Climate Change and the Great Lakes Region

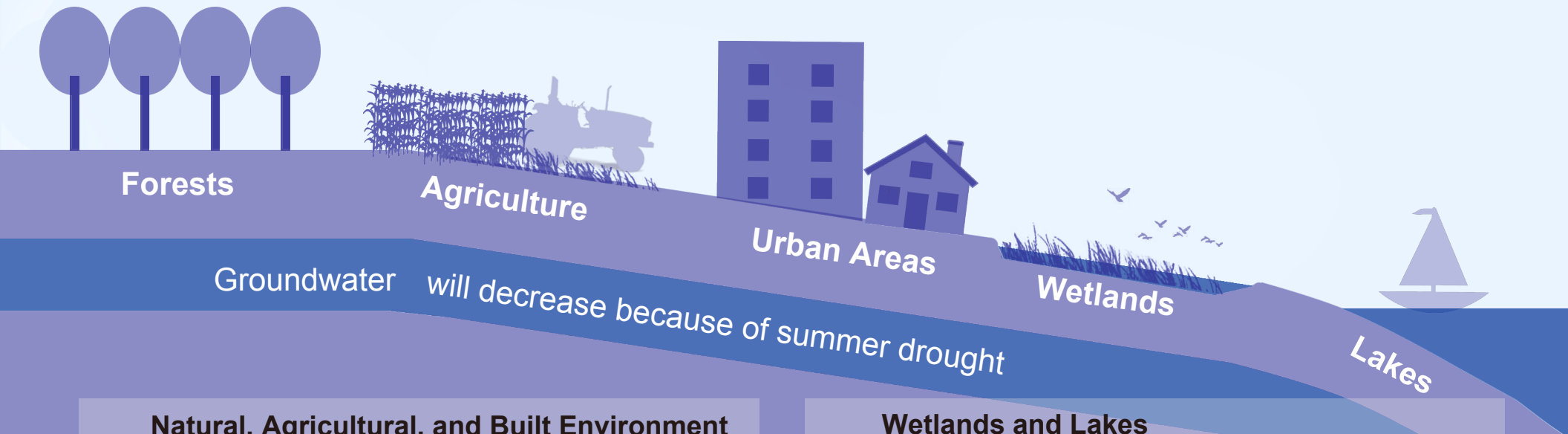
General Climate Change Trends and Projections

↑2F **Average Temperature**, 1900-2012
1.8 - 5.4 F increase, now to 2050

↑11% **Total Precipitation**, 1900-2012
Projected to increase during spring

↑37% **Extreme Weather Events**, 1958-2012
Increase risks of floods and droughts

↓71% **Lake Ice Coverage**, 1973 - 2010
Continue to decrease



Natural, Agricultural, and Built Environment

Change in tree species composition and urban vegetation

Increased invasive plants and wildlife

Changes in growing season, crop types and pests

Increased heat wave intensity and frequency

Degraded air and water quality

Frost-free season lengthened 9 days from 1958 to 2012, projected to be 1-2 months longer by 2100

Impacts on YOU

Increased risks of fire, drought and flood

More heat-related and vector-borne diseases

Decreased food variety (wild rice, cherries, beets)

More pesticides and lower crop yields

Electricity supply shortages

Reduced building lifespans

Wetlands and Lakes

Since 1980, lake levels have fallen but rebounded in 2014, Increased variability in the future

Stronger storms and warming temperatures produce more runoff and more Harmful Algal Blooms (HABs)

HABs reduce dissolved oxygen in water, impacting aquatic life

Reduced availability of seasonal migratory wetland habitats

Change in range and distribution of species

Altered nature of watershed, stemming from extreme events

Impacts on YOU

More weather variation

Worsening water quality

Less aquatic species diversity

Declined beach health and coastal recreation opportunities

Worsening air quality

Compromised views in coastal parks

Scan or Click to Learn More

Climate trends in the Great Lakes region: http://glisa.umich.edu/resources/summary

Climate change and forest: http://forestadaptation.org/

NOAA National Oceanic and Atmospheric Administration, U.S. Department of Commerce
School of Natural Resources & Environment, University of Michigan
Great Lakes and St. Lawrence Cities Initiative
GLISA, A NOAA RISA Team