

Bluff, Utah, Wastewater Facility Plan

In this project, David Venhuizen generated and analyzed options for decentralized concept wastewater management systems to serve Bluff, a small community currently served by individual on-lots systems only. The community includes several businesses that serve a tourist economy and experience large seasonal fluctuations in wastewater flow. These options include:

- Centrally managed on-lot systems plus clusters for the commercial generators and lots on which a code-compliant on-lot system could not be sited, routing wastewater from those lots to collective dispersal systems, including options with low-pressure-dosed dispersal fields for septic tank effluent and with high quality pretreatment prior to drip irrigation dispersal, depending on findings of need to protect the shallow aquifer from nitrate pollution.
- A “small-scale” cluster system collectivizing all properties into several treatment centers spaced around the community, with high quality pretreatment prior to drip irrigation dispersal, optionally locating the drip dispersal fields to serve an irrigation reuse function on public greenspace and/or private property.
- A “large-scale” collective system routing wastewater from all properties to one or two treatment centers, with high quality pretreatment, routing effluent to stream discharge or to drip dispersal systems, which may optionally be located to serve an irrigation reuse function on public greenspace and/or private property.

The project was conducted with a partner firm that generated and analyzed more “conventional” management options. The community chose the decentralized concept options as the most favored strategies, and the facility plan was completed on that basis. The project is currently about to enter the design phase. The treatment technology favored for use in the decentralized concept options is a variant of the packed bed filter (recirculating “sand” filter). All wastewater collection would use effluent gravity sewers.

A [report](#) detailing this work is on this web site.