

Community Excellence Awards

2018 Application Form

Please complete and return the application form by Friday, May 25, 2018. All questions are required to be answered by typing directly in this form. If you have any questions, contact awards@ubcm.ca or (250) 356-5193.

SECTION 1: Applicant Information

Local Government: City of Surrey	Complete Mailing Address: 13450 104 Ave, Surrey, BC, Canada, V3T 1V8
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SECTION 2: Category

- Excellence in Governance.** *Governance processes or policies that are outcomes-based and consensus oriented; support and encourage citizen participation in civic decision-making; are efficient, equitable and inclusive, open and transparent; and exemplify best practices in accountability, effectiveness, and long term thinking.*
- Excellence in Service Delivery.** *Projects/programs that provide effective services in a proactive manner, demonstrate benefit to the community, and utilize performance measures, benchmarks and standards to ensure sustainable service delivery.*
- Excellence in Asset Management.** *Projects/programs that demonstrate a comprehensive system of asset management policies and practices, meeting and/or exceeding accepted best practices.*
- Excellence in Sustainability.** *Projects/programs that incorporate a long-term sustainability lens by considering cultural, social, economic and environmental issues in planning, policy and practice.*

SECTION 3: Project/Program Details

1. **Name of the Project/Program:**
Improving Coastal Flood Adaptation Approaches (ICFAA)

2. Project/Program Summary. Please provide a summary of your project/program in 150 words or less.

Flood risk and climate change is Surrey's greatest strategic risk. Backed by its Climate Adaptation Strategy, City of Surrey is leading several initiatives to reduce climate vulnerability of the community. An example of such forward-thinking plans is the project Improving Coastal Flood Adaptation Approaches (ICFAA) to minimize infrastructure risk using Engineers Canada PIEVC Protocol. Previous assessment of a 65-square-kilometer area revealed significant vulnerabilities of provincially and nationally important infrastructure, so a collaborative interjurisdictional risk-based approach was implemented to inform infrastructure planning and asset management in the area.

Linked to a broader Surrey Coastal Flood Adaptation Strategy (CFAS), ICFAA focused on assessing infrastructure vulnerabilities to future impacts of flooding in the coastal floodplains of Surrey, and explored the implications of proposed adaptation options with the intent of improving approaches to adapt to sea level rise. Using a collaborative and hands on process that other municipalities can follow, all levels of government were successfully engaged in climate adaptation planning to overcome tough infrastructure challenges.

3. Demonstrating Excellence. Please describe how your project/program demonstrates excellence in meeting the purposes of local government in BC and provides promising practices for others to follow.

City of Surrey's Sustainability Charter 2.0 guides all City decisions and outlines a 40-year vision for sustainability in Surrey: to become a thriving, green, inclusive city. Infrastructure is one of the eight themes of the Charter, and its goal is: "Effective infrastructure and services that meet the current and future needs of the city, while protecting the natural environment and supporting urban growth." One of the desired outcomes for Infrastructure envisions "Infrastructure systems [that] are designed to protect human health, preserve environmental integrity and be adaptable to climate change impacts."

To ensure that Surrey achieves community resilience in a timely and cost effective way, based on the best available science and information, the Surrey Climate Adaptation Strategy was developed. The Strategy identifies the following adaptation actions (among others): "Assess existing City infrastructure and utilities for vulnerability to climate change; and Support the development of the Regional Flood Management Strategy in coordination with senior levels of government, other municipalities, and key stakeholders".

While, as a result of these policies, new City infrastructure is being built with increased resiliency sea level rise is still a big challenge for service delivery in Surrey as it impacts asset management spanning a multitude of jurisdictions and agencies. ICFAA supported the tough discussions of long-term viability of assets and the interjurisdictional aspects of resilience and vulnerability of infrastructure networks using a triple-bottom-line analysis of environmental, social and economic impacts. The workshops focused on identifying vulnerabilities to, and interactions between, transportation infrastructure (rail,

roads, trails, and runways), utilities (power, gas, sanitary sewers and lift stations), and flood control / marine infrastructure (marinas, private docks, drainage pump stations, sea dams, and dykes) and assessing the consequences of the impacts from flooding and evaluating proposed adaptation options.

The information gathered during the ICFAA workshops that brought together staff from across City departments and other agencies and jurisdictions is supporting an ongoing discussion to develop and prioritize investment in effective and efficient flood adaptation measures for the infrastructure and service delivery at risk, supported by a number of related initiatives in Surrey including development of a sustainable service delivery program, ongoing updates to 10-year planning cycles, Capital Asset Management Program, Enterprise Risk Management Reporting system and the Coastal Flood Adaptation Strategy (CFAS).

The project also demonstrates a nationally recognized process for local government to convene stakeholders to tackle tough problems today, to create a sustainable future and then take the information to the public for broad support and action in a larger planning and engagement process.

4. Category Criteria.

A. Please describe how your project/program meets the objectives of the category you have applied under. Refer to S. 3 of the Program & Application Guide.

City of Surrey recognizes that the complex challenge of coastal climate change adaptation requires partnerships and work across organization silos. Thus, the ICFAA project developed a structure for interdepartmental and interjurisdictional collaboration through two workshops and site tour that facilitated the exchange of knowledge and perspectives among the attendees were the fundamental elements of ICFAA and critical for achieving an efficient, transparent and inclusive climate change adaptation process. To start off on the best footing and help recruit the broadest level of participation, an Organizing Committee was established with external organizations.

The workshops were attended by participants representing 28 organizations, which included provincial ministries and public sector agencies, energy distribution infrastructure owners, non-governmental organizations and local governments, emergency planners, emergency response providers, RCMP, engineering associations, academic institutions and others. Among the workshop participants there were also seven City of Surrey managers and other staff from various City departments, ranging from Planning, Risk Management, Finance and Operations to Transportation and Sustainability Office.

Representation from the broad group of stakeholders was crucial for enhancing the shared understanding of all the infrastructure asset vulnerabilities and to promote open conversations about priorities, plans and concerns, and increasing awareness of the issue of coastal flooding and adaptation approaches available that require extensive collaboration to implement. Together these outcomes enabled for informed, equitable

and inclusive decision-making and collaborative solutions to the multifaceted challenge.

The results of ICFAA will be incorporated in the broader CFAS process, which is taking a community-based, participatory approach to coastal flood adaptation planning and has engaged residents, stakeholders, and other partners throughout project, including First Nations, community and environmental organizations, business associations and groups, senior levels of governments, farmers and the agricultural community, and neighbouring jurisdictions.

B. In many cases projects may meet the criteria of more than one category. If applicable, please describe how your project meets the criteria of one or more other categories.

Service Delivery

The knowledge and linkages established during ICFAA will contribute to ensuring sustainable and reliable service delivery in Surrey. The ICFAA study area includes numerous locally, regionally and nationally important infrastructure assets—proactive risk-informed management of these assets will improve long-term service delivery to communities in Surrey and beyond. ICFAA allowed for exchange of knowledge and fostered open dialogue among infrastructure owners, encouraging a collaborative and forward-thinking approach to maintaining a high level of service now and into the uncertain future. While the outcomes of ICFAA will be incorporated into CFAS and other City initiatives, this coordinated interjurisdictional approach will benefit the local communities by enabling sustainable service delivery through non-City-owned infrastructure too.

Asset Management

ICFAA enhanced the current asset management system at the City which includes the Asset Management for Sustainable Service Delivery initiative, an Enterprise Risk Management Reporting system, the Capital Asset Management Program and 10-year Servicing Plans. The shared awareness of the need for climate adaptation of assets resulting from this initiative will ensure that concerns for both municipal and regional infrastructure are adequately incorporated into the participatory planning process of CFAS. Knowledge of the flood risks to municipal infrastructure will inform City policy and plan updates including future investment planning and decision-making through an integrated approach that reduces asset lifecycle cost and reduces service disruption. By adopting the Engineers Canada PIEVC protocol method, ICFAA incorporated climate risk assessment into asset management to improve the climate resilience of critical infrastructure, while evaluating the triple-bottom-line aspects of adaptation options.

Sustainability

Climate change adaptation is a long-term and complex process, and we believe that sustainability considerations should be an integral element of any adaptation efforts. Therefore ICFAA adopted the PIEVC Protocol's triple-bottom-line (TBL) decision-making module that helps to establish, in broad terms, environmental, social and economic factors to aid decision-makers in selecting appropriate adaptation actions and strategies. The use of a TBL-support tool is a means of priority setting; it helps decision-

makers balance competing interests to provide the greatest overall return on investment that extends beyond purely financial terms. It illuminated the broader, community level impacts of infrastructure decision making beyond what individual organizations would consider if making decisions in isolation from other organizations.

SECTION 4: Program Criteria

- 5. Leadership.** Describe the extent to which your local government acted as a local or regional leader in the development or implementation of the project/program.

In the region, City of Surrey has been commended for its leadership in coastal flood and sea level rise adaptation; Surrey is at the forefront of collaborative adaptation planning and is proactively planning for City infrastructure that will become vulnerable from sea level rise.

Members of two engineering associations (Engineers Canada, and Engineers and Geoscientists of British Columbia) also recognized the leadership of the City of Surrey in pursuing this project. David Lapp, Practice Lead, Globalization and Sustainable Development at Engineers Canada, characterized ICFAA as an innovative approach to dealing with sea level rise and was hopeful that the lessons learned through this project will be applicable in other parts of Canada and the world.

This work is being highlighted in a Massive Open Online Course being developed on Sustainable Development and Environmental Stewardship delivered by Polytechnique Montréal. ICFAA acted as an instrument through which City of Surrey was able to bring together infrastructure stakeholders in the study area and lead important initial conversations regarding coastal flood adaptation.

The Fraser Basin Council and Metro Vancouver have been quoted in the Globe and Mail and Vancouver Sun respectively in support of the work Surrey is leading on sea level rise planning.

- 6. Partnerships and collaboration.** Describe the breadth and depth of community and/or regional partnerships that supported the project/program and the extent to which internal and/or external collaboration was evident.

Establishing partnerships and catalyzing collaboration was the core principle of ICFAA. We recognized the importance of engaging with organizations and jurisdictions with similar mandates and challenges in coastal flood protection, such as the neighbouring City of Delta and the Fraser Basin Council, and have maintained the relationships even after the completion of the project to keep each other informed and involved with flood adaptation works. Similarly, we understood that the challenge of adapting to rising sea levels is one that can most efficiently and effectively be approached through collaboration, so we aimed to exploration of common risks and potential joint solutions and their TBL implications.

Due to the interconnected nature of infrastructure systems, how infrastructure owned by others adapts in the future will impact the City. When starting the project, none of the infrastructure owners had clear objectives or plans of their own for how they will adapt in the future. In time, other infrastructure owners will advance their own adaptation plans building on the shared understanding developed to date, which will in turn reduce the planning uncertainty for all of the other infrastructure owners. Adaptation planning is a particularly integrative process when there is interconnected infrastructure under multiple jurisdictions; however, ICFAA was an important step in moving forwards and developing a strategy, as well as establishing a collaborative environment and building trust.

The ICFAA project was nested into the community focused engagement and planning process under CFAS. Through CFAS, all sectors of the community that are impacted from sea level rise have been engaged. Partnerships with environmental groups and community associations have been instrumental in the success of the broader CFAS.

7. Innovation and promising practices. Describe the degree to which the project/program demonstrated creativity and innovation, and contributed to increased efficiency or effectiveness.

We believe that ICFAA's collaborative approach to infrastructure adaptation planning is an innovative and efficient way of asset management. This innovative aspect was also reflected in the novel way of applying the PIEVC Protocol which typically considers groups of infrastructure assets of one type (e.g., flood protection or transportation), but in this case it focused on all infrastructure asset types in the study area.

Using a structured TBL process increased the profile of broad considerations across infrastructure sectors. An essential aspect of the process was including a diverse range of professionals beyond those typically involved in infrastructure asset management resulted in an increased profile to environmental (regulatory compliance and biodiversity) and social (public perceptions, level of service and risk, emergency response and First Nations and archaeology) considerations. Specifically, City of Surrey Parks and Environment staff elevated Environmental objectives at discussion tables. Emergency service providers and City Planners emphasized social considerations (e.g., disruption of commerce and emergency access). Inclusion of operators raised the profile of ongoing economic factors (resilience and maintainability, and risk tolerance and asset lifecycle considerations).

8. Public engagement and communications. Describe the extent to which public engagement was foundational to the success of the project/program, including the use of communication tools such as social media.

Input elicited from the stakeholders was an integral component of ICFAA. We engaged with infrastructure owners and operators with assets in the study area. First, we identified the stakeholders and invited them to attend the two workshops. During the workshops we sought feedback on flooding risk perception to infrastructure in the study area, and evaluation of TBL decision-making factors for two flooding adaptation options. The outcomes of the two workshops were the key component of ICFAA; the workshop

attendees also had an opportunity to provide feedback on a draft report. An online Story Map (<https://bit.ly/2qSNFCf>) and video (<https://youtu.be/KqjyX1aUghc>) was developed to provide more information on infrastructure in the coastal floodplains of Surrey to the broader public and is featured on the Surrey CFAS website (www.surrey.ca/coastal)

Other segments of the public are being engaged through the broader CFAS process, which has the following engagement frameworks: a Decision Support Framework, a Stakeholder Engagement Framework and integrated Communications and Media Framework. The Decision Support Framework detailed the overall participatory, community values-based planning approach, methods, data needs, and decision points for the CFAS. The framework was closely integrated with a Stakeholder Engagement Framework, which guided the work of the consultant team in gathering input and feedback for CFAS, and a Media and Communications Framework, which laid out a process to inform the local community and stakeholders, and supports productive change management. CFAS stakeholder groups include the CFAS Steering Committee, the CFAS Advisory Group, City of Surrey committees, Semiahmoo First Nation, CFAS Focus Groups, and a multitude of general engagement and outreach opportunities provided for the general public, including youth. A range of stakeholder engagement activities (e.g., surveys, focus groups, strategy sessions, workshops, open houses), visual materials (e.g., 2D and 3D simulations, project videos, process graphics and illustrations), and communication channels were used (e.g., project website, on-line surveys, project post cards and door hangers, social media).

To reach youth in particular, a social media campaign was used and a YouTube Playlist created
<https://www.youtube.com/playlist?list=PLtVfxe1fnZNtBJzAXgQ7kwMNf6bQFrQnI>

9. Transferability. Describe the degree to which the process or outcomes of the project, or other learnings, could be conveyed to other UBCM members.

The collaborative ICFAA process developed by Surrey can be adapted to various circumstances in which a number of infrastructure assets in an area are facing a common current or future risk associated with climate changes.

We found the following factors key to the successful completion of the project:

First, having an experienced, interdisciplinary consultant team was instrumental to meeting the objectives of this multifaceted project; the combination of engineering, stakeholder engagement and flood-management communications expertise proved invaluable in the process.

Second, a study tour ensured that all stakeholders were familiar with the study area, and provided them the opportunity to see the existing flood-management infrastructure and current flooding challenges in person, as well as to learn about the potential future impacts of sea level rise.

Third, a representation from diverse infrastructure stakeholders was crucial to gain a broad, triple-bottom-line, understanding of types of risks and challenges associated with coastal flooding and the proposed adaptation options.

Lastly, tightly linking this risk assessment with the comprehensive decision-making process of the broader CFAS initiative gave participants the confidence that their input would help shape timely and significant decisions. This is essential to align political decision makers with the staff level knowledge that comes out of detailed consultations with infrastructure owners.

SECTION 5: Additional Information

10. Please share any other information you think may help support your submission.

The final ICFAA report which includes more information on the project can be found at <http://www.surrey.ca/files/CFAS-ICFAA-FinalReport-29032018.pdf>

SECTION 6: Signature

Applications are required to be signed by an authorized representative of the applicant.

Name: Matt Osler

Title: Senior Project Engineer

Signature:

Date: May 25, 2018

All applicants are required to submit:

- Signed application form. Applications should be submitted as Word or PDF files.
- Five representatives photos of the project. Photos should be submitted as JPEG files.

If you choose to submit your application by e-mail, hard copies do not need to follow.

Submit applications to Local Government Program Services, Union of BC Municipalities

E-mail: awards@ubcm.ca

Mail: 525 Government Street, Victoria, BC, V8V 0A8