



**CATFISH CREEK**



**CONSERVATION AUTHORITY**

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## **Programs and Services**



**Invest in the Future !!**

**"a Vision of Harmony between the Social and Ecological needs  
of our Watershed for Present and Future Generations"**

**FLOOD FORECASTING, WARNING, AND OPERATIONS**

- ▶ **What does the Authority do?**
  - reduces the risk of property damage and loss of lives due to flooding by providing a flood control monitoring and warning program
  
- ▶ **Examples**
  - ▶ **Data Collection:**
    - operation and maintenance of four water level recording gauges in or near major Flood Damage Centres within the watershed (i.e. Springfield, Aylmer, Port Bruce)
    - operation and maintenance of one meteorological station in Port Bruce for shoreline and riverine flooding during high lake levels
    - maintenance of five crest and staff gauges throughout the watershed to record depths and flow velocities
    - channel soundings, data interpretation, and mapping for presentation and implementation of dredging activities
    - ice monitoring to determine potential for flooding caused by ice jams (i.e. thickness, extent of ice cover on creek and lake, ice quality, strength)
    - computer hardware and software programs (i.e. Geographic Information System, Reflections)
    - staff training
    - precipitation recording
    - mapping of flood damage centres
    - operational and maintenance agreements for two water level recording gauges with Environment Canada (Water Survey of Canada)
    - record keeping (i.e. dates, times, messages, contacts, field observations)
    - maintenance of the Flood Damage Centres occupants data base
    - downloading and storage of flow and climate information from data loggers for historic records
    - preparation of stage/discharge charts and graphs during flood events
  
  - ▶ **Communications:**
    - annual revisions and updates of the Authority's Flood Warning and Operations Plan
    - preparation and review of Ice Management Plans and dredging manuals
    - ice bulletins, media releases
    - liaison with municipalities, local residents, and contractors
    - assistance with municipal emergency response plans
  
  - ▶ **Response:**
    - issuance of Advisories, Warnings, and All Clear Statements for riverine flood events
    - issuance of high lake level statements for shoreline flooding and erosion
    - ongoing technical advice to Municipal Flood Coordinators during flood events
    - continuous monitoring of precipitation and stream flows during storm events and spring thaw/runoff season
    - flood damage assessment reporting to province and local municipalities (i.e. Flood Damage/Cost Reports, Flood Status Reports)
    - flood event termination and follow-up



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- ▶ **What does the Authority do?**
  - ▶ **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 (Hamlet of Port Bruce):**
    - coordinate ice breaking operations in consultation with 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):**
    - annual inspections
    - replacement of stop logs and lifting mechanisms
    - painting, parging, repairs to concrete, fencing, signage
    - review and updates to operation and maintenance manuals
    - debris removal
    - ongoing maintenance and operation to control water levels
  - ▶ **Flood Control Capital:**
    - develop Terms of Reference for preliminary engineering studies to determine the feasibility and benefits of capital protective works
    - coordinate the Environmental Assessment Process
    - construct flood control projects designed to eliminate or reduce the effects of flooding
  - ▶ **Plan Input:**
    - provide plan input to planning boards on comprehensive Official Plans and updates with regard to Natural Hazard Policies, Section 3.1 of the Public Health and Safety Policy of The Planning Act
    - policy support for Ministry of Municipal Affairs and Housing on matters of provincial interests relating to the Natural Hazards Policy
- ▶ **Why?**
  - reduce injury and loss of life
  - reduce property damages
  - maintain a \$1 million infrastructure
  - mandated program of the province (i.e. 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 stream flow
  - public safety program that is tied to the flood plain component of the Plan Input and Review Program



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▶ **Who benefits/participates?**

- municipalities
  - watershed residents, property owners, and businesses located in flood susceptible areas within the watershed
    - i.e. Town of Aylmer
- 28 residential and non-residential structures located along Catfish Creek and Bradley Creek  
Village of Springfield
- 57 residential and non-residential structures on the Simpson Drain  
Hamlet of Port Bruce
- 217 residential and non-residential structures on Catfish Creek and along the Lake Erie shoreline

Rural Areas - approximately 30 residential and non-residential structures on various watercourses throughout the watershed

- province (through reduced flood damages)
- Conservation Area users



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## **REFORESTATION**

- ▶ **What does the Authority do?**
  - provides a wide range of tree planting services to improve the health of the local environment
  
- ▶ **Examples**
  - 24,000 trees planted throughout the watershed in 1998
  - technical expertise available for species selection, site preparation, planting plans, and maintenance
  - planting Community Forests improves the local environment while commemorating people or events
  - planting, weed control, shipping, cold storage, and equipment rental services available to landowners
  - roadside tree planting for local municipalities
  - establishes long-term partnership with local schools, community groups, individuals, businesses, and provincial organizations
  
- ▶ **Why?**
  - reduce soil erosion and nutrient loss
  - provide habitat for wildlife
  - improve crop productivity
  - enhance air and water quality
  - remove marginal land from production
  - generate income from the sale of forest products
  - provide hands-on learning opportunities through participation
  - creates employment opportunities in the local community
  - groundwater recharge
  - provide recreational opportunities and aesthetics
  - reduce energy costs
  
- ▶ **Who benefits/participates?**
  - general public
  - municipalities
  - non-profit groups, service clubs, and community associations
  - farmers and rural landowners
  - students
  - private tree nurseries



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## **ENVIRONMENTALLY SIGNIFICANT AREAS PROTECTION**

- ▶ **What does the Authority do?**
  - 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 Areas within the Catfish Creek watershed
  
- ▶ **Examples**
  - protection and management of over 390 hectares (963 acres) of Authority-owned lands
  - mapping and inventories of the Environmentally Significant Areas within the watershed
  - provides the land base for outdoor education activities at the Elgin County Outdoor Education Centre
  - acquisition and stewardship of provincially significant wetlands (i.e. Calton Swamp)
  - protection of headwater source areas
  - active partner with other agencies and individual landowners in the Carolinian Canada Stewardship Program (i.e. Catfish Creek Slope and Flood Plain Forest Site)
  - support towards natural heritage studies (i.e. Oxford County Terrestrial Study)
  - 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)
  - interpretive and recreational opportunities (i.e. guided hikes, snowmobiling)
  - partnerships with other conservation organizations (i.e. Ducks Unlimited, Nature Conservancy Canada, St. Thomas Field Naturalists, Carolinian Canada Coalition)
  - preparation of forest management strategies for the Authority's Agreement Forest land holdings (i.e. Springwater Forest Preservation Study)
  
- ▶ **Why?**
  - provide storage for flood waters
  - improve water quality
  - provide research opportunities
  - protect and provide habitat for a variety of flora and fauna
  - provide recreational and eco-tourism opportunities throughout watershed
  - provincially mandated program
  
- ▶ **Who benefits/participates?**
  - watershed residents
  - naturalists, hiking groups, hunters
  - students, instructors, researchers
  - provincial government
  - municipalities
  - special interest groups
  - local environment



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## **ENVIRONMENTAL PLANNING**

- ▶ **What does the Authority do?**
  - provides land use planning input and review advice to watershed municipalities and planning boards
  - provides technical advice and information to landowners, developers, and the public regarding flood and erosion hazards and environmental concerns
  - regulates filling, construction, and alteration to waterways along rivers, creeks, streams, and lakeshore
  
- ▶ **Examples**
  - official plan policies and schedules, comprehensive zoning by-laws, plans of subdivisions
  - reviewed 52 property inquiries (legal, real estate, and general information) in 1998
  - provide comments on approximately 70 municipal planning/development documents or applications
  - approved 13 permit applications under Section 28 regulations of the Conservation Authorities Act in 1998
  - participated on FOCALerie GIS Project Steering Committee and development of CCCA Geographic Information System (GIS) capability
  - 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
  - coordination of watershed and subwatershed studies
  - provide advice and assistance to watershed municipalities with regards to new responsibilities under the Planning Act
  - natural heritage protection
  - identification and protection of watershed wetlands and environmentally significant areas
  - municipal drain review (i.e. erosion control and location)
  - provided comments on 9 Municipal Drain Reports (i.e. erosion control and location)
  - screening applications under the Federal Fisheries Act
  
- ▶ **Why?**
  - 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, Ontario Municipal Board, Mining and Lands Commissioner



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## **CONSERVATION AREAS**

- ▶ **What does the Authority do?**
  - 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 (220 campsites), swimming, fishing, picnicking, hiking, and special event facilities
  - rural based Conservation Areas like Archie Coulter provide passive recreational opportunities such as hiking, archery tournaments, bird watching, and research
  - Conservation Areas located in an urban setting provide municipalities with valuable green space for active recreation (i.e. Ward McKenna and Ivan Steen properties)
  - maintain and operate the Springwater Dam for flow augmentation and recreation purposes
  - volunteer opportunities (i.e. scouting groups, cooperative education students)
  - capital improvement projects (i.e. roads, campsite development, trails)
  
- ▶ **Why?**
  - provides a high quality recreational experience in a natural setting
  - generates excess revenues to offset other program expenses and municipal levies
  - allows safe access to Authority owned/managed lands for permitted activities
  - creates fish and wildlife habitat
  - protects the integrity of environmentally significant lands
  - permits land susceptible to hazards (flood plain) to be utilized for recreational purposes
  - provides valuable green space in urban settings
  - creates summer employment opportunities for students
  - maintain \$2 million infrastructure
  - provides land for the housing of municipal services (i.e. 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
  - local economies (tourism spinoffs and purchase of goods and services)
  - the people of Ontario
  - sponsors of special events
  - volunteer supporters and donors
  - students



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## **COMMUNITY INFORMATION/EDUCATION**

- ▶ **What does the Authority do?**
  - 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**
  - provides various types of printed material for public distribution and consumption (i.e. brochures, newsletters, trail guides, Annual Report)
  - recognition of deserving conservationists within the watershed (i.e. CCCA Conservation Award)
  - environmental education programs in partnership with various community organizations (i.e. Aylmer Museum Victorian School Days)
  - joint working relationship with the Elgin County Outdoor Education Centre (i.e. Maple Syrup Program)
  - hands-on resource management opportunities with local schools (i.e. erosion control, tree planting)
  - cooperative education (i.e. student placement from local secondary schools)
  - displays and presentations (i.e. Home and Garden Show, CCCA Annual meeting, school events)
  - community involvement (i.e. Elgin County Farm Conservation Field Day, Arbor Day)
  - joint marketing and advertising initiatives with neighbouring Conservation Authorities (i.e. tree planting, workshops)
  - involvement of local business in sponsoring environmental programs (i.e. Yellow Fish Road Storm Drain Marking Program)
  - research partnerships (i.e. University of Toronto Hardwood Biomass Project)
  - media relations
  - demonstration sites for public viewing and education
  - special programming (i.e. badge requirements for scouts and guides)
- ▶ **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 learning opportunities
  - create an environmental/stewardship ethic within the local community especially with our youth
- ▶ **Who benefits/participates?**
  - watershed residents/general public
  - students (over 1,200 participants in 1998)
  - municipalities by having an involved and informed constituency
  - Conservation Area users
  - local businesses



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## **EXTENSION SERVICES**

- ▶ **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 and municipalities experiencing erosion problems on their land holdings (i.e. over 100 erosion control projects installed by CCCA staff over the past decade to preserve soil resources and reduce sedimentation)
  - woodlot management on municipal lands
  - local delivery agency for provincial and federal environmental initiatives (i.e. Managed Forest Tax Incentive Program)
  - local contact for environmental issues
  - researching, designing and implementing streambank erosion control using non-traditional methods (i.e. bioengineering)
  - access to special employment program funding
  - hands-on resource management opportunities (i.e. 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 (i.e. Great Lakes Health Effects Program)
  - 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
  - provide clean water for recreational opportunities
  
- ▶ **Who benefits/participates?**
  - private landowners
  - local community
  - downstream users
  - local environment
  - contractors
  - municipalities
  - other levels of government



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## **CORPORATE SERVICES**

- ▶ **What does the Authority do?**
  - supports all programs and activities of the Conservation Authority in a business like manner
  
- ▶ **Examples**
  - budgets, accounting and administration of payroll, benefits, personnel policies, and employment legislation
  - supports the CCCA Board of Directors
  - provides liaison with member municipalities
  - administrative, clerical, and design support
  - corporate and strategic planning, policy development and implementation
  - assessing community needs
  - services accounts with suppliers, contractors, and businesses
  - provides policy interpretation and program guidance for other CCCA services
  - training and compliance with Health & Safety Regulations
  - provides training and work experience placements for a variety of agencies (i.e. Workfare, Cooperative Education, Human Resources Development Canada)
  
- ▶ **Why?**
  - provides programs that are cost-effective and run as efficiently as possible
  - ensures programs are consistent with watershed resources, community values, political and financial realities, and approved policy
  - 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
  
- ▶ **Who benefits/participates?**
  - municipalities benefit from programs tailored to their specific environmental needs and economic realities
  - watershed residents (taxpayers) receive the most value for their dollars
  - staff and members of the Conservation Authority
  - watershed businesses and suppliers (over \$225,000 spent locally on an annual basis)