

To: Project Team and Advisors  
From: Tom Green, Agflex and IPM Institute  
Re: Third Quarterly Report: BMP CHALLENGE and Water Quality Trading

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### **Executive Summary**

Our project is designed to meet water resource quality goals by promoting and supporting innovative strategies including the BMP CHALLENGE net returns guarantee and water quality credit trading. We will build broad awareness of these tools and competence in their use by developing and distributing a curriculum and support tools, and training in-state trainers to support conservation district, crop advisory professionals and others who work with farmers. We will manage the BMP CHALLENGE for corn farmers reducing nutrient use and tillage in DE, IA, IL, IN, MD, MI, MN, NC, NE, OH, PA, VA, WI. Water quality credit trading objectives will focus on MN and PA. BMP CHALLENGE received less than half the amount anticipated from the Pennsylvania Department of Environmental Protection, limiting projects to the preparation of a trading template by James Klang, PE. The document will be used to document credits created by BMP CHALLENGE participants.

To date we have:

- Finalized three Minnesota trainers;
- Composed a curriculum and support materials for trainer use, to be continually improved over the life of the project;
- Held a BMP CHALLENGE and WQT workshop in Michigan;
- Expanded our advisory group with producer contacts and others;
- Initiated a white paper on WQT through interviews with potential buyers and sellers of credits;
- Held two monthly calls with the project team and advisors;
- Filed six-month progress report to CIG head office; and
- Set next quarterly call date as September 14, 2007.

Over the next quarter we will continue to build awareness of the project, recruit additional advisory members from trading sectors and recruit BMP CHALLENGE participants in 13 states. We will continue monitoring factors such as MN trading rules, corn prices, growth in corn acreage and con-on-corn acres, and corn-belt wide changes in nitrogen rate recommendations for corn. We will continue to interact with MN state agencies and others on trading rule development and pursue additional funding to meet our match requirement.

The project is funded by USDA NRCS with matching funds from the Minnesota River Board for Minnesota activities, Bush Foundation for trading development in Minnesota and PA DEP for activities in Pennsylvania, with additional funders.

**I. Deliverables Update**

<p>1. Diverse advisory panel for quarterly review of plans and progress.</p>	<p><b>Confirmed:</b>  Adam Birr, Minnesota Department of Agriculture  George Boody, Land Stewardship Project  Paul Burns, Minnesota Department of Agriculture  Dennis Fuchs, Stearns County SWCD  Marco Graziani, Minnesota Pollution Control Agency  David Mulla, University of Minnesota  Mark Scharf, AgStar Financial Services  Jeff St. Ores, USDA-NRCS  Jason Portner, United Farmers Cooperative  Doug Thomas, Board of Water and Soil Resources  Scott Thaden, Anez Consulting, Ltd.  Mark Bredehoeft, Southern Minnesota Beet Sugar Cooperative  Jeremy Geske, Minnesota Farm Bureau  Judy and Fred Hanson, Producers  John Schueller, Minnesota River Board and Producer</p> <p><b>Pending identification of candidates:</b>  Wastewater treatment plants</p>
<p>2. WQ trading and BMP CHALLENGE curriculum delivered 12 to MN state agency, conservation districts, crop advisors and others to equip them to offer these opportunities to their producer clientele.</p>	<p>a. Initial syllabus and curriculum (PowerPoint presentations) presented on January 11, 2007, in New Ulm, MN and March 29, 2007 in Shelbyville, MI.</p> <p>b. Curriculum to be offered during the remainder of the three-year project period at existing programs and events held by trainers.</p> <p>c. Calendar of industry and extension meetings has been created and continually modified with contact information.</p>
<p>3. Training plan, three MN public agency/NGO trainees to train others on BMP CHALLENGE and WQ credit trading.</p>	<p>a. Three trainers have been identified for Minnesota:  Adam Birr, Minnesota Department of Agriculture  Shannon Fisher, Minnesota River Board and Water Resources Center  Ed Hohenstein, Seven Mile Creek Watershed Project</p> <p>b. Schedules to be worked out with trainers during June/early July, with presentations to be placed with existing events throughout the year.</p> <p>c. Current fall/winter Minnesota meeting possibilities:  Jan. 15, 2008 - MSGA Annual Meeting  Jan. 2008 - Minnesota Ag EXPO 2007  Mar. 13-15, 2008 – Farm and Power Show</p>
<p>4. Support package of existing tools for trainers, subset to be used as handout for seminars and available online.</p>	<p>a. Support package currently includes 2007 BMP CHALLENGE enrollment and implementation forms, presentation PowerPoint files and print-outs, curriculum outline with notes, water quality trading references, BMP CHALLENGE FAQ sheets and additional BMP information (i.e. alternative credit generating BMPs and management information).</p> <p>b. Website updated regularly, with current documents and information. Changes to be made during summer 2007, including style update, user profile setups, online forms and additional information pages.</p>

<p>5. 75,000 brochures, 1,000-1,500 farmer inquiries generated to state agencies, crop advisors, watershed groups on BMP CHALLENGE and WQ credit trading.</p>	<p>a. 35,000 BMP CHALLENGE brochures were printed with approx. 6,900 distributed to date.</p> <p>b. Trading brochures to be developed and distributed once trading rules have been finalized.</p> <p>c. Minnesota currently has 587 mailing addresses along with 192 email addresses, containing roughly 200 extension agents, 190 crop advisors, 50 agricultural professionals, 70 environmental professionals and 85 conservation organization professionals.</p> <p>d. The next mailing is scheduled to go out in late July and early August. Mailings consist of a BMP CHALLENGE brochure, 2007 corn price update insert and informational cover letter. Another mailing is not scheduled until November 2007.</p> <p>e. A tri-monthly online newsletter is scheduled to be sent in late June, followed by an additional newsletter in September. Newsletters contain BMP CHALLENGE program information as well as recent agricultural and conservation focused news. Topics for the upcoming newsletter are still pending.</p>
<p>6. Ten point sources in MN prepared to trade, list of trades completed, acres, practices, credits, estimated resource improvements.</p>	<p>a. Keiser &amp; Associates have begun identification of potential wastewater treatment and ethanol plants in Minnesota for participation.</p> <p>b. James Klang, PE, is preparing a white-paper to help clarify how point and non-point perspectives view trading by interviewing potential buyers and sellers. Klang will work with Brian Brandt to include written testimonials from agricultural professionals on the need of trading for agriculture. Klang is nearly finished with GIS work with David Legvold (Cannon River Partnership) and Kevin Kuehner (Seven-Mile Creek Watershed) to establish trading potential maps for these areas.</p>
<p>7. Inventory of BMP CHALLENGE guarantees implemented, acres, practices, improvements.</p>	<p>a. Nutrient BMP guarantees have been implemented on approximately 90 farmer fields, resulting in an average 25% reduction in nitrogen fertilizer use (pre-2007 data).</p> <p>b. Reduced tillage was implemented on the first 14 fields in 2006. Conservation equivalents not yet quantified.</p> <p>c. An Enhanced Nutrient BMP guarantee program was piloted on 18 fields. Enhanced refers to an additional 15% reduction in BMP rates for nitrogen fertilizer use. This program is currently only available in Pennsylvania.</p> <p>d. All results are recorded in a database.</p> <p>e. Approx. 50 fields are expected for 2007; 16 for nutrient guarantees, 16 for tillage guarantees, 20 enhanced nutrient guarantees. Total acreage is estimated at approx. 4,000 acres.</p>
<p>8. Inventory of potential point and non-point source traders, trades, values, credits, rates, forms, implementation and verification procedures.</p>	<p>a. Being developed by James Klang, PE (Keiser &amp; Associates), working with Marco Graziani (MPCA). Graziani is heading the Minnesota rules coordination.</p>

<p>9. Reductions of 760K lbs of N use, 40K lbs. P loading; 30K tons sediment loading; 25 K lbs. NO<sub>2</sub>; 5K tons CO<sub>2</sub> from nutrient and tillage reduction on approximately 34K acres in MN and PA.</p>	<p>a. Tacking in place for nutrient use.</p> <p>b. Tracking for other reductions to be developed.</p>
<p>10. Funding development including \$759,464 in matching non-federal funding, \$170,500 in program income and \$944,400 in-kind. Additional funding for program expansion.</p>	<p>a. Current grants amounting to \$983,000:</p> <p>Conservation Innovation Grant (CIG) – NRCS - \$683,000  Bush Foundation Grant (to AFT) - \$75,000  Pennsylvania Dept. of Environmental Protection - \$225,000</p>
<p>11. Quarterly and final progress reports including conference call and advisory meeting minutes.</p>	<p>a. Advisory conference calls and meetings scheduled for Sept, Dec, Jan and Mar through Aug 2009, including on in-person meeting per year.</p> <p>b. BMP CHALLENGE team (Arlt, Brandt, Green, contractors) meets at least twice monthly by conference call to manage BMP CHALLENGE acreage recruitment and implementation.</p> <p>c. MN BMP CHALLENGE and WQ Credit Trading team (Arlt, Fisher, Green, Kieser &amp; Associates) meets monthly by conference call, second Thursday of each month at 8:30am CST. Advisors welcome to participate. Call agenda and post-call notes circulated to project team and advisors.</p>
<p>12. Other</p>	

## II. Project Team, Advisors and Trainers – As of 06/07/07

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Participation is invited on monthly conference calls and requested for quarterly conference calls and one in-person meetings per year. Role includes reviewing plans and progress, responding to requests for information/assistance from project team.

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**Trainers**

Three Minnesota and three Pennsylvania public agency or NGO professionals who will be trained to offer the BMP CHALLENGE and WQ Credit Trading curriculum developed as part of this project. Goal is to identify individuals whose current role would be enhanced by this capacity.

**Minnesota Trainers**

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***Pennsylvania Trainers yet to be determined.***

### **III. Project Summary from Original Proposal to NRCS CIG**

Our project will build capacity by creating broad awareness and teaching in-state personnel to support CD, crop advisory professionals and others who work with farmers to meet conservation goals using new, innovative strategies. We will highlight, teach and implement BMP performance guarantees for corn farmers reducing both nutrient use and tillage in DE, IA, IL, IN, MD, MI, MN, NC, NE, OH, PA, VA, WI and point-nonpoint water quality credit trading in MN and PA.

BMP performance guarantees will focus on 51 million acres of corn in these 13 states. Our *BMP Challenge* has delivered a 24% nutrient use reduction in seven states over the past four years. We provide a financial safety net for farmers who reduce nutrient and sediment pollution using practices developed and recommended by land-grant scientists and state agencies. These practices save farmers money over time, but in any one year may result in lower yields and income. The program uses a side-by-side comparison in the farmer's field of his or her conventional practice on a "check" strip vs. reduced nutrient or tillage practice on the balance of the field. We compensate the farmer if net income declines as a result. Our 2005 survey indicates that 42% of corn farmers would try these new practices if guarantees were available.

Water quality credit trading is a new opportunity in the Susquehanna and Potomac River Watersheds in PA and the Minnesota River Watershed in MN. Point sources such as wastewater treatment facilities have greatly reduced nutrient emissions over the past 30 years and face very high costs for incremental gains. These funds can be more efficiently invested in improvements by farmers. Adequate controls are needed to ensure water quality goals are met. Accurate and effective education, training and technical support are needed to implement trading effectively.

Our experienced and nationally recognized team will work with state agencies and others to develop and implement a training curriculum, support tools and outreach for these innovative approaches, and work with conservation districts, crop consultants and other key influencers to equip them to competently offer and manage these opportunities with their client farmers. Support tools will include both new and existing materials and trained in-state technical support to help these professionals efficiently identify the best opportunities, calculate economic benefits to farmers and estimate water quality improvements, and verify and report implementation of conservation practices. Outreach will focus on CDs, crop consultants, Extension, ag organizations and other key influencers to drive farmer interest and inquiries to trained CD staff and crop consultants.

We will ease farmer recruiting to trading using our proven model of enlisting crop consultants, Extension and CD staff as recruiters, on-site BMP overseers and/or third-party verifiers for our guarantee program; assure farmers with yield/income guarantees so that they can put a comfortable value on their participation in trades, e.g., farmers are reluctant to trade nutrient use reductions for cash because they can't predict the yield impacts; verify/document credit production by farmers and so provide point-sources/regulators with the assurance they need; discover and institutionalize locally-acceptable credit estimation tools to provide certainty for participants; track multiple environmental benefits/environmental services; aggregate credits from multiple farmers to create a reserve pool such that if any one farmer cannot deliver promised credits for any reason, other credits are available to fill in; and offer this model as a turn key service solution to trading projects in other states as they begin to get ready for trading.