

Citizens Monitoring Stream Flow and Lake Levels in the Wisconsin Central Sands



By: Jessica Haucke



University of Wisconsin-Stevens Point
College of Natural Resources

Important Points

- Volunteers are collecting accurate water quantity data in the Wisconsin Central Sands
- Sustaining a long term water quantity monitoring program is challenging but possible.
- Water quantity data provides:
 - long-term regional context,
 - informs high-capacity well permitting decisions,
 - calibrates stream flow models,
 - informs water quality assessments.

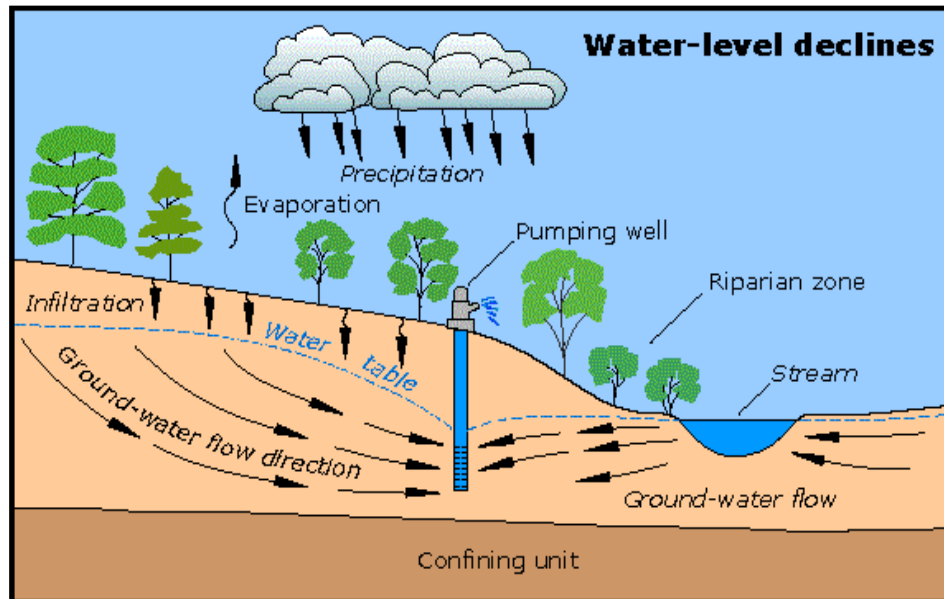
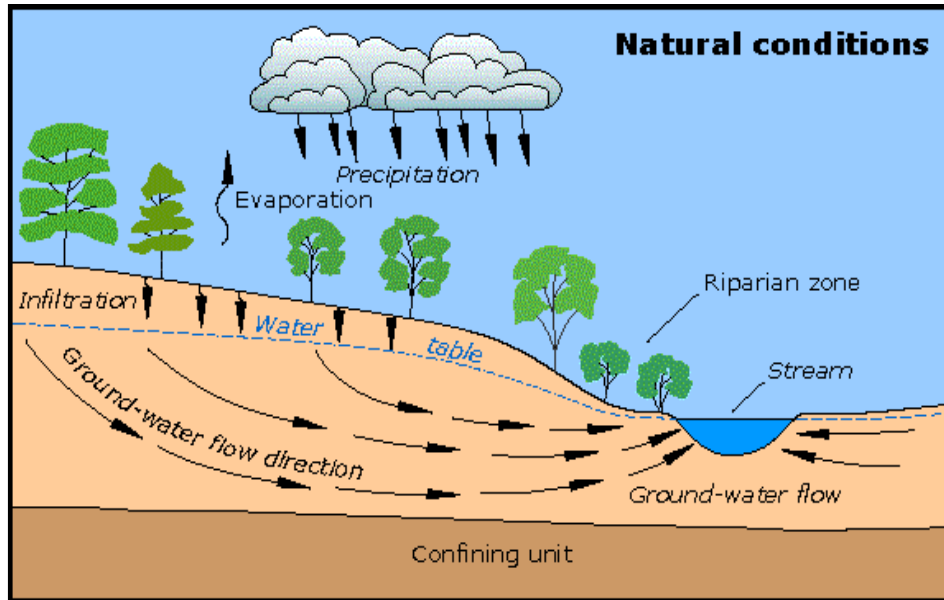
County Soil and Water Conservation Districts



Center for Watershed Science and Education
College of Natural Resources
University of Wisconsin-Stevens Point



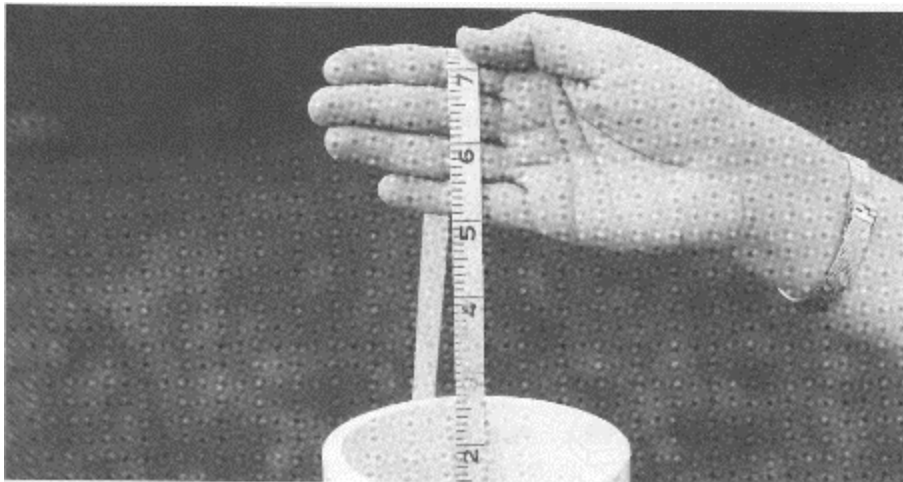
Why is lake and stream flow data needed?



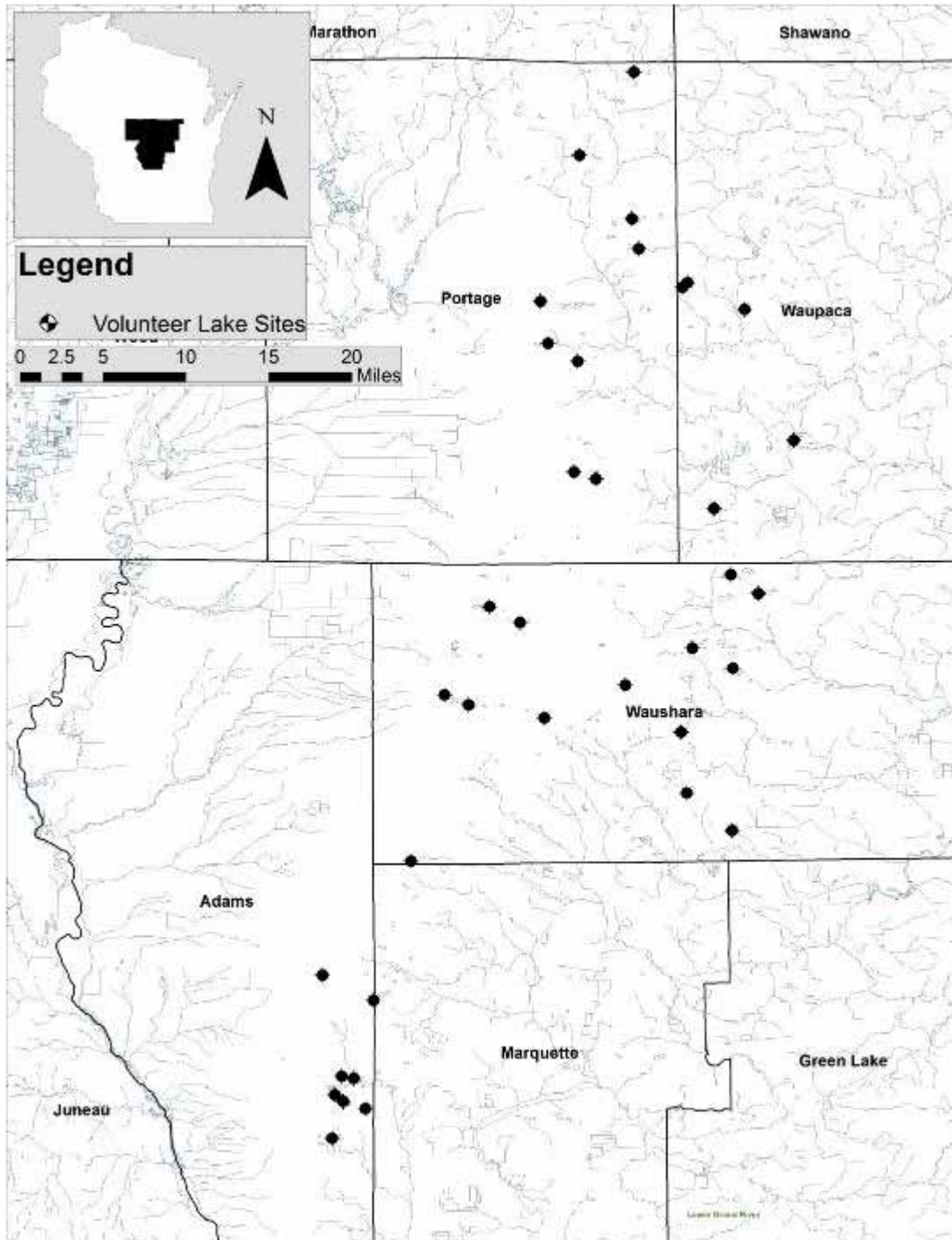
Project Goals:

1. Produce high quality stream flow data using advanced methods and equipment.
2. Establish baseline information for lakes and streams.
3. Provide real data.
4. Help to clarify the impacts of groundwater pumping on Central Sands lakes and streams.

What were we asking volunteers to do?



Lakes: After a monitoring well was installed close to a lake, volunteers used a special tape measure and recorded the level of the water in the well.



Volunteer Lake Sites in Central Wisconsin

What were we asking volunteers to do?



Photo Courtesy of Diane Lueck

Streams: learn to use professional grade flow meters to measure streams and only measure during “baseflow” conditions.



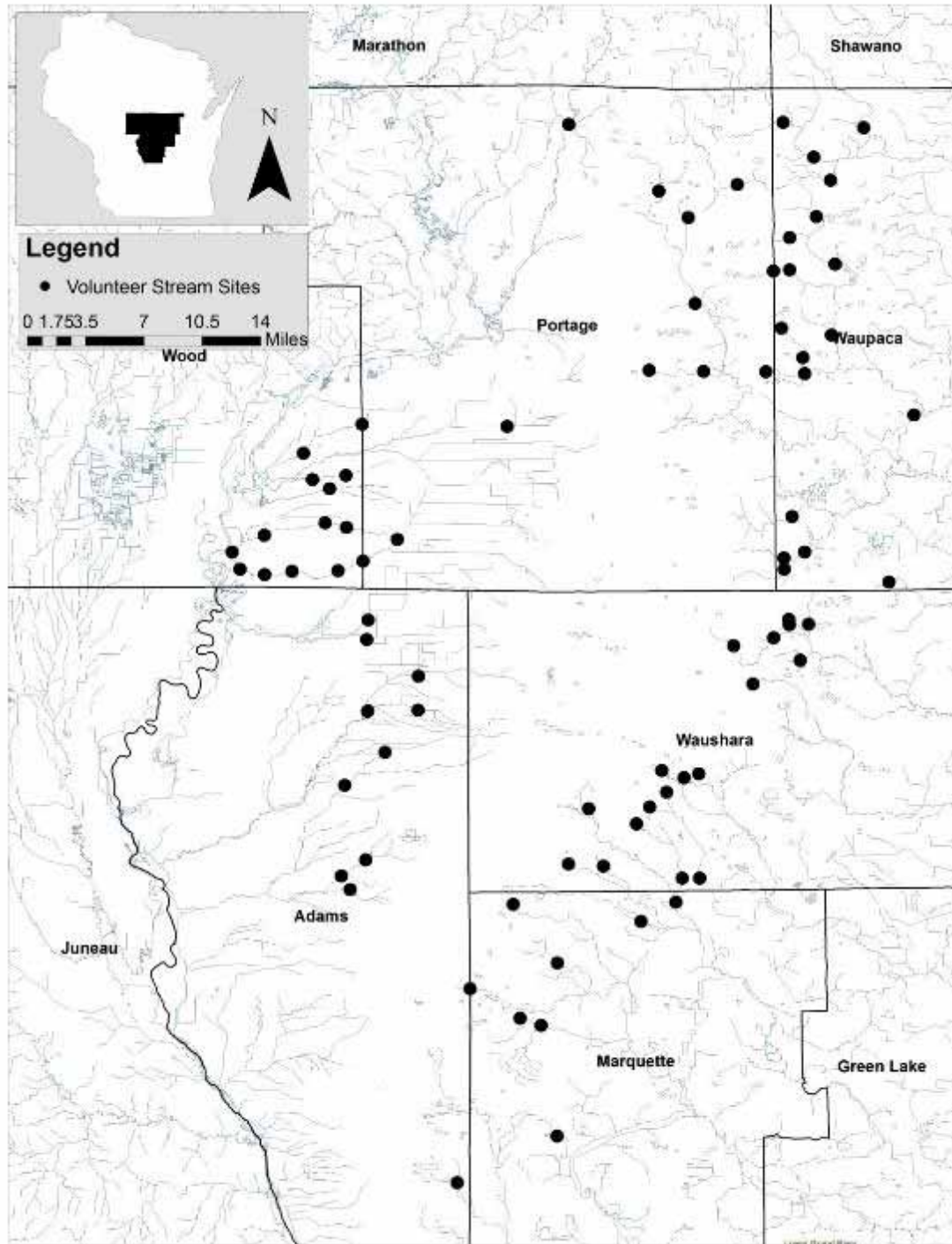
Photo Courtesy of Diane Lueck

Adams County Training

Waupaca County Training

Photo Courtesy of
Waupaca County Land
Conservation Department





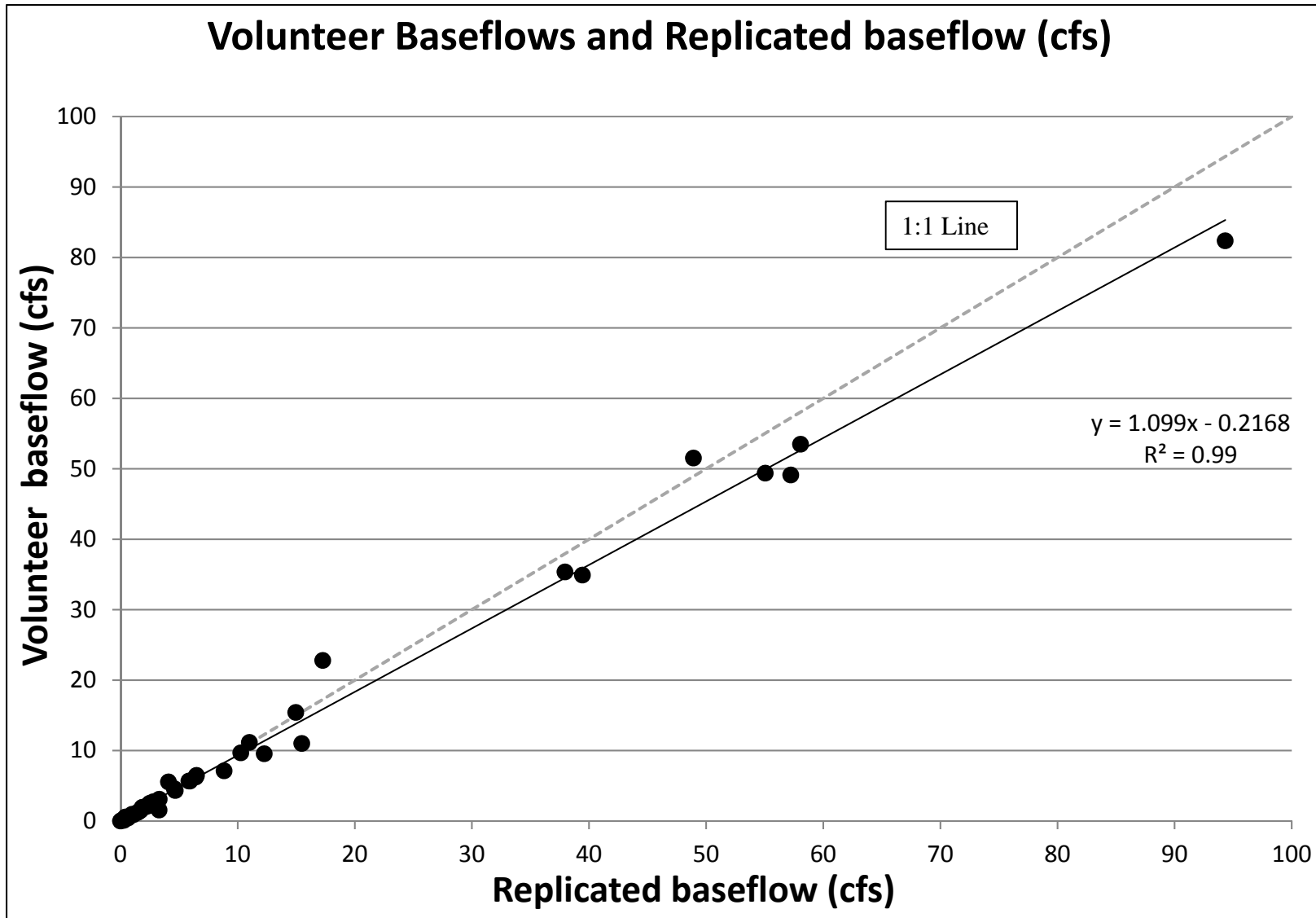
Volunteer Stream Sites in Central Wisconsin



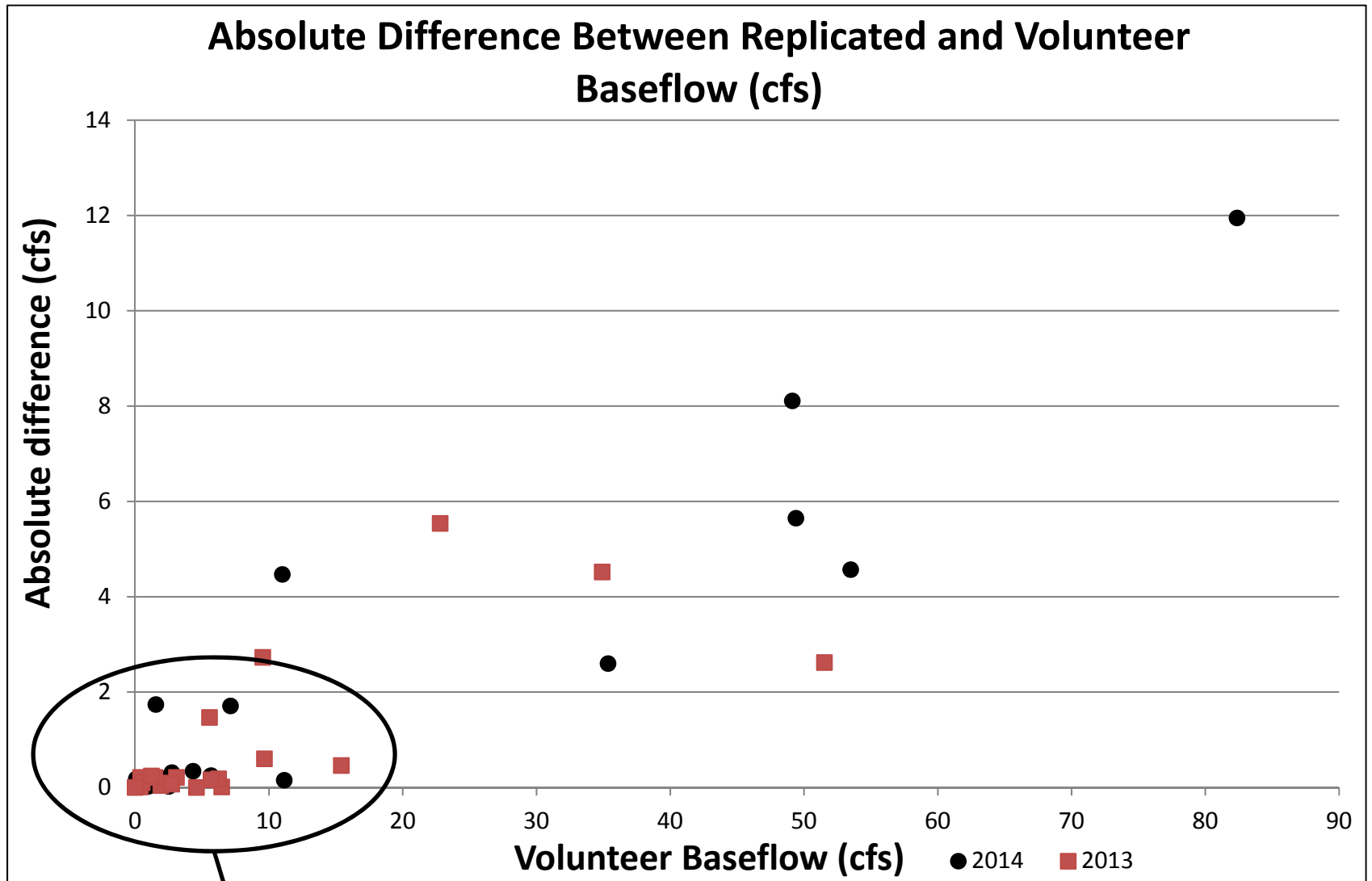
I hope
volunteer
Jen did a
good job!

Looking
good..

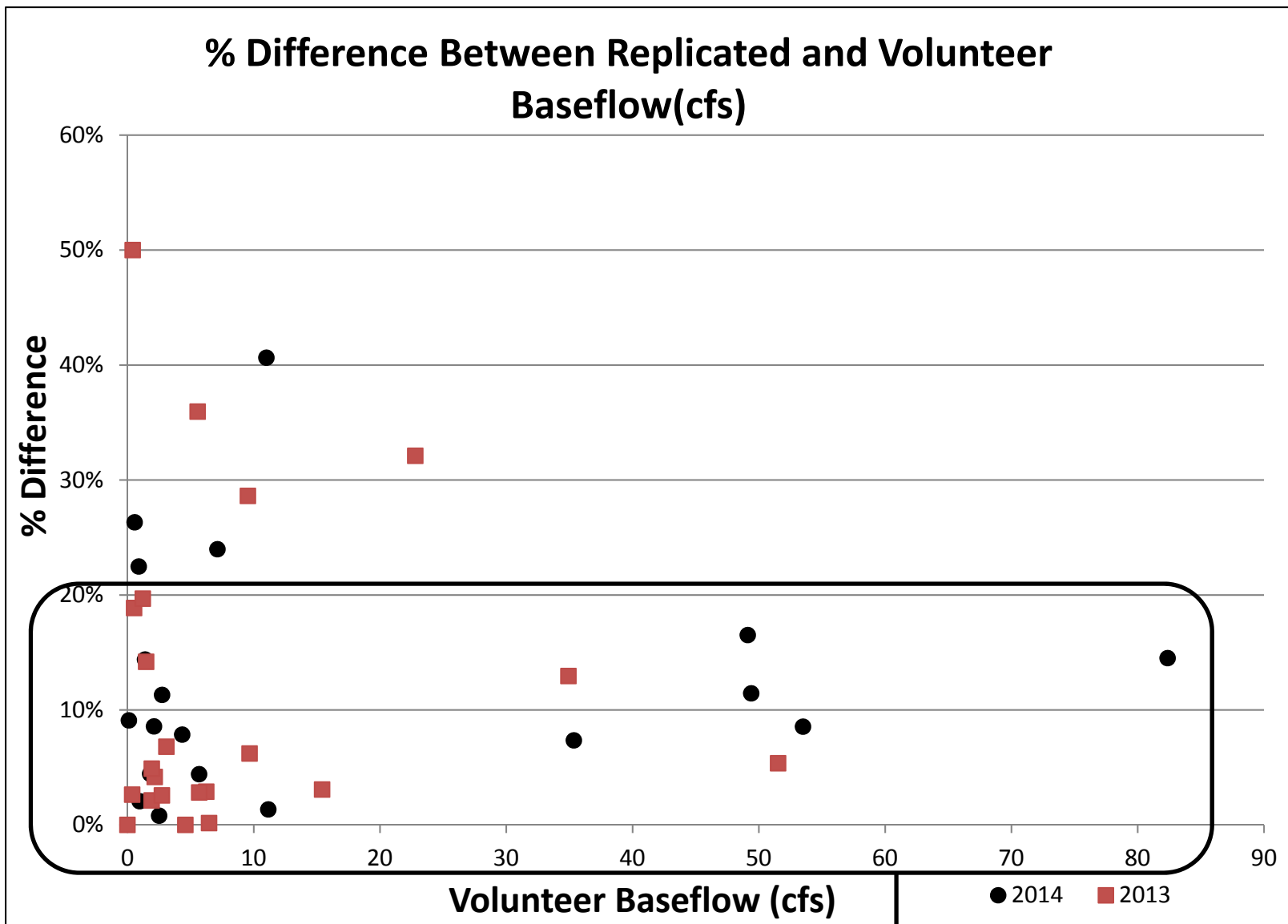
WOW!
NICE!



Volunteer measurements tended to be a little lower than my replicated measurements. But not by much!



Most replicated measurements had differences of < 2 cfs.



77% of replicated measurements had a % difference
below 20%.

Important Points

- Volunteers are collecting accurate water quantity data in the Wisconsin Central Sands
- Sustaining a long term water quantity monitoring program is challenging but possible.
- Water quantity data provides:
 - long-term regional context,
 - informs high-capacity well permitting decisions,
 - calibrates stream flow models,
 - informs water quality assessments.

Thanks to Lake and River Volunteers!!



Photo Courtesy of Waushara County Land Conservation Department