Figure 10.14: Location of alternate stream diversion and artificial recharge infiltration sites represented by injection wells in Layer 1.

Little Spokane River Basin Water Bank
Modelling and Decision Support Tools

Alternate Diversion/Recharge Sites

Map produced with data
provided by: Spokane Co.
State of Washington
US Geological Survey

Legend:
- River/Stream
- Lake
- Wetland
- Subwatershed Boundary
- Roads
- Highway
- County Boundary
- Model Boundary
- × Alternate Aquifer Recharge Locations
- ● Alternate Aquifer Recharge Diversions

SPCS Washington North (NAD83) - Feet
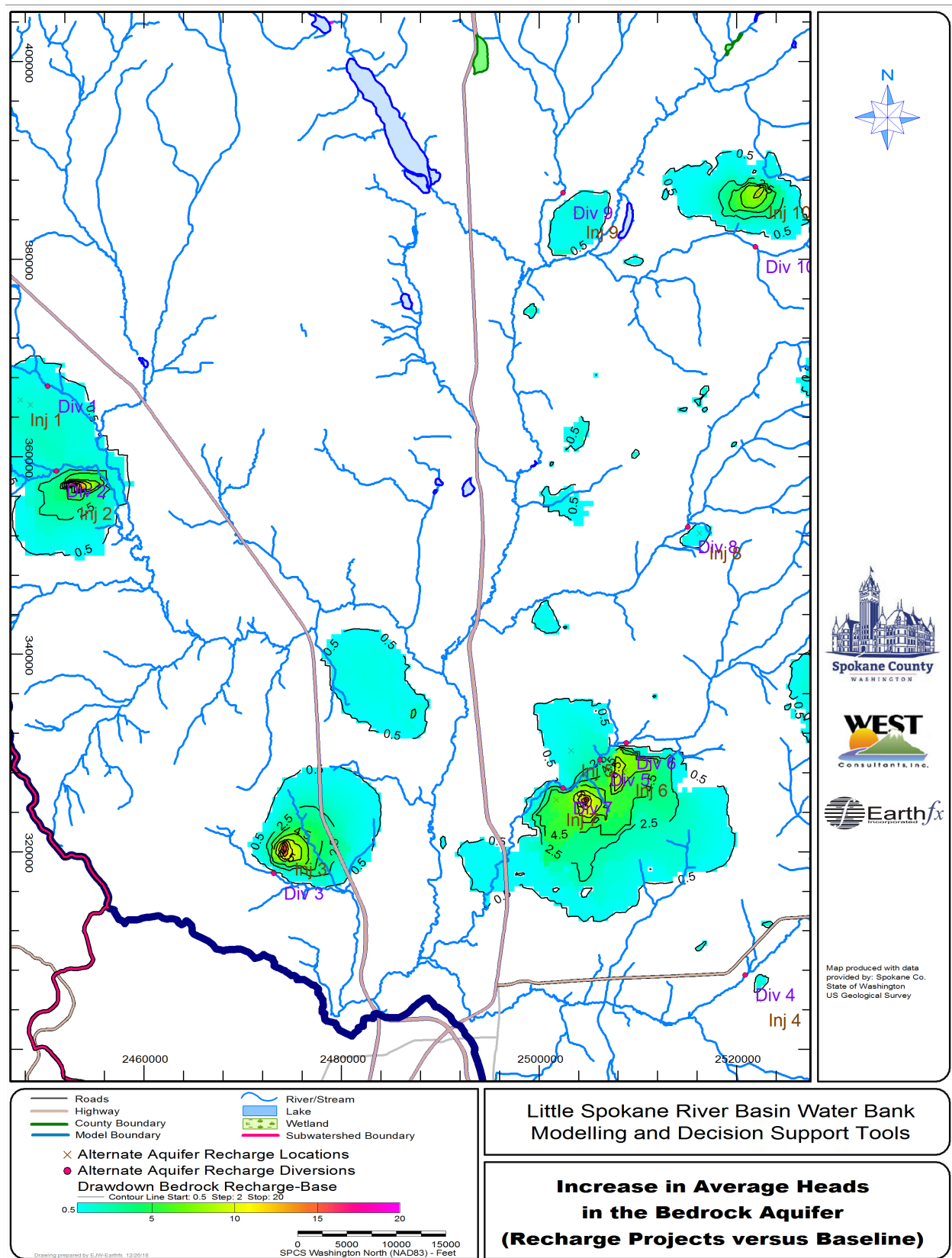0   5000   10000   15000

Figure 10.15: Simulated increase in average heads (ft) in the bedrock aquifer with ten aquifer recharge projects.
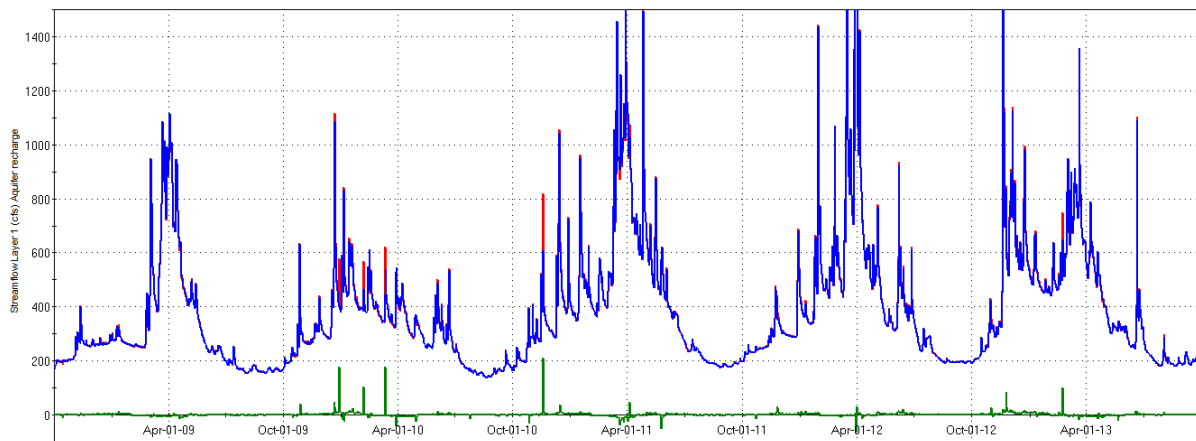
Figure 10.16: Simulated flow at the Dartford gage – baseline (blue) versus recharge projects scenario (red) and change in flow (green).
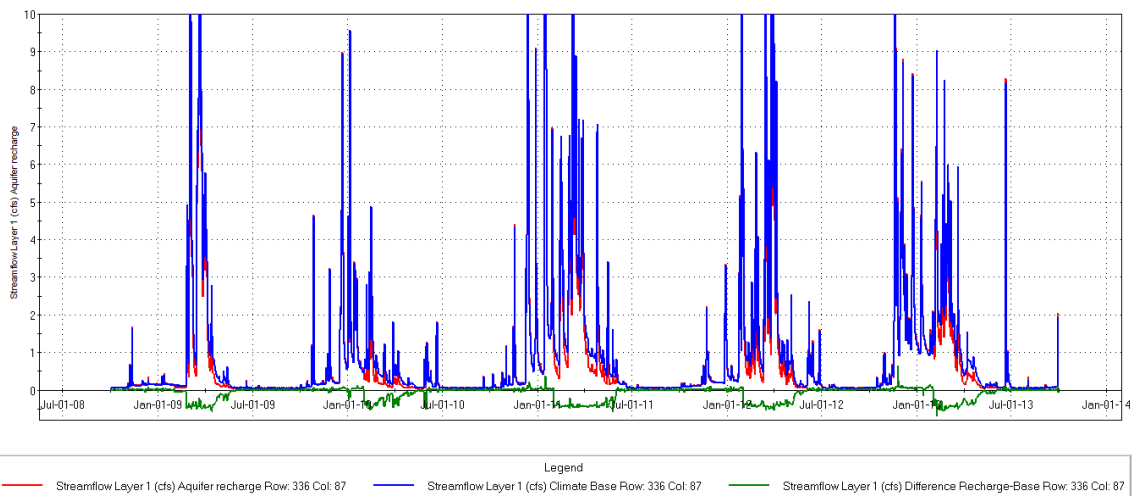

Figure 10.17: Simulated flow at Dartford Creek near Highway 395 – baseline (blue) versus recharge projects scenario (red) and change in flow (green).
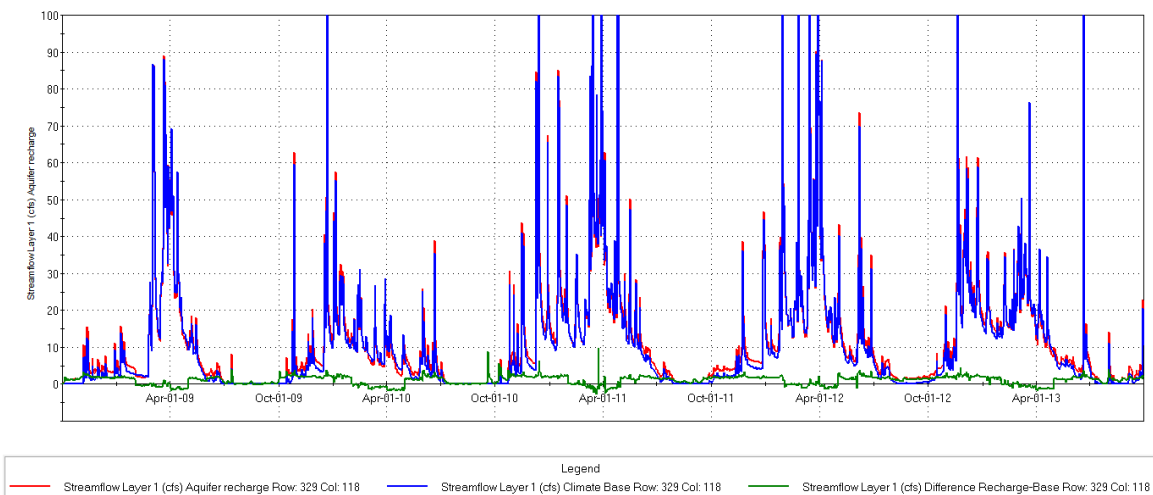

Figure 10.18: Simulated flow at Little Deep Creek near Highway 2 – baseline (blue) versus recharge projects scenario (red) and change in flow (green).
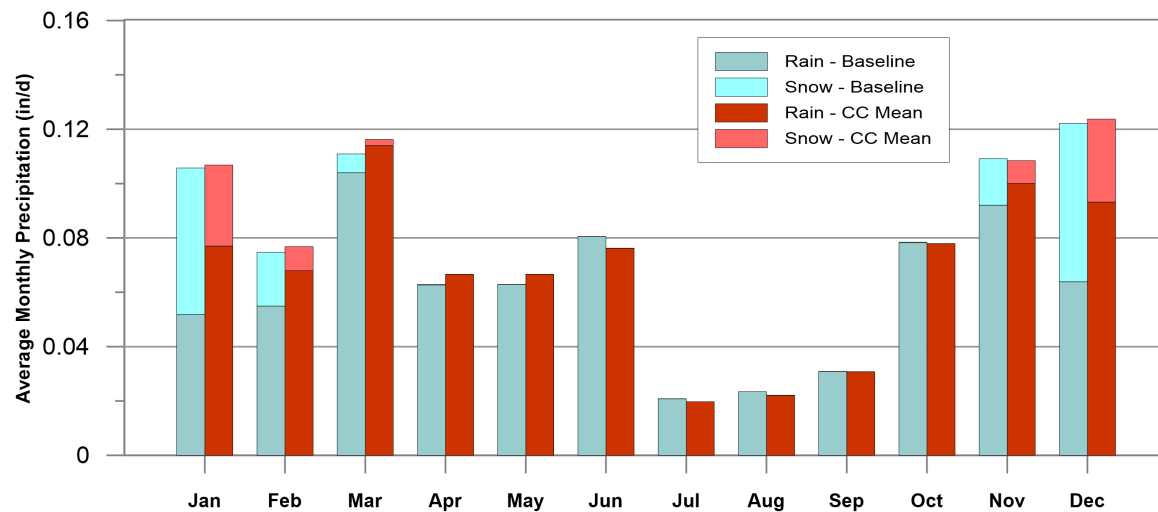
Figure 10.19: Simulated rain and snow for baseline and mean climate change conditions.
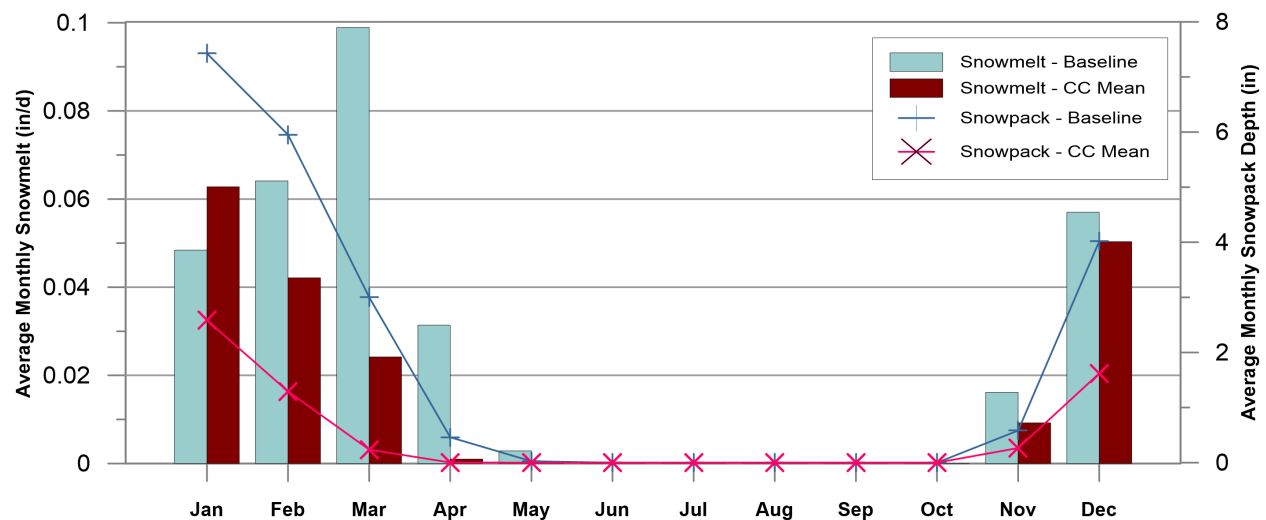

Figure 10.20: Simulated average monthly snowpack depth (in inches) and monthly snowmelt volumes (in in/d over the model area) for the baseline and mean climate change conditions.
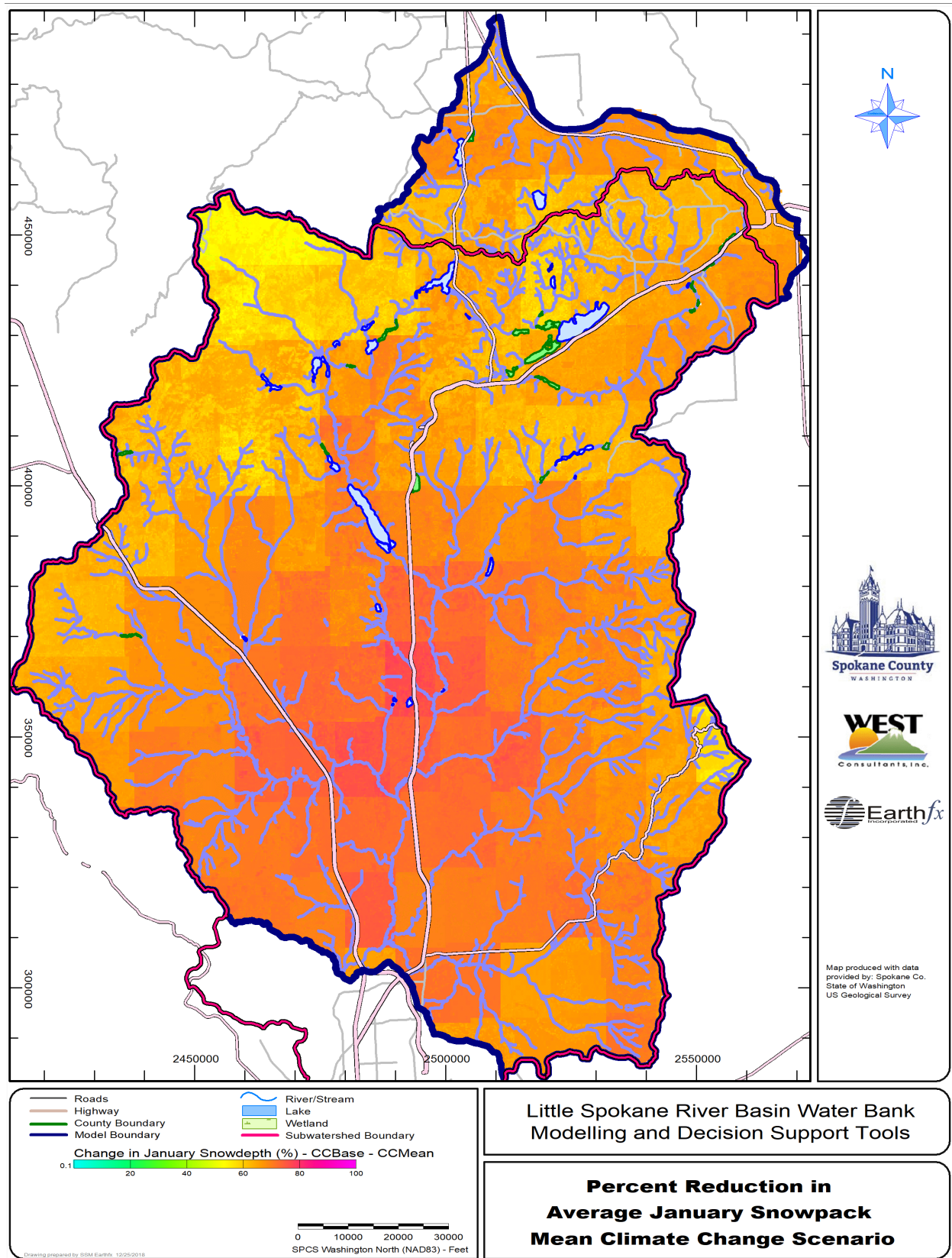
Little Spokane River Basin Water Bank Modelling and Decision Support Tools

Percent Reduction in Average January Snowpack Mean Climate Change Scenario

Figure 10.21: Percent reduction in the January snowpack depth (inches) under future climate conditions.
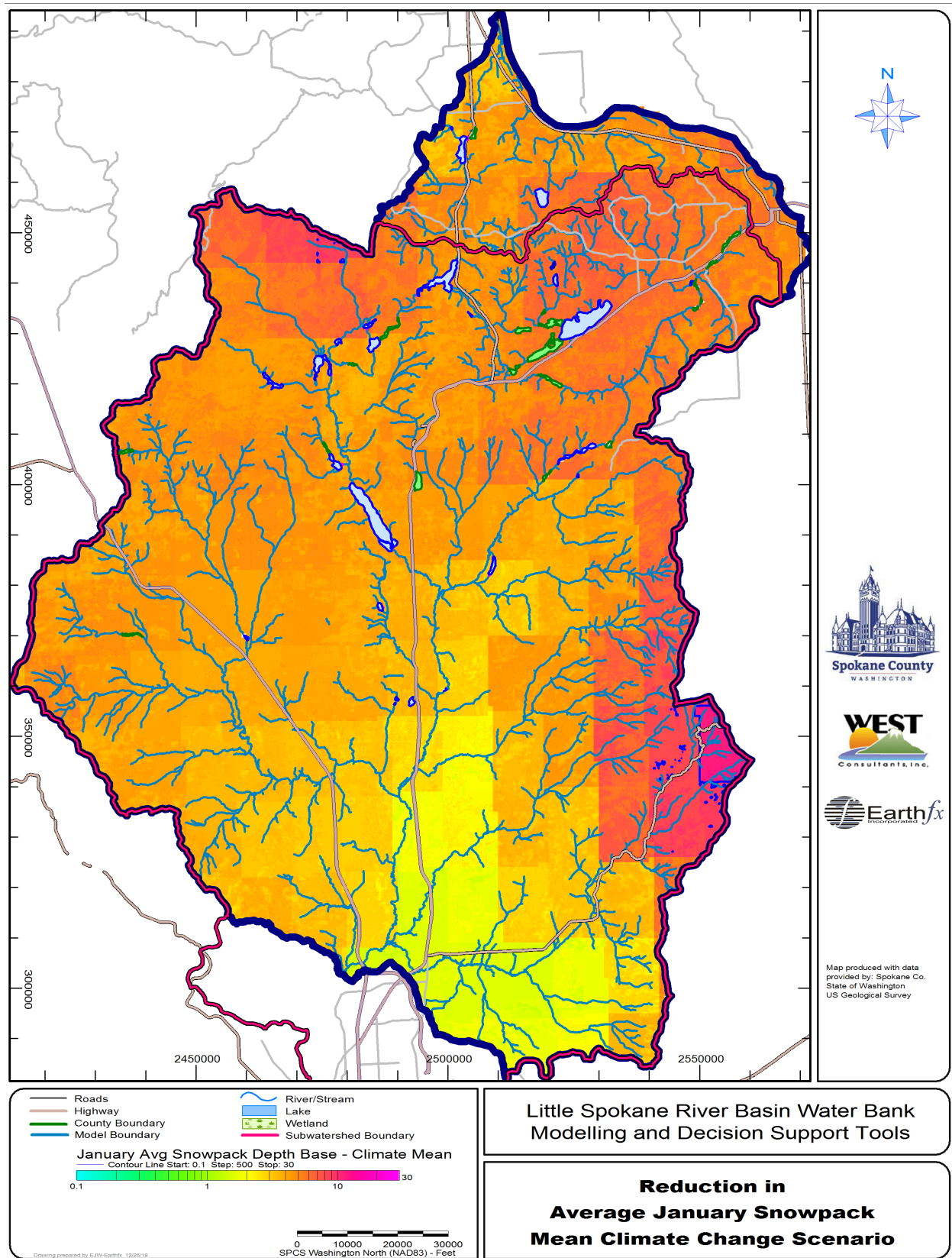
Figure 10.22: Simulated reduction in the January snowpack depth (inches) under future climate conditions.
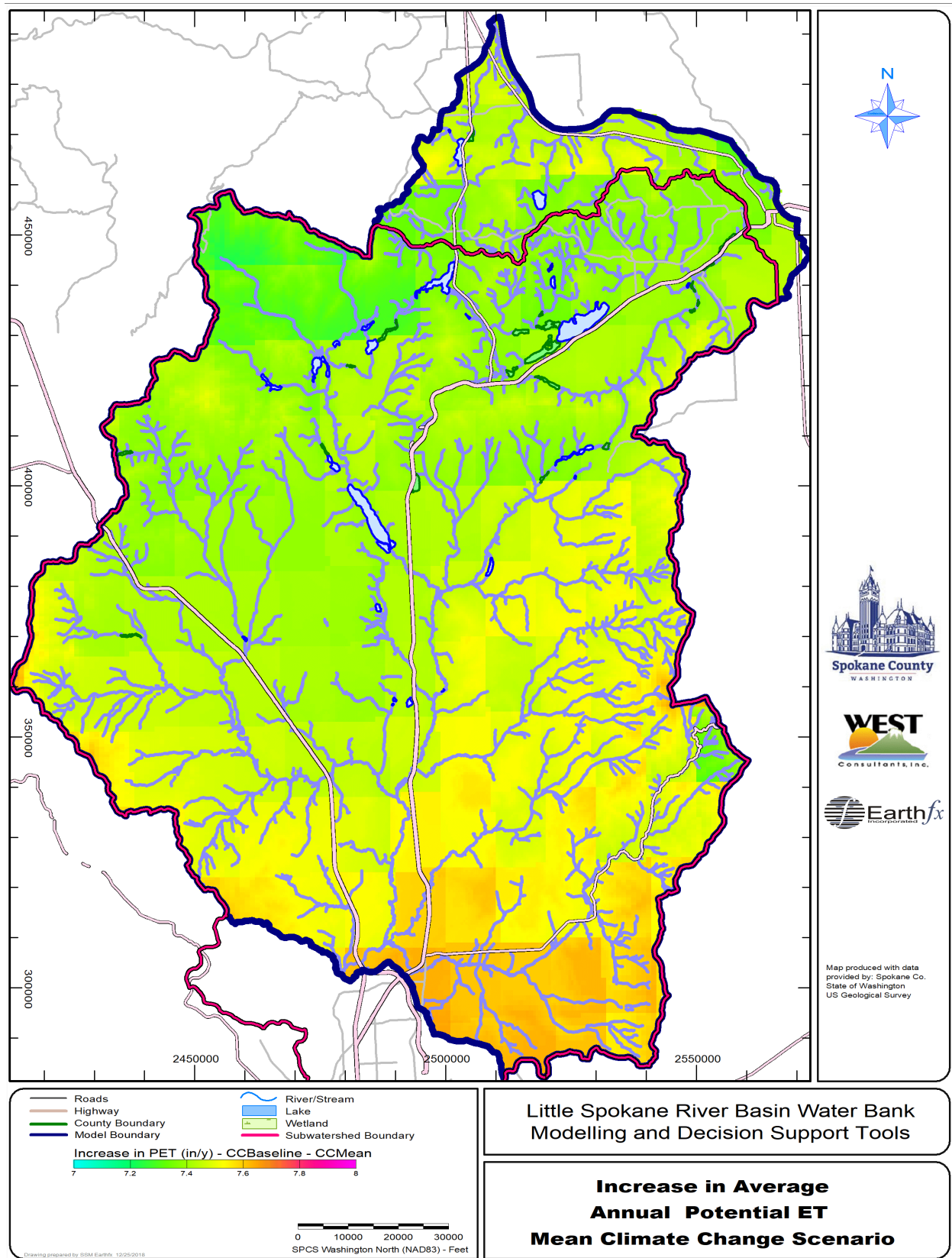
Figure 10.23: Simulated increase in the long-term average PET (inches) for the study area (in/yr) under future climate conditions.
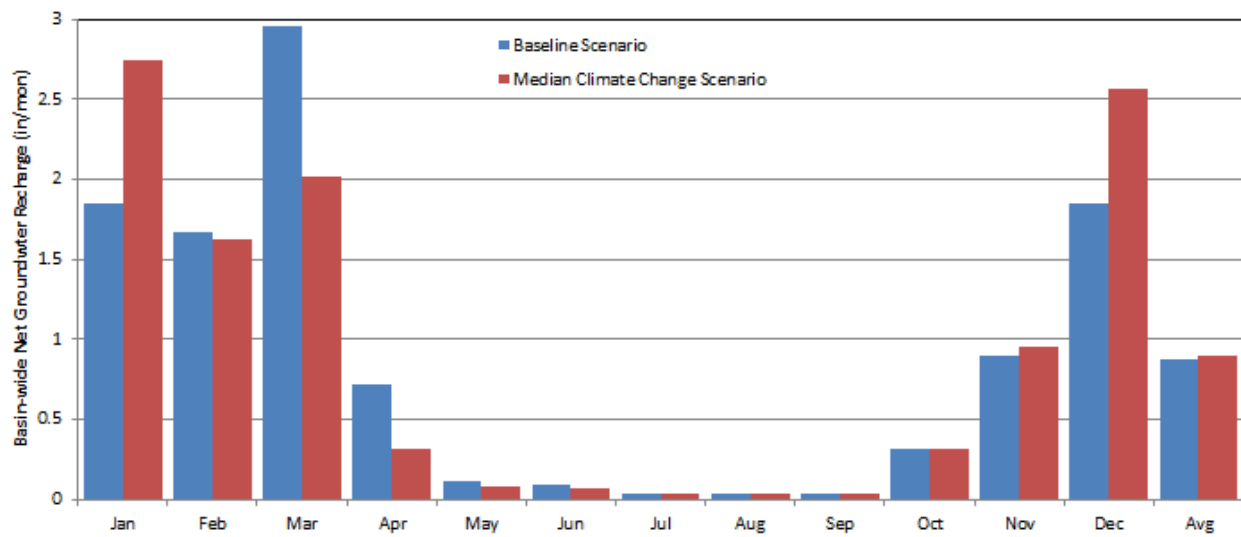
Figure 10.24: Average monthly groundwater recharge for the baseline and future climate scenarios, in inches/month.
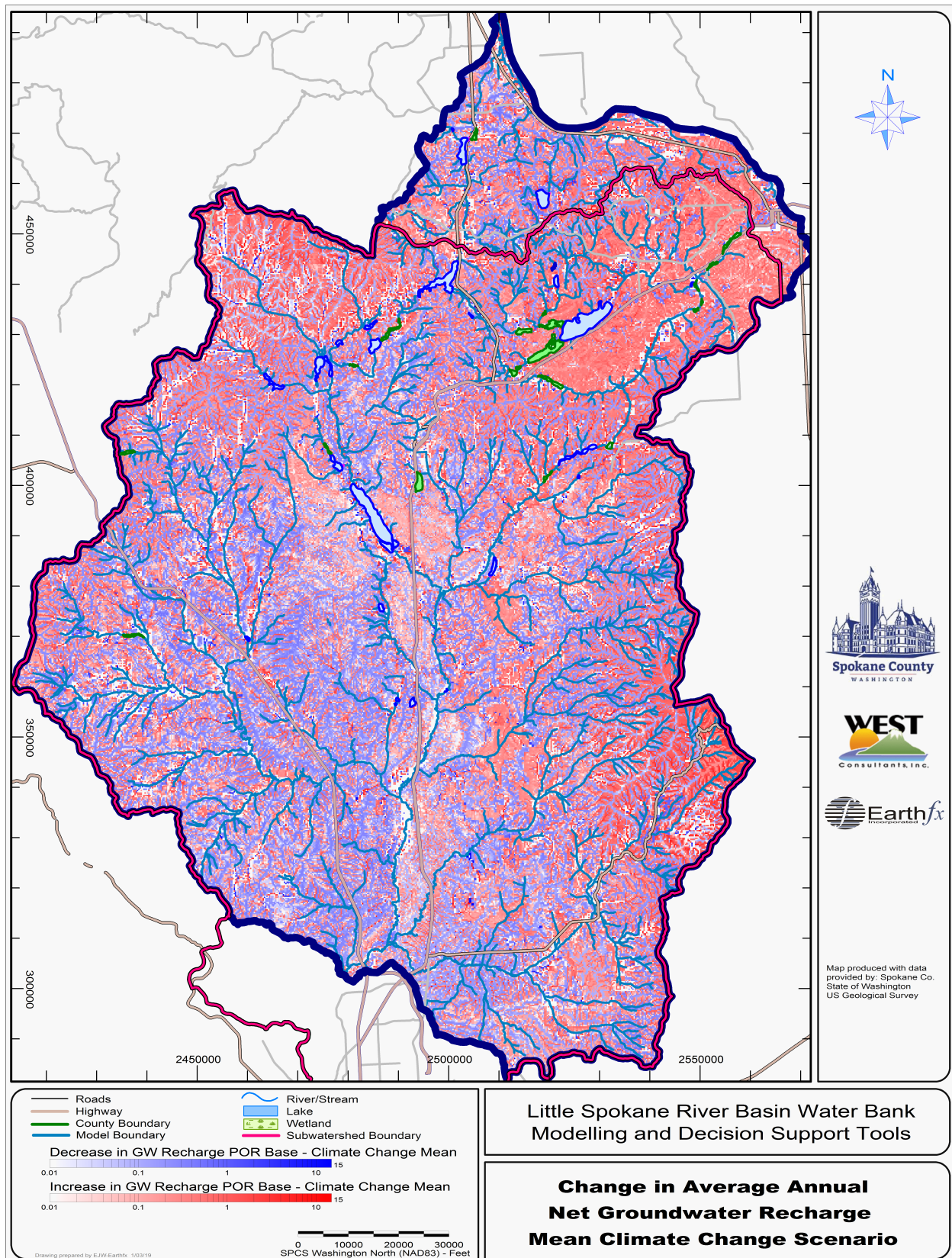
Figure 10.25: Simulated long-term average change in groundwater recharge (in/yr) under future climate conditions.
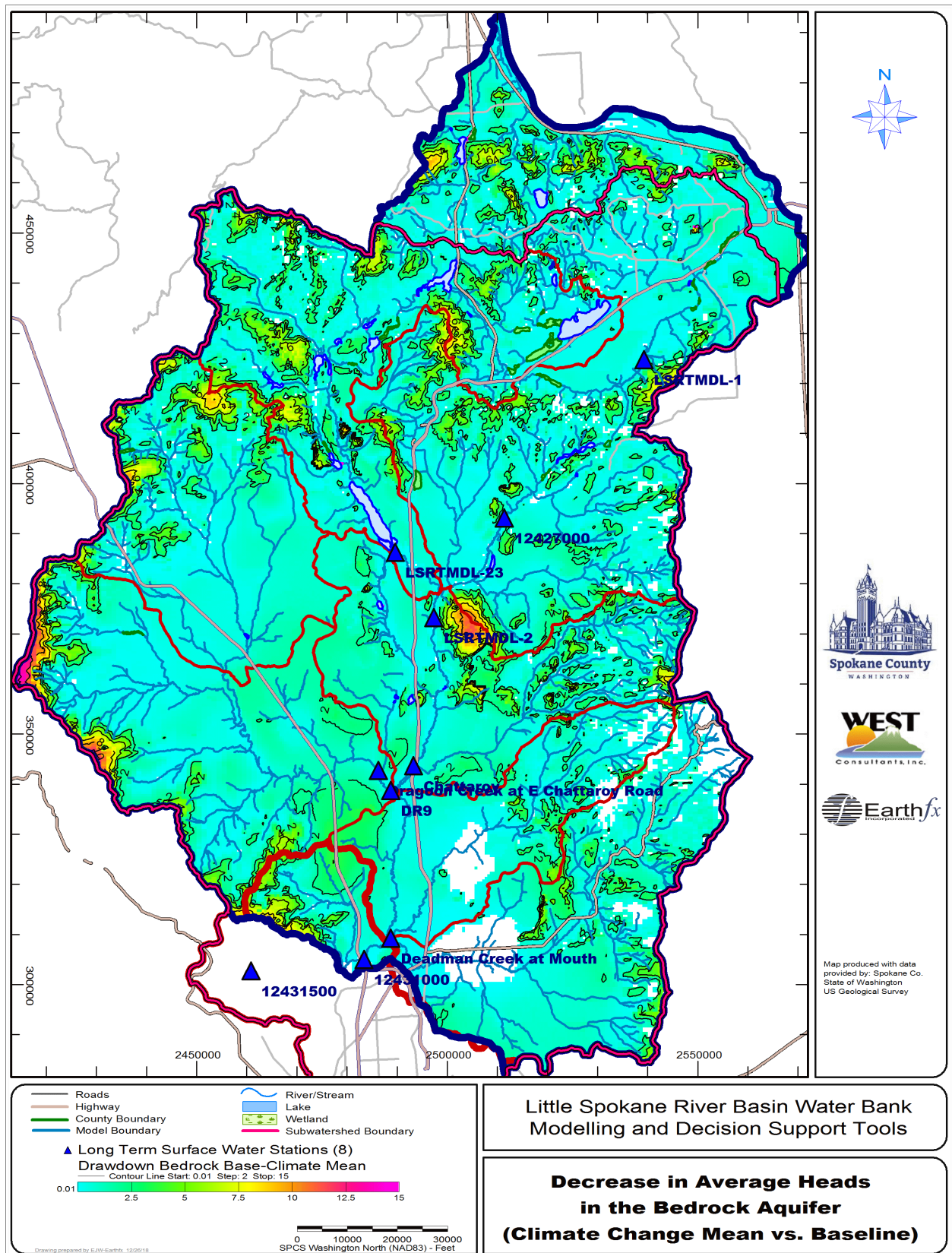
Figure 10.26: Simulated long-term average decrease in bedrock aquifer heads (ft) under future climate conditions.
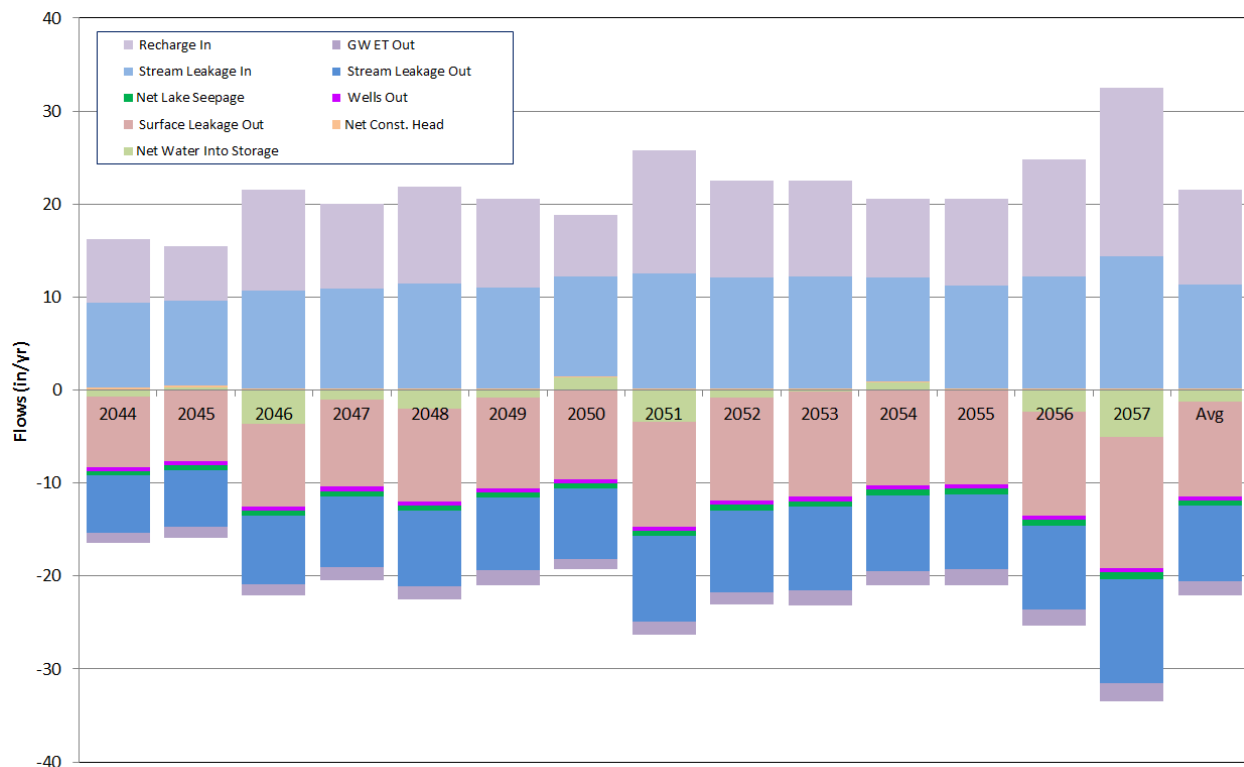
Figure 10.27: Average annual groundwater budget for the LSR watershed under future climate conditions
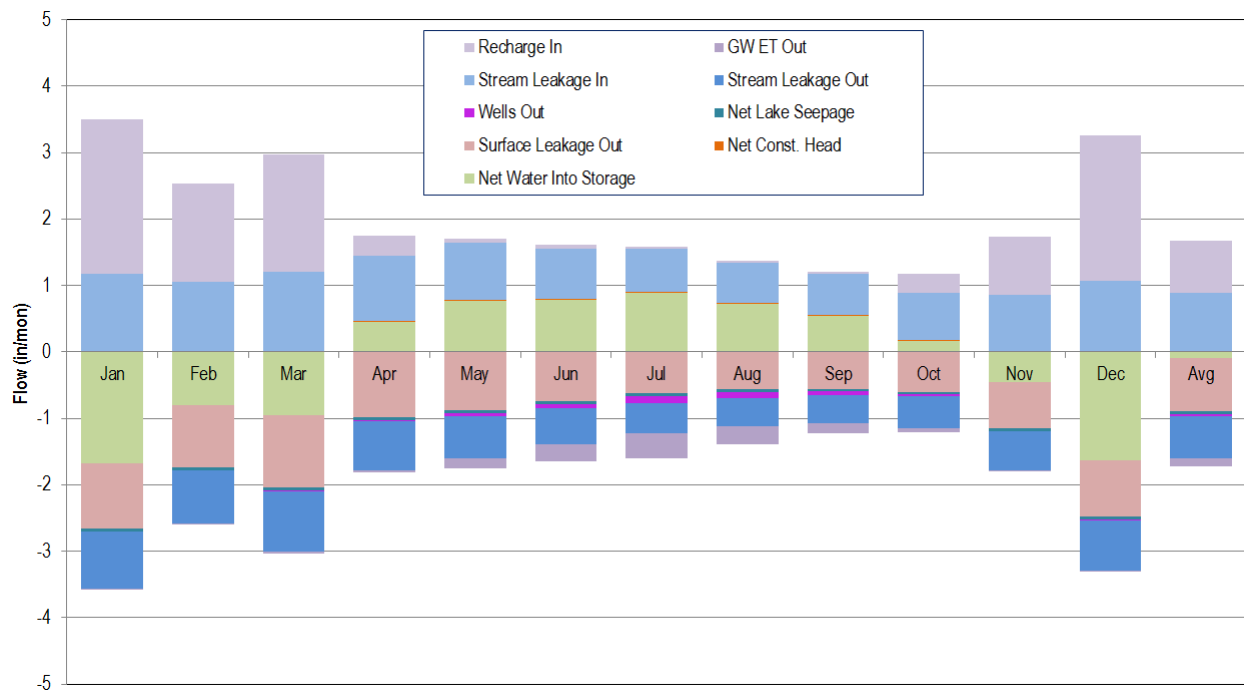

Figure 10.28: Average monthly groundwater budget for the LSR watershed under future climate conditions:
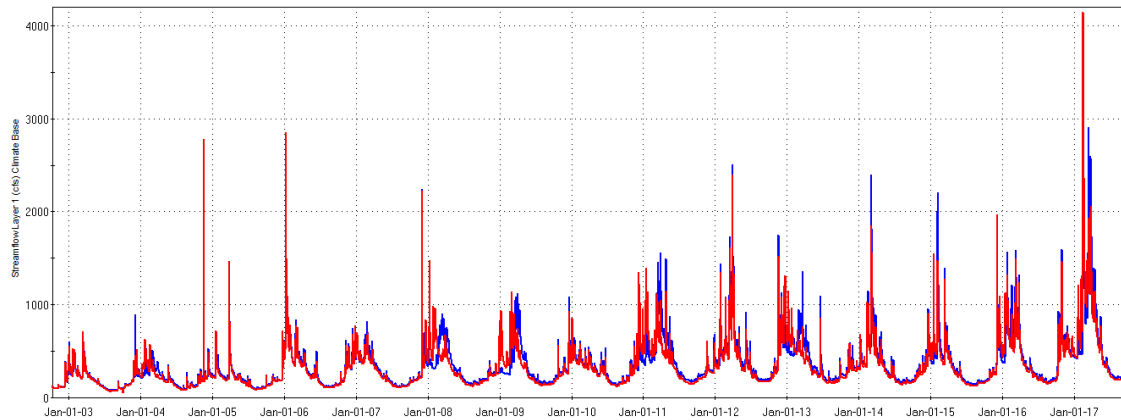
Figure 10.29: Flow at the Dartford gage – baseline (blue) versus mean future (2050) climate change scenario (red).
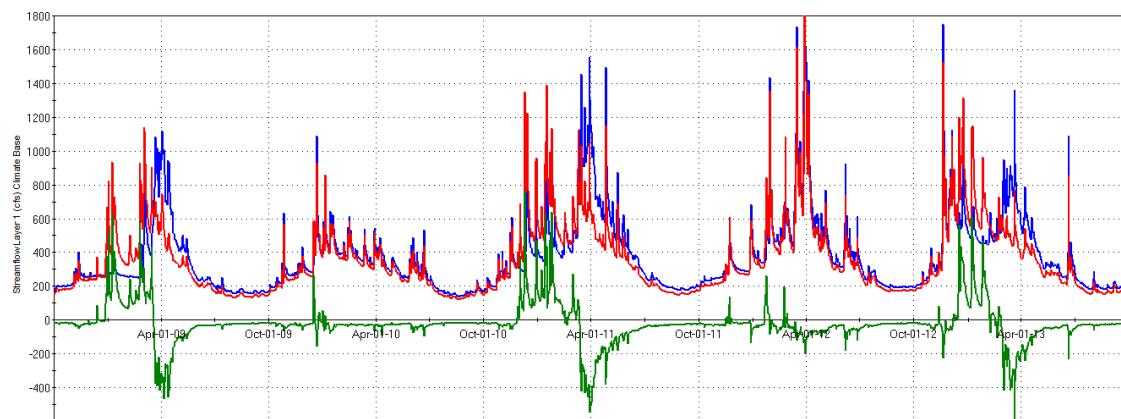

Figure 10.30: Simulated flow at the Dartford gage – baseline (blue) versus mean future (2050) climate change scenario (red) and difference in flow (green) for WY2008-WY2013 (WY2048-WY2053).
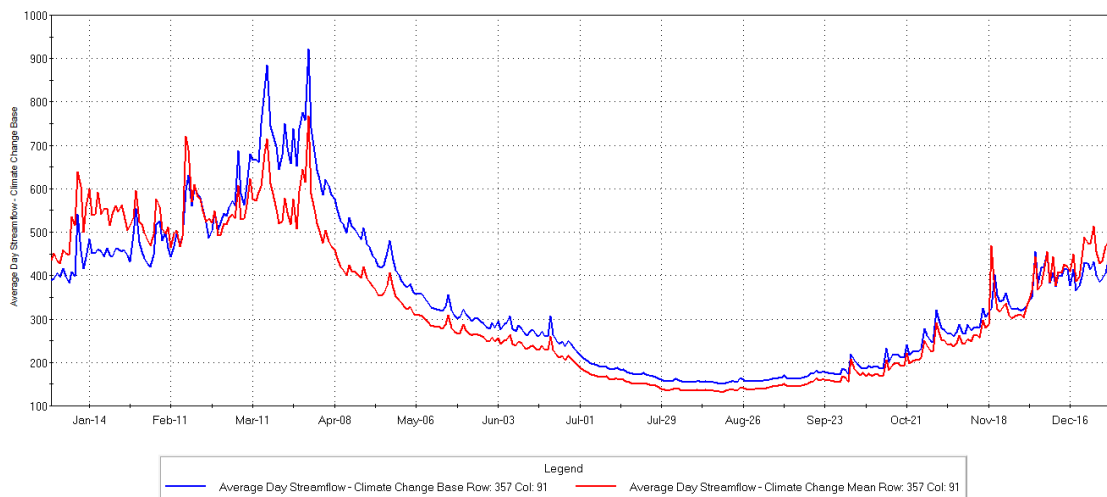
Figure 10.31: Simulated average day flow at the Dartford gage – baseline (blue) versus mean future (2050) climate change scenario (red).
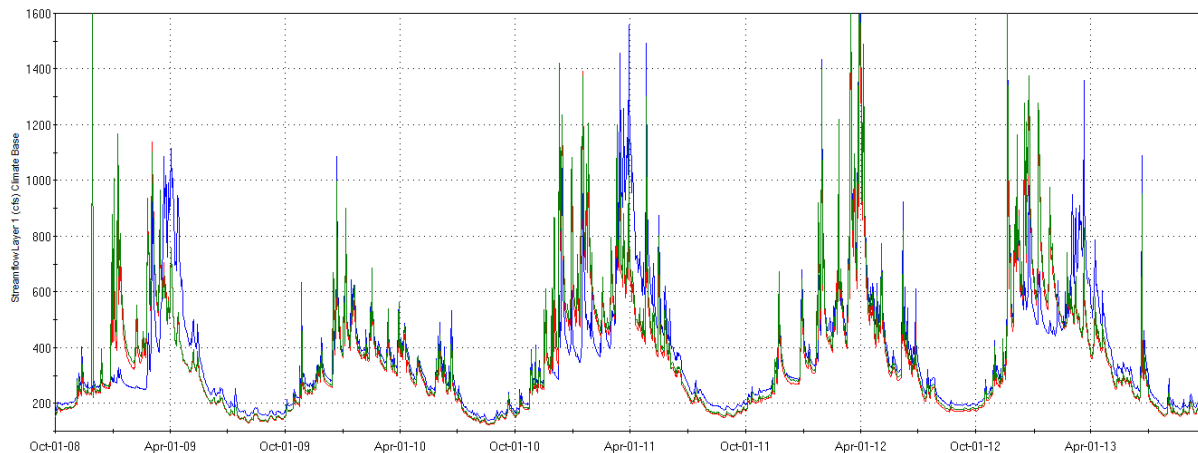

Figure 10.32: Simulated flow at the Dartford gage – baseline (blue) versus mean future (2050) climate change scenario (red) and high range future (2050) climate change scenario (green) for WY2008-WY2013 (WY2048-WY2053).