

Programs & Services

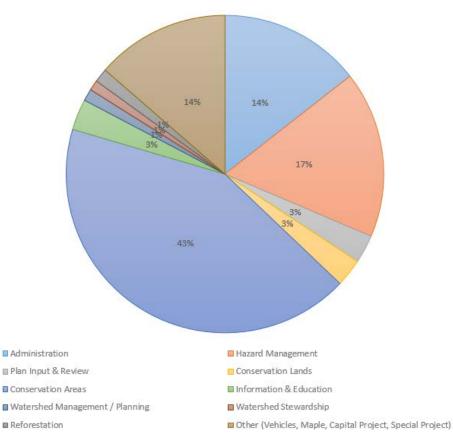
2021

To communicate and deliver resource management services and programs in order to achieve social and ecological harmony for the watershed

Table of Contents

ADMINISTRATION	3
HAZARD MANAGEMENT	4
Flood Forecasting:	5
Flood Damage Reduction / Ice Management Program (Port Bruce)	5
Operation of Flood Control Structures (Springwater Dam):	6
Flood & Erosion Control Capital Repairs:	6
PLAN INPUT & REVIEW	7
CONSERVATION LANDS	8
CONSERVATION AREAS	9
INFORMATION & EDUCATION	10
WATERSHED PLANNING & WATER MANAGEMENT PROGRAMS	11
WATERSHED STEWARDSHIP	12
REFORESTATION	12

Work Plan Categories and Projected Expenditures



ADMINISTRATION

What does the Authority do?

Supports mandatory and non-mandatory programs and services.

Examples

- Responsible for the annual budget and levy process
- Responsible for annual business plan and associated staff work plans
- Responsible for ensuring annual internal and external audits are completed, support auditors
- Support creation of the Annual Report
- Supports the governance of the CCCA Board of Directors via agenda, minutes, monthly summaries of revenue & expenditures
- Provides liaison with member municipalities (e.g. presentations to council)
- Liaise with Conservation Ontario, other Conservation Authorities, and the broader network
- Administrative, clerical, and Information Technology & Information Management support for the entire organization
- Strategic planning, policy development and implementation, and supporting program guidance (e.g. Purchasing Policy guidance)
- Supports grant submissions through financial and strategic support, applies for human resources grants, and assesses proposals that result in a further diversified business model
- Commenting on proposed provincial (legislation, regulation) and local (by-laws) changes
- Assessment of community needs
- Service of accounts with suppliers, contractors, and businesses
- Provide Human Resources Function and compliance with related employment legislation
- Administration of Group RRSP and Benefits program
- Management of Fleet and Vehicles (e.g. Tracking Use, expenditures for maintenance)
- Provide governance (Joint Health & Safety Committee) and training to ensure compliance with Health & Safety Legislation and Regulations
- Negotiates agreements for non-mandatory services with Municipal Partners
- Fundraising to support a wide range of mandated and non-mandated programs and services
- Technical Studies such as GIS that support the broader organization

Why?

- Ensure cost effective and efficiently run programs and services
- Ensure programs and services are streamlined, time limited, and cost-effective
- Ensures programs are consistent with watershed resources, community values, political and financial realities, and approve policies
- Ensures accountability to member municipalities, taxpayers, partners, and senior governments
- Ensures conformity with provincial policies and procedures
- Ensures that goods and services are purchased locally whenever possible
- Maintains competent, highly trained, and motivated staff to implement the Authority's programs
- Ensure staff perform duties and conduct themselves in accordance with the Personnel Policy
- To ensure the Authority's interests and uniqueness are represented and accounted for in current and proposed CA related legislation and regulations
- Support information management in business areas to support decision making

Who benefits/participates?

- Municipalities benefit from programs tailored to their specific needs and economic realities
- Municipalities benefit from cost-effective shared environmental expertise across municipal boundaries on an ecological basis (watershed)
- Watershed residents (taxpayers) receive the most value for their tax dollars through cost-effective shared environmental expertise and capacity
- Watershed businesses and suppliers (over \$500,000 spent locally on an annual basis)

HAZARD MANAGEMENT

(FLOOD FORECASTING, WARNING, AND OPERATIONS, FLOOD CONTROL STRUCTURES, ICE MANAGEMENT, EROSION CONTROL, & PLAN INPUT & REVIEW)

What does the Authority do?

Protect life and minimize property damage from flooding and erosion by providing a flood control monitoring and warning program. CCCA alerts the public through flood messages, provides municipal staff with data and information to enable sufficient lead time to enable emergency flood mitigation procedures to promote resident's safety, safeguard flood prone areas and as a result minimize flood related damage and loss of life.

CCCA also provides a related Plan Input & Review Service to ensure future development stays out of the flood prone areas.

Examples

Data Collection:

To assist with determining the appropriate watershed statement, staff will collect data and evaluate information based on the following flood forecasting data and extrapolated GIS information. The CCCA is obligated to issue an appropriate watershed statement (e.g. Flood Warning) for the CCCA Low Lying Flood Prone Areas around waterways within the Authorities administrative boundary. Staff will collect data and evaluate the following information:

- Port Bruce channel soundings, data interpretation, and mapping for presentation and implementation of flood operational activities
- Provincial Flood Watches or Warnings issued by the Ministry of Natural Resources and Forestry (MNRF), Surface Water Monitoring Centre
- Government of Canada Weather Alerts
- Precipitation exceedance rates, Hurricane Hazel Precipitation Rates, Conservation Authorities Act Flood Event Standards, and Flood Forecast Precipitation Rates
- Potential of combined forecast precipitation and snow water equivalency surface runoff to exceed the aforementioned precipitation rates
- The combined present stage, rainfall, and snow water equivalency potential to exceed a discharge rate at the Catfish Creek Sparta (02GC018) gauge of 39.2 m³/sec (1.47m stage)
- Estimate ice thickness on Catfish Creek at Port Bruce greater than 15.25cm (6.0 in), Catfish Creek discharge below average, may indicate that ice transported downstream has the possibility of jamming
- GIS modelling, the distance inland (elevation) that Lake Erie water levels have the risk to impede channel flows
- Present Lake Erie ice thickness and concentration in the area off shore of Port Bruce
- Government of Canada, Marine Weather forecast for Lake Erie, sustained wind speed and direction (potential to push outlying lake ice into the harbour)
- London Airport Daily Weather Data, precipitation

Communications:

CCCA flood interrelated manuals are considered live documents and are meant to be reviewed annually to assess the viability and to evaluate any recommendations stemming from the previous year's high water events. In general, the objective of these manuals and plans is to link flood emergency personnel of the Catfish Creek Conservation Authority, its member municipalities, government emergency organizations, applicable provincial government agencies, and police to assist in reducing the potential for

flood associated damage. They have been compiled to provide a systematic procedure for the Catfish Creek Conservation Authority staff to consult during flood emergencies.

- Flood Watch and Warning Procedures Manual
- Ice Management Plan and dredging manual
- Flood Warning and Operations Plan
- Flood bulletins, media releases
- Liaison with municipalities, local residents, and contractors
- Assistance with municipal emergency response plans

Response:

The CCCA fundamental response to flood forecasting, warning, and operations is to communicate watershed statements to the residents of the watershed. These statements include, but are not limited to Watershed Outlooks, Watches, and Warnings through the conveyance of these statements to provide our partner municipalities with sufficient flood notification lead time to act according to the notifications.

During high water events the CCCA implements The Flood Watch and Warning Procedures to maintain the following:

- Ongoing technical advice to Municipal Flood Coordinators during flood events
- Continuous watershed monitoring of precipitation and stream flows during storm events and spring thaw/runoff season
- Flood damage assessment reporting to the province and local municipalities (e.g. Flood Damage/Cost Reports, Flood Status Reports)
- Flood event termination and follow-up

The CCCA issues communication statements based on flood monitoring and forecasting of provincial and federal weather forecasts and advisories for application at the local level for storm intensity and duration, precipitation intensity and duration, temperature increase duration, pre-storm stream water level, storm duration rate of water level increases, seasonal watershed characteristics (such as frozen soils, riverine and Port Bruce harbour ice thickness and type, snow depth, and water equivalency), Lake Erie water levels, and ice cover.

To be consistent with the wording used by weather agency communications, the Ministry of Natural Resources and Forestry in partnership with Conservation Ontario, Environment Canada, and other applicable agencies updated and changed the flood messaging terminology in February of 2012.

The CCCA uses the aforementioned data and information to maintain and calibrate a Hydrometric Numeric Interpolator (forecasting model) to interpolate numeric inputs and output a graphical interpretation.

Flood Forecasting:

- Interpretation of provincial weather forecasts and advisories for application at local level
- Development of flood forecasting model

Flood Damage Reduction / Ice Management Program (Port Bruce)

- Coordinate ice breaking operations in consultation with the Municipal Flood Coordinator
- Coordinate dredging activities for removal and disposal of sediments
- On-site supervision, tender contracts, soil testing, associated clean-up, access agreements, tree removal

Operation of Flood Control Structures (Springwater Dam):

- Engineering Dam Inspection in 2020/21.
- Annual inspections
- Replacement and maintenance of stop logs and lifting mechanisms
- Painting, parging, repairs to concrete, fencing, and signage
- Review and updates to operation and maintenance manuals, policies, and procedures
- Debris removal and control of inflow debris
- Ongoing maintenance and operation to control water levels
- Provide protection of loss of life, environmental damage, economic loss, and property destruction.

Flood & Erosion Control Capital Repairs:

- Develop Terms of Reference for preliminary engineering studies to determine the feasibility and benefits of capital protective works and repairs
- Coordinate the Environmental Assessment Process
- Solicit funding for repairs through the provincial Water and Erosion Control Infrastructure (WECI) Program

Why?

- · Reduce injury and loss of life
- Reduce property damages
- Maintain a \$2 million infrastructure
- Mandated program of the province (e.g. municipalities must ensure that provincially satisfactory flood warning and operations programs are implemented)
- Provide local coordinated operation of flood warning system and Springwater Dam
- Provide park land and recreational opportunities
- Improve water quality and mitigate stream flow for flooding
- Public safety program that is tied to the flood plain component of the Plan Input and Review Program

Who benefits / participates?

- 28 residential and non-residential structures located along Catfish Creek and Bradley Creek
- 57 residential and non-residential structures on the Simpson Drain in the Village of Springfield
- 250+ residential and non-residential structures on Catfish Creek and along the Lake Erie shoreline in the Village of Port Bruce
- Approximately 30 residential and non-residential structures on various watercourses throughout the watershed in rural areas
- Member Municipalities
- Upper Tier Municipalities
- Province (through reduced flood damages)
- The Town of Aylmer
- Watershed residents, property owners, and businesses located in flood susceptible areas within the watershed

PLAN INPUT & REVIEW

What does the Authority do?

Provide Information and policy support to municipalities on matters relating to Natural Hazards Policies (Section 3.1 under the PPS) with a focus on Official Plan and Official Plan Amendments. This includes: broad policy interpretation, transfer of data, information and science to municipalities, and provision of advice on matters relating to natural hazards policy to MMAH.

Examples

- Provides land use planning input and review advice to watershed municipalities
- Provides technical advice and information to landowners, developers, and the public regarding flood and erosion hazards and environmental concerns
- Regulation of development, interference with wetlands, and alterations to shorelines and watercourses
- Develops new natural hazard information to support the delegated commenting role inputting into municipal planning to ensure consistency with the Provincial Policy Statement (PPS) s.3.1 (natural hazards) policies
- Support the delegated commenting role inputting into municipal planning to ensure consistency with the PPS s.2.3 (natural heritage) policies
- Provide proponents with waterproofing standards and related advice that facilitates development in the flood fringe

Examples

- Official plan policies and schedules, comprehensive zoning by-laws, plans of subdivisions
- Property inquiries (legal, real estate, and general information)
- Provide comments on municipal planning / development documents or applications annually
- Process permit applications under the Section 28 regulations of the Conservation Authorities Act
- Resource mapping and flood elevations
- Liaison between municipalities and other government agencies
- Coordination and implementation of the CCCA Shoreline Management Plan
- Cooperation with neighbouring Conservation Authorities to ensure 'seamless planning service' for municipalities and counties with more than one CA within their boundaries
- Provide advice and assistance to watershed municipalities with regard to environmentally related responsibilities under the Planning Act
- Natural heritage protection
- Identification and protection of watershed wetlands and environmentally significant areas
- Municipal drain review (e.g. erosion control and location)
- Screening applications under the Federal Fisheries Act

Whv?

- Reduce risk to life and property from natural hazards such as flooding and unstable slopes
- Compliment flood control operations
- Promote wise use of land and water resources for future generations
- Interpret and implement provincial policies at the local level
- Key component of a comprehensive flood plain management program

Who benefits/participates?

- The general public, landowners, developers, and watershed municipalities
- Municipal planners and building officials
- Lawyers and real estate agents, students, and academic institutions
- Provincial and federal ministries, Local Planning and Appeal Tribunal (formerly OMB), Mining and Lands Commissioner

CONSERVATION LANDS

What does the Authority do?

CCCA works in partnership with the local community, special interest groups, private landowners, and the provincial government to ensure the long-term protection of Environmentally Significant Conservation Lands the Catfish Creek watershed

Examples

- Protection and management of over 553 hectares (1368 acres) of Authority-owned lands
- Mapping and inventories of the Environmentally Significant Areas including the associated flora and fauna within the watershed
- Provides the land for outdoor education activities at the Jaffa Environmental Education Centre and Catfish Creek Conservation Authorities Environmental based curriculum
- Acquisition of and stewardship of/on provincially significant wetlands (i.e. Calton Swamp)
- Protection of headwater source areas (Hawkins Tract)
- Active co-management partners with our member municipalities, towns, cities, and with other
 agencies and individual landowners in the Carolinian Canada Life Zone Stewardship Program
 (i.e. Catfish Creek Slope and Flood Plain Forest Site)
- Support towards natural heritage studies (i.e. Oxford County and Elgin County Studies)
- Protection of Areas of Natural and Scientific Interest (ANSI) (i.e. Springwater Forest)
- Development and implementation of land-use strategies to protect endangered flora and fauna (i.e. Small Whorled Pogonia, Acadian Flycatcher)
- Interpretive and recreational opportunities (i.e. guided hikes, eco-tourism)
- Partnerships with other conservation organizations (i.e. Ducks Unlimited, Bird Studies Canada, University of Guelph, Nature Conservancy Canada, St. Thomas Field Naturalists, Carolinian Canada Coalition, ALUS, Canadian Chestnut Council)
- Partnerships and work agreements with LEEDS employment and The Children's Aid Society
- Restoration activities and projects for Aquatic and Terrestrial Species at Risk
- Development of Forest Management Plans
- Development of Management Plans
- Administer research permits for organizations such as MNRF to perform tree disease research
- Promote stronger local communities by giving citizens the knowledge and support they need to reach out and work with their neighbors to protect the local places they need and love

Why?

- Conserving land increases property values near greenbelts, saves tax dollars by encouraging more efficient development, and reduces the need for expensive water filtration facilities
- Provides storage for flood waters
- Improves water quality
- Provides research opportunities
- · Protects and provides habitats for a variety of flora and fauna
- Provides recreational and eco-tourism opportunities throughout the watershed
- Provincially mandated program
- Reducing air and water pollution
- Preserving open and green spaces
- Preserving fish and wildlife habitats, endangered species, and biodiversity
- Managing and protecting watersheds and wetlands
- Maintains scenic landscapes and recreational amenities
- Prevents soil erosion and improves soil quality
- Reduces the negative impacts of flooding
- Improves resilience to drought and invasive species
- Helps to sequester greenhouse gases

Who benefits / participates?

- Watershed residents
- Youth who gain valuable life skills through our community outreach programs through LEEDS, Children's Aid Society
- Recreationalists such as Field Naturalists, Hiking Groups, Eco Tourists, and campers from all over North America
- Thousands of Students, instructors from Thames Valley School Board, other Conservation Authorities through programs such as the Carolinian Forest Festival and researchers within different educational and environmental institutions
- Provincial government and ministries of all sorts from OMAFRA, OFIA, MPAC all the way to MNRF, and the Ministry of the Environment, Conservation and Parks
- ALUS Program, Ducks Unlimited, Stewardship Council, Chestnut Council, Bird Studies Canada, University of Guelph, Department of Fisheries and Oceans, Elgin County Trappers Association, Local member municipalities, towns and cities, and most of all the residents of our watershed

CONSERVATION AREAS

What does the Authority do?

CCCA provides a wide variety of recreational opportunities on 120 hectares (300 acres) of Authority owned/managed lands using sound business and environmental principles

Examples

- Springwater Conservation Area offers camping (265 campsites), group camping, swimming, boating, fishing, picnicking, hiking, and special event facilities
- Rural based Conservation Areas like the Archie Coulter C.A. provide passive recreational opportunities such as hiking, bird watching, and research
- Conservation Areas located in an urban setting provide municipalities with valuable green space for active recreation (e.g. Ward McKenna and Ivan Steen properties)
- Maintain and operate the Springwater Dam for flow augmentation and recreation purposes
- Volunteer opportunities (e.g. scouting groups, cooperative education students)
- Capital improvement projects (e.g. roads, campsite development, trails, stage)
- Agreement with TVDSB to allow environmental education opportunities for approximately 8000 students per year

Why?

- Provides a high quality recreational experience in a natural setting
- Generates excess revenues to offset other mandated program expenses
- Allows safe access to Authority owned/managed lands for permitted activities
- Creates necessary fish and wildlife habitat
- Protects the integrity of environmentally significant lands
- Permits land susceptible to hazards (e.g. flood) to be utilized for recreational purposes
- Provides valuable green space in urban settings
- Creates seasonal employment opportunities for local youth and students
- Provides annually over 1000 hours of volunteer opportunities for high school co-op students, those seeking rehabilitation, or clients of LEEDS employment opportunities for those seeking work experience opportunities
- Maintains \$2 million infrastructure
- Provides land for the housing of municipal services (e.g. hydro and sewer easements, stormwater management facilities)

Who benefits / participates?

 Over 100,000 people who visit and use the facilities at the Conservation Areas on an annual basis, mostly from local communities

- Over 1500 new visitors to Springwater Forest through the Active Naturally initiative
- Local economies (tourism spinoffs and purchase of goods and services)
- Sponsors of special events
- Volunteer supporters and donors
- Students
- The people of Ontario

INFORMATION & FDUCATION

What does the Authority do?

CCCA provides information and education in a cost effective manner to the community about conservation, the environment, and the programs and services of the CCCA

Examples

- Educational and recreational opportunities
- Provides a mobile, hands on, and interactive education program
- Assist with environmental education programs in partnership with various community organizations (e.g. Environmental Leadership Program, Marsh Quest, Carolinian Forest Festival, Regional Envirothon)
- Printed and digital material for public distribution and consumption (e.g. brochures, newsletters, trail guides, Annual Report)
- Recognition of deserving conservationists within the watershed (e.g. CCCA Conservation Award)
- Joint working relationship with the Jaffa Environmental Education Centre (e.g. Maple Syrup Program)
- Hands-on resource management opportunities with local schools (e.g. erosion control, tree planting)
- Cooperative education (e.g. student placement from local secondary & post-secondary schools)
- Displays and presentations (e.g. Trade Shows, Go Wild Grow Wild, AGM, school events)
- Joint marketing and advertising initiatives with neighbouring Conservation Authorities (e.g. tree planting, workshops)
- Involvement of local business in sponsoring environmental programs
- Media relations & Social Media
- Demonstration sites for public viewing and education
- Special programming (e.g. Active Naturally)
- Coordinate the Annual Student Scholarship Award
- Fundraising to support a wide range of mandated and non-mandated environmental projects and initiatives
- Develop and cultivate strong partnerships with other government agencies, foundations, local businesses, tourism groups, environmental groups, and individuals

Why?

- Generate public support and awareness for Authority programs and services
- Help watershed residents make informed environmental decisions
- Promote and encourage use of Authority owned / managed lands
- Create value for a healthy environment by providing opportunities for people to experience and learn about conservation programs
- Provide hands-on & experimental learning opportunities
- Create an environmental/stewardship ethic within the local community especially with our youth
- Generate additional sources of revenue to support non-mandated environmental projects
- Recognition of partners, donors, and volunteers
- Promote our local heritage (e.g. Maple Syrup Festival)

Who benefits/participates?

- Watershed residents/general public
- Students (approximately 5000 participants annually)
- Municipalities, by having an involved and informed constituency
- Conservation Area users
- Local businesses

WATERSHED PLANNING & WATER MANAGEMENT PROGRAMS

CCCA develops a watershed plan for the CCCA Watershed, implements the plan, monitors progress, and provides a periodic review of plans.

Examples

- Coordination of watershed studies
- Integration and Analysis of water quality and water quantity data
- Acquisition and analysis of spatial data (e.g. Elevation model, stream locations and flow direction)
- Acquisition and data management of water quality information (PWQMN, PGMN, OBBN)
- Produce watershed report cards using spatial and water quality data
- Support planning department with updated base data and regulatory information
- Develop Source Water Protection Plans to protect water quality and quantity for municipal drinking water systems
- Administer the provincial Low Water Response Program locally

Why?

- The health of rivers and streams is both influenced by and illustrative of the health of the lands through which they flow
- Water systems demonstrate the cumulative effects of environmental stresses
- Quality of life is directly linked to water quality in watersheds
- There is strong and growing public support for implementation of locally based solutions at the local watershed level
- Informs decision making in all other mandatory and non-mandatory programs and services such
 as watershed function during floods, targeting sources of pollution, and identifying locations to
 focus acquisition of new or disposal of CA Lands
- Provide clean water for recreational opportunities
- · Safeguard human health
- Ensure enough safe, clean water is available
- Protect current and future sources of groundwater and surface water supplies

Who benefits / participates?

- Watershed residents
- Provincial government
- Municipalities
- Local environment

WATERSHED STEWARDSHIP

What does the Authority do?

 Provides municipalities and landowners with a local source of technical expertise and services to address erosion control, forest management, and water quality issues

Examples

- Technical and financial assistance available to landowners experiencing erosion problems on their land holdings
- Woodlot management on municipal lands
- Local delivery agency for provincial and federal environmental initiatives (e.g. Managed Forest Tax Incentive Program)
- Local contact for environmental issues
- Researching, designing, and implementing streambank erosion control using non-traditional methods (e.g. bioengineering)
- Hands-on resource management opportunities (e.g. stream rehabilitation)
- Staff expertise easily accessible to watershed residents
- Easy access to the most up-to-date resource materials
- Certified Approvers on staff to prepare, approve, and audit Managed Forest Plans for private landowners
- Solicit funding from other environmental partners
- Tree marking services for municipalities and private landowners

Why?

- Improve water quality and habitat for fish and wildlife
- Preserve soil resources and reduce sedimentation
- Demonstrate sound forestry management practices on municipal lands
- Ensure technical expertise and resource materials are available locally for the residents in the community

Who benefits/participates?

- Private landowners
- Local community
- Downstream users
- Local environment
- Contractors
- Municipalities
- · Other levels of government

REFORESTATION

What does the Authority do?

CCCA implements watershed management and conservation strategies to enhance air and water quality, protect areas within the watershed susceptible to erosion, and mitigate the impact of flooding.

Examples

- Implementation of an improved and focused Carolinian species planting strategy to increase partner planting opportunities through watershed forest cover enhancement project to support the establishment of new Carolinian mixed species plantations
- Partnered with Ontario Power Generation (OPG), Forests Ontario/Forest Recovery Canada, and local interest groups to plant thousands of trees

- Provide technical assistance and some financial incentives to landowners to establish a variety of Carolinian hardwoods, wildlife shrubs, and conifer tree species
- Reforestation annually on approximately ten hectares of private and publically owned lands throughout the watershed
- Provide technical expertise for species selection, site preparation, planting plans, and maintenance
- Maintain the Community Forest for watershed residents and visitors to enjoy with the lasting reminder of special occasions such as birthdays, anniversaries, or weddings, as well as living memorials to family and friends of the deceased.
- Planting Community Forests improves the local environment while commemorating people or events
- Established long-term partnerships with local schools, community groups, individuals, and businesses resulting in thousands of trees planted annually.

Suggested reforestation activities include:

- Planting a protective buffer strip along waterways and creeks to protect the watercourses and allow enhancement of aquatic habitat
- Windbreaks to minimize soil erosion and improve the heat units available to crops
- Provide a treed corridor to link established woodlots, helping to improve genetic diversity among wildlife
- Retire old unused pasture lands and scrub land to forest stands and consequent woodlots

We consider our continued partnerships a vital component in assisting the Catfish Creek Conservation Authority with reforestation, increasing wildlife habitat, and prevalent bio-diversity within the Catfish Creek watershed. Landowners are able to participate in helping us reach our environmental goals and milestones.

Why?

- Reduce soil erosion and nutrient loss
- Filter and slow down flood waters
- Provides habitat for wildlife
- Improves crop productivity
- Enhances air and water quality
- Removes marginal land from production
- Provides hands-on learning opportunities through participation
- Assists with groundwater recharge
- Reduces household energy costs
- Enhances interior forest habitat and extends natural heritage corridors

Who benefits/participates?

- General public
- Municipalities
- Non-profit groups, service clubs, and community associations
- Farmers and rural landowners
- Students
- Private tree nurseries