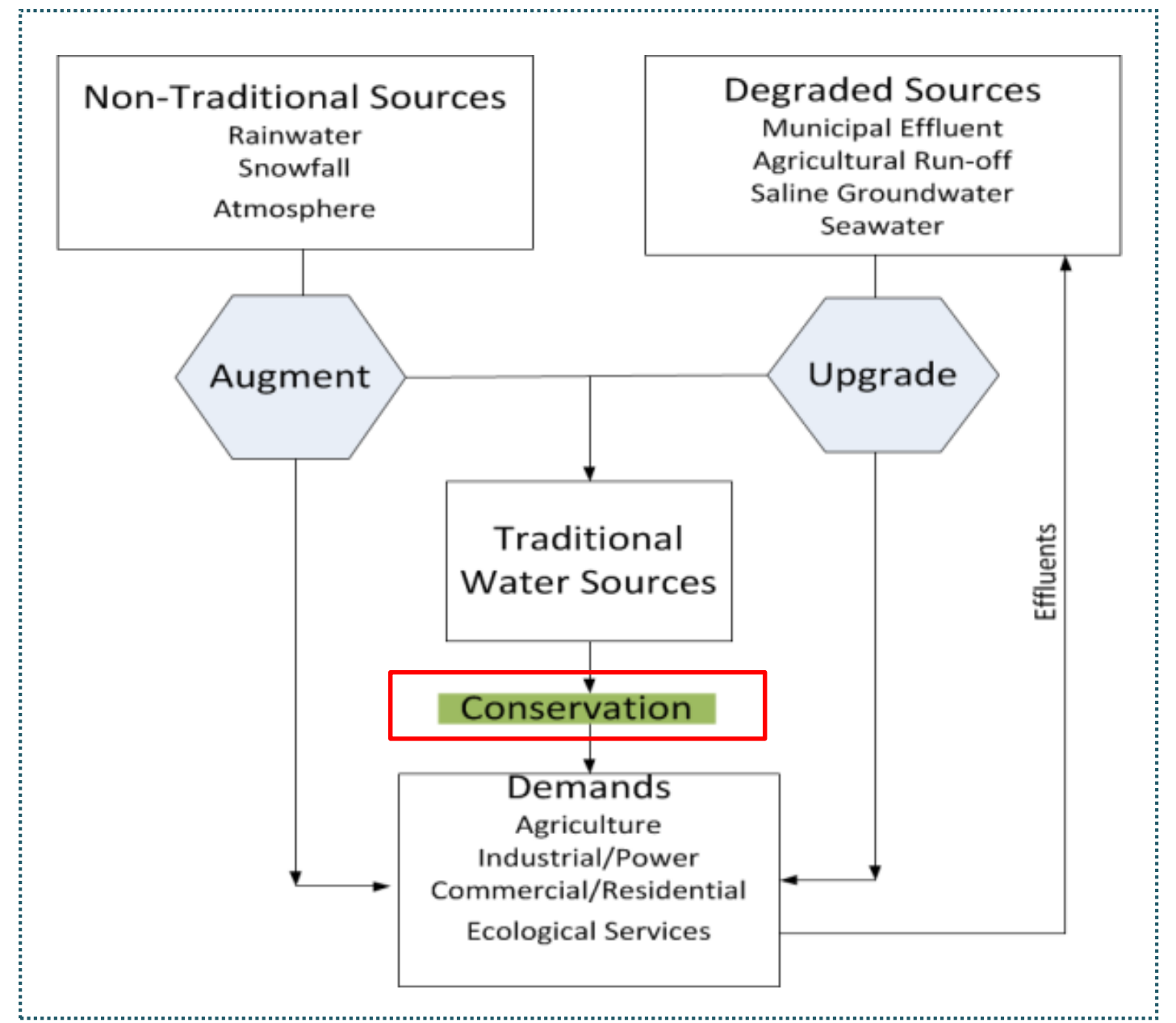


Water Reuse & Conservation

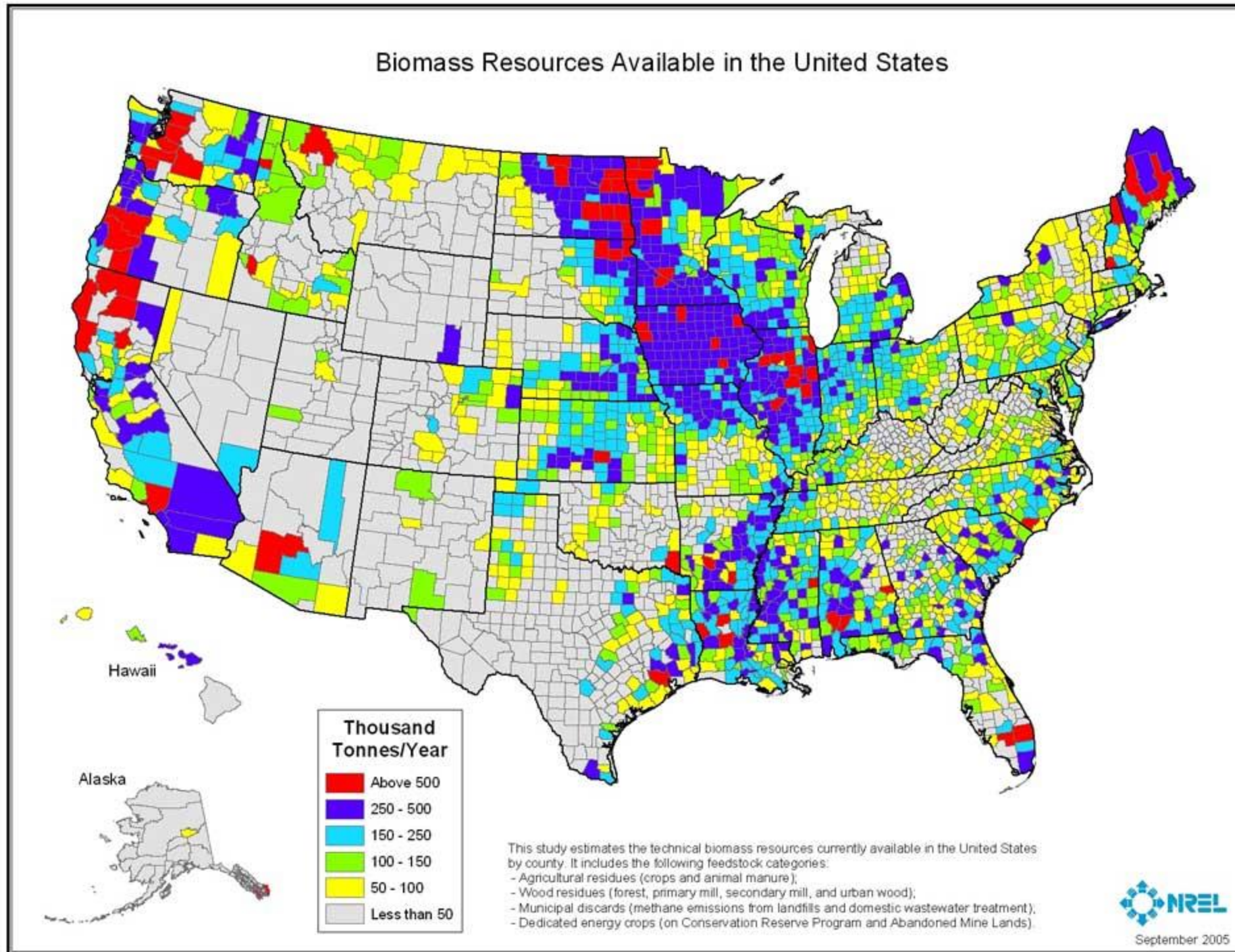
ILLINOIS SUSTAINABLE TECHNOLOGY CENTER
PRAIRIE RESEARCH INSTITUTE

Research Approaches

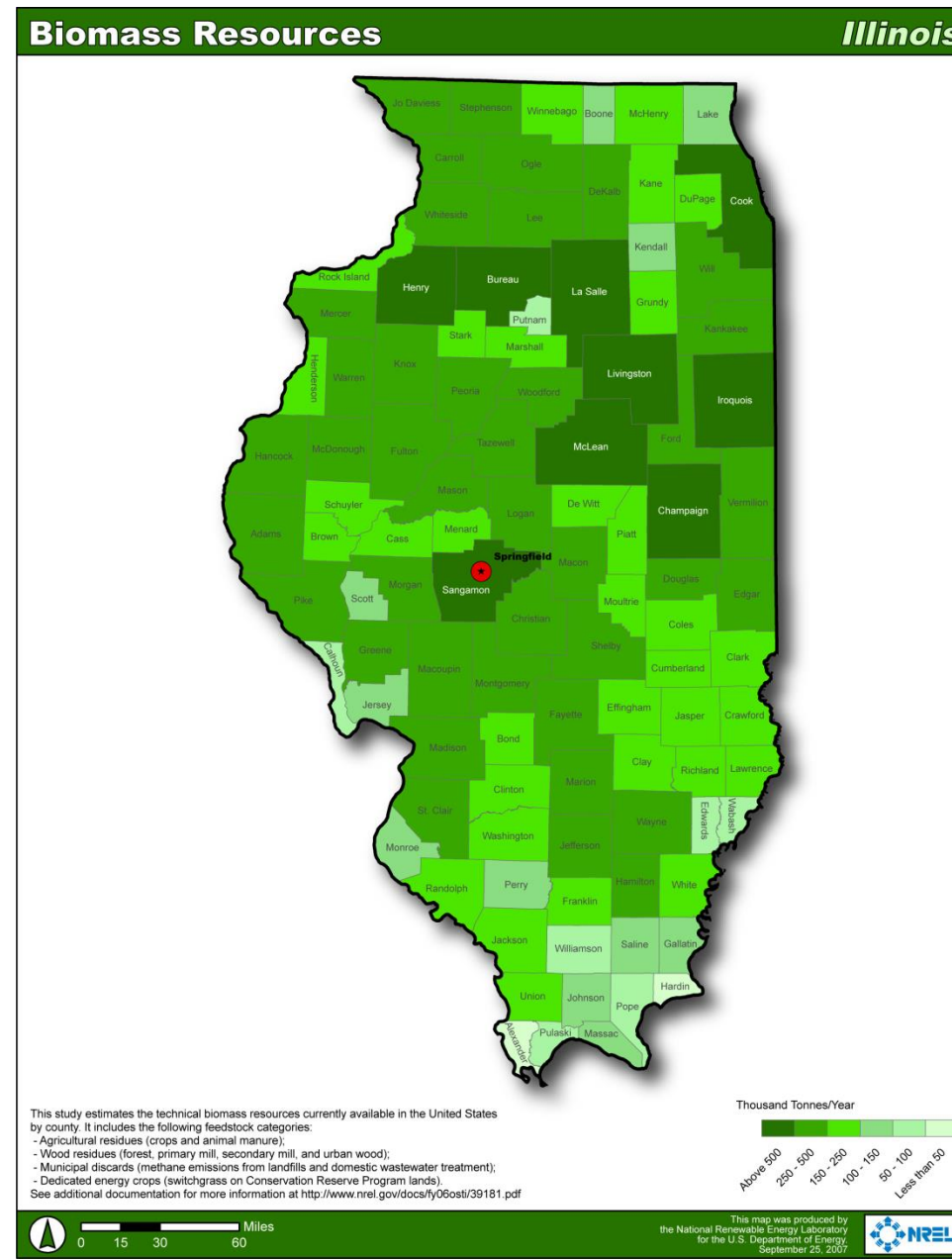
- Conservation
- Upgrading
- Augmentation



Water Conservation in Fuel Production



Illinois biomass resource availability is estimated to be 9.6% of all biomass resources in the USA.



Illinois could be the manufacturing base for 1.6 billion gallons of cellulosic ethanol.



- 2,000 direct jobs
- 76,800 secondary jobs
- \$1.6 billion to local and regional economies

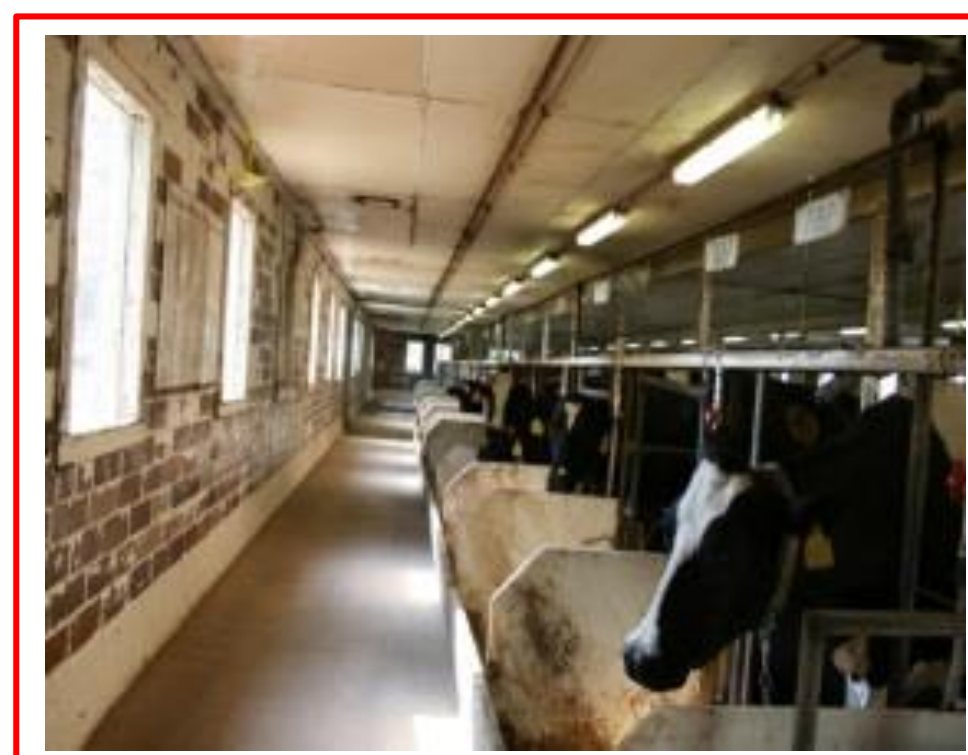
The utilization of 3-10 gallons water per gallon ethanol production is a major concern for many citizens.

(The National Academies and Institute for Agriculture and Trade Policy)

Water can also be conserved during biomass growth by using treated wastewater from concentrated animal feed operations (CAFO) and rural sewage treatment plants (RSTP)



ISTC research demonstrates applicability of treated wastewater and internal reuse as pathways to conserve water resources in cellulosic ethanol plants.



CAFO treated water



RSTP treated water



Irrigated corn with treated wastewater

But, does treated wastewater still have contaminants such as personal care products and pharmaceuticals (PPCPs) and hormones? Stay Tuned! ISTC research underway.