Ottawa Rural Clean Water Program

2016-2020 Review and Renewal

March 22, 2021

Rural Clean Water Grants Program

working together for clean water

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1. Background

1.1. Purpose of the Review

The Ottawa Rural Clean Water Program (ORCWP) provides cost-share grants to farmers and other rural landowners for projects that protect surface and groundwater quality. The program has operated since 2000 through a partnership with the South Nation, Rideau Valley, and Mississippi Valley Conservation Authorities. As part of the City of Ottawa's Grants and Contributions Policy, the ORCWP must be reviewed and re-affirmed in each new Term of Council. The 2016-2020 Program was last renewed in 2015 at $200,000 per year ending in 2020.

A Program Review was undertaken to:

- Review the current Program design, delivery, and feasibility;
- Evaluate the Program against its goals, objectives, and expected outcomes;
- Evaluate the overall allocation, monitoring, and reporting framework; and
- Examine opportunities to streamline and/or standardize the grant process.

This report shares the findings of the review and proposes recommendations for a renewed Program for 2021-2025.

1.2. Overview of the Ottawa RCWP

The City of Ottawa established the Ottawa Rural Clean Water Program in 2000 and renewed it in 2004, 2010, and 2015 following Program Reviews. The 2016-2020 Program was delivered in partnership with South Nation Conservation (SNC), Rideau Valley Conservation Authority (RVCA), and Mississippi Valley Conservation Authority (MVCA). SNC leads the Program's administration, and the Program is funded by the City through a Conservation Authority special levy of $200,000 per year.

The ORCWP offers grants of up to $15,000 for 18 project types that include a variety of agricultural best management practices, erosion control, and well decommissioning (Table 1). Since the ORCWP began in 2000, the Program has supported over 1,300 projects with more than $2.7 million in grants. Landowners contributed an additional $10.1 million towards those projects at an average rate of $3.86 for every dollar granted by the City (Annex 1).

Table 1 - Eligible projects from 2016-2020

Eligible Projects	Maximum Grant	
Chemical or fuel storage	50%	$1,000
Clean water diversion	50%	$5,000
Cover crops[1]	N/A	$3,000
Educational initiatives	75%	$5,000
Erosion control	90%	$7,500
Forest and wetland management plan	75%	$750
Innovative projects	50%	$5,000
Land retirement incentive[2]	N/A	$4,500
Manure storage and treatment	50%	$15,000
Natural windbreaks	75%	$6,000
Nutrient management plan/precision farming	50%	$1,000
Septic system repair/replacement	50%	$1,000
Tile drain control structures	50%	$5,000
Tile outlet erosion control	75%	$2,500
Washwater treatment	50%	$5,000
Watercourse buffers	90%	$7,500
Watercourse fencing	90%	$7,500
Well decommissioning	90%	$3,000

[1]Performance incentive of $50/acre/year; maximum of 20 acres, 3 years

[2]Performance incentive of $150/acre/year; maximum of 10 acres, 3 years

Grants are available for:

- Any property in rural Ottawa;
- Agricultural, well decommissioning and septic projects within Ottawa's urban boundary; and
- Non-profit organizations for demonstration and other educational projects.

The 2016-2020 Program included the following changes:

- Addition of a Program Goal and modifications to the Objectives to include the importance of agricultural best management practices and rural stewardship in protecting water quality;

- Enhanced suite of eligible projects with new categories for cover crops, forest and wetland management plans, and innovative projects;

- Reinstated category for septic system repairs and replacement (with eligibility criteria and funding limits);

- Expansion to the coverage for washwater treatment and tile drain control structures, and modifications to the criteria for well decommissioning and education initiatives;

- Streamlined Program implementation with improvements to the approvals process for shoreline planting and precision farming projects, 12 months allocated for project completion, and acceptance of Canadian Organic Standards certification for specific farm projects;
- Enhanced promotion and outreach with requirement for site signage, identification of watercourse projects through City Stream Watch, and enhanced role of the Program Committee in peer-to-peer contact;
- Development of clear top-up guidelines for continued coordination with Green Acres and RVCA's Shoreline Naturalization program; and
- Improved online data collection and management and establishment of performance indicators, such as length of watercourses restored, nutrients kept out of watercourses and investment in rural land stewardship, to enhance annual reporting.

1.3. Methodology

A Project Charter detailing the methodology for the Program Review was approved in February 2020, taking into consideration the City's Grants and Contributions Policy. The Review was led by the City of Ottawa and supported by the Conservation Authority partners, with input from the Program Committee (Annex 2) and review committees.

The Review focused on:

- *Environmental Scan*: review of 2016-2020 projects and participants, other clean water stewardship programs across Ontario, and water quality monitoring data;
- *Program Goal*: review of the current goal and objectives;
- *Program Design*: review priority project types and consider the addition and/or removal of specific project types;
- *Program Delivery*: review current administration procedures and practices, agency delivery partnerships, and promotion and communication methods;
- *Governance, Monitoring and Reporting*: review effectiveness of program and review committees and evaluate monitoring and reporting framework;
- *Stakeholder Engagement*: conduct interviews with key stakeholders and surveys of past participants to gather insights on the program from administrative, organizational, and funding perspectives;
- *Analysis of Strengths, Weaknesses, Opportunities and Barriers (SWOB)*: based on stakeholder interviews and surveys of past participants;
- *Integrated Analysis and Program Recommendations*: based on the above, determine the effectiveness of the Program, while identifying opportunities and gaps, and develop recommendations for improvement.

A key task as part of this five-year Program Review involved undertaking a web-based review of 28 other rural clean water stewardship programs across Ontario. The results of this assessment are summarized in Section 2.2, with details available in Annex 3.

Key stakeholders for the ORCWP, including Conservation Authority partners, Program Committee members, Review Committee members, and City of Ottawa staff, were given the opportunity to provide feedback on the 2016-2020 Program in May 2020. Stakeholders were invited to complete a questionnaire to assess their insights and experience with the ORCWP, and they were given the option to respond to the questions during a verbal interview or using an online form. Four stakeholders participated in a verbal interview, and another six stakeholders provided feedback using the online questionnaire (a response rate of 27%). Feedback from stakeholders is included throughout the Program Review Findings, with details available in Annex 5.

The majority of 2016-2019 ORCWP participants had the opportunity to provide feedback through an online survey available in May 2020. The City of Ottawa sent email notifications to successful and unsuccessful grant recipients encouraging them to take part in the survey. The survey gave participants an opportunity to share their experiences and to suggest improvements in how the Program is delivered, administered, and promoted. Thirty-five (35) participants responded (a 20% response rate), including farm and rural non-farm property owners. Feedback from participants is included throughout the Program Review Findings, with details available in Annex 5.

The review analyzed and categorized the feedback and ideas gathered from key stakeholders and past program participants in terms of strengths, weakness/challenges, opportunities, and barriers (SWOB analysis). Several broad themes emerged as a result of this analysis, and these are summarized in Annex 5. The review used this information to guide the development of recommendations for the 2021-2025 Program.

2. Program Review Findings

The following sections examine:

- Program outcomes;
- Environmental scan;
- Program goal and objectives;
- Program design;
- Program delivery, including administration, promotion and budget; and
- Program governance, monitoring, and reporting.

2.1. Program Outcomes

Completed Projects

Since 2016, the Program has supported 234 grants totalling $627,425 (Table 2). A further 34 projects are currently underway and represent another $132,369 in committed funding. The total value of grants (allocated and committed) from 2016 to 2020 represents $759,794.

The most common projects were forest and wetland management plans, well decommissioning, erosion control, and land retirement incentives. Most grant funds were allocated to erosion control, manure storage and treatment, and well decommissioning. Few or no projects were completed for chemical or fuel storage, clean water diversion, educational initiatives, innovative projects, tile drain control structures, tile outlet control structures, washwater treatment, or watercourse fencing.

Many projects reflect considerable investment by landowners; in 2016-2020 landowners contributed more than $1.4 million for a total project value of over $2 million dollars. In addition, projects that are currently underway represent over $200,000 that landowners plan to invest towards rural land stewardship. For further detail, including a map of completed projects and those underway, see Annex 1.

Table 2 – Projects completed or underway from 2016-2020

Project Type	Projects Completed			Projects Underway		
	Number of Projects	Grant Amount	Total Project Cost	Number of Projects	Grant Amount	Estimated Project Cost
Chemical or fuel storage	1	$1,000	$2,255	1	$1,000	$2,500
Clean water diversion	0	$0	$0	0	$0	$0
Cover crops	5	$5,000	$12,100	3	$2,900	$2,900
Educational initiatives	3	$10,608	$29,054	0	$0	$0
Erosion control	49	$332,971	$645,108	10	$75,000	$124,287
Forest and wetland management plan	67	$29,707	$40,764	2	$750	$1,000
Innovative projects	1	$5,000	$9,775	0	$0	$0
Land retirement incentive	19	$14,010	$14,010	0	$0	$0
Manure storage and treatment	8	$110,000	$958,778	1	$15,000	$60,000
Natural windbreaks/watercourse buffers	5	$4,824	$9,315	5	$6,216	$86,541
Nutrient management plan/precision farming	9	$8,563	$41,006	2	$1,800	$10,600
Septic system repair/replacement	8	$8,000	$191,703	0	$0	$0
Tile drain control structures	1	$2,500	$6,649	1	$5,000	$10,313
Tile outlet erosion control	2	$3,002	$3,074	0	$0	$0
Washwater treatment	1	$2,141	$4,283	1	$5,000	$11,000
Watercourse fencing	0	$0	$0	1	$7,500	$15,000
Well decommissioning	55	$90,101	$100,008	7	$12,203	$14,725
TOTAL	**234**	**$627,425**	**$2,067,882**	**34**	**$132,369**	**$338,866**

As a result of projects completed between 2016-2020:

- 522 hectares of sensitive land have been retired from agricultural production (19 projects);
- 425 hectares of farmland have been protected from erosion through cover crops (5 projects);
- 1,996 hectares of farmland have improved nutrient management with precision farming techniques and Nutrient Management Plans (9 projects);
- 2,174 m of streambanks have been protected from erosion (49 projects);
- 1,536 hectares of forest were protected through forest management plans (67 projects);
- The risks of surface and groundwater contamination at 55 sites have been reduced through well decommissioning; and
- Improved manure storage for 1,986 cattle (8 projects) and improved treatment of milkhouse washwater (1 project) has reduced nutrient runoff into local watercourses by an amount equivalent to 1,017 kg of phosphorus each year[1].

Program Participation

Projects have been undertaken, and continue to be underway, right across the City (Table 3). Full details are available in Annex 1. Not surprisingly, most farm projects occur in the City's fertile agricultural lands in the wards of Cumberland and Rideau-Goulbourn. Most forest management plans have been completed in the western area of the City where agricultural lands are less productive and there is greater forest cover.

Most erosion control projects (a non-farm project type) have occurred along the Rideau River beginning in Manotick and continuing upstream. Another hotspot for erosion control projects is along the Ottawa River near Constance Bay, as this community was severely impacted by flooding in 2017 and 2019 (Figure 1). Sixteen projects have been completed, or are underway, within the City's urban wards, including 10 well decommissioning projects and 5 agricultural projects.

Figure 1. Shoreline erosion control in Constance Bay following 2017 flooding event

[1] Calculated by SNC's Phosphorus Trading Program

Table 3 – Projects completed or underway from 2016-2020 by City of Ottawa ward

Ward	Agricultural Projects	Erosion Control	Forest Management Plans	Well Decommissioning	Other Projects	Total
Cumberland						
No. of Projects	22	0	6	8	0	36
Grant Amount	$76,670	$0	$2,663	$16,795	$0	$96,128
Osgoode						
No. of Projects	6	18	8	15	5	52
Grant Amount	$33,563	$126,349	$3,371	$25,206	$14,500	$202,989
Rideau-Goulbourn						
No. of Projects	20	26	13	23	5	87
Grant Amount	$45,165	$187,350	$5,594	$39,923	$5,000	$283,032
West Carleton-March						
No. of Projects	13	15	41	6	2	77
Grant Amount	$35,385	$94,271	$18,680	$6,393	$4,108	$158,837
Urban Wards						
No. of Projects	5	0	1	10	0	16
Grant Amount	$4,672	$0	$150	$13,985	$0	$18,808
Total						
No. of Projects	66	59	69	62	12	268
Grant Amount	$195,455	$407,971	$30,457	$102,303	$23,608	$759,794

Following the last review in 2015, the program database began recording information on property type, such as farm, rural non-farm, and residential. Along with property size, information on property type can provide insights on the type of landowners that utilize the program.

Of the 268 projects approved since 2016, 69 (26%) took place on farms, 88 (34%), took place on rural non-farm properties and 100 (38%) took place on residential properties. This represents a decrease in the proportion of farm projects when compared with the period from 2011-2015.

Landowners of all property sizes have completed projects (for both farm and non-farm properties), reflecting the range of property sizes across the City. Most farms that carried out projects were less than 50 hectares in size (58%), and most rural non-farm properties that carried out projects were less than 19 hectares in size (56%) (Annex 1).

While the Program has successfully engaged a diversity of farm and non-farm property owners, the Review highlighted the need to continue working with City Stream Watch programs and utilizing data from subwatershed plans and catchment studies to identify potential projects along watercourse properties.

2.2. Environmental Scan

Other Clean Water Programs in Ontario

Many municipalities across Ontario offer similar clean water programs in partnership with their local Conservation Authorities. A review of 28 programs was undertaken to summarize overall trends across the Province and to and identify possible areas of improvement for the Ottawa RCWP (see details in Annex 3).

Table 4 shows the types of grants available through the programs that were reviewed. Projects are organized according to those offered and not currently offered by the ORCWP. Table 4 also shows the percentage of programs that offer each project type along with the range of grants and cost-share amounts that are available.

Projects that are directly related to the protection of water quality are common across most programs and include grants for erosion control (93%), cover crops (71%), and watercourse buffers (71%). Agricultural best management practices in connection with nutrient management are also widespread and include grants for watercourse fencing to restrict livestock (89%), clean water diversion (89%), and manure storage and treatment (57%). Well decommissioning prevents groundwater contamination by sealing unused wells, and 79% of programs offer funding for this project type.

Funding offered by the ORCWP is generally in line with or greater than other programs across the province. The grant amount available through the ORCWP for well

decommission projects is 90% up to $3,000 and is the most generous amount of the programs reviewed. Funding amounts for five project types are on the lower end of the range, when compared with other programs, including chemical or fuel storage, cover crops, nutrient management plans, septic system repair/replacement, and tile outlet erosion protection.

Other projects that are frequently offered by other programs but not the ORCWP include natural habitat creation and restoration (61%), well upgrading, replacement and protection (57%), and wetland habitat creation and restoration (54%). Funding for well upgrades was previously offered by the ORCWP but was discontinued in 2011 to prioritize Program resources for projects that protect water quality for the greatest public benefit. A small number of programs include additional project types such as deadstock composting, invasive plant species management, and urban stormwater management. While beneficial to the local environment, projects such as these are not directly related to rural water quality.

The majority of programs reviewed (54%) target their funding for farm and non-farm rural landowners in a manner similar to the ORCWP. Eleven programs offered to farms require the completion of an Environmental Farm Plan (EFP), and four programs give prioritization to those with an EFP. Four programs require non-farm landowners to complete an action plan similar to the Healthy Homes Guidebook required by the ORCWP.

Table 4 - Summary of grants available through other clean water programs in Ontario

Project Type	Programs to Offer[1]	Range of Grants Available	Range of Cost-Share Available
Projects available through the Ottawa Rural Clean Water Program			
Chemical or fuel storage	39%	$500 - $4,000	50% - 70%
Clean water diversion	86%	$1,000 - $12,000	50% - 70%
Cover crops[2]	71%	$500 - $9,000	N/A
Educational initiatives	29%	$500 - $7,500	50% - 80%
Erosion control	93%	$1,000 - $10,000	30% - 100%
Forest and wetland management plan	11%	$750 - $1,000	50% - 75%
Innovative projects	54%	$2,500 - $10,000	50% - 100%
Land retirement incentive[2]	50%	$2,000 - $10,000	50% - 80%
Manure storage and treatment	57%	$2,500 - $25,000	30% - 75%
Natural windbreaks	50%	$2,000 - $10,000	50% - 100%
Nutrient management plan	46%	$500 - $12,000	50% - 100%
Precision farming	7%	$1,000 - $2,500	50%
Septic system repair/replacement	46%	$1,000 - $10,000	30% - 50%
Tile drain control structures	29%	$1,000 - $12,000	50% - 80%
Tile outlet erosion control	14%	$3,000 - $5,000	30% - 90%
Washwater treatment	50%	$2,500 - $12,000	50% - 75%
Watercourse buffers	71%	$2,000 - $10,000	50% - 100%
Watercourse fencing	89%	$2,500 - $20,000	50% - 100%
Well decommissioning	79%	$500 - $2,500	50% - 100%
Projects not available through the Ottawa Rural Clean Water Program			
Deadstock composting	14%	$4,000 - $25,000	50%
Integrated pest management	7%	$5,000	50%
Invasive plant species management	18%	$3,000 - $6,000	N/A
Irrigation water management	11%	$5,000 - $10,000	50% - 75%
Natural habitat creation and restoration	61%	$2,000 - $20,000	50% - 100%
Silage storage enhancement and relocation	7%	$5,000 - $10,000	50%
Tree planting	54%	$2,000 - $10,000	50% - 100%
Urban stormwater management	14%	$150 - $3,000	50%
Well upgrading, replacement and protection	57%	$500 - $3,000	50% - 80%
Wetland habitat creation and restoration	54%	$3,000 - $15,000	50% - 100%

[1]Based on an online review of 28 active rural clean water programs

[2]Often available as a performance incentive on per acre per year basis

Water Quality Indicators

The City of Ottawa has an extensive network of watercourses, and the Ottawa, Rideau, and Mississippi Rivers are prominent feature across the landscape. There are close to 4,700 km of watercourses in Ottawa, where 3,500 km are natural and 1,200 km are Municipal Drains. More than 80% of these watercourses are in the rural areas and villages, and 88% of rural watercourses run through private property.

The City's Stormwater Management Services branch, in partnership with the three local Conservation Authorities, monitors water quality at 129 locations in six rivers and 40 creeks[2]. Technicians carry out monthly sampling during the ice-free period, and each sample is analyzed for 50 different chemical parameters. Each location is assessed using provincial and federal guidelines, including Provincial Water Quality Objectives (PWQO), the Canadian Water Quality Guidelines (CWQG) for the Protection of Aquatic Life, and the Canadian Council of Ministers of the Environment (CCME) Water Quality Index.

Overall, the water quality in the City's larger rivers is very good to excellent. Locations with poor water quality tend to be smaller streams in areas that are heavily influenced by urban runoff or agriculture. Apart from the main channel of the Ottawa River and naturalized areas upstream of the urban area, phosphorus is a concern in all the City's rivers and streams. Average concentrations of total phosphorus regularly or usually exceed water quality targets in many locations right across the City (See Annex 4 for details).

Many factors influence water quality and watershed health, and it is difficult to measure the impact of the ORCWP, or individual projects, using the monitoring data. This data is useful for guiding Program outreach activities and showing that there continues to be many opportunities to improve water quality in both rural and urban areas. Working with landowners to reduce erosion, maintain natural shorelines, and manage nutrients through agricultural best management practices are well established ways to continue to protect and improve water quality and overall watershed health.

2.3. Program Goal and Objectives

The overall goal of the ORCWP is to protect Ottawa's streams, rivers, wetlands, and groundwater by providing cost-share grants to Ottawa farmers and rural landowners, including rural villages. The ORCWP focuses on the following Objectives[3]:

[2] City of Ottawa Surface Water Quality Report (2016)
[3] Ottawa RCWP Terms of Reference (2016)

- To focus on priority Best Management Practices that directly protect and enhance surface water and groundwater quality for recreation, livestock watering, irrigation, aquatic habitat, and drinking water supplies;
- To increase awareness and encourage adoption of practices that protect water quality;
- To streamline the application process by partnering with other cost-sharing programs, when appropriate;
- To guide the Program based on changes in water quality and stream health; and
- To adapt the Program based on continued performance monitoring.

The program goal and objectives were updated and refined during the last review in 2015. The ORCWP Terms of Reference was revised accordingly on January 19, 2016. Protecting the quality of surface water and groundwater through cost-share grants to landowners remains a relevant program goal. Most stakeholders who provided feedback agree that the ORCWP is achieving this goal and that the existing suite of projects is well-aligned with this goal.

Some stakeholders recognized the need for continuous improvement to further advance the Program goal and objectives. Protecting wetlands is included within the goal, and currently there are two project types (wetland management plans and the land retirement incentive) that can be directly linked to achieving this goal. The success of the Program is also dependant on the types of applications that are submitted by landowners, and this can result in a disconnect between project types that are the most beneficial to the environment and those that are preferred by landowners.

2.4. Program Design

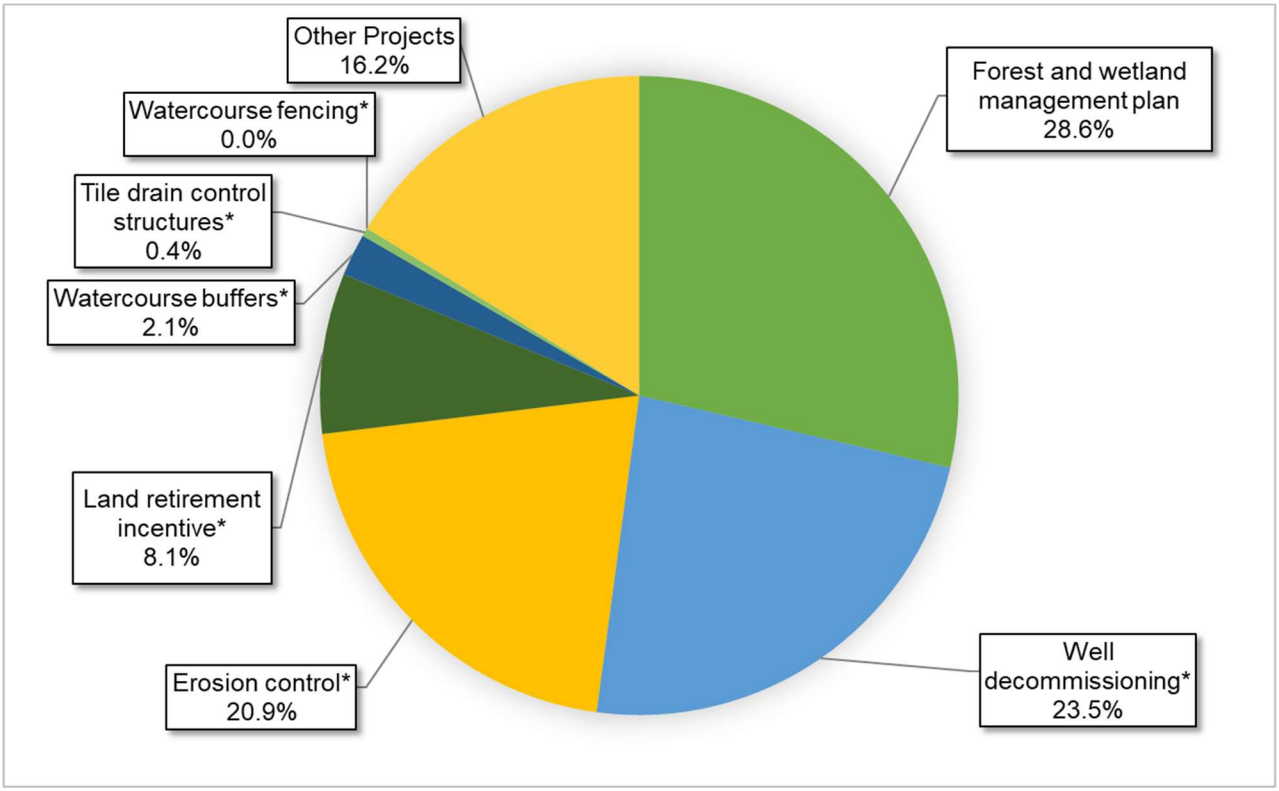
Priority Projects

The program reviews completed in 2010 and 2015 identified several priority project types that directly improve water quality, including education initiatives, erosion control, fragile land retirement, precision farming, watercourse buffers, and watercourse fencing. The intent was to focus efforts on promotion and communication for these project types to encourage greater uptake.

Most stakeholders who provided feedback for the 2016-2020 review indicated that erosion control, watercourse buffers, watercourse fencing, and land retirement incentives should remain as high priority projects. Many stakeholders also viewed well decommissioning as a high priority project due to the direct protection of groundwater quality. Some stakeholders also identified tile drain control structures as a priority project that would benefit from stronger promotion.

As shown in Figure 2, 55% of projects completed in 2016-2020 were considered high priority projects and mainly included well decommissioning, erosion control, and fragile land retirement. Along with manure storage and treatment, these projects have also received the majority of grant funds (Table 2).

Figure 2 - Breakdown of projects completed from 2016-2020

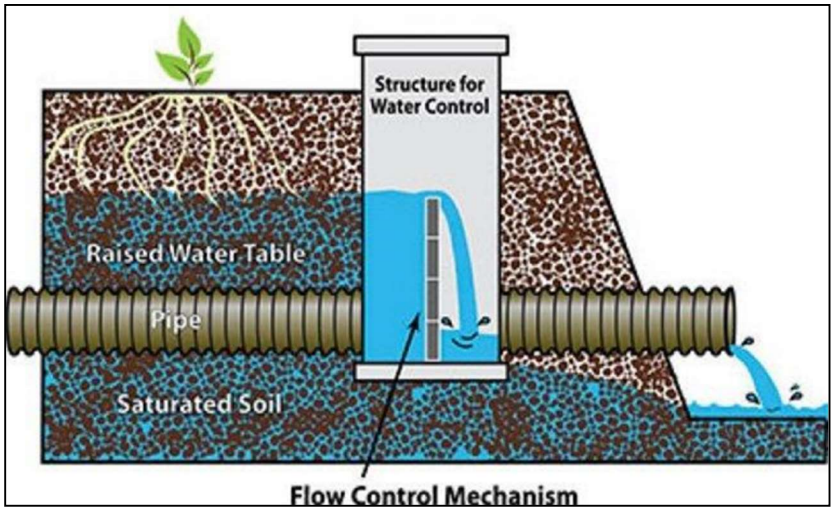


*Identified as a high priority project in the 2016-2020 program review.

Some priority projects have seen little to no uptake over the past five years including tile drain control structures, watercourse buffers, and watercourse fencing. Although watercourse buffers and watercourse fencing to restrict access by livestock have direct environmental benefits, these projects also come at a high cost to landowners and have little to no financial return or improvements in productivity. Existing grants for both these project types are considered generous with a maximum amount of $7,500 and a cost-share of 90%.

Tile drain control structures are a relatively new technology (Figure 3). While research led by Agriculture and Agri-Food Canada demonstrates the increased yield and environmental benefits[4], farmers may be hesitant to install these structures because of the required maintenance or until they are a more common practice. The maximum grant amount for tile drain control structures was increased from $1,000 to $5,000 in 2016 in an effort to increase uptake.

Figure 3 – Schematic of a tile drain control structure



[4] Beneficial management practices that impact water quality - Agriculture and Agri-Food Canada (AAFC)

Modifications to Eligible Projects

The existing suite of projects, including farm projects, is seen as comprehensive and complementary to other programs offered by Conservation Authorities and the City of Ottawa. Several ideas to improve the suite of projects were gathered through discussions with program stakeholders, surveys of grant recipients and based on program trends across Ontario.

The possibility of expanding the program beyond traditional water quality-focused projects to include environmental stewardship and/or ecosystem health was raised several times during the review. Suggestions for new project types were broad and included wetland creation and restoration, climate change mitigation, biodiversity/pollinators, delayed hay cutting/hay buffers and soil health. There was recognition that wetland management plans (an existing project type) have had very low uptake, and that this category could be separated from forest management plans or broadened to include wetland restoration projects.

Many of the clean water programs that were reviewed across the province include funding to improve natural and/or wetland habitat (see Section 2.2). Some programs encourage rural landowners to restore or enhance woodlands, native grasslands and meadows. Other programs offer funding to create nesting and shelter structures for wildlife. The loss of wetlands, including marshes, bogs and swamps, is a significant issue across southern and eastern Ontario, and many jurisdictions are incentivizing the creation or restoration of wetlands on rural properties. This type of project has direct benefits for water quality, in terms of filtering pollutants, but also has many co-benefits related to recharging groundwater, reducing impacts from flooding and protecting wildlife habitat.

Cover crops are non-harvested, non-grazed crops that reduce soil erosion and nutrient runoff especially in extreme weather events. As this practice is widely accepted and implemented in the farming community, some stakeholders consider cover crops to be a low priority project type and suggested removing it from the suite of eligible projects. An alternative suggestion is to revise the criteria to ensure that watercourse buffers are implemented in tandem with cover crops to maximize the water quality benefits.

Other suggestions from stakeholders for improving the Program's suite of projects to enhance uptake include:

- Providing additional clarity on eligible and ineligible project expenses (e.g. septic repairs/replacements);
- Capping the amount of funding for erosion control projects along large rivers (e.g. Rideau and Ottawa rivers), encouraging more projects on smaller watercourses and on agricultural properties, and prioritizing projects that employ natural bioengineering methods;

- Increasing the cost-share for tile drain control structures (currently at 50%) to encourage greater uptake.
- More properties could benefit from erosion control projects, but it can be difficult to prioritize the funding. More emphasis could be placed on bioengineering projects and/or agricultural projects.

2.5. Program Delivery

Program Administration

The Ottawa Rural Clean Water Program is administered by the South Nation, Rideau Valley, and Mississippi Valley Conservation Authorities. Interested landowners contact the Landowner Resource Centre to determine their eligibility and to be directed to the appropriate Conservation Authority. An initial screening and site visit are carried out by a Site Representative (local farmer or Conservation Authority staff with knowledge of agricultural industry). Once an application is submitted, it is reviewed and approved by a Review Committee comprised of local farmers and landowners. These Committees also review and approve applications for Rideau Valley and South Nation clean water programs that are delivered outside of the City boundary.

The Program has continued with the streamlined delivery approach introduced in 2011, and projects are also identified and administered through partnerships with Green Acres (the City of Ottawa's rural tree planting program) and the Conservation Authorities' shoreline naturalization programs. The Ottawa RCWP provides top-ups for erosion control, watercourse buffer, and windbreak projects identified through these partner programs, as these projects often require greater site preparation than other tree planting projects. Ten projects were approved through Green Acres and six projects were approved through the Shoreline Naturalization Program between 2016 and 2020.

Following the program review in 2015, clear top-up guidelines for continued coordination with Green Acres and shoreline naturalization programs were developed to facilitate program and financial reporting. Working with these partner programs enables City resources to leverage external private, provincial, and federal funding sources. The Program should have the flexibility to collaborate, as feasible, with complementary rural stewardship programs.

A number of other measures were implemented in 2016 to enhance the efficiency and effectiveness of the program. The year-end deadline for project completion was removed and replaced with a 12-month period starting from the project approval date. An electronic application form was introduced to simplify the application process, streamline data entry, and bring efficiencies to the administration process.

Feedback gathered through surveys of past participants was extremely positive. Eighty-four percent of respondents expressed satisfaction with how well the Program is run, and 76% of respondents indicated that their application was approved in a timely manner. Many stakeholders highlighted that the administration of the Program by Conservation Authority staff is a significant strength. Stakeholders also felt that site visits are very beneficial and that the flexible approach to the submission of applications, along with regular reviews of applications in the spring and fall, is working well.

Stakeholders proposed the following ideas to further enhance the administration and delivery of the program:

- Implementing staff level approvals for straightforward projects types that don't require input from the Review Committee (e.g. forest management plans, septic system repair/replacement, and well decommissioning);
- Reinstating site visits for forest management plans, septic system repair/replacement, and well decommissioning projects (as an educational/promotional tool);
- Updating the application process to allow the application form to be completed and submitted online and to accept electronic signatures; and
- Making the Healthy Home Guide available as an online resource.

Promotion and Outreach

The Program is promoted using a range of methods including print, social media, attendance at fairs and events, targeted activities, and presentations (see Annex 6 for details). Ads are published in community and agricultural newspapers annually in the spring, and announcements are made through the City's Rural Affairs newsletter and rural Councillor newsletters. Postcards highlighting both the ORCWP and Green Acres were delivered to over 50,000 rural and village homes between 2016-2020 and were made available at City of Ottawa Client Service Centres and libraries. Facebook posts and tweets reached over 90,000 individuals and generated over 1,800 engagements between 2016-2020.

Program staff participated in 49 rural fairs and events, including the Eastern Ontario Crop Conference, the Kemptville Woodlot Day, the Ottawa Valley Farm Show, and the Mayor's Rural Expo, and provided information on the ORCWP to attendees. Conservation Authority representatives were on hand at open houses held in Constance Bay following historic flooding on the Ottawa River in 2017 and 2019 to provide affected residents with information on grants available to repair shorelines. Program staff also delivered presentations at the Ontario Soil and Crop Improvement Association's Environmental Farm Plan workshops in 2016 and 2017, prior to these workshops shifting to an online platform.

A series of targeted promotional activities were undertaken in an effort to highlight priority agricultural project types that have had limited uptake. A grass buffer demonstration site was developed on Stoodley Farm along the South Castor Municipal Drain (Figure 4), and a fact sheet and video were prepared and posted on the City of Ottawa and South Nation Conservation websites. In addition, the Stoodley Farm Demonstration Site was a featured stop on SNC's Watershed Tour in 2019. Two short videos highlighting a farmer's experience with controlled tile drainage were produced and are available on SNC's YouTube channel.

Figure 4 – Grass buffer demonstration site along South Castor Municipal Drain

Despite these on-going efforts with promotion and outreach, most survey respondents (80%) felt that the ORCWP is not effectively promoted. Many past participants mentioned that they were completely unaware of the Program until a contractor, neighbour, or Conservation Authority staff member informed them. This feedback is supported by the fact that contractor referrals, agency referrals, and word of mouth continue to be the most common source of new applicants (see Annex 6).

Promotion and outreach are challenging given the geographic extent of the City and the diversity of landowners. While local producer groups and community associations can share information with their members on relevant project grants, not all landowners are affiliated with a group. This is particularly true for smaller or part-time farm operators, or those with large non-farm properties who may not be aware of the Program.

Stakeholders and past participants proposed the following suggestions to help ensure that the Program remains effective and to encourage priority project types with low uptake:

- Continue promoting the Program through related programs, events, agricultural groups, stewardship organizations and community associations, and find ways of enhancing these avenues (e.g. participation in virtual events, presentations at local meetings);

- Use social media more effectively for targeted promotion and link the benefits of specific projects with weather events (e.g. highlight the role of tile drain control structures when watersheds are experiencing low water conditions);
- Reach out to local contractors and suppliers to encourage continued Program referrals for specific priority projects (e.g. tile drain control structures, watercourse buffers and watercourse fencing); and
- Encourage and support local educational initiatives that function as demonstration projects and have these sites featured on rural tours and other events.

Program Budget and Expenditures

Total ORCWP funding for 2016 to 2020 was $1,000,000. This amount includes $304,727 in surplus funds from the 2011-2015 program and an annual special levy to South Nation Conservation ranging from $95,273 to $200,000.

Total ORCWP expenses from 2016-2020 were $846,430 including grants and program delivery expenses. Program delivery expenses were 26% of total expenditures (Table 5 and Annex 6).

Table 5 – Ottawa RCWP revenue and expenditures (2016-2020)

Revenue	**2016-2020**
Special Levy	$695,273
2011-2015 Surplus Funds	$304,727
Total Revenue	**$1,000,000**
Expenses	
Grants – RCWP	$627,428
Program Delivery	$219,002
Total Expenses	**$846,430**
Balance	**$153,570**

The remaining balance of $153,570, as of December 31, 2020, was encumbered and will be carried forward to 2021 for projects approved in previous years that have not yet been completed.

Many higher cost projects such as erosion control and manure storage are carried forward for completion in a subsequent year, often due to time or cashflow constraints. Landowners are required to cover all initial costs and are reimbursed once the project has been completed and all receipts submitted and verified.

Demand for funding under the ORCWP has increased since the five-year review period from 2011-2015. The Program is now consistently oversubscribed and has an annual waiting list.

2.6. Governance, Monitoring and Reporting

Governance

The 2016-2020 Ottawa Rural Clean Water Program was approved by the Agriculture and Rural Affairs Committee (ARAC) and Council, and staff report annually to ARAC on program outcomes and performance indicators.

The Program Terms of Reference (revised in 2016) outline the responsibilities and function of the Program Committee and Delivery Agents. Details on project eligibility as well as applicant guidelines are available online.

An external Program Committee composed of representatives of agricultural and environmental organizations, provincial agencies, local Conservation Authorities, and community members (Annex 2) provides guidance on program delivery. Committee members also serve as ambassadors of the Program, assist with promotion and education, and identify opportunities to meet the Program goals. Members are invited from a list of twelve organizations as well as three Members-at-Large.

The Committee typically meets annually, with additional meetings as required, and is responsible for:

- Making recommendations on program design and delivery, annual grant structure and budget, promotion and outreach, and monitoring and evaluation;
- Appointing representatives to watershed Review Committees in each CA; and
- Hearing appeals.

Overall, this governance structure works well, as the Program benefits from the expertise of the Program Committee members. Most stakeholders who participated in this review felt that the role of the Program Committee is important and well defined, and they did not see a need for major changes to the Committee's level of responsibility.

Many stakeholders pointed out that an ongoing challenge for the Program Committee is related to inconsistent participation and vacancies from members, particularly from agricultural organizations. These challenges are not new, as the 2011-2015 Program review also highlighted vacancies and lack of participation as issues. Regular and meaningful participation from a broad cross-section of members is important for ensuring that the Program Committee continues to function as intended into the future.

There were diverging opinions among stakeholders regarding the optimal number of meetings to hold each year. Some respondents felt that committee members' level of engagement may increase if meetings were held more frequently, whereas others felt that fewer meetings would make it easier for members to commit their valuable time.

The Program covers mileage costs for Program Committee members to attend meetings, as well as other expenses.

Stakeholders identified the following opportunities for enhancing participation on the Program Committee:

- Reaching out to relevant agricultural organizations (e.g. Ontario Federation of Agriculture, Soil and Crop Improvement associations) to offer an opportunity to contribute for the 2021-2025 Program;
- Inviting interested citizens with relevant backgrounds and/or existing Review Committee members to join as members at large;
- Reducing the overall size of the committee;
- Increasing the use of teleconferencing/video conferencing to reduce the need for travel; and
- Encouraging the role of Program Committee Chair to be filled by a stakeholder rather than a Conservation Authority staff member.

Monitoring and Reporting

A framework for monitoring and evaluating the ORCWP is described in the program's Terms of Reference (2016). Briefly, the Program is monitored and evaluated through a range of methods:

- Program database tracks and retrieves project statistics, including project status, project type, landowner type, farm type, property location and size, project costs, referral method, and environmental benefits of projects;
- Site representatives visit a select number of completed projects (follow-up site visits to all completed projects were discontinued in 2011 for cost savings);
- Semi-annual and annual reports are prepared by the lead Conservation Authority and submitted to the City's program coordinator;
- Annual reports are brought to ARAC on the number of projects completed, funds allocated, and education and promotional efforts; and
- Program Reviews are undertaken on a five-year cycle to summarize project and program outcomes, collect feedback from participants and stakeholders, review water quality and environmental indicators, and provide recommendations for the future renewal of the Program.

This current framework is comprehensive and has been well received by Program stakeholders. The Program tracks and reports out on a variety of project metrics, and this information is valuable for highlighting the overall impacts of Program on the Ottawa landscape. Annual reports provide a snapshot on a regular basis and allow for fine-tuning of promotion and communications when needed. The five-year Program Reviews offer a deeper examination of both strengths and challenges, provide an opportunity to ensure that the Program remain relevant, and recommend ways to adapt when necessary.

One opportunity to further enhance monitoring and reporting includes moving the program database to an online platform to streamline data sharing among agencies. Another area for improvement involves the timing of when feedback is gathered from program participants, which currently happens as part of the five-year review. Giving participants the opportunity to provide feedback immediately following the payment of their grant, while their experience with the ORCWP is still top of mind, may result in higher response rates and more detailed comments.

3. Recommendations for 2021-2025

The following recommendations stem from the above analysis. These recommendations fit within the existing Program budget and are feasible to implement within the 2021-2025 Program. The Program Terms of Reference will be revised accordingly as per Council direction.

3.1. Program Goal and Objectives

1. Continue to be guided by the Program's existing goal and objectives as detailed in the 2016 ORCWP Terms of Reference.

3.2. Eligible Projects

2. Continue to offer grants for all current project types and maintain existing grant names and categories for communication purposes. See Table 6 for the proposed list of Eligible Projects.

3. Emphasize erosion control on smaller streams, land retirement incentives, tile drain control structures, watercourse buffers, watercourse fencing, and well decommissioning as higher priority project types.

4. Modify current projects to maximize water quality benefits and enhance uptake of less popular project types by:
    - Revising the criteria for cover crops to require that a minimum buffer strip be maintained between the watercourse and the field;
    - Clarifying the eligibility criteria for septic system repair/replacement to state that costs attributed to reconstruction or renovations are ineligible;
    - Revising the criteria for erosion control to indicate that projects employing natural methods, located on smaller watercourses, or located on agricultural properties will be given priority access to funding;
    - Increasing the cost-share for tile drain control structures; and
    - Increasing the maximum grant amount for chemical or fuel storage, nutrient management plan/precision farming, and septic system repair/replacement.

5. Introduce wetland habitat restoration as a new eligible project type. Funding would be available to create or enhance wetlands for the purpose of improving local surface water and groundwater quality, reducing erosion, reducing flooding, and/or improving aquatic habitat.

Project guidelines will be developed or revised in 2021, as needed, in consultation with the Program Committee.

Table 6 - Proposed eligible projects for 2021-2025

Project Type	Grant Rate	Maximum Grant	Proposed Revisions
Nutrient Management			
Manure Storage	50%	$15,000	
Washwater Treatment	50%	$5,000	
Nutrient Management/ Precision Farming	50%	$2,000	Increase maximum grant amount from $1,000 to encourage uptake.
Watercourse Fencing	90%	$7,500	
Soil Protection			
Erosion Control	90%	$7,500	Revise criteria to prioritize access to funding.
Tile Outlet Erosion Control	75%	$2,500	
Cover Crops	$50/acre/year Max 20 acres, 3 yrs		Introduce a requirement for minimum buffer strips.
Water Management			
Clean Water Diversion	50%	$5,000	
Tile Drain Control Structures	75%	$5,000	Increase grant rate from 50% to encourage uptake.
Chemical or Fuel Storage	50%	$2,000	Increase maximum grant amount from $1,000 to encourage uptake.
Well Decommissioning	90%	$3,000	
Septic System Repair/ Replacement	50%	$2,000	Increase maximum grant amount from $1,000 to encourage uptake.
Land Stewardship			
Watercourse Buffers	90%	$7,500	
Natural Windbreaks	75%	$6,000	
Land retirement Incentive	$150/acre/year Max 10 acres, 3 yrs		
Forest & Wetland Management Plan	75%	$750	
Wetland Habitat Restoration	50%	$5,000	New project to create or enhance wetland habitat for organizations or individuals.
Education and Innovation			
Educational Initiatives	75%	$5,000	
Innovative Projects	50%	$5,000	

3.3. Program Delivery

Program Administration

6. Continue to administer the Program by:
    - Delivering through the South Nation, Rideau Valley, and Mississippi Valley Conservation Authorities, with South Nation as the lead agency;
    - Having local farmers and stewardship advisors as site representatives and review committee members; and
    - Having City of Ottawa staff participate as review committee members and provide oversight and support for the Program.

7. Enhance the effectiveness and efficiency of the Program by:
    - Implementing staff level approvals for forest management plans, septic system repair/replacement, and well decommissioning;
    - Reinstating site visits for forest management plans, septic system repair/replacement, and well decommissioning projects;
    - Updating the application process to allow the application form to be completed and submitted online and to accept electronic signatures; and
    - Exploring the feasibility, and securing a funding source, to make the Healthy Home Guide available as an online resource.

Promotion and Outreach

8. Continue to promote the Program using:
    - Related programs, events, agricultural groups, stewardship organizations, and community associations;
    - Ads in agricultural newspapers, targeted mail drops, Councillor newsletters, and Rural Affairs newsletter;
    - Project signs provided to all participants; and
    - Local educational initiatives that function as demonstration projects.

9. Explore additional ways to enhance Program promotion (e.g. participation in virtual events, presentations at local meetings, demonstration sites featured on rural tours/events, creation of project profiles).

10. Connect with local contractors and suppliers to encourage Program referrals for specific priority projects (e.g. tile drain control structures, watercourse buffers, and watercourse fencing).

11. Use social media more effectively for targeted promotion and link the benefits of specific projects with weather events (e.g. low water conditions, heavy rainfall events).

12. Enhance how the results from City Stream Watch surveys, subwatershed plans, and catchment studies are used to identify and target properties with issues related to shoreline erosion, tile outlet erosion, presence of watercourse buffers, and/or livestock access to watercourses.

Program Budget

13. Continue to fund the Program at $200,000 per year for 2021-2025 through a special levy to South Nation Conservation.

3.4. Program Governance, Monitoring and Reporting

Program Committee

14. Re-assess Program Committee representation for 2021-2025 by:
    - Ensuring the membership reflects the range of practices covered by the Program and organizations have the capacity and interest to participate;
    - Offering relevant agricultural organizations that are not currently involved with the Program the opportunity to contribute;
    - Inviting interested citizens with relevant backgrounds and/or existing Review Committee members to join as members at large to fill any gaps in the Committee membership; and
    - Encouraging a stakeholder to fill the role of Program Committee Chair rather than a Conservation Authority staff member.

15. Continue to meet annually to advise on program delivery, including grant structure, budget and promotion, and more frequently, when required, to update Program documentation.

16. Increase the use of teleconferencing/video conferencing to reduce the need for travel and enhance participation.

17. Review and update the ORCWP Terms of Reference to align with all new recommendations as approved by ARAC and City Council.

Monitoring and Reporting

18. Continue to report annually to ARAC on Program performance including environmental, social, and economic outcomes.

19. Explore the feasibility of moving the program database to an online platform to streamline data sharing among agencies.

20. Provide Program participants the opportunity to complete a simple online survey immediately following the payment of their grant.

4. List of Annexes

Annex 1 – Program Outcomes

Annex 2 – Program Committee Membership for 2016-2020

Annex 3 – Review of Other Rural Clean Water Programs in Ontario

Annex 4 – Maps of Water Quality

Annex 5 – Summary of Stakeholder Feedback

Annex 6 – Program Delivery