



Calculating aquifer recharge in municipal and subdivision service areas for Wood River Valley Groundwater Flow Model

Preliminary data presented to Modeling Technical Advisory Committee

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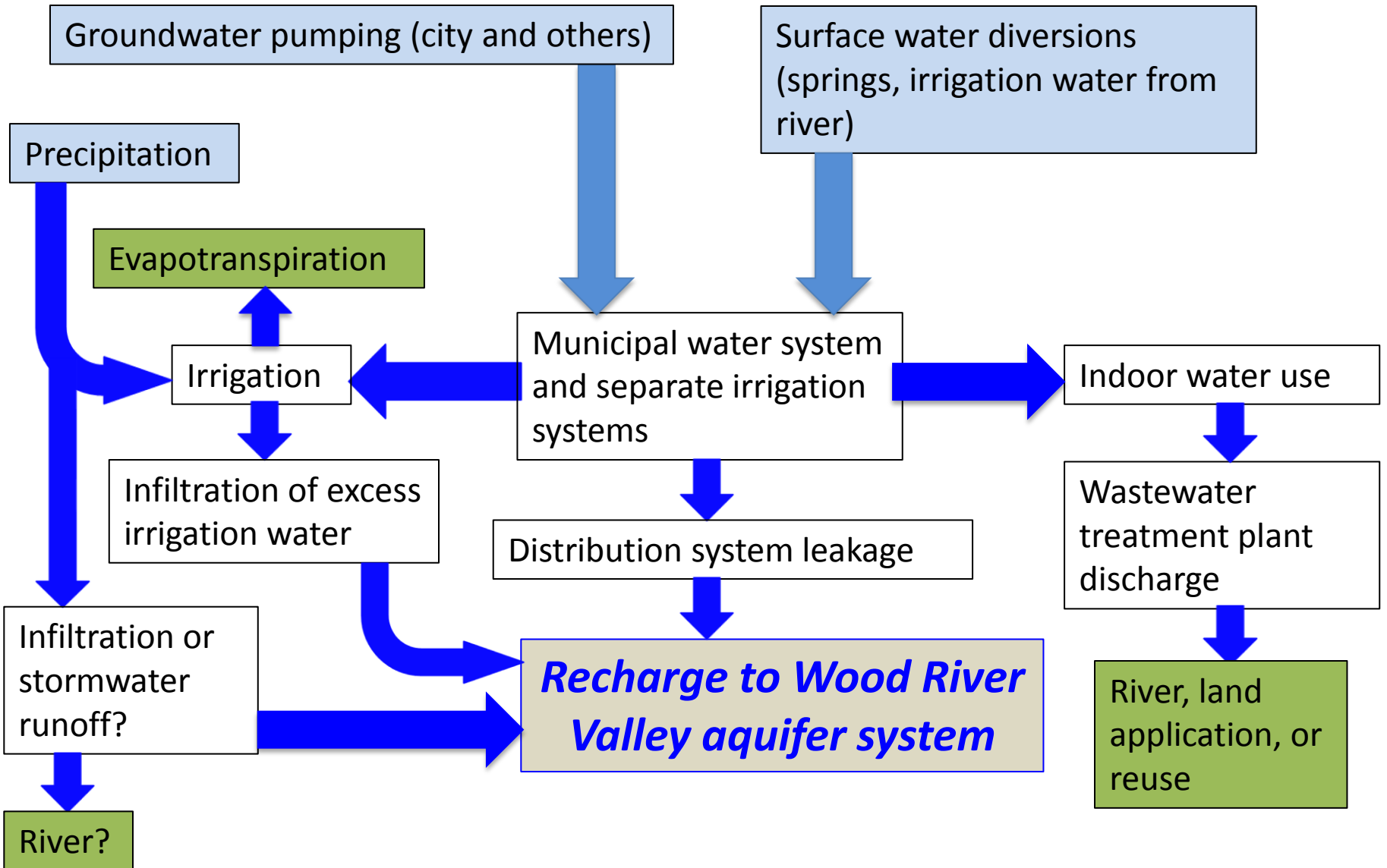
February 6, 2014



Overview

- Calculating aquifer recharge within municipal and subdivision service areas
 - Community water systems with centralized wastewater treatment
 - Community water systems with septic systems
 - Input on how stormwater runoff is handled by Wood River Valley cities and subdivisions?
- Domestic water systems with septic systems

Municipal water systems with WWTP

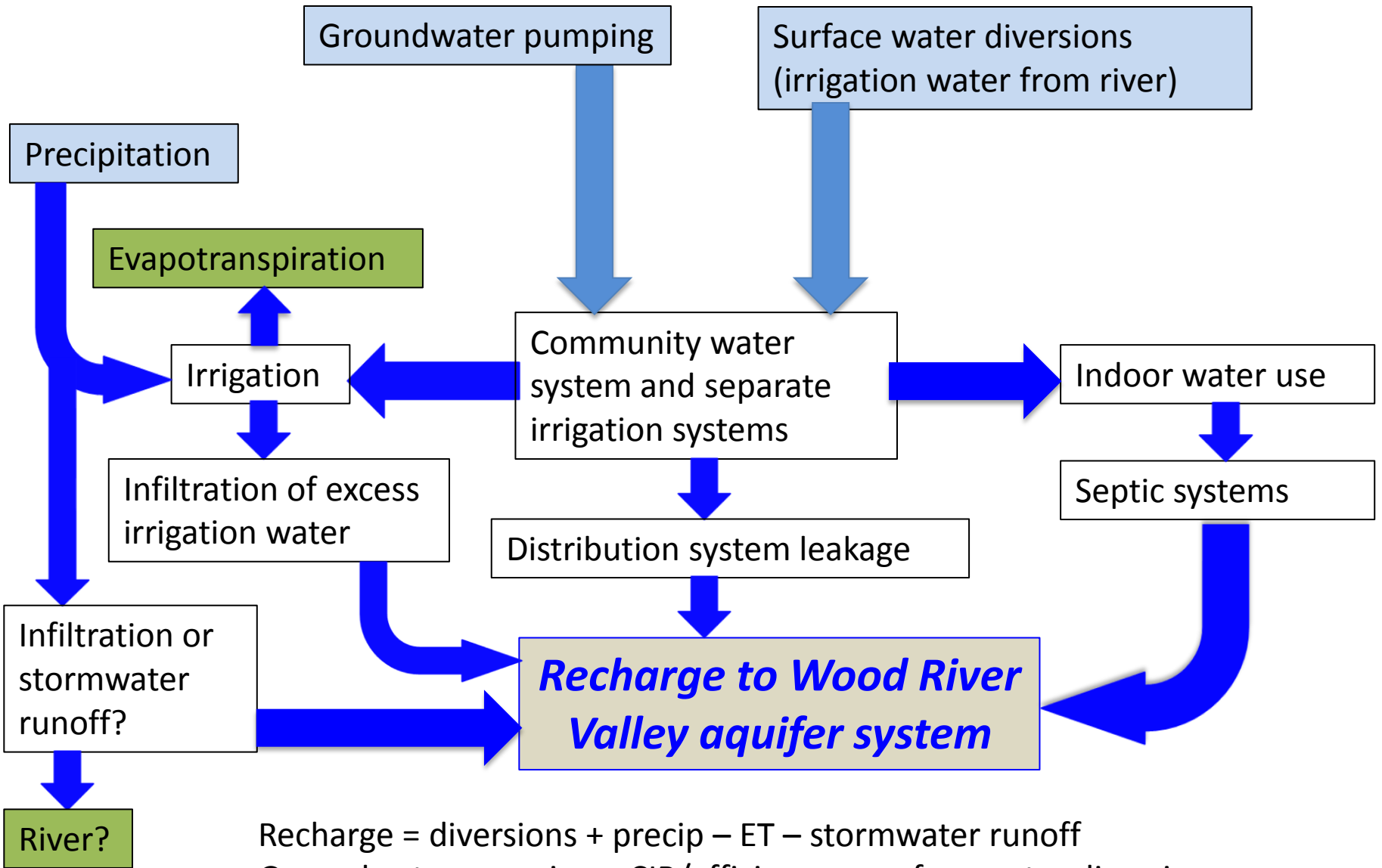


$$\text{Recharge} = \text{diversions} + \text{precip} - \text{wastewater} - \text{ET} - \text{stormwater runoff}$$

Community water systems with WWTP

- WWTP discharge to Big Wood River (during 1995-2010 model calibration period)
 - Sun Valley Water and Sewer District
 - City of Ketchum
 - Mid Valley Water Company/The Meadows
 - City of Hailey
- WWTP discharge to offsite land application
 - City of Bellevue
- How is stormwater runoff handled in municipal areas?

Community water systems with on-site septic systems



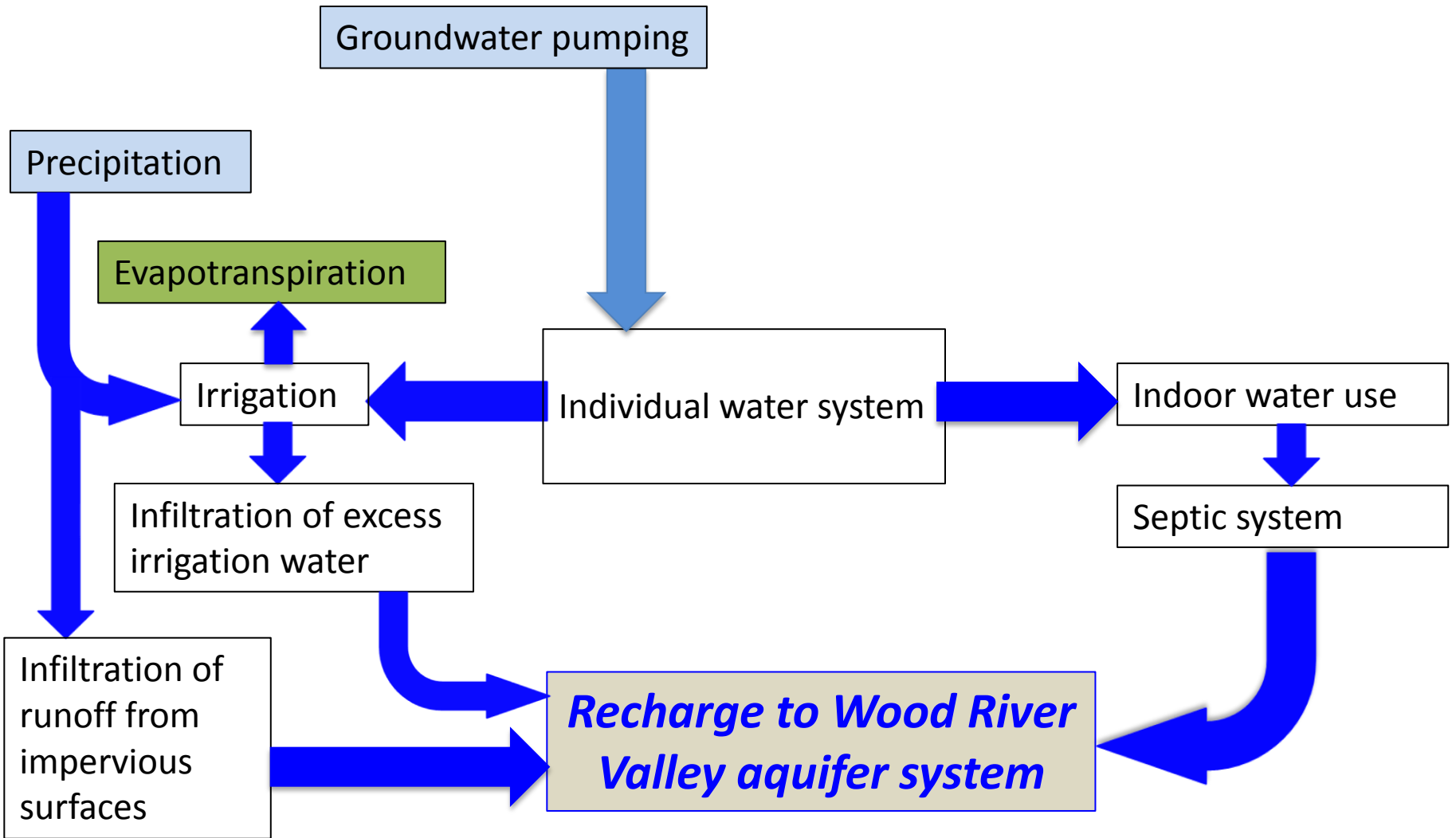
$$\text{Recharge} = \text{diversions} + \text{precip} - \text{ET} - \text{stormwater runoff}$$

$$\text{Groundwater pumping} = \text{CIR/efficiency} - \text{surface water diversions}$$

Community water systems with on-site septic systems

- 23 water systems that serve multiple homes were identified from IDEQ and IDWR records
 - Note that some of these systems do not meet IDEQ's definition of a Community Water System
 - How is stormwater runoff handled in subdivisions?
- Aspen Grove HOA
 - Aspen Hollow HOA
 - Chalet Mobile Home Park
 - Clear Creek Light Industrial Park
 - Cold Springs Water Co
 - Flying Heart Ranch II
 - Gannett HOA
 - Golden Eagle Ranch HOA
 - Greenhorn Owners Association
 - Griffin Ranch PUD
 - Heatherlands HOA
 - Holiday Highway Subdivision
 - Hulen Meadows Water Co
 - J and C Deluxe Mobile Home Park
 - North Fork Water System
 - Picabo Water System
 - Riverwoods HOA
 - Southern Comfort HOA
 - Starlite HOA
 - Starweather Owners Association
 - Stonegate HOA
 - Sun Tree Hollow Mobile Home Park
 - Valley Club Owners Association

Single home domestic systems with on-site septic systems



$$\text{Recharge} = \text{pumping} + \text{precip} - \text{ET}$$

$$\text{Pumping} - \text{recharge} = \text{precip} - \text{ET} = \text{net pumping}$$