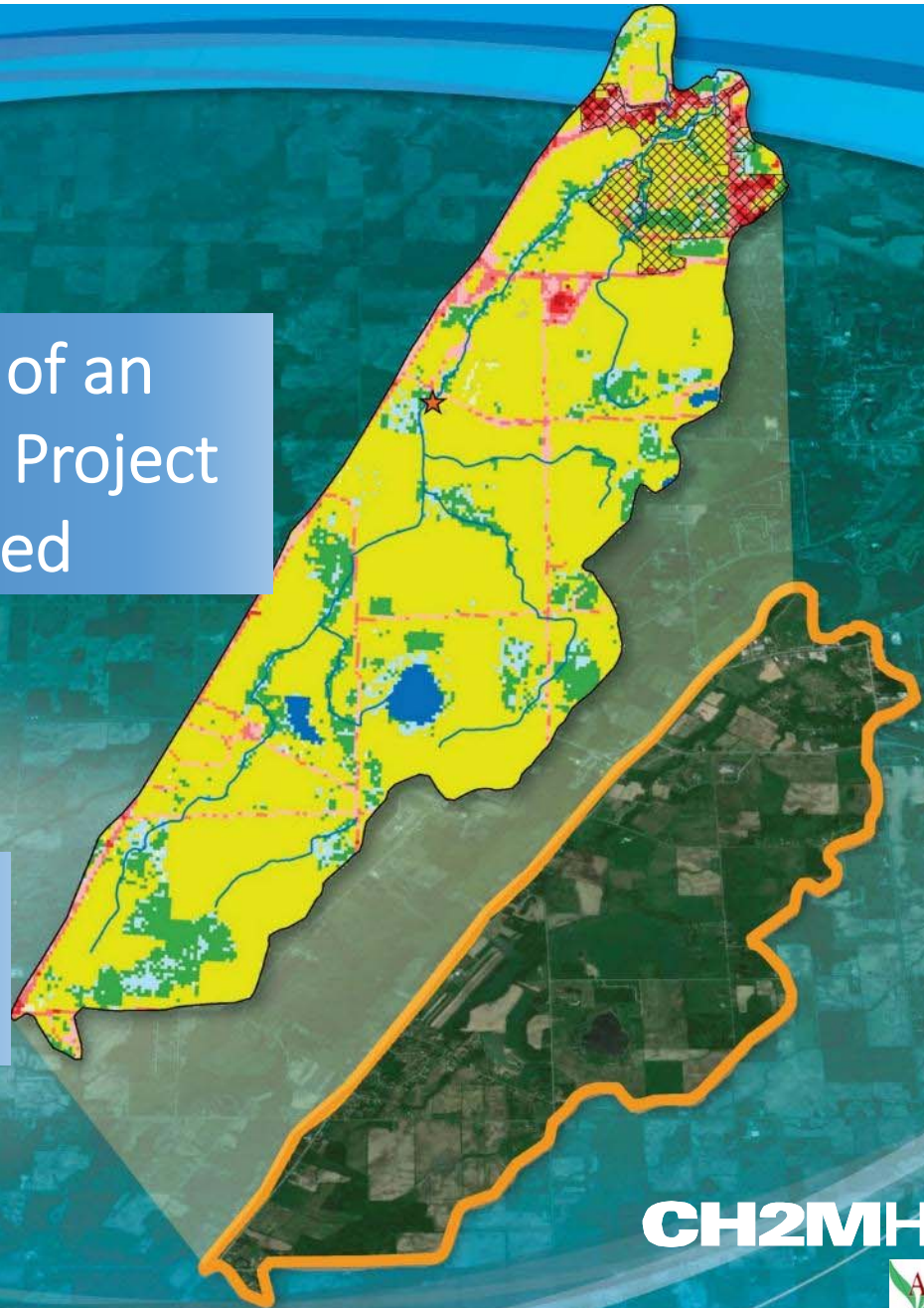


Design and Implementation of an Adaptive Management Pilot Project for the Silver Creek Watershed

Progress Update and Planning for 2015

December 4, 2014



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AgVentures

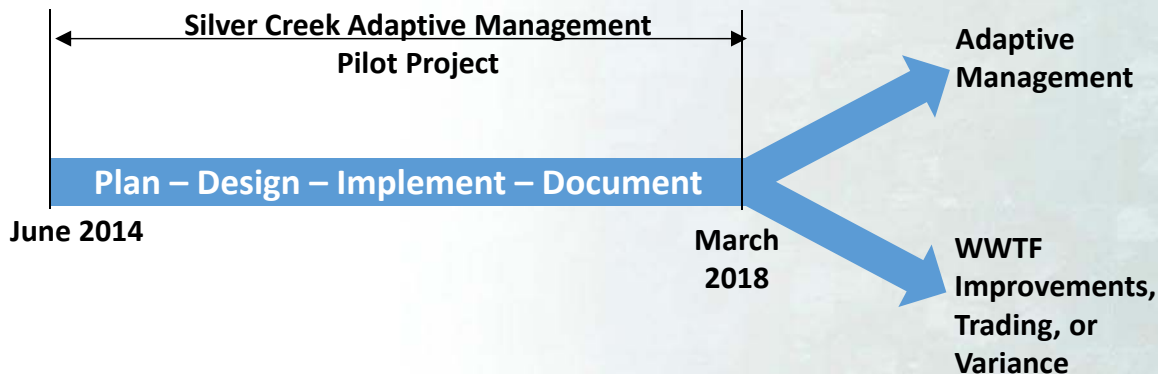
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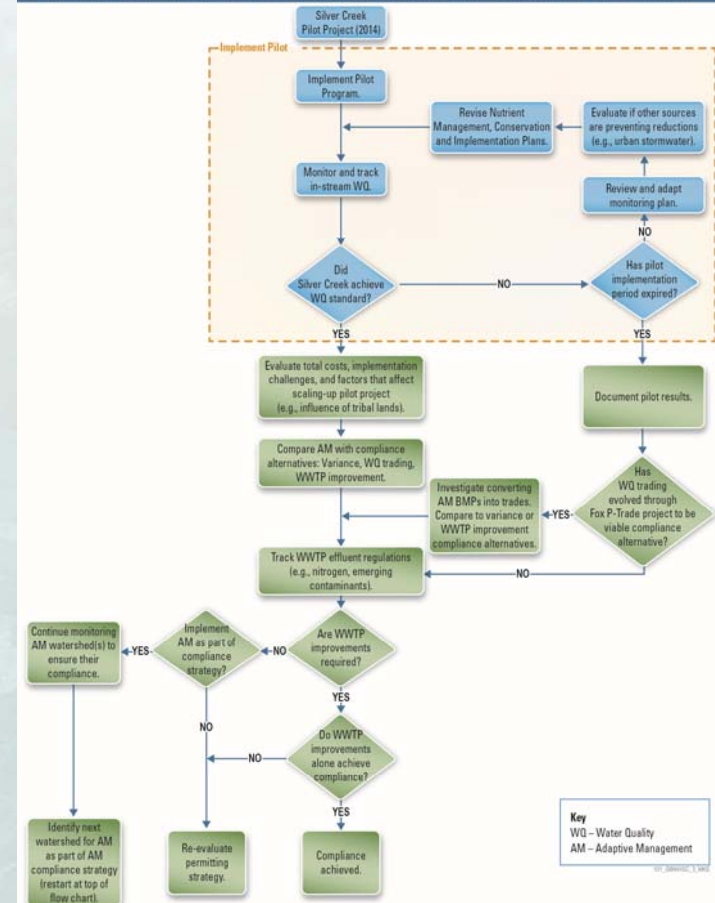
Background

■ Permit compliance options

- Trading
- Variance
- WWTF Improvements
- Adaptive Management



Integrating the Silver Creek Adaptive Management Pilot within a Permit Compliance Strategy



Purpose

- Reduce uncertainty
 - Collect data to provide information
 - Identify road blocks and solutions
 - Ability to scale-up
 - Informed decision making
 - Permitting and facility strategy
 - Support future permit negotiations
 - Adaptive Management implementation guidance
 - Implementable schedule
- Or...
- be confident in alternative compliance option

Example Pilot Project Goals

■ Example questions to answer

- Can we demonstrate AM in a 4 yr pilot?
- Can the Pilot result in water quality improvement?
- What does compliance mean?
- Can we demonstrate AM in 20 years for permit compliance?
- What will it cost?
- Can AM be a viable permit compliance approach?
- Is this the best approach for our ratepayers?
- Are there willing stakeholders and landowners/growers?
- What barriers exist to full scale implementation? Can they be overcome?

■ Each task supports a future decision

Planning for Success

- Leverage existing relationships among partners
 - Counties, NRCS, Oneida, crop consultants, etc.
- Openness and consistent messages
- Leverage existing data
- Understand stakeholders roles and limitations
- Document stakeholder participation
- Endorse team charter
- Prepare contingency planning



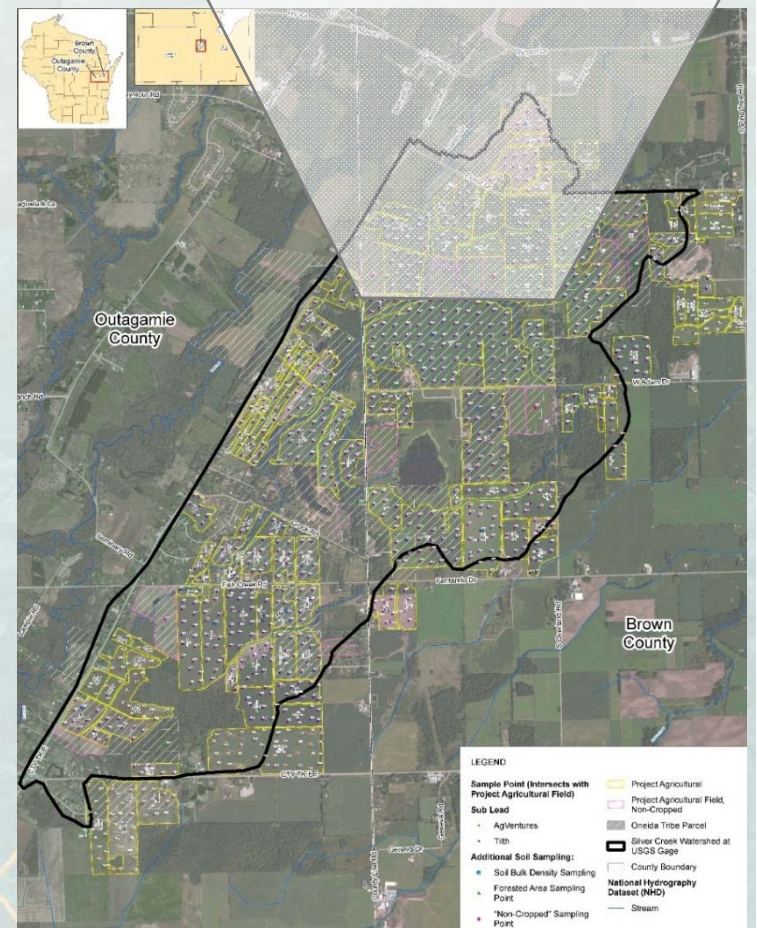
The Reality of Success

- Farming is intensely personal
- Skepticism of “another program”
- Large yet small community
- Inviting vs. being invited
- Less than 4 yrs to baseline, design, implement and monitor watershed response
- Media



Accomplishments in 2014

- Stakeholder meetings to review and confirm commitments
 - Oneida financial support, others
- Team chartering and kickoff meeting
- Identify landowner and growers
- Field delineations
- Soil sample locations



Accomplishments in 2014

■ Soil sampling program

- Sampling parameters
- Sampling locations
- Sampling protocol
- Field training

■ iPad application for field data collection

■ Field training

- Multiple teams require consistent procedure
- GIS database
- iPad allows field teams to be paperless



Accomplishments in 2014

- 123 of 124 fields permission
- 100% specialized sampling completed
- 100% forest samples completed
- 100% non-cropland completed
- 100% modeling parameters completed
- All fields sampled except standing corn or soybean
 - 73 fields complete (68%)
 - 631 samples complete (62%)
- Considering options to complete work in 2014



Plans for 2015 - The Year of Planning

- Finish soil sampling and analyze data
- Stakeholder and landowner/grower meetings
- Stakeholder commitments and work planning
- Nutrient Management Plans
- Field walks and Conservation Plans
- Enrollment into programs and identify cost share needs
- Implement some best management practices (BMPs)
 - Cover crops
 - Residue
 - No-till
 - Manure and fertilizer application
 - Hay

2015 Optional Tasks

- Adaptive management scale-up strategy review
- Watershed modeling
- Conservation Plan BMP design and implementation support
- Watershed data evaluation
- Remote phosphorus monitoring
- Spring cover field evaluation
- GIS portal development
- Public outreach, website, meetings, social media, etc.

Example Considerations for a Full Scale Adaptive Management

- Institutional capacity of planning and implementation
- Monitoring and tracking of Nutrient Management and Conservation Plans, and BMPs
- One-size-fits all has been tried...needs to be individual
- Programmatic approach for full scale implementation
- Weather impacts
- Education of landowner
- Permit timelines not unified

Tracking and designing the Pilot Project to allow NEW Water to evaluate the risks of Adaptive Management

Questions?

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