

Apache and Blue seams, respectively. The completion groundwater elevation in the Allen seam at NE-1-10 was 7,045.5 feet on September 13, 2010. The completion groundwater elevation in the Apache seam at NE-6-10(a) was 6,773.1 feet on November 15, 2010. The completion groundwater elevation in the Blue seam at NE-6-10(b) was 7,033.2 feet on November 16, 2010.

Groundwater Usage

Domestic wells for area residents are supplied by alluvial sediments and bedrock in the Raton Formation. A few higher-yield production wells are also located near the mine are used for irrigation. The irrigation wells are completed in the Purgatoire River Alluvium. CBM development activities in the northern portion of the Raton Basin are currently producing groundwater from coal beds in the Raton and Vermejo Formations. Groundwater withdrawal related to CBM production has partially dewatered coal seams in the permit area, but has not impacted water availability in alluvial wells. Similarly, dewatering of the Blue, Allen, and Apache coal seams for mining is not expected to lower water levels in alluvial wells that are used for domestic supply and irrigation. It may, however, impact deeper bedrock wells that are completed in permeable strata near the Allen and Apache coal seams. The Blue seam is closer to the surface, so there is no impact to deeper bedrock wells. On average the Blue seam currently generates about 20-40 gpm on average throughout the entire mine. A summary of developed groundwater sources for domestic use and irrigation is presented in Table 10. Wells that are located within one mile of the permit boundary (excluding CBM wells) are shown on Map 8. Locations for CBM development wells are shown on Map 20.