



Congressional Research Service

Assisting the Congress with its deliberations and legislative decisions

Repurposing Public Policy Data for Congress

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Outline

CRS

- History
- Relationship to Congress
- Attributes of our work

Repurposing public policy data

- Challenges
- CRS data lifecycle
- Methodology and procedures

Three cases using GIS

- Deriving data from legislation
- Privacy, poverty, and energy
- California water: connecting vs. custody

Potential opportunities to facilitate re-use of data



CRS in Brief

- Legislative branch agency founded in 1914
- Provides comprehensive legislative research and analysis
 - Authoritative
 - Confidential
 - Objective
 - Nonpartisan
 - Timely



Relationship with Congress

- Serves as shared staff to committees and Members
- Expert assistance at every stage
 - Early considerations
 - Committee hearings
 - Floor debates
 - Oversight of enacted laws



Authoritative

- Services and products are authoritative
- Rigorous research methodologies
- Nonpartisan
- Assumptions explained and justified
- Primary resources used whenever available
- Document and evaluate research sources

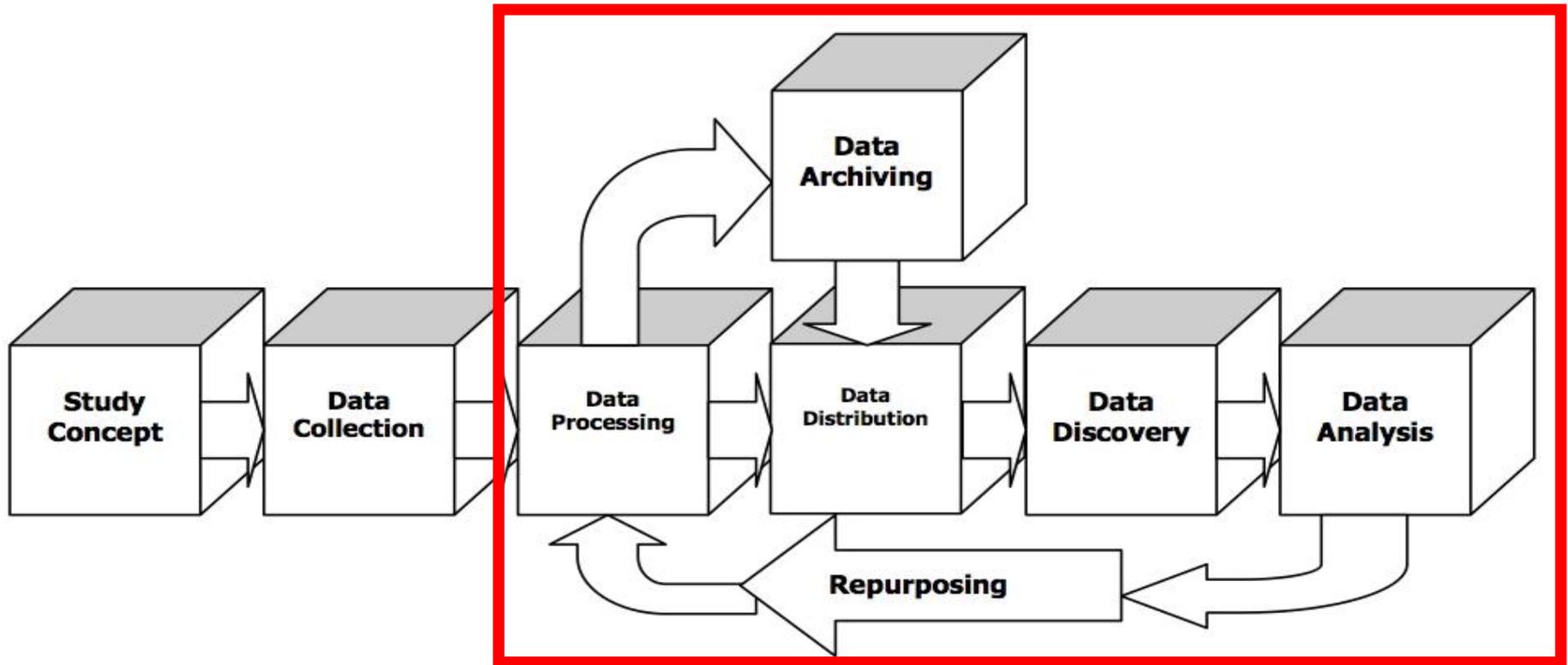


Data Repurposing for Congress: Challenges

- Hundreds of analyses per year
- Tight deadlines
- Repurposing unfamiliar datasets
- Data & survey privacy issues
- Unique questions, unique solutions
- Combined Data from
 - Federal, local, state
 - Commercial sources
 - Non-governmental organizations
 - International data



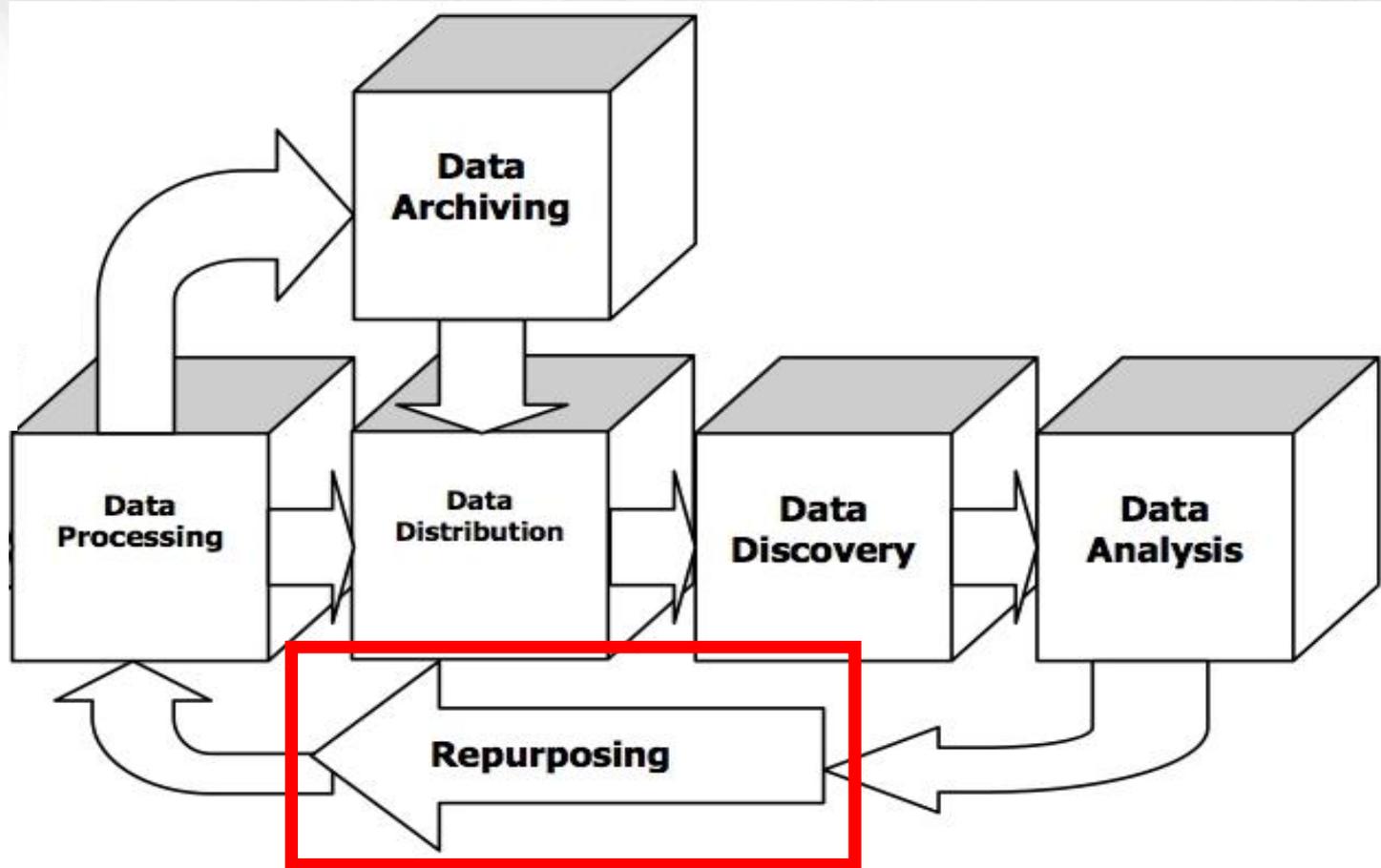
LC Strategic Plan – Annual Objective 11e and the CRS Data Use Model



Source: <http://www.iassistdata.org/files/images/DDlifecycle.jpg>



CRS Data Use Model



Source: <http://www.iassistdata.org/files/images/DDlifecycle.jpg>



How Data/Geospatial Analysis Can be Helpful

- Conveys complex legislative issues simply
- Reveal consequences, impacts otherwise concealed
- Members of Congress represent a population within a geography
 - Policy issues relate spatially to the Member's political geography: either a state or a district
 - Geography can identify shared public policy interests
 - Legislation with a geographic impact does not always precisely reference that geography



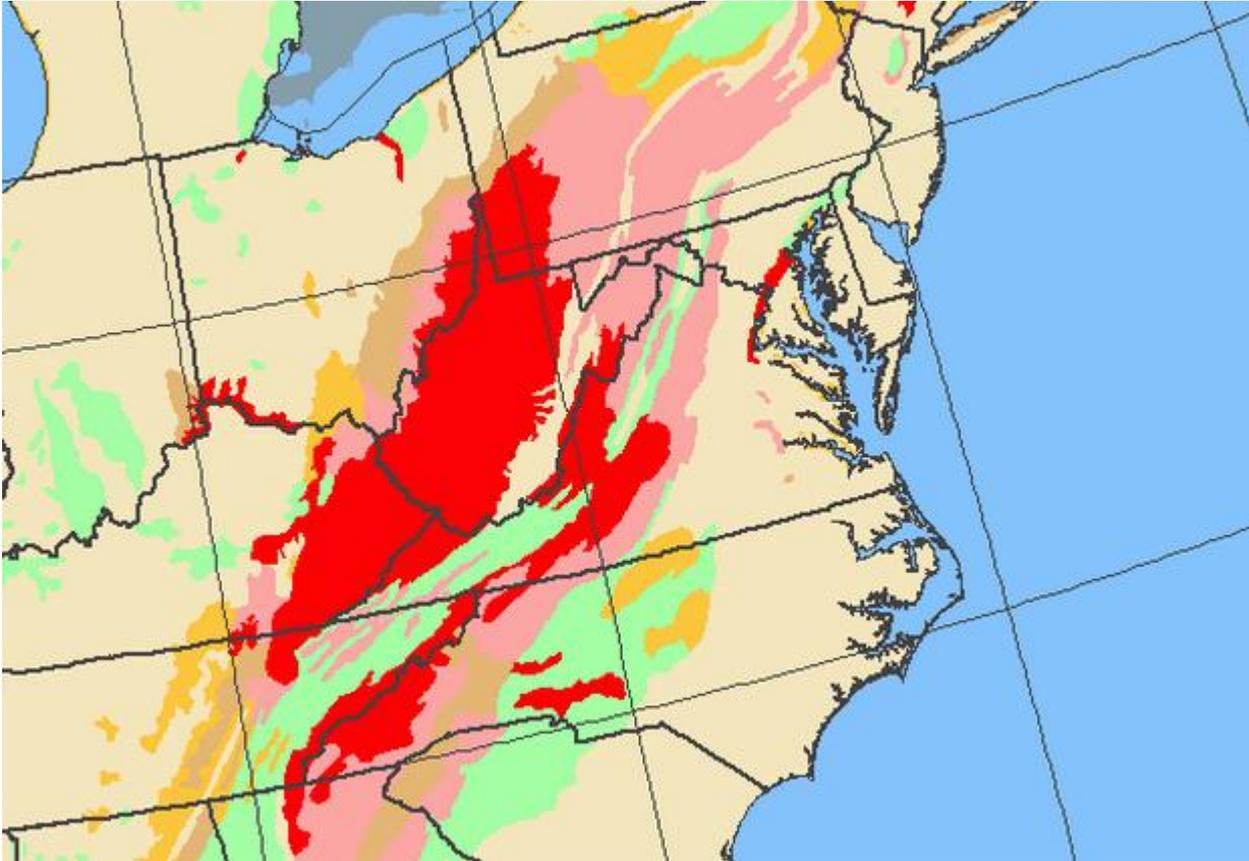
Using GIS for Congress: Three Cases

Because of our commitment to maintaining confidentiality, each case has been altered to protect the identity of the requestor

- Creating geospatial data *from* legislation
- Analyzing relationship between poverty and carbon emissions controls
- Exploring policy issues related to California water management



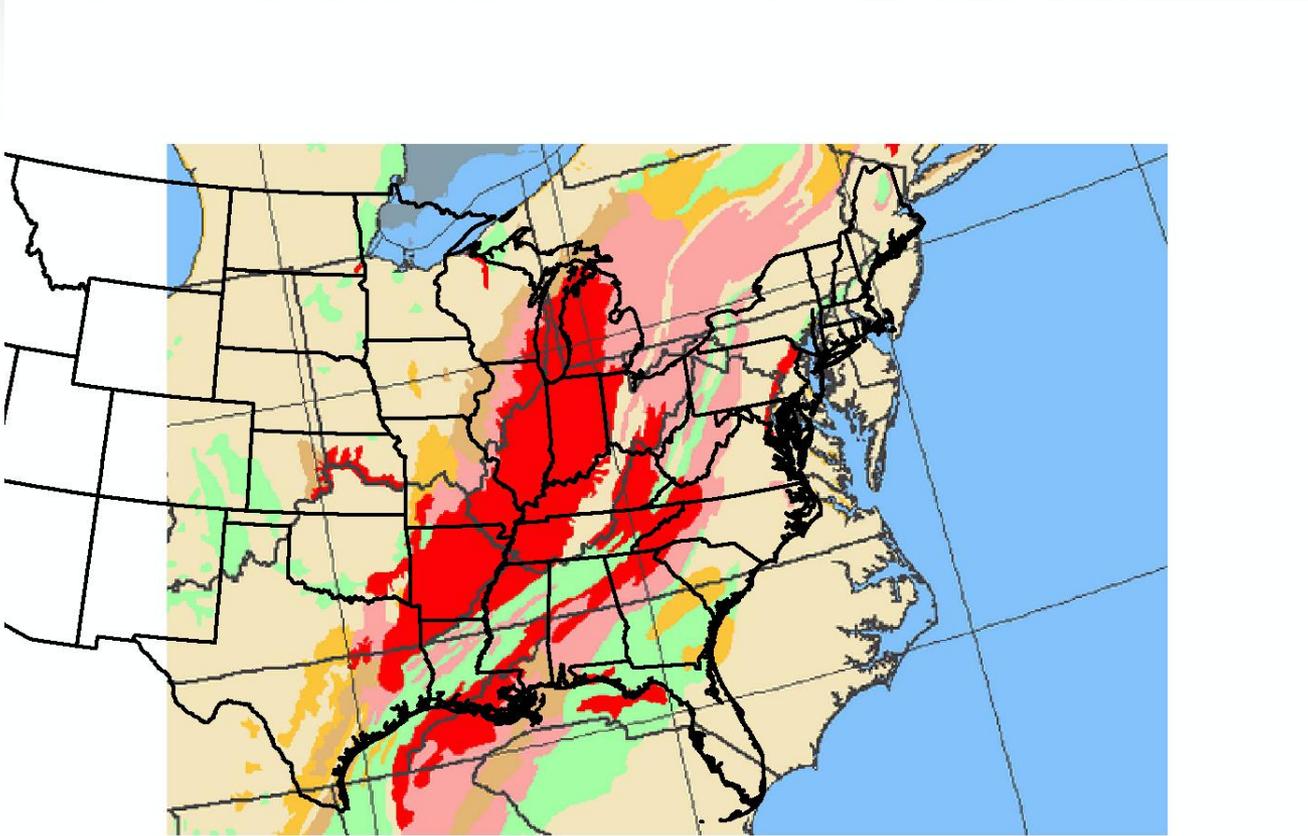
Creating Geospatial Data From Legislation



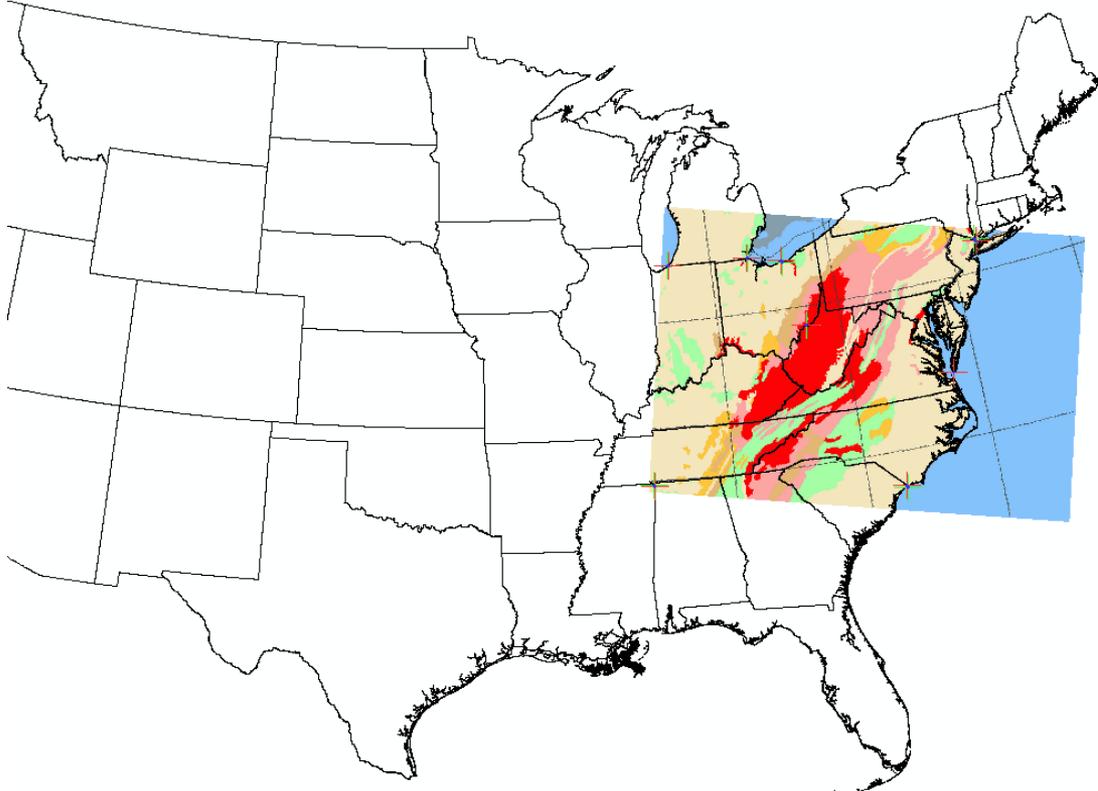
Extraction



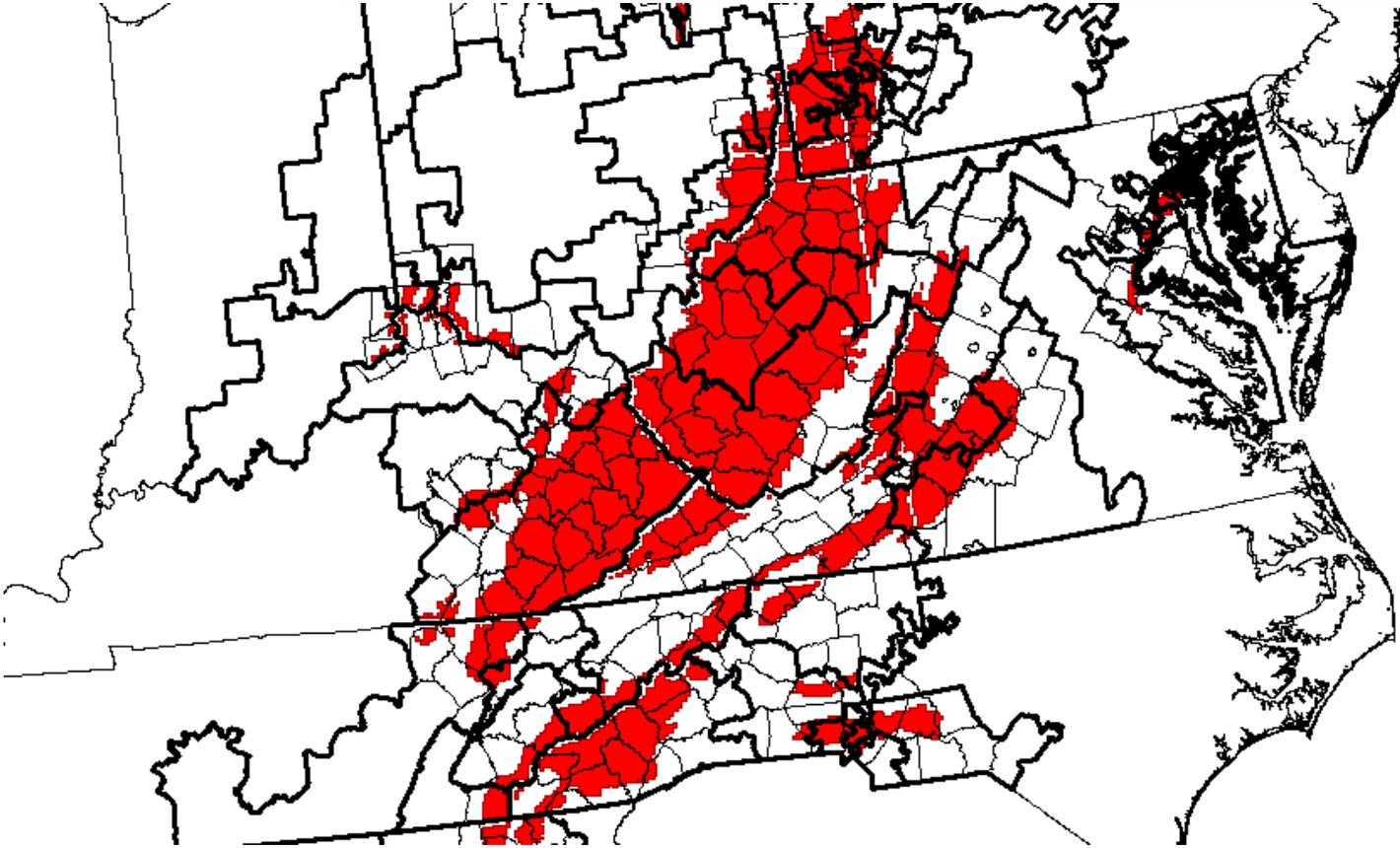
Overlay



Georectify



Analysis



Analyzing Relationship Between Poverty and Carbon Emissions Controls

Questions

- Ranked by carbon intensity, **where** is electricity generated
- Ranked by quality of home insulation, **where** do Low-Income Home Energy Assistance Program (LIHEAP) recipients live
- Ranked by type of home heating source, what is the necessary LIHEAP adjustment for a given carbon tax
- Can carbon tax impacts for LIHEAP recipients be cost-effectively offset by home insulation subsidies



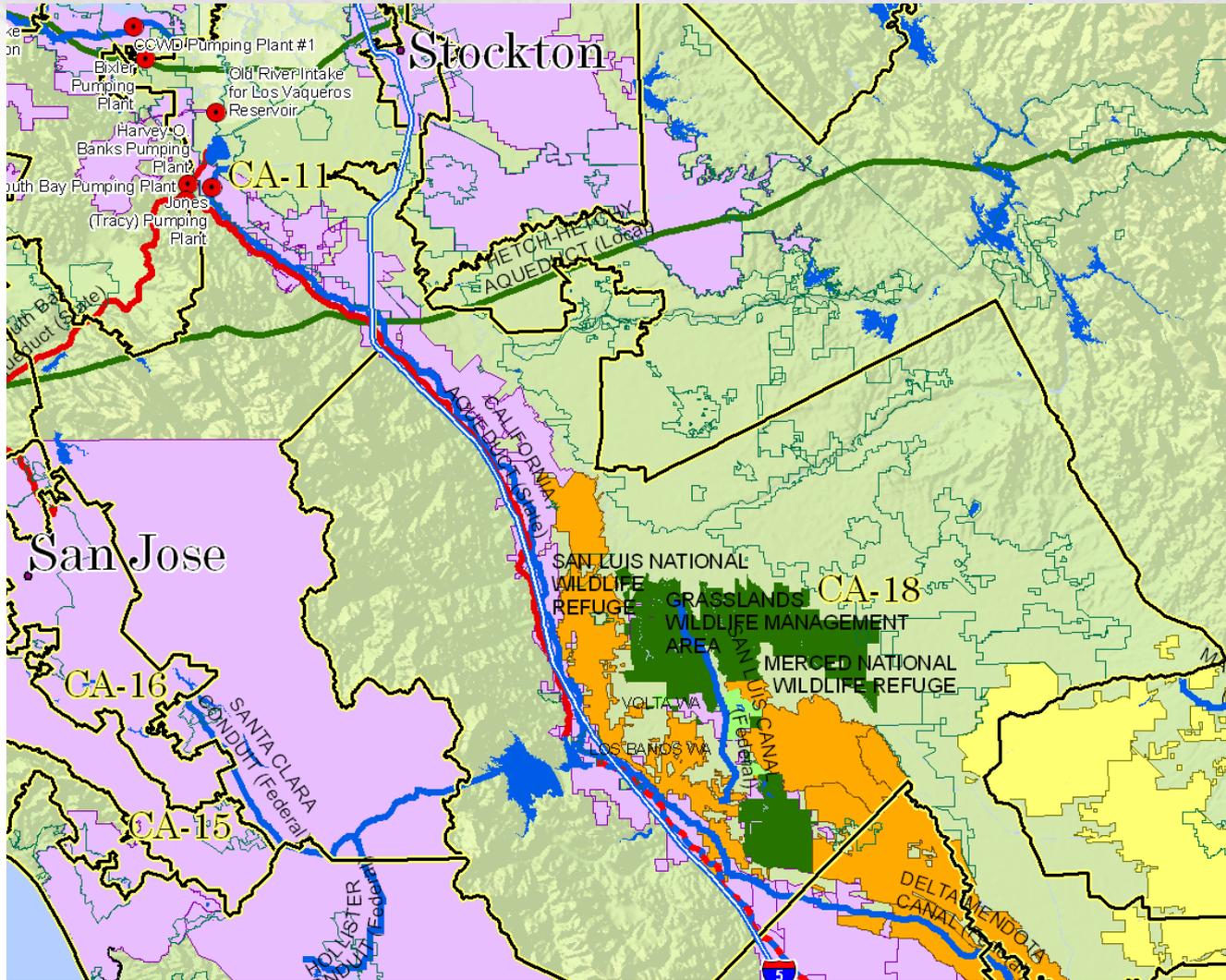
California Water Management

- Relate data from municipal, state and federal sources for long-term water supply analysis including
 - Regulatory
 - Climatological
 - Ecological
 - Economic
 - Demographic
- Analysis data sourced from several federal, state and local databases
 - Access to earlier versions of data
 - Take database snapshots
 - OR
 - Make dynamic database connections

Choice contingent on trust in database



California Water Management



Potential opportunities to facilitate re-use of data

Collaborate with data creators who

- know more about their data than can be included in the metadata
- can identify the data with the greatest resolution and the fewest transformations
- know the best data available for the use intended
- understand data collection methodology (which is essential for determining appropriate secondary data uses)



Potential opportunities to facilitate re-use of data

National indexes to trusted repositories

- Simplified data discovery and access
- Standardized metadata for review of research methodology
- Certified integrity, authenticity and provenance
- Durable citations to data allow simple verification of research results
- Connections to data sets rather than duplicative custody

