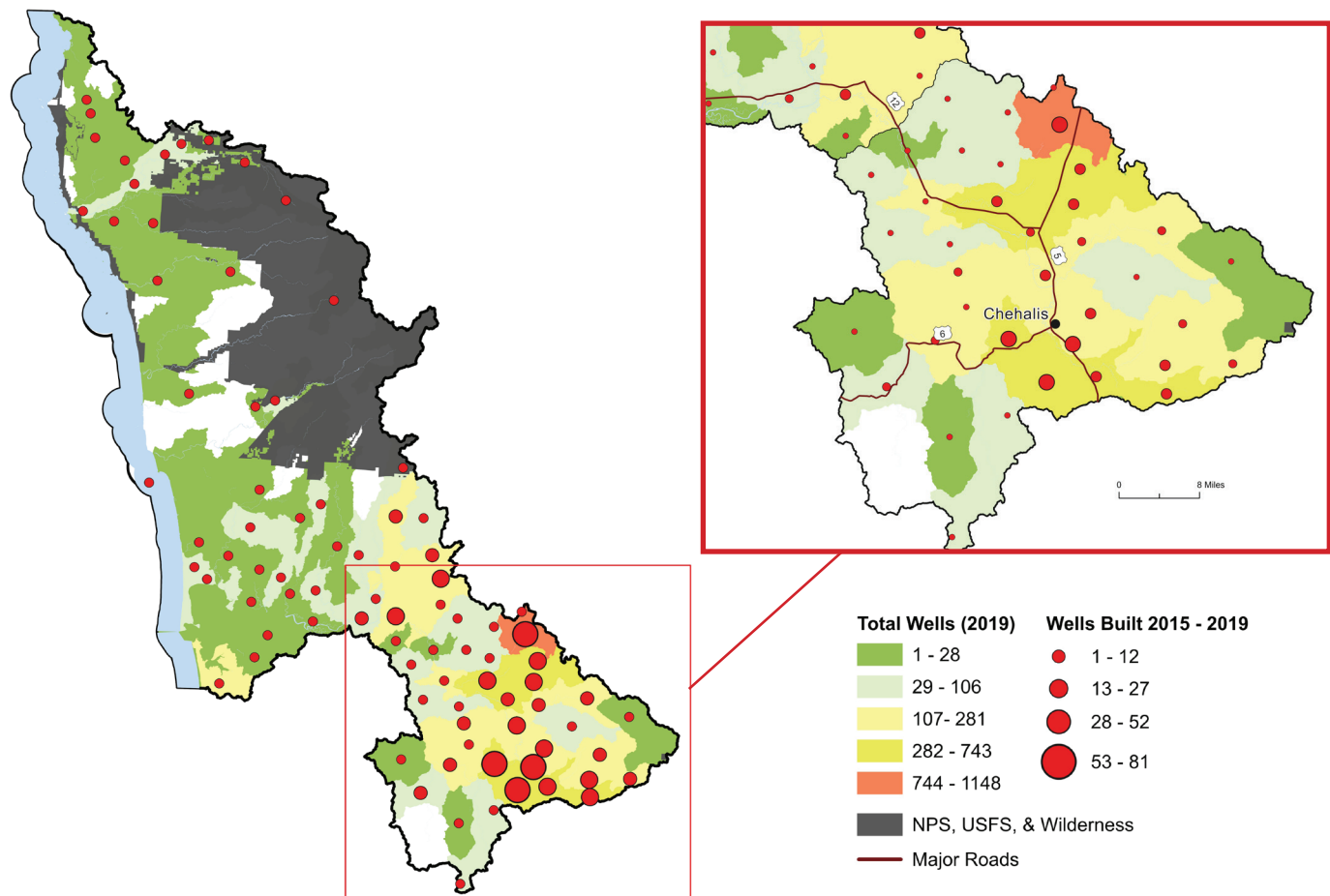


Groundwater Withdrawals Impact Surface Flows

Since 1980, more than 10,000 wells have been developed in the Pacific Coast region. Between 2015-2019, 1,133 wells were built, which is a 74% increase in the number wells built during the previous five years (2010-2014). The vast majority of total and new wells in the region exist in the Chehalis watershed. This increasing rate of new well installations threatens groundwater availability and ecosystem health across the region.



Population growth within the Pacific Coast region, especially in the Chehalis watershed, will continue to have increased demands on groundwater resources. Washington state instream flow rules allocate river flow for ecological requirements, but state law allows new wells to withdraw 5,000 gallons of groundwater per day without obtaining a permit that would require scientific evidence that water is legally available.¹ Groundwater withdrawals can cumulatively affect streamflows, especially in late summer when flows are naturally low.

An aquifer's natural outflow discharges into lakes, wetlands, streams, and seawater through springs and seeps on the land surface and through groundwater. Adequate natural outflow is essential for sustaining

stream base flows, maintaining lake levels, providing fresh water inputs to the nearshore, and preventing seawater intrusion.

As development occurs and more groundwater is extracted than is being recharged, the natural outflow from groundwater subsequently decreases. This reduces the amount of fresh water available to lakes, wetlands, streams, and the Pacific Coast nearshore. Reduced freshwater inputs to the Pacific Coast nearshore can have a negative impact on shellfish and out-migrating juvenile salmonids.

The reduced availability of surface water can have a negative impact on all stages of the salmonid life cycle. Water quality (e.g. temperature, flows) is affected by decreased inputs from groundwater. Lessened groundwater water input concentrates pol-

lutants, increases temperature and diminishing dissolved oxygen. This is detrimental to salmonid migration, spawning and rearing.

Although total well numbers and new wells installed remain low across much of the Pacific Coast region, population growth within the Chehalis watershed will continue to increase demand on water resources within the region. Wells are drilled without regard to aquifer sensitivity and stream recharge needs, which makes it even a greater demand that something changes as the region's freshwater demand increases. Unchecked growth and its associated increase demand for groundwater must be addressed for the overall ecosystem-level health of the region.