City of Ottawa Rural Clean Water Program

Ducks Unlimited Canada

Grenville Land Stewardship Council

Laflèche Environmental Inc.

Local Farmers

Ontario Federation of Agriculture

Ontario Ministry of Agriculture, Food and Rural Affairs

Ontario Ministry of Environment

Parmalat Canada

RiverWatch Program

Soil & Crop Improvement Association

South Nation Conservation

JULY 2010

SOUTH NATION CONSERVATION
DE LA NATION SUD

Clean Water Program
2009 Annual Report

2009 Clean Water Program Annual Report

South Nation Conservation Watershed Municipalities:

Alfred-Plantagenet
Augusta
Casselman
City of Ottawa
Clarence Rockland
Edwardsburgh/Cardinal
Elizabethtown-Kitley
Nation
North Dundas
North Glengarry
North Grenville
North Stormont
Russell
South Dundas
South Stormont

Levy dollars from watershed municipalities have played a large role in sustaining the Clean Water Program since its establishment in 1993. Municipal dollars help secure matching funds from government grant programs that have resulted in the expansion the Clean Water Program over the years.

2009 Clean Water Program Funding Partners:

St-Albert Cheddar

Lafleche

parmalat

Eastern Ontario Water Resources Committee / Comité des ressources en eau de l'Est de l'Ontario

South Nation Conservation
de la Nation Sud

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1. CLEAN WATER PROGRAM BACKGROUND

The Clean Water Program has provided a pro-active approach to protection of South Nation River water resources since 1993. The farming and rural communities benefit from improved water quality through this program. Many watershed residents rely on the South Nation River for drinking water, livestock watering, crop production, recreation, and fisheries habitat.

Since 1993, over $2.0 million has been granted to local farmers and landowners for 631 projects that address non-point source pollution and protect surface and ground water quality. Total value of these projects is estimated at $10,132,601.

In 2005, the South Nation Conservation (SNC) jurisdiction increased to include the portions of the Townships of South Dundas, Edwardsburgh-Cardinal, and Augusta along the St. Lawrence River that were formally not part of any Conservation Authority. Clean Water Program grants are available in this extended area as part of the municipality's regular levy or as a Special Levy for Clean Water Program grants.

The Clean Water Program focuses on the following aspects:

a) Local surface and ground water quality improvement through improved rural, urban and agricultural land management techniques;
b) Extension, education and technology transfer;
c) Grants to landowners and community groups to complete projects and adopt practices which reduce nutrient, sediment and bacteria contributions to surface watercourses, and reduce the potential impact to ground water resources, and
d) Approval of project proposals by the Clean Water Committee based on the project's potential to improve water quality and cost effectiveness.

2. 2009 CLEAN WATER PROGRAM FUNDING

The SNC Clean Water Committee thanks all partners and contributors to the Clean Water Program for helping to ensure the long-term success of the Program.

For specific details on Program funding, please refer to the budget in section 18.

a) <u>St. Albert Cheese</u>

St. Albert Cheese has provided annual funding to the Clean Water Program since 2004. The 2009 contributed of $5,000 brings the total contribution amount to $36,000 for the past six years.

2009 St. Albert Cheese cheque ($5,000) presentation to the Clean Water Committee

b) Parmalat Canada

2009 Parmalat cheque ($5,000) presentation to the Clean Water Program

Parmalat has a long history of contributing to SNC, providing $270,000 to the Clean Water Program between 1998-2008. These past donations have helped to fund over 80 landowner cost-share grants to implement best management practices.

In 2009, Parmalat once again donated $5,000 to the Clean Water Program.

c) Total Phosphorus Management

Two industries contributed $31,632 in funding to the Clean Water Program in 2009 as part of their Total Phosphorus Management (TPM) agreement with South Nation Conservation. For more information on the TPM program and municipal contributions please refer to section 10 Total Phosphorus Management.

d) South Nation Conservation

The South Nation Conservation Board of Directors approved a total contribution of $115,307 to the Clean Water Program in 2009. SNC's contribution to the Program comes from Municipal levy dollars. This cash contribution does not include senior staff time for support of Program implementation and reporting.

e) Eastern Ontario Water Resources Committee (EOWRC)

In 2009, EOWRC provided $40,000 in funding for Well Decommissioning grants and project delivery in Eastern Ontario. Of this total funding, $20.977 was allocated to grants within the South Nation River watershed. Refer to section 15 for more information on EOWRC.

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3. 2009 CLEAN WATER COMMITTEE MEMBERSHIP

The Clean Water Program is directed and implemented by a Clean Water Committee. The Committee is responsible for all aspects of the Program, including; budget, Program funding priorities, Program grant rates and guidelines, landowner project approval, monitoring, education, promotion, and research initiatives.

The multi-stakeholder Committee, with a majority of agricultural-based representatives (as agriculture accounts for ~60% of the watershed land use), that has proven beneficial for networking with landowners within the South Nation River watershed. The ability of the Committee to work in harmony with the local landowners, agricultural groups, government, and other organizations has made it a model to be followed in other areas of the Province.

The Committee member's experience and expertise in best management practices enables them to deliver the Program in a fair and cost effective manner.

2009 Clean Water Committee membership:

- Denis Perrault, Committee Chair
- Erling Armson, Ducks Unlimited Canada
- Conrad deBarros, Ministry of Environment
- Lise Guèvremont, City of Ottawa, Ottawa Rural Clean Water Program
- Ken Hill, Chair, South Nation Conservation (ex-officio)
- Jack Hoogenboom, RiverWatch
- Chris Kinsley, Ottawa Rural Clean Water Program
- Alan Kruszel, Eastern Counties Representative, Ontario Federation of Agriculture
- Geoff Laflèche, Laflèche Environmental Inc.
- René Lalonde, Beef Farmer
- Lawrence Levere, South Nation Conservation
- Keith Matthie, Soil & Crop Improvement Association
- Donald Patterson, Ottawa Rural Clean Water Program (alternate)
- Jackie Pemberton, Dairy Farmer
- Dennis Pommainville, Vice Chair, South Nation Conservation (ex-officio)
- Serge Racine, Parmalat
- Arlene Ross, Ottawa Rural Clean Water Program
- Terrence Sauvé/Amadou Thiam, Ontario Ministry of Agriculture, Food and Rural Affairs
- Norm Tinkler, Dairy Farmer
- Doug Thompson, South Nation Conservation
- Adrian Wynands, Grenville Land Stewardship Council

4. 2009 Clean Water Program Grant Structure

The Clean Water Program grant structure is presented in Table 1. Project costs are shared with the landowners, with a maximum grant applicable to all projects.

Table 1: 2009 Clean Water Program Grant Structure

Project Type	Grant Cost Share	Maximum Grant
Septic system repair	50%	$1,000
Livestock fencing restriction Completed by contractor OR Completed by landowner	75% OR 100% for cost of materials	$5,000
Milkhouse wastewater treatment	50%	$2,500
Manure storage	50%	$5,000
Barnyard runoff control/clean water diversion	50%	$5,000
Constructed wetlands for wastewater treatment	50%	$5,000
Nutrient management plans	50%	$500
Tile drain control structures	50%	$1,000
Streambank erosion control	50%	$5,000
Buffer strips	50%	$5,000
Fertilizer, chemical and fuel storage	50%	$1,000
Educational initiatives	50%	$5,000
Well decommissioning*	100%	$1,000

*Grant funding provided in part by the Eastern Ontario Water Resources Committee (EOWRC).

Other projects, not listed, may be considered for funding by the Clean Water Committee on a case-by-case basis. Projects must show the potential to improve local surface and/or ground water quality, must be located within the South Nation River watershed, and must be cost effective.

5. Clean Water Program Representatives

The Committee began to use members of the community as Clean Water Program Representatives (Reps) to complete site visits in 1999. Reps are hired on a part-time, casual basis and have experience in agricultural BMPs.

The use of Reps has resulted in increased exposure for the Program and enhanced networking with landowners. SNC retained 4 Reps (Robert Gratton, René Lalonde, Jackie Pemberton, and Adrian Wynands) to assist with Program delivery in 2009.

In 2009, the Reps completed approximately 101 site visits and attended 13 meetings, training sessions and promotional events to represent the Clean Water Program. The cost to use Reps in 2009 was $5,974; this has proven to be a cost effective delivery model and will be recommended for continued use in 2010.

6. BIOSECURITY

In 2001, as a response to growing concerns about Foot and Mouth disease and other contagious agents that can be spread from farm to farm; SNC implemented minimum biosecurity practices for all staff (including Program Reps) completing site visits on livestock operations. These biosecurity measures remained in effect for the protection of our farming community. Staff have the choice between two different biosecurity methods; plastic boot covers and/or disinfectant boot washes. Staff, whenever possible, limit their visits to one livestock operation per day. Unnecessary access to livestock barns, out buildings, and pasture areas during site visits are avoided when possible. Staff vehicles are also kept as far from the livestock areas as possible during site visits.

7. LANDOWNER CONFIDENTIALITY

SNC implemented a project coding system in 2000 in response to applicant concerns for “right to privacy”. The coding system provides confidence in the Clean Water Committee’s ability to make unbiased decisions, as they do not know the identity of the landowner applying for Program grants. The coding system also addressed concerns from the farming community that Total Phosphorus Management funds not be linked to specific landowners and projects. Similar systems for confidentiality are used in other incentive programs, such as the Environmental Farm Plan and the Ottawa Rural Clean Water Program.

All information collected through the Clean Water Program application process is used for the sole purpose of determining eligibility under the Clean Water Program. Information from deferred, denied or un-reviewed project applications is also treated as confidential. However, all information collected for the purposes of application for funds through the Clean Water Program is subject to the Municipal Freedom of Information and Protection of Privacy Act, c.M.56, as amended, and may be subject to disclosure under that Act.

SNC reserves the right to use information from approved projects for Program promotion and reporting; however, individual landowner names and specific project locations are not disclosed unless SNC has obtained permission from the landowner.

8. PHOSPHORUS REDUCTION CALCULATIONS

An estimated phosphorus reduction is calculated for each individual project (for which we have a defensible calculation) completed through the Clean Water Program. These calculations are based on an extensive review of the most reliable science available. SNC, under the direction of an expert panel, completed a review of the phosphorus calculations in 2003. Calculations were revised as necessary to ensure the most up-to-date research was incorporated. Please refer to *Phosphorus Loading Algorithms for the South Nation River* (January 2003) for more information.

These calculations have been accepted by the Ministry of Environment as an accurate and defensible means to estimate phosphorus reduction for projects funded through the Total Phosphorus Management Program (see section 10 for more information of the Total Phosphorus Management Program).

Additional research is required to develop a practical, defensible calculation for shoreline erosion protection projects. Current calculations are too complex to be practically implemented at the field level. This project type will not be eligible for Total Phosphorus Management Program funding until a calculation is available.

9. PROJECT SUMMARY

9.1 2009 COMPLETED PROJECTS

In 2009, the Clean Water Program provided $83,995 in grants to 48 projects, reducing annual phosphorus contributions to watercourses by approximately 436 kilograms. The total cost of these 48 projects was $668,167; therefore, landowner contributions totalled $584,172.

Table 2 provides a summary of the projects (by project type) completed under the 2009 Clean Water Program. A total of 66 applications were received; 48 projects were completed and 9 projects did not proceed.

Table 2. Summary of Completed Projects in 2009

Type of Project	# of Applications Received	# of Projects Completed	Phosphorus Reduced (kg/yr)	Total Project Cost	Landowner Share	Total CWP Grant
Barnyard Runoff/Clean Water Diversion	4	2	118	$13,015	$6,508	$6,507
Livestock Fencing	6	1	8	$5,246	$246	$5,000
Streambank Erosion Control	11	4	n/a	$40,704	$24,721	$15,983
Buffer Strip*	1	1	n/a	$4,500	$0	$4,500
Manure Storage	5	3	215	$292,047	$279,547	$12,500
Milkhouse Wastewater	1	1	58	$2,551	$1,301	$1,250
Fuel, Chemical, Pesticide Storage and Handling	1	1	n/a	$827	$414	$414
Septic System Repairs	26	24	37	$289,202	$265,202	$24,000
Well Decommissioning	11	11	n/a	$20,074	$6,233	$13,841
TOTALS	**66**	**48**	**436**	**$668,167**	**$584,172**	**$83,995**

* Completed Buffer strip project was for a performance incentive of $150/ac/year

Manure Storage"before" photo

Manure Storage "after" photo

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Table 3 provides details of the projects completed in 2009. This information includes project code, municipality, project type, estimated phosphorus reduction, project costs, and grants paid out. Phosphorus reduction calculations are available upon request.

Table 3: Summary of 2009 Clean Water Program Completed Projects

Project Code	Municipality	Project Type	Total Cost	Grant Amount	P reduction (kg/yr)
2008-NST-CW-61	North Stormont	Buffer Demonstration	$4,500.00	$4,500.00	n/a
2008-EDW-CW-57	Edwardsburgh/Cardinal	Clean Water Diversion	$8,015.00	$4,007.50	72.3
2009-SDU-CW-65c	South Dundas	Clean Water Diversion	$5,000.17	$2,500.00	46.3
2008-SDU-CW-46	South Dundas	Erosion	$18,737.56	$5,000.00	n/a
2009-SDU-CW-17	South Dundas	Erosion	$6,766.40	$3,383.20	n/a
2009-SDU-CW-48	South Dundas	Erosion	$7,730.00	$3,865.00	n/a
2009-EDW-CW-49	Edwardsburgh/Cardinal	Erosion	$7,470.00	$3,735.00	n/a
2009-NAT-CW-11	Nation	Fencing	$5,246.47	$5,000.00	7.9
2009-NST-CW-67	North Stormont	Fuel Storage	$827.00	$413.50	0.0
2009-EDW-CW-52	Edwardsburgh/Cardinal	Manure Storage	$112,000.00	$5,000.00	93.1
2009-SDU-CW-65a	South Dundas	Manure Storage	$167,538.00	$5,000.00	82.2
2009-NST-CW-66	North Stormont	Manure Storage	$12,509.30	$2,500.00	40.2
2009-SDU-CW-65b	South Dundas	Milkhouse Wastewater	$2,551.00	$1,250.00	58.0
2009-NAT-CW-03	Nation	Septic	$13,000.00	$1,000.00	0.6
2009-RUS-CW-04	Russell	Septic	$4,500.00	$1,000.00	1.2
2009-CLR-CW-12	Clarence-Rockland	Septic	$9,483.00	$1,000.00	1.8
2009-NDU-CW-02	North Dundas	Septic	$13,500.00	$1,000.00	2.4
2009-SDU-CW-09	South Dundas	Septic	$17,300.00	$1,000.00	1.2
2009-NDU-CW-05	North Dundas	Septic	$3,500.00	$1,000.00	1.8
2009-NDU-CW-07	North Dundas	Septic	$14,030.00	$1,000.00	0.6
2009-NGR-CW-06	North Grenville	Septic	$3,600.00	$1,000.00	1.2
2009-RUS-CW-14	Russell	Septic	$23,731.64	$1,000.00	1.2
2009-NAT-CW-16-B	Nation	Septic	$15,000.00	$1,000.00	1.8
2009-SDU-CW-25	South Dundas	Septic	$13,150.00	$1,000.00	2.4
2009-NDU-CW-32	North Dundas	Septic	$17,152.00	$1,000.00	1.2
2009-RUS-CW-18	Russell	Septic	$17,152.38	$1,000.00	1.8
2009-EDW-CW-33	Edwardsburgh/Cardinal	Septic	$9,488.10	$1,000.00	1.2
2009-RUS-CW-47	Russell	Septic	$17,224.73	$1,000.00	0.6
2009-SDU-CW-62	South Dundas	Septic	$17,000.00	$1,000.00	3.0
2009-NST-CW-55	North Stormont	Septic	$11,000.00	$1,000.00	1.2
2009-NGR-CW-56	North Grenville	Septic	$10,000.00	$1,000.00	1.2
2009-NDU-CW-60	North Dundas	Septic	$4,165.00	$1,000.00	1.2
2009-NST-CW-63	North Stormont	Septic	$11,300.00	$1,000.00	1.8
2009-NGL-CW-64	North Glengarry	Septic	$13,150.00	$1,000.00	1.2
2009-NDU-CW-68	North Dundas	Septic	$15,275.82	$1,000.00	1.2
2009-NAT-CW-70	Nation	Septic	$4,500.00	$1,000.00	3.0
2009-NST-CW-59	North Stormont	Septic	$11,000.00	$1,000.00	1.8
2009-NDU-CW-10	North Dundas	Well	$1,300.00	$1,000.00	n/a
2009-EDW-CW-08	Edwardsburgh/Cardinal	Well	$3,000.00	$1,000.00	n/a
2008-NST-CW-06-B	North Stormont	Well	$925.00	$925.00	n/a
2008-NST-CW-06-A	North Stormont	Well	$940.00	$940.00	n/a

Project Code	Municipality	Project Type	Total Cost	Grant Amount	P reduction (kg/yr)
2008-NST-CW-44	North Stormont	Well	$1,250.00	$997.00	n/a
2009-AUG-CW-41A-E	Augusta	Well	$8,000.00	$5,000.00	n/a
2009-NAT-CW-15	Nation	Well	$1,000.00	$880.00	n/a
2009-NGL-WD-26	North Glengarry	Well	$898.60	$898.60	n/a
2009-NST-CW-22	North Stormont	Well	$500.00	$500.00	n/a
2009-NAT-CW-21	Nation	Well	$1,260.00	$1,000.00	n/a
2009-NST-CW-28	North Stormont	Well	$1,000.00	$700.00	n/a
		Grand Total	**$668,167.17**	**$83,994.80**	**436.5**

9.2 1993-2009 COMPLETED PROJECT SUMMARY

Table 4 provides a summary of the projects completed through the Program for 1993-2009. Since 1993, the Program has granted over $2.0 million to complete 631 projects. These projects have reduced the annual phosphorus contributions to the watershed's rivers by about 14,391 kilograms.

Table 4: Clean Water Program 1993-2009 Project Summary

Type of Project	Year	Number of Projects	Phosphorus Reduced (kg/yr)	Total Cost of Projects	Total Landowner Share	Total Grants Paid
Septic System Repair	1994	26	26	$139,622	$88,579	$51,043
	1995	19	19	$111,014	$73,014	$38,000
	1996	7	7	$38,947	$31,947	$7,000
	1997	20	20	$121,831	$100,056	$21,775
	1998	19	103	$105,770	$87,285	$18,485
	1999	4	31	$22,128	$18,041	$4,087
	2000	2	15	$16,616	$14,616	$2,000
	2001	2	2	$17,613	$15,613	$2,000
	2002	8	48	$52,989	$44,689	$8,300
	2003	9	6	$58,211	$49,161	$9,050
	2004	12	26	$103,960	$91,960	$12,000
	2005	6	8	$60,690	$54,690	$6,000
	2006	3	7	$30,692	$29,192	$1,500
	2007	8	17	$90,260	$82,260	$8,000
	2008	12	21	$167,111	$155,111	$12,000
	2009	24	37	$289,202	$265,202	$24,000
Erosion Protection	1997	6	n/a	$23,115	$13,415	$9,700
	1998	4	n/a	$63,041	$43,041	$20,000
	1999	8	n/a	$49,078	$30,123	$18,955
	2001	11	n/a	$105,151	$61,381	$43,770
	2002	2	n/a	$20,749	$10,185	$10,564
	2003	1	n/a	$4,975	$2,363	$2,612
	2007	4	n/a	$35,978	$19,138	$16,840
	2008	7	n/a	$91,102	$58,398	$32,704
	2009	4	n/a	$40,704	$24,721	$15,983

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Type of Project	Year	Number of Projects	Phosphorus Reduced (kg/yr)	Total Cost of Projects	Total Landowner Share	Total Grants Paid
Manure Storage	1994	5	75	$141,543	$82,175	$59,368
	1995	15	152	$519,485	$307,646	$211,839
	1996	6	78	$128,577	$91,577	$37,000
	1997	4	25	$116,831	$95,831	$21,000
	1998	4	54	$150,914	$118,578	$37,336
	1999	6	265	$131,741	$68,658	$63,083
	2000	5	213	$242,849	$190,849	$52,000
	2001	14	881	$770,380	$647,500	$122,880
	2002	15	784	$695,558	$541,119	$154,439
	2003	12	2,678	$721,428	$607,342	$114,086
	2004	6	396	$151,624	$115,048	$36,576
	2005	10	1,450	$745,964	$660,824	$85,140
	2006	5	565	$509,525	$487,425	$22,100
	2007	11	931	$1,117,283	$1,066,937	$50,346
	2008	4	433	$378,581	$360,951	$17,630
	2009	3	215	$292,047	$279,547	$12,500
Barnyard Runoff/Clean Water Diversion	1999	1	21	$14,536	$9,536	$5,000
	2001	1	16	$3,138	$1,569	$1,569
	2002	1	7	$590	$265	$325
	2003	5	81	$44,983	$28,525	$16,458
	2004	4	47	$28,732	$15,838	$12,894
	2006	2	19	$19,845	$16,983	$2,861
	2007	2	23	$5,385	$2,873	$2,512
	2009	2	118	$13,015	$6,508	$6,507
Fuel, Chemical, Pesticide Storage and Handling	2002	2	n/a	$8,634	$5,334	$3,300
	2003	1	n/a	$1,418	$818	$600
	2004	5	n/a	$10,384	$5,988	$4,396
	2005	2	n/a	$4,068	$2,500	$1,568
	2008	4	n/a	$14,521	$11,017	$3,504
	2009	1	n/a	$827	$414	$414
Milkhouse Wastewater	1994	1	70	$13,125	$8,125	$5,000
	1995	9	555	$89,199	$51,319	$37,880
	1996	4	235	$31,400	$13,801	$17,599
	1997	1	52	$1,810	$905	$905
	1998	2	81	$12,537	$6,602	$5,935
	1999	2	96	$25,785	$15,285	$10,500
	2001	7	530	$76,310	$51,549	$24,761
	2002	7	245	$66,624	$40,078	$26,546
	2003	4	204	$37,046	$26,288	$10,759
	2004	4	162	$71,081	$60,062	$11,019
	2005	6	317	$104,546	$78,087	$26,459
	2006	4	197	$88,700	$79,934	$8,767
	2007	9	583	$189,850	$167,350	$22,500
	2009	1	58	$2,551	$1,301	$1,250

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Type of Project	Year	Number of Projects	Phosphorus Reduced (kg/yr)	Total Cost of Projects	Total Landowner Share	Total Grants Paid
Commercial Wastewater	1997	1	n/a	$14,396	$9,396	$5,000
	2001	1	n/a	$11,615	$6,115	$5,500
Livestock Access Restriction from Waterways	1993	1	4	$2,223	$1,223	$1,000
	1994	6	43	$11,076	$2,768	$8,308
	1995	18	158	$96,600	$30,204	$66,396
	1996	7	34	$28,353	$11,177	$17,176
	1997	2	11	$7,842	$3,921	$3,921
	1998	1	17	$6,164	$1,223	$4,941
	2000	1	7	$3,386	$1,693	$1,693
	2001	2	15	$5,309	$1,032	$4,277
	2002	11	71	$40,724	$8,730	$31,994
	2003	9	141	$21,759	$490	$21,269
	2004	7	63	$31,340	$6,665	$24,675
	2006	1	22	$7,156	$4,658	$2,500
	2007	2	114	$6,775	$1,352	$5,423
	2008	3	71	$19,001	$7,697	$11,304
	2009	1	8	$5,246	$246	$5,000
Buffers (includes performance incentive payments)	2003	1	16	$599	$285	$315
	2004	1	2	$1,705	$852	$853
	2005	1	0.7	$268	$134	$494
	2006	1	n/a	$0	$0	$270
	2007	1	n/a	$0	$0	$270
	2008	1	n/a	$0	$0	$270
	2009	1	n/a	$4,500	$0	$4,500
Private Wellhead Protection/Repair	1999	1	n/a	$5,619	$4,619	$1,000
	2001	1	n/a	$1,018	$458	$560
	2002	2	n/a	$3,558	$1,871	$1,687
	2003	9	n/a	$14,340	$8,850	$5,490
Well Decommissioning	1999	1	n/a	$3,450	$2,950	$500
	2001	2	n/a	$1,574	$812	$762
	2002	1	n/a	$800	$400	$400
	2004	18	n/a	$19,179	$10,179	$9,000
	2005	24	n/a	$20,545	$9,021	$11,524
	2006	18	n/a	$21,890	$13,131	$8,759
	2008	5	n/a	$4,178	$533	$3,645
	2009	11	n/a	$20,074	$6,233	$13,841
Nutrient Management Plans	2004	3	263	$5,905	$4,405	$1,500
	2006	1	25	$2,968	$2,718	$250
	2007	1	n/a	$3,025	$2,525	$500
	2008	1	n/a	$1,450	$950	$500
Other	2002	3	n/a	$13,911	$7,009	$6,902
	2003	1	n/a	$7,561	$5,061	$2,500
TOTALS		**631**	**14,391**	**$10,132,601**	**$8,076,628**	**$2,062,147**

10. TOTAL PHOSPHORUS MANAGEMENT (TPM) PROGRAM

10.1 TPM SUMMARY

According to Provincial policy, where water quality does not meet Provincial standards for a specific contaminant, no further degradation of water quality will be allowed for that contaminant. However, in the past the Ministry of Environment (MOE) gave dischargers a permit to discharge phosphorus from their facilities into the South Nation River and its tributaries, even though the watercourses did not meet Provincial water quality objectives. Beginning in 1998, the MOE stopped issuing these permits and required all dischargers to have zero discharge of phosphorus from their facilities. MOE imposed this standard on new construction only (this includes expansion of existing facilities). Existing facilities that continued to operate according to their current permits are not required to reduce their phosphorus loading to zero.

The Total Phosphorus Management (TPM) Program is an innovative, MOE approved, pilot phosphorus management strategy for the new or expanding municipal or industrial wastewater discharge facilities that must meet the zero phosphorus discharge limit. TPM allows the option of removing the phosphorus loads by implementing non-point source projects elsewhere in the watershed. The offsetting of point source phosphorus by non-point sources is implemented at a 4:1 ratio. This ratio results in a net water quality and environmental benefit, with four times as much phosphorus removed from non-point sources as is contained in the discharge (point source). This offsetting approach also has the added benefit of removing other contaminants (e.g. nitrogen, bacteria, and sediment) in addition to phosphorus.

Participation by municipalities or industry is voluntary and in most cases, TPM is more cost-effective than conventional treatment technology. The SNC Clean Water Program provides funding assistance to landowners for water quality improvement projects; as such, it provides the delivery mechanism for the TPM Program.

TPM participants pay a cost per kilogram for the phosphorus credits. The total cost of each TPM agreement is calculated by determining the dischargers annual phosphorus loading and multiplying it by 4 (4:1 ratio) to establish the phosphorus reduction target. This target is then multiplied by the set cost per kilogram (determined based on the history of the Clean Water Program and adjusted annually for cost increases). Discharges can negotiate an annual payment plan for their TPM agreement.

In August 1999, a TPM working group was formed to develop the roles and responsibilities of the TPM stakeholders and to oversee its implementation. The group consisted of:

- Ministry of Environment

- Ontario Ministry of Agriculture, Food & Rural Affairs
- Ontario Federation of Agriculture
- Ontario Soil and Crop Improvement Association
- Municipalities/industries participating in the TPM Program (past and present)
- South Nation Conservation

Since 2000, SNC has signed TPM agreements with 10 wastewater discharges, including, municipal wastewater treatment plants (WTP), municipal and commercial landfill sites, a waste treatment company, and a milk processing plant. These agreements include:

- North Stormont Township for Village of Finch (WTP)
- North Dundas Township for Winchester Village (WTP)
- Nation Municipality for the Village of Limoges (WTP)
- Village of Casselman (WTP)
- Nation Municipality/Village of Casselman (joint landfill)
- Laflèche Environmental Inc. (landfill, 2 separate TPM agreements)
- Laflèche Leblanc Soil Recycling Inc (waste treatment for contaminated soils)
- Parmalat Canada (milk processing plant)

As of December 2009, these ten TPM agreements, have resulted in approximately $881,629 (includes grants and delivery) implemented through the Clean Water Program. In 2009, 60 kg/year was credited to the two TPM agreements. Since 2001, a total of 3,167 kg/yr phosphorus credits have been allocated to the ten TPM agreements.

10.2 TPM Program Statistics

The tables below provide a detailed breakdown of project statistics and funding for the Total Phosphorus Management Program. Table 5 summarizes the total number of projects completed through the TPM Program since it began implementation in the fall of 2000. This table also includes a breakdown of how many kilograms of phosphorus the projects removed per year, the target amount of phosphorus reduction (kg/yr) to meet the TPM Agreements for that year and the amount of grant and delivery funding generated by these agreements annually.

Table 5: Summary of TPM Projects and Phosphorus Reductions (2000-2009)

Year	# TPM Projects[1]	Kg/Yr generated by projects[2]	Target Kg/Yr for TPM Agreements[3]	Total TPM Grants[4]	Total TPM Delivery[5]
2000	8	235	42	$10,000	$2,500
2001	26	1444	704	$143,862	$32,775
2002	42	1155	808	$183,195	$37,828
2003	39	3110	712	$156,024	$24,372
2004	33	693	279	$62,405	$21,009
2005	24	1775	349	$74,623	$30,353
2006	15	810	86	$20,517	$5,129

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Year	# TPM Projects[1]	Kg/Yr generated by projects[2]	Target Kg/Yr for TPM Agreements[3]	Total TPM Grants[4]	Total TPM Delivery[5]
2007	32	1673	60	$16,875	$5,625
2008	19	525	67	$17,179	$5,726
2009	31	423	60	$23,724	$7,908
Totals	**269**	**11,843**	**3,167**	**$708,404**	**$173,226**

[1] Eligible TPM projects that generate a phosphorus reduction (manure storage, milkhouse wastewater, clean water diversion/barnyard runoff control, fencing, and septics)

[2] Total phosphorus reductions estimates, using the TPM science-based calculations, for TPM projects

[3] Required amount of kg/yr of phosphorus reduction to meet the TPM agreements for the year

[4] TPM Program grant dollars from TPM agreements for that year and delivered through the Clean Water Program (landowner grant payment for implementing phosphorus reduction project)

[5] TPM Program delivery dollars from TPM agreements for that year to support the Clean Water Program for Clean Water Committee, Program Representatives, outreach/education, staffing to administer grants.

Table 6 below is a breakdown of the number of phosphorus reducing projects completed each year through the TPM program.

Table 6: Number of TPM Program Projects Completed Annually (2000-2009)

Project Type	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total
Septics	2	2	8	9	12	8	3	8	12	24	88
Manure storages	5	14	15	12	6	10	5	11	4	3	85
Milkhouse wastewater	0	7	7	4	4	6	4	9	0	1	42
Barnyard/clean water	0	1	1	5	4	0	2	2	0	2	17
Fencing	1	2	11	9	7	0	1	2	3	1	37
Total	**8**	**26**	**42**	**39**	**33**	**24**	**15**	**32**	**19**	**31**	**269**

Table 7 below provides a breakdown of the total estimated phosphorus reduction (kg/yr) generated by TPM project implementation by project type and year.

Table 7: Annual Phosphorus Reduction by Project Type (2000-2009)

Project Type	Annual Phosphorus Reduction (kg/yr)										Total P Removed (kg/yr)	Total # Projects Completed
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009		
Septic Systems	15	2	48	6	26	8	7	17	21	24	97	88
Manure Storages	213	881	784	2678	396	1450	565	931	433	215	8546	85
Milkhouse Wastewater	0	530	245	204	162	317	197	588	0	58	2301	42
Barnyard Runoff / Clean Water	0	16	7	81	47	0	19	23	0	118	311	17
Fencing	7	15	71	141	63	0	22	114	71	8	512	37
Total	**235**	**1444**	**1155**	**3110**	**693**	**1775**	**810**	**1673**	**525**	**423**	**11843**	**269**

Manure storages and milkhouse wastewater projects account for 92% of the phosphorus reduction credits generated through the Total Phosphorus Management Program since it began implementation in the fall of 2000. Given the nature of these project types and the number of livestock associated with them, it is not surprising that they account for the largest percentage of phosphorus reduction. Figure 1 below provides a summary of the project types, percentage of total phosphorus reduction (kg/yr) achieved through the TPM Program and the amount of phosphorus reduction (kg/yr).

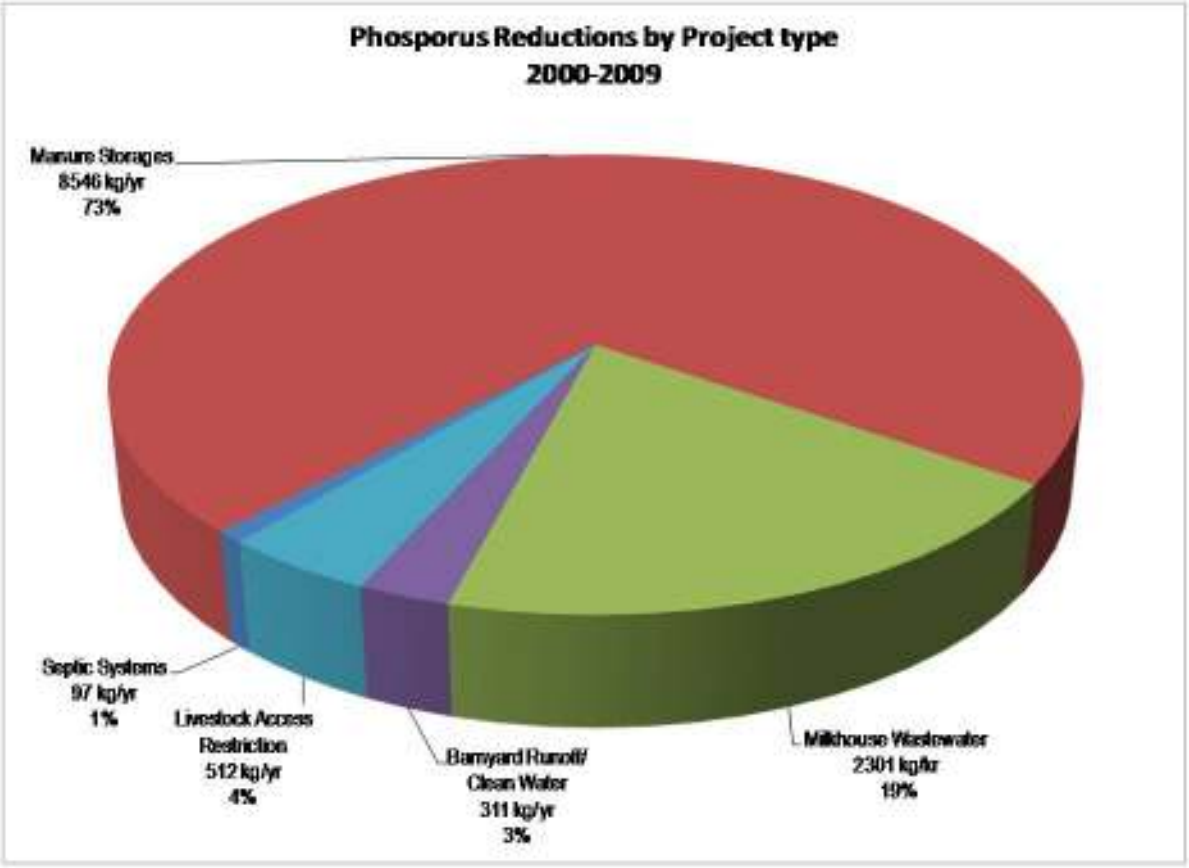

Figure 1: Phosphorus Reductions by Project Type, 2000-2009

10.3 TPM EVALUATION

As per the *Roles and Responsibilities* document, SNC and the Ministry of Environment (MOE) initiated an evaluation of the TPM Program after 5 years of implementation. This comprehensive evaluation will review all aspects of the TPM pilot program and will offer recommendations for future program delivery. SNC hired a consultant, Cullbridge Marketing and Communications, to assist with the evaluation and production of a final report. As part of the evaluation, Cullbridge conducted an extensive survey of TPM partners and landowners who completed phosphorus reducing projects through the Clean Water Program. Data collected

included, knowledge of the TPM Program, satisfaction on Program delivery, and suggestions for improvement. The evaluation final report is available upon request.

11. EVALUATION OF AGRI-ENVIRONMENTAL PROGRAMS

This research project aimed to advance preliminary fieldwork and interviews completed by the project team in the winter of 2009 with over a dozen dairy farmers in the Grand River Conservation Authority (GRCA) and South Nation Conservation Authority (SNCA) watersheds. The goal is to analyse and evaluate elements of *three* specific and interrelated agri-environmental programs: the Canada-Ontario Environmental Farm Plan (EFP), the Grand River Rural Water Quality Program and the South Nation Clean Water Program. With environmental, socio-economic and organizational objectives, the project aims to better understand factors in dairy farmer participation in these particular programs.

Project Objectives:

- Environmental: *Perception of environmental-water quality benefit of existing programs.*
  - Quantify statistically the projects that have been undertaken.
  - Determine the perception amongst dairy farmers of the environmental benefit of these projects.
  - Determine if dairy farmer knowledge and awareness of the environmental benefit of water quality BMPs is coordinated with program delivery communication and extension.
- Socio-economic: *To understand the perceived socioeconomic value of program delivery related to water quality BMP projects for dairy farmers.*
- Organizational*: Perception of organizational and inter-organizational planning*.
  - Evaluate dairy farmers' perceptions of the organizational effectiveness of program delivery and inter-organizational coordination between program delivery agencies (CAs, governments, OSCIA, banks, etc.).
  - Evaluate dairy farmer perceptions of their own organizational and peer networks as influencing and determining factors in their involvement in projects.

Mark Juhasz, a PhD Candidate at the University of Guelph, spent six weeks in the South Nation watershed conducting interviews with local dairy farmers and gathering information on the Clean Water Program. A focus group session was also hosted for any local dairy operations that wished to attend and provide feedback to the project. Copies of the reports on summarizing the findings for the Clean Water Program are available upon request.

The work completed in the South Nation watershed will be combined with similar information collected for the EFP and Grand River programs into a final report for the project, anticipated completion of the project is mid 2010.

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12. WATER QUALITY MONITORING

12.1 SURFACE WATER MONITORING

12.1.1 Provincial Water Quality Monitoring and Watershed Characterization Networks

SNC staff taking a reading from a multi-probe while surface water sampling.

SNC continues to collect surface water samples through the Provincial Water Quality Monitoring Network (PWQMN) and Watershed Characterization (WC) Network. These networks are coordinated through the Ontario Ministry of the Environment (MOE) with technical expertise and laboratory support provided by staff at the MOE.

SNC collects surface samples at thirteen sites throughout the watershed on a monthly basis when the watercourses are free of ice. These samples are tested at the Ministry laboratories in Etobicoke, Ontario for suspended solids, major ions, and nutrients, and metals.

While at the sample site, SNC staff also take readings of pH, conductivity, temperature, dissolved oxygen and turbidity.

The water quality information collected at these thirteen sites is incorporated into the Provincial Water Quality Monitoring Network database. SNC has available, upon request, the information collected while in the field, and the laboratory reports detailing the results of the water quality tests performed on the samples collected.

12.1.2 Algal Sampling

In 2006, SNC supported research at the University of Ottawa on the primary productivity and algal populations (measured as Chlorophyll A concentrations) in the South Nation River (SNR). At each of the 13 PWQMN and WC sampling sites, an additional water sample was taken to determine Chlorophyll A concentrations. Algal abundance is a better indicator (than phosphorus) of eutrophication and this information will be used to better assess the state of the SNR.

The amount of light that penetrates through the solution in which the filter is dissolved will allow the amount of chlorophyll pigmentation to be determined. The amount of chlorophyll α found in a sample determine the amount of algae that

would be found in the water

12.1.3 Ontario Benthic Biomonitoring Network (OBBN)

In 2009, SNC and the Ontario Ministry of Environment collaborated efforts towards creating a database to identify reference condition sampling sites throughout eastern Ontario. These reference sites will be used to compare results found from the additional 30 sites from each sampling year. This will enable SNC to determine if the sites are in "reference" good condition or "non-condition" not good condition.

Ephemeroptera (Mayfly), is an example of a benthic invertebrate that can be used as a biological indicator of water quality.

SNC has initiated a new sampling regime using the OBBN to try and collect data in areas previously lacking. The regime is based on dividing the watershed into 5 sections and each year a section is sampled at 10 different sites. Over the course of 5 years the entire watershed will be covered, allowing for a complete watershed-wide water quality report to be produced, in conjunction with PWQMN and WC data.

12.1.4 RiverWatch Program

Riverwatch volunteers during the 'hands on' training workshop.

The Riverwatch Program is our volunteer monitoring program, where watershed residents get trained and supplied with water chemistry kits to help us monitor streams that are local to their neighbourhoods.

With financial assistance from Eastern Ontario Water Resource Committee (EOWRC), SNC to date has purchased 8 additional test kits for surface water sampling. These kits were distributed to returning and new volunteers to the RiverWatch Program.

SNC provides new and reoccurring volunteers with a 'hands on' workshop to teach them about the kits and discuss past sample seasons. Volunteers sample their local site as often as they would like with a minimum of 10 volunteer hours, during ice-free conditions. The end of the field season each volunteer is supplied with a written report on the results found in their water course. It allows the volunteers to understand what is going on in their waterway and helps fill in data gaps for SNC. Data gathered through this program is used to enhance water quality data collected through the PWQMN and Watershed Characterization monitoring networks. The data is also used towards the South Nation – State of the Nation; a

five year rotational summary of the 5 sub-watersheds found within the South Nation watershed.

12.2 Groundwater Monitoring

Provincial Groundwater Monitoring Program well set-up.

In 2001 and 2002, the MOE hydrogeologists and SNC staff identified sensitive groundwater areas within the SNR watershed that would be incorporated into the Provincial Groundwater Monitoring Network (PGMN). SNC currently maintains 17 wells for the network.

The purpose of this network is to monitor groundwater quantity and quality in these sensitive aquifers. To achieve this goal, all wells have been equipped with dataloggers capable of recording the water levels in each well. In addition, where feasible, wells have also been equipped with telemetry units for remote access to download data. The dataloggers currently collect water level readings hourly.

The MOE's main computer connects with each well in the PGMN at a scheduled time and downloads the information from the datalogger. Wells without telemetry units are manually downloaded by SNC staff. A message is sent to SNC to verify the data from the well to ensure that it is accurate. Once the data is confirmed to be reasonable, it is incorporated into a long-term PGMN database.

In conjunction with the water quantity component of the PGMN, a baseline analysis of the water quality of each well is collected and analyzed each fall. A comprehensive suite of water quality variables were tested for presence and concentration in the water collected from each well. These tests included nutrients, metals, volatile organic compounds, herbicides, and pesticides.

13. Agriculture and Agri-Food Canada (AAFC) Partnered Research Projects

13.1 Microbial Source Tracking (MST)

In 2004 SNC partnered with Agriculture and Agri-food Canada (AAFC) to research sources of E. Coli bacteria in the South Nation river Watershed. E. Coli can enter a drinking water source and can be very deadly. It can enter a water system from a variety of locations. Specific E. Coli strains can be linked to specific sources, such as human septic systems, livestock manure, or wild animal scat (feces). AAFC is able to determine, through genetic testing (DNA fingerprinting), what makes up the sources of E. Coli in the South Nation River. Knowing where E. Coli

bacteria are coming from is an important step in understanding how to most efficiently provide clean, safe, drinking water.

In the fall of 2009, SNC partnered with AAFC to complete a follow up of the first project. AAFC needed to collect more samples to improve its scientific study. SNC collected 12 water samples from municipal lagoons in Chesterville, Winchester, Casselman, St. Albert, and more. 12 Private landowners throughout the watershed also agreed to have their septic systems sampled. These samples were given anonymously. SNC worked with local trapper Darcy Alkerton of Nuisance Wildlife Trapping from Roebuck Ontario to collect over 30 scat samples from goose, muskrat, coyote, and beaver. SNC and its partners are always excited to work on projects such as this, which combines the work of many local and national experts to improve the scientific understanding of the local environment.

13.2 Watershed Evaluation of Beneficial Management Practices (WEBs)

The Watershed Evaluation of Beneficial Management Pracitices (WEBs) is a national project led by Agriculture and Agri-Food Canada (AAFC), with Ducks Unlimited Canada a key funding partner. Designed to measure the performance of selected agricultural beneficial management practices (BMPs) at a watershed scale, the project studies the impact of BMPs on water quality in seven micro-watersheds across Canada. Each site includes an on-farm economic assessment and a hydrologic modelling component, with integrated modelling occurring at two of the sites. WEBs was initiated in 2004 and will run to March 31, 2013.

The South Nation River watershed, specifically the Little Castor River sub-watershed, has been selected as one of seven watersheds across Canada for the WEBs study. This research project is being coordinated by SNC in parnership with AAFC.

The objectives of the study are to determine how effetive BMPs are in decreasing inputs of various nutrients and bacteria to the river. Unlike previous studies of this nature, the focus of WEBs is collecting scientific data using a paired watershed approach (one control watershed and one research watershed that can be alternated throughout the course of the study).

The following BMPs are being studied in the South Nation project:

- Controlled Tile Drainage
- Cattle Restriction to Streams

Controlled Tile Drainage

The effects of controlled tile drainage have been shown in other studies to increase water, nutrient and sediment retention on farmer's fields during periods when they are most needed (summer and draught conditions). These benefits are in addition to the regular benefits of traditional tile drains. The control is accomplished by the manual positioning of a sluice gate that can be adjusted to the desired height for optimal water retention without causing flooding. Figure 2 below shows the cross-sectional schematic for the control structures.

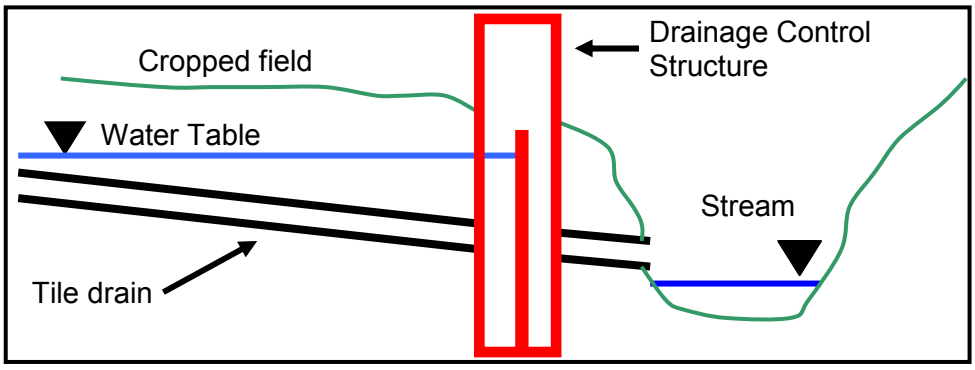

Figure 2: Schematic of tile drain control structure instalment

AAFC and SNC had 36 drainage control structures (figure 3) installed in 18 fields in 2006. A significant monitoring effort continues (figure 4) to capture any changes in water quality from the controlled and uncontrolled tile drains in the study area, in addition to regular monitoring of water quality in municipal drains and local rivers.

Figure 3: Tile drain control structure installed on a tile header for the WEBs – controlled drainage BMP.

Figure 4: Automated sampler set-up to sample flow from the tiles for the WEBs – controlled drainage BMP.

Cattle Restriction to Stream

Cattle fencing and alternate watering project site for WEBs project.

The second project component, restricted versus unrestricted access of cattle to a stream, was implemented in 2006.

Fencing, nose pumps, and stock tanks were installed in the spring of 2006. The following field activities are being carried out in both the restricted and unrestricted cattle pastures:

- Surface water quality sampling
- Hydrograph sampling
- *Cryptosporidium* genome tracking
- Stream discharge measurements

14. DRINKING WATER SOURCE PROTECTION

The Ministry of the Environment (MOE) passed the Clean Water Act in October of 2006. This act requires communities to look at their municipal drinking water sources, identify potential sources of contamination, and create and carry out a plan to protect both the quality and quantity of municipal drinking sources.

The Province of Ontario has embarked on a study of all watersheds in the province with the end goal of producing source protection plans which will outline a community approach to managing water quality and quantity risks for drinking water supplies. Source protection plans will be locally developed and delivered. Communities, with the support of competent technical staff will build plans to protect their water supplies. These plans will adopt local solution that works for local people.

Source Protection Committees have been established for each drinking water source protection region in the province. These committees have a Chair, appointed by the MOE, and a membership of local stakeholders, including representatives from municipalities, sectors/industry, public, and in some cases First Nations.

The Raisin-South Nation Source Protection Committee (SPC) consists of the Chair and 15 members, additional First Nations appointments are pending. The SNC Clean Water Committee has representation on the Committee, this allows the Committee to draw on local knowledge from existing, well established body and

fosters partnerships between existing programs and drinking water source protection. In 2009, Denis Perrault was appointed to the SPC; Mr. Perrault was replaced by Jacqueline Pemberton.

Information on the SPC and other drinking water source protection initiatives for the Raisin-South Nation Source Protection Region is available on the Region's bilingual website (www.yourdrikingwater.ca or www.notreeaupotable.ca)

14.1 ONTARIO DRINKING WATER STEWARDSHIP PROGRAM

The Ontario Drinking Water Stewardship Program (ODWSP) was established under the Act to provide financial assistance for measures that help protect Ontario's drinking water sources. ODWSP consists of 3 program components:

- **Early Actions** funding actions to protect drinking water sources immediately within surface water intake and wellhead protection areas.

- **Education and Outreach** funding local education and outreach activities related to source protection planning.

- **Special Projects** funding activities that complement the Early Actions and Education and Outreach components.

In 2009, the Raisin-South Nation Source Protection Region secured delivered the following projects under the ODWSP. SNC's Water Quality Coordinator acts as Project Lead for Stewardship Programs in the Region.

14.1.1 Early Actions Grants

A total of $515,149 in funding was secured for landowner cost-share grants for voluntary actions to protect municipal drinking water for properties within close proximity to municipal surface intakes or wellheads. An additional $42,834 was approved for the Region for delivery (staffing, outreach, education, promotion, and reporting) of the grant dollars; both of these funding allocations carry-over to the end of 2010.

As of December 31, 2009, a total of 13 projects were completed and received $33,813 in grants and 2 additional projects were approved for another $24,016 in grants. Copies of Early Actions Monthly and Progress reports, submitted to the MOE, are available upon request.

14.1.2 Special Projects – Spill Response Project

The Region received a total of $314,000 ($150,500 in 2009 and $163,500 in 2008) from the MOE to implement a Spill Response Project across the Region. The objectives of this project were: a) to provide spill response/containment

equipment and supplies to local fire departments; b) provide 4 equipped spill response trailers across the Region; and c) provide training to local fire departments on spill containment and use of materials/equipment supplied through the project.

A copy of the final report for the Spill Response Project, including details on equipment/materials supplied, location of trailers, and summary of training, is available upon request.

14.1.3 Special Projects - Wellhead Security Upgrades

The Raisin-South Nation Source Protection Region (RRCA-SNC) received $166,600 to undertake a Wellhead Security Project under the *Ontario Drinking Water Stewardship Program: Special Projects.* The objective of the Wellhead Security project was to provide funding to municipalities to upgrade security around their municipal wellheads and wellhead buildings. The project provided enhancement of the current security measures that protect wellheads and wellhead buildings from unauthorized entry (intentional or unintentional) that could lead to contamination of the municipality's drinking water source.

A total of seven municipalities upgraded security at 11 wellhead sites within the Region, a detailed breakdown of participating municipalities and upgrades undertaken are provided in the final report for the project that is available upon request.

15. EASTERN ONTARIO WATER RESOURCES COMMITTEE

The Eastern Ontario Water Resources Committee (EOWRC) was established in 2001 to implement recommendation from the Eastern Ontario Water Resources Management Study (EOWRMS) completed March 2001. The EOWRMS outlined 35 recommendations for regional water resources management. The EOWRC's goal is "*to provide a solid regional representation for the assessment and management of water resource related studies and projects that improve our capacity to anticipate and prevent negative environmental impacts and to address health/environmental needs on a cost-effective basis*".

Current EOWRC membership includes:

- Municipalities (United Counties of Stormont, Dundas & Glengarry, United Counties of Prescott and Russell, and the City of Ottawa)
- Agriculture (Ontario Federation of Agriculture, L'Union des cultivateurs franco-ontariens, Ontario Cattlemen's Association, and Ontario Soil and Crop Improvement Association)
- Government (provincial Ministries of the Environment and Agriculture, Food and Rural Affairs, and the federal Agriculture and Agri-Food Canada)
- Conservation Authorities (South Nation and Raisin Region)

- Resource Stewardship Councils
- Eastern Ontario Health Unit
- University of Ottawa

The Clean Water Committee is kept up-to-date on EOWRC projects and provides input to further the implementation of these projects. The Clean Water Committee's work supports many of the recommendations of EOWRMS.

15.1 Well Decommissioning Grants

South Nation Conservation submitted and received funding from the EOWRC for decommissioning abandoned wells throughout Eastern Ontario in 2009.

SNC delivered grants to landowners within the EOWRMS study area to properly decommission abandoned wells. The grant rate was 100% of the total costs to a maximum of $1,000/well. The grants were delivered through the Clean Water Program in the SNR watershed and by SNC staff in the remainder of the EOWRMS area. The EOWRC funding was also utilized by the Ottawa Rural Clean Water Program to supplement grants in the City of Ottawa portion of the EOWRMS area.

Example of an abandoned well decommissioned with the EOWRC grant funding

In 2009, a total of 46 wells were decommissioned and $35,000 in grants was paid out to landowners in Eastern Ontario. Of these totals, 11 wells were within the South Nation watershed and received $13,841 in grants. EOWRC 2009 funding for this project, including delivery, was $40,000.

15.2 Other SNC Projects Funded by EOWRC in 2009

SNC also received EOWRC funding for the following projects in 2009:

- Riverwatch (see section 12.1)
- Watershed Evaluation of Beneficial Management Practices WEBs (see section 13)
- Evaluation of Agri-Environmental Programs (see section 11)
- Cool Streams Base Flow Project
- Agriculture and Drainage Land Use Study for the Hoasic Creek Subwatershed Plan
- Coordination of Wastewater Discharges in the South Nation River Watershed

Information on the first three projects are included in this report, information on the remaining three projects is available upon request from SNC.

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16. OTTAWA RURAL CLEAN WATER PROGRAM

The City of Ottawa launched its Rural Clean Water Program in the spring of 2000. The South Nation River watershed overlaps with portions of the City of Ottawa. To avoid duplication of programs in the overlap area, South Nation Conservation withdrew the Clean Water Program from this portion of the South Nation River watershed.

The City of Ottawa has approved the funding for the Ottawa Rural Clean Water Program for 5 years (2005-2009) in the amount of $184,000/year as a special levy to the Ottawa Conservation Authorities (South Nation, Rideau Valley, and Mississippi). South Nation Conservation has been appointed by the Conservation Authorities to act as lead CA and banker for the Program.

The Conservation Authorities provide Program delivery of all aspects of the Program (program management, communications, project review, and reporting), under the direction of the Ottawa Rural Clean Water Program Committee and the City of Ottawa. Each CA is responsible for the delivery of the Program for their watershed within the City of Ottawa.

In 2009, SNC reviewed 33 project applications with the South Nation River watershed and approved 32 projects. Of this total, 10 projects were completed and received $11,587 in grant funding; the remaining 22 projects were added to a waiting list pending available funding from the City of Ottawa. The total value for the completed projects is estimated at $104,827.

The combined number of projects completed for the 3 CAs was 80 for a total of $116,856 in grants and an estimated total project value of $758,800.

Example of a "before" septic system project.

"After" septic system replacement, prior to final site grading.

Program Evaluation

The City of Ottawa undertook an evaluation of the current Ottawa Rural Clean Water Program in preparation for a request to the Agricultural and Rural Affairs Committee and City Council in 2010 to extend the Program beyond 2009.

In fall of 2009, City Council approved a one-time Special Levy to the Program of $250,000; this funding was to address the significant waiting list of project applications and allow the Program to continue delivery while the Program was redeveloped for a request for an additional 5 years of funding (2011-2015).

A copy of the Evaluation Report is available upon request.

17. EDUCATION AND PROMOTION ACTIVITIES

South Nation Conservation was involved in many different education and promotion events in 2009. These activities provide opportunities to inform people of how they can improve the natural environment on their properties. Appendix A provides examples of 2009 communications materials for the Clean Water Program.

The key elements of the 2009 Clean Water Program education and promotion campaign are outlined below:

a) The following events were attended to promote the grant programs and water quality in general:
   - Dundas Healthy Home Fair
   - Eco-Energy Day
   - Living Local Fair
   - Ottawa Valley Farm Show
   - Riceville Fair
   - South Dundas Spring Show
   - South Stormont Spring Show
   - St. Albert Curd Festival
   - Royal Winter Fair - Toronto

SNC staff talking with landowner at SNC booth at the South Stormont Spring Show

b) Presentations were made to:
   - Township of Augusta
   - Township of Clarence Rockland
   - Township of Edwards/Cardinal
   - La Nation Township
   - Township of North Stormont
   - Water Efficiency Team (W.E.T.) Well and Septic Workshops

c) SNC Fall Watershed Tour:

Fall Watershed Tour – Sommerville Farm visit

SNC hosted the Fall Watershed Tour on September 23rd, 2009; the area of focus was the upper watershed (United Counties of Leeds and Grenville).

A visit to the Sommerville Farm was included on the agenda. This farm has completed several projects through the Clean Water Program, including a manure storage in 2009.

d) 2009 Press Releases (related to Clean Water Program and water quality):

- "Groundwater Indicator Study to Benefit Landowners" – January 5th, 2009
- "2009 SNC Clean Water Program Totals $125,000" – April 22nd, 2009
- "South Nation Conservation River Watchers Needed" – April 23rd, 2009
- "SNC Well Decommissioning Grants Available" – June 15th, 2009
- "SNC Offers Free Environmental Tour" – September 11th, 2009
- "SNC Provides Expertise on Water Quality Trading" – October 14th, 2009
- "Say Cheese! St. Albert Co-op Drops Another $5,000 in Clean Water Program / SNC Nominees All Smiles at Conservation Awards Gala" – October 30th, 2009
- "Parmalat Canada Clean Water Donation total reaches $125,000" – December 17th, 2009

e) The Clean Water Program and other water quality initiatives were featured in the SNC Watershed Update in April, May, June and November.

f) Clean Water Program information is included on South Nation Conservation's web page (www.nation.on.ca).

g) Clean Water Program brochure was updated for 2009 to reflect Program changes and acknowledge donators. The brochures were distributed to local farm organizations, municipal offices, Provincial Ministries, Environmental Farm Plan representatives, and at fairs and trade shows.

h) English and French fact sheets were developed specifically for the Well Decommissioning grants. The fact sheets were distributed to local well contractors, local farm organizations, municipal offices, Provincial Ministries, Environmental Farm Plan representatives, and at fairs and trade shows.

18. BUDGET

18.1 2009 CLEAN WATER PROGRAM BUDGET

Table 8 outlines the revenue and expenses for the 2009 Clean Water Program. Budget notes are provided in 19.2.

Table 8: 2009 Clean Water Program Budget

		2009		
Notes		**Budget**	**Year End**	**Surplus/ Deficit**
	Contributions			
a)	Parmalat Canada	$5,000	$5,000	$0
b)	South Nation Conservation (SNC)	$115,307	$115,307	$0
c)	Total Phosphorus Management (TPM)	$31,632	$31,632	$0
d)	St. Albert Cheese	$5,000	$5,000	$0
e)	Moose Creek Project	$4,500	$4,500	$0
	Totals	**$161,439**	**$161,439**	**$0**
	Expenses			
f)	Program Grants	$125,000	$83,995	$41,005
g)	Education/Promotion	$2,000	$2,090	-$90
h)	Committee Expenses	$7,000	$7,649	-$649
i)	Program Representatives	$6,500	$5,974	$526
j)	Program Expenses	$500	$633	-$133
k)	Program Staff	$20,439	$19,546	$893
	Totals	**$161,439**	**$119,887**	**$41,552**

18.2 2009 CLEAN WATER PROGRAM BUDGET NOTES

CONTRIBUTIONS

a) Parmalat
Parmalat contributed $5,000 to the 2009 Clean Water Program.

b) South Nation Conservation
SNC allocated $115,307 to the Clean Water Program Budget in 2009.

c) Total Phosphorus Management (TPM)
Laflèche Environmental Inc. has a TPM agreement with SNC for their landfill site expansion. Their 2009 contribution to the Program was $23,386.

Parmalat Canada signed a 1-year TPM agreement in late 2008, for a total contribution of $8,246; this amount was paid and allocated in 2009; the agreement was completed as of December 31, 2009.

d) St. Albert Cheese

St. Albert Cheese donated $5,000 to the Clean Water Program in 2009.

e) Moose Creek Project

The Clean Water Committee was approached to deliver $5,000 in cost-share grants to landowners within the Moose Creek sub-watershed, funded by Laflèche Environmental Inc. as a separate donation to SNC.

In 2008, the Moose Creek Project budgeted $5,000 to the Clean Water Program for landowner grants in the Moose Creek sub-watershed; $504 was allocated to projects. The remaining $4,496 was carried over to the 2009 Program for allocation, of which $2,200 was granted to three projects. The remaining $2,300 will be carried forward to 2010, as part of the Program grants, for projects within the Moose Creek sub-watershed.

EXPENSES

f) Project Grants

The Clean Water Program budget for grants in 2009 was $125,000; the $41,500 unspent dollars will be carry-over to the 2010 Program Budget for grants.

g) Education and Promotion

Education and promotion budget for 2009 was $2,000. Whenever possible the Program cost-shares with other similar education and promotional initiatives.

h) Committee Expenses

Committee members, if not covered by their member organization, are paid per diem and mileage in accordance with SNC regulations to compensate them for their contribution to the Program. Expenses also include lunch/refreshments for the Committee meetings.

i) Program Representatives

Program Representatives (Reps) are paid an hourly wage and mileage in accordance with SNC rates. Reps complete site visits to assist landowners with the application process and provide delivery support for Program education and promotion activities.

j) Program Expenses

The budget for Program expenses in 2009 was $500 for Program supplies/materials and staff expenses.

k) Program Staff

The budget for Program staff in 2009 was $20,439, including staff salary and benefits.

19. RECOMMENDATIONS FOR 2010 CLEAN WATER PROGRAM

The following recommendations are based on 2009 Clean Water Program and feedback from the Clean Water Committee:

a) That the Clean Water Program continue to offer grants for water quality improvement projects to rural, urban and agricultural residents of the South Nation watershed for improving surface and ground water quality.

b) That the Clean Water Committee review Program Grant Structure to ensure maximum water quality benefit for minimum cost.

c) That the following activities be undertaken for Communications/Marketing:
- Continue with Municipal Council presentations by Staff and Program Reps
- Continue to request the release landowner name and project location from the Application Form.
- Written testimonials – staff to mail a survey, complete with self addressed envelope, with the grant cheque, to gather feedback on the program and collect testimonials for project promotion
- Staff to continue requesting that landowners consider writing a Letter to the Editor outlining their appreciation of the Program
- Continue to highlight Program projects on the SNC annual fall watershed tour
- Wine and cheese (or similar) get-to-gether be hosted, for all completed projects completed through the Program
- Staff contact Agri-Business Representatives to promote the Clean Water Program
- Program insert in Dairy Federation of Ontario milk cheque, or with milk truck drivers
- Utilize farm organization's publications/newletters to promote program
- Consider implementing a recognition or award of merit program to acknowledge the efforts of landowners completing water quality improvement projects through the Clean Water Program.

d) That Program Representatives continue to be used to assist with Clean Water Program delivery and that staff review site visit requests to determine if additional Reps are required in 2009. Where applicable, Reps are used to conduct follow-up site visits.

e) That the Committee should continue to seek additional funds to support the work of the Clean Water Program; including delivery, promotion, education, monitoring, research and project grants.

f) That education and promotional activities continue to focus on water quality improvement benefits and best management practices for rural, urban and agricultural landowners. Where possible, SNC should partner with other organizations/programs to reduce costs.

g) That surface and ground water quality/quantity monitoring continue in the South Nation River watershed in cooperation with the Ontario Ministry of Environment.

h) That SNC continue to maintain the RiverWatch Program.

i) That the Clean Water Committee work with the Eastern Ontario Water Resources Committee to continue implementing recommendations from the 2001 Eastern Ontario Water Resources Management Study report, including promotion of BMPs in the study area outside of the South Nation River watershed.

j) That SNC continue to deliver the Ottawa Rural Clean Water Program, in partnership with the Conservation Authorities of Ottawa. Where possible, SNC and Ottawa should jointly promote Programs to residents.

20. APPENDICES

Appendix A – 2009 Education and Promotional Material

APPENDIX A

2009
Education
and
PROMOTIONAL MATERIAL