FINAL REPORT

AUG 2 1 2003

2001 Project Abstract For the Period Ending June 30, 2003

TITLE:	Environmental Practices on Dairy Farms
PROJECT MANAGER:	Bob Lefebvre
ORGANIZATION:	Minnesota Milk Producers Association
ADDRESS:	413 South 28 th Ave., Waite Park, MN 56387
WEB SITE ADDRESS:	www.mnmilk.org
FUND:	Minnesota Future Resources Fund
FUND:	Minnesota Future Resources Fund
LEGAL CITATION:	ML 2001, 1 st Special Session, Ch. 2, Sec. 14, Subd. 8(c)

APPROPRIATION AMOUNT: \$245,000

Overall Project Outcome and Results

The Minnesota Milk Producers Association (MMPA) and project partners developed the Environmental Quality Assurance (EQA) program with \$245,000 funding provided by Minnesota Future Resources Fund as recommended by the Legislative Commission on Minnesota Resources.

The EQA program assists dairy producers in complying with environmental quality regulations and certifies producer achievement of rigorous environmental quality standards in five major topic areas (Water Quality, Odor and Air Quality, Soil Quality and Nutrient Management, Habitat Quality and Diversity, and Community Image).

The EQA program worked with a total of 105 Minnesota dairy producers of which 52 achieved EQA "FIVE-STAR" Certification.

Steps in the Process to Achieve EQA "FIVE-STAR" CERTIFICATION:

- Step 1: Send in Your Application.
- Step 2: Develop Your Environmental Action Plan.
- Step 3: Implement Your Plan.
- Step 4: Achieve EQA Certification.
- Step 5: Continue to be a Positive Example of Excellence in Environmental Stewardship.

Producers develop their farm's Environmental Action Plan based on how their farm scored on the EQA Assessment. The Assessment identifies levels of management practices in each of over 100 categories. The Assessment together with the farm's EQA Technician help the producer develop an Environmental Action Plan.

Producers were further encouraged to invest in environmental improvements by the EQA Incentive Fund which provided up to \$5000 per farm (1:1 match required) for projects identified in the farm's Environmental Action Plan. An investment of just over \$70,000 in EQA Incentive Funding resulted in more than \$345,000 in total projects completed (21% incentive).

Project Results Use and Dissemination

The EQA program has been recognized by USDA: NRCS in the EQIP docket for Minnesota and by the Minnesota Pollution Control Agency (MPCA) as a valuable tool for achieving environmental results.

MPCA and MMPA have agreed to work together to continue to make the EQA program available to Minnesota dairy producers.

I. PROJECT TITLE: Environmental Practices on Dairy Farms

Project Manager:	Bob Lefebvre
Affiliation:	Minnesota Milk Producers Association
Mailing Address:	413 South 28 th Ave., Waite Park, MN 56387
Telephone Number:	(320) 203-8336
E-Mail:	mnmilk@cloudnet.com
Fax:	(320) 203-8322
Web Address:	http://www.mnmilk.org

Total Biennial Project Budget: \$245,000

\$ LCMR Appropriation \$245,000 -\$234,378.48 = \$10,621.52 Balance

Legal Citation: ML 2001, 1st Special Session, Ch. 2, Sec. 14, Subd. 8(c).

Appropriation Language: \$245,000 is from the future resources fund to the commissioner of natural resources for an agreement with the Minnesota Milk Producers Association to assist dairy producers in complying with environmental quality regulations.

II. and III. FINAL PROJECT SUMMARY:

The Minnesota Milk Producers Association (MMPA) and project partners developed the Environmental Quality Assurance (EQA) program with \$245,000 funding provided by Minnesota Future Resources Fund as recommended by the Legislative Commission on Minnesota Resources.

The EQA program assists dairy producers in complying with environmental quality regulations and to certifies producer achievement of rigorous environmental quality standards in five major topic areas (Water Quality, Odor and Air Quality, Soil Quality and Nutrient Management, Habitat Quality and Diversity, and Community Image).

The EQA program worked with a total of 105 Minnesota dairy producers of which 52 achieved EQA "FIVE-STAR" Certification.

Steps in the Process to Achieve EQA "FIVE-STAR" CERTIFICATION:

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- Step 3: Implement Your Plan.
- Step 4: Achieve EQA Certification.
- Step 5: Continue to be a Positive Example of Excellence in Environmental Stewardship.

Producers develop their farm's Environmental Action Plan based on how their farm scored on the EQA Assessment. The Assessment identifies levels of management practices in each of over 100 categories. The Assessment together with the farm's EQA Technician help the producer develop an Environmental Action Plan.

Producers were further encouraged to invest in environmental improvements by the EQA Incentive Fund which provided up to \$5000 per farm (1:1 match required) for projects identified in the farm's

Environmental Action Plan. An investment of just over \$70,000 in EQA Incentive Funding resulted in more than \$345,000 in total projects completed (21% incentive).

The EQA program has been recognized by USDA: NRCS in the EQIP docket for Minnesota and by the Minnesota Pollution Control Agency (MPCA) as a valuable tool for achieving environmental results.

MPCA and MMPA have agreed to work together to continue to make the EQA program available to Minnesota dairy producers.

IV. OUTLINE OF PROJECT RESULTS:

RESULT 1: DEVELOP ENVIRONMENTAL QUALITY ASSURANCE (EQA) PROGRAM

The Minnesota Milk Producers Association (MMPA) and project partners developed the following Environmental Quality Assurance (EQA) program with funding provided by Minnesota Future Resources Fund as recommended by the Legislative Commission on Minnesota Resources to assist dairy producers in complying with environmental quality regulations and to certify producer achievement of rigorous environmental quality standards in five major topic areas.

Environmental Quality Standards for:

Water Quality – Identify best management practices to maintain and enhance water quality.

Odor and Air Quality – Identify best management practices to maintain and enhance air quality through the use of appropriate odor abatement practices and technologies.

Soil Quality and Nutrient Management – Identify best management practices to maintain and enhance soil quality through the use of comprehensive nutrient management.

Habitat Quality and Diversity – Identify best management practices to maintain and enhance habitat quality and biological diversity in concordance with community landscape-level objectives.

Community Image – Identify best management practices that project a positive environmental image to the general public and local community including farm appearance and neatness.

The Environmental Quality Assurance (EQA) program works with Minnesota dairy producers to achieve quality standards on their farms that help assure the community and environmental regulators that EQA Certified dairies truly represent "Excellence in Environmental Stewardship".

Steps in the Process to Achieve "FIVE-STAR" EQA CERTIFICATION:

Step 1: Send in Your Application. Minnesota Milk's EQA Program is a voluntary program and enrollment is limited. Call Minnesota Milk today for more information, toll-free 1 (877) 577-0741.

Step 2: Develop Your Environmental Action Plan. Locally-based EQA Technicians have been trained to conduct an Initial Assessment (IA) to determine your farm's environmental rating based on EQA Certification Standards. EQA Certification Standards were designed to help you develop an Environmental Action Plan to achieve EQA Certification of your farm.

Step 3: Implement Your Plan. Your EQA Technician will provide you with Certification Assistance (CA) to help you accomplish your Environmental Action Plan and to provide you with assistance in obtaining cost-share funding from the EQA Incentive Fund.

Step 4: Achieve EQA Certification. In order to receive EQA Certification, your farm must achieve certification in all five (5) evaluation areas (water quality, odor and air quality, soil quality and nutrient management, habitat quality and diversity, and community image). EQA Certified farms will receive a sign recognizing their accomplishment and will become part of Minnesota Milk's promotion of positive examples of Environmental Excellence.

Step 5: Continue to be a Positive Example of Excellence in Environmental Stewardship. The EQA program provides for periodic review by conducting Certification Walkthrough's (CW's) of participating farms to help assure that EQA Certification Standards are being maintained and to help producers continue to receive financial incentives for environmental stewardship through USDA's new Conservation Security Program (scheduled to begin in 2003).

EQA Program Development Team:

The EQA program development team included participants from SWCD's, Extension, University Faculty, Board of Water and Soil Resources (BWSR) and NRCS personnel, the Minnesota Department of Agriculture (MDA), the Minnesota Pollution Control Agency (MPCA), County Officials, Dairy Producers and others within the dairy industry.

EQA Certification Standards:

EQA Certification Standards were developed specifically for dairy farming operations (but would be adaptable to most types of livestock production operations) to provide an assessment tool for use by producers to improve their environmental management practices.

EQA Certification Standards and scoring system were developed by adapting, modifying, and in most cases simplifying a number of existing farm evaluation tools including Farm*A*Syst. Farm*A*Syst is a nationwide program developed, in part, by the University of Minnesota, to prioritize environmental risks and guide investments in environmental protection.

EQA Certification Standards were designed to be both user friendly and rigorous. The Program Development Team recognized that both producer acceptance and government recognition were requirements for a successful program.

To accomplish this goal, MMPA held fourteen Producer Forum sessions across Minnesota from November 19, 2001 through December 12, 2001, which included MPCA, NRCS, Minnesota Department of Agriculture, County Feedlot Officers, and industry professionals. The forums provided the Project Development Team with a better understanding of the full range of environmental issues facing both producers and government regulators.

Following completion of a full set of EQA Certification Standards in December 2001, the assessment was field tested on-farm with producer cooperators from across the state.

EQA Technicians were hired (March 2002) and trained to implement the program statewide (June 2002) and the programs Incentive Fund Authorization procedure and Allocation system were developed and fully operation by July 2002 (see Result III.).

EQA Technicians began conducting Initial (on-farm) Assessments in August of 2002 and the programs first Action Plan Authorization Letters were sent out to participating farms on September 25th, 2002.

Action Plan Authorization Letters confirm the farms Action Plan and allocate Incentive Funding to help accomplish the plan.

Action Plan Authorization procedures were developed by the Project's Review Team which included: Bob Lefebvre, LCMR Project Manager and Executive Director of MMPA, Lee Gross, University of Minnesota Dairy Extension Specialist, Steve Sellnow, NRCS District Conservationist; and Dennis Fuchs, Stearns County Soil and Water Conservation District Supervisor.

Action Plans cover a wide range of potential environmental improvements including: nutrient management, improvement of disposal methods for pesticides and other hazardous wastes, clean water diversions, buffer strips to protect waterways, shelterbelt enhancements and landscaping to improve drainage and site conditions, to name a few.

As part of EQA program development, MMPA established the rules governing the disbursement of the EQA Incentive Fund. The Incentive Fund is used to cost-share the completion of projects identified in the farms Environmental Action Plan and for EQA Certification Signage.

A maximum of \$5,000 is available per farm and the producer must match the fund.

Upon completion of a project in the farm's Action Plan, proof of payment for work completed is submitted to Minnesota Milk for reimbursement up to 50% of the total project cost, not to exceed the amount Authorized by the farms Action Plan.

Incentive Fund Criteria have been established for both Management Practices (based on EQA Score) and Priority Rank (based on UofM Priority ranking).

HIGH PRIORITY AREAS – as identified by UofM ranking allow Authorization by Review Team up to \$5000 regardless of EQA Score.

Incentive Funds are allocated, as shown below, based on the farms <u>Overall</u> Initial Assessment score.

EQA INCENTIVE FUND CRITERIA: Score 4.0 – Authorizes up to \$ 500 Score 3.9 – Authorizes up to \$1000 Score 3.8 – Authorizes up to \$1500 Score 3.6 – Authorizes up to \$2000 Score 3.6 – Authorizes up to \$2500 Score 3.5 – Authorizes up to \$3000 Score 3.4 – Authorizes up to \$3500 Score 3.2 – Authorizes up to \$4000 Score 3.1 or < Authorizes (max.) \$5000

All Action Plans include an allocation of \$500 for EQA Certification Signage, pending that farms future Certification.

Two examples of actual EQA farm participant Authorization Letters follow on the next two pages.

The first farm #3001 scored in the top 10% of all farms in the program. The second farm (#4007) scored in the bottom 10% of all farms in the program.

September 25, 2002

Dear Mr. and Mrs. _____:

Minnesota Milk has received and approved your application to become part of our Environmental Quality Assurance (EQA) program. The EQA program is designed to help Minnesota dairy producers achieve the highest levels of environmental stewardship on their farms, to document their achievements, and to recognize those farms that meet or exceed EQA Standards for environmental excellence.

FARM # 3001

Initial Environmental Assessment - EQA Score - Action Plan and Incentive Funding

Water Quality	3.8	\$ 250 for concrete pad for fuel tank(s)
Odor & Air Quality	3.9	
Soil Quality & Nutrient Management	3.9	
Habitat Quality & Diversity	3.0	\$1250 for Wildlife Corridor Enhancement and for moving field approach and culvert installation
Community Image	3.8	\$ 500 for EQA Certification Sign
Overall Environmental Quality Rating		
	3.7	\$2000 Total EQA Cost-Share Commitment

We congratulate you on achieving an initial overall score of 3.7 (maximum score = 4.0).

As you know, to achieve EQA Certification you must score 3.5 or more in each of the five topic areas. You have identified an Action Plan that would, upon completion, improve your overall score and result in your farm achieving EQA Certification.

Your proposed EQA Action Plan is Approved and based on EQA Program Priorities Minnesota Milk authorizes up to a maximum of \$2000 from our EQA Incentive Fund to help you improve your Water Quality and Habitat Quality & Diversity scores, and to provide for EQA Certification Signage, this funding commitment expires June 1, 2003.

As soon as the work to accomplish your Approved Action Plan has been completed, send proof of payment for work completed to Minnesota Milk and you will be reimbursed for up to 50% of the total project cost, not to exceed the amount authorized. Your own labor, materials, and equipment costs are eligible as in-kind expenses for meeting the 1:1 cost-share requirement. Contact your EQA Technician for assistance in establishing in-kind rates for labor and equipment.

Your EQA Technician is Steve Linow. He may be reached at (320) 251-7800 ext. 3.

The matching requirement for the EQA Certification Sign is met by entering into an agreement with Minnesota Milk to maintain your sign and grounds around the sign in good condition and to work with Minnesota Milk to promote the EQA program.

For further information on the EQA program or other Minnesota Dairy Initiatives contact the Minnesota Milk Producers Association, toll-free, at (877) 577-0741, and thanks for providing positive producer leadership in your community.

Sincerely,

Bob Lefebvre EQA Program Manager and Executive Director, MMPA

11/1/02

Dear Mr. _____:

Minnesota Milk has received and approved your application to become part of our Environmental Quality Assurance (EQA) program. The EQA program is designed to help Minnesota dairy producers achieve the highest levels of environmental stewardship on their farms, to document their achievements, and to recognize those farms that meet or exceed EQA Standards for environmental excellence.

FARM #4007

Initial Environmental Assessment - EQ	<u>A Score</u>	- Action Plan and Incentive Funding
Water Quality	2.6	\$2000 to seal unused well, and to develop and implement new system for Milking Center Wastewater, improve hazardous waste storage and disposal methods, and to investigate EQIP options;
Odor & Air Quality	2.7	\$500 to evaluate and implement land application methods and systems to reduce odor, and evaluate on-farm composting options for mortalities and for implementation of composting system;
Soil Quality & Nutrient Management	2.3	\$500 to develop Nutrient Management Plan and subcomponents, and to evaluate and improve manure application methods;
Habitat Quality & Diversity	2.0	\$500 to evaluate options with SWCD/DNR or others to enhance habitat/wildlife; - {note: determine Habitat Priority level
Community Image	2.6	\$1000 to improve grounds, buildings, and shelterbelt conditions, and recommend consideration of ways to improve community perception of livestock farming, including pasture development and farm visits, and \$500 for EQA Certification Signage.
Overall Environmental Quality Rating	2.4	\$5,000 Total EQA Cost-Share Commitment

Your farm has received an initial EQA score of 2.4 (maximum score = 4.0).

As you know, to achieve EQA Certification you must score 3.5 or more in each of the five topic areas. You have identified an Action Plan that would, upon completion, improve your overall score and potentially result in your farm achieving EQA Certification.

Your proposed **EQA Action Plan is Approved** and based on EQA Program Priorities Minnesota Milk authorizes **up to a maximum of \$5,000** from our EQA Incentive Fund to help you improve your EQA scores, and to provide for EQA Certification Signage, <u>this funding commitment expires June 1, 2003</u>.

As soon as the work to accomplish your Approved Action Plan has been completed, send proof of payment for work completed to Minnesota Milk and you will be reimbursed for up to 50% of the total project cost, not to exceed the amount authorized. Your own labor, materials, and equipment costs are eligible as in-kind expenses for meeting the 1:1 cost-share requirement. Contact your EQA Technician for assistance in establishing in-kind rates for labor and equipment.

Your EQA Technician is Marie Engel. She may be reached at (507) 237-4314.

EQA CLARIFICATION

MMPA hosted a Project Team Meeting in January 2003 at the midpoint in program implementation (at this point about 50 farms were enrolled in the EQA program) to conduct a thorough review EQA Certification Standards and Scoring and to strengthen EQA partnerships with other agencies and organizations.

Representatives from NRCS, SWCD's, BWSR, Extension, MPCA, DNR, and MDA each provided an overview of existing environmental programs and resources that would be available to program participants and provided comment regarding program standards and procedures.

As a result of this review and clarification effort a revised set of Certification Assessment Standards have been developed. The revised EQA Certification Standards reflect the experience gained over the course of the LCMR pilot project. These revised standards have been presented to MPCA for review and comment as part of a working agreement between MPCA and MMPA to continue to provide funding for the EQA program through June of 2004.

<u>RESULT 1 L</u>	CMR BUDGET:	\$21,000	-\$ 2,0681.68	=\$ 318.32 BALANCE
Personnel:	MMPA Project Manager:	\$10,000	-\$10,000	= \$ -0-
	MMPA Office Assistance:	\$ 1,000	-\$ 1,000	= \$ -0-
Subcontracts:	University of Minnesota:	\$ 7,500	-\$ 7,254.00	= \$ 246.00
	Stearns County SWCD:	\$ 2,500	-\$ 2,500	= \$ -0-

NOTE: The University of Minnesota has satisfactorily completed the scope of work and have submitted their final report, see Attachment C. However, MMPA has not, as of the date of this report, received an invoice for this work. MMPA expects to submit a subsequent request for reimbursement for this work.

RESULT 2: DEFINE ENVIRONMENTAL PRIORITY AREAS

The University of Minnesota's Center for Rural Design (CRD) utilized geographic information systems (GIS) technologies to help prioritize EQA Incentive Fund investments based on environmental risk factors, as identified by Minnesota's new 7020 Feedlot rules.

CRD developed the process for assessing environmental priorities and for achieving compliance with the 7020 feedlot rules by using GIS technologies to inventory and assess relevant characteristics of geology, soils, topography, hydrology, land use, land cover, and sensitive areas as defined in the 7020 feedlot rules.

These characteristics were identified for six major dairy regions across the state, defined as follows: **Northwest** (Kittson, Roseau, Lake of the Woods, Koochiching, Marshall, Beltrami, Polk, Pennington, Red Lake, Clearwater, Norman, Mahnomen, Hubbard, Cass, and Itasca).

West Central (Clay Becker, Wilkin, Otter Tail, Grant, Douglas, Traverse, Stevens, Pope, Big Stone, Swift, and Chippewa).

Central (Wadena, Todd, Stearns, Kandiyohi, Meeker, Sherburne, Benton, Morrison, Crow Wing, Aitkin, Mille Lacs, Kanabec, Pine, Carleton, St. Louis, Lake, and Cook).

South Central (Renville, McLeod, Wright, Hennepin, Isanti, Chisago, Washington, Ramsey, Dakota, Scott, Sibley, Nicollet, LeSueur, and Rice).

Southwest (Lac Qui Parle, Yellow Medicine, Lincoln, Lyon, Redwood, Brown, Blue Earth, Faribault, Martin, Watonwan, Jackson, Cottonwood, Nobles, Murray, Rock, and Pipestone). Southeast (Goodhue, Wabasha, Winona, Houston, Fillmore, Olmstead, Waseca, Steele, Dodge, Freeborn, Mower, and Fillmore).

Within each region, one county was selected to develop priority mapping to aid in targeting EQA Incentive Funding to high priority concerns. The counties which were mapped are Marshall County in NW MN, Ottertail County in WC MN, Stearns County in Central MN, Wright County in SC MN, Pipestone County in SW MN, and Olmstead County in SE MN.

The UofM also provided farm-scale design assistance for over twenty participating farms by modifying and adapting the county-scale Environmental Priority mapping for use in defining environmental priorities on specific farms. The maps produced in this process supported the development of site-specific solutions for individual farms.

UofM has also developed a web-based system for easy access to priority mapping for Farm-Scale Design support. The web site,_Minnesota Dairy Decision Support Systems (http://ruraldesign.coafes.umn.edu/projectdss.htm), is accessible from CRD's home page (<u>http://ruraldesign.coafes.umn.edu/</u>). This site provides two mechanisms of information delivery.

The site's Map Gallery provides county-wide versions of - Basic Geographic Information Map; -Refined Land Use/Land Cover Map; - Surface Water Priority Map; - Ground Water Priority Map; -Habitat Priority Map; - Social Sensitivity Priority Map; and - Environmental Quality Assurance Priority Map.

These maps are offered in two resolutions - small (8 1/2x11) for ease of printing and wall sized (36x48, typical) for greater detail when magnifying to farm-scale. Both resolutions are viewable

with web browsing software or are downloadable and can be manipulated with graphics editing software.

The site also provides an Interactive Map – this mechanism allows interactive and selective exploration of tabular as well as graphic data layers related to individual issues associated with the Environmental Quality Assurance program.

See Attachment C, UofM Final Report

RESULT 2	LCMR BUDGET:	\$49,500	-\$40,250.24	= \$ 9,249.76 BALANCE
Personnel:	MMPA Project Manager:	\$ 4,000	-\$ 4,000	= \$ -0-
	MMPA Office Assistance:	\$ 1,000	-\$ 1,000	= \$ -0-
MMPA Profe	essional Services CHDS:	\$ 2,000	-\$ 2,000	= \$ -0-
Subcontracts	: University of Minnesota:	\$42,500	-\$35,470	= \$ 7,030

NOTE: The University of Minnesota has satisfactorily completed the scope of work and have submitted their final report, see Attachment C. However, MMPA has not, as of the date of this report, received an invoice for this work. MMPA expects to submit a subsequent request for reimbursement for this work.

RESULT 3: IMPLEMENT PROGRAM IN REGIONS

EQA Technicians were hired in cost-shared positions to implement the program statewide leveraging the work currently being done by dairy diagnostics teams and SWCD's. Technicians were jointly funded through four regional organizations that have primary responsibility for the following areas of the state {with regional identification code in parenthesis}:

- West Central Minnesota Dairy Initiative (WCMDI) NW + WC Minnesota {2000 series} Principal Contact: Jerry Kalinowski, Alexandria Technical College
- Stearns County Soil and Water Conservation District (SWCD) Central Minnesota {3000} Principal Contact: Dennis Fuchs, Stearns County SWCD
- Dairy Profitability Enhancement Program (DPEP) SC + SW Minnesota {4000} Principal Contacts: Vern Oraskovich and Tim Dolan, UofM Extension
- Southeastern Minnesota Dairy Initiative (SEMDI) SE Minnesota {6000} Principal Contact: Jim Kelm, Riverland Community College

Each organization provided the services of one or more Technicians that completed formal training Technician Training, as of June 2002. Additional on-farm EQA Technician Training Walkthroughs were conducted by CHDS for MMPA in the fall of 2002.

Initial Assessment (IA)

The project's initial target of enrolling at least 100 farms in the program was achieved as 105 producers are currently enrolled in the program.

Initial Assessment scores for all 105 program participants are shown below (scores range 0-4).

	WQ	O&AQ	SQ&NM	HQ&D	CI	Overa
LOW	3.2	2.8	2.9	2.3	2.3	3.0
HIGH	4.0	3.9	3.9	4.0	3.7	3.8
AVERAGE	3.7	3.4	3.4	3.4	3.3	3.4
ALL						

Low	= Lowest overall score on Initial Assessment
High	= Highest overall score on Initial Assessment
Average	= Average overall score on Initial Assessment

TOPIC AVERAGE OF COMBINED ASSESSMENTS: WQ = Average Water Quality Score;O&AQ = Average Odor and Air Quality Score; SQ&NM = Average Soil Quality and NutrientManagement Score; HQ&D = Average Habitat Quality & Diversity Score; CI = AverageCommunity Image Score; Overall = Average Overall Score on all Initial Assessments.

Certification Assistance (CA)

Fifty-two (52) farms achieved EQA "FIVE-STAR" Certification. To achieve Certification the farm must score 3.5 or better in each of the programs five (5) major topic areas.

EQA Technician provided over 500 hours of certification assistance to producers to work toward achieving certification. EQA Technician also help identify potential sources of financial assistance that producers can use in financing needed improvements and provide access to the EQA Incentive Funding.

Farms that achieved EQA Certification standards are being promoted as EQA "Five-Star" Dairies.

Certification Walkthroughs (CW's)

To ensure the ongoing credibility of the program, Certification Walkthroughs, where MPCA or County Feedlot Officers, as appropriate, are invited to participate with MMPA staff, are being utilized to provide field verification that EQA standards are being maintained.

Stearns County SWCD developed, published, and distributed a technical reference guide (EQA Resource Manual) for use by EQA Technicians to support farm assessment and EQA Action Plan development (see Attachment D).

Implementation Results Summary:

JOI 11 50, 2005					
	NW+WC	Central	SC+SW	SE	
Result 3 Status	2000	3000	4000	6000	total
# IA's	22	29	35	19	105
#CA's	110	180	111.5	132	533.5
#CW's	7	9	2	6	24
Incentive Funds – Expended TOTAL	21,979.16	12,313.45	45036.62	18,917.56	98,079.48
INCENTIVE FUND REQUESTS: (\$5,000 max/farm)	74,500	82,500	137,500	60,500	355,000

JUNE 30, 2003

KEY: Region Identification # = Identifies EQA Technicians Region in Performance Report # IA's = Number of Initial Assessments as of June 30, 2003 # CA's = Number of Hours of Certification Assistance by Region # CW's = Number of Farms that have had a Certification Walkthrough Incentive Funds = Amount of Incentive Funding assigned by Region TOTAL INCENTIVE FUND REQUESTS = Total Amount Requests for Incentive Funding based on EQA Program Authorization limits (see Action Plans and Approved Budgets: Summary, Attachment D).

RESULT 3 I	CMR BUDGET:	\$156,500	-\$ 31,667.72 =	\$124,8	32.28 B	ALANCE
Personnel:	MMPA Project Manager:	\$ 4,000	-\$ 4,000	= \$	-0-	
	MMPA Office Assistance:	\$ 1,000	-\$ 1,000	= \$	-0-	
MMPA Profe	ssional Services CHDS:	\$ 4,000	-\$ 4,000	= \$	-0-	
Subcontracts:	Stearns County SWCD:	\$ 17,500	-\$ 9,250	= \$	750	
	SE MN TEAM:	\$ 10,000	-\$ 9,325	= \$	675	
	DPEP:	\$ 10,000	-\$10,000	= \$	-0-	
	WC MN TEAM:	\$ 10,000	-\$10,000	= \$	-0-	
EQA INCEN	TIVE FUND:	\$100,000	-\$98,631.32	= \$ 1	,920.52	

RESULT 4: APPLICATIONS, CERTIFICATIONS, AND INSPECTION REPORTS

Minnesota Milk Producers Association with assistance from CHDS provided quarterly performance and task completion reports to LCMR. The reports updated progress on results and reported on the status of producer applications and utilization of the projects Incentive Fund.

The attached EQA Performance Final Report details individual farm scores for Water Quality, Odor and Air Quality, Soil Quality and Nutrient Management, Habitat Quality and Diversity, and Community Image. These scores are considered confidential and are protected by listing only the farms private identification number (see Attachment E: EQA Performance Final Report).



Funding for Actions Items completed under the EQA Program was distributed by topic area as shown above (Total funds expended \$98,180.48).

Water quality (WQ) topics received the majority of funding (38%), especially since many topics considered under the O&AQ (Odor and Air Quality) topic area are important for water quality. In fact, the new Assessment Standards have moved a number of assessment criteria from O&AQ to WQ.

Overall for water quality, improvements to manure storage and handling systems were as expected a significant portion of the investment, however, pesticide and petroleum management, although much less expensive were fairly common action items.

Odor and air quality improvements resulted in 7 good size projects to divert clean water from entering open lots.

Soil quality and nutrient management assessments resulted in upgrading almost every clients nutrient management plans and are responsible for 12 complete nutrient management plans.

Habitat quality and diversity resulted in many food plots being established for wildlife and in two significant improvements to wildlife corridors, where land was taken out of production and planted to native prairiegrass and wildflowers.

Community Image funding resulted in shelterbelt improvements on six farms in the program.

A complete listing of projects cost-shared under the EQA Program follows.

EQA ACTIONS COMPLETED:

Planning, design, and construction of Ag waste storage system, as per invoice Improved land application management and crusting for manure storage Record keeping improvements to meet MPCA standards

Established food plot for wildlife Current host for farm visits

Implemented pesticide spill plan and recycling of hazardous waste Improved manure handling system and land application practices Planted food plot adjacent to wildlife corridor

Moved fuel tanks and disposed of unwanted pesticides in appropriate manner Planned and developed clean water diversion from open lots includes gutters and landshaping, and improved land application management

Completed and implemented comprehensive Nutrient Management Plan

NRCS assessment determined wildlife corridor not applicable on this farm, established food plot for wildlife

Completed Good Neighbor Policy and plan for handling complaints, and shelterbelt improvements

Nutrient Management Plan completed

Fencing to exclude livestock access to Goose Lake and for rotational grazing of pastureland and new water system to replace lake access and feed management improvements in EQA Water Quality Priority Area (combination with EQIP Funding)

A permanent fence for north pasture to restrict livestock access and provide for a filter strip between feeding area and wetland (~1200 ft. of fencing) and a permanent fence also for the south pasture to restrict livestock access to creek (~1200 ft. of fencing).

Working on design with SWCD for improving open lot conditions and drainage

Application in with Otter tail SWCD and plan completed to improve winter dry cow feedlot conditions and fencing to protect grasslands for wildlife and recommended annual food plot.

Improvements to feeding area including installation of feed bunkers

Improvements to open lot and silage storage surface completed – scoring change pending confirmation on Open Lot Agreement

Field approach moved and culvert installed to allow development of wildlife corridor. Spring work required for further development of wildlife corridor which will include planting of native perennials. Installed concrete pad for fuel tank

Seeded wildlife corridor to native grasses and herbs

Removed below ground fuel tank and replaced with above ground tank Poured concrete slab for feed storage area and to improve conditions in loafing shed

Sealed unused wells with clay

Established Good Neighbor Policy and plan for Handling Complaints (Response Plan)

Seeding for wildlife corridor enhancement, establishment of food plot, and improved management of shelter edges

Completion and implementation of Response Plan for Handling Complaints

closed tile intake by silage storage and upgraded silage storage surface, upgraded pesticide storage area and container disposal method;

improved dry cow cleanliness, installed concrete reception pit adjacent to free stall barn to eliminate problems with manure stockpiling, installed under surface agitator for liquid manure storage system; Established improved record keeping system and developed plan to meet (w/i 20%) UofM Nitrogen rate recommendations;

implemented improved conservation tillage management practices

improved pasture fencing and conditions and invited community groups (local school kids) to visit farm

Completed pasture improvements (seeding) Established 1 acre food plot for wildlife

Improvement to front entry drainage and surface

working to achieve NRCS zero discharge standards, grass waterway installed to divert runoff from ditch, milk house waste pumped to new liquid manure storage, pesticide and hazardous waste management improvements have been made, and feed storage area improvements completed. Installation of pump to move milk house waste to storage

grading and concrete surface in place to improve open lot conditions and control runoff from lot and from manure storage, and storage allows land application improvements.

custom application according to NRCS Nutrient Management Plan.

Wildlife cover and shelterbelt enhancement resulting from shrub plantings

Food plantings planned and shelter edge management improvements ongoing.

Shelterbelt improvements have been made and a plan for handling complaints and Good Neighbor policies in place.

Establish buffer on ditch #33

Control runoff and improve grading to divert clean water from open lots

Develop and Implemented Comprehensive Nutrient Management Plan and installed rock inlets in tile lines to improve management of application in Sensitive areas

Contacted local SWCD and working on Habitat plan

Improvement to grounds and development of response plan

Installation of pre-cast manure storage pit to improve manure storage and land application options – (LA score improved from 1 to 3).

Improvements completed to milk house waste management system and drainage by pumping septic tank and fixing tile lines and site work to improve drainage field. Milking Center Discharge Method score improved from 1 to 2

Improvements to shelterbelt completed

Improvements completed to grounds and building maintenance including clean water diversion (gutter system) and dirt work to improve drainage and appearance, however overall scoring, to-date, for this category has not resulted in a change to the topic score.

Increased planting of perennial forage crops and is working with SWCD on sediment basins to stop erosion. Pesticide and hazardous waste management plans in place and unused pesticides and other wastes disposed of with hazardous waste contractor and manure storage system constructed which collects milk house waste and new freestall barn constructed which elimates open lot runoff problem.

Designed new manure storage with clean water diversion away from barn and open lots and is implementing improved application methods.

Purchased DMI to improve soil quality and began incorporation within 24 hours. Worked with local CFO to develop Nutrient Management Plan, calibrate spreader and test manure.

Planted grass watereway and grass around barn and installed corn feeders for wildlife. Has engaged in local radio promotion of dairy with local newspaper and phone contact with opinion leaders and has a plan in place for handling complaints and has agreed to contact neighbors prior to manure application on adjacent fields.

Improved feed storage surface and installed concrete pad under fuel tank

Hired consultant to improve nutrient management plan

Working with NRCS on improving wetland management for wildlife

Purchased new calf housing to improve community perception of animal care

Improved water quality score by removing underground fuel tank and replacing with above ground tank and worked with MPCA officials to confirm certification status of existing lagoon. Projects resulted in petroleum management score improving from 3.7 to 4.0 and manure storage score to 3.0

Improved pesticide storage management practices and developed and implemented increased manure storage by constructing an earthen basin where Milk House waste is collected

Improved surface and slope of open lot, controlled runoff from lots, diverted clean water from entering open lots, and improved manure handling system to avoid daily haul situation;

Improved Nutrient Management as described

Improved Community Perception of Animal Care by developing and fencing in pasture area that is visible from the road

Milk house waste system improvements completed.

Documentation of permit status -not received-

EQA Certification on hold pending confirmation of permit status

improved heifer housing and surface conditions of open lots by constructing a concrete pad

Preliminary design and engineering assistance for improvement of manure storage.

Completed Response Plan and Good Neighbor Policy (GNP)

Worked with SWCD to establish buffer strips along ditch banks, relocated fuel tanks and secured Pesticide Applicators License

Improved cow cleanliness scores by improving stall conditions which also improved scores for floor and alley cleanliness

Improved freestall housing conditions and appearance with improved lighting and established response plan

soil borings and engineering completed for development of clean water diversion and milking center waste system improvements completed

diverted clean water from entering open lots;

manure testing completed as component of nutrient management plan improvements;

Stream Management improved by diverting clean water from open lot – reducing feedlot runoff potential

completed Response Plan and Good Neighbor Policy

Increased Manure Storage Capacity by constructing holding unit;

Improved drainage from open lot with grading and landshaping and improved land application practices as a result of increased storage;

Engineering to make improvements to manure handling systems and to control runoff from feedlot. Response plan completed

Engineering to control runoff from open lots

Established vegetative barrier

Nutrient Management Plan completed by Jeff Tipton, Ag Partners Coop, includes computer programming, record keeping, spreader calibration, and manure testing

Completed Good Neighbor Policy and Plan for Handling Complaints which includes providing neighbors with verbal notice when majority of manure hauling occurs in spring and fall, and notifying neighbors of who they can contact on the farm if they have a complaint, complaint form developed with procedure for collecting and recording information, and have formal policy of responding to complaints in a timely manner.

increased manure storage capacity and handling systems and improved area adjacent to open lot to enhance buffer and considers time of day for applications

Completed nutrient management plan components for record keeping system and tested manure and calibrated spreader;

Developed Response Plan and Good Neighbor Policy

Installed gutters to divert clean water from open lots Response plan completed

RESULT 4 LCMR BUDGET:		\$18,000	-\$18,000	=\$ -0- BALANCE
Personnel:	MMPA Project Manager: MMPA Office Assistance:	\$ <u>4,500</u> \$ 2,000	\$ 4,500 -\$ 2,000	= \$ -0- = \$ -0-
MMPA Prof	essional Services CHDS:	\$ <u>11,500</u>	-\$11,500	= \$-0-

V. TOTAL PROJECT BUDGET

		TOTAL	EXPENDED	BALANCE
All Results:	Personnel:	\$ 45,000	-\$ 45,000.00	=\$ -0-
All Results:	Subcontracts:	\$100,000	-\$ 91,299.00	=\$ 8,701.00
All Results:	EQA Incentive Funds:	\$100,000	-\$ 98,079.48	=\$ 1,920.52
TOTAL BUI	DGET:	\$245,000	-\$234,378.48	=\$ 10,621.52

NOTE: \$7,276.00 (balance owed to UofM, remains unpaid as of this report, however, we expect to submit a subsequent invoice for this amount).

VI. PAST, PRESENT AND FUTURE SPENDING:

A. Past Spending: The Generic Environmental Impact Statement (GEIS) on Animal Agriculture developed a number of recommendations that were implemented by the EQA Program.

B. Current and Future Spending: The University of Minnesota through the Center for Rural Design (CRD) invested over \$100,000 in a "Community Dairy Partnerships" project that developed many of the tools, processes, and partnerships that resulted in the EQA Program. CRD invested additional resources prior to July 1, 2001 to continue the development of the technical and analytical skills needed to produce the Environmental Priority Framework for the EQA program.

The EQA project resulted in Total Project Investments of \$345,009.95 to make environmental improvements on Minnesota dairy farms. This total overall investment was encouraged by the program's investment of \$98,079.48 in Incentive Funding (28% of total) or about a 250% return on investment.

MMPA and other project partners have made a significant investment in the EQA Program in addition to the investment from LCMR which will be further quantified for the purpose of establishing ownership rights for the EQA Program (as per LCMR CONTRACT TERMS: <u>Section</u> 2.4 Ownership of Materials and Intellectual Property Rights.

C. Project Partners: The University of Minnesota provided services under contract to MMPA and Professional Services Agreements were in place with the Stearns County Soil and Water Conservation District; Dairy Profitability and Enhancement Program (DPEP); The Prairie Region Profit Team (WC MDI); SE Region MDI, and Chris Hanson Design Solutions (CHDS).

D. Time: The project began July 1, 2001 and ended June 30, 2003.

VII. DISSEMINATION: Every dairy farm that achieves Certification will receive EQA Certification Signage for posting at the entrance to the farm, in the farms milking center area, and in the farm office or home. All signage will identify the farm as having achieved EQA standards for Environmental Excellence and acknowledge the effort as a "Minnesota Future Resources Fund Project".

Certified farms agree to become part of the ongoing promotion of the EQA program by participating in newspaper and radio promotion of their achievement. Public Issue Management, LLC., a vendor hired by MMPA, is managing the delivery of radio actualities and news releases, and advertising promotion for the first 50 farms (see list of farms on following page) that achieved EQA Certification prior to the conclusion of the LCMR project on June 30, 2003.

All printed materials use the following attribution language: "Funding provided by the Minnesota Future Resources Fund as recommended by the Legislative Commission on Minnesota Resources".

Examples of EQA Signage and promotional materials for the EQA Program for the 50 farms Certified under the LCMR project are included on the following pages.

VIII. LOCATION: The program was presented and will continue to be available statewide.

EQA CERTIFIED FARMS as of JUNE 30, 2003

FARM NAME # Aakre Dairy # Alpha Foods, LLP # Arendt's Holstein Resort, Inc. # Balzer Dairy # Beckman Dairy # Bode Dairy & Feedlots # Brookside Inc. # Bruce and Cheryl Warga # Dairyridge # Damhof Dairy # Skiba's Jerseys # Disco Dairy # Dorrich Dairy # Duban Dairy # Dublin Dairy # Excel Dairy # Fuchs & Kerfeld Dairy # Gar-Lin Farms Green Waves Farm # # H+JJ Johnson Dairy # Haubenschild Farms # Kerfeld Hillview Farms Inc. # Kern Dairy # Kipland Vale Inc. # Kotten Dairy # Lauer & Sons Inc. # Lubitz Dairy # Massmann Family Joint Venture # McNallan Farms # Meyer Dairy # Nu-Dimension Holsteins # Quaal Dairy # R.C. Dairy # Ritter Farm # Riverview Dairy # Rowekamp Farms # Schmiesing Dairy # Schouviller Dairy # SkyView Dairy # Speltz Farms, Inc. # Stiflers Farm Sunshine Dairy Ranch Tauer Farms # Terry Schulzetenberg # Uphoff Dairy # Welgraven Dairy # Union Dairy, LLP # Wiechmann Farm # Wiener Farm

Wood's Farm

Congratulations to Dennis and Judy Ritter Minnesota's First "FIVE-STAR" Dairy



Dennis and Judy Ritter of Melrose, MN, received this sign in recognition of their dedication to excellence in environmental stewardship.

Minnesota dairy farms that are enrolled in Minnesota Milk's "Environmental Quality Assurance" (EQA) program must achieve excellence in each of five major topic areas (Water Quality, Odor and Air Quality, Soil Quality & Nutrient Management, Habitat Quality & Diversity, and Community Image) to receive a "FIVE STAR" rating.

Minnesota Milk developed the Environmental Quality Assurance (EQA) program with funding provided by the Minnesota Future Resources Fund as recommended by the Legislative Commission on Minnesota Resources, and in partnership with the University of Minnesota, the Minnesota Pollution Control Agency, the Minnesota Department of Agriculture, Soil and Water Conservation Districts, and NRCS.

Minnesota Milk is dedicated to protecting our environment and strengthening our rural communities by creating a climate of growth and prosperity for Minnesota's dairy farmers.

Congratulations to the Wiechmanns and the Rowekamps... Two More Five Star Dairies!



Allan and Lisa Wiechmann bought Alan's dad's farm near Melrose in 1986, but both worked at Jennie-O Foods for ten years before getting back to farming. Lisa noted, "Sometimes I think everyone should work someplace else before they start farming."

The Wiechmann Farm is located on the Sauk River and has been recognized as a River Friendly Farm. "We pay a lot of attention to public relations because we live so close to town", said Lisa.

In 1991, Alan and Lisa upgraded their manure storage and handling systems. They also have grass waterways, pastureland and alfalfa to protect the river. They milk about 50 cows in a stanchion barn setup.

Allan serves on the Board of Melrose Mutual Insurance Company and on the Township Planning and Zoning Commission. He and Lisa are active in their church and with the Trail Blazers Snowmobile Club.

Alan thought the EQA Assessment "was a really good look at all the things farmers deal with. We need to be good stewards, and also tell folks about the things we're doing."

Jean and Bill Rowekamp run a third generation farm near Lewiston in Winona County. In 1972, they upgraded from a 36-stall stanchion barn to a free stall barn with a double-six herringbone parlor.

"Dairying has been so rewarding because of the lifestyle, the people



we've met, and knowing we produce an important product, " says Bill.

Bill saw the EQA program as a chance to improve their overall operation. "The program was very thorough. It wasn't just the facility, we looked at the whole farm."

The Rowekamps put 620 acres in corn, beans, and alfalfa. They also sell haylage and silage to a young couple just starting in the dairy business and see potential opportunity to provide complete TMR mix to other operators.

Bill likes to operate as locally as possible. "We prefer soybean meal as our best source of protein and it's a local ingredient. I also like to take as much product as we can from our local ethanol plants and we're working with our nutritionist to look at all our options".

The EQA program is a rigorous on the farm evaluation where producers demonstrate superior environmental management practices in each of five areas—water quality, odor and air quality, soil quality and nutrient management, habitat quality and diversity, and community image.

Minnesota Milk Producers Assn. 413 South 28th Avenue Waite Park, MN 56387 1-877-577-0741 www.mnmilk.org

The EQA program is funded by the Minnesota Futures Resources Fund as recommended by the Legislative Commission on Minnesota Resources. Participants include the University of Minnesota, the Minnesota Pollution Control Agency, the Minnesota Department of Agriculture, Soil and Water Conservation Districts, and the NRCS.



ongratulations to Dimension Holsteins Farms and the McNallan Family... Minnesota's Newest Five Star Dairies!



Dwain and Jayne Dinse operate "Nu-Dimension Holsteins" on five acres near Owatonna with 68 cows and plans to grow to 90. The Steele county DHIA has recognized them for lowest somatic cell count five years running (they just missed this year).

ain and Jayne were both very active in 4-H and FFA growing up in Meridian and she on a dairy farm in southwestern Minnesota. y're also busy off the farm. Dwain has a 20-year career with Select s and Jayne is Past President of the MN Association of Student ancial Aid Administrators. Also pictured is Juliana Vesga—a foreign hange student from Columbia on a 12 month International Dairy mer Training Program.

ain predicts "The future of the dairy industry in Minnesota will be ermined by how well we do environmentally". Dwain used funding n the EQA program to upgrade their manure storage capacity, prove drainage, and divert clean water from entering open lots. Brothers Paul and Steve McNallan farm with their sons Matt and Scott in Wabasha County near Kellogg. The McNallan family has been milking here since 1868. In 1980 they upgraded to a Germainia double-eight parlor and freestall housing. They are cur-



rently milking about 350 cows. They also raise about 1100 acres of corn, beans, and alfalfa-all of which goes into haylage.

Paul notes, "We got into the EQA program to promote environmental stewardship. We scored high in Habitat Quality and Diversity because we raise a lot of hay and practice contour farming using no-till and zone till to protect the trout streams on our farm and to keep our soil in our fields. We also put some ground into the RIM program and we have our steep ground in CRP. We have conservation buffer strips on our waterways and worked with our local DNR folks to develop a Woodland Stewardship Plan."

ie EQA program is funded by the Minnesota Futures Resources Fund as recommended by the Legislative Commission on innesota Resources. Participants include the University of Minnesota, the Minnesota Pollution Control Agency, the innesota Department of Agriculture, Soil and Water Conservation Districts, and the NRCS.

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ATTACHMENTS:

Attachment A - Attachment A: FINAL PROJECT BUDGET 6-30-03

 $Attachment \ B-EQA \ Performance \ Report$

Attachment C – UofM Final Report

Attachment D - EQA Action Plans and Approved Budgets

Attachment E – EQA Certification Standards

Attachment F – EQA Resource Manual