

CSHydro Transition: Legacy to IDC Based Integrated Framework (CSHydro v2)

Mohammad Monirul Hasan (DWR)



Collaborators: Jay Wang, James Polsinelli, Naditha Macaluso, Ruian Dong, Can Dogrul, Z.Q. Richard Chen (DWR)

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Outline of the Presentation

- CalSim 3 Hydrology Framework
 - CSHydro Legacy – A Brief Overview
 - CSHydro v2 – Modeling Framework
 - Simulation Techniques
 - Spatial Domain
 - Input and Output data Format
 - Project Status



CalSim 3 Hydrology Framework

- ❑ Rim Watersheds

- ❑ Valley Floor (WBAs)

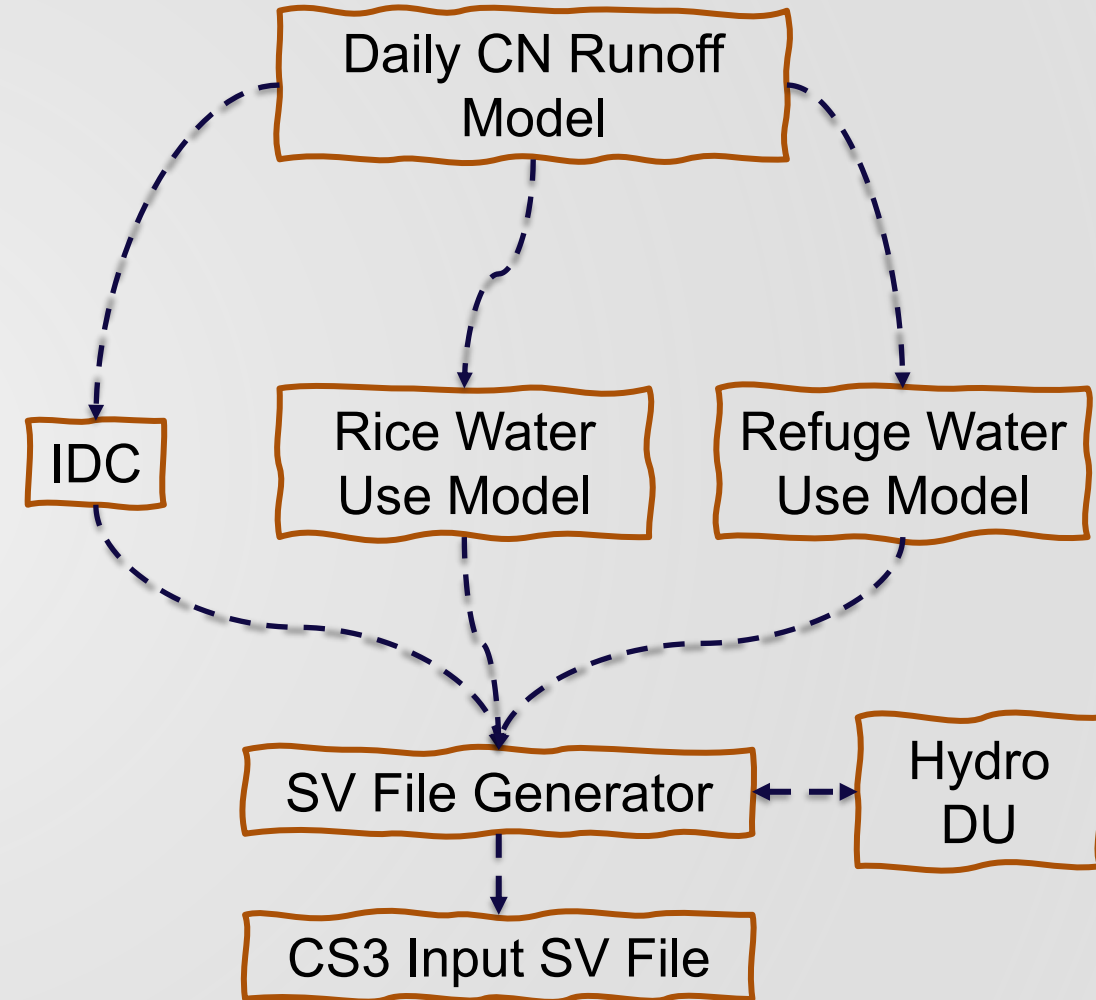
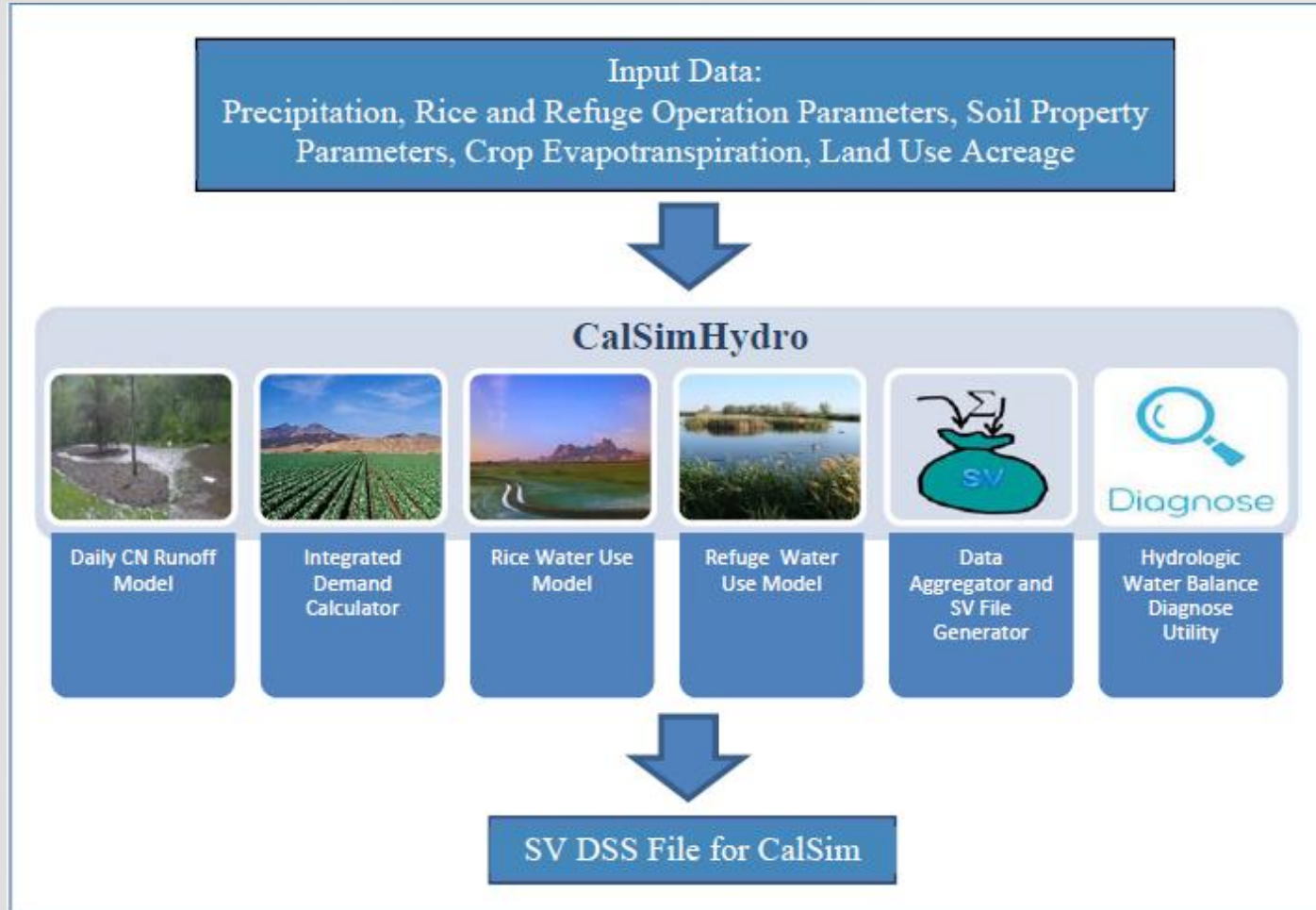
→ CSHydro

- ❑ Delta Subregions

Surface hydrologic modeling system for the valley floor Water Budget Areas (WBAs) of CalSim 3.0.



CSHydro Legacy – A Brief Overview



CSHydro v2 – Modeling Framework?

CSHydro v2.0

| Root Zone Water Balance Framework|

| ET, Runoff, Percolation |
| Soil Moisture Routing |
| Water Demand Calculation |
| Groundwater Interaction |

Unified Outputs

CalSim 3 Input

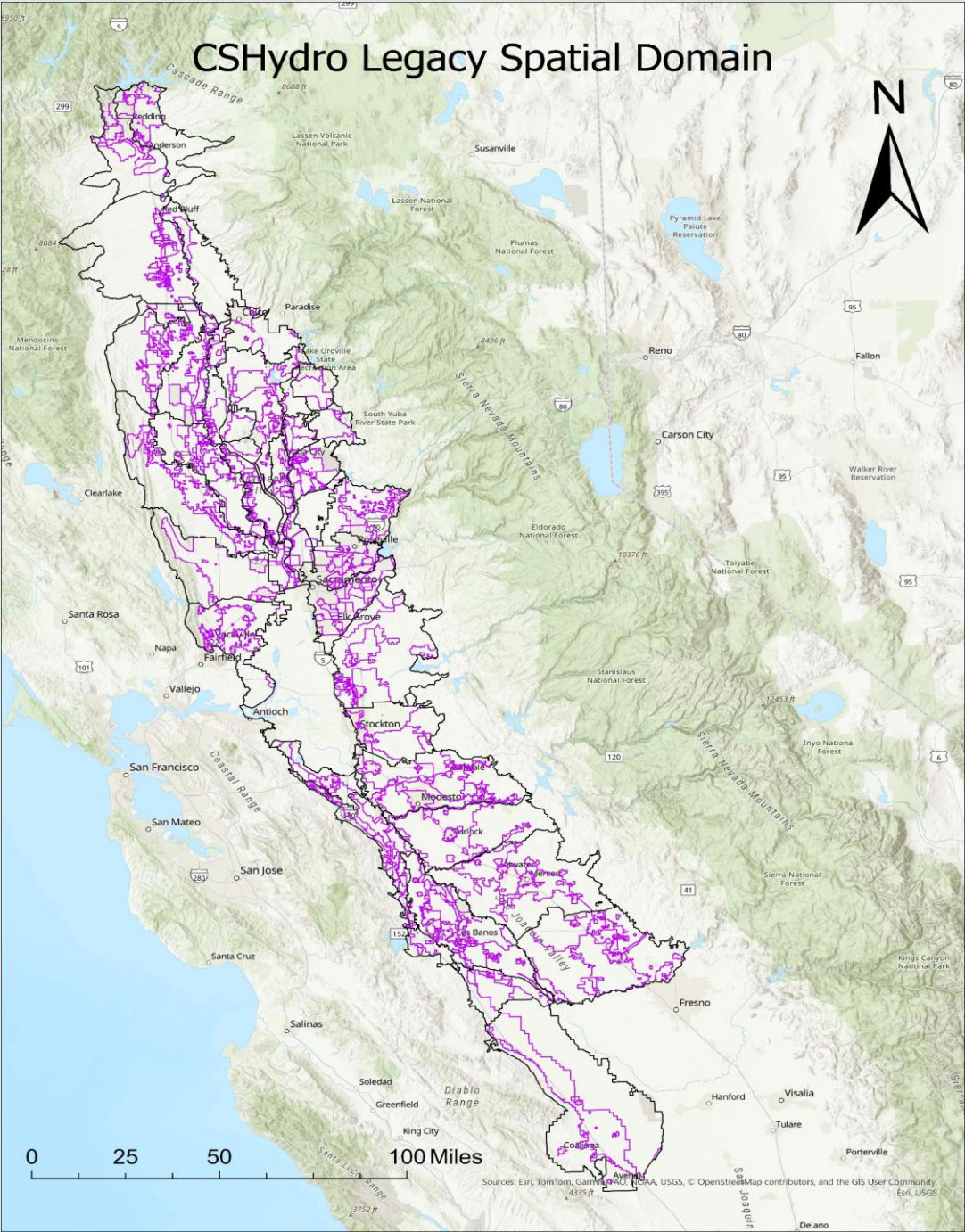


Difference in Simulation Techniques

Aspect	CSHydro Legacy	CSHydro v2.0
Approach	Sequential models	Single integrated simulation engine
Water movement	Computed separately by individual models (runoff, IDC, rice, refuge)	Continuous routing through root zone water balance
Demand calculation	Monthly	Daily
Process interaction	Script coupling , data passing between models	Internal coupling within one framework
Temporal Resolution	Stepwise across sequential components – mixed timesteps	Continuous simulation within each time step; all flow components are simulated with daily timestep, final output accumulated to monthly timestep



Spatial Domain

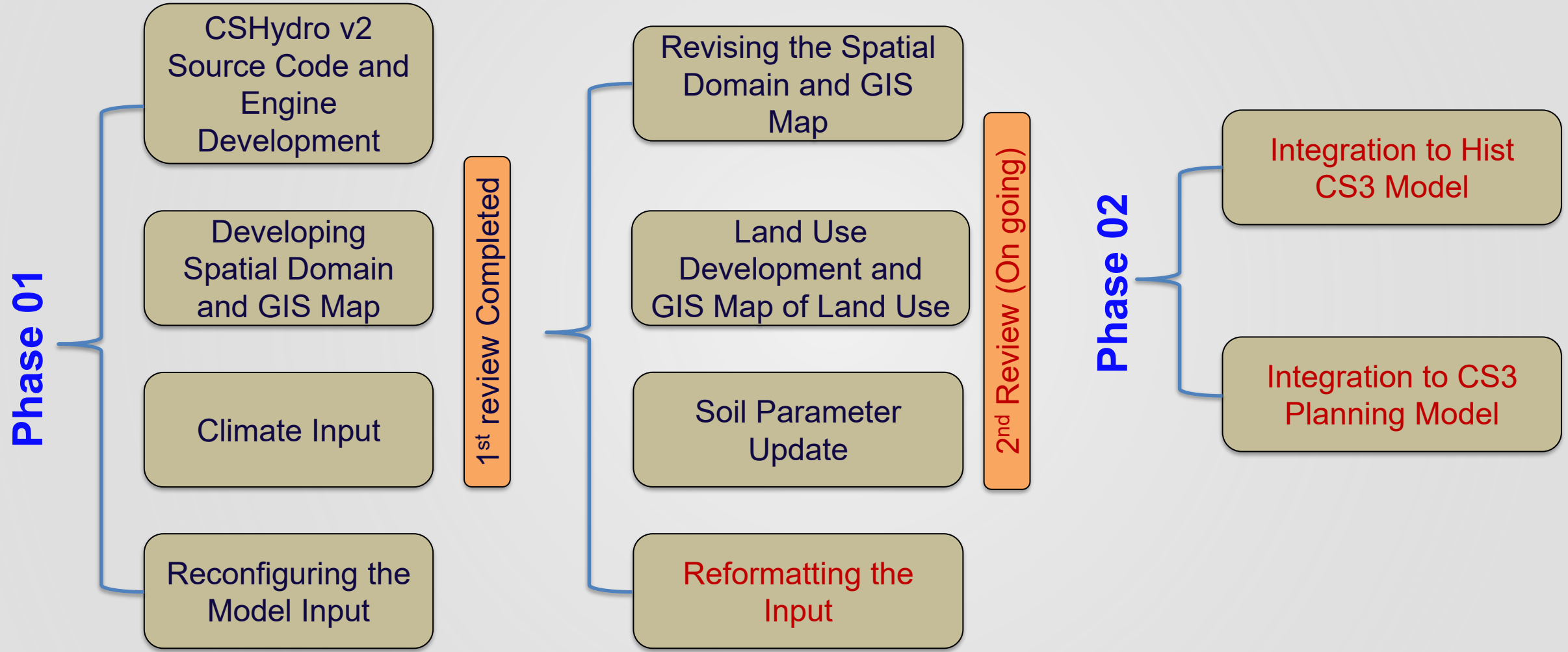


Input and Output data Format

Model	Input Format	Output Format
CSHydro Legacy	ASCII Text / DSS	DSS
CSHydro v2.0	ASCII Text / DSS	HDF5 & DSS



Project Status



Job Opportunity

Hydrology Development Group – Modeling Support Office (MSO)
California Department of Water Resources

Job Control (JC) Number: JC-

Position Type:

Permanent Intermittent (PI)

Application Deadline:

April 27, 2026



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Thank You

Questions?

Mohammad.Hasan@water.ca.gov

Can.dogrul@water.ca.gov

ZhiQiang.Chen@water.ca.gov



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