



Water for America Initiative

Eric J Evenson
Update to the ICWP
October 28, 2008

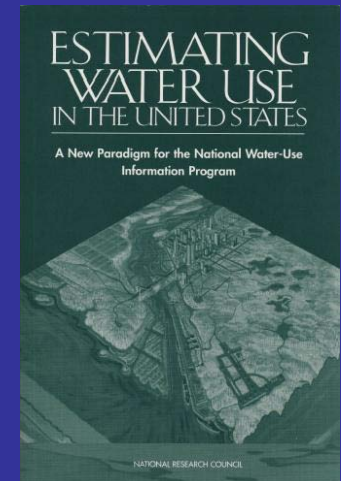
U.S. Department of the Interior
U.S. Geological Survey

The Initiative is proposed for funding at \$9.5M in FY 2009 and will devote the following resources to:

–The Streamgaging Network \$2.75 M

- Add 350 high data rate radios per year \$2.0M
- Re-establish 50 streamgages recently discontinued \$0.75M

–Water Use Science Program and Database Enhancement \$1.05 M



–The Regional and Focus Area Studies
+\$4.2 M

–The National Cooperative Geologic
Mapping Program (NCGMP) +\$1.5 M

- Enhance geologic mapping and hydrogeologic knowledge of the Regions being studied.
- FEDMAP and STATEMAP



Nationwide Study Plans

Study activities will be organized around the 21 Water Resource Regions established in Circular 1223



Regional Studies

- Coverage Entire Nation
- Basis 21 Water Res. Regions
- Scale Large Basins
- Duration Three years
- Products Indicators of Water Availability
Trends in Hydrologic Indicators



Focused Area Studies

- Only Nine Selected Areas
- Designed to inform the nation on ecological needs for water
- Smaller Basins
- Three years
- Relevant Studies and Products to expand our knowledge of how hydrologic variability affects aquatic communities



Indicators of Water Availability

1. Precipitation
U.S. Historical Climatology Network (HCN) dataset is maintained at the National Climatic Data Center.
2. Evapotranspiration
Point source measurements collected by the USGS are stored in project-specific databases, so if you are aware of E.T. measurements being collected by USGS projects, contact the applicable USGS Science Center. The USGS Water Discipline is working with the NWS, the U.S. Forest Service, the Natural Resources Conservation Service and the USGS Geography Discipline to provide databases on E.T. variability across the landscape and over time. Beyond these sources, E.T. values have to be calculated at selected basins.
3. Water in storage in snowpack, icefields, large lakes and reservoirs
Snow Surveys in selected Science Centers, Army Corps and Bureau of Reclamation databases on reservoirs, NWIS ADAPS on large lakes

Indicators of Water Availability

- | | |
|------------------------------------|---|
| 4. Ground-water level indices | NWIS GWSI and ADAPS Systems, State Databases |
| 5. Rates of ground-water recharge | Rates of recharge are calculated from streamgage records after developing baseflow estimates through hydrograph separation. |
| 6. Changes in ground-water storage | NWIS GWSI and ADAPS Systems, State Databases, estimates of specific yield |
| 7. Stream and river run-off | NWIS ADAPS System, hydrograph characteristics separation |
| 8. Stream and river baseflow | NWIS ADAPS System, hydrograph characteristics separation |

Indicators of Water Availability

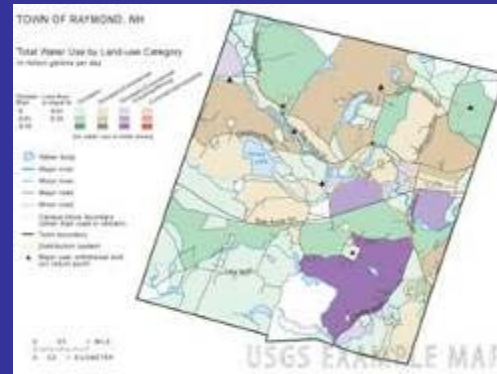
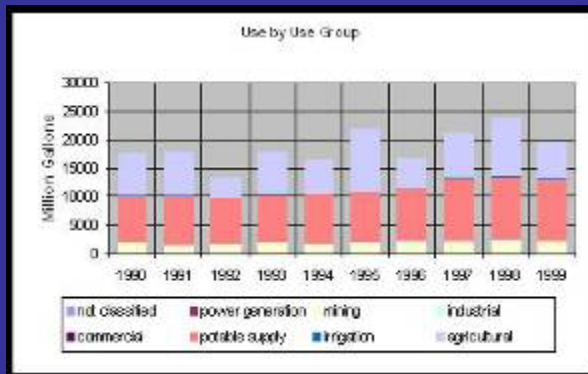
- | | |
|--------------------------------------|--|
| 9. Total water withdrawals by source | NWIS SWUDS System, PSBD database, USEPA- SDWIS database, State Databases |
| 10. Interbasin Transfers | NWIS SWUDS System, PSBD database, State Databases |
| 11. Consumptive Uses | Establish definitions, Utilize both Literature References and some calculation of consumptive use. |
| 12. Return Flows | NWIS SWUDS System, USEPA-PCS database, State Databases |

Enhancing the Nation's Water Use Information

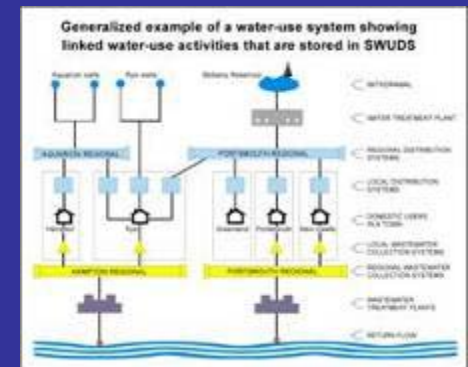
Use Recommendations of the National Research Council Report

- Stratified Random Sampling
- Regression Models

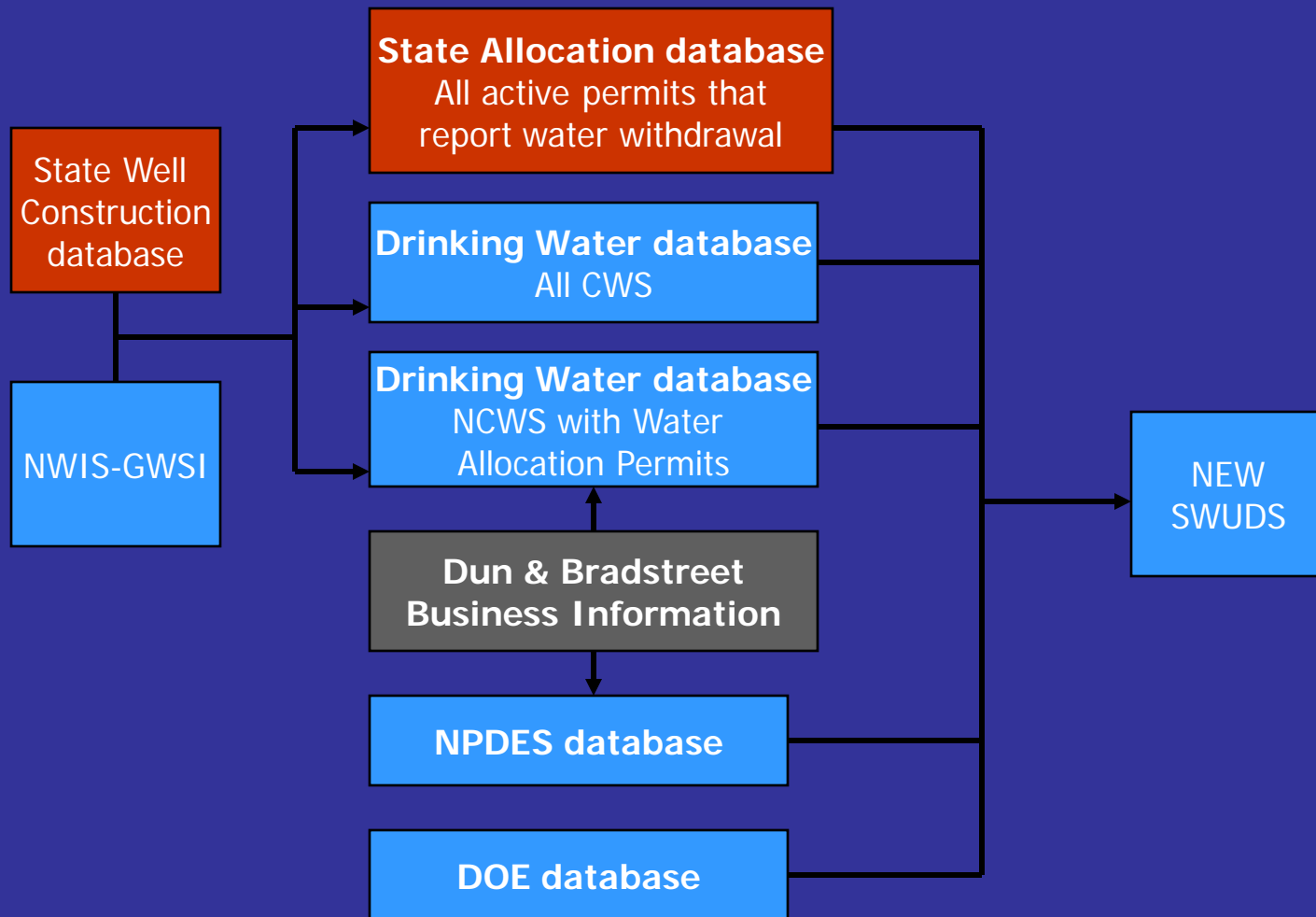
Develop water use characteristics by types of land use



Ability to track water from point of withdrawal thru to return of flow.



Links needed among state and federal databases to develop SWUDS

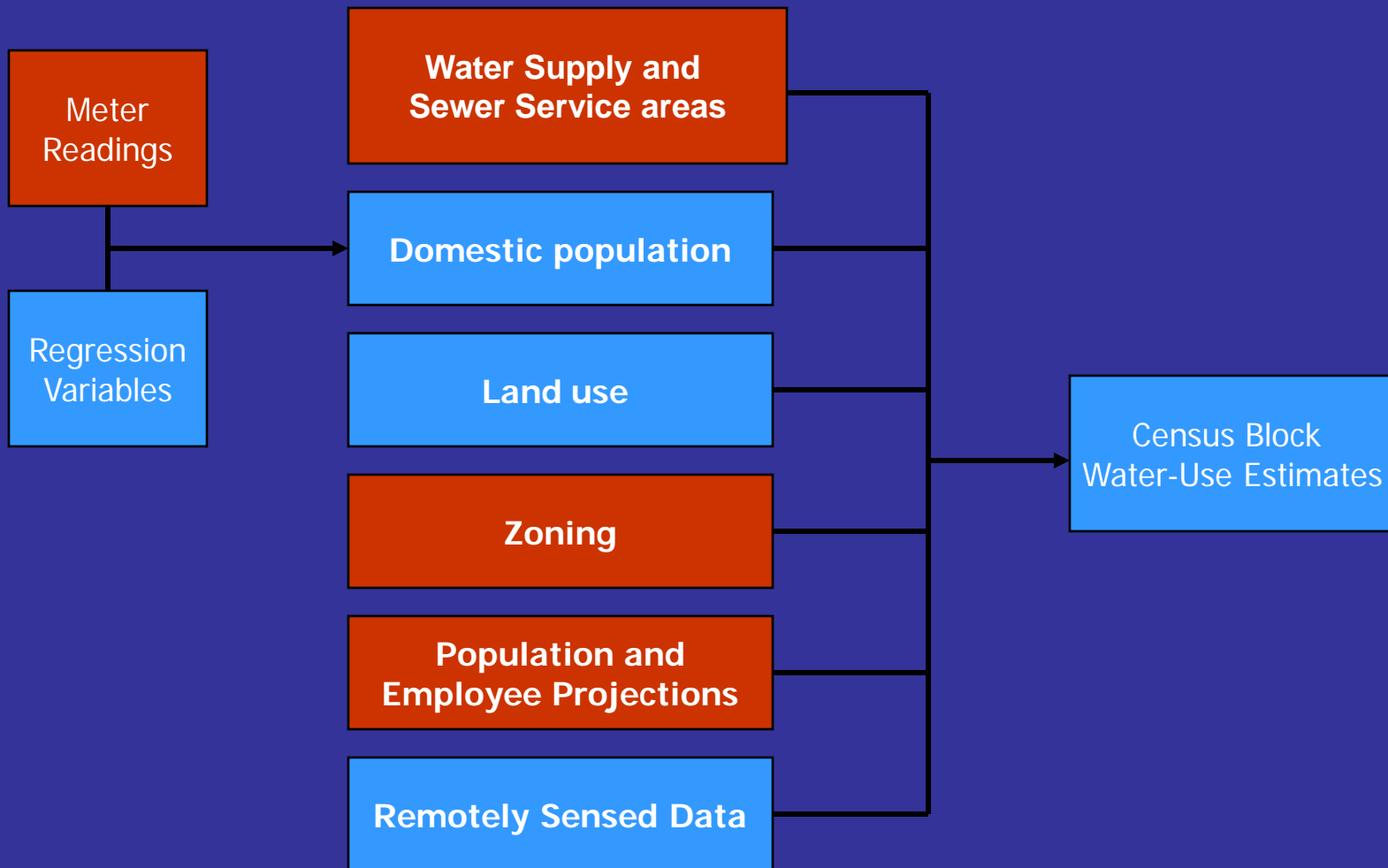


Federal Database with State versions

State Database

Commercial Database

Links needed among state and federal databases to develop CBDE



Federal Database
with State versions



State Database

