

ESPAM Potential Improvement Ranking C.E. Brockway and Erick Powell July 12, 2013

Rank	Level of Effort	Structural Improvements
2	Moderate	Add Portneuf River
	Hard	Include multiple model layers in selected areas
	Done	Include Menan gage
	Easy	Faults at Rexburg Bench
5	Easy to implement field data do not exist	Add connected reaches of Teton River
	Moderate	Grid refinement
	Unknown	Convert to Modflow USG
	Moderate	Convert Snake River from RIV package to STR package
	Hard	Vadose zone transport
	Moderate	Increase base flow elevations
	Hard	Surface water model linking
	Done	Include two drains for every spring
	Done	Adjust elevation of Briggs Spring
	Hard	Modeling largest canals with STR package
	Hard	Modeling Perched Seepage with STR Package
	Moderate	Represent thinning along edge of aquifer by reducing transmissivity
	Unknown	Representation of local geologic structure
	Hard	Specify layer type as unconfined
	Hard	Allow for vertical anisotropy (need 2 or more layers)
Unknown	MODFLOW USG Connected Linear Network representation of specific drains, possibly above ground canal features	
<b>Water Budget Improvements</b>		
3	Unknown	Improve understanding of complex entities
	Unknown	Finer spatial resolution within large entities.
4	Will happen	Incorporate more METRIC data
8	Unknown	Refine procedure to represent ET between METRIC years
6	Unknown	New calculations for non-irrigated recharge
	Done	Uncertainty analysis to select field observations
	Hard	Source of water on mixed source lands
	Hard	Seepage study along Milner-King Hill reach
<b>Calibration Improvements</b>		
7	Easy	Include cross plot, slope, and R2 as calibration targets
	Easy	Adjust pilot points
	Done	Include filtered and unfiltered Snake River gains
3	Easy	Extend model dataset
	Hard	Incorporate water quality observations
1	If we approach this piece meal - Easy	tributary underflow update
	Unknown	Compare model calibrated conductances and flow directions with those derived from water level and spring flow data
	Easy	Consider direct cell assignment and calibration of transmissivities at edges of model domain
<b>Clerical Improvements</b>		
10	Unknown	Change entity names (IESWMudLk vs IESW029, IESWNrtSd vs IESW032)