

The ongoing study, described below, will help inform this understanding and increase confidence in the growing body of work being done here.

Estimated use and outflow from the basin ranges from about 9,000 afy to about 12,000 afy (BLM, 2010; BLM, 2011a; BLM, 2011b; FERC, 2012). Since existing outflow estimates exceed the maximum recharge being proposed, it is expected that the Chuckwalla Basin may be experiencing groundwater overdraft conditions to some degree. Future environmental documents should address the groundwater supply issues identified here for the Chuckwalla Basin and other arid basins of southern California. The BLM supports analysis and discussion of perennial yield that presents a full range of possible outcomes and consequences, so that State and Federal agencies can fully meet requirements of the California Environmental Quality Act and the National Environmental Policy Act.

Conclusion

Utility scale renewable energy development is rapidly becoming an important component of the nation's energy production portfolio. This growth is particularly noticeable in the deserts of southern California where many projects have been approved or are being considered. Each of these projects carries with it a water demand that varies with the specific technology involved and its application. Where water is scarce, even small demands may have noticeable impacts. Water demand within the Riverside East SEZ is expected to range between a high of about 14,829 afy to a low of about 672 afy (Greer, et al, 2013). These volumes are equivalent to most or all of the groundwater outflow from the Chuckwalla Basin into the Palo Verde Mesa Groundwater Basin and into the Colorado River. The projections made in Greer, et al do not include the potential for the Eagle Mountain Project to further deplete groundwater resources. There is a real risk of harm to the BLM, its management goals in the Chuckwalla Basin, and renewable energy proponents. There is a real risk of harm to authorized users of Colorado River water.

In a case study of the Chuckwalla Basin, understanding of the perennial yield is evolving and there continues to be uncertainty. At the heart of this issue is the estimation of groundwater recharge within the basin, which has tremendous importance to existing users of the local aquifer and the nearby Colorado River. New information and analysis suggests that adjustments in the calculated underflow from the Pinto and Orocopa Basins should be made. In making those adjustments, the proposed range of total recharge adds up to less than the current estimates of groundwater production from within the Chuckwalla Basin. Application of these revised values to the water balance calculation indicates the basin may be in overdraft. If nothing else was done, use of the conservative end of a range of values would be prudent. Consideration of this analysis, at the very least, demonstrates greater uncertainty and risk in adhering to earlier, preliminary studies.