

SUSTAIN

NeDNR's New Modeling Application

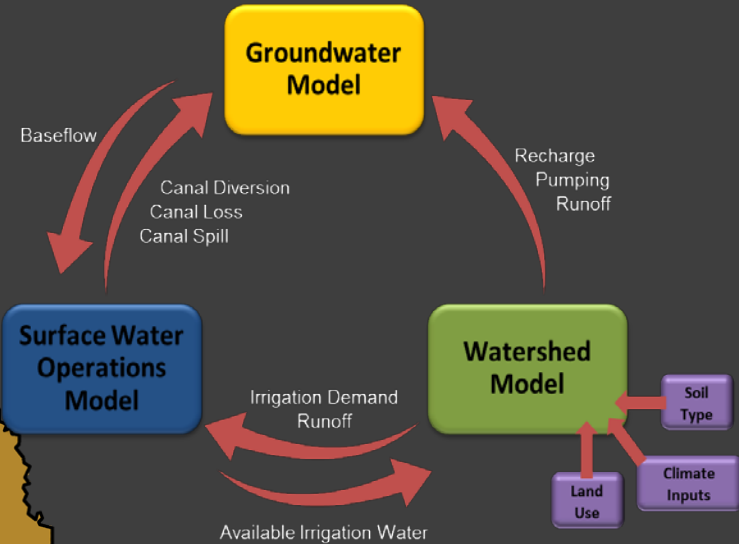
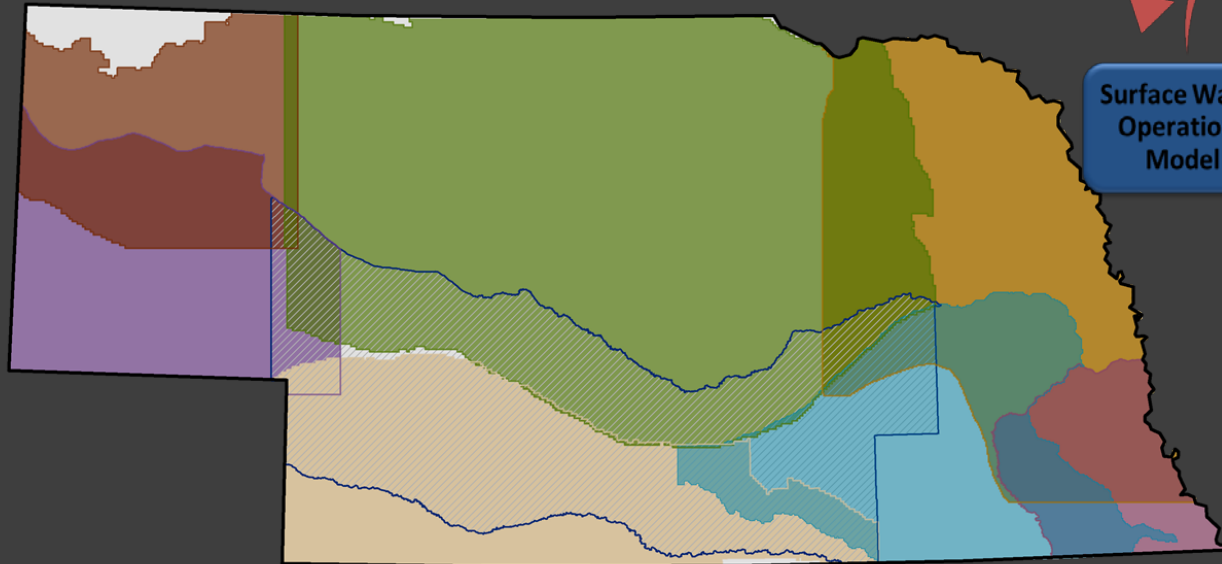
Jennifer Schellpeper, Division Head
Margeaux Carter, Integrated Management Specialist









NEBRASKA

Good Life. Great Water.

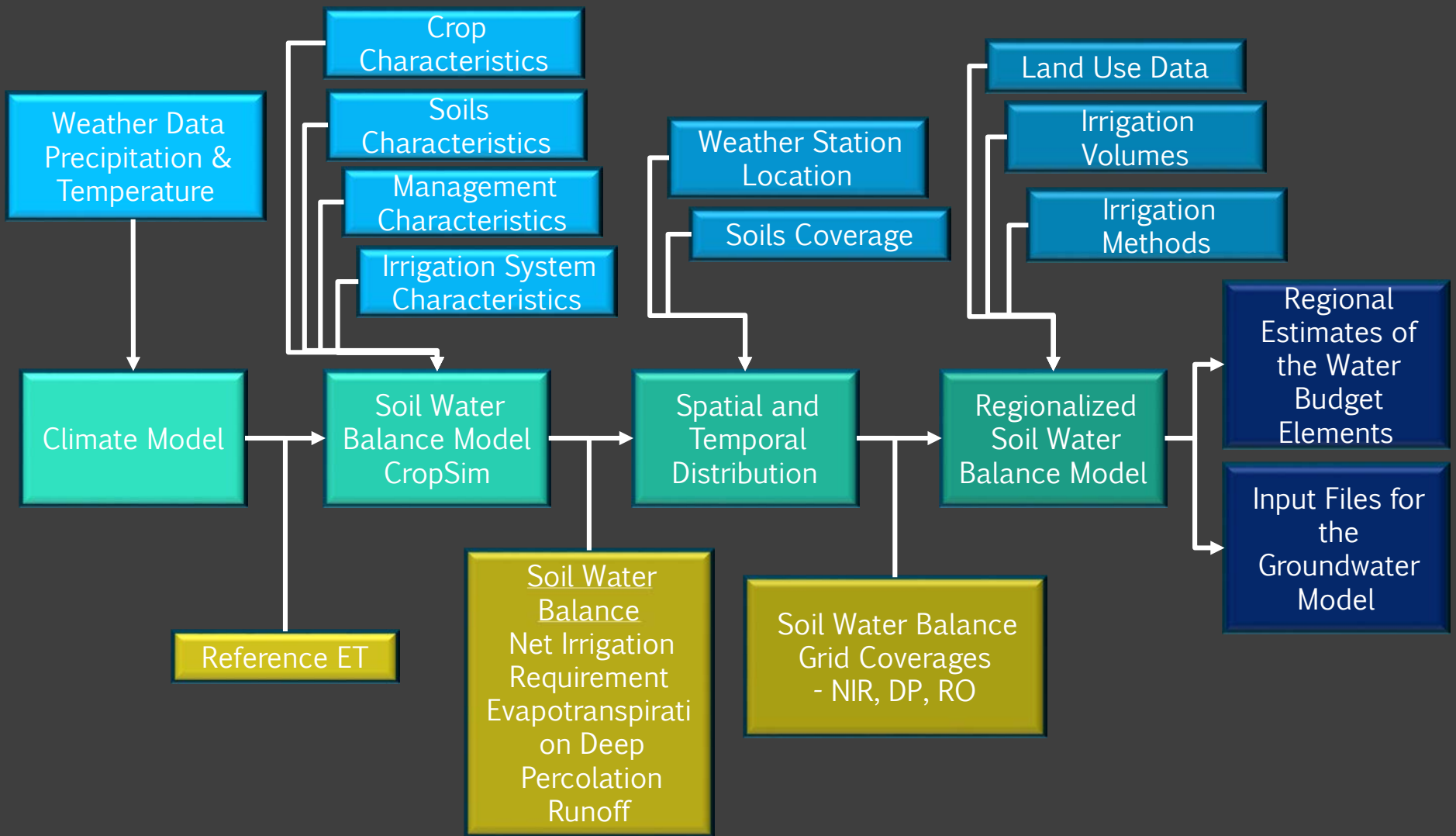
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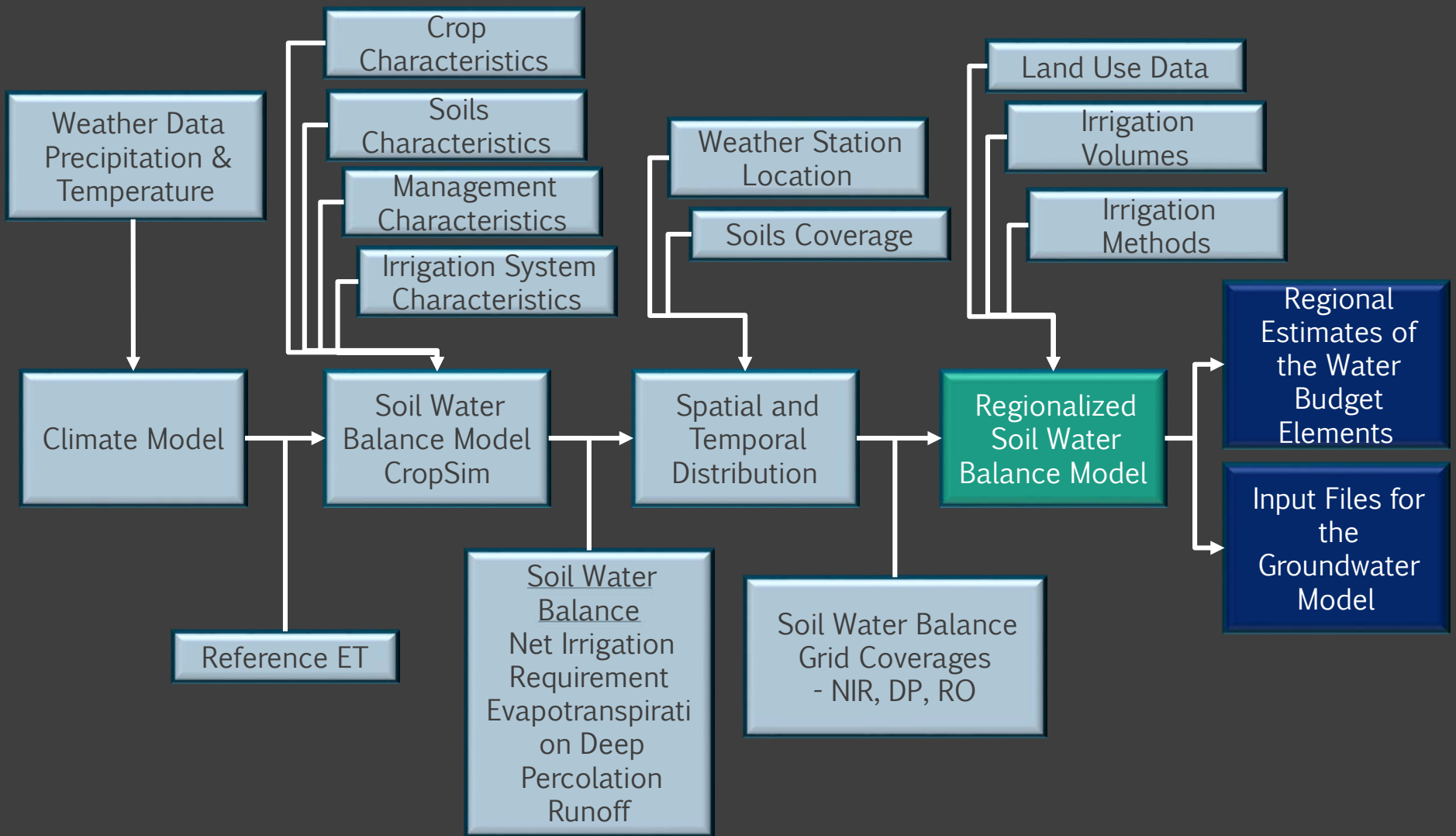
Groundwater Models



- | | | |
|---|--|---|
|  Blue Basin Model |  CENEB Model |  UNW Model |
|  Nemaha Model |  LPMT Model |  WWU Model |
|  COHYST Model |  RRCA Model | |

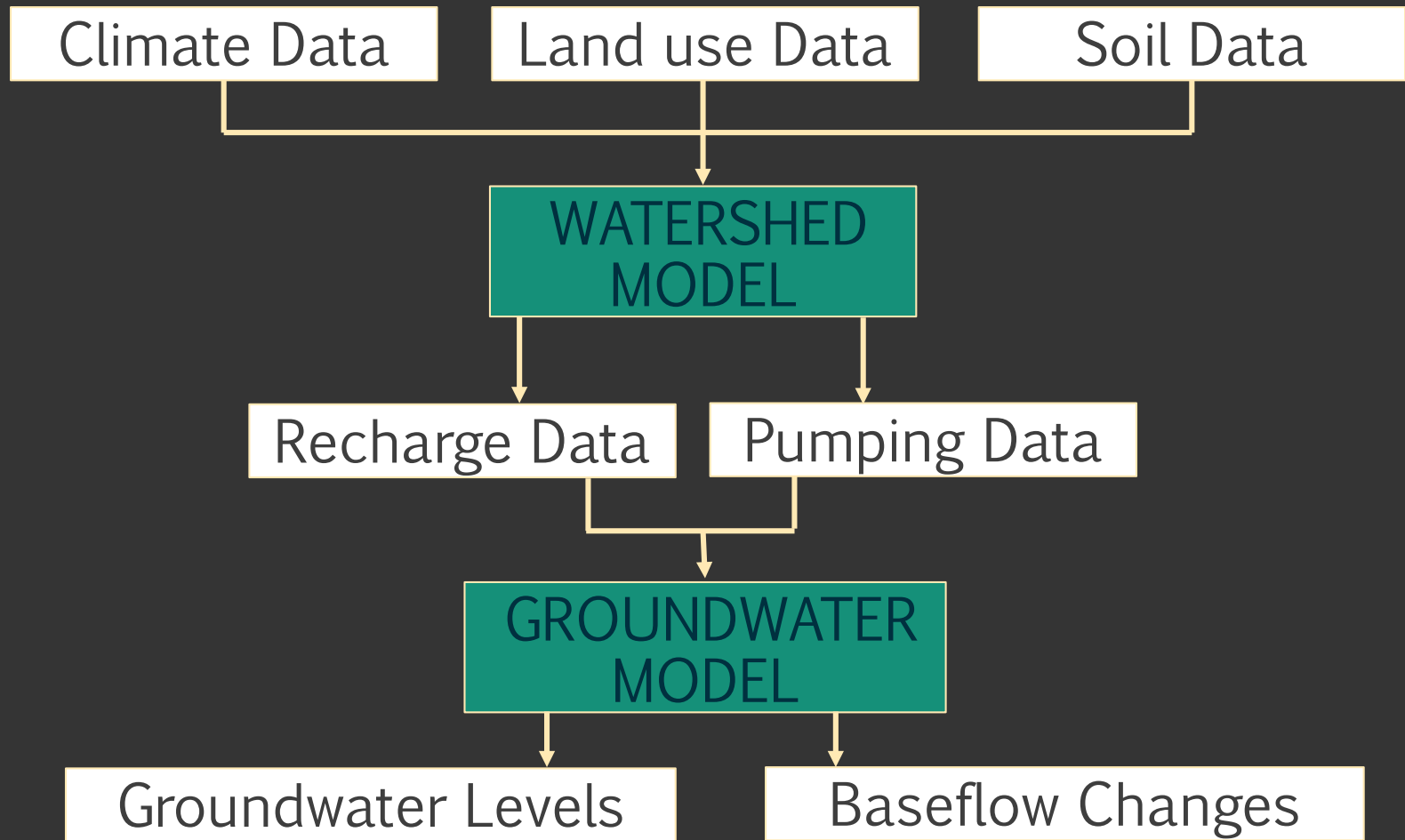
Goal has been to have statewide groundwater modeling tools... we're almost there





SUSTAIN

(Sustainable Use Scenario Tool for Analysis and Informing Nebraskans)



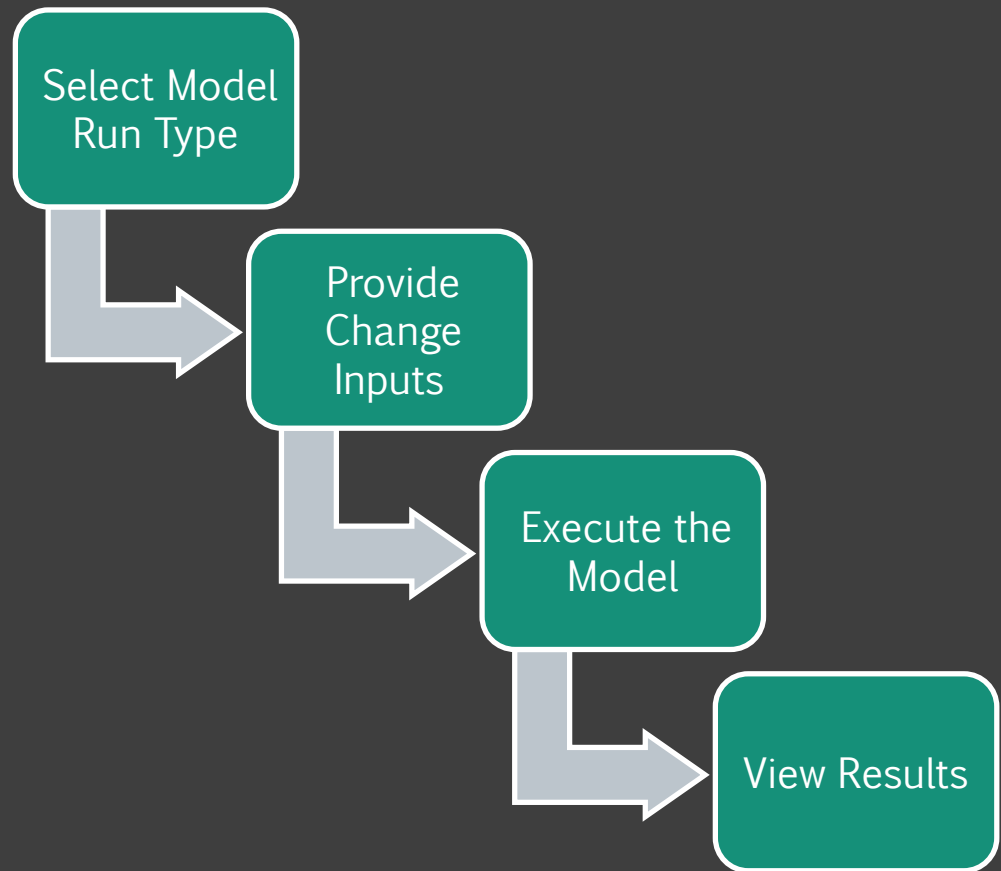
What is SUSTAIN and what does it do?

Utilizes existing groundwater models

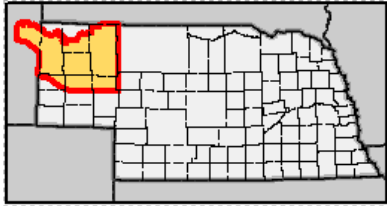
Improve access to watershed model results (land use, pumping, recharge)

GUI for model analysis (recharge and pumping changes)

View results at the county, NRD, or user defined level



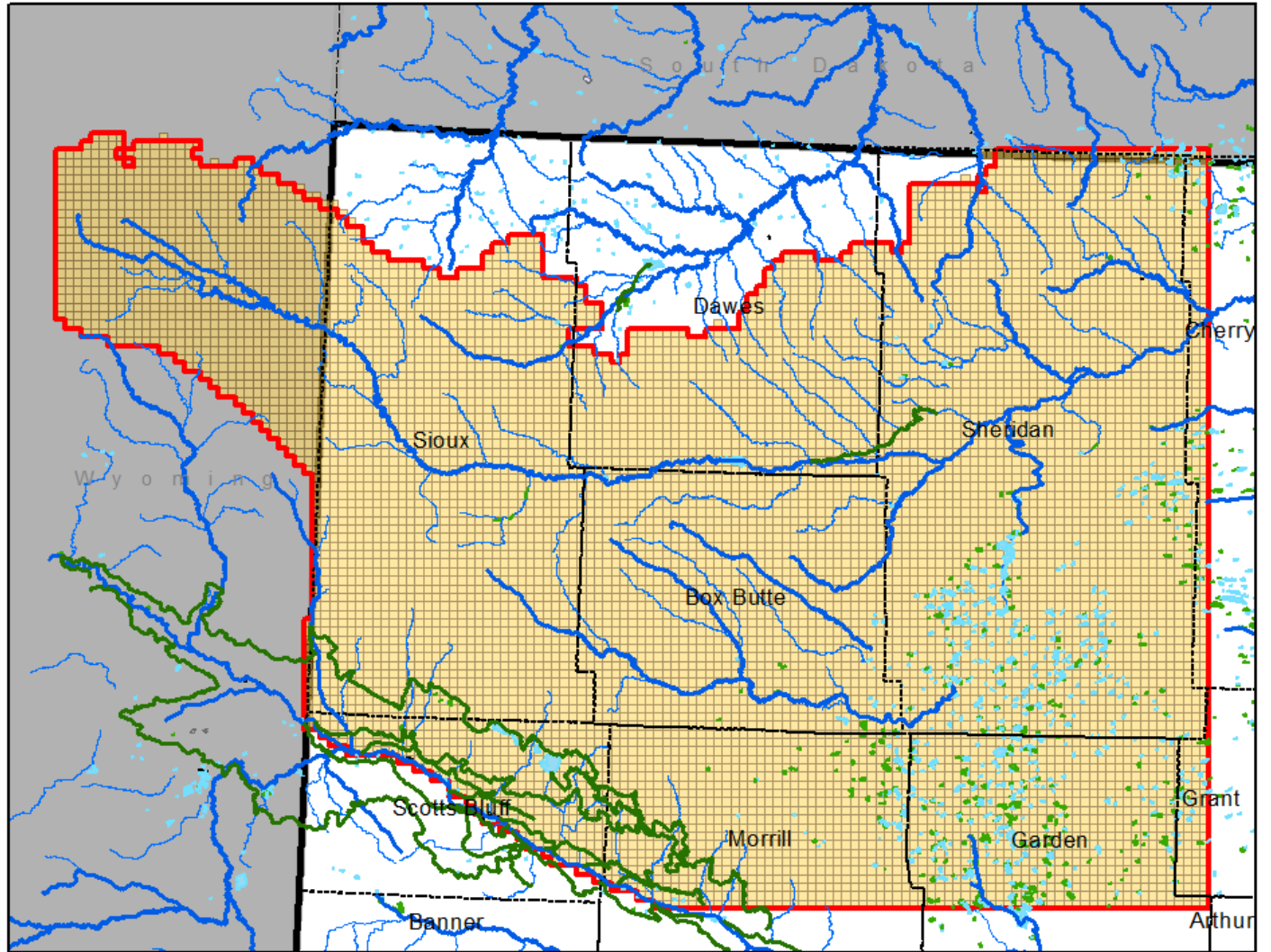
UNW Model



Legend

- UNW Grid Cell
- UNW Model Boundary
- County
- Lake
- Playa
- Reservoir
- Marsh
- Stream
- Canal

0 2 4 8 12 16 20 Miles



SUSTAIN

Live Demo...

Summary

Water Management Uses for SUSTAIN:

Develop Water Budget

- How many irrigated acres are in an area?
- How much pumping occurs in an area?
- Is the pumping in an area more or less than the recharge?

Model Integrated Water Management Scenarios

- Canal recharge projects
- New Wells and Allocations
- Retirements
- Conjunctive management activities

See Water Management Results and Impacts

- Stream Baseflow
- Aquifer Storage Change
- Water Level Difference

Summary

NeDNR Plans for Moving Forward:

- Finalize application
- Document methods and create tutorials for users
- Incorporate additional models
 - Northern Missouri-Tribs Model
 - CeNEB Model
 - COHYST Model
 - Blue Basins Model

Input from potential users is welcome!

NEBRASKA

A yellow swoosh graphic that starts under the 'N', goes under the 'B', 'R', 'A', 'S', and 'K', and ends under the 'A'.

Good Life. Great Water.

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