

CLIMATE ADAPTATION

SUSTAINABLE MADISON COMMITTEE MEETING

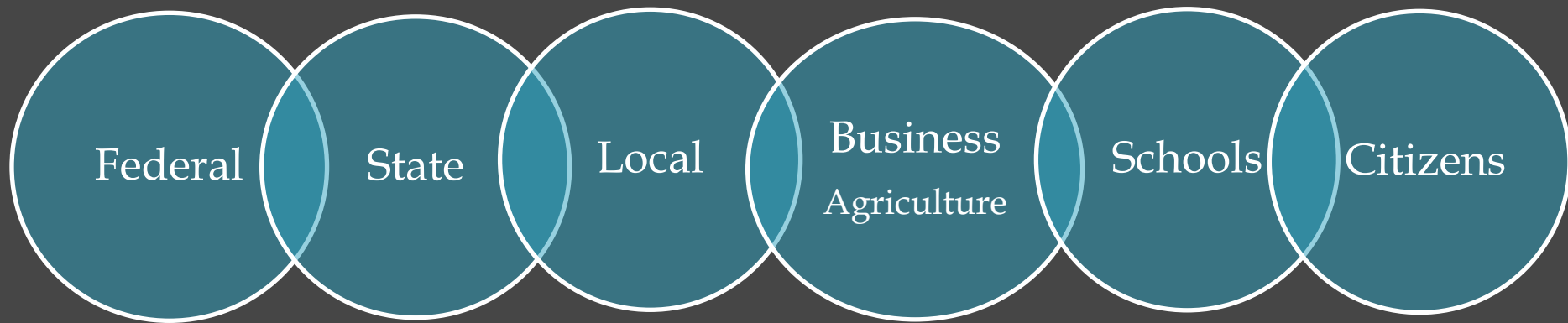
MAY 20, 2013

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Climate Change Is Everyone's Business



“Climate is properly the long average of weather in a single place.” *The Cornhill Magazine, 1860.*

Climate Terms

MITIGATION

“Reduce Greenhouse Gases” (GHG)

Carbon dioxide

Methane

Nitrous oxide

Halocarbons

Ozone

ADAPTATION

“Prevent or reduce the impacts”

MITIGATION: Reduce Greenhouse Gases

Set GHG reduction goals

- ❖ Renewable energy systems
- ❖ Improve manufacturing process and stack technology
- ❖ Improve transit system/ and bike lanes
- ❖ Upgrade fleet (higher mpg)

ADAPTATION: Prevent or Reduce Impacts

- ❖ GOAL: Functioning Community
- ❖ HOW? Increase Resilience!
 - ❖ Storm, drinking, waste water systems, roads, buildings, communication and power lines
 - ❖ Government services and operations
 - ❖ Business
 - ❖ Agriculture
 - ❖ Schools
 - ❖ Citizens

Examples of Adaptation

- ❖ Keep structures out of the floodplain
- ❖ Increase buffer space between water bodies and roads and buildings
- ❖ Proactively stabilize slopes and erodible areas
- ❖ Prepare landfill and material recycling plans to handle large amounts of climate event related waste
- ❖ Plan for agricultural resilience

“ Madison’s improvement efforts in sustainability will focus on these three key areas (environment, economic prosperity and social well-being) with the goal of enhancing our community’s health and quality of life.”

Goal 3: Improve surface water quality`

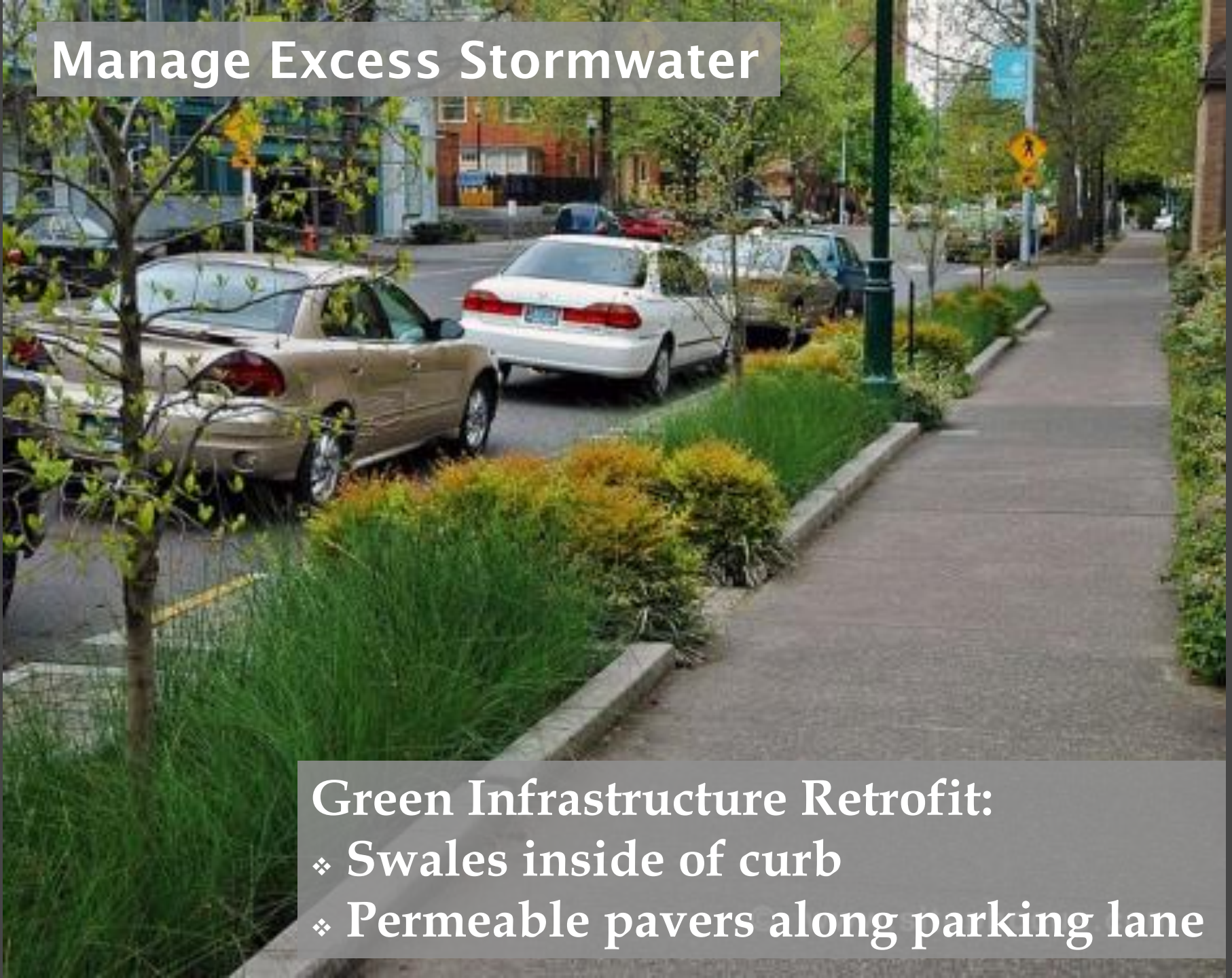
Action #5: Pilot the use of green infrastructure and incorporate into standard street and building design, where appropriate.



Manage Excess Stormwater

Green Infrastructure Retrofit:

- ❖ Swales inside of curb
- ❖ Permeable pavers along parking lane



Bioretention

Bioengineered soils with plants and grass cover.
Rain gardens, Urban forest.



Bioretention Cells in Parking Lot



“Leadership in Energy and Environmental Design” (LEED)

LEED Buildings and LEED Neighborhood practices :

- ❖ More green infrastructure
- ❖ Greater localized stormwater management
- ❖ Decreases heat island effect
- ❖ Enhances survival of urban wildlife



Consider Building Code Revision

- ❖ Insurance industry studies resilient building materials
 - ❖ Structure and roof withstand 80 mph winds, 1.5 inch hail and heavy snow
 - ❖ Potential for new insurance standards

Cooling Centers

- ❖ A/C community facilities
- ❖ Churches
- ❖ City pool or spray parks



Evacuation Shelters

- ❖ National Weather Service ability to forecast wind events 1-3 days ahead
- ❖ Allows communities to prepare
- ❖ Vulnerable populations have time to get to safe location.

2009-2013 DNR & WICCI Climate Adaptation Workshops

- ❖ Statewide – Madison (pilot)
- ❖ Eau Claire - Local officials
- ❖ River Falls Plan Commission
- ❖ Great Lakes communities with NOAA
- ❖ Manitowoc County: Lakeshore Natural Resources Partnership
- ❖ La Crosse City/County officials

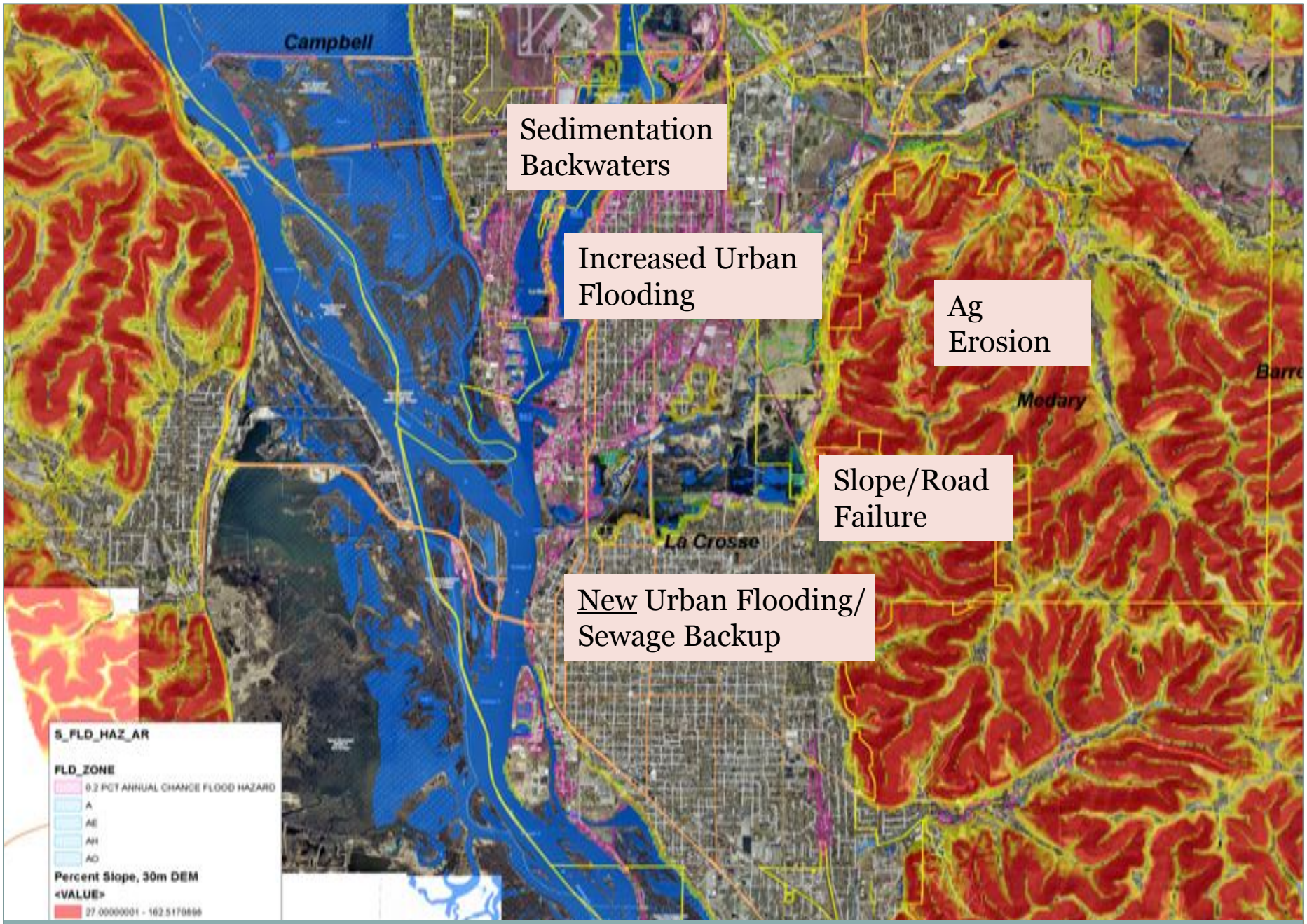
Community Plans and Climate Adaptation

- ❖ Stormwater and Wastewater Utility Plans
- ❖ Local Transportation plans
- ❖ Sustainability Plan
- ❖ Hazard Mitigation and Emergency Management Plans
- ❖ County Health Plan
- ❖ Parks and Forestry Plans
- ❖ Comprehensive Planning

La Crosse Community Climate Adaptation workshop 2-28-12



- Elected & appointed officials
- City & county staff
- MPO
- National Weather Service
- USGS
- NPOs and civic leaders



La Crosse Plan Updates

- ❖ All Hazard Mitigation Plan
- ❖ Strategic Plan for Sustainability
- ❖ Engineering Planning for Green Infrastructure
- ❖ County Health Department Planning
- ❖ Comprehensive Plan



Thank you

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