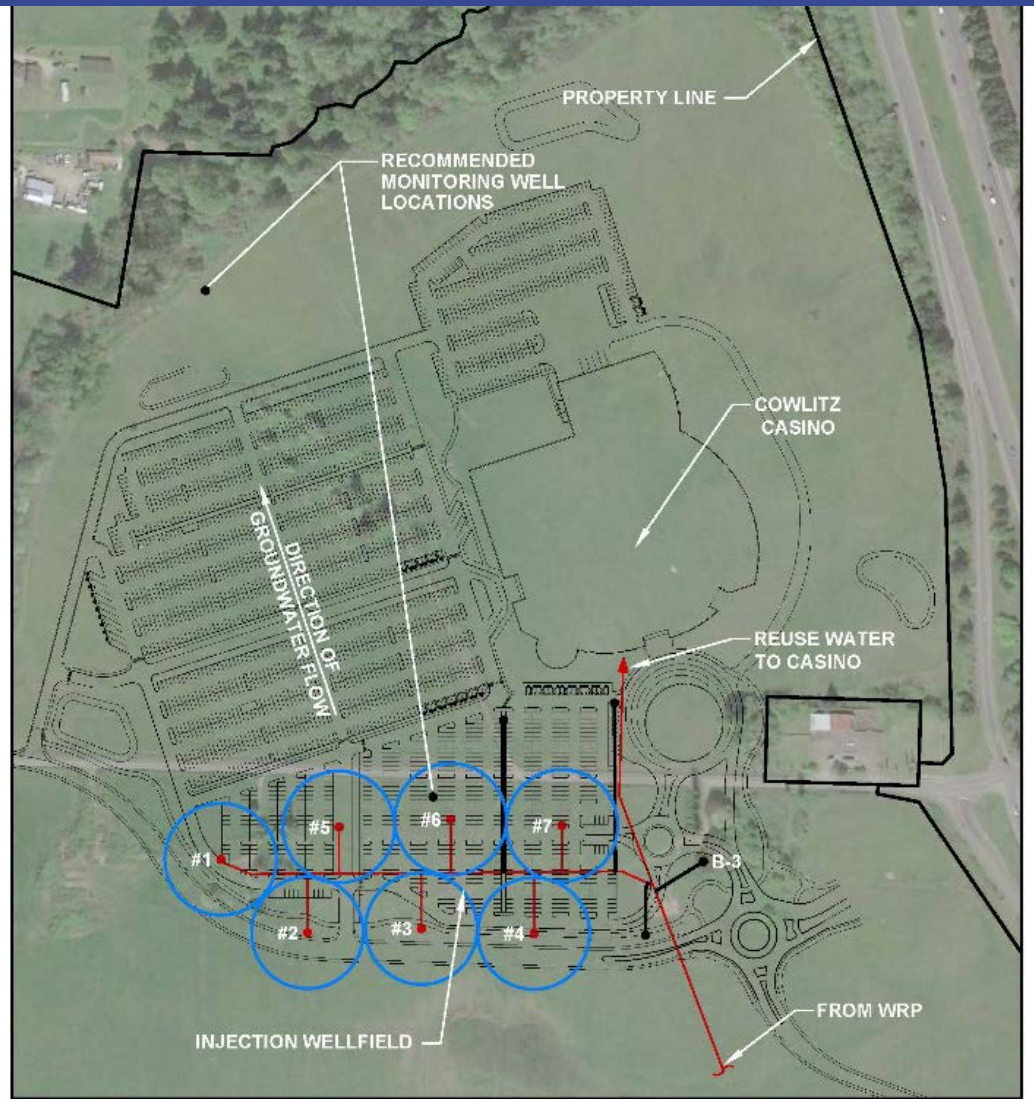
THE COWLITZ PROJECT

Water Reclamation Plant

COWLITZ WATER RECLAMATION PLANT

Uses advanced water reclamation technology

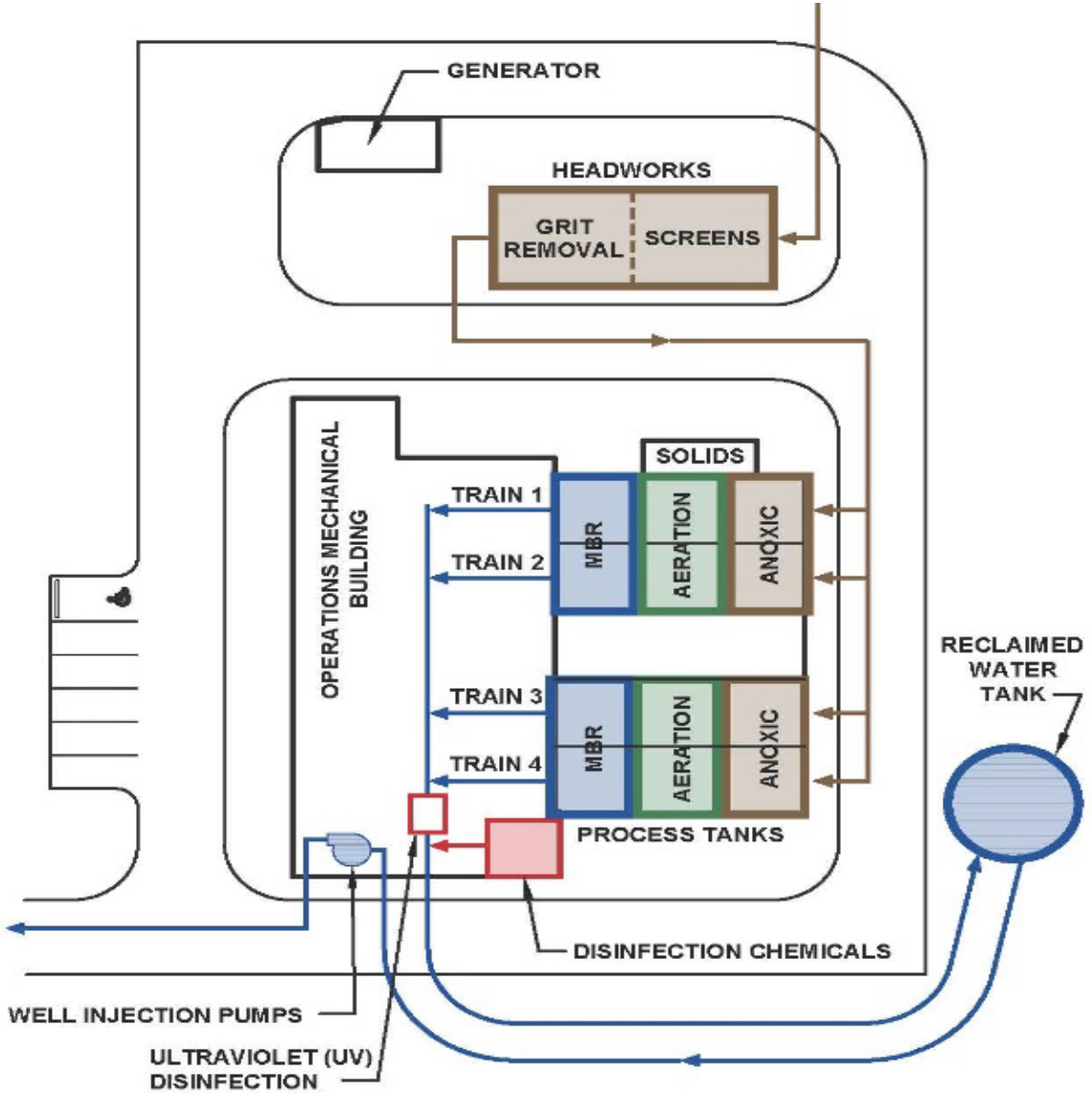
- Protects groundwater and the environment adjacent to the facility
- Designed by leading wastewater engineering firm Parametrix
- Advanced groundwater protection treatment using biological and membrane filtration process followed by a combination of UV and chemical disinfection



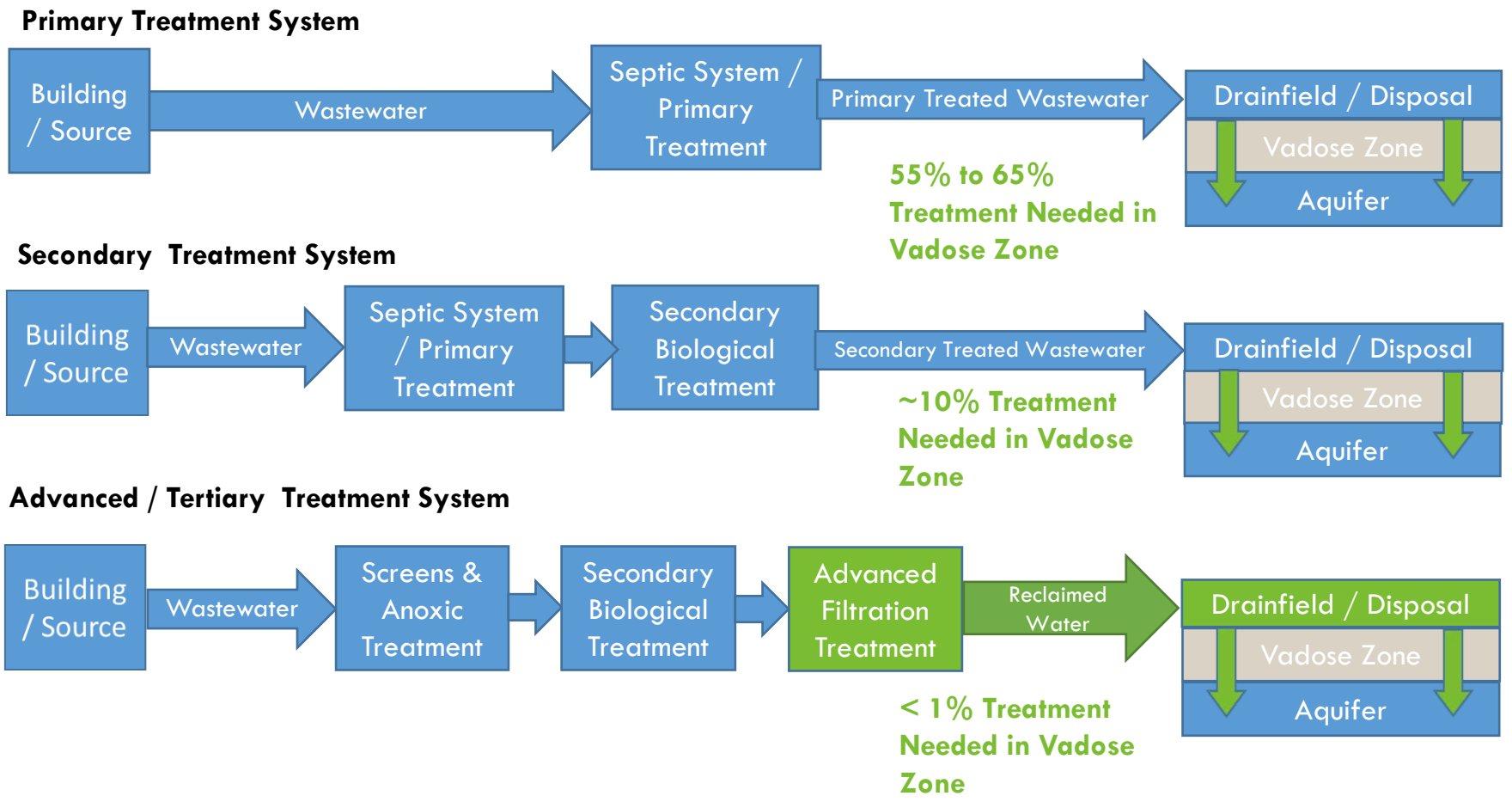
STATE-OF-THE-ART FACILITY

$15 million investment

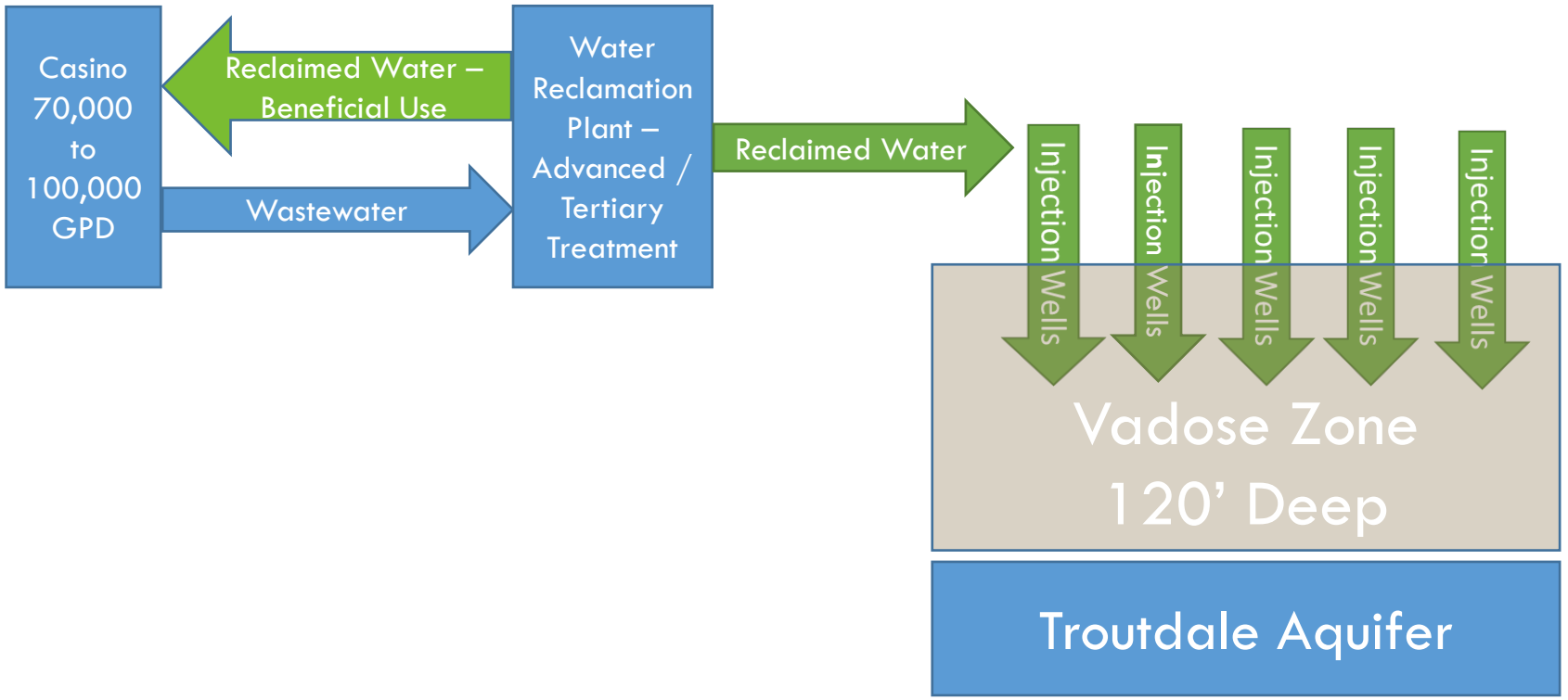
- Initial flow processes 70,000-100,000 gallons of water per day
- Onsite licensed staff-operated, monitored 24 hours a day/7 days.
- Biological waste treatment, 99% better than most conventional onsite septic systems
- Biological treatment is equivalent to one-single family home per 75 acres of land
- The Cowlitz Project System will be among 280 other WRP's in operation today in the U.S. using flat plate membrane technology



BENEFITS: INVESTING IN AN ADVANCED SYSTEM



HOW IT WORKS


Casino
70,000
to
100,000
GPD
Reclaimed Water –
Beneficial Use
Wastewater
Water
Reclamation
Plant –
Advanced /
Tertiary
Treatment
Reclaimed Water
Injection Wells
Injection Wells
Injection Wells
Injection Wells
Injection Wells
Vadose Zone
120' Deep
Troutdale Aquifer

THE ADVANCED TREATMENT PROCESS

The **advanced treatment process** uses screening, nitrogen removal, biological waste removal, **MBR technology microfiltration technology**, and dual disinfection.

PLANT RAW SEWAGE SCREENS

Removes up to 75% of many pharmaceuticals and personal care products (PPCP) and endocrine disrupting chemicals (EDCs)

ANOXIC AND AERATION TANKS

Treatment system removes nitrates below drinking water standards of 10 mg/L

MEMBRANE FILTRATION IN CLEAN WATER

Reduces the biological waste concentrations (biochemical oxygen demand) **to 1-2% of the concentrations coming from a septic tank.**

THE OUTCOME

Process exceeds Environmental Protection Agency's Underground Injection Control (UIC) program requirements.

THANK YOU & QUESTIONS