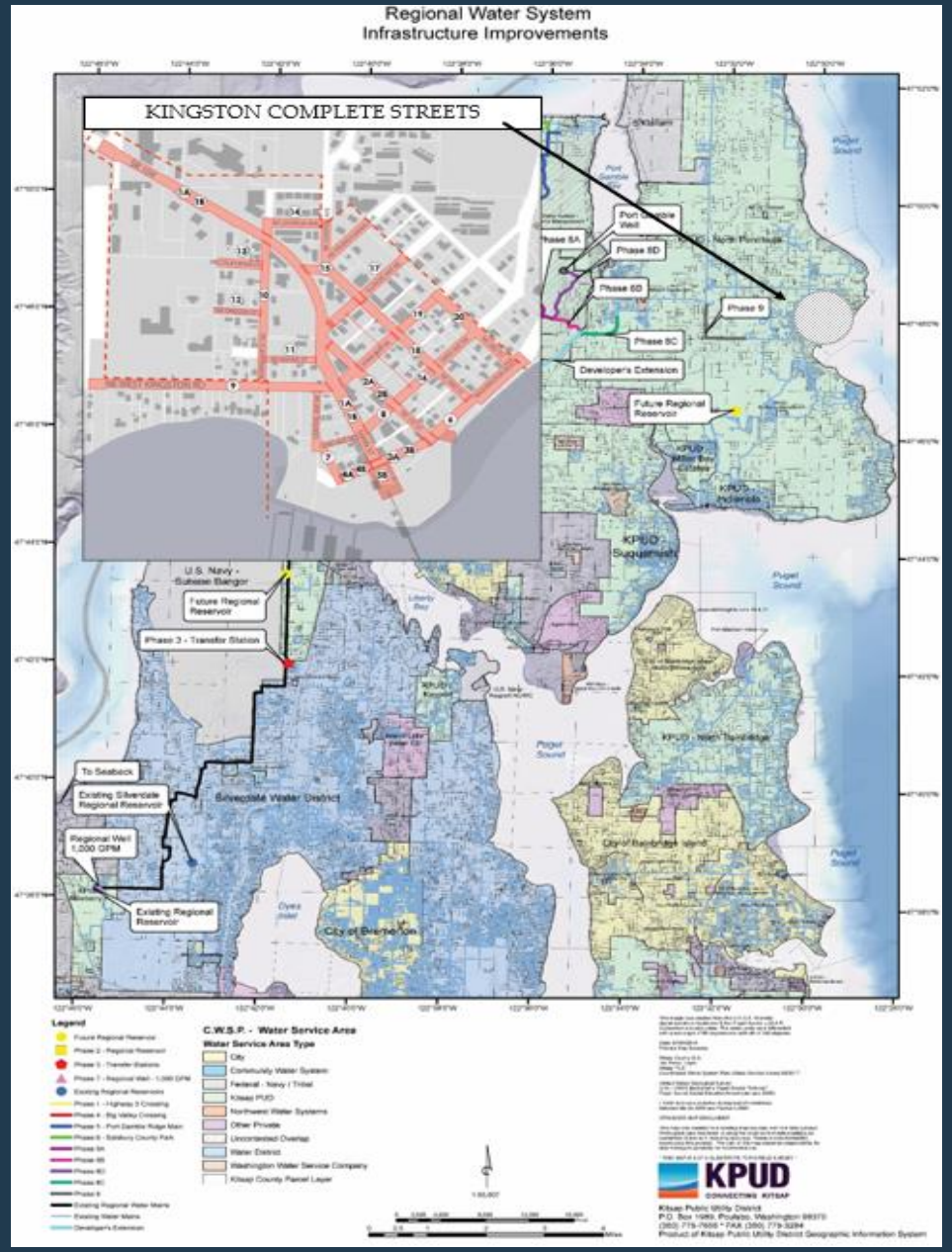
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KINGSTON COMPLETE STREETS
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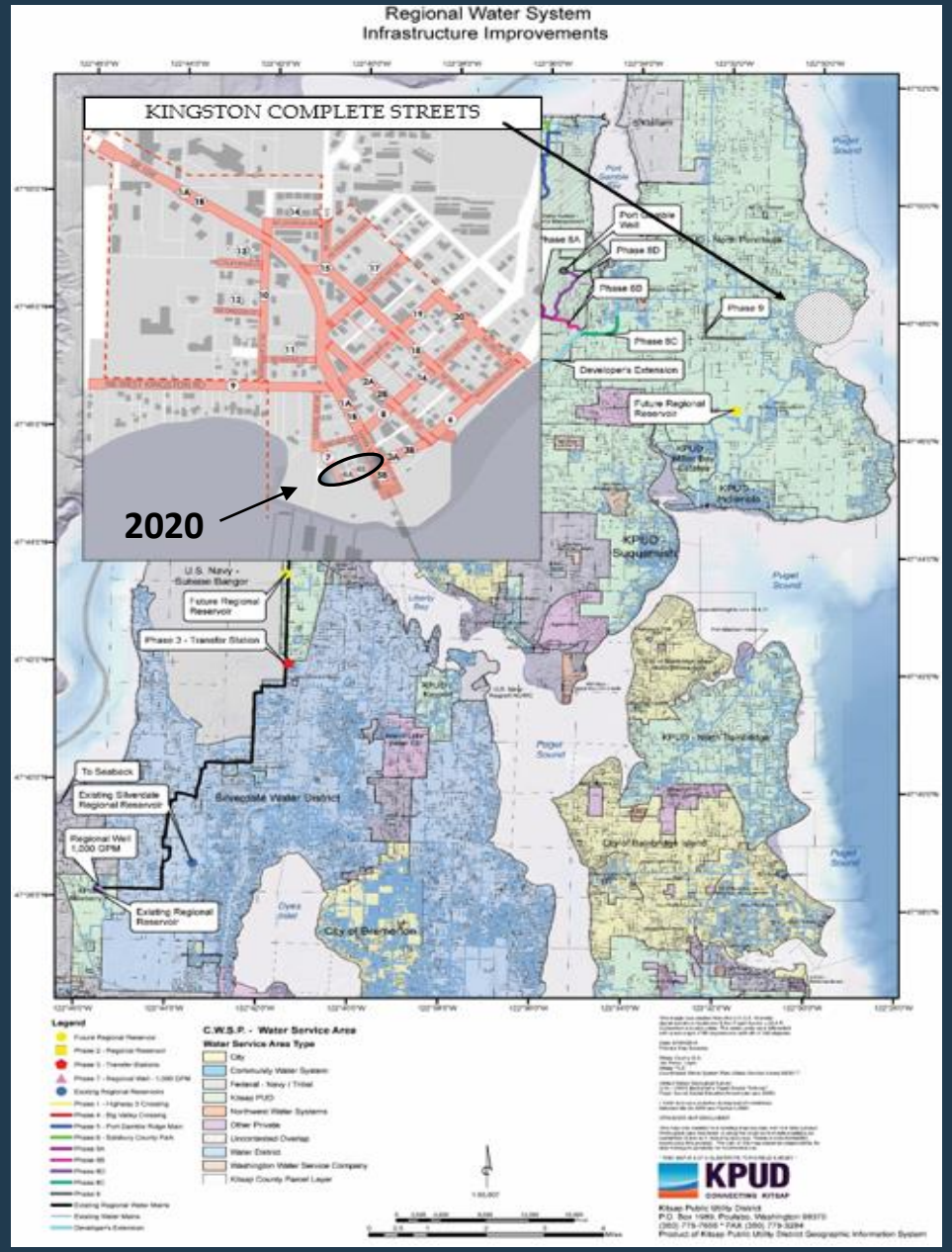
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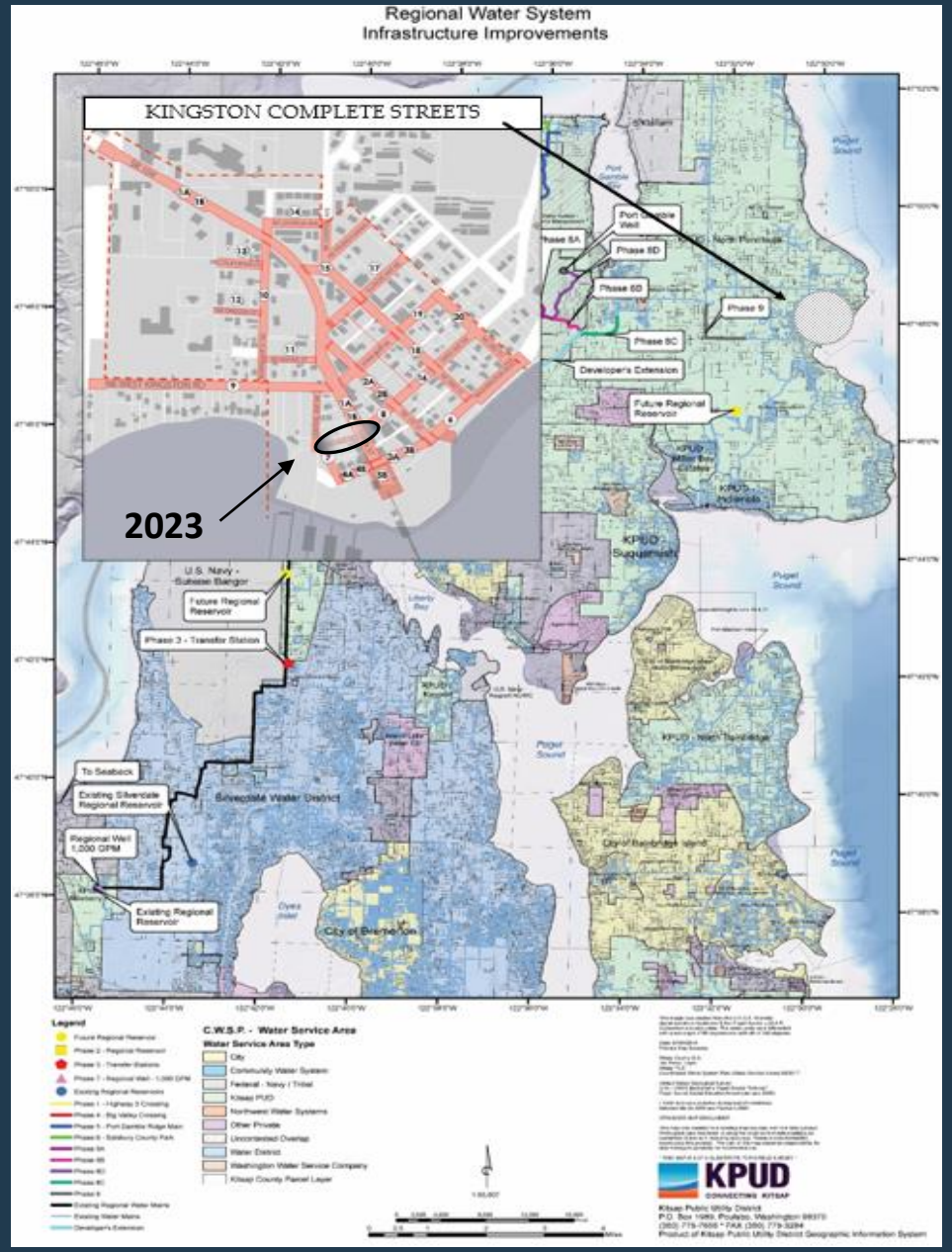
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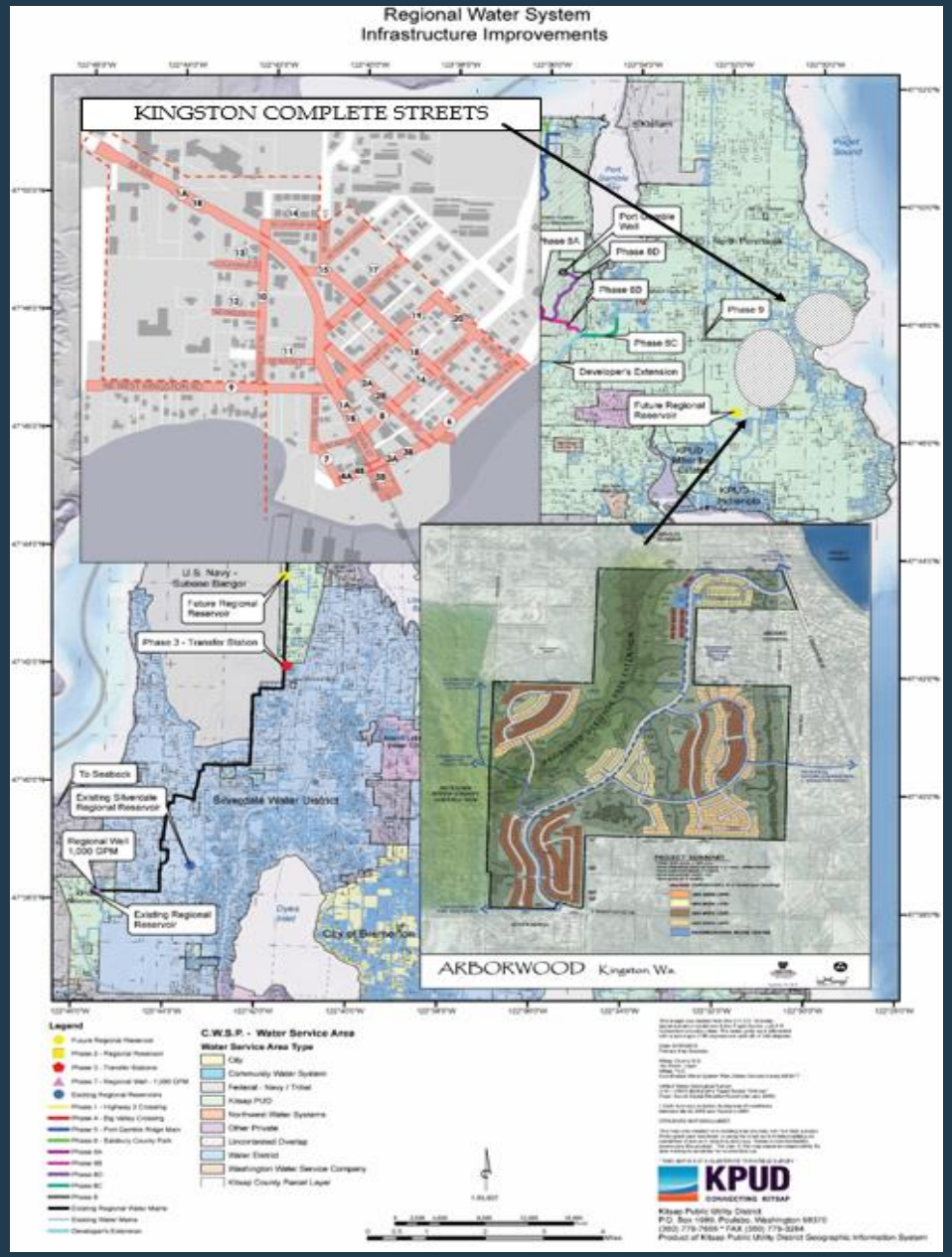
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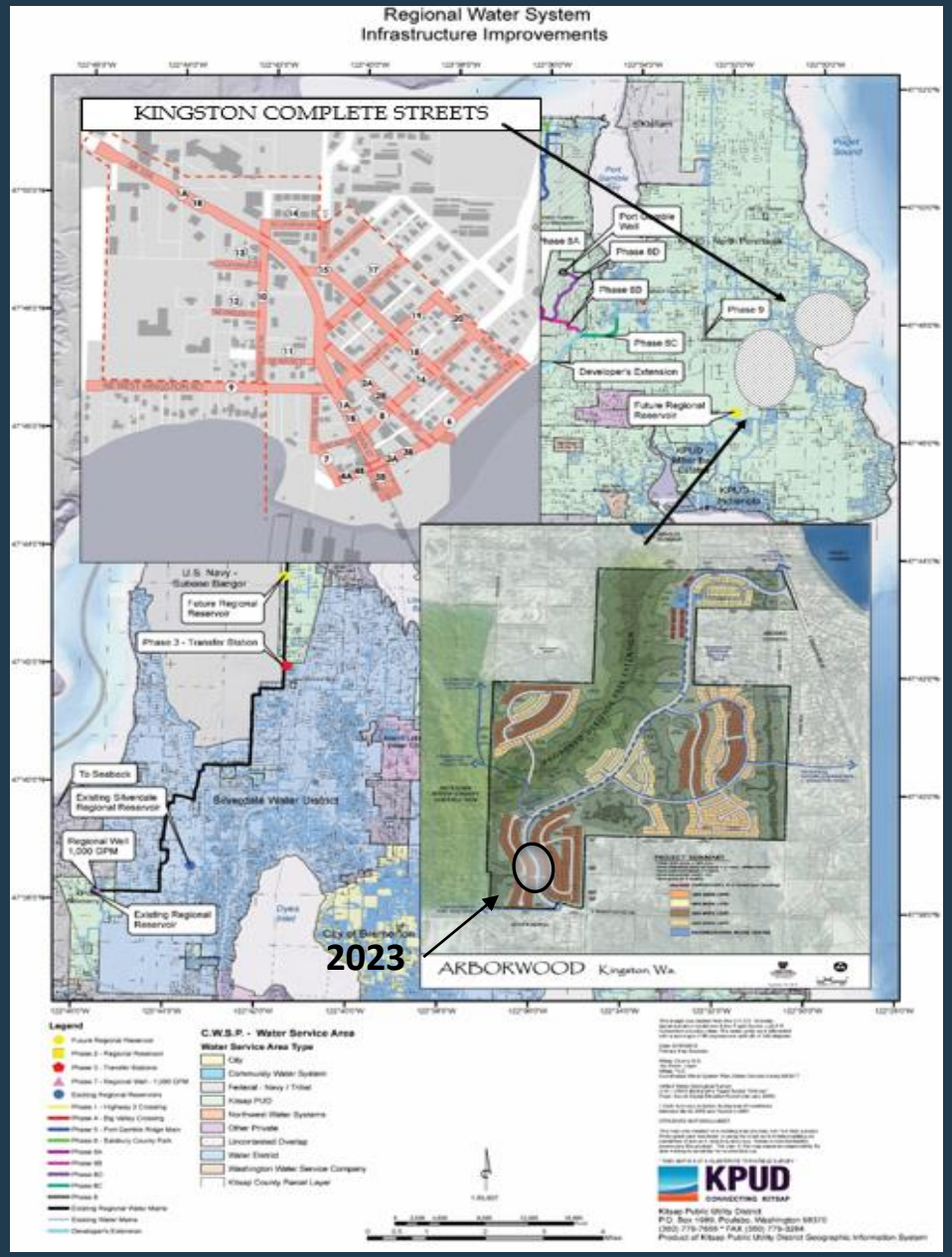
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2023
ARBORWOOD Kingston, Wa.
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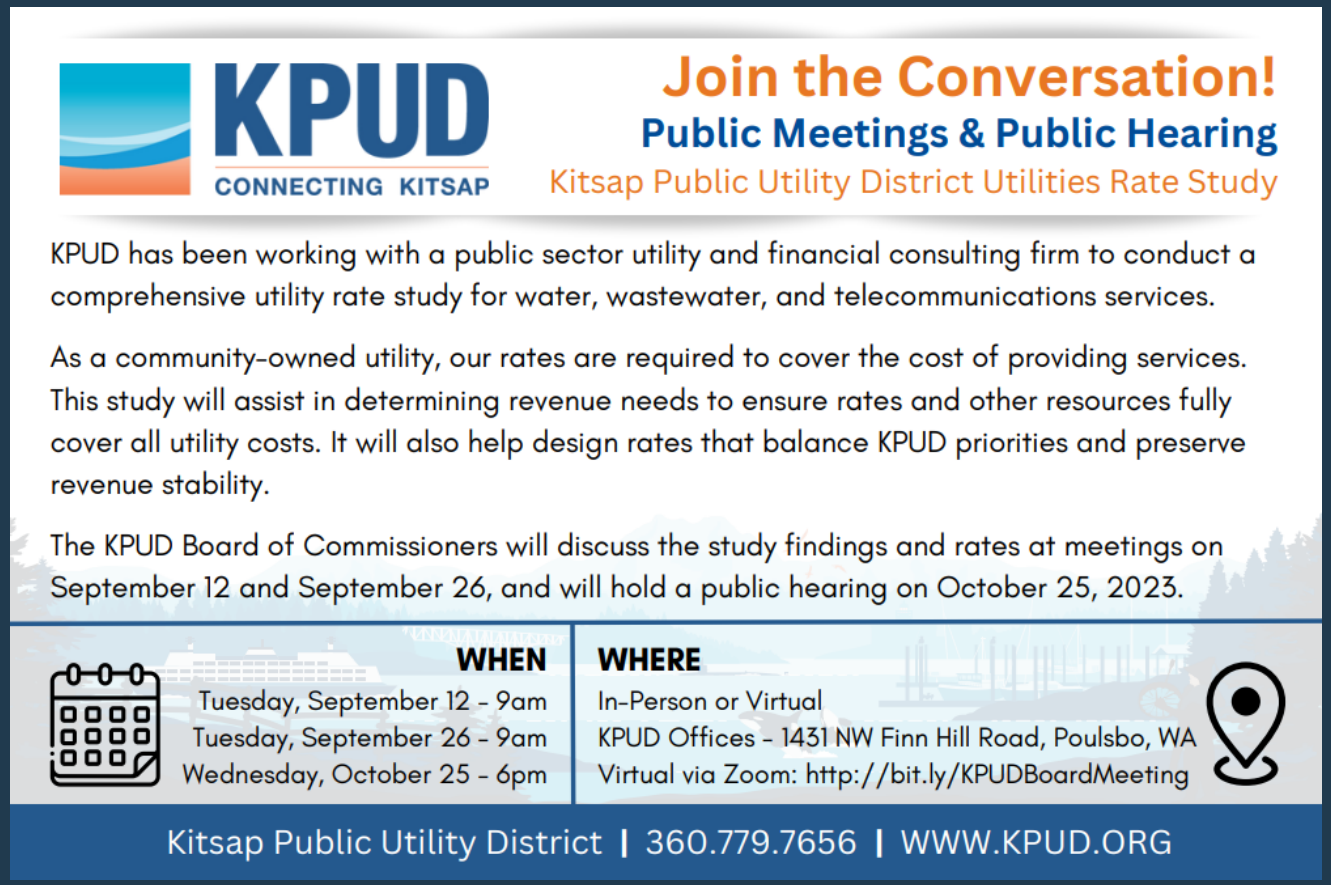
Utilities Rate Study



KPUD Telecom - Fiber Internet

History

Residential Fiber Expansion

KPUD Fiber Internet

How to get KPUD Fiber Internet

Kingston Area Projects

KPUD's Telecom Milestones

2000s

- ✓ KPUD connects key community institutions.
- ✓ Establishes an open-access network, allows ISPs to provide monthly internet service on the network - creates competition.

2015

- ✓ KPUD surveys the community, realizes need for reliable internet service and starts to expand to residential customers.

2016 - present

- ✓ KPUD focuses on connecting unserved/underserved communities throughout Kitsap.

School Districts

Libraries

Public Safety Agencies

Kitsap County Govt.

Naval Bases

KPUD CONNECTING KITSAP

KPUD Residential Fiber Expansion

KPUD allowed retail authority.

HB1336 passes with the support of Senator Rolfes.

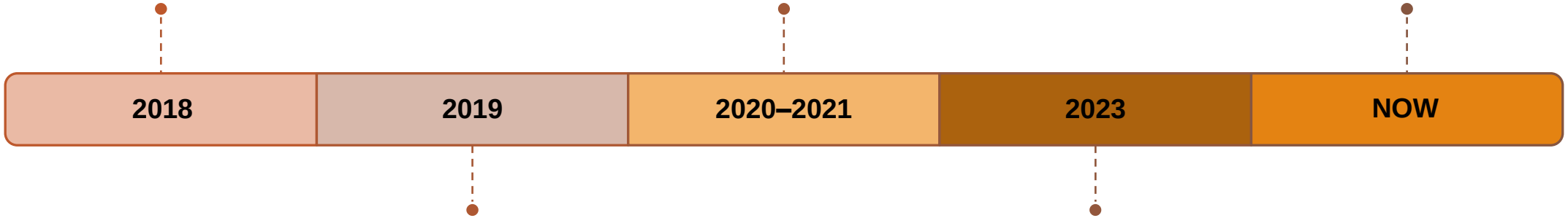
Covid-19 pandemic

Escalates need for reliable internet.

45+ miles of fiber built to serve 1,100+ residential customers.

Demand for fiber internet grows

500+ miles of fiber/1,800 residential customers.



Fiber Expansion

25+ miles of middle-mile fiber built to serve 500+ residential customers.

$6.6 Million ARPA grant

Build up to 21 nodes to serve every unserved location in Kitsap County.

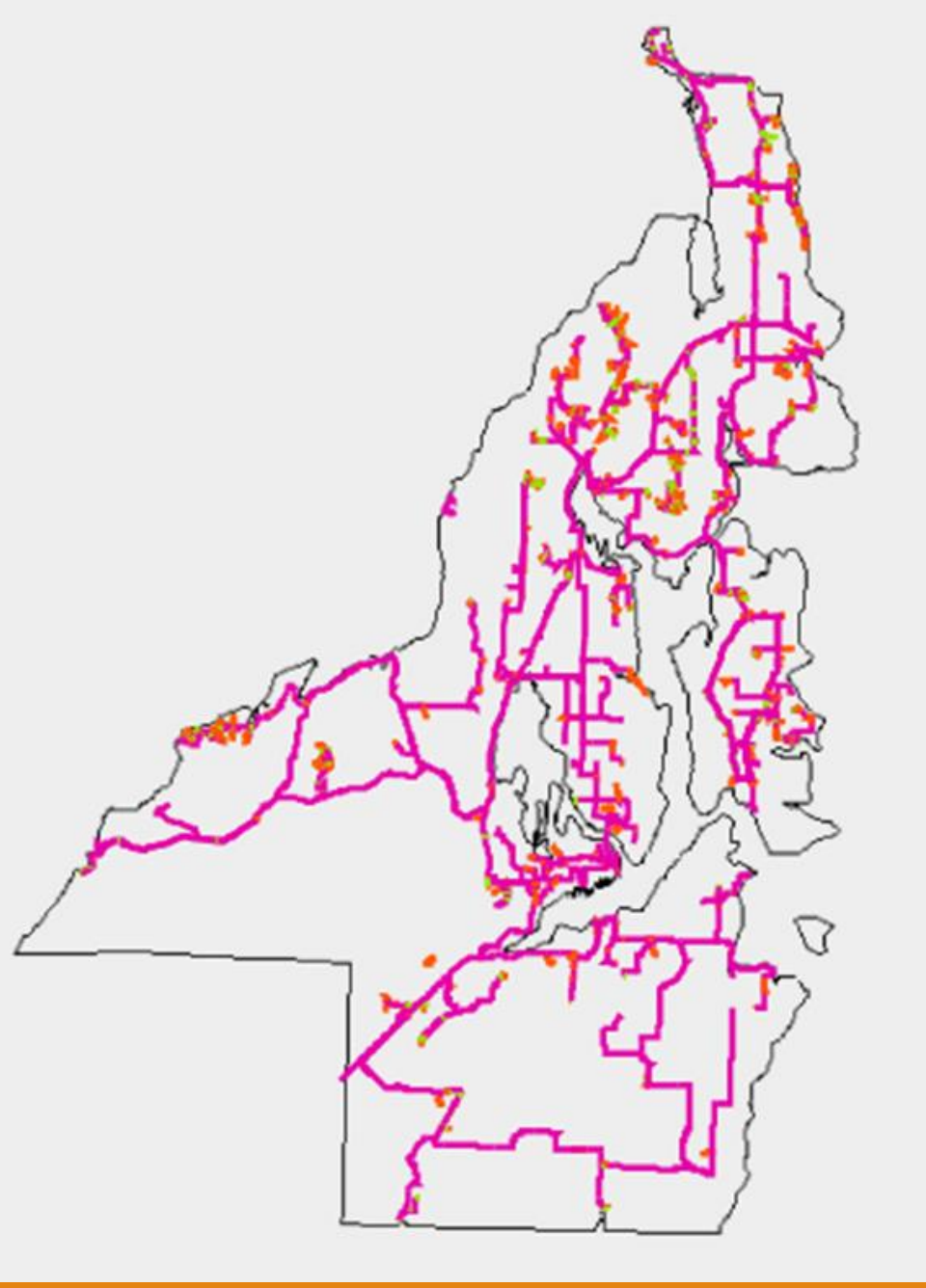
KPUD Fiber Internet

- Speeds up to 1 Gbps for Residential Customers
- Speeds up to 1 Gbps for Residential Customers
- Symmetrical Speeds *(upload speed = download speed)*
- Dedicated Fiber Connection
- Future Proof Network
- 6 Residential ISPs to Choose from for Services

ISP Monthly Residential Service Fees:

100 Mbps ▶ $55-$70

1 Gbps ▶ $70-$99



KPUD
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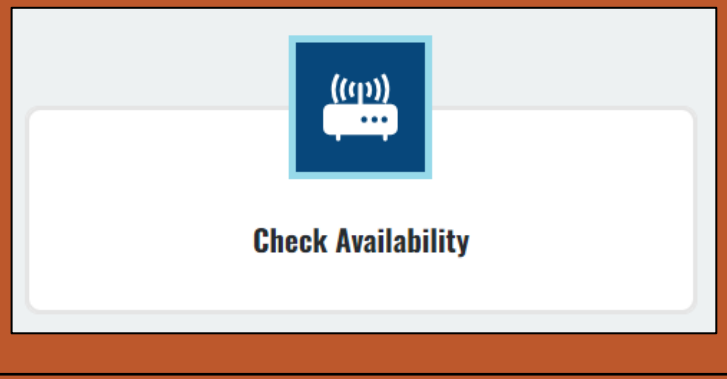
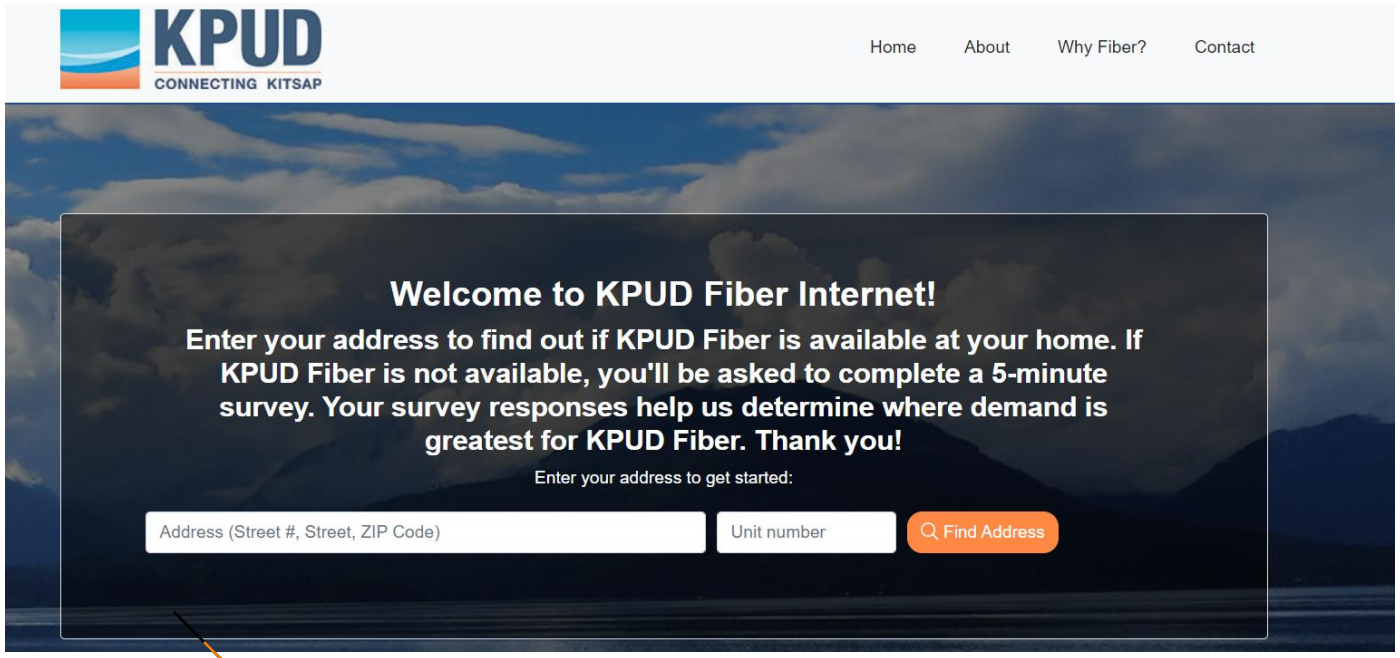
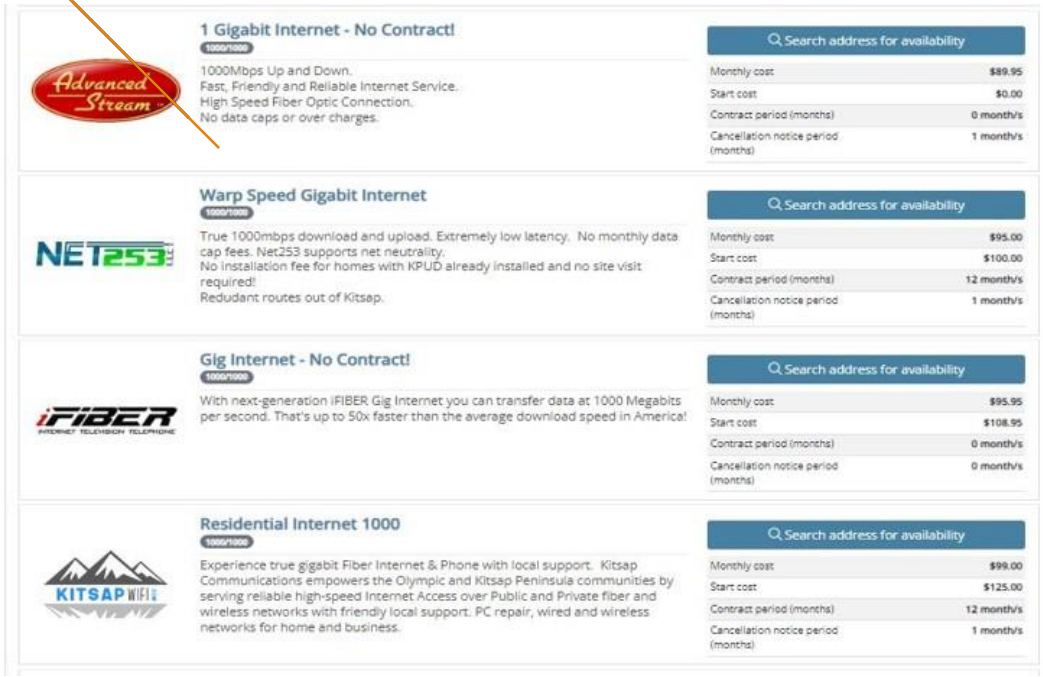
KPUD Fiber to the Home

www.kpud.org



- If available, select ISP
- If not available, complete our community survey.
- Request an estimate





KPUD Fiber to Your Community

- **Generate Interest Among Neighbors**
  - ✓ KPUD captures community interest from surveys and estimate requests.
  - ✓ Neighborhood champion program.
  - ✓ Neighbors share construction cost.

- **Form a Local Utility District**
  - ✓ Financing mechanism for neighbors to share cost of improved utilities.
  - ✓ Defined boundary – formal process, signed petitions, KPUD Board approval.
  - ✓ Allows homeowner to finance over a 20-year period.
  - ✓ KPUD hosts community meetings.

Kingston Area Projects

Nature Way & Frogsong Place

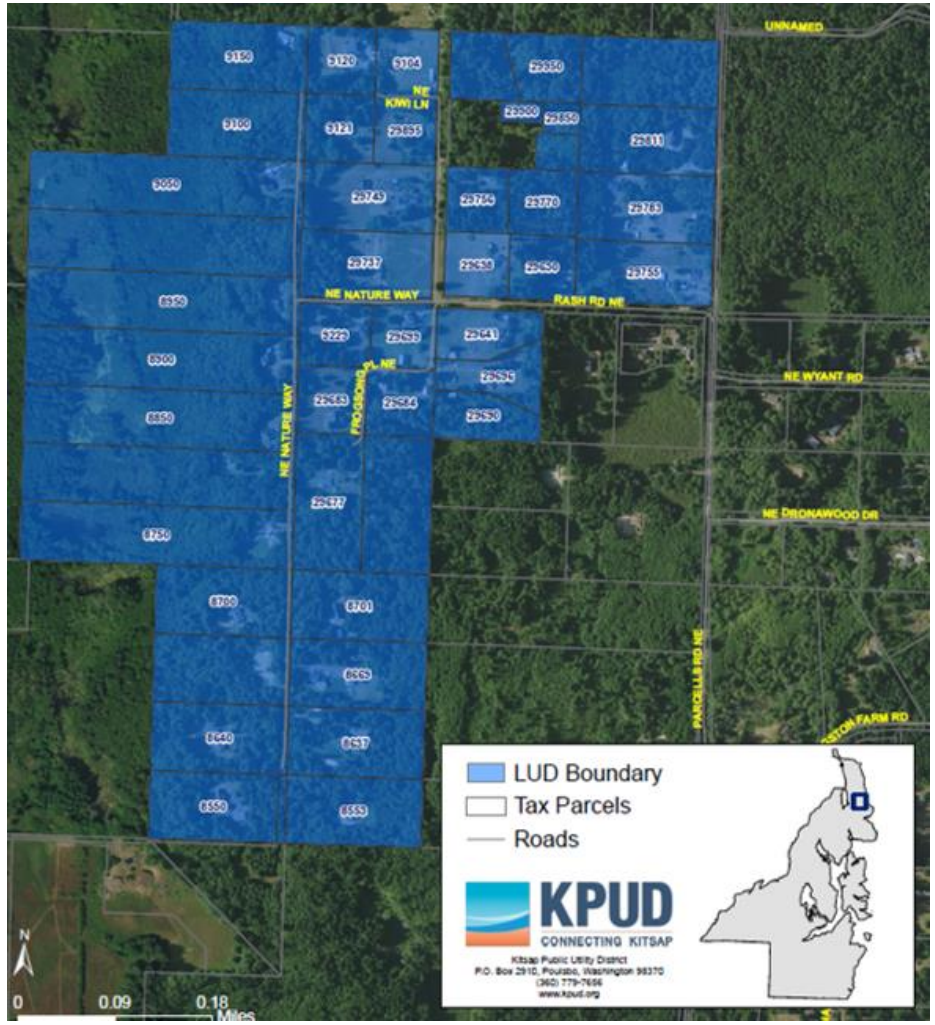
- Potential of ~45 customers
- Financing via Local Utility District (LUD) with 20-year term
- 80% grant funded through the CERB
- Community meeting held September 2023

Washington State Department of Commerce

Community Economic Revitalization Board (CERB)

The Community Economic Revitalization Board (CERB) was formed in 1982 to respond to local economic development in Washington communities. CERB provides funding to local governments and federally-recognized tribes for public infrastructure which supports private business growth and expansion. Eligible projects include domestic and industrial water, storm water, wastewater, public buildings, telecommunications, and port facilities.

KPUD CONNECTING KITSAP



Kingston Area Projects

Kingston Farms

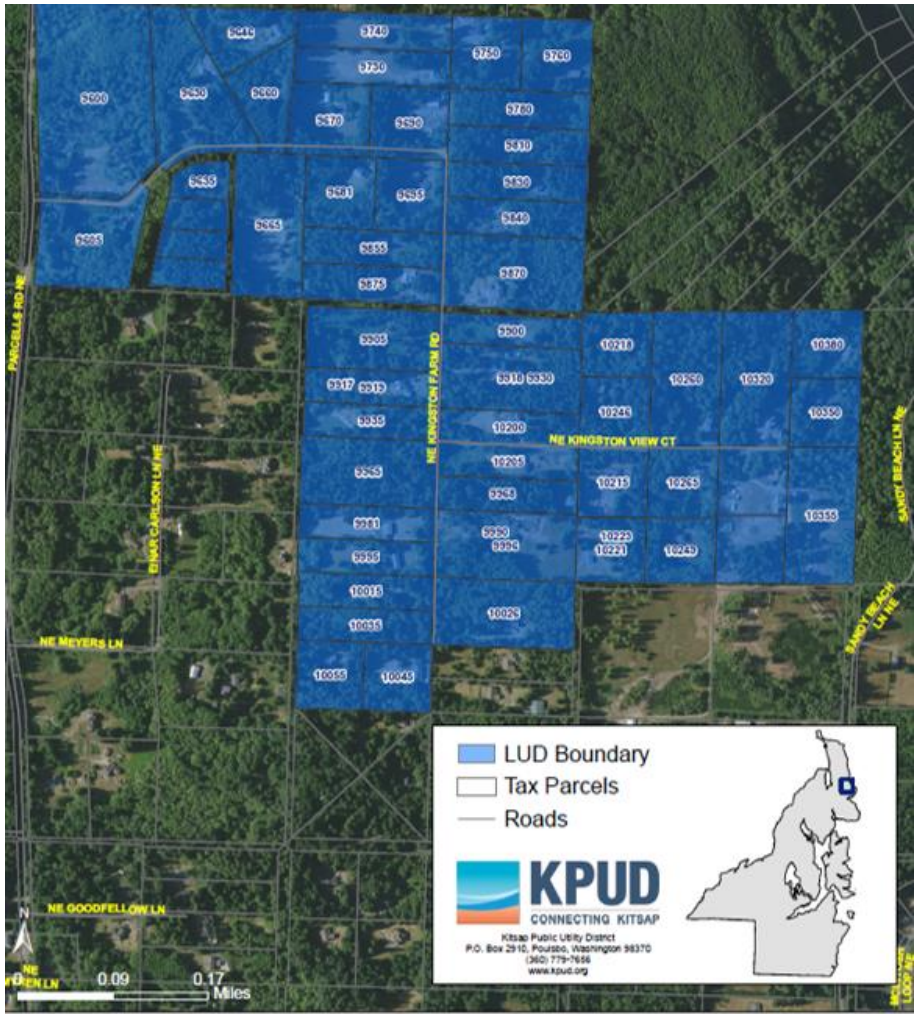
- Potential of ~55 customers
- Financing via Local Utility District (LUD) with 20-year term
- 80% grant funded through CERB
- Community meeting held September 2023

Washington State Department of Commerce

Community Economic Revitalization Board (CERB)

The Community Economic Revitalization Board (CERB) was formed in 1982 to respond to local economic development in Washington communities. CERB provides funding to local governments and federally-recognized tribes for public infrastructure which supports private business growth and expansion. Eligible projects include domestic and industrial water, storm water, wastewater, public buildings, telecommunications, and port facilities.

KPUD CONNECTING KITSAP



Kingston Area Projects

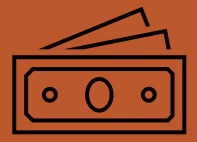
Arborwood

- New distribution node with the ability to serve all phases.
- KPUD conduit installed in Phase 1 only.
- No commitment from the developer; currently, no fiber installed

Affordability Connectivity Program

The Affordable Connectivity Program (ACP) is a federally funded program that assists low-income households to pay for internet service and connected devices like a laptop or tablet.

If your household is eligible, you could receive:



Up to a $30/month discount on internet service ($75/month if your household is on qualifying tribal lands)

A one-time discount of up to $100 for a laptop, tablet, or desktop computer.

Washington State Enrollment*

- 28% eligible participants enrolled in Washington
- National average – 38%
- Participants include iFiber, Astound, CenturyLink, Comcast

*Data Source – Education SuperHighway

Questions?

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