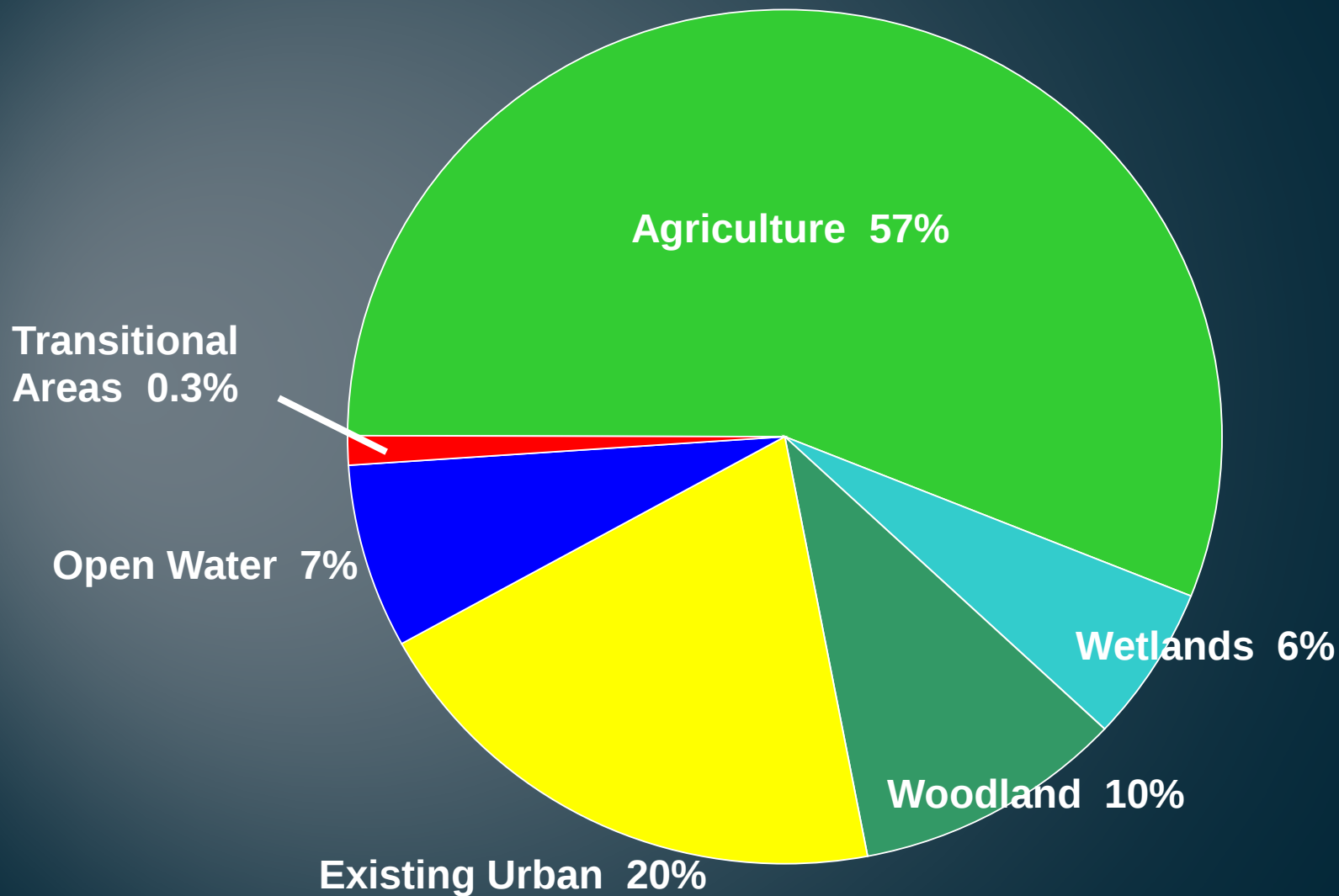


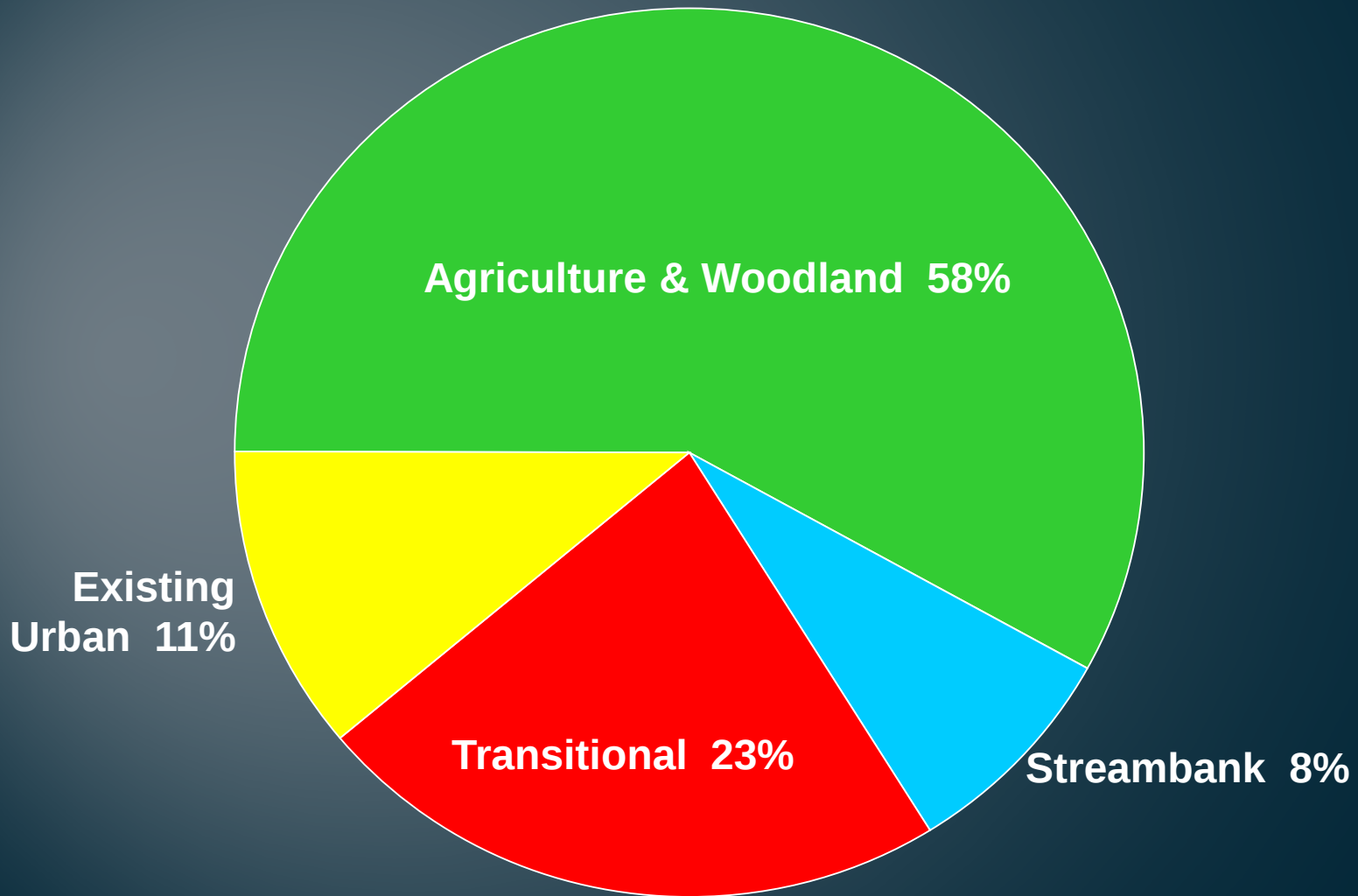
Urban Water Quality Grants

- Offers cost-sharing grants to municipalities for sediment and phosphorus reduction practices.
- Projects in existing urban areas
- Program began in 2007
- 50% cost share up to \$100K
- Top Ten list developed in 2013
- 75% cost share with no cap for “Top Ten”

Land use in the Lake Mendota Watershed



Sediment Delivered to Lake Mendota





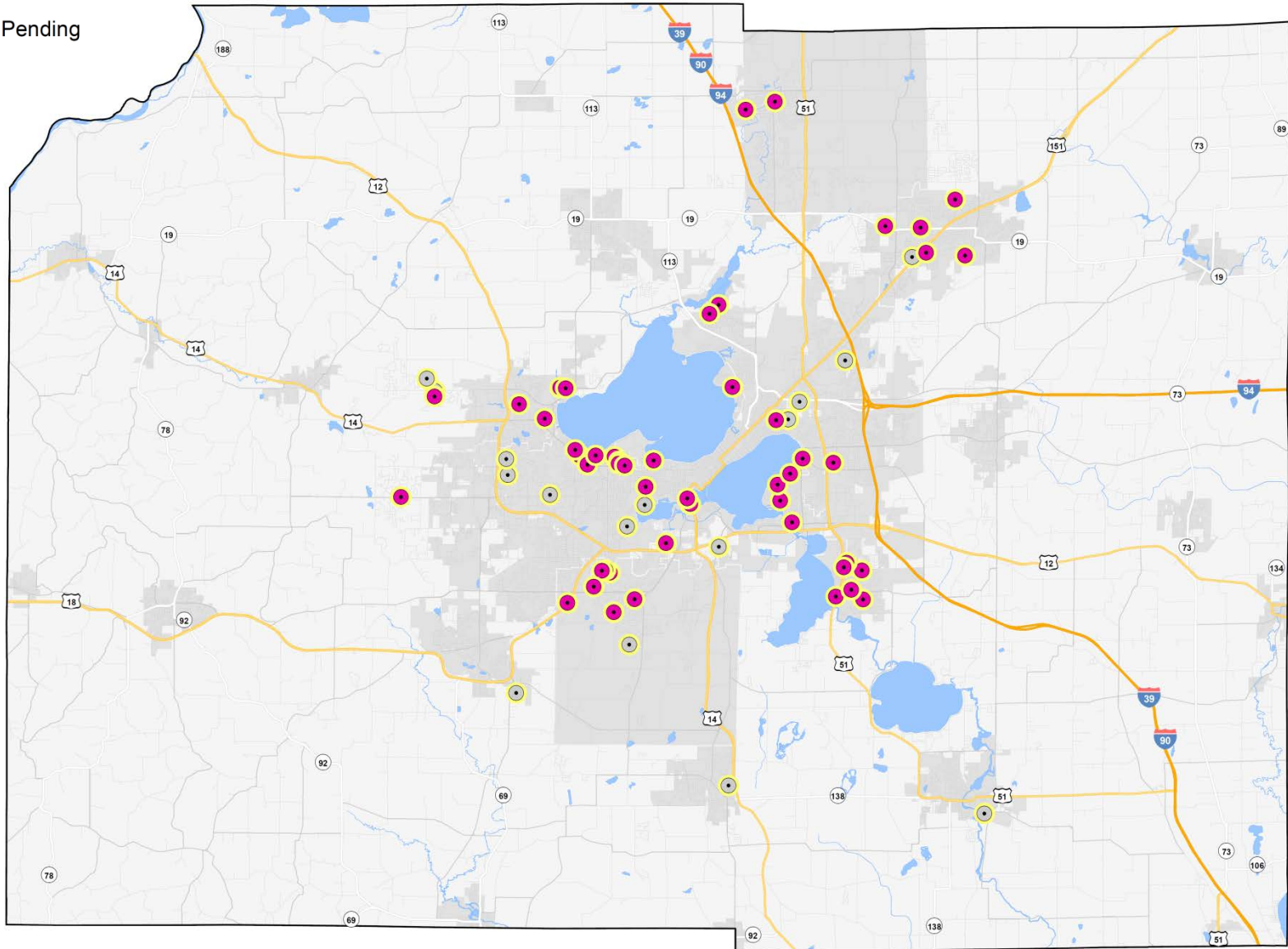




03/26/2010

UWQG Projects

- Completed
- Pending









Lacy Heights Pond

A City of Fitchburg Stormwater Facility

5824 Persimmon Drive



Program Achievements

- 65 Projects - 50 Completed/15 Ongoing or Pending
- \$23 million total project costs (\$7 million in cost share)
- Annual trap nearly 1 million pounds of sediment
 - Over 50 dump trucks of sediment per year
- Annual trap more than 3,700 pounds of Phosphorus
 - Every pound of P can produce 500 pounds of algae

Moving Forward (2019)...

- Approximately \$1.6 million in 2019
- Add volume control (infiltration) projects to eligibility
- 50% Cost share up to \$500K
- Replace “Top Ten” with performance-based prioritization.
- Remove application deadline – accept applications throughout the year

Alum Treatment of Natural Waterways

- Alum is used to describe several chemicals
 - Aluminum Sulfate
 - Aluminum Chlorohydrate
- Aluminum binds to phosphorus and settles to the bottom.
- Research has shown that if pH is managed there are no toxic effects to aquatic biota.
- If not removed, the flocculent crystallizes into gibbsite, an inert natural mineral.

Alum is not a “New” Practice

- Has been used across the country for decades for lake treatment.
- Several private ponds have been treated in Dane County
- Used to purify water for public supplies



Effects of alum treatment on water quality and sediment in the Minneapolis Chain of Lakes, Minnesota, USA

Brian Huser, Patrick Brezonik, Raymond Newman

Fisheries, Wildlife, and Conservation Biology

Research output: Contribution to journal › Article



ELSEVIER

Water Research

Volume 97, 15 June 2016, Pages 122-132



Longevity and effectiveness of aluminum addition to reduce sediment phosphorus release and restore lake water quality

Brian J. Huser ^a✉, Sara Egemose ^b, Harvey Harper ^c, Michael Hupfer ^d, Henning Jensen ^b, Keith M. Pilgrim ^e, Kasper Reitzel ^b, Emil Rydin ^f, Martyn Futter ^a

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[Water Res.](#) 2016 Jun 15;97:142-52. doi: 10.1016/j.watres.2015.07.036. Epub 2015 Jul 22.

In-lake measures for phosphorus control: The most feasible and cost-effective solution for long-term management of water quality in urban lakes.

Huser BJ¹, Futter M², Lee JT³, Perniel M⁴.

⊕ Author information

UWQG Alum Projects

- Offline storm dosing of Starkweather Creek
- Ultra low dose stormwater pond treatment between storms
- Stormwater pond – whole pond treatment