Watershed Agricultural Program
2009 Annual Report and 2010 Workload

for the New York City Catskill/Delaware and Croton Watersheds

February 2010

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The Watershed Agricultural Program of the Watershed Agricultural Council (Council) is a comprehensive, source water protection program in the New York City Watershed. The Program focus is to improve, maintain and protect local and New York City water supplies through extensive whole farm and nutrient management planning, conservation practice implementation, education and economic development of the local agricultural industry.

The Program is a collaborative effort between the Council, local Cornell Cooperative Extensions, Soil and Water Conservation Districts, the USDA Natural Resource Conservation Service and Farm Service Agency. Together, we engage landowners in this voluntary Program that uses extensive environmental assessments, whole farm planning (farm-specific, water-quality protection plans) and Best Management Practices (BMPs) to reduce the risk of pollutant runoff and to protect drinking water.

In 2009, the Program implemented 427 BMPs at a total investment of nearly $3.4 million. Farm participants are actively following 167 Nutrient Management Plans and over 375 Whole Farm Plans, a percentage of which are reviewed and updated annually. Funding provided by New York City Department of Environmental Protection, the USDA and other sources helped the Program realize its goals.

If you have any questions or comments, please contact the Program office at (607) 865-7090 or by mail at 44 West Street, Suite 1, Walton, NY 13856. Respectfully submitted on behalf of the Watershed Agricultural Program staff by:

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Cover Photo: Brian Danforth
Report Photos: WAP Staff

PRIMARY FUNDING SOURCES

NYC Environmental Protection

USDA Natural Resources Conservation Service

USDA Farm Service Agency

Watershed Agricultural Program

2009 Planning Goals and Accomplishments

Catskill/Delaware Large Farms		Catskill/Delaware Small Farms		Croton Watershed	
Goal	Accomplishment	Goal	Accomplishment	Goal	Accomplishment
Annual Status Reviews					
248	251	65	64	43	40
New Whole Farm Plans					
as identified	2	10	10	6	6

2010 Planning Goals

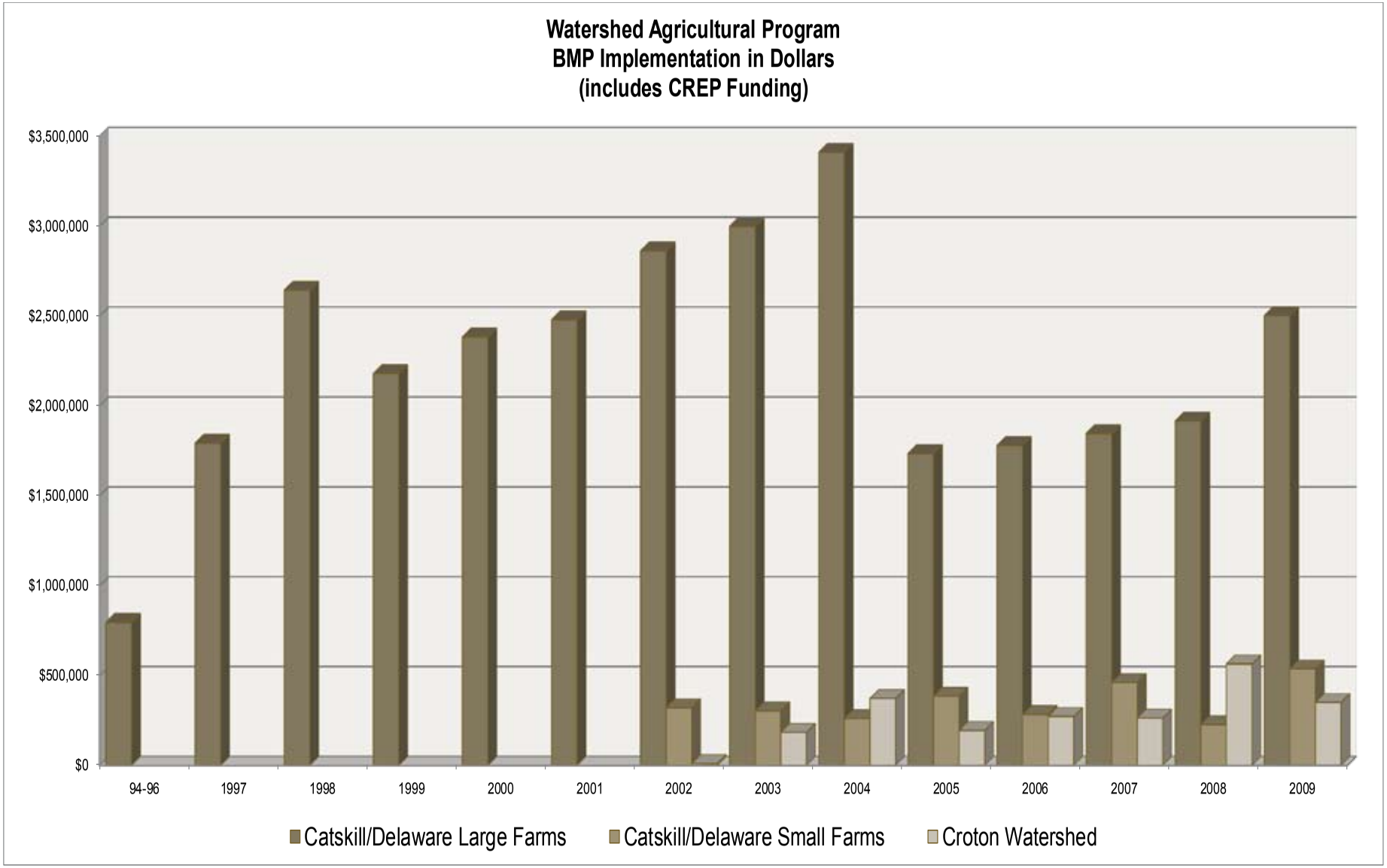
Catskill/Delaware Large Farms	Catskill/Delaware Small Farms	Croton Watershed
Goal	Goal	Goal
Annual Status Reviews		
251	75	46
New Whole Farm Plans		
as identified	10	6

2009 Implementation Accomplishments - Funding

BMP - Funding Sources	Catskill/Delaware Large Farms	Catskill/Delaware Small Farms	Croton Watershed	Total
Watershed Agricultural Program				
- Non-CREP BMPs	$ 2,243,181	$ 375,807	$ 314,405	$ 2,933,394
- CREP (WAP)	$ 128,060	$ 79,186	$ 12,990	$ 220,236
Total Watershed Agricultural Program Funding	$ 2,371,241	$ 454,993	$ 327,395	$ 3,153,630
Other Funding Sources				
- CREP (FSA)	$ 127,728	$ 79,192	$ 5,557	$ 212,477
- EQIP	$ -	$ 2,250	$ -	$ 2,250
- Landowner	$ 2,000	$ -	$ 4,775	$ 6,775
- Other Miscellaneous	$ -	$ -	$ 12,200	$ 12,200
Total Other Funding Sources	$ 129,728	$ 81,442	$ 22,532	$ 233,702
Total Funding	**$ 2,500,969**	**$ 536,435**	**$ 349,927**	**$ 3,387,332**

Watershed Agricultural Program
2009 Implementation Accomplishments - Number of BMPs

NRCS/WAC BMP Code	Best Management Practices	Catskill/Delaware Large Farms	Catskill/Delaware Small Farms	Croton Watershed	Total
312	Waste Management System		2		2
313	Waste Storage Facility - Roofed	4			4
317	Manure Composting Facility		1	4	5
328	Conservation Crop Rotation	5			5
329	Conservation Tillage	1			1
330	Contour Farming			1	1
340	Cover Crop			1	1
342	Critical Area Planting	1			1
350	Sediment Basin			1	1
362	Diversion	2		1	3
382	Fencing	13	17	2	32
390	Riparian Herbaceous Cover			2	2
391	Riparian Forest Buffer	6	1		7
393	Filter Strip	3			3
412	Grassed Waterway		1		1
511	Forage Harvest Management	1			1
512	Pasture & Hayland Planting	4			4
516	Pipeline	5	11		16
528	Prescribed Grazing	3			3
528	Prescribed Grazing - Lime	1			1
558	Roof Runoff Management System	2	1	1	4
560	Access Road Improvement	1	3	1	5
561	Heavy Use Area Protection	6	4	5	15
574	Spring Development	13	6		19
575	Animal Trails and Walkway	13	8		21
578	Stream Crossing	2	1		3
585	Contour Stripcropping	2			2
587	Structure for Water Control		3	1	4
590	Nutrient Management Plan	62	33	4	99
595	Pest Management	5			5
612	Tree & Shrub Planting	6	7		13
612.1	Tree & Shrub Planting - Site Prep	1	3		4
612.2	Tree & Shrub Planting - Shelters	2			2
612.3	Tree & Shrub Planting - Natural Regeneration	2	1		3
614	Watering Facility	4			4
620	Underground Outlet	2		1	3
633	Waste Utilization	33	24	2	59
634	Waste Transfer System	4			4
635	Wastewater Treatment Strip			2	2
643	Wash Water Infiltration System			2	2
701	Barnyard Water Management System	4	1		5
719	Waste Infiltration Area			1	1
748	Recordkeeping	21	17	3	41
749	Manure Pile Area		2		2
783	Pathogen Management			1	1
3010	Roofed Barnyard		1		1
3100	Calf Kennel (Portable)	1			1
3120	Calf Hutches	1			1
3175	Enhanced Nutrient Management Credit	2			2
3430	Manure Truck	3			3
3450	Manure Agitator Pump	1			1
3710	Water Wagon	1			1
Total		**243**	**148**	**36**	**427**



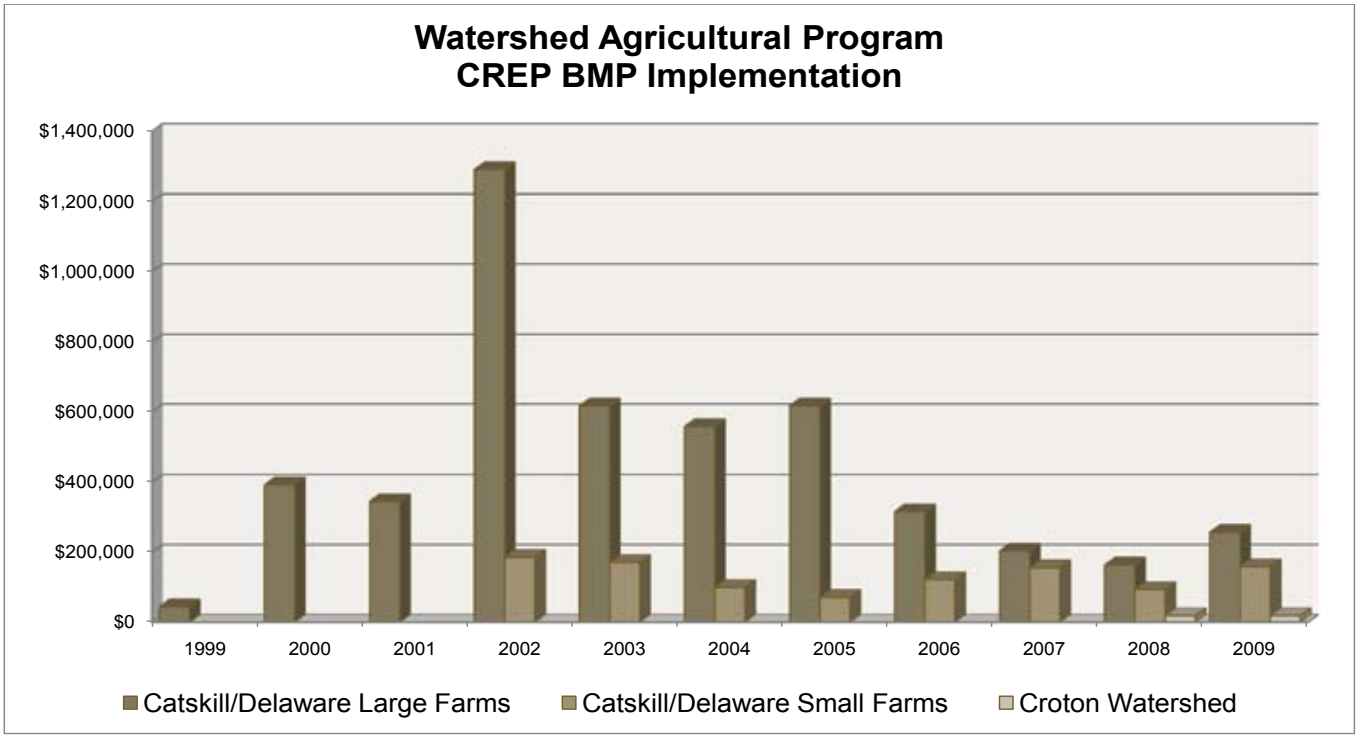
Program	94-96	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total
Catskill/Delaware Large Farms	$794,766	$1,791,415	$2,642,046	$2,178,782	$2,382,389	$2,477,633	$2,861,236	$2,998,478	$3,410,102	$1,733,128	$1,778,216	$1,845,415	$1,914,753	$2,500,970	$31,309,329
Catskill/Delaware Small Farms							$319,568	$302,521	$260,723	$384,344	$281,674	$460,467	$225,757	$536,435	$2,771,489
Croton Watershed							$9,100	$183,164	$371,193	$193,481	$271,550	$262,147	$563,552	$349,927	$2,204,114

USDA Conservation Reserve Enhancement Program (CREP)
2009 Accomplishments

The USDA CREP Program within the NYC Watershed Agricultural Program utilizes the talents found within the multi-agency team assigned to work in the Watershed to promote, design and establish both Riparian Forest Buffers and Vegetative Buffers along watercourses. This year marked the 11th full year of the New York City Watershed Conservation Reserve Enhancement Program (CREP) Memorandum of Agreement between New York City, New York State and the United States Department of Agriculture (USDA). In 2009, eight Riparian Forest Buffer contracts (seven new and one renewal) enrolled an additional 69.7 acres, increasing the total number of enrolled acres to 1,998.5.

2009 Total Implementation Expenditures

Total Rental Payments (USDA)	$103,846
SIP (FSA)	$ 6,970
PIP (FSA)	$ 65,171
BMP Cost (FSA)	$117,883
BMP Cost (WAP)	$117,883



Program	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total
Catskill/Delaware Large Farms	$43,706	$391,333	$343,881	$1,291,118	$616,995	$557,601	$616,929	$315,034	$202,979	$162,811	$255,789	$4,798,176
Catskill/Delaware Small Farms				$185,096	$169,888	$98,829	$70,182	$120,534	$155,360	$92,777	$158,378	$1,051,044
Croton Watershed										$17,968	$18,547	$36,515

Nutrient Management Program 2009 Accomplishments

The Nutrient Management Team (NMTeam) is a multi-agency effort that assists farmers in improving phosphorus and pathogen management. Nutrient Management Plans (NMPs) are designed to manage the amount, source, placement, form and timing of the application of nutrients from fertilizer, manure, and other organic sources. The NMTeam supports the farmer in implementing a NMP that will result in management that protects water quality and produces optimum yields. All plans are compliant with the NRCS 590 Standard and use the NY Phosphorus Index and Cornell Cooperative Extension guidelines.

In the Catskill/Delaware Watershed, 167 large farms follow NMPs:

157 farms (94%) with 13,952 animal units with NMPs developed in the last three years,
8 farms (5%) with 579 animal units with NMPs developed between three and five years ago,
2 farms (1%) with 504 animal units with NMPs developed more than five years ago.

Nutrient Management Credit (NMCredit)

The NMCredit Program encourages heightened stewardship of manure resources to improve water quality. In 2009, 84 farms participated in the NMCredit Program and earned $307,485 in credits that they can utilize to reimburse nutrient management related expenses.

Farmer Education Program

The Farmer Education Program supports the water quality protection and farm viability mission of the Watershed Agricultural Council by providing educational programs that enhance farmers' abilities to manage their operations more profitably and in a way that nurtures their natural resources. In total, 21 educational programs were offered during 2009 and total attendance was a record high of 531. A new initiative established three producer groups: Beef, Dairy, and Sheep and Goat. The producer groups focus on a farmer-to-farmer exchange of information and experience. The Program provided a wide range of educational opportunities from disease and parasite management to meat processing and marketing. The groups are led by volunteer group members with limited backstopping by WAP staff.

123	Catskill Regional Dairy Livestock and Grazing Conference
98	Beef Producer Group, 5 Meetings
16	Dairy Producer Group, 2 Meetings
62	Sheep and Goat Producer Group, 6 Meetings
30	Build Your Own Farm Website in a Few Hours
44	NoTill Production Workshop
95	Farm to Market Conference
11	Build Your Own Farm Website
5	Nutrient and Pathogen Management Credit Workshop
29	FAMACHA Certification Workshop
18	Cultivating an Agri-Tourism Enterprise
531	**Total**

Attendee Demographics:

Watershed Farmers	225
Other Farmers	166
Agency	81
Agri-Service	40
Other	13
Students	6

Farm to Market Program

The Farm to Market Program works to support the economic viability of farm and food-based businesses in the greater New York City Watershed Region. The Program's regional coverage serves Delaware, Greene, Otsego, Schoharie, Sullivan and Ulster counties. In 2009, the Program aimed to assist farmers in developing new business ventures and to raise the awareness of local agriculture. In April, over 100 farmers and buyers gathered at the Farm to Market Conference for a full day of workshops and networking opportunities focused on building the local agricultural industry. December's Beef Marketing Tour attracted nearly 50 farmers for a day out visiting Hudson Valley farms involved in direct sales of specialty beef (see group photo above). Throughout the year, Producers Groups met to share and learn tricks-of-the-trade from peer farmers. To help farm businesses grow, Pure Catskills offered member scholarships for educational activities, product workshops and regional conferences.

This year's Pure Catskills *Guide to Farm Fresh Products* featured 200 business listings of farms, farmers' markets, retailers, restaurants and community organizations. At www.purecatskills.com, content continued to expand listings of all business members, details on upcoming events and newsletter postings. The Farm to Market Program also publicly recognized September as "Buy Local Month." By month's end, 286 pledges totaling $207,452 were collected representing a significant community dedication to local farms and food.

Covered Composting

This three-bay, covered composting structure was built at an educational center located in Roxbury, Delaware County. Prior to construction, manure was piled in an open, uncovered mound. A stream 100 feet downhill eventually led into the Pepacton Reservoir. The farm school is considered a small operation with a herd of sheep, several goats, a dozen laying hens and a milking cow. The farm and design team were concerned about water quality and the health implications for visiting school children and came up with this simple solution. The farm school now uses this composting facility to provide hands-on learning experiences for students while providing rich soil amendment for their garden.

Feed Pad
Bunk Silo
Drainage
Laneway Reconstruction

Located in the Cannonsville drainage basin, this 2,500-acre farm is part of a larger, family-owned/operated business located just outside Stamford, Delaware County. The Cannonsville Reservoir holds 95.7 billion gallons of surface water and is one of six Catskill/Delaware Watershed reservoirs that supplies 1.1 billion gallons of drinking water to New York City each day. In recent years, the project farm -- a multi-generational dairy -- transitioned to organic and downsized from 700 to 450 milking Holsteins. The farm needed an outdoor feed pad upgrade, as the existing, unprotected heavy-use area allowed runoff carrying feed and animal waste to drain into a nearby stream. To improve water quality and herd health, the Program design team installed a barnyard runoff management system to address the feeding area's shortcomings.

This farm posed unique circumstances, as it is the largest dairy farm in the New York City watershed system. On-site work took roughly five weeks, wrapping up in August 2009. The planning and design team looked to improve the feeding operation and water quality with the same effort. This project included several key elements:

- A concrete pad, 325 feet long x 25 feet wide, totaling 300 cubic yards of concrete
- An animal-friendly feeding area (pictured above)
- Drainage, culvert pipes and ditch work diverting runoff from the site
- Roof runoff controlled with gutters
- Two water troughs

When the planning and design team proposed a barnyard water management system to facilitate manure removal and improve water quality while improving cattle feed intake, the farmer understood the Big Picture and agreed to the tailored system. The feeding pad was one of the largest planned and installed by the Program. The planning team considered the logistics of traffic patterns (animal and farm equipment), as well as the animals' needs. Specifications from NRAES (Natural Resource, Agriculture, and Engineering Service -- Dairy Housing and Equipment Systems) were incorporated into the design. The team objectives were: 1) water quality, 2) allow for maximum feed intake and animal comfort, and 3) allow for efficient mechanical feeding. For example, feed and guard rails and watering trough heights are specific to the Holstein breed. The feed table is 6 inches above the cow alley/scrape alley, allowing for a natural head-neck drop during feeding. The team factored in enough shoulder-to-shoulder spacing so cows could eat comfortably, which leads to better nutrition. And the overall width of the feed pad allows two-way cow traffic. Cows heading to the barn can pass behind feeding cows without bumping into them.

The heavy-use concrete pad runoff (see top photo) was routed into an existing manure storage system, one that holds 2.5 million gallons of manure. The contents are spread at a later date according to

a Nutrient Management Plan specified within the farm's Whole Farm Plan.

Bunk-Silo Leachate Collection System: The bunk-silo leachate collection system addressed an area where forages (corn silage and grass haylage) were stored in an open bunk (see photo below). Shortly after filling the bunk with forages, a liquid called silage leachate would ooze out of the storage. Silage leachate is nutrient rich, having a high BOD (Biological Oxygen Demand) that is potentially toxic to plants and animals. This leachate originally seeped into a nearby pasture, killing the grass (see photo above).

The bunk silo's constructed concrete apron on the down slope side captures and channels all liquid leaving the bunk and routes it to a high-flow/low-flow separation system. Since the bunk is open to the elements, nutrients mixing with rainfall created runoff on the bunk that was very dilute and therefore not toxic. The high-flow runoff was treated by removing organic matter (chopped forages) using a series of screens. Runoff was diverted and dispersed over a vegetative filter area. The low-flow liquid leaving the bunk was directed to a pump tank where it was transferred to an existing concrete manure storage. The combined waste was analyzed and applied according to a Nutrient Management Plan.

The feeding area and feed storage improvements also created a more efficient farm operation. Farm equipment now maneuvers easily within the feed pad. Herd health improved because feed quality has improved, while feeding stress and wasted feed were reduced. Not only are cows benefitting from better feeding management, water quality improved since nutrient rich runoff is treated before reaching nearby streams. To date, the WAP has completed significant environmental infrastructure on the project farm including: three separate manure storage tanks, CREP (Conservation Reserve Enhancement Program) measures, laneways, watering facilities and fencing systems. According to staff, the farm owner understands the benefits of water quality and land stewardship, embracing innovative methods to improve soil quality, fertility and health.

Fencing Drainage Barnyard

This project farm is a 240-acre dairy in Delhi, Delaware County. The family-run business milks 50 Holstein cows and raises heifers. The cow barnyard was native soil; seasonally, it became a muddy mess. Cattle manure mixed with rain and eventually reached Spring Valley Creek and the West Branch of the Delaware River which supplies water to the Cannonsville Reservoir. Sediment and nutrients, phosphorous in particular, from barnyard runoff are major pollutants to the New York City water supply.

The barnyard improvements installed on this farm consisted of a concrete pad with curbing and fencing. This design confined cattle to the barnyard where manure could be contained. It is periodically scraped into a manure spreader and applied as crop supplement according to the farm's Nutrient Management Plan. Clean water from roofs and upslope area is diverted from the barnyard with gutters and ditching. The cattle lane from the barnyard to pasture traverses the ditch using a culvert. Any polluted barnyard runoff is piped to a vegetative filter area for further treatment.

Overall, the project resulted in decreased sediment and nutrient loading of the local reservoir which recently opened to public recreation. Improved animal health was also an added benefit to the farm.

Asphalt Barnyard Water System Drainage Fencing

Located in the East Brook area of Walton, Delaware County, this 198-acre beef cow-calf operation consists of 43 animals. Prior to planning and implementation, the barnyard feeding area was extremely wet and sloppy, draining into the nearby stream and spring. (See top photo.)

The team designed a barnyard feeding area with water management system and laneway improvement (pictured at left). Because of the herd size, the team felt a harder surface was appropriate. Barnyard clean-up would be easier on an asphalt surface compared to gravel (the traditional barnyard option for beef operations), but less expensive than concrete (the high-end alternative).

The barnyard feeding area is the first asphalt barnyard installed in the watershed. Animals are now confined to the barnyard. Fencing keeps animals out of the spring and a winter waterer provides livestock with a reliable water source. (See photo at right.)

Covered Barnyard
Stream Crossing
Water System
Drainage
Fencing

Located in the Frazier/Delhi area of Delaware County, this 180-acre beef cow-calf operation operates with 20 cows, 8 sows, 120 piglets, 300 laying hens and 15 goats. While grass-fed during summer months, the beef herd was contained closer to the barn through winter. This posed a water quality issue as the farm's winter feeding area was adjacent to the stream (see top left photo). Under existing conditions, animals had unlimited access to the waterway and the hay bale feeding area often ended up in the stream's path.

Following construction, the winter feeding area was moved across the road into a covered feeding area away from the stream (see bottom photo) completely eliminating animal access to the stream. The disturbed area around the covered feeding area was reseeded and regraded to improve drainage.

Along with the barnyard and relocation of animals, this project included a spring development and winter waterer. The stream is now fenced (3,000 feet) and four cattle slats were installed to improve animal waterway crossing (see top right photo). The project team used CREP funds for fencing and the spring development.

Fencing
Barnyard
Water System
Erosion Control
Streambank Stabilization

This 85-acre farm in Pawling, Dutchess County, is a mixed livestock, horse and hay farm. Prior to design and implementation, Holstein and Brown Swiss dairy cows, their calves, and horses had unlimited stream access. The stream was the animals' only source of water and also served as a tributary to the East Branch Reservoir.

Two pressing water-quality issues evolved: bank erosion and the potential for pathogen and nutrient introduction from animal access (see top photo).

Part of the water-quality solution was paperwork to enroll the farm in USDA's Conservation Reserve Enhancement Program (CREP). With funding from the Council, federal government and the landowner, the design team installed 2,630 feet of fencing to exclude animals from the stream (see center photo).

The landowner also agreed to establish 2.5 acres of riparian buffer on either side of the stream which remedied bank erosion.

Four frost-free watering facilities were installed as alternative water sources (see photo at right).

Laneway Composting Pad Water Diversion

Established in 1795, this 129-acre farm grows organic vegetables, flowers and herbs. Nestled within the suburban enclave of Brewster in Putnam County, the farm conserves open space while supporting a Community Supported Agriculture (CSA) program, custom orders and local wholesale delivery. The farm also sells at New York City's Greenmarket, Brewster Farmers' market and from their roadside stand. In order to meet the nutrient demands of their crops, the farm imports manure from area horse farms to generate compost for land application.

Prior to implementation, the farm stockpiled the imported manure in an open pile, without runoff control (see top photo). The access road to the site allowed runoff to leave the pile without treatment (see center right photo). Drainage from the area ultimately fed into the Muscoot Reservoir.

The design team configured a concrete pad and buck wall which aided in managing and turning compost and controlling runoff (see bottom left photo). The pad is pitched to a vegetated filter area to treat runoff, where potential pathogens are filtered out and nutrients are taken up by vegetation. The access road was stabilized and crowned to prevent water from channelizing and eroding the road (see bottom right photo). Overall, simple farm improvements diverted runoff to proper areas and improved equipment access to the manure for appropriate management.

Covered Manure Storage

From design to implementation, projects like this covered manure storage building in Grand Gorge, Delaware County, could take the better part of a year to construct. Talks with the farmer often yield customized planning and projects that benefit the farm's overall business and water quality. Here, the planning and design team addressed piled manure near a waterway (photo below left). Design specs like 14-foot trusses (photo top right) allow for bucket loader clearance.

Once completed (photo bottom right), this covered manure storage not only benefits water quality, but also impacts the local economy. Over 30 people brought this project to fruition.

2010 Projected Workload

BMP - Funding Sources	Catskill/Delaware Large Farms	Catskill/Delaware Small Farms	Croton Watershed	Total
Watershed Agricultural Program				
- Non-CREP BMPs	$ 2,800,201	$ 676,764	$ 502,591	$ 3,979,556
- CREP (WAP)	$ 105,900	$ 165,125	$ -	$ 271,025
Total Watershed Agricultural Program Funding	$ 2,906,101	$ 841,889	$ 502,591	$ 4,250,581
Other Funding Sources				
- CREP (FSA)	$ 105,900	$ 165,125	$ -	$ 271,025
- AWEP	$ 511,340	$ -	$ -	$ 511,340
- EQIP	$ -	$ -	$ 1,755	$ 1,755
- Landowner	$ -	$ -	$ 105,046	$ 105,046
- Other Miscellaneous	$ -	$ -	$ 13,348	$ 13,348
Total Other Funding Sources	$ 617,240	$ 165,125	$ 120,149	$ 902,514
Total Projected Workload*	**$ 3,523,341**	**$ 1,007,014**	**$ 622,740**	**$ 5,153,095**

* The "The Total Projected workload" represents BMPs in various stages of implementation. Not every BMP will be implemented (certified and paid) in 2010. For the calendar year 2010, the Catskill/Delaware Watershed Agricultural Program projects total BMP implementation in the amount of $2,500,000.

Watershed Agricultural Program
2010 Projected Workload - Number of BMPs

NRCS/WAC BMP Code	Best Management Practices	Catskill/Delaware Large Farms	Catskill/Delaware Small Farms	Croton Watershed	Total
313	Waste Storage Facility - Roofed	5	2		7
314	Brush Management	1			1
317	Manure Composting Facility			1	1
328	Conservation Crop Rotation	5	1		6
329	Conservation Tillage	1			1
340	Cover Crop	6			6
342	Critical Area Planting	1	1		2
360	Closure of Waste Impoundment	2			2
362	Diversion	4	2	2	8
378	Pond	1	1		2
382	Fencing	23	40	1	64
391	Riparian Forest Buffer	6	5		11
393	Filter Strip	1			1
393a	Milkhouse Waste Filter		1		1
410	Grade Stabilization Structure	1			1
411	Grasses and Legumes	1			1
412	Grassed Waterway	1			1
468	Lined Waterway	1		1	2
500	Obstruction Removal	2			2
511	Forage Harvest Management		1		1
512	Pasture & Hayland Planting	2	2		4
516	Pipeline	1	18	1	20
528	Prescribed Grazing	10	4	1	15
528	Prescribed Grazing - Lime	2	1		3
558	Roof Runoff Management System	4	11	4	19
560	Access Road Improvement	6	2	2	10
561	Heavy Use Area Protection	9	17		26
574	Spring Development	9	10	12	31
575	Animal Trails and Walkway	13	20	1	34
578	Stream Crossing	2		1	3
580	Streambank Stabilization	1		1	2
585	Contour Stripcropping	4			4
587	Structure for Water Control	3		1	4
590	Nutrient Management Plan	64	24	6	94
595	Pest Management	7		1	8
606	Subsurface Drain	3		2	5
612	Tree & Shrub Planting	9			9
612.2	Tree & Shrub Planting - Shelters	4			4
612.3	Tree & Shrub Planting - Natural Regeneration	8			8
614	Watering Facility	4	1	1	6
620	Underground Outlet	3	1	5	9
633	Waste Utilization			1	1
634	Waste Transfer System	4		1	5
635	Wastewater Treatment Strip	1		2	3
644	Wetland Wildlife Habitat Management	1			1
701	Barnyard Water Management System	5			5
3010	Roofed Barnyard	7	2		9
3110	Solar Calf Housing	2			2
3410	Manure Spreader	1			1
3420	Front-End Loader	1			1
3425	Dump Wagon	1			1
3430	Manure Truck	2			2
4100	Wash Water Infiltration System			1	1
Total		**255**	**167**	**49**	**471**