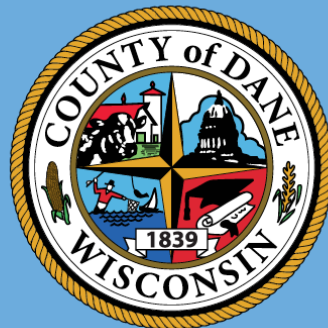


Resiliency: Preparing for More Frequent and More Intense Flooding

Powering Local Leadership
Wisconsin Academy of Science, Arts & Letters
January 24
Gordon Bubolz Nature Preserve

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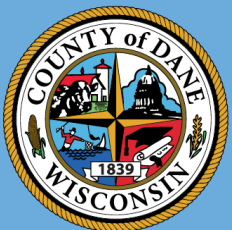
Keith Reopelle, Director

Lake Delton Flooding June 2008



- ~ 8 inches in two days,
- ~ 14 inches over two weeks

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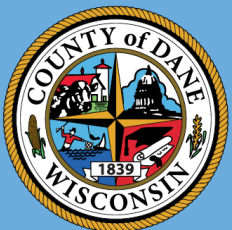


August 2018 Madison/Dane County

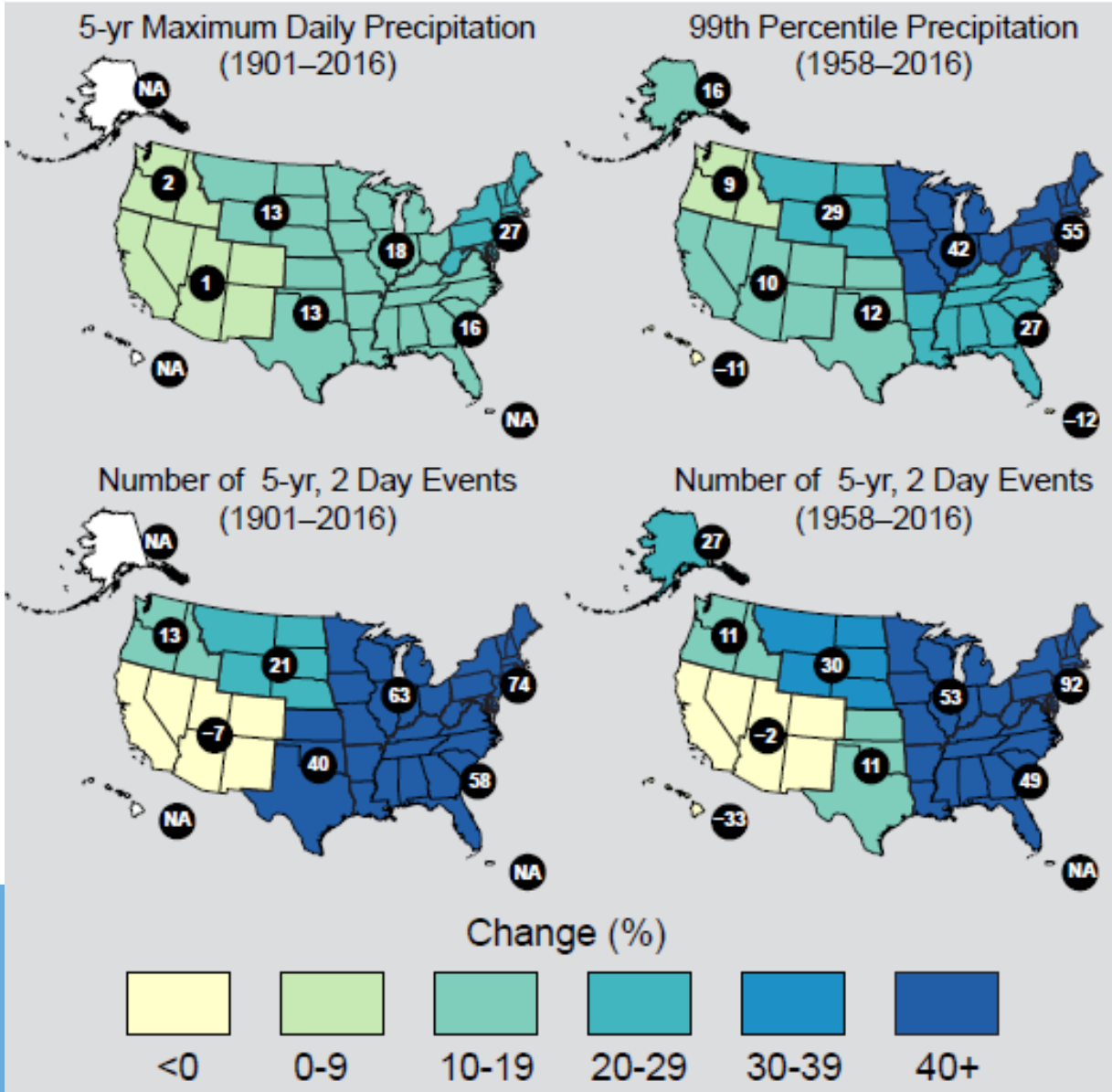


- 13 to 15 inches in less than 24 hours
- As much as 19 inches over 2 weeks in other areas

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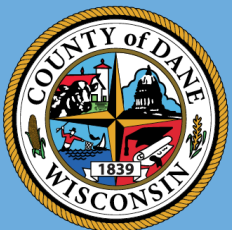


Observed Change in Heavy Precipitation



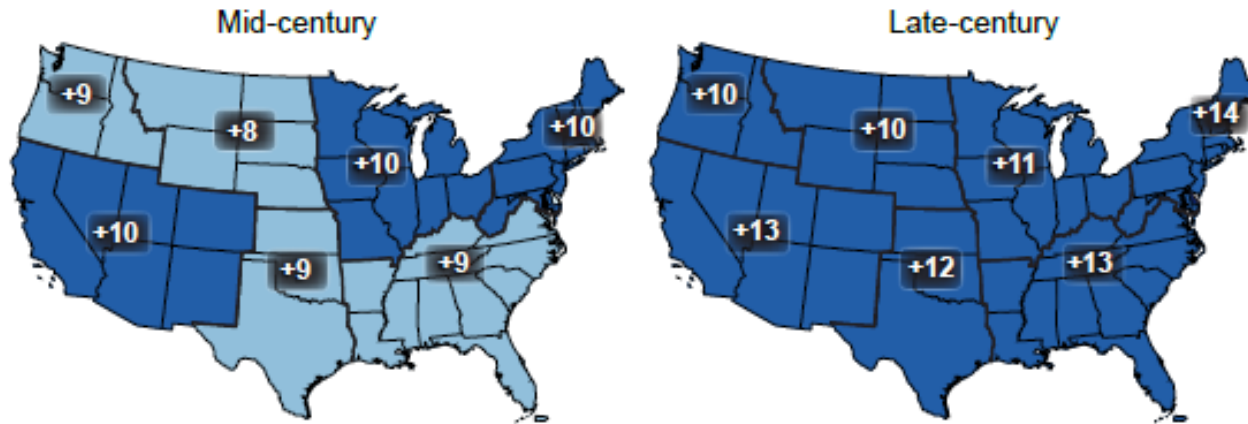
Fourth National Climate Assessment NCA4

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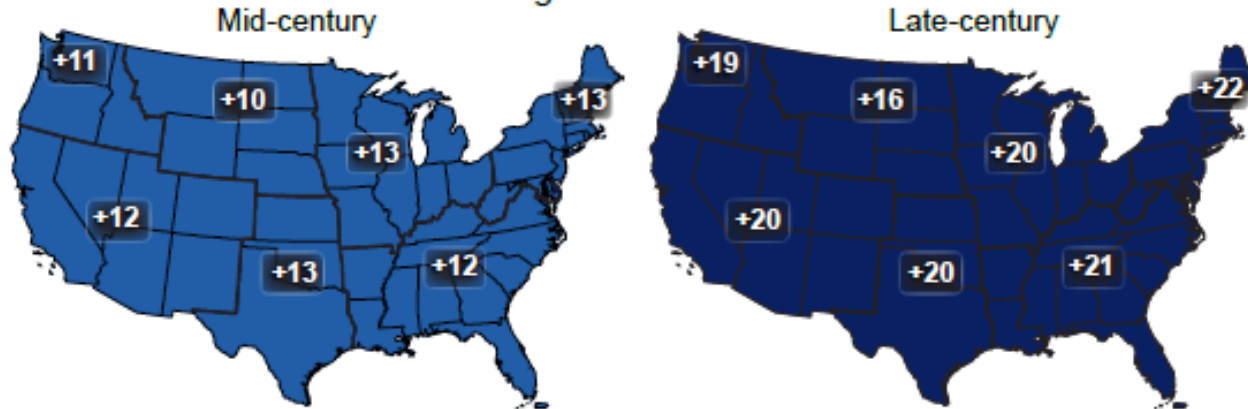


Projected Change in Daily, 20-year Extreme Precipitation

Lower Emissions



Higher Emissions



Change (%)

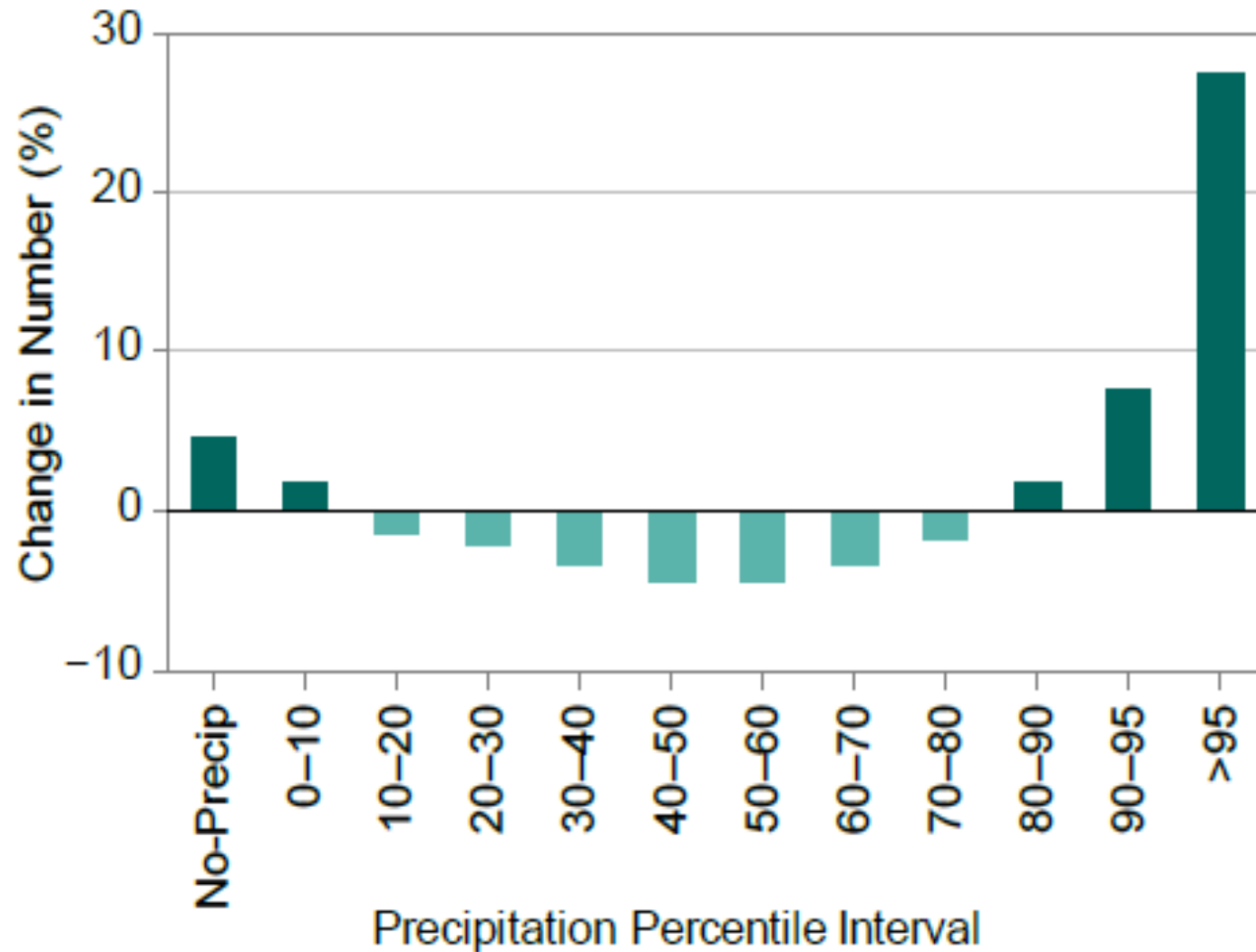


Fourth National Climate Assessment NCA4

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National Climate Assessment



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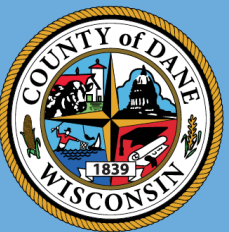


August 2018 Flooding & the Dane County Dept of Emergency Management



- More than 1,000 9-1-1 calls
- More than 80 dispatched water rescue calls (plus many that were not dispatched)
- Dane County EOC open 24/7 for 10 days
- More than 1,500 cars towed
- More than 1,500 homes impacted

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Dept of Emergency Management

- Evacuation orders in:
 - Cross Plains
 - Black Earth
 - Mazomanie
 - Madison
- Red Cross Shelters in Cross Plains, Mazomanie & Madison
- Informal shelters in churches, fire stations, hotels & other buildings

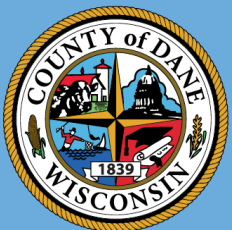


August 2018 Flooding in Dane County Damages



- Initial residential damage estimates exceed \$70 million
- >90 business reported losses of exceeding \$50 million
- Public sector losses exceeded \$28 million
- Of 623 private wells tested, 136 bacterial contamination (as of 9/14)

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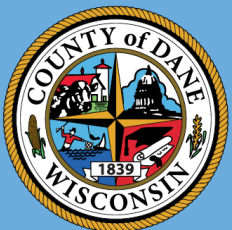


Dane County 2019 Budget



- \$3 million to improve Yahara water flow
- \$1 million for shoreline and other repair
- \$750,000 for Dane CRP
- \$9 million for land purchases

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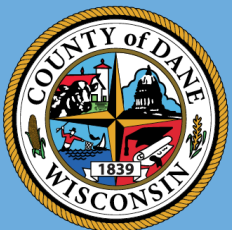


Next Steps: Co Board Resolution 227

- Dane Land & Water Resources Dept:
 - Convene Technical Work Group
- Dane Lakes & Watershed Commission, &
- Environmental, Ag & Natural Resources Committee:
 - Convene Task Force



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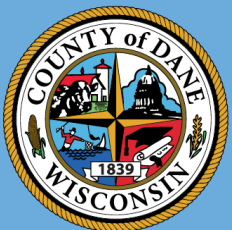
Dane County Council on Climate Change

38 Organizations – Diverse Perspectives

- 7 Governments (Madison, Middleton, Monona, Sun Prairie, Fitchburg)
- 3 Utilities (Alliant Energy, MGE, WPPI)
- 7 Businesses & Madison Chamber
- 4 Community Equity/Justice (e.g. Urban League, YWCA)
- 2 Agriculture (Clean Fuel Partners, crop farmer)
- 6 Environmental (e.g. Sustain Dane, Sierra Club)
- 3 UW (e.g. Nelson Institute, WICCI)
- Labor & Law



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Office of Energy & Climate Working Groups:



Renewable CNG Filling Station

- Energy Efficiency
- Electricity Supply/Generation
- Agriculture, Forestry & Food
- Transportation & Land Use
- Buildings
- Water—Energy Nexus
- Adaptation
- Modeling
- Public Engagement
- Financing



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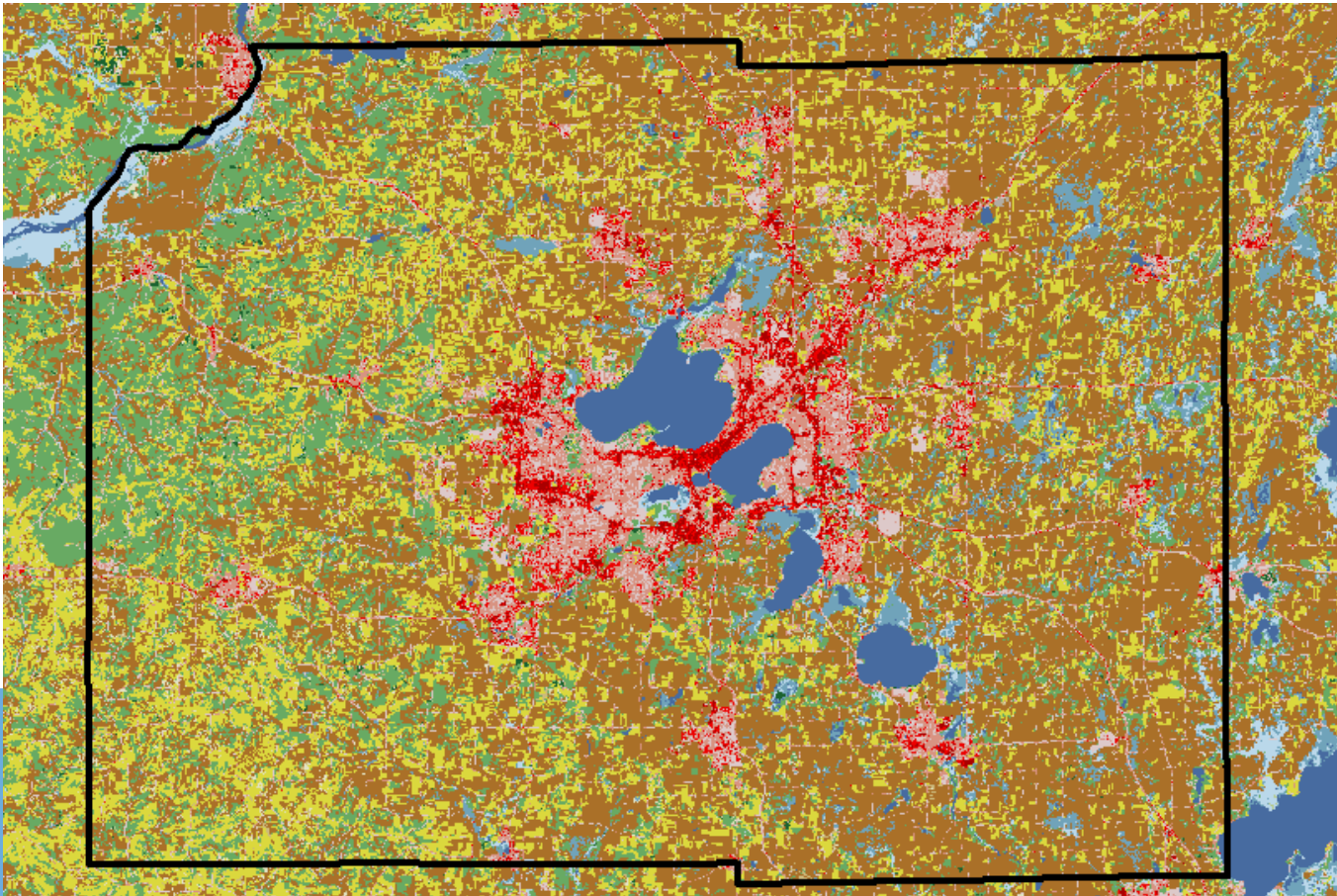


Policies & Programs Considered for the CAP

- Dane Co energy efficiency program
- 1,200 MW of solar capacity
- Bio-digesters build out
- Electricity storage
- Regenerative Ag & Afforestation
- New construction guidelines and benchmarking for commercial buildings
- R&D

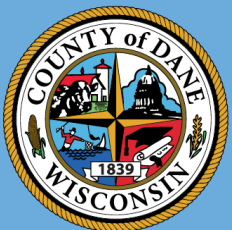


Regenerative Ag Systems and NRCS Agroforestry Practices



- Riparian Buffers
- Ally Cropping
- Silvopasture
- Multi-story Cropping

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Electric Energy Storage

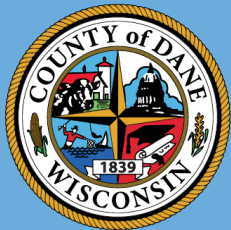
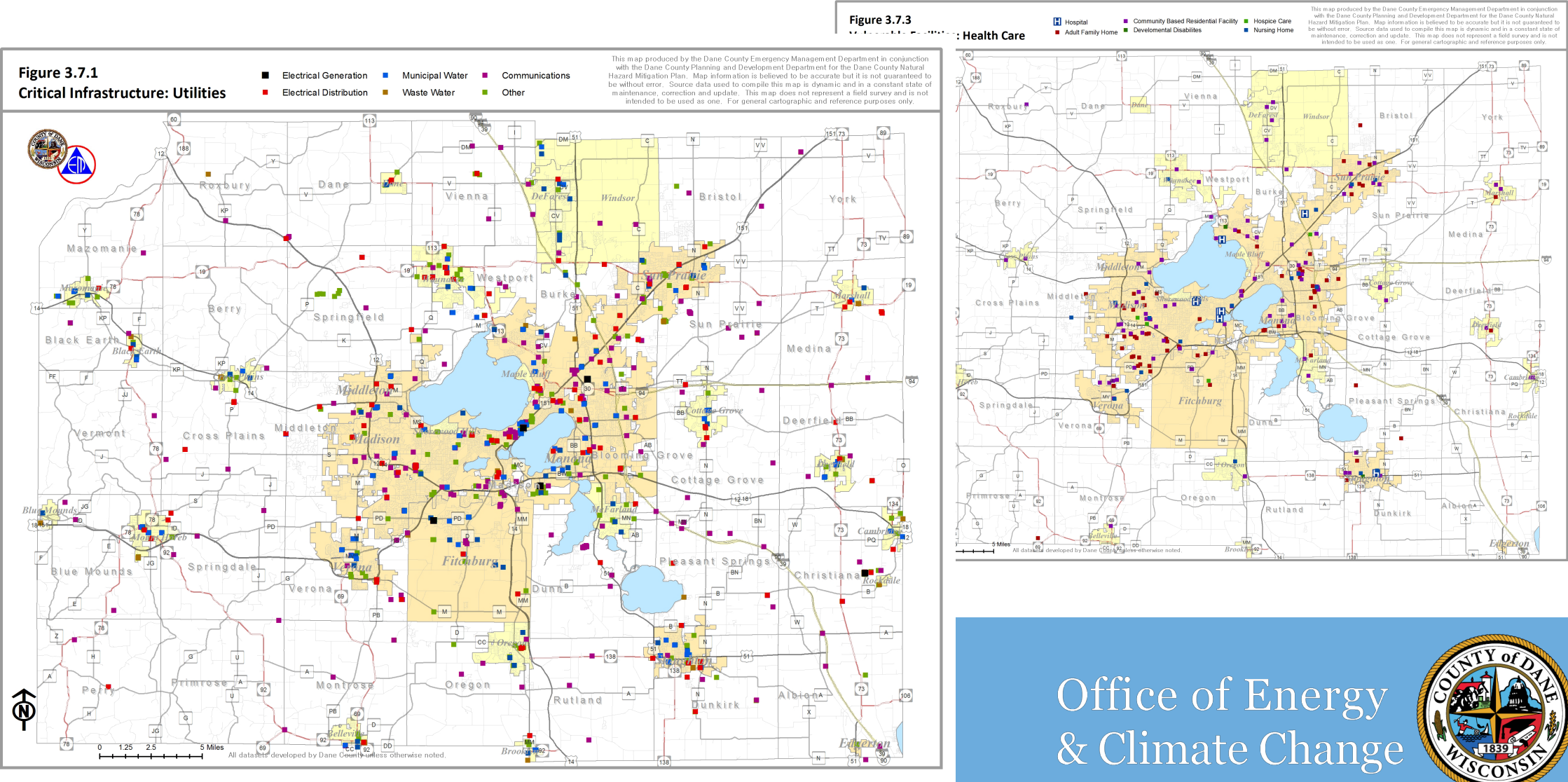


- Utility-scale storage on the electric distribution system.
- Co-owned utility-scale storage on customer premises between the utility and customer.
- Storage for microgrids at critical Dane County Governmental Facilities.
- Facilitate customer-sited storage for commercial and industrial buildings.
- Encourage customer-sited storage for home and residential buildings.

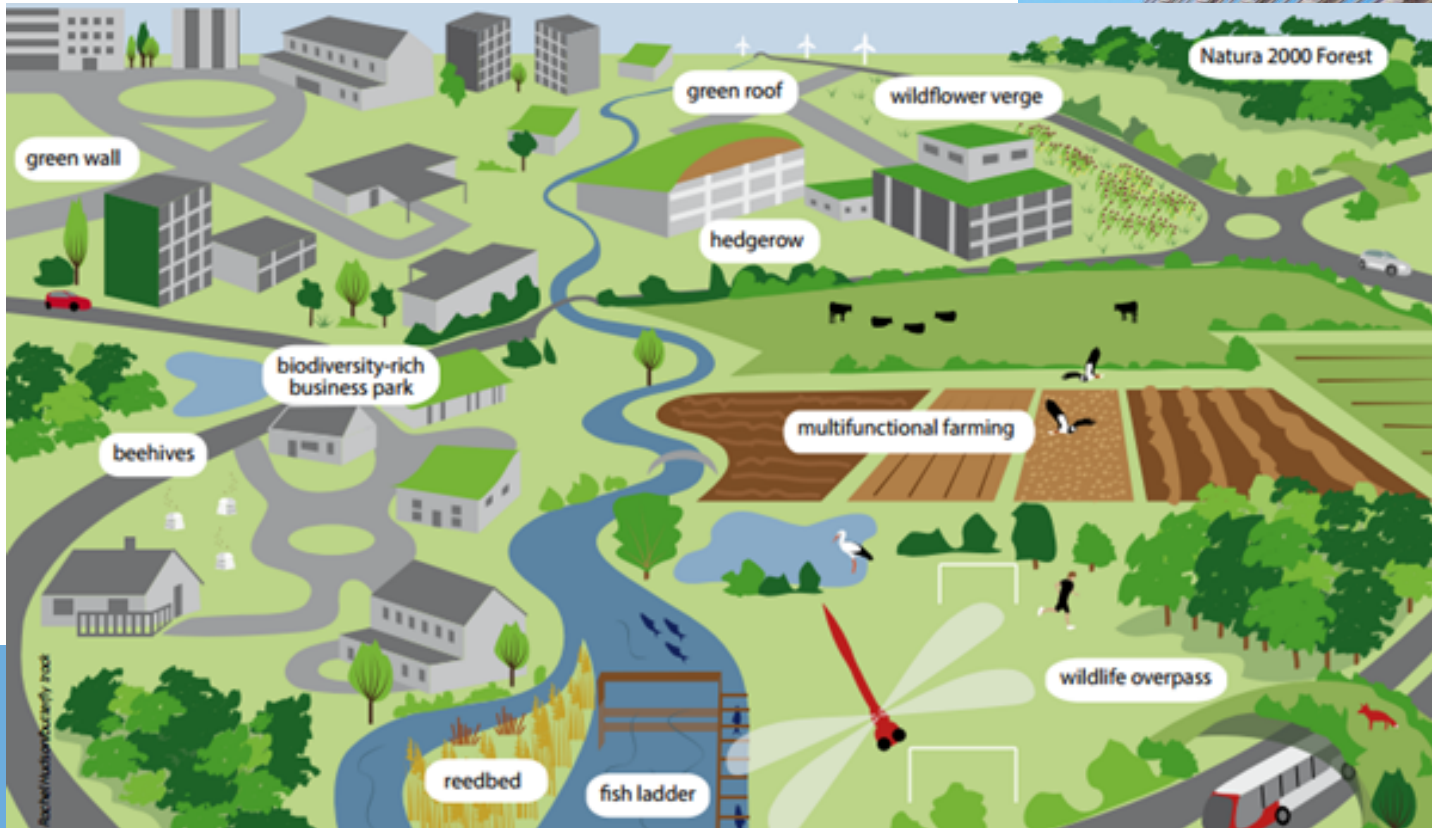
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Critical & Vulnerable Facilities



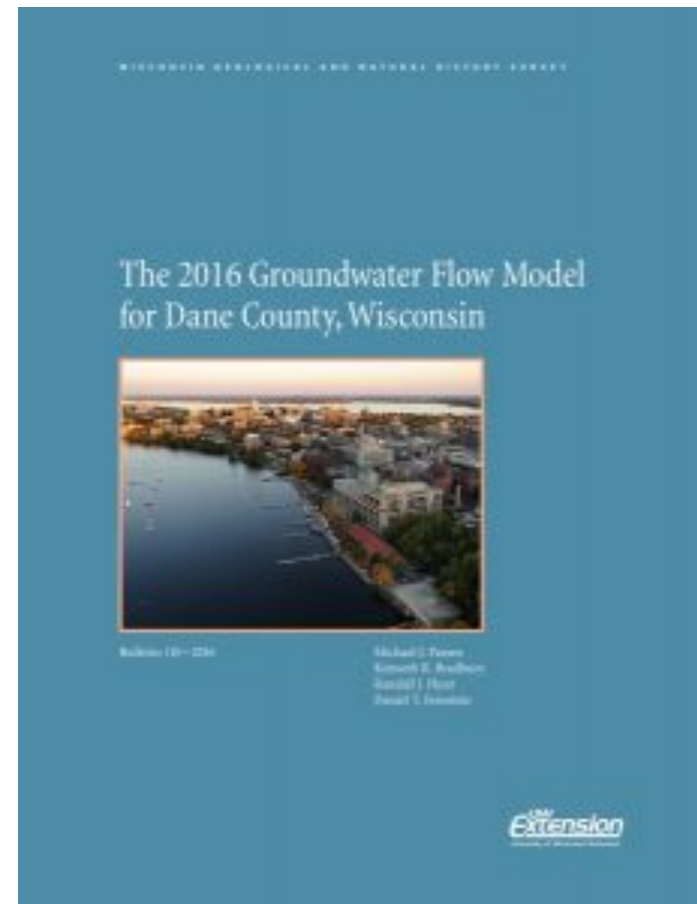
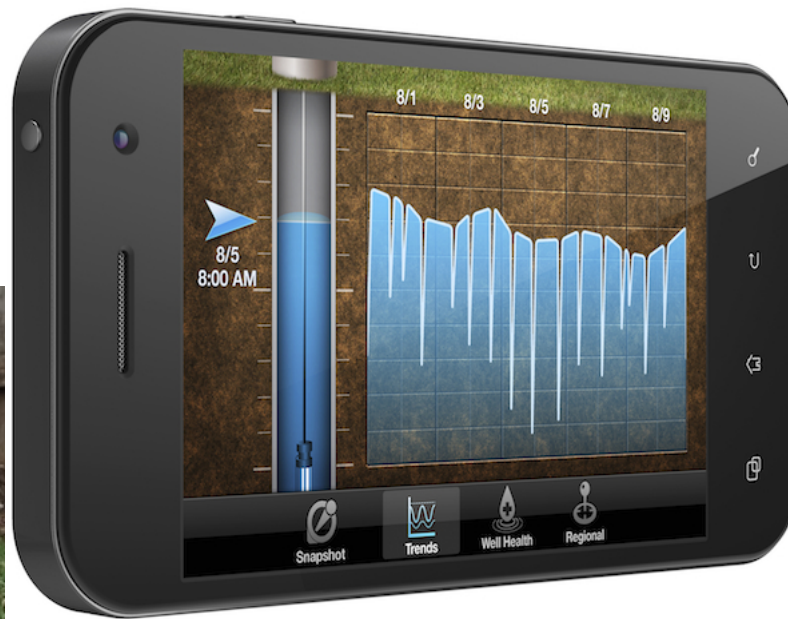
Building Guidelines – Green Infrastructure



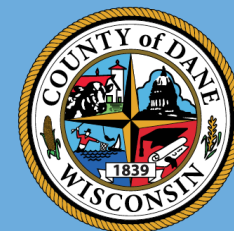
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Groundwater Research Modeling and Technology



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Dane County Office on Energy and Climate Change

Questions?

Comments?

Suggestions?

reopelle.keith@countyofdane.com

608-283-1476



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