

CLARK, LINCOLN, AND WHITE PINE COUNTIES GROUNDWATER DEVELOPMENT PROJECT EIS

WATER RESOURCES TECHNICAL REVIEW
MEETING 1 – BASELINE DATA
June 23-24, 2005

ANTHROPOGENIC ASPECTS

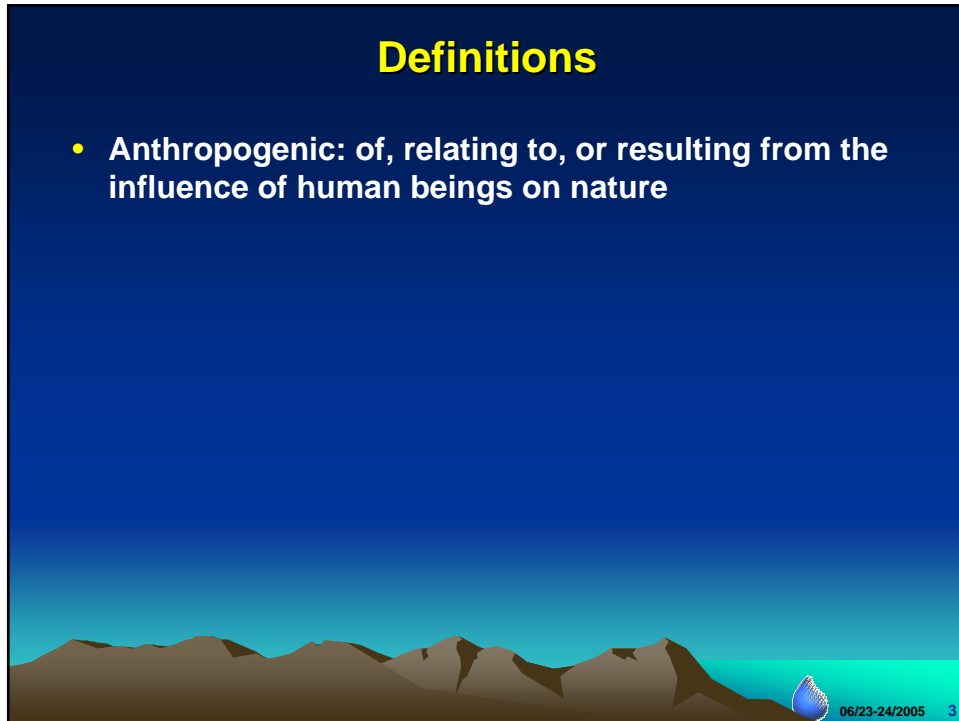
Andrew Burns
Southern Nevada Water Authority

Presentation Organization

- Definitions
- Data types
- Uses of data
- Task specific study area
- Datasets by source
- Data Considerations

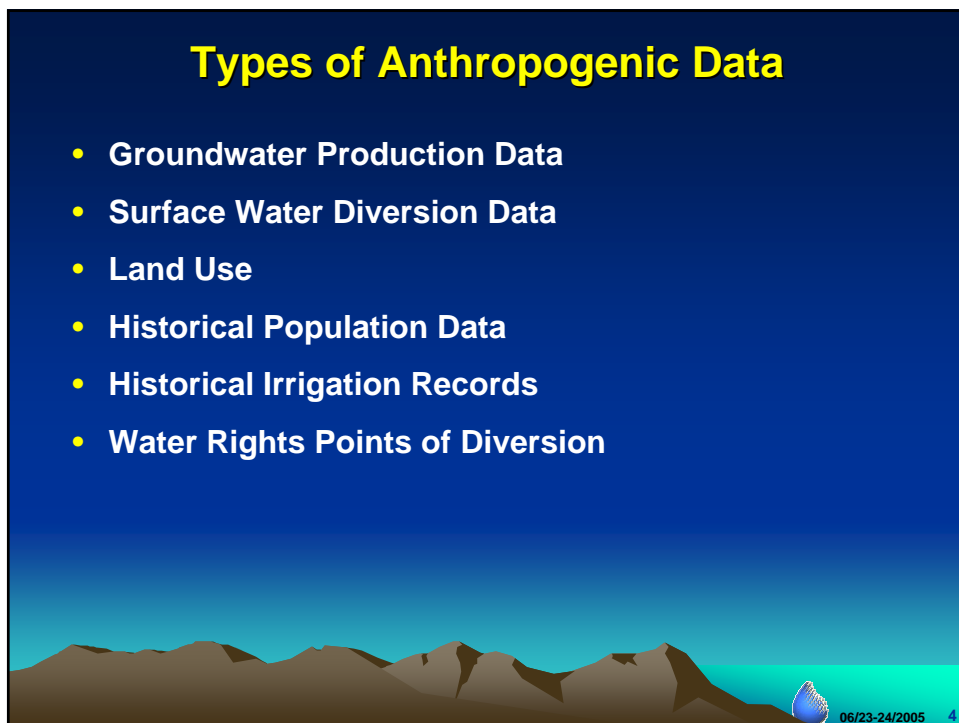
Definitions

- **Anthropogenic:** of, relating to, or resulting from the influence of human beings on nature



Types of Anthropogenic Data

- **Groundwater Production Data**
- **Surface Water Diversion Data**
- **Land Use**
- **Historical Population Data**
- **Historical Irrigation Records**
- **Water Rights Points of Diversion**



Uses of Data

- **Groundwater Production Data**
 - Used to document withdrawal of groundwater from aquifers
- **Land Use**
 - Used to delineate ownership administration / political boundaries
- **Historical Population Data**
 - Used to estimate groundwater withdrawals necessary to support a given population
- **Water Rights Point of Diversion Data**
 - Used to estimate potential amount of groundwater withdrawals from aquifer system and surface water diversions

06/23-24/2005 5

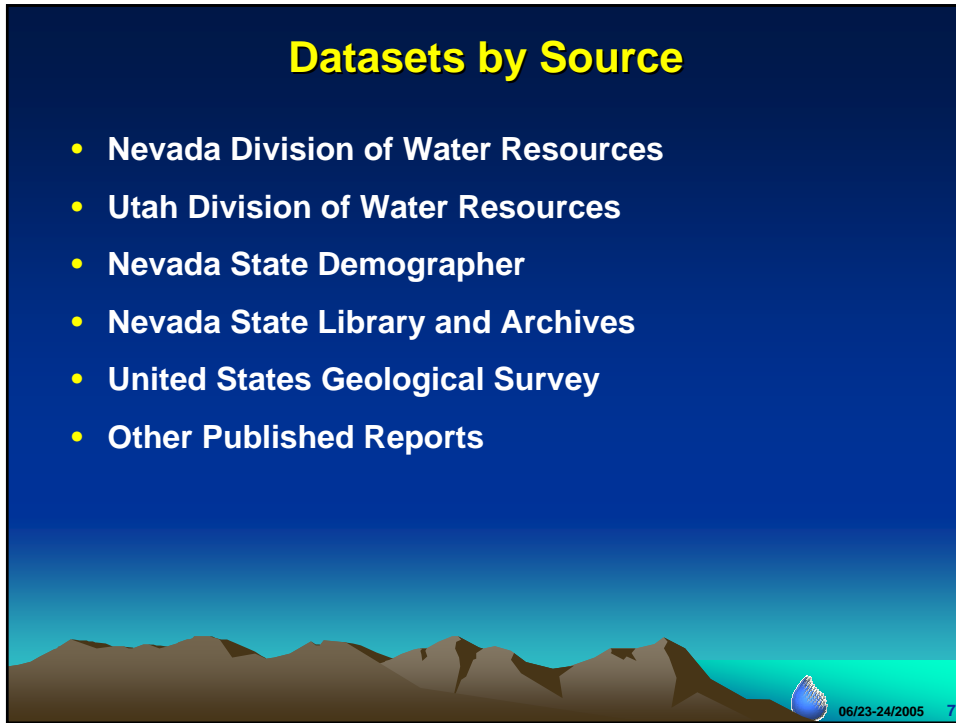
Study Area

- **Reconnaissance level investigation for the “General Hydrologic Study Area”**
- **Detailed level of investigation for hydrographic areas containing irrigated lands**
 - Delineation of irrigated lands
 - Compilation of water rights and population data

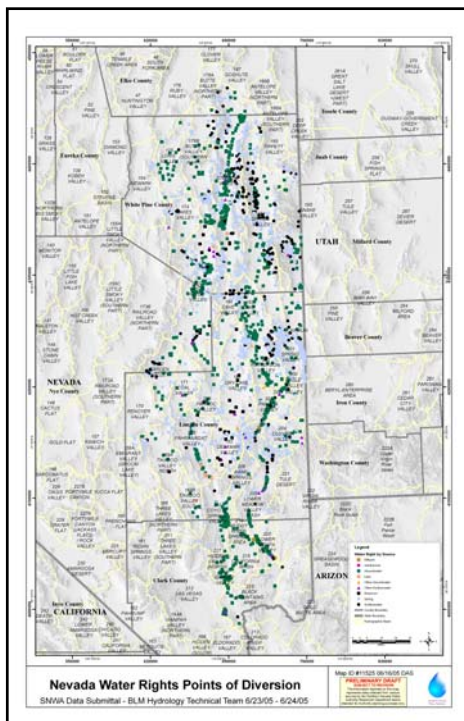
06/23-24/2005 6

Datasets by Source

- Nevada Division of Water Resources
- Utah Division of Water Resources
- Nevada State Demographer
- Nevada State Library and Archives
- United States Geological Survey
- Other Published Reports

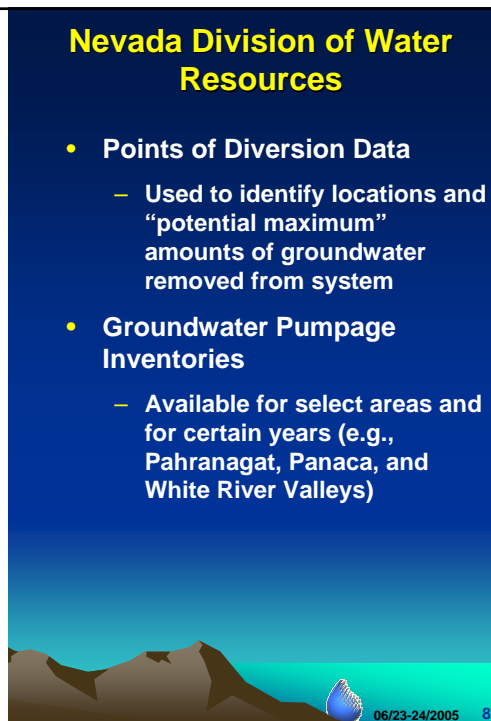


06/23-24/2005 7

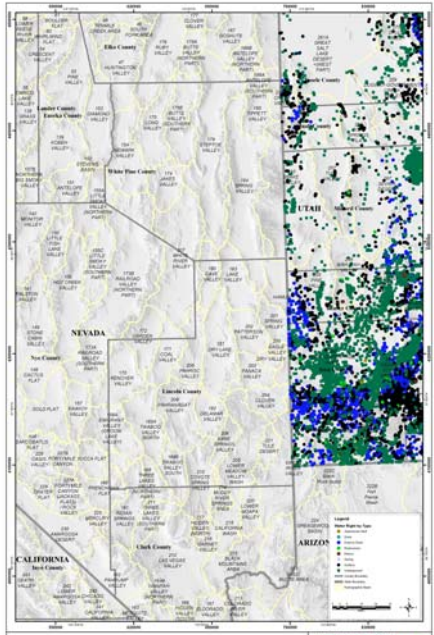


Nevada Division of Water Resources

- Points of Diversion Data
 - Used to identify locations and “potential maximum” amounts of groundwater removed from system
- Groundwater Pumpage Inventories
 - Available for select areas and for certain years (e.g., Pahrnagat, Panaca, and White River Valleys)



06/23-24/2005 8



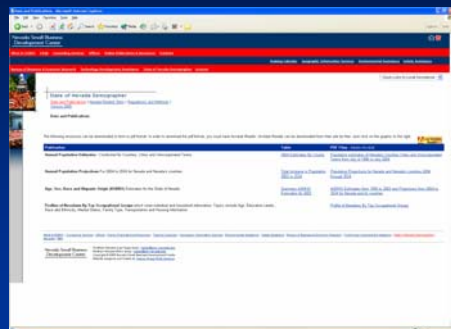
Utah Division of Water Rights

- Points of Diversion
 - Executable zipped shapefile
 - Used to identify locations and “potential maximum” amounts of groundwater removed from system

Utah Water Rights Points of Diversion
SNWA Data Submitted - BLM Hydrology Technical Team 6/23/05 - 6/24/05

06/23-24/2005 9

Nevada State Demographer



- The Nevada State Demographer's Office
 - <http://www.nsbdc.org/demographer/>
 - Contains yearly county, city, and town populations from 1986-2004

06/23-24/2005 10

Nevada State Library and Archives

- Nevada State Library and Archives
 - <http://dmla.clan.lib.nv.us/docs/NSLA/sdc/placenames/>
- Contains Nevada place names populations from 1860-2000



06/23-24/2005 11

United States Geological Survey

- Hutson and others (2004) – “Estimated use of water in the United States in 2000”
 - County-level data for the year 2000
 - Allows for a determination of water use rates for different counties
- Moreo and others (2003) - “Estimated Ground-Water Withdrawals from the Death Valley Regional Flow System, Nevada and California, 1913-1998”
- Lopes and Evetts (2004) - “Ground-Water Pumpage and Artificial Recharge Estimates for Calendar Year 2000 and Average Annual Natural Recharge and Interbasin Flow by Hydrographic Area, Nevada”



06/23-24/2005 12

Data Considerations

- Potential to over estimate groundwater pumpage if water right duties are used
- Population data not available for every year
- Groundwater pumpage inventories not available for all basins and for every year

06/23-24/2005 13

How to Access the Data



- Anthropogenic data found in the “Anthropogenic Aspects” folder
- Data is organized by source discussed in this presentation

06/23-24/2005 14

Questions

Thank you

