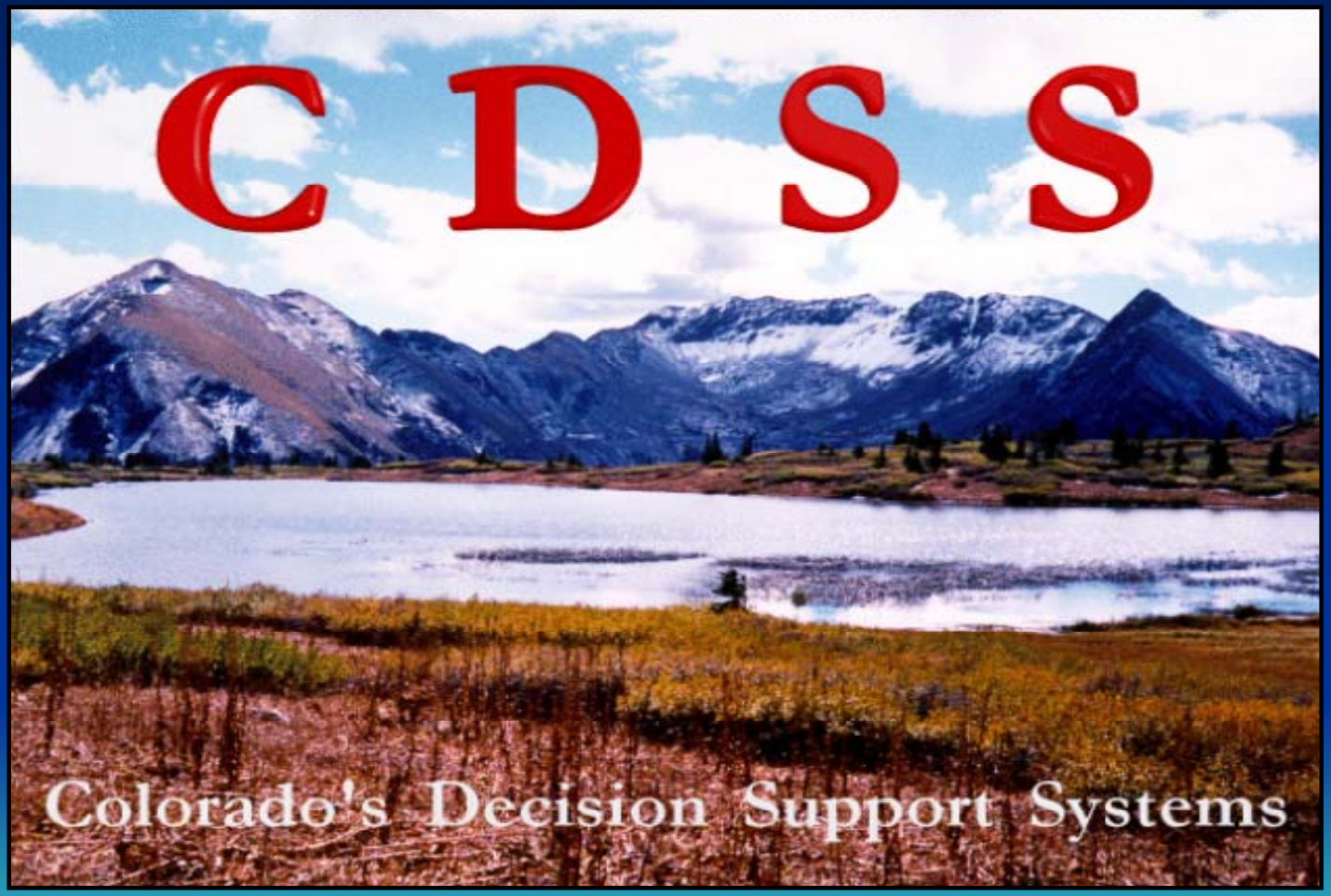
CDSS Tools for Water Administration

- 

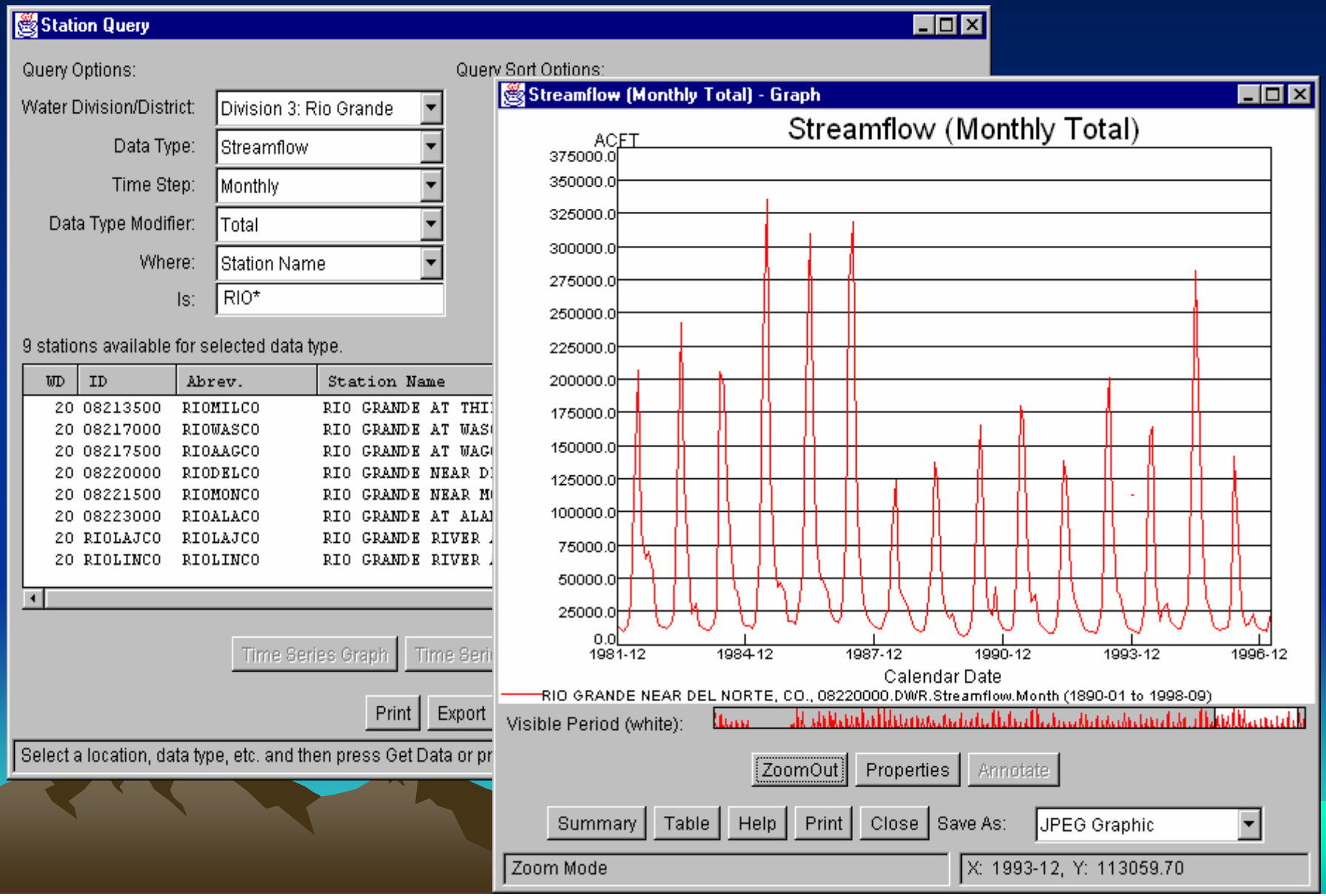
CDSS Tools for Water Administration

- CD's of HydroBase
- GIS Coverages
- StateCU, a Consumptive Use Model
- AWAS, a Stream Depletion Model

HydroBase CD

- Stations
  - Streamflow
  - Climate (temp, ppt., evap.)
- Structures
  - Diversions
  - Reservoirs
  - Instream Flows
  - Wells
- Water Rights
  - Transaction
  - Net
- Ground Water
  - Water Levels
  - Pumping Tests
- Other
  - Agricultural Statistics
  - Crop Growth Coefficients

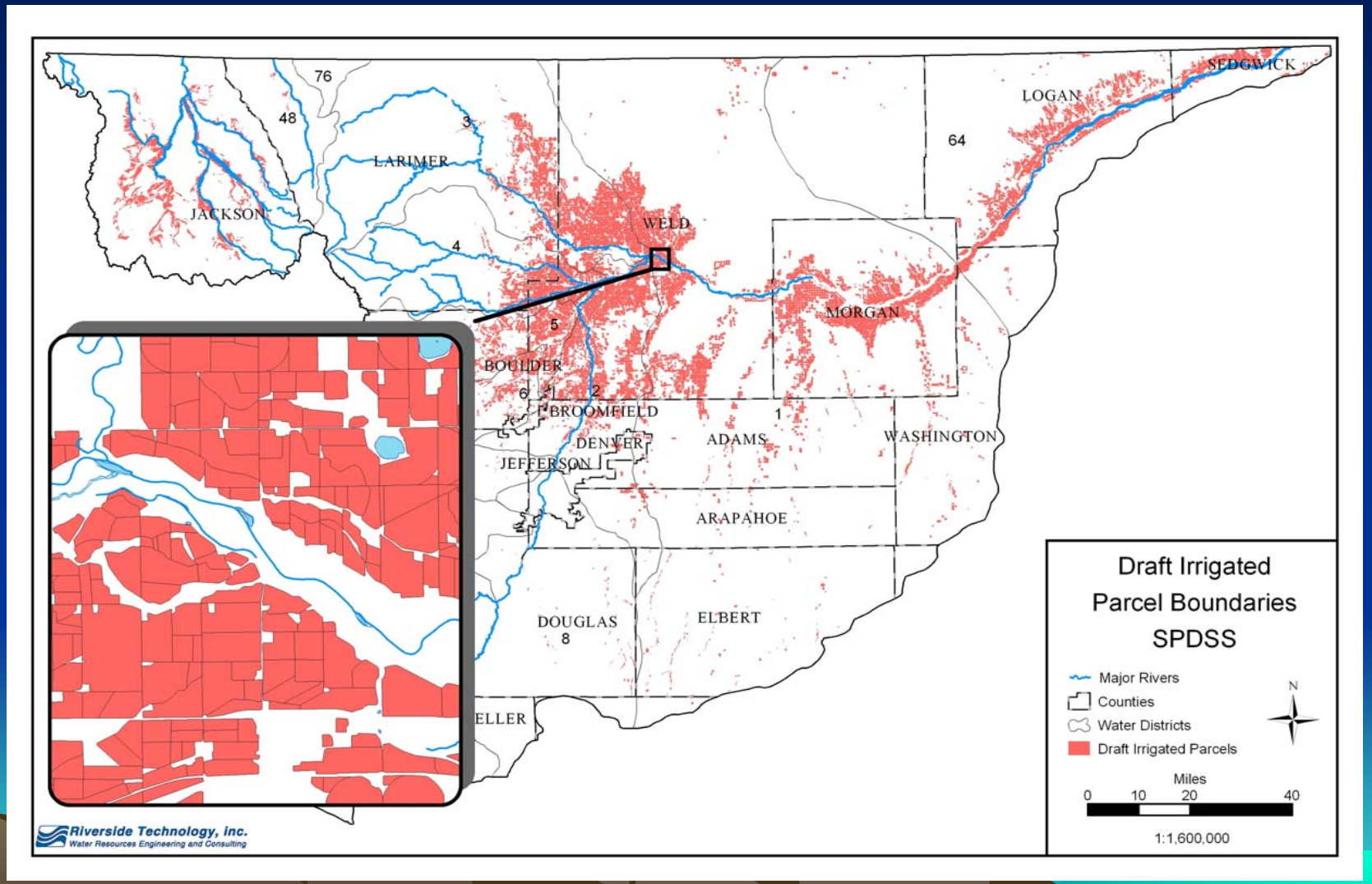
HydroBase CD



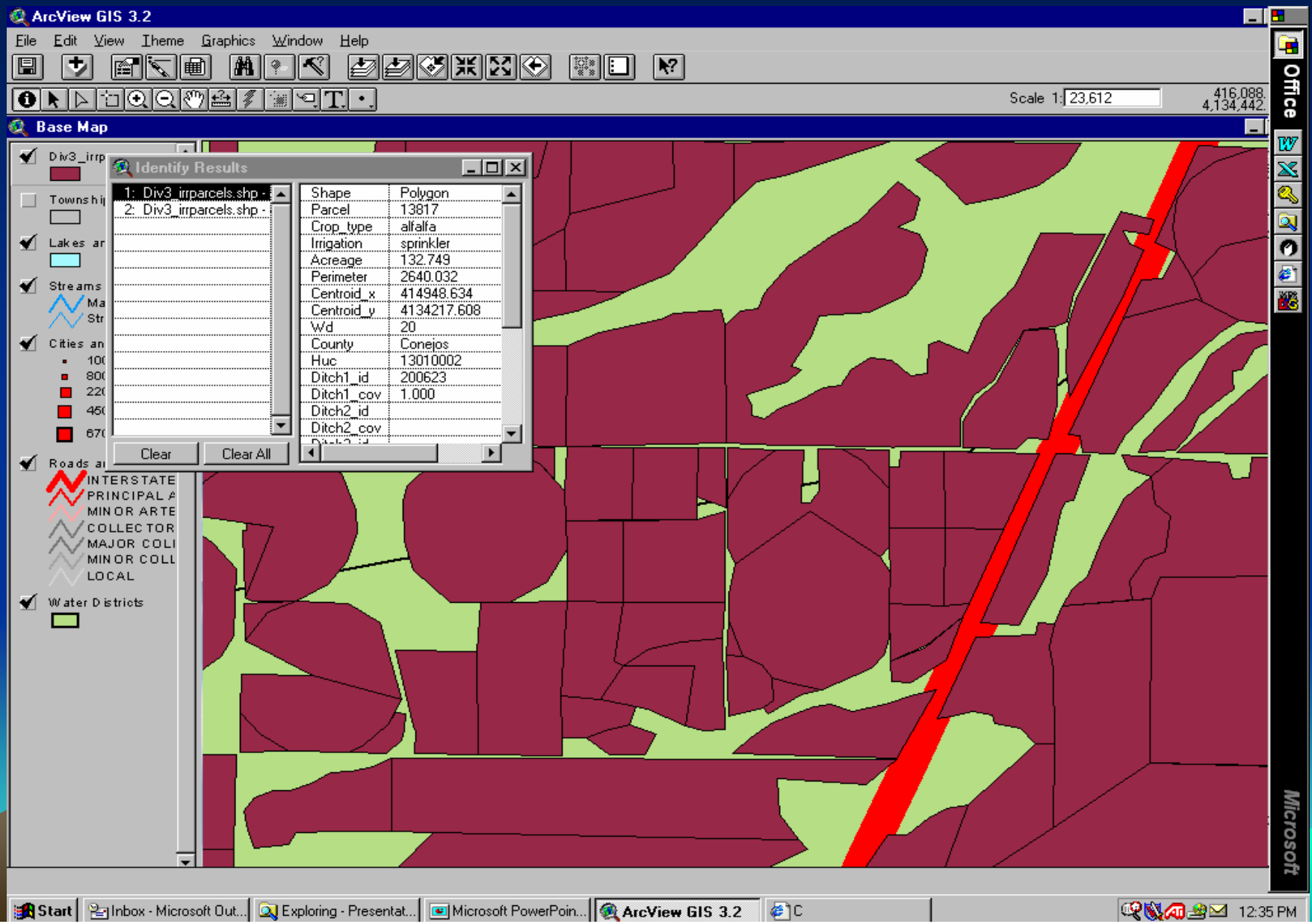
GIS Coverages

- Base Data
  - Hydrology
  - Roads
  - Cities and Towns
  - Public Land Survey (T-R-S)
- Stations
  - Diversions
  - Reservoirs
  - Instream Flows
  - Climate
- Irrigated Acreage
  - Water Source
  - Crop Type
  - Irrigation Method
- Other
  - Average precipitation
  - Average evaporation
  - Canals
  - Drains

GIS Coverages



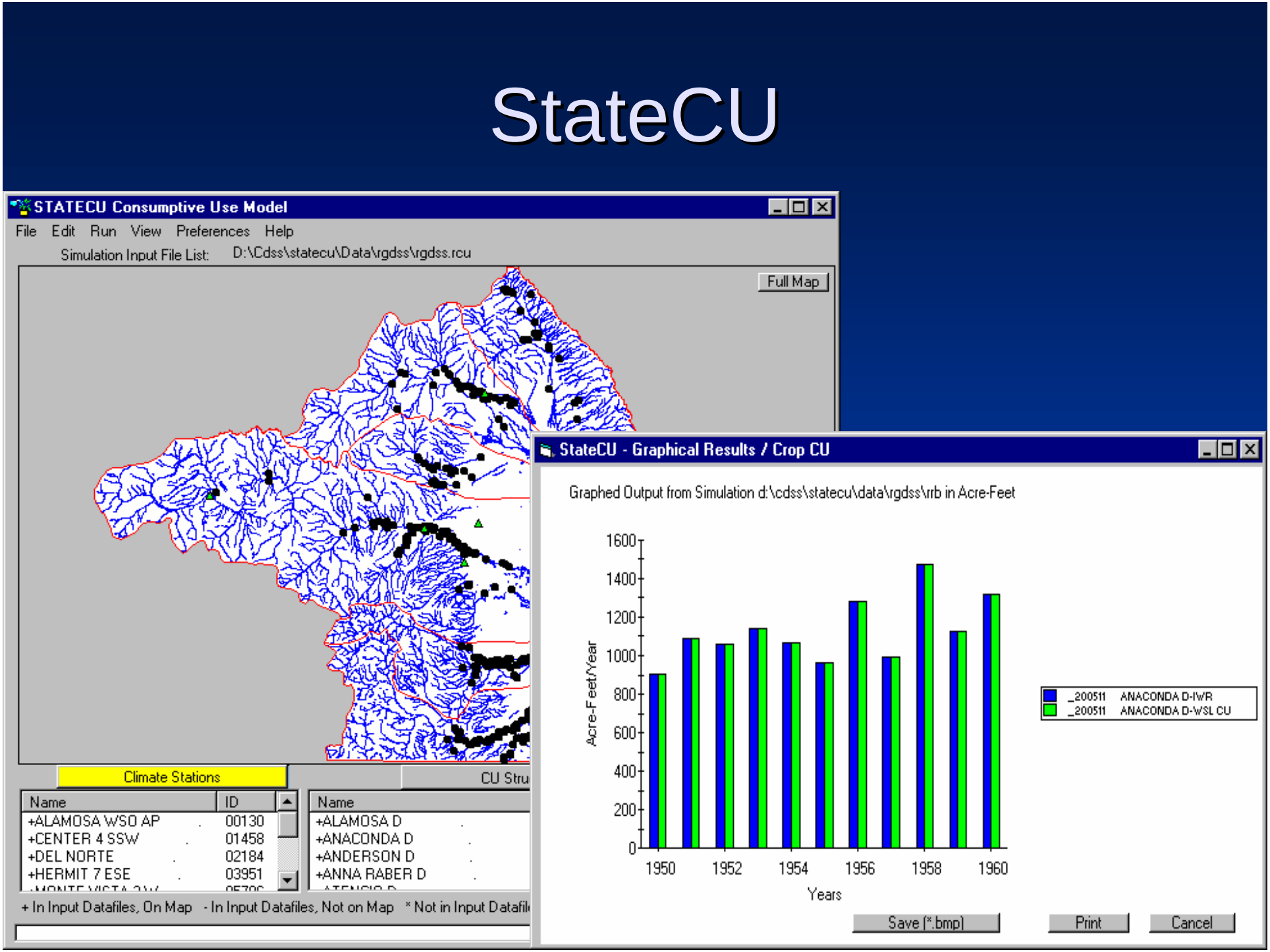
GIS Coverages



StateCU

- Inputs
  - BC data
  - Climate (ppt, temp, frost)
  - Irrigated Acreage
  - Irrigation Method (flood, sprinkler)
  - Diversions
  - Efficiencies (Canal & On farm)
- Outputs
  - IWR (Potential)
  - CU (Water Supply Limited)
  - System Losses / Recharge
  - Pumping Estimates

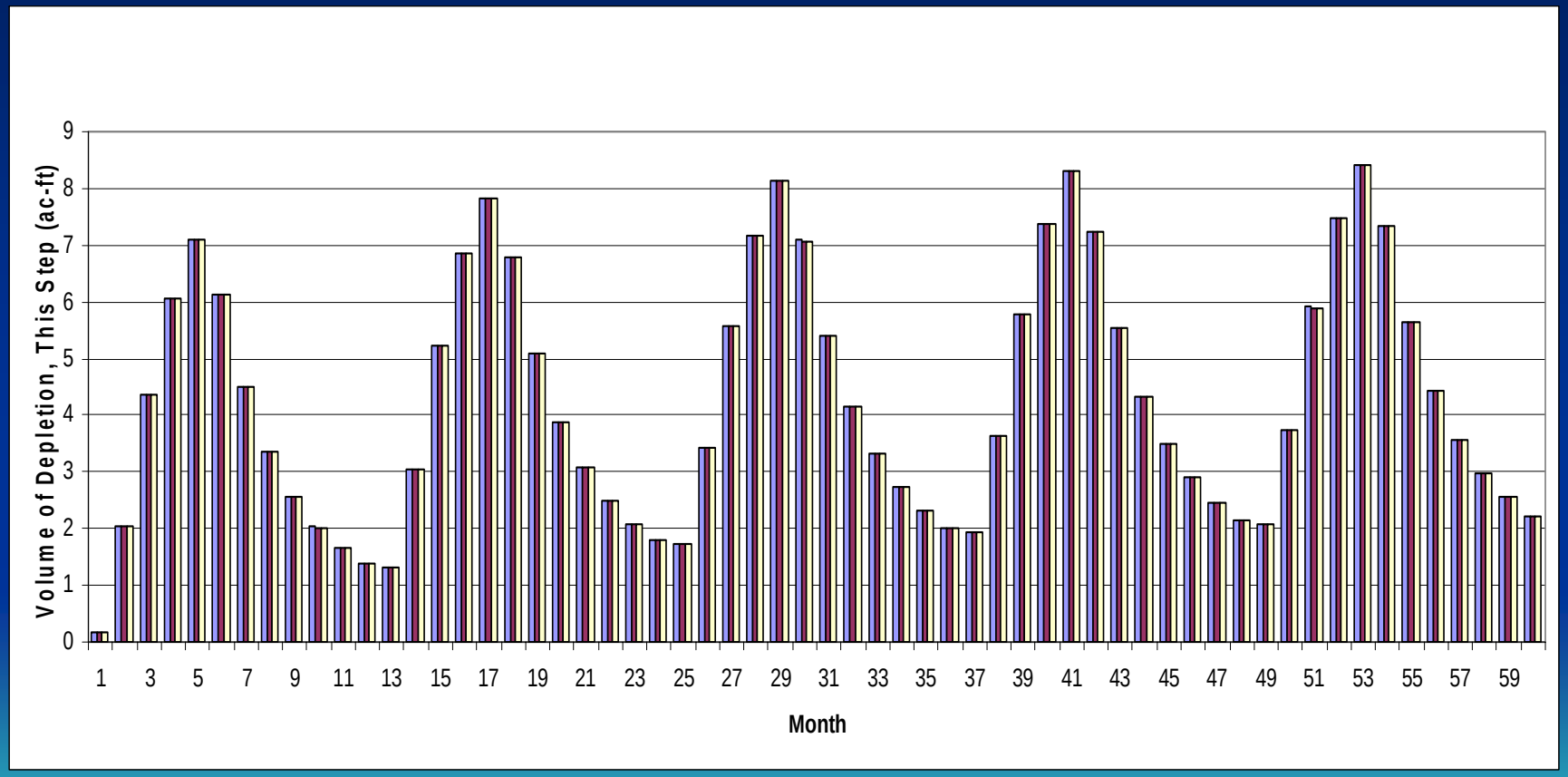
StateCU


STATECU Consumptive Use Model
File Edit Run View Preferences Help
Simulation Input File List: D:\Cdss\statecu\Data\rgdss\rgdss.rcu
Full Map
Climate Stations
CU Stru
Name ID
+ALAMOSA WSO AP 00130
+CENTER 4 SSW 01458
+DEL NORTE 02184
+HERMIT 7 ESE 03951
Name
+ALAMOSA D
+ANACONDA D
+ANDERSON D
+ANNA RABER D
+ In Input Datafiles, On Map - In Input Datafiles, Not on Map * Not in Input Datafil
StateCU - Graphical Results / Crop CU
Graphed Output from Simulation d:\cdss\statecu\data\rgdss\rrb in Acre-Feet
Acre-Feet/Year
1600
1400
1200
1000
800
600
400
200
0
1950
1952
1954
1956
1958
1960
Years
_200511 ANACONDA D-IWR
_200511 ANACONDA D-WSL CU
Save (*.bmp)
Print
Cancel

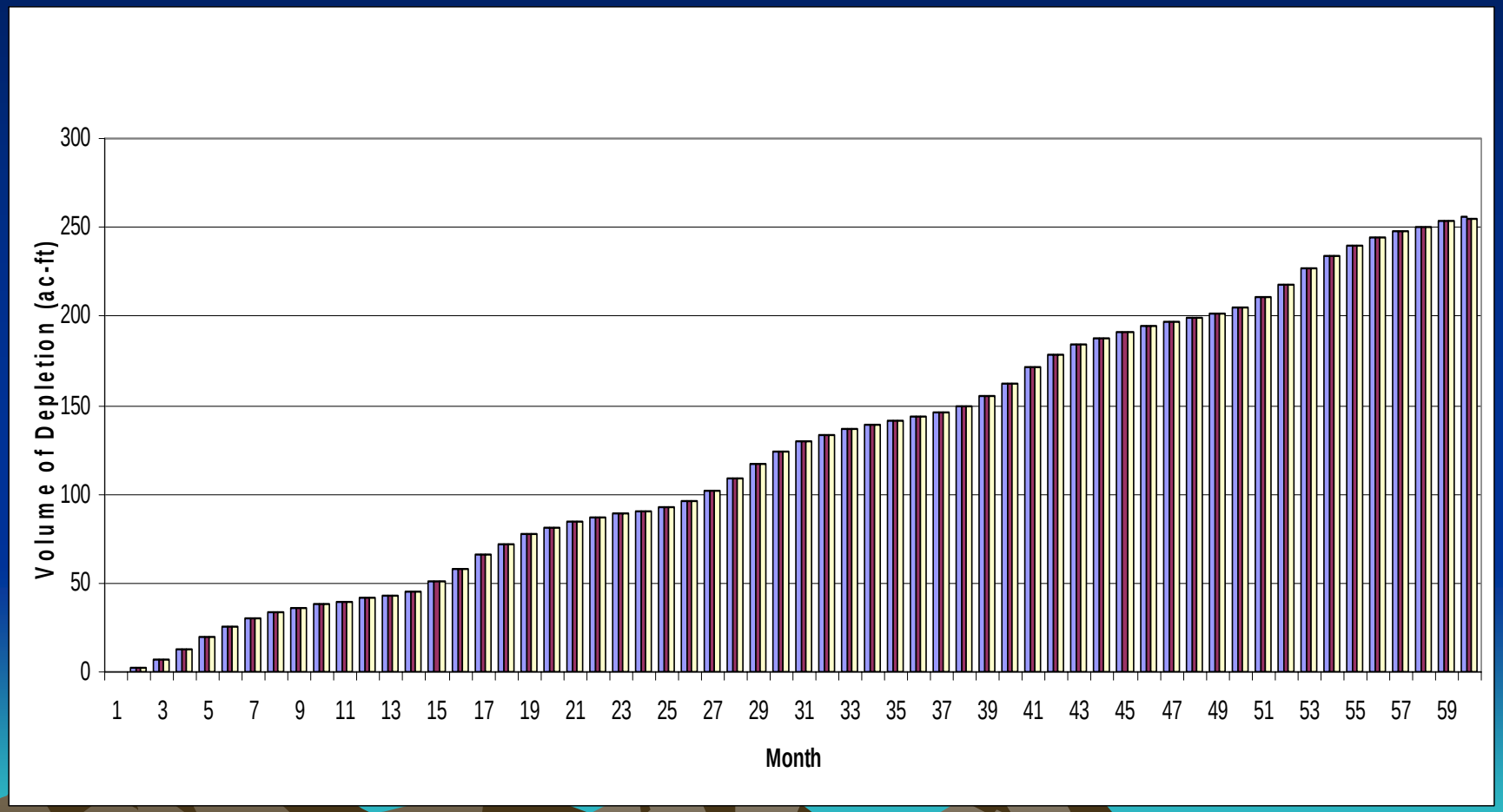
AWAS

- Developed by IDS at CSU
- Time Step
  - Daily
  - Monthly
- Boundary Conditions
  - Alluvial
  - Infinite
  - No Flow
- Year Type
  - Calendar
  - Water
  - Irrigation
- Input Options
  - Pumping Records
  - Net CU
  - Recharge Rate

AWAS
Depletion Vs Time



AWAS
Total Depletion



Summary

- CDSS has developed or adopted a number of tools and Data sets
  - HydroBase CD's
  - GIS Coverages
  - StateCU (CU Model)
  - AWAS (Depletion Model)
- Excellent source of Water Resource Data and Tools