

Lessons Learned in 20 Years of Erosion Control & Storm Water Management Programs

- ◆ *Looking back & looking ahead*
- ◆ *The evolution of storm water technology, standards & programs*
- ◆ *What has and has not worked*

April 10, 2013 Waukesha County
Storm Water Workshop



Program Overview



1. Evolution of construction site erosion control & storm water management

- Break 10:00 – 10:15

2. Basement flooding

- Lunch 12:00 – 12:45

4. Plan implementation & enforcement

- Break 2:30 – 2:45

5. Permits & BMP maintenance

- Adjourn 4:00



Please fill out evaluations! They help us plan and improve.

Water Retention

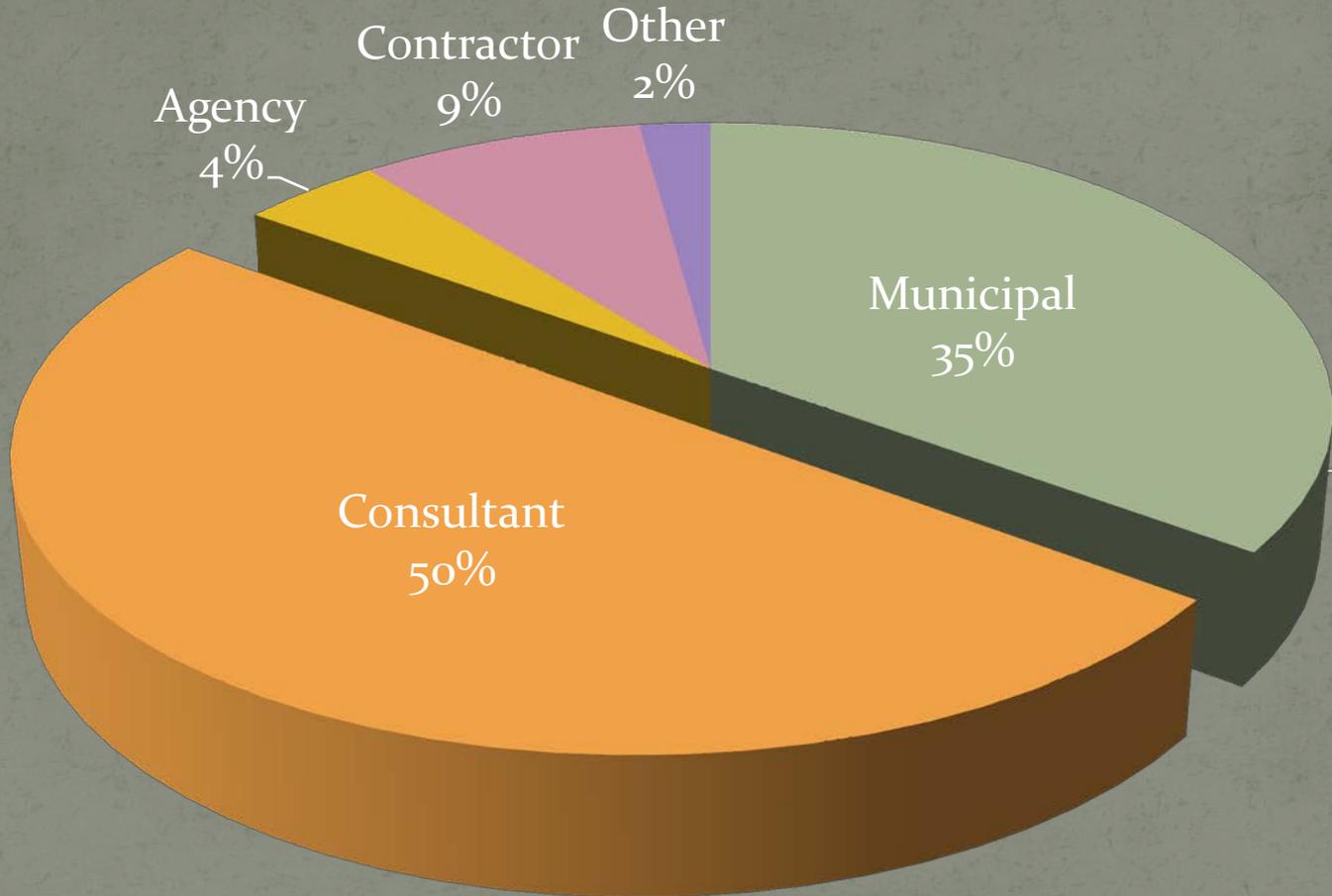


Do you think my weight gain may be due to water retention?



No, its not water. You seem to be retaining food.

2013 Workshop Attendees



History of SW Regulation

- 1972 CWA/Washington County project (1974-80)
 - EPA/UW research – nonpoint regulations (1979 ordin.)
- National Urban Runoff Project/Milw. (1980's)
- TR-55 published by SCS/NRCS (1986)
- 1987 Clean Water Act Revisions (+ Storm Water)
 - DNR Model Constr. Erosion Control Ordinance (1987)
 - DNR "Blue Book" - Erosion Control BMPs (1989)
- WI Priority Watershed Program (1990's)
 - Erosion control ordin. req'd for grants (Wauk. Co. 1992)
 - SLAMM – pollutant load in storm water

History of SW Regulation (cont.)

- Phase I - NR 216 (1994) > 5 acres, 100,000 pop.
 - DNR “Green Book” - Storm Water BMPs (1995)
 - DNR/Wauk. Co. model storm water ordinance (1998)
 - Wet detention basin technical standard (1999)
- NR 151 Nonpoint Performance Standards (2002)
 - Agricultural & non-agricultural standards
 - New DNR Model SW & EC Ordinances (2002/NR 152)
- Phase 2 - NR 216 Rewrite (2004)
 - Incorporation of NR 151 standards, including infiltration
 - MS4 permits (municipalities >1,000 pop./sq. mile)
 - Required municipal SW & ER ordinances
 - Waukesha County ordinance rewrite (2005)

Community MS4 Permits in Waukesha Co.

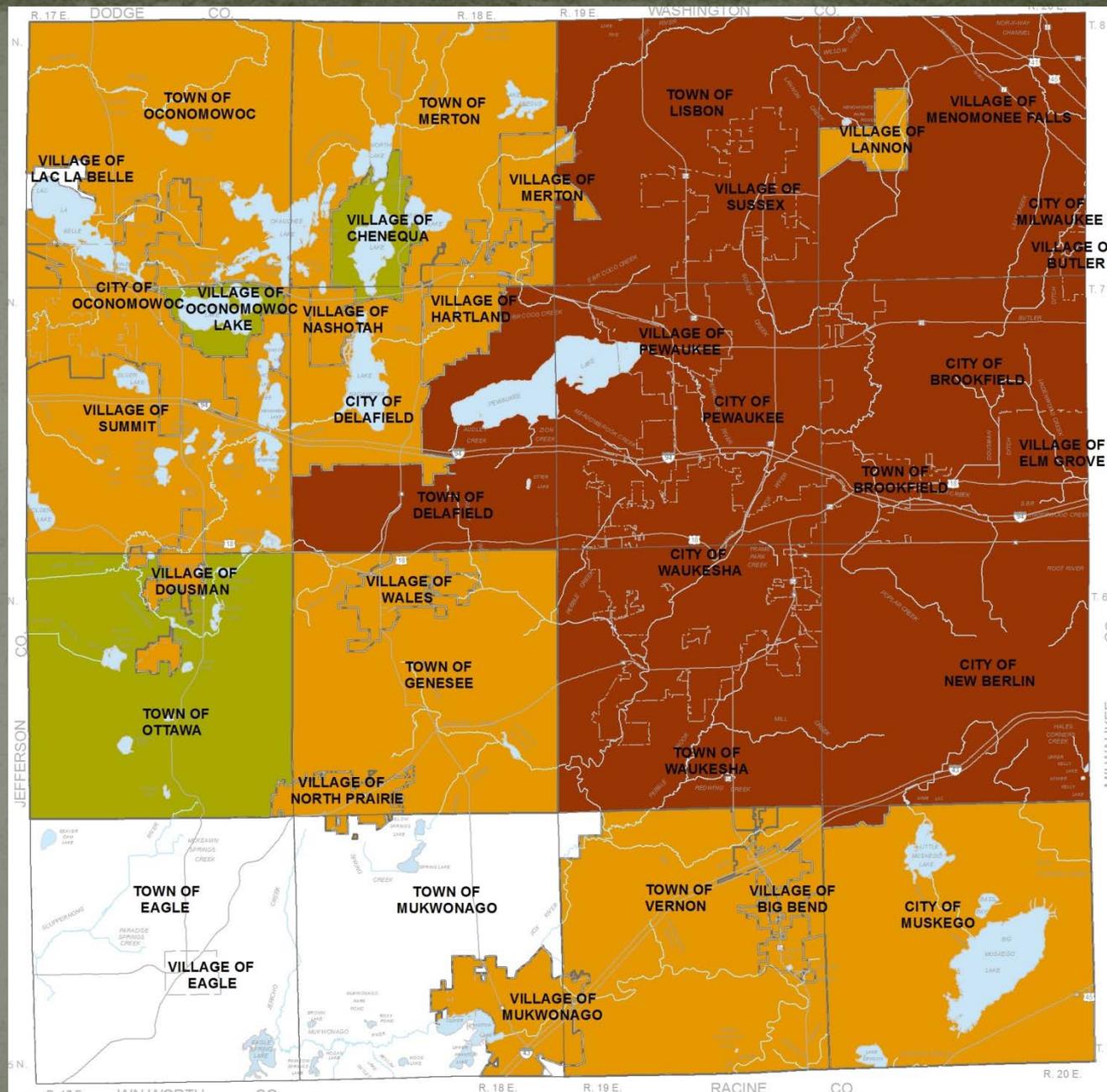
(MS4=Municipal separate storm sewer systems)

Legend

- Phase I (13)
- Phase II (18)*
- Exempted (3)
- Not required (4)

* Includes Waukesha Co.

(31 out of 38 communities)



History of SW Regulation (cont.)

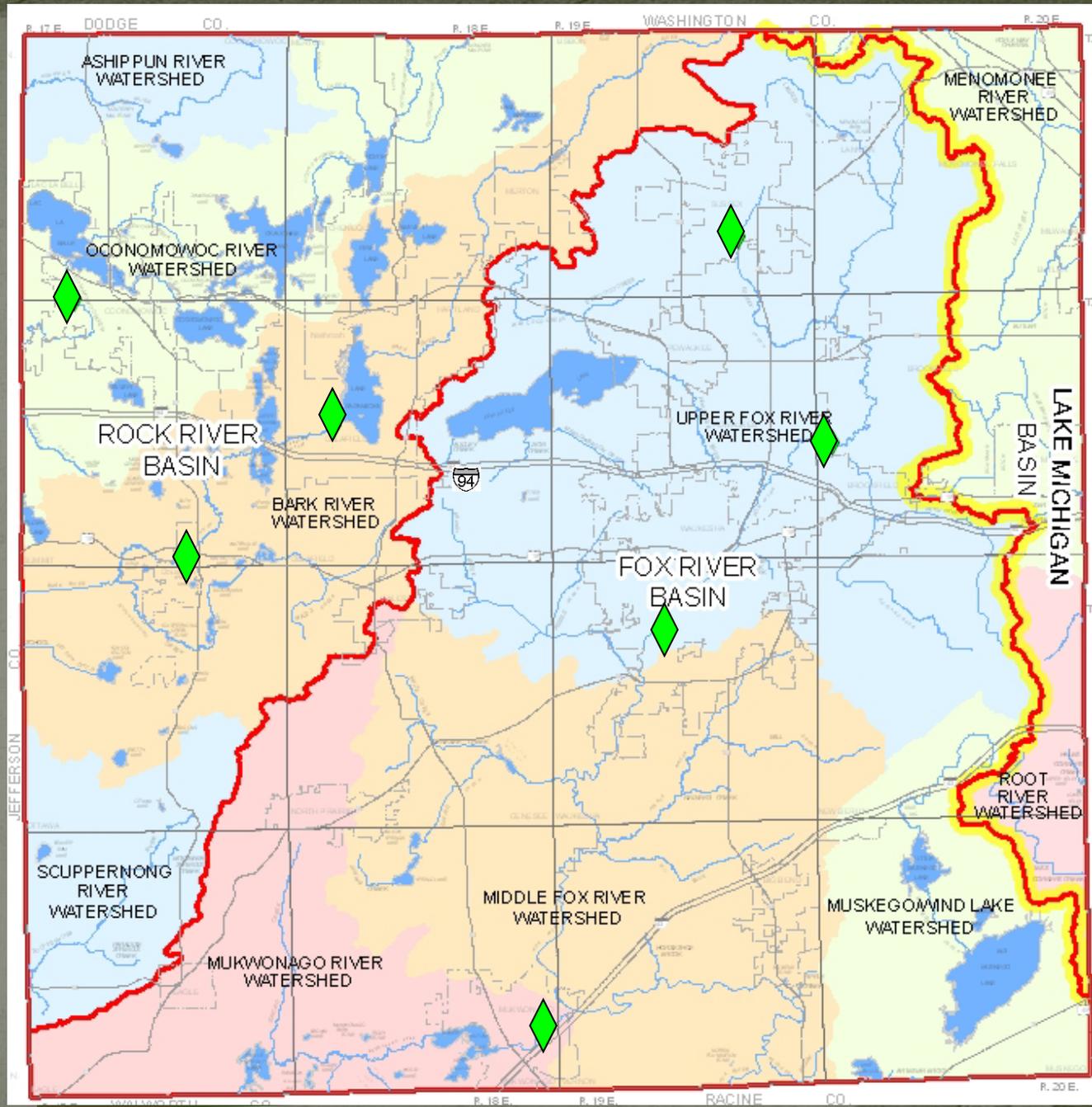
- 2010 – Phosphorous Rule Updates
 - In-stream/lake standards for P (NR 102)
 - P effluent limits for treatment plants (NR 217)
 - P-Index for farm runoff (NR 151)
- Future Implementation Tools
 - MS4 permits
 - TMDL watershed plans – point & nonpoint sources
 - Water quality trading (modeling & BMP credits)
 - Adaptive management (P monitoring)

Watersheds & Sewage Treatment

Waukesha County

Legend

-  Subcontinental Divide
-  River Basin Boundaries
-  Sewage Treatment Plants (7)



We've come a long way... in a short time!



What have we learned?

What still needs work?