

CEQA and NEPA Support

Rockville Trails Estates EIR, Cordelia, Solano County, California



Fractured volcanic bedrock promotes rainfall infiltration.

Background

Based on our evaluation of a previous project on the same site, Balance was asked to assess potential hydrologic and water quality effects of a proposed 370-home subdivision on 1,580 acres in the hills between Green Valley and Suisun Valley.

Project Highlights

- Installed two stream gages and monitored them during several spring storms to develop a calibrated HEC-HMS model
- Measured peak discharges were about one-tenth of those expected from default County-approved models, establishing that actual infiltration is higher than modeled infiltration
- Recommended use of distributed BMPs to manage peak flows and avoid hydromodification, rather than on-line detention basins, consistent with Solano County NPDES Phase 2 permit requirements
- Recommended use of lot- and neighborhood-level BMPs to promote stormwater runoff infiltration and renovation
- Results were also used to estimate recharge rates, develop a water-quality protection program for the local aquifer, and select the location of water-supply wells for the project



Actual runoff is lower than predicted by standard models.



Using stream gaging to calibrate model output.