



## 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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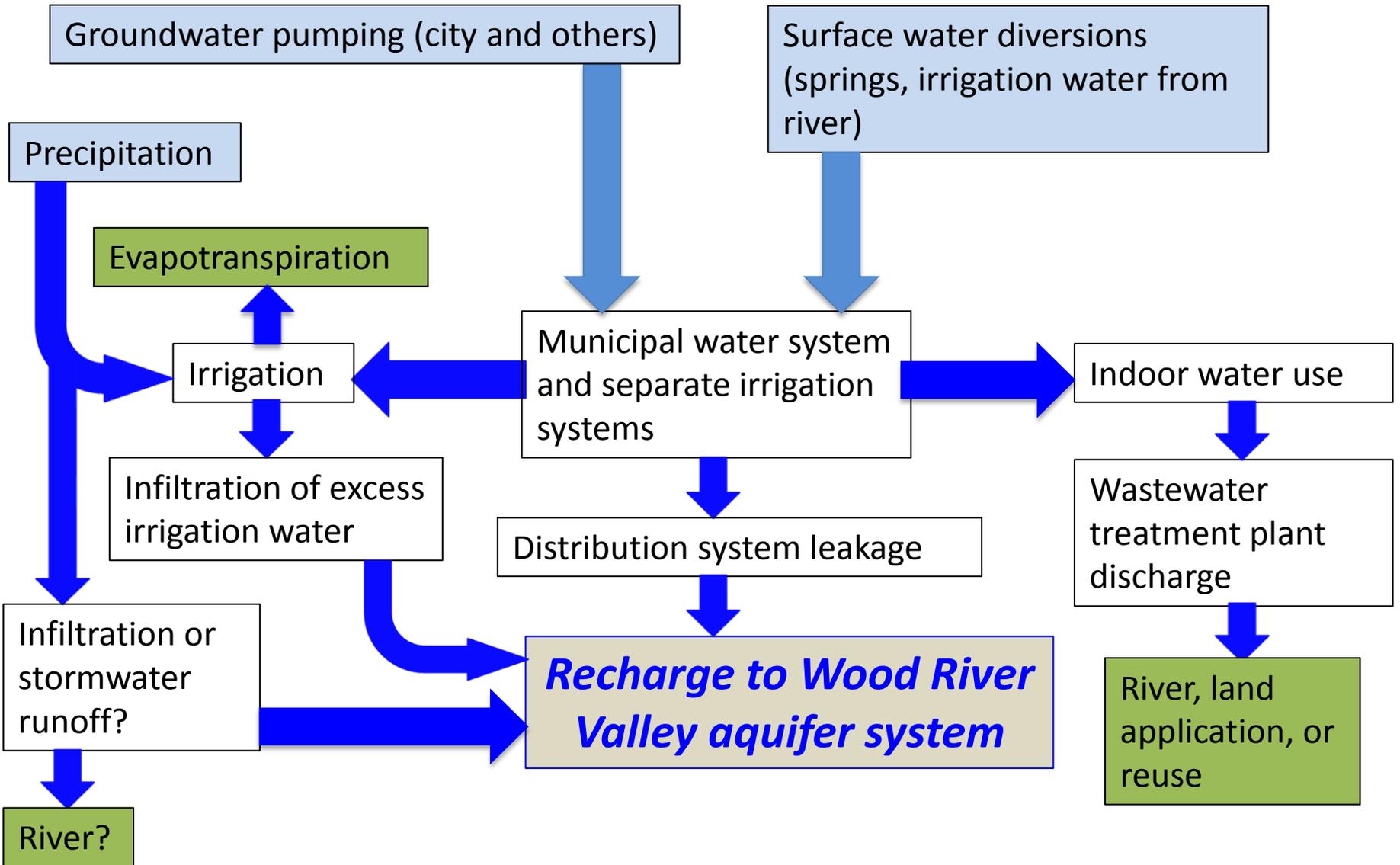
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# Overview

- 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

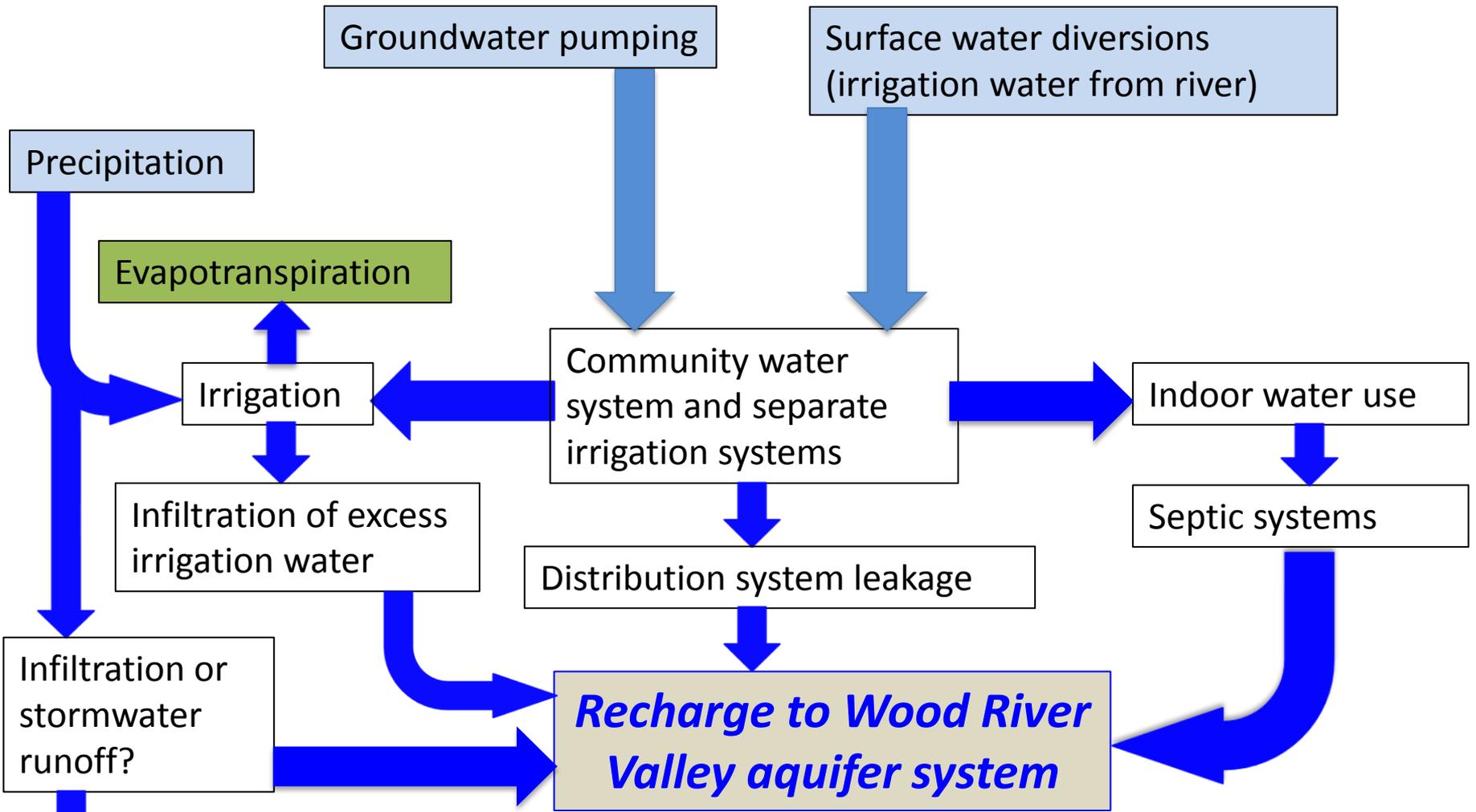


$$\text{Recharge} = \text{diversions} + \text{precip} - \text{wastewater} - \text{ET} - \text{stormwater runoff}$$

# 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



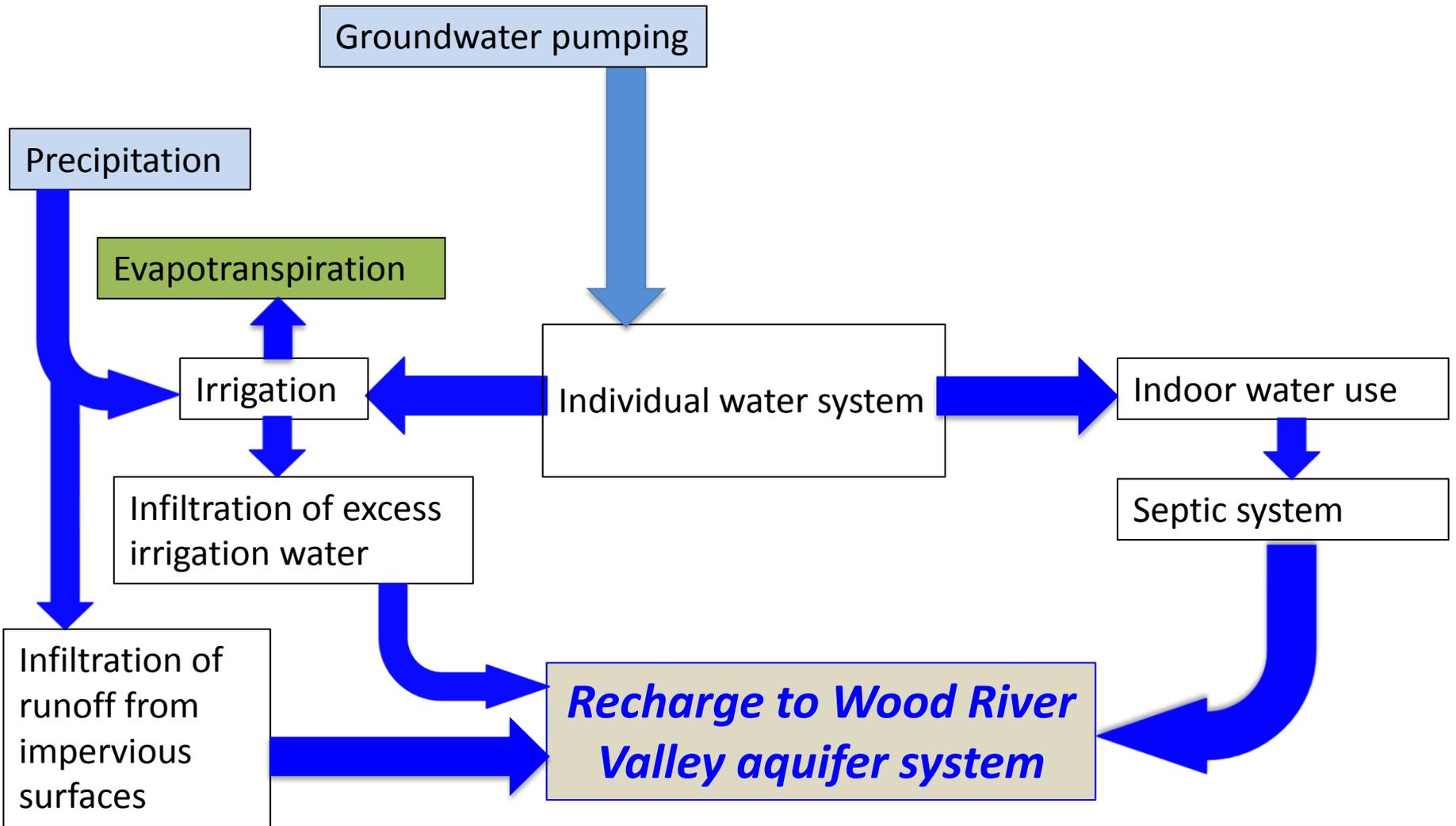
$$\text{Recharge} = \text{diversions} + \text{precip} - \text{ET} - \text{stormwater runoff}$$

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

# 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



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

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