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NEBRASKA'S WATER MANAGEMENT RESOURCE

Providing the sound science and support for
managing Nebraska's most precious resource.

Voluntary Approaches to Integrated Water Resources Management in Nebraska

AWRA Annual Conference, Denver, CO

November 17, 2015

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Nebraska Department of Natural Resources

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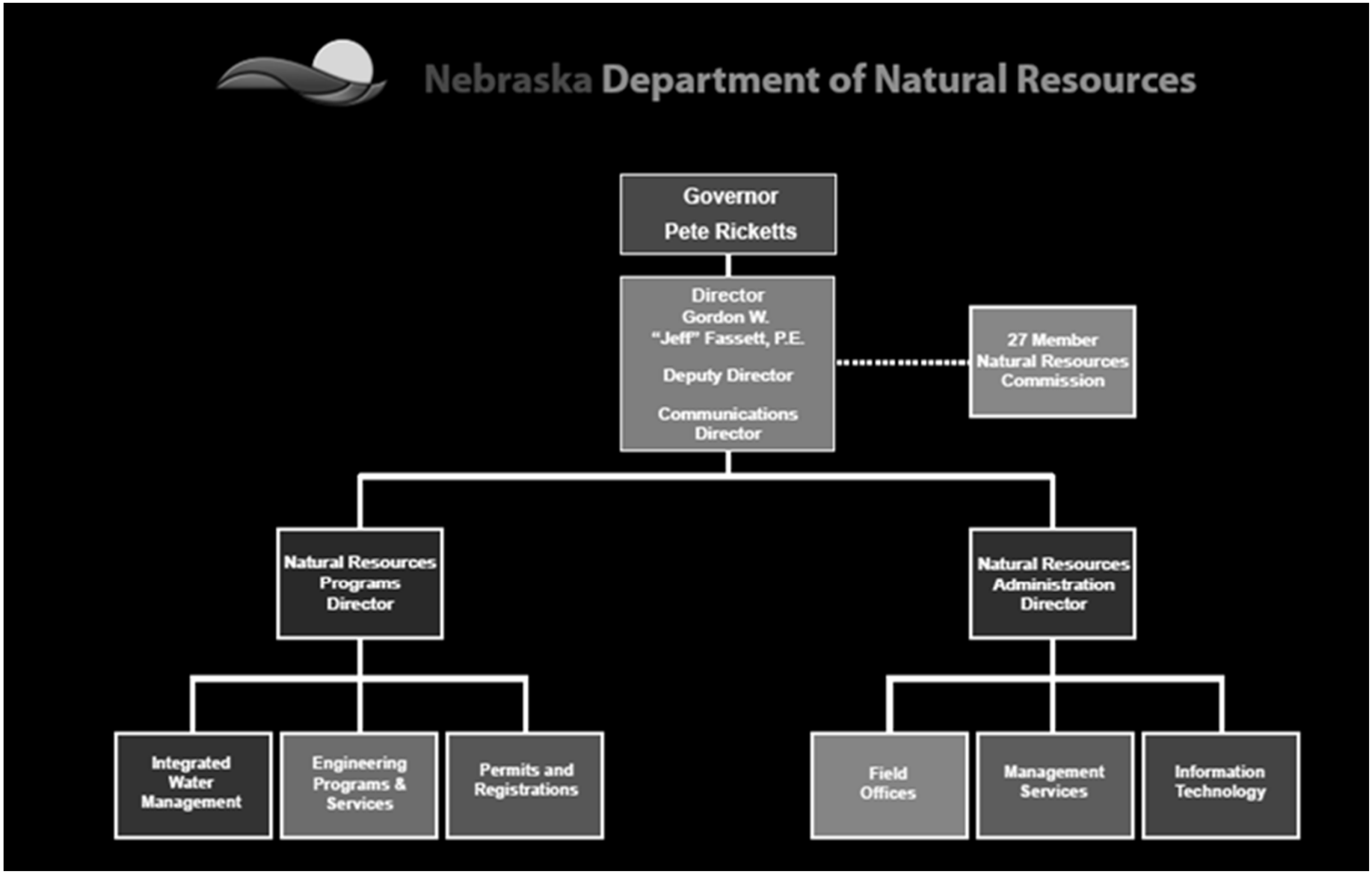
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Outline

- Background on Nebraska water and land use development
- IWMR in Fully Appropriated Basins
- Voluntary IWRM in Non-Fully Appropriated Basins
  - Inception
  - Current status
  - Stakeholder process
  - Benefits

Water Resources in Nebraska

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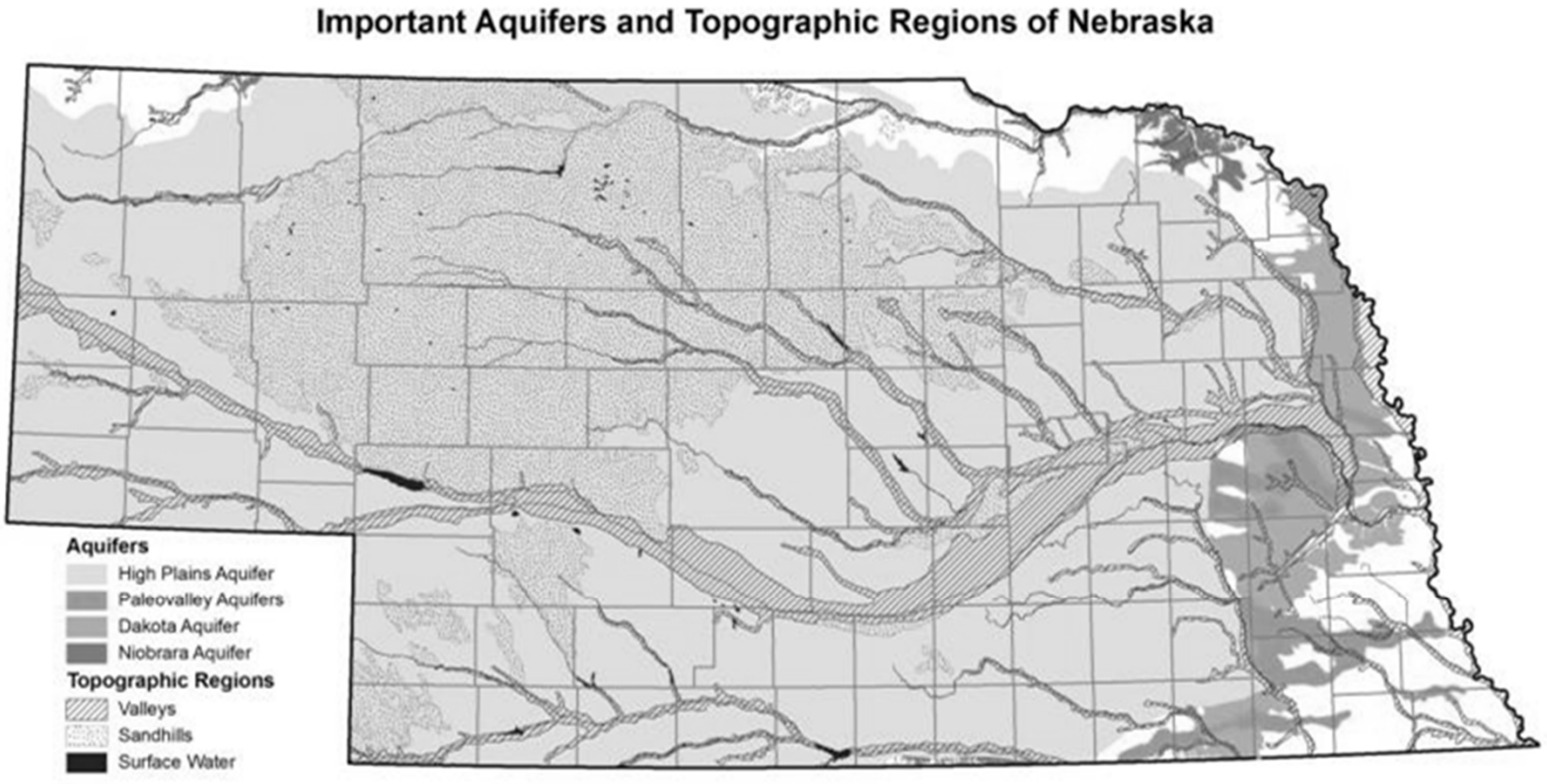
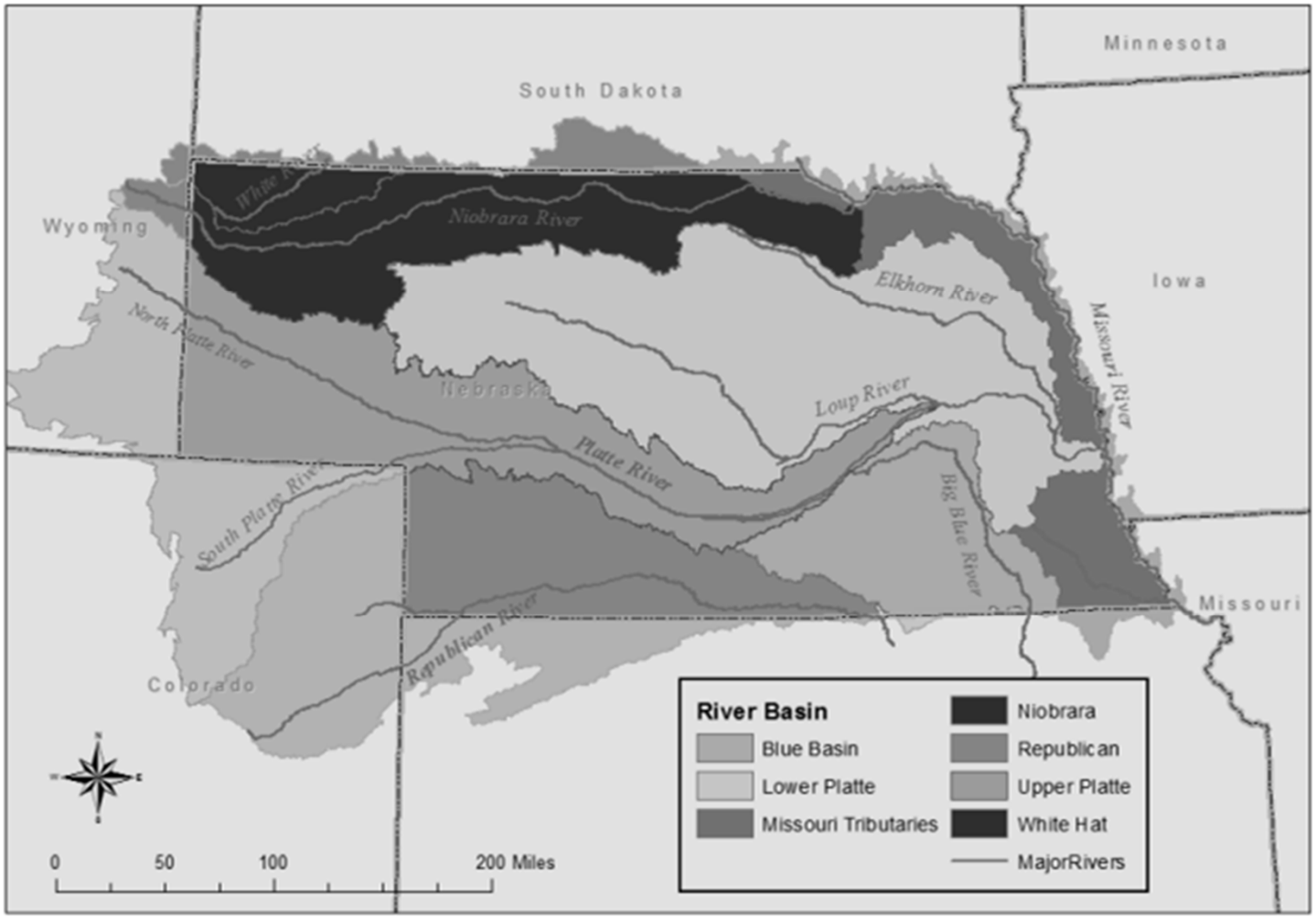
Water Resources in Nebraska



From: http://snr.unl.edu/csd/images/surveyareas/water/AquifersinNebraska.jpg

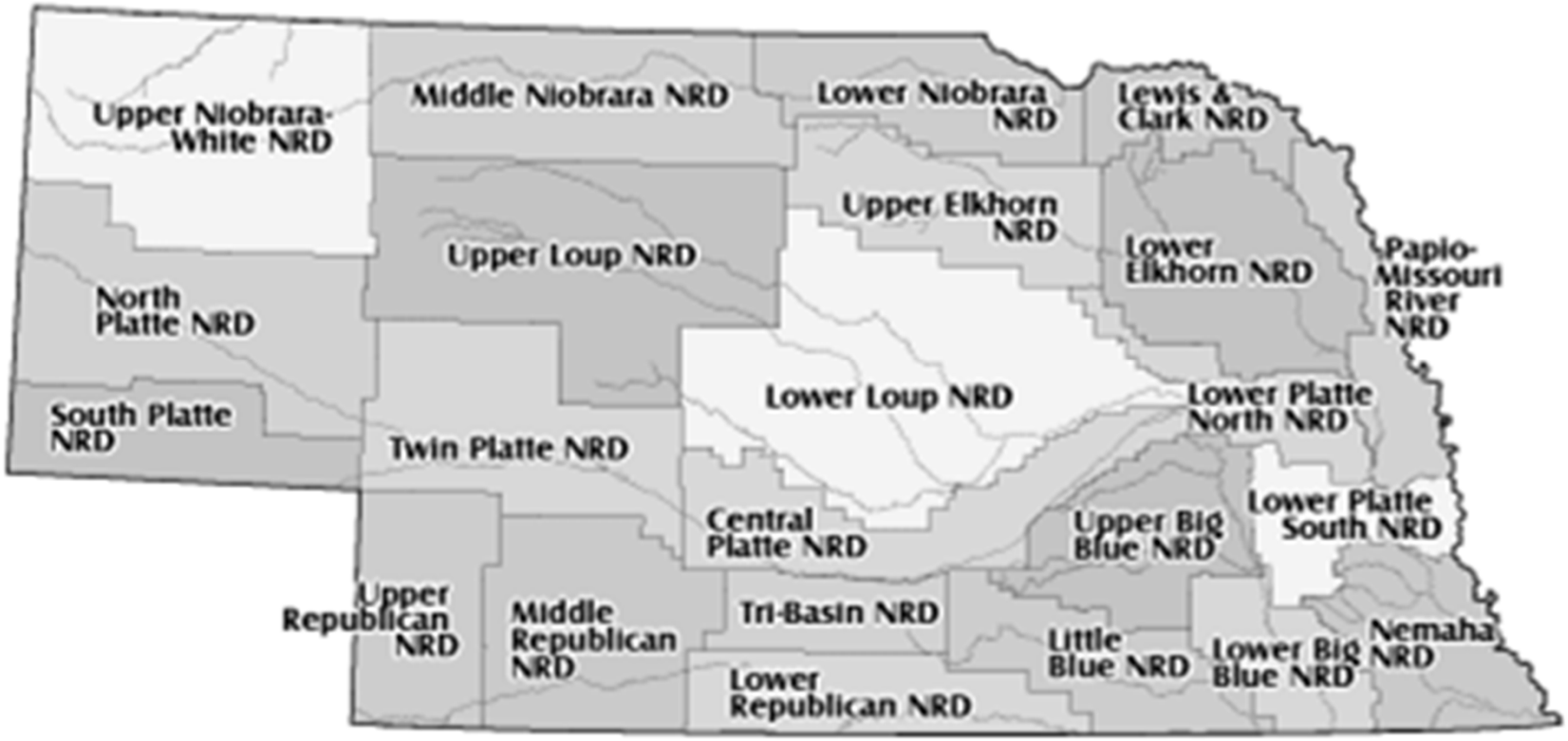
Water Resources in Nebraska



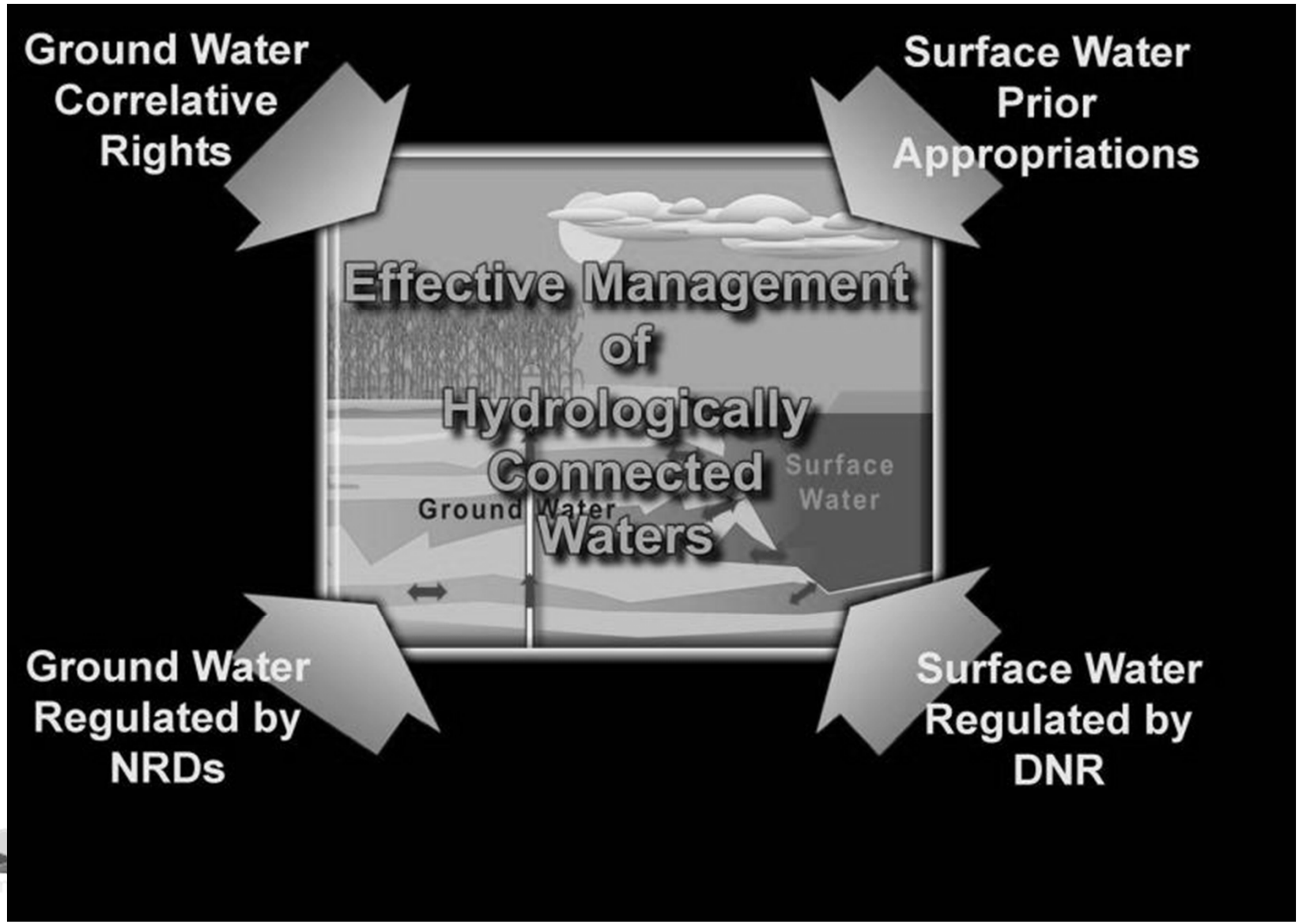
Water Management in Nebraska

- 1889 - Surface water prior appropriation system adopted
- 1933 - Correlative rights of groundwater established
- 1972 - Natural resources districts (NRDs) created
  - Governed by a locally elected board of directors
  - Boundaries based on river basins
  - Each NRD has groundwater management authorities

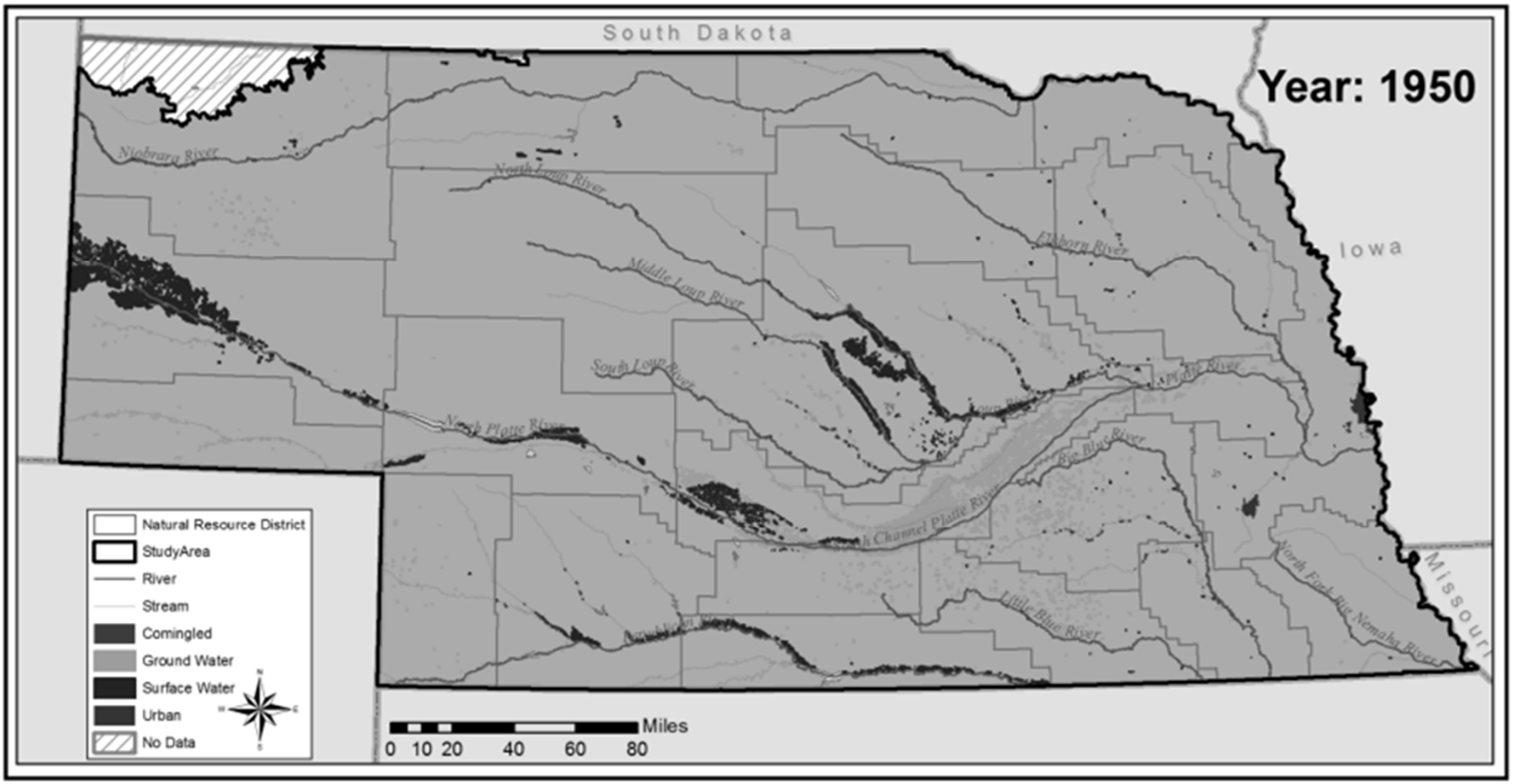
Management of GW through Local NRDs



Management of Water in NE



Land Use Development



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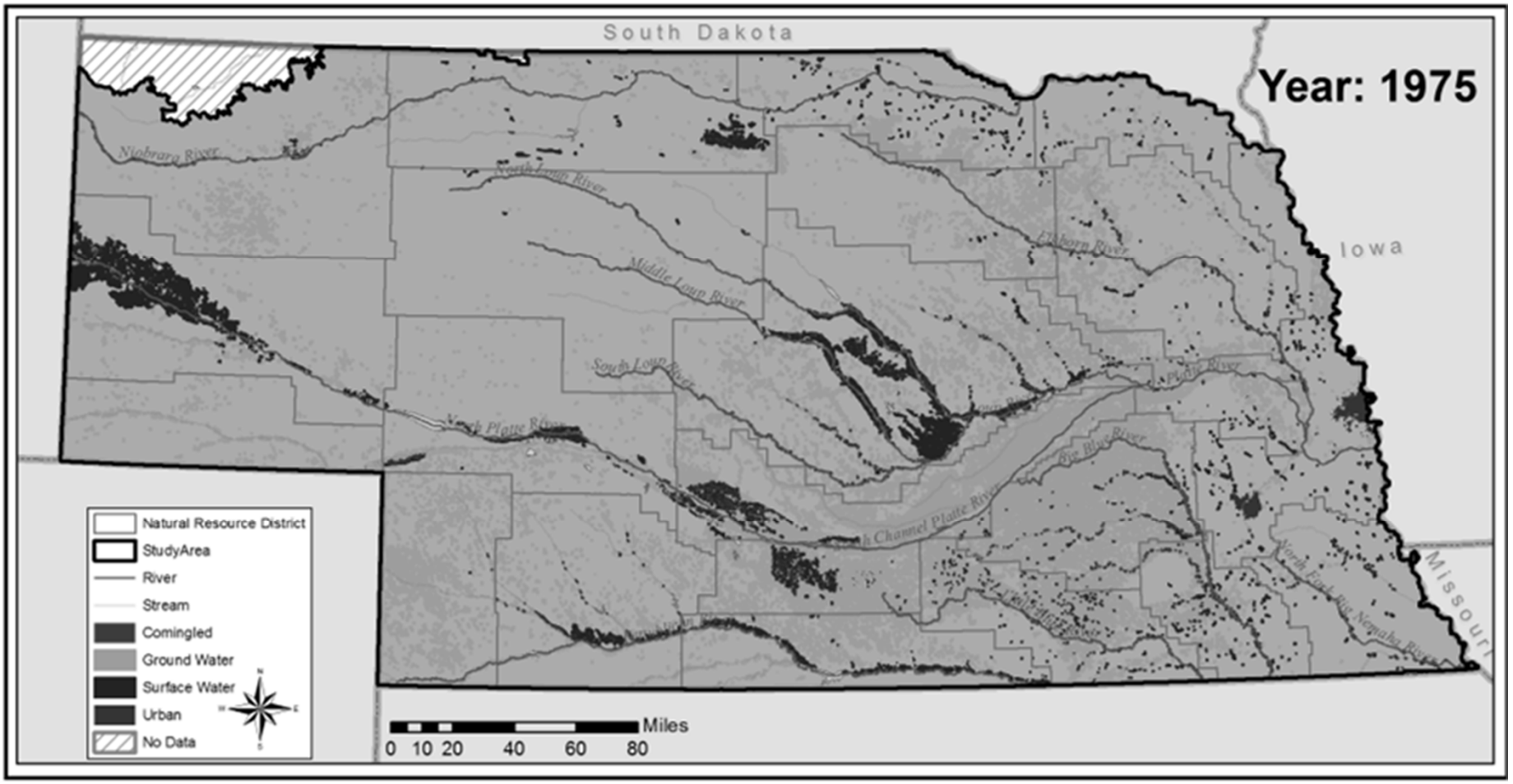
Land Use Development



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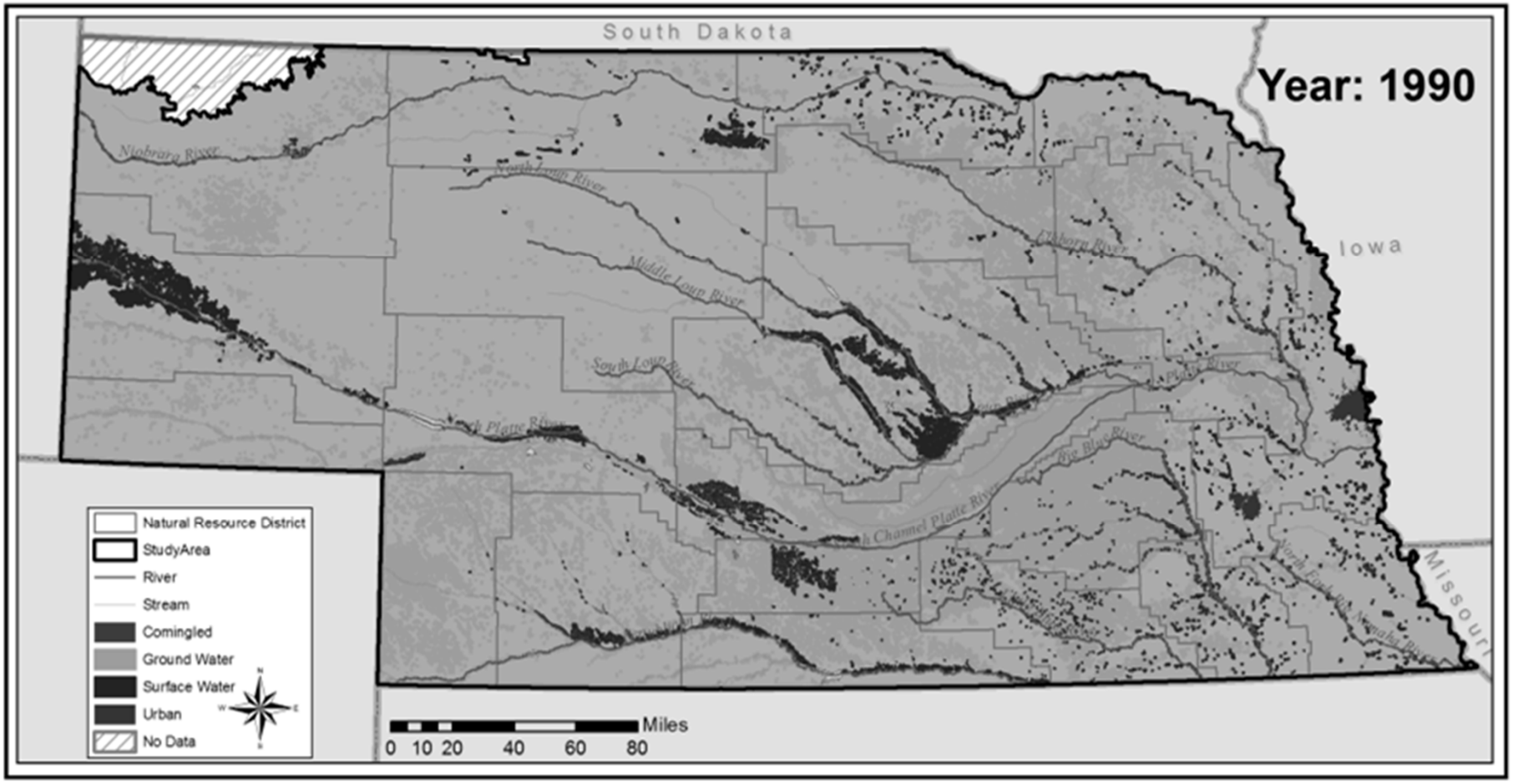
Land Use Development



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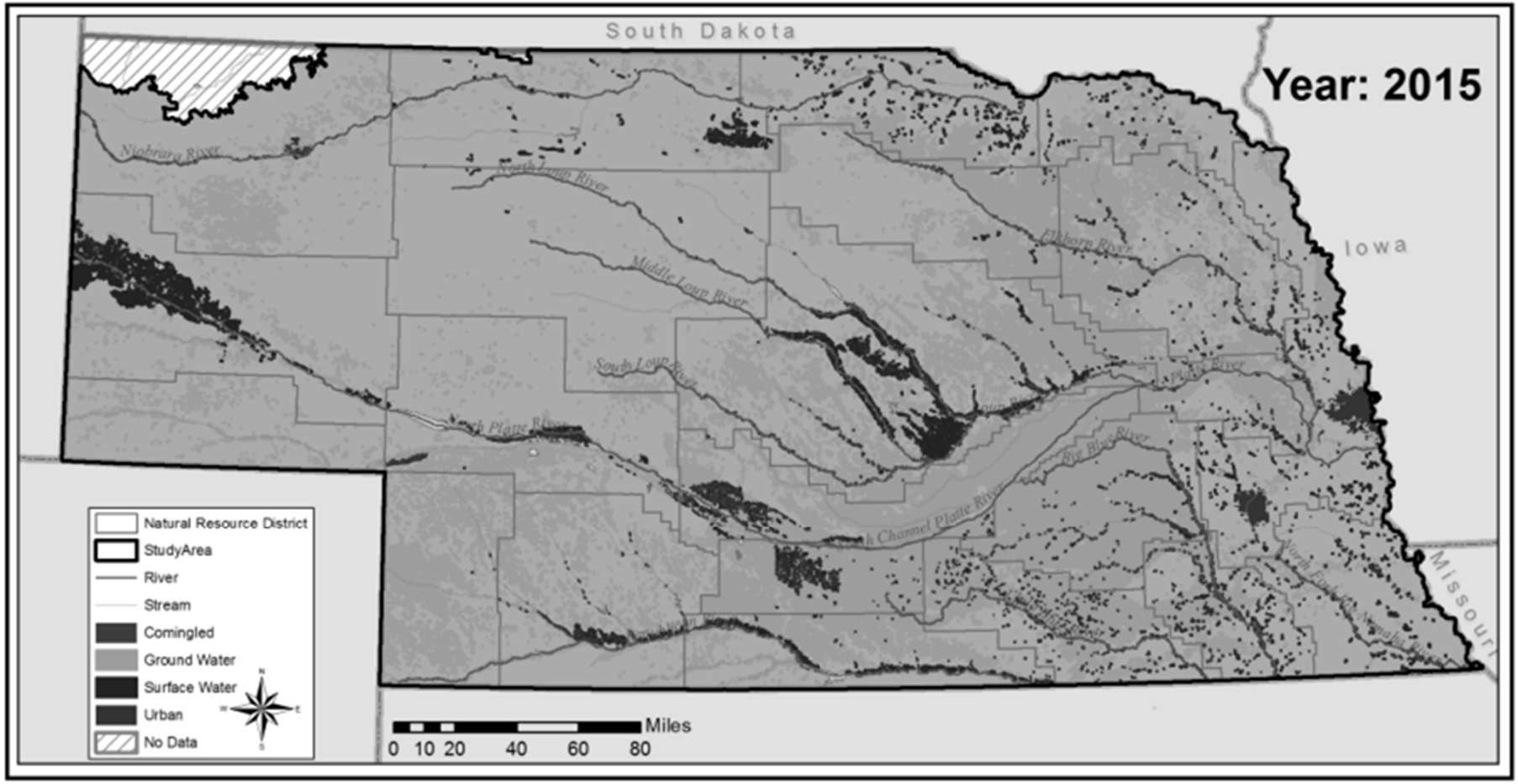
Land Use Development



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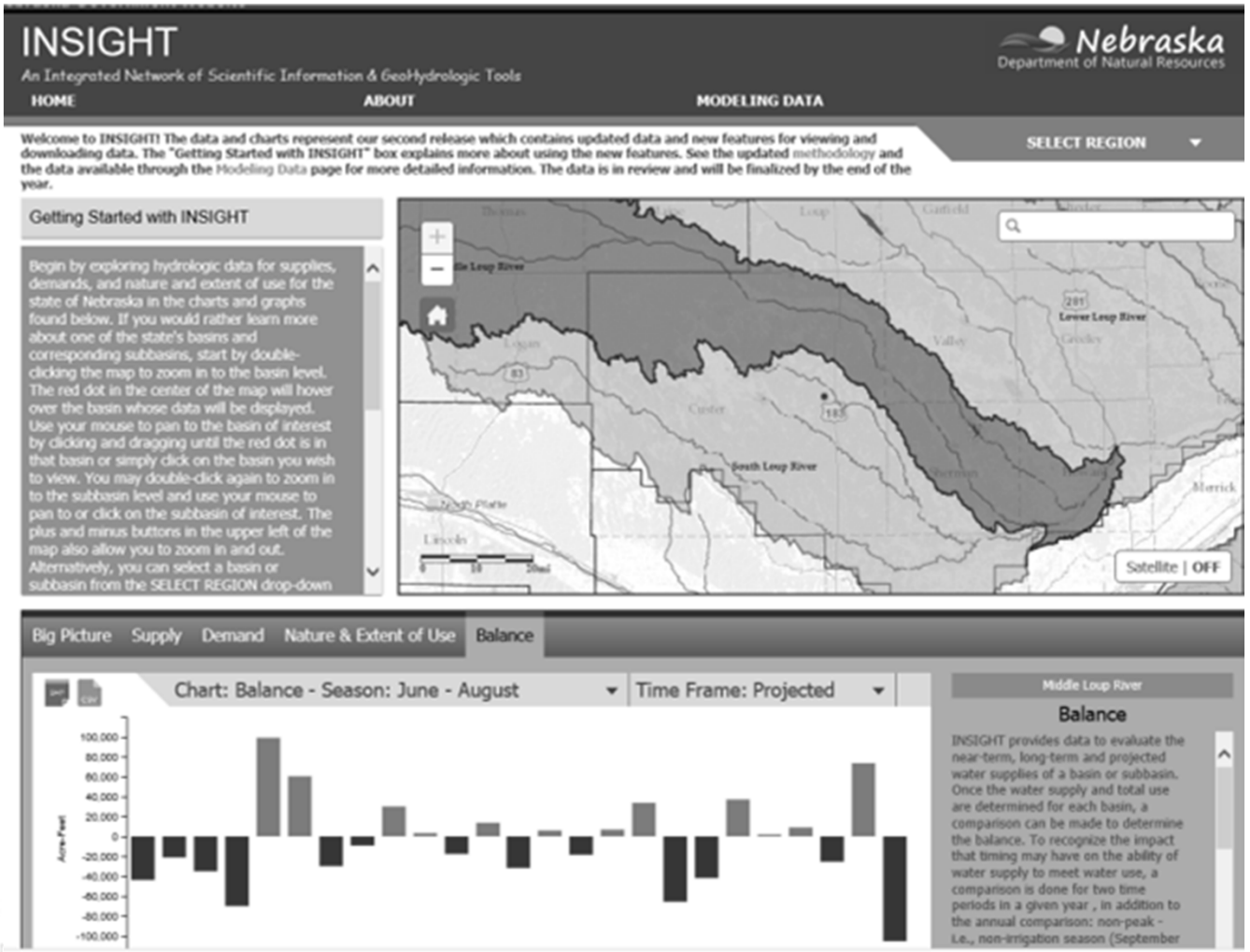
IWRM for Fully Appropriated Basins

- LB962 (2004) recognized hydrologic connection between ground- and surface water
- LB962 set up a framework for NRD/DNR joint management of ground- and surface water
  - Originally required only in fully-appropriated basins
  - Integrated management plans were to be developed within 3 years of a fully appropriated designation
- Stakeholder process during development of IMP

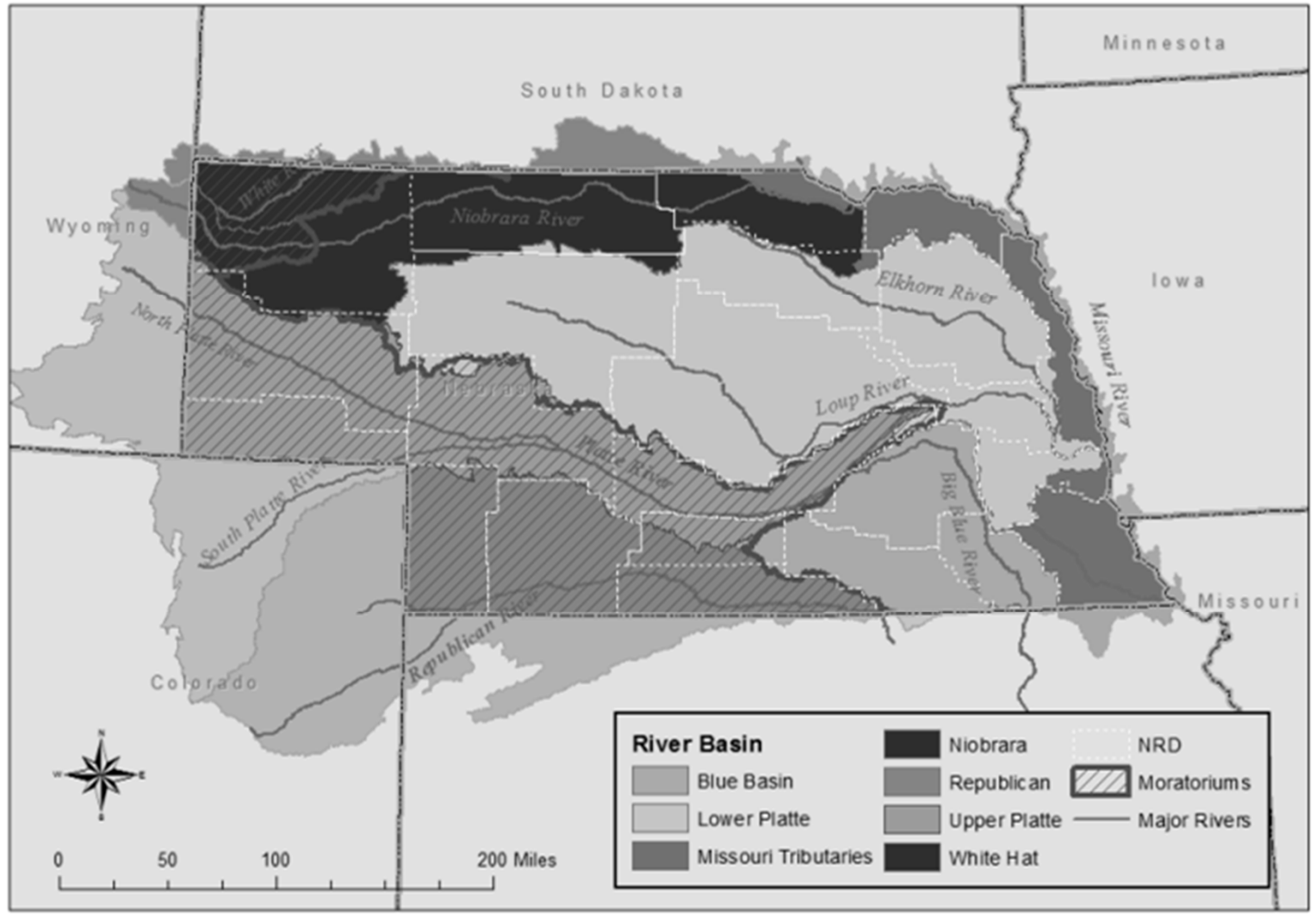
IWRM for Fully Appropriated Basins

- Integrated management plan components
  - Clear goals and objectives to achieve and sustain water balance sustainability and economic viability for the near and long term
  - At least one surface water control and one groundwater control, some examples--
    - Limits on new development
    - Allocations
    - Educational requirements
  - Monitoring
  - Incentive plans/Education

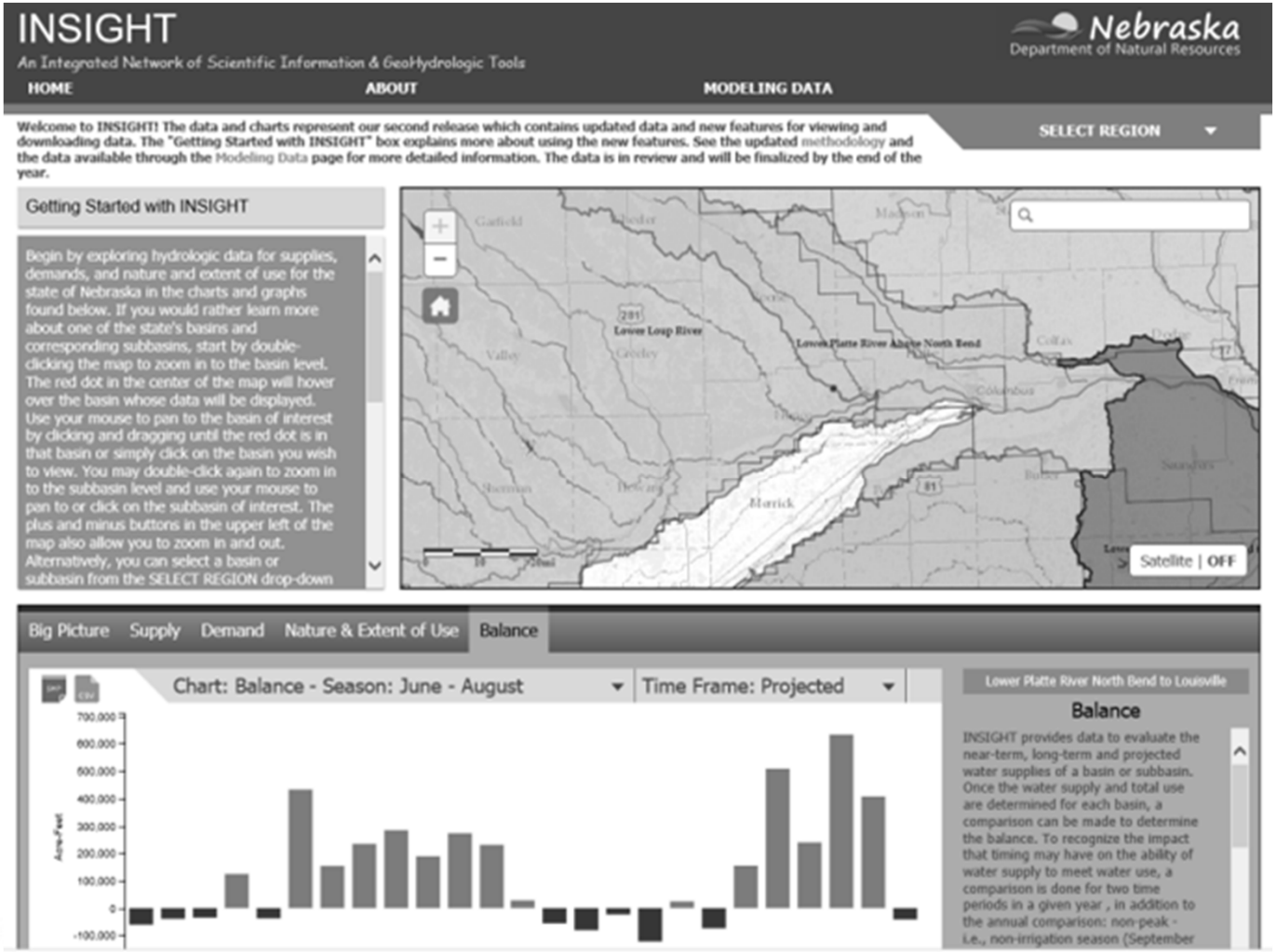
IWRM for Fully-Appropriated Basins



IWRM for Fully Appropriated Areas

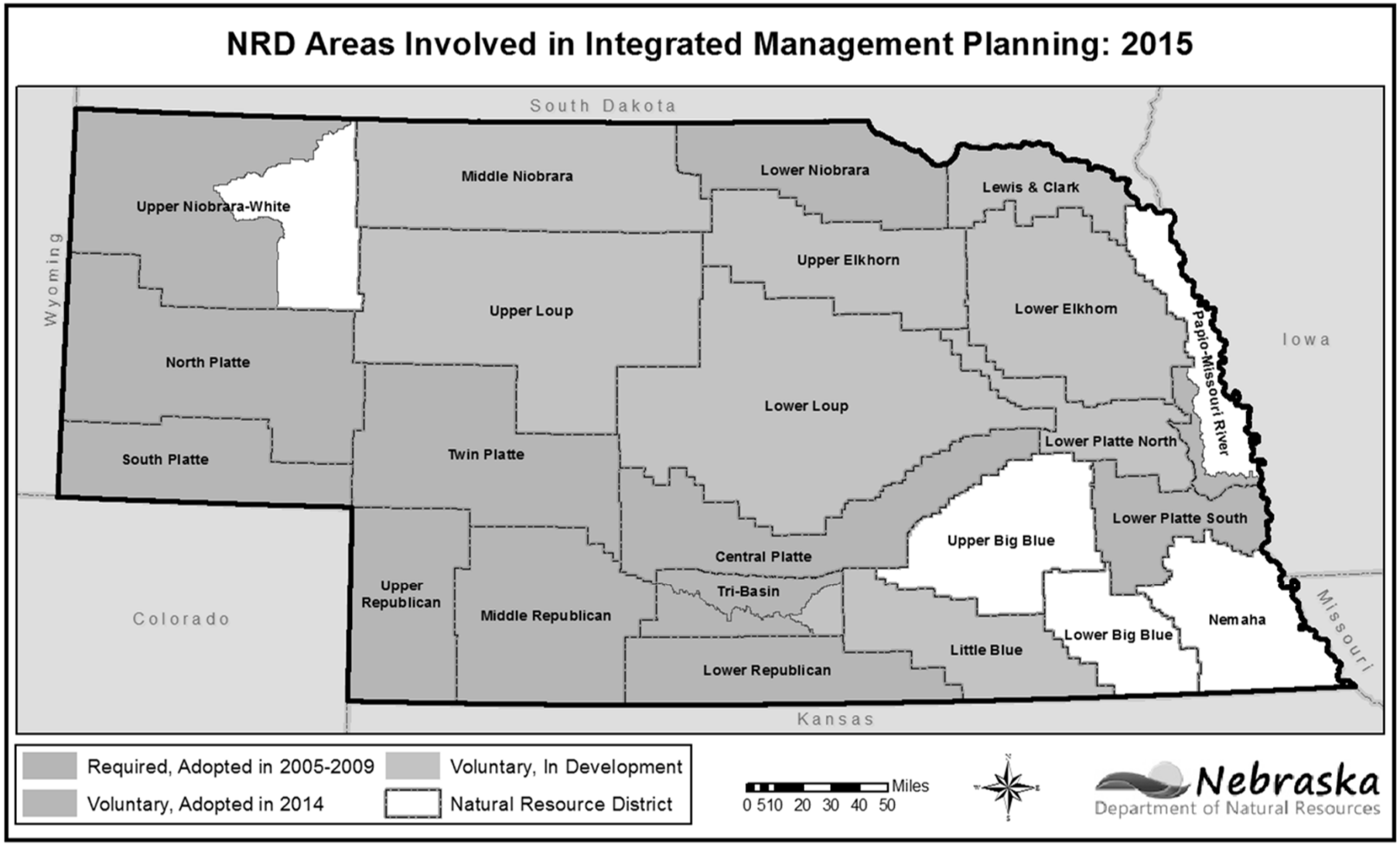


Non-fully Appropriated Basins-IWRM?



Voluntary IWRM (2010)

- In 2010, inclusion of voluntary integrated management process in statute
- NRDs in non-fully appropriated basins could request to jointly develop an IMP with NDNR
- The area of the IMP can be the hydrologically connected area or the whole NRD (up to the NRD)
- In 2014, the water sustainability fund was authorized
  - NRDs who have or are developing IMPs are eligible to apply for funds


NRD Areas Involved in Integrated Management Planning: 2015
South Dakota
Wyoming
Iowa
Missouri
Colorado
Kansas
Upper Niobrara-White
Middle Niobrara
Lower Niobrara
Lewis & Clark
Upper Elkhorn
Lower Elkhorn
Upper Loup
North Platte
Lower Loup
Papio-Missouri River
South Platte
Twin Platte
Lower Platte North
Lower Platte South
Upper Big Blue
Central Platte
Tri-Basin
Upper Republican
Middle Republican
Nemaha
Lower Big Blue
Little Blue
Lower Republican
Required, Adopted in 2005-2009
Voluntary, Adopted in 2014
Voluntary, In Development
Natural Resource District
Miles
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Bottom up approach for Voluntary IWRM

- Consult with stakeholders on issues, goals, objectives
- By statute, controls should be consistent with goals and objectives
- NRDs choose the control(s) for groundwater that are consistent with G&O
- NDNR chooses control(s) that mirror the NRD controls

Bottom up approach for Voluntary IWRM

Bottom up approach for Voluntary IWRM

Examples of Current Voluntary IWRM Implementation

- Well metering
- Limits on new acres
- Certification of acres
- Evaluate need for new gages
- NRD/DNR IWRM combined education events
- Recognition of need for consistent database formatting between NRDs/DNR

Benefits of Voluntary IWRM

- Proactive approach to water management
- NRD/DNR transparency on what each respective agency can/cannot do
- Stakeholders better understand management framework, seem appreciative to be part of planning
- Improved knowledge of data and information and sharing of data between agencies
- Management framework is in place; better able to respond for climate, socio-political emergencies

Summary/Conclusions

- IWRM officially began in 2004, limited to fully appropriated basins (reactive)
- More recently, voluntary IWRM is being implemented in basins that are not fully appropriated (proactive)
- Initial benefits of voluntary IWRM have been relationship building, better understanding of issues, needs and data
- Stakeholder process is key; stakeholders can reach many more people than the agencies alone can
- Local buy-in leads to better management of resources

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