



Committee of the Whole

September 3, 2019

8:30 a.m.

Council Chambers, Town Hall

359 Main Street

Agenda

1. **Approval of Agenda**

2. **Approval of Minutes**

- a. Committee of the Whole June 4, 2019 In-Camera Minutes
- b. Committee of the Whole July 2, 2019 Minutes
- c. Committee of the Whole July 2, 2019 In-Camera Minutes

3. **Presentations**

- a. Kings REMO Heat Advisory and Response System & Kings REMO Hurricane Preparedness and Response Plan – Dan Stovel
- b. Environmental Summer Camps Overview – Alisha Christie

4. **Public Input / Question Period**

PLEASE NOTE (applicable to both scheduled public input/question periods):

- Public Participation is limited to 30 minutes
- Each Person is limited to 3 minutes
- Questions or comments are to be directed to the Chair
- Questions shall not refer to personnel matters, litigation or potential litigation or planning matters that have already had a public hearing or any item considered confidential.



5. **Committee Reports (Internal)**

- a. Art in Public Spaces
- b. RCMP Advisory Board

6. **Staff Reports for Discussion**

- a. MPS Review – [click here](#)
- b. RFD 057-2019: Annual Operating Line of Credit
- c. RFD 059-2019: Stormwater Infrastructure - East End Gateway
- d. RFD 050-2019: Shoreline Protection and Wharf Repair
- e. RFD 053-2019: Community Development & Public Works Facility Upgrade
- f. RFD 042-2019: Kings REMO Heat Advisory and Response System (HARS), Kings REMO Hurricane Preparedness and Response Plan (HPRP)

7. **CAO Report**

8. **Committee Reports (External)**

- a. Kings Point-to-Point (KPPT)

9. **Public Input / Question Period**

10. **Regular Meeting Adjourned**

COMMITTEE UPDATE

Title: Art in Public Spaces

Date: September 3, 2019

Department: Office of the CAO



UPDATE

The committee met on July 24, 2019. The following topics were discussed:

- a. Presentation from Acadia Cinema Cooperative requesting funding for a mural
 - Advised Society about opportunities for Wolfville Community Grants
 - No recommendation from this discussion
- b. Uncommon Common Art
 - Wolfville was the only community profiled
- c. Art RFP update
 - The RFP shall go to public tender shortly
 - A jury will be required in the future to assess submissions



Municipal Planning Strategy Review – Draft 3 – September 2019
Committee of the Whole

PLEASE NOTE

All documents and mapping are now publicly available on our website:

<https://www.wolfville.ca/draft-documents.html>

#growingtogether



*Draft Municipal
Planning Strategy*



*Draft Land
Use Bylaw*



*Draft Subdivision
Bylaw*



*Draft Design
Guidelines*

For Council to receive Draft 3, understand process moving forward and identify issues to explain or discuss further at PAC/Council Workshop on September 10th, 2019.

Agenda for today:

Presentation from Staff

- Background
- Document Structure and Brief Overview
- Process and Next Steps

Feedback and Discussion (facilitated by Chair)

- What is needed at upcoming workshop?

**It's how we, as
human beings,
organize ourselves.
It's how we
physically embody
our values in the
built environment.**

Background

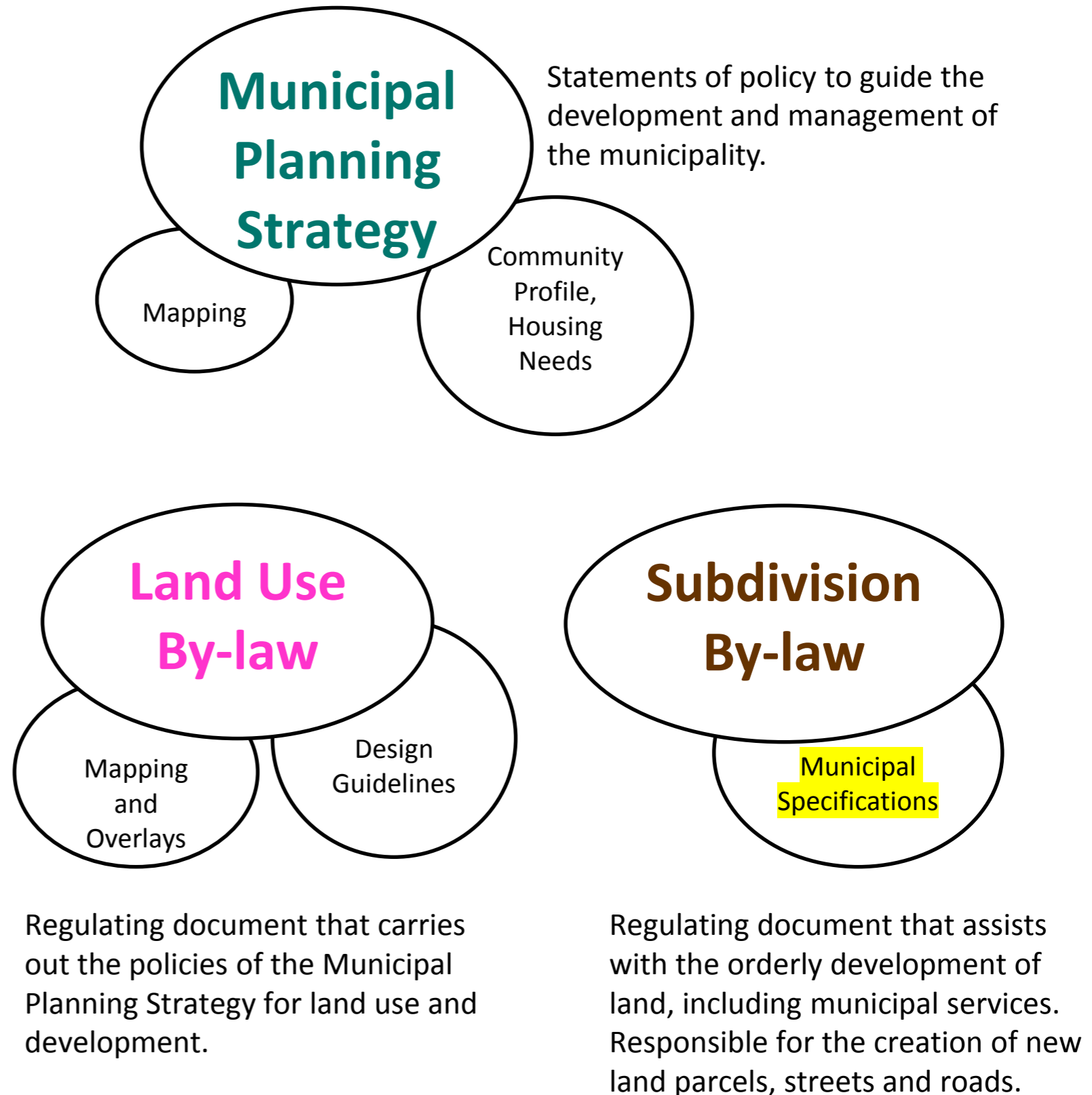
2015 stated goals for our Planning document review:



- Review of the Town's Planning Documents has been ongoing since 2015 (see website for previous drafts, other background documents).
- This is now Draft 3 and will hopefully be (close to) the final draft adopted by Council
- Extensive Community Consultation dating back to 2015 (Schedule 5 of MPS provides summary)
- Many documents (Local, Regional, Provincial) reviewed and/or completed as part of this review (Schedule 5 of MPS provides summary)
- Committee and Council direction provided through 2018 on Key Issues / Draft 2 documents

Document Structure

- 3 main documents – MPS sets Policy and the LUB and SUB are main implementation tools.
- Other tools (guidelines, mapping, etc.) contained within.
- Stormwater guide and Public Participation Program included on website.



Draft 3 – Municipal Planning Strategy



PURPOSE:

to provide statements of policy to guide the development and management of the municipality

and, to further this purpose, to establish:

- policies which address problems and opportunities concerning the development of land and the effects of the development;
- policies to provide a framework for the environmental, social and economic development within a municipality;
- policies that are reasonably consistent with the intent of statements of provincial interest; and
- specify programs and actions necessary for implementing the municipal planning.

(excerpt from Part 213 of the *Municipal Government Act*)



Town of Wolfville Municipal Planning Strategy

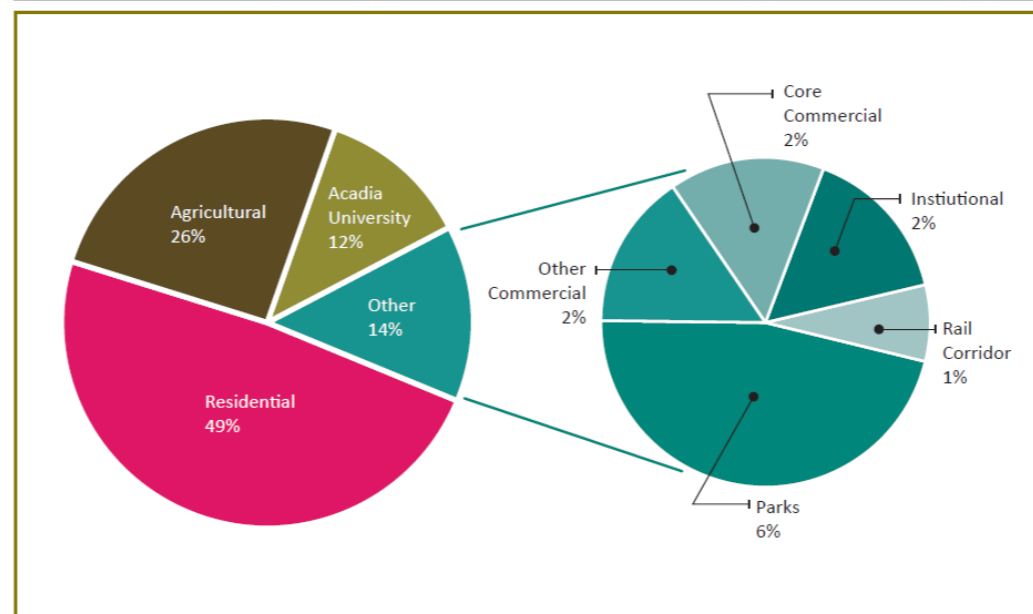
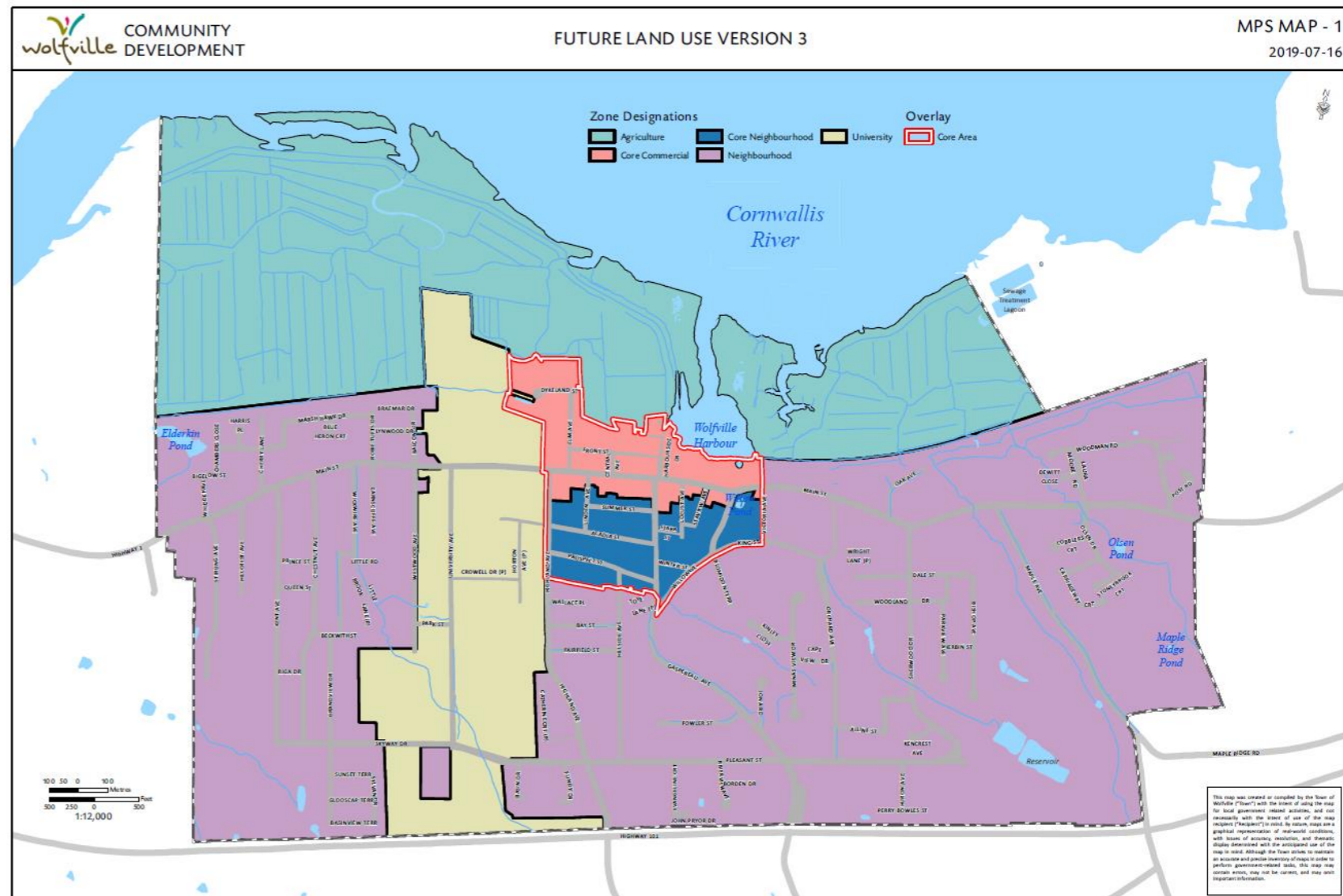
September 2019

Town of Wolfville
Department of
Community Development
200 Dykeland Street
Wolfville, NS



Draft 3 – Municipal Planning Strategy

Generalized Future Land Use Map (Schedule 1 of MPS) – provides land use structure and designations used to organize policy in the MPS document.



Land use breakdown by category

Draft 3 – Municipal Planning Strategy



- States purpose, overview of process and plan structure.
- Summarizes Community Profile (detailed Profile and Housing Needs included as Schedule 4).
- Policy on Provincial and Regional Coordination.



- “Vision, Goals, Objectives” section - establishes strategic decision making framework.
- Policy on Sustainability & Managed Growth in accordance with Community Priorities.
- Includes “core concepts” and “anticipated results”.

Community Priorities	
EP	Economic Prosperity
SE	Social Equity
ES	Environmental Sustainability
LU	Land Use and Design

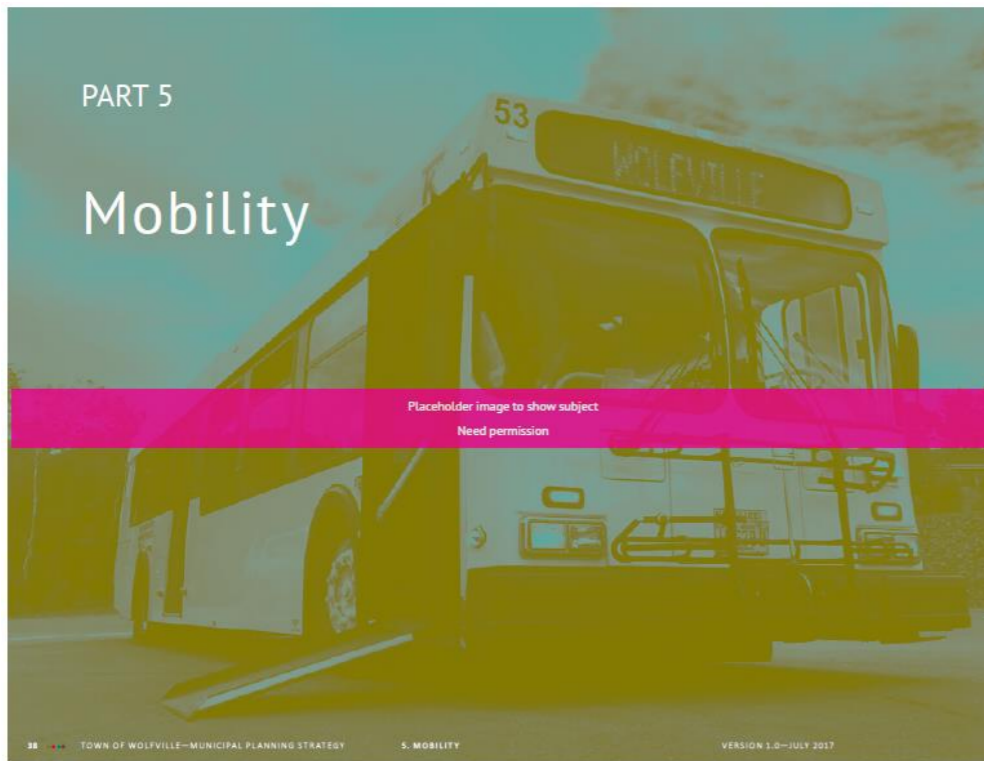


- Policy on how a Town, and a Municipal Planning Strategy, need to balance limited resources.
- Policy on the importance of strategic municipal investment to set the conditions for success.
- Policy on Heritage, Culture and Economic Development.



- Policy on Climate Action and Energy Transition.
- Policy on establishing Development Constraints in the Land Use By-law, including agricultural land in and around the Town.

Draft 3 – Municipal Planning Strategy



- Policy focused on providing mobility options including future streets and improvements to existing infrastructure.
- Policy on Parking and Loading throughout the Town.



- Policy on managing our Parks and Open Spaces generally.
- Policy on parkland dedication for new development or subdivision.
- Establishes parks and open space classifications, including University related lands and the Active Transportation Corridor (former Rail Line).

Draft 3 – Municipal Planning Strategy

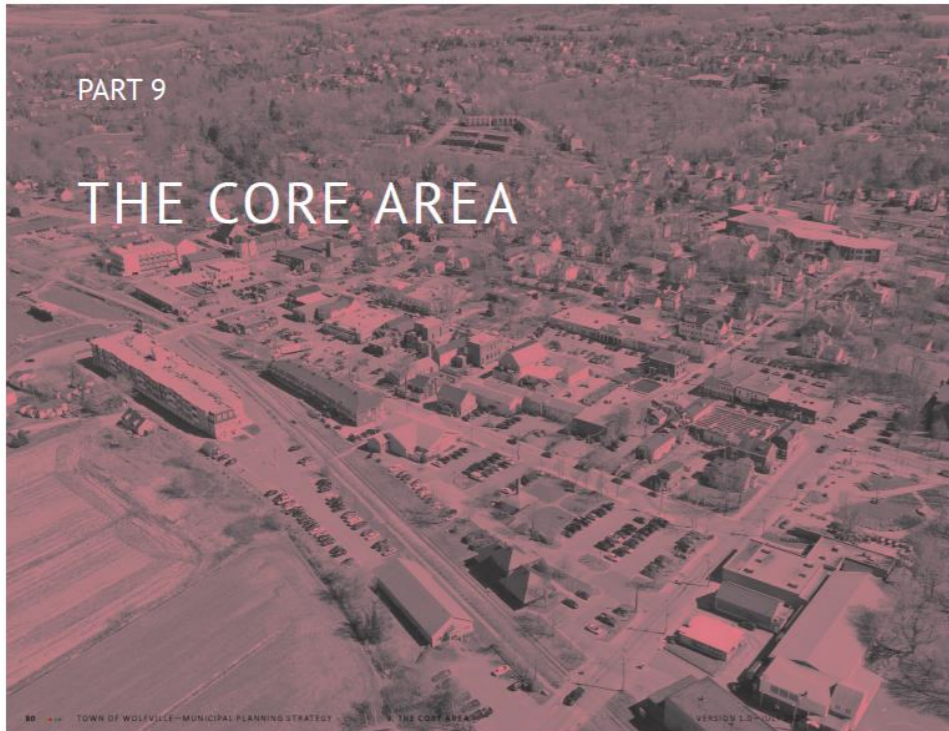


- Policy on sustainable service delivery and asset management.
- Policy on water, sewer, stormwater, solid waste, police and fire.
- Policy on servicing beyond our borders.



- Policy pertaining to the Neighbourhood Designation.
- Policy on Low, Medium, High density residential, and Comprehensive Development Districts.
- Policy organized by focus areas of: Housing Choice & Affordability; Sustainable + Resilient Neighbourhoods; Land Use Compatibility and Placemaking; and Neighbourhood Entrepreneurship, consistent with Community Priorities.

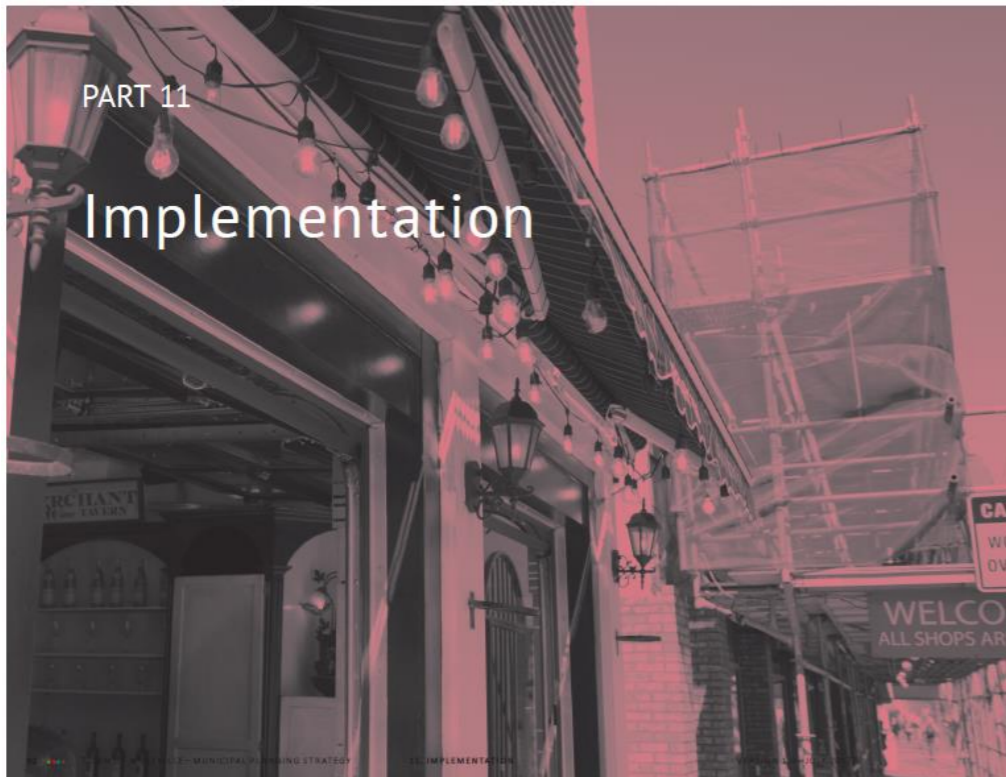
Draft 3 – Municipal Planning Strategy



- Policy pertaining to the Core Area – Core Neighbourhood and Core Commercial designations.
- Policy on how development will be considered, including specific built form requirements (e.g. building height).
- Policy to encourage additional commercial development opportunities, including live-work units in the Core Neighbourhood Area.



- Policy pertaining to the University designation – Acadia University lands.
- Policy on how development will be considered, including specific built form requirements.
- Policy to recognize the role of the University in the Town's success including the new Partnership Agreement and importance of University open space.



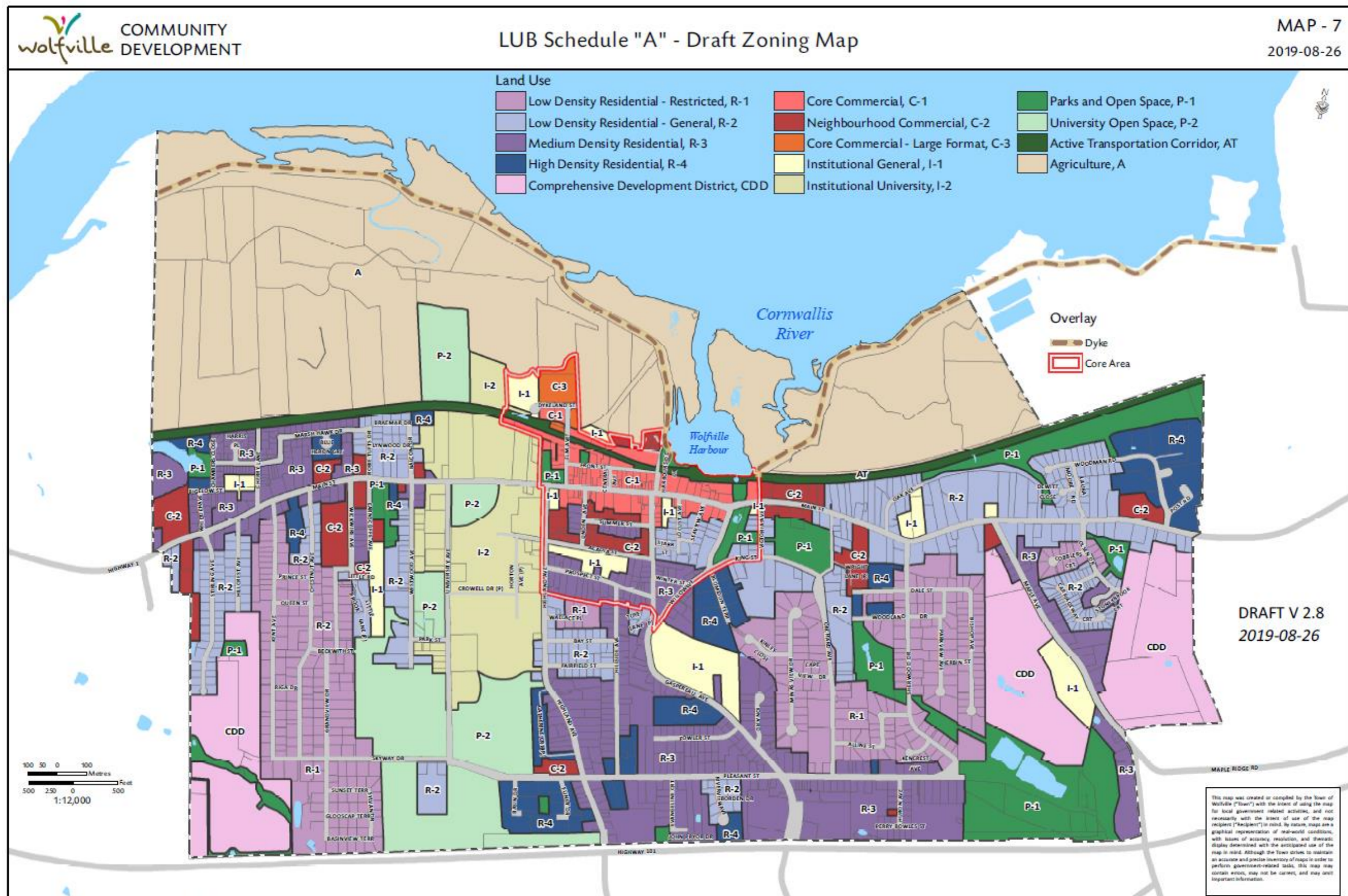
- Policy related to the Implementation of the MPS through the Land Use By-law, Design Guidelines, Subdivision By-law, Development Agreements and other tools.
- Policy on general development matters, enabling more specific regulation in the Land Use By-law (e.g. outdoor storage, lighting, accessory buildings, landscaping, etc.).
- Policy on Public Engagement.



- Policy on the importance of monitoring and sets up future work to develop a Measurement and Reporting framework for the Town.

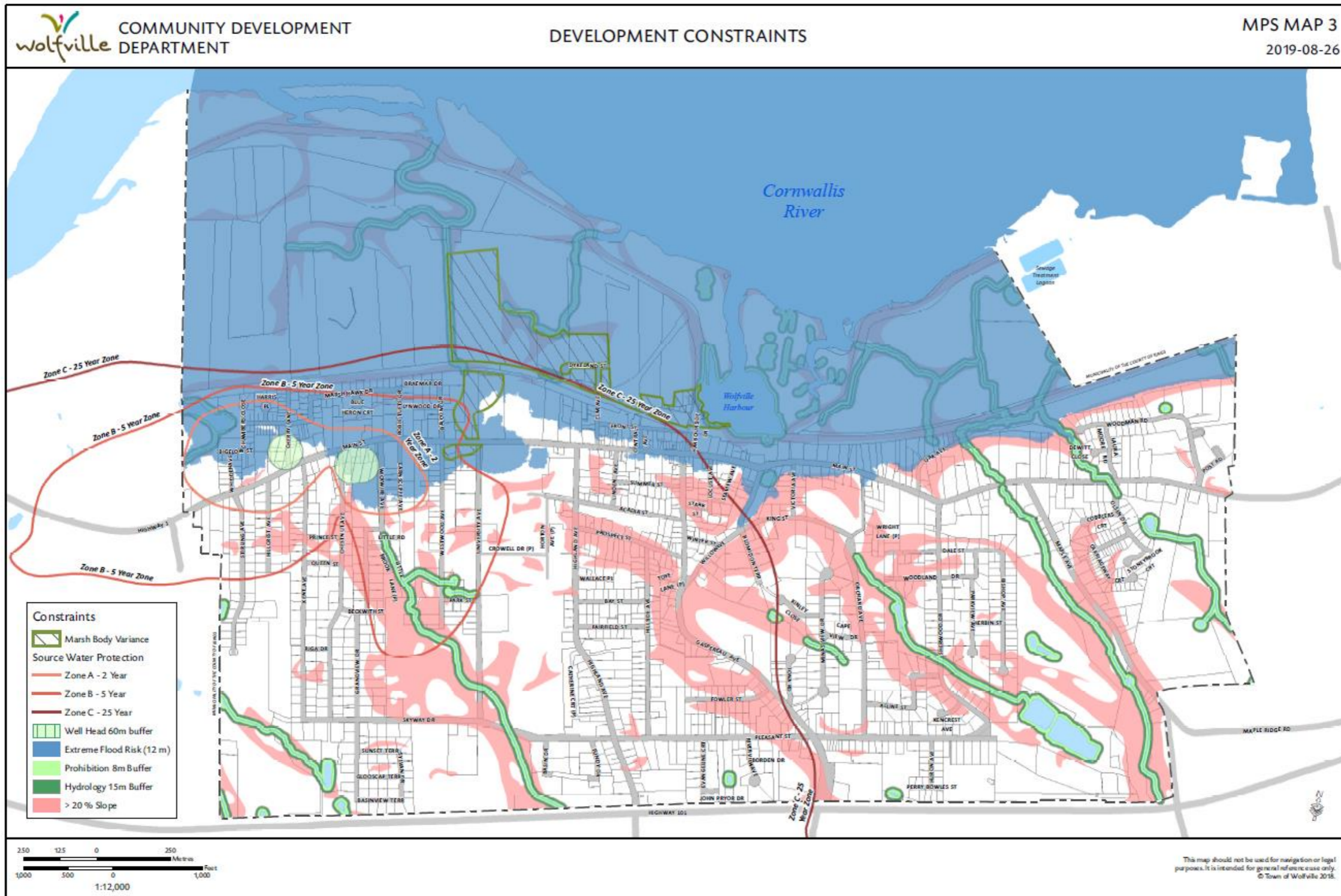
Draft 3 – Land Use By-law

Land Use Zoning Map (Schedule 1 of LUB) – provides areas where specific regulations apply to different zones within the broader land use designations of the MPS.



Draft 3 – Land Use By-law

Development Constraints (Schedule 2 of LUB) are outlined with updated data.



Draft 3 – Land Use By-law

- Moving away from Development Agreements to Site Plan approval
- Focus on clear requirements and predictable built form results (for all stakeholders)
- Improved requirements for flood proofing, stormwater management, parking, and other requirements

LUB excerpts / examples:

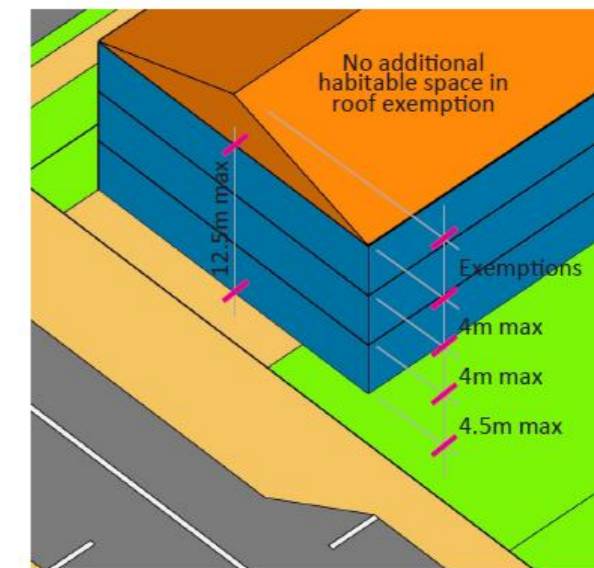
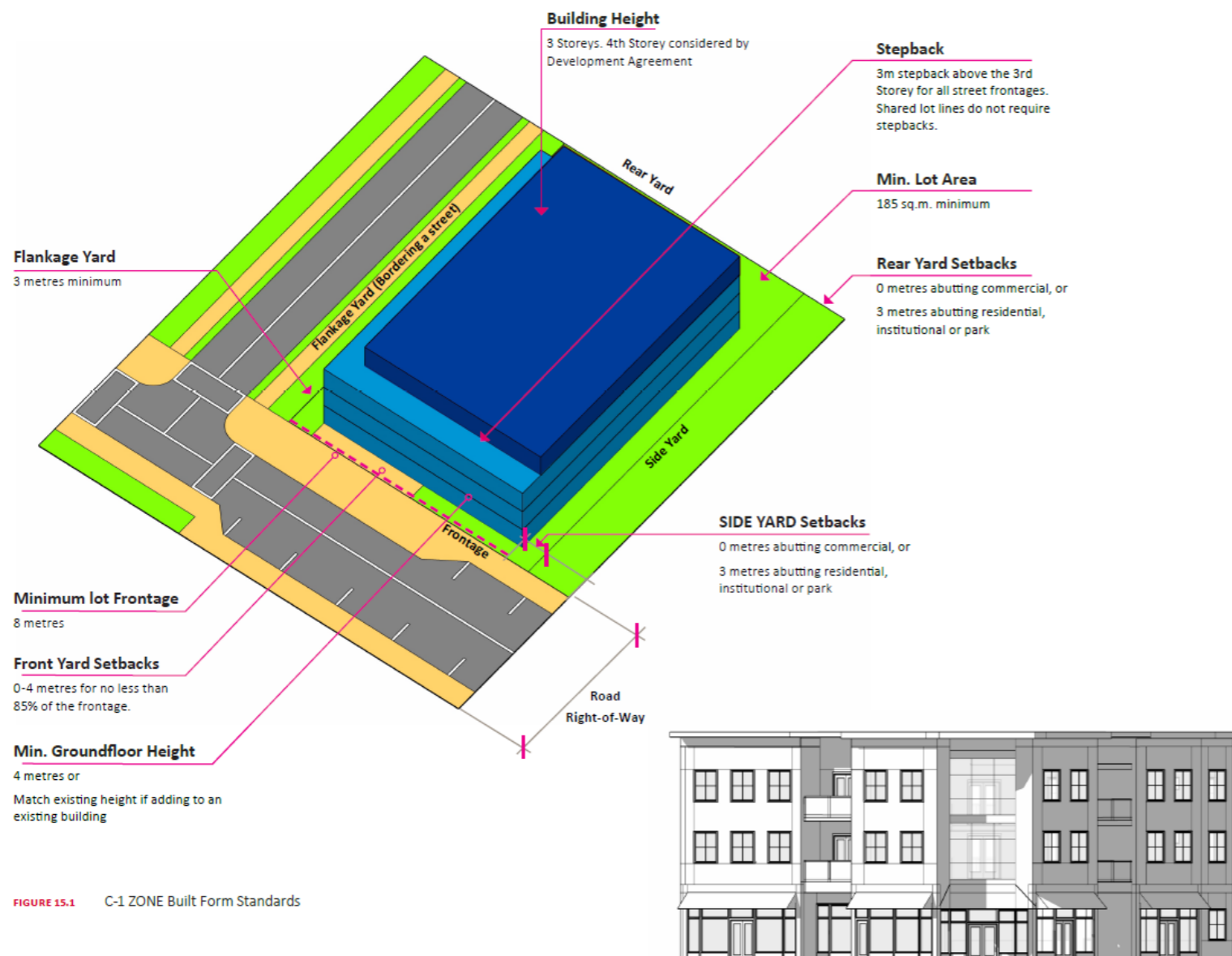


FIGURE 4.10 Building Height Maximums

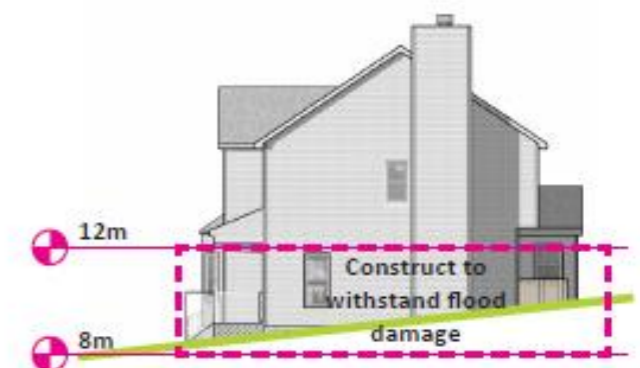


FIGURE 5.1 Section 8m-12m Flood proofing

Draft 3 – Land Use By-law

LUB excerpts / examples:

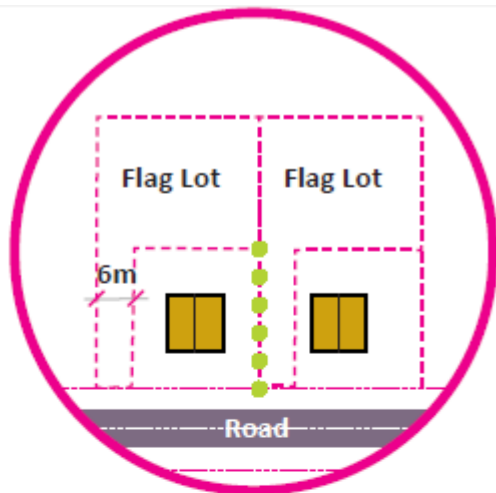


FIGURE 4.8 Flag Lots 6m access easement

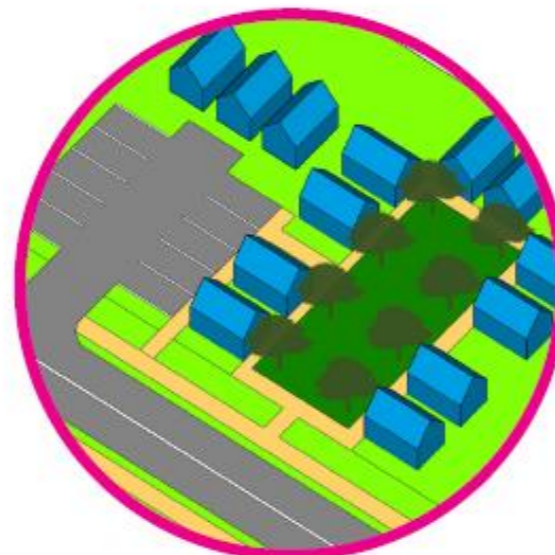


FIGURE 8.1 Cluster Housing Example

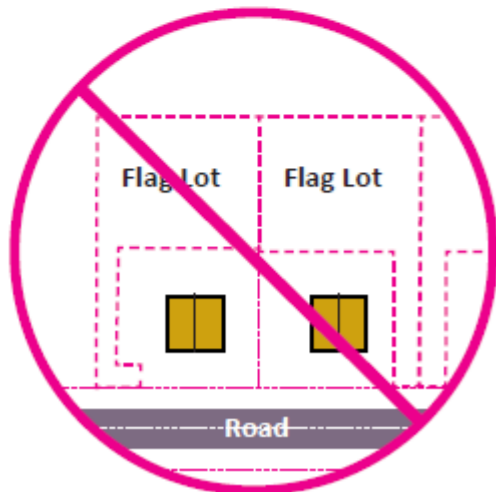


FIGURE 4.9 Flag Lots not permitted

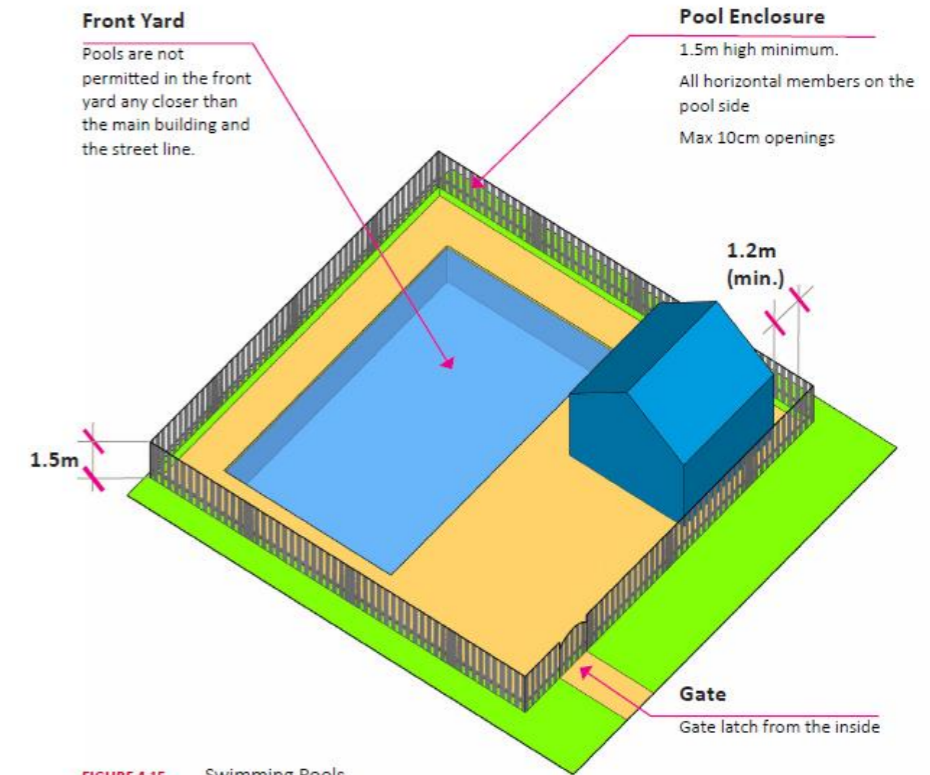


FIGURE 4.15 Swimming Pools

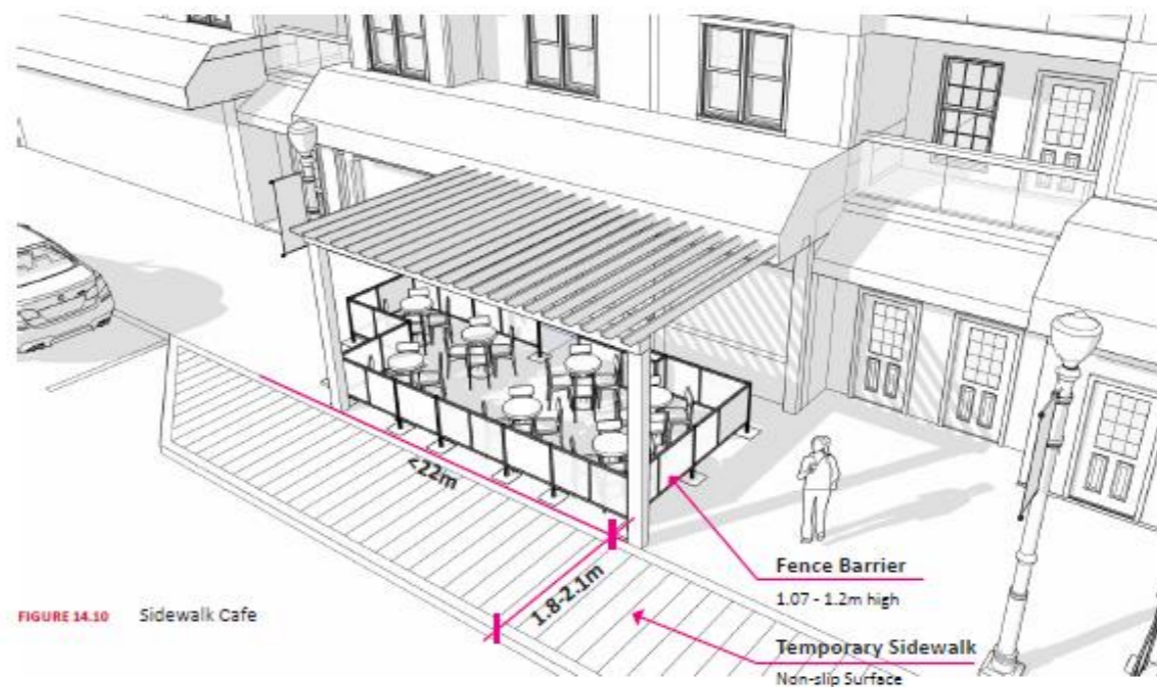
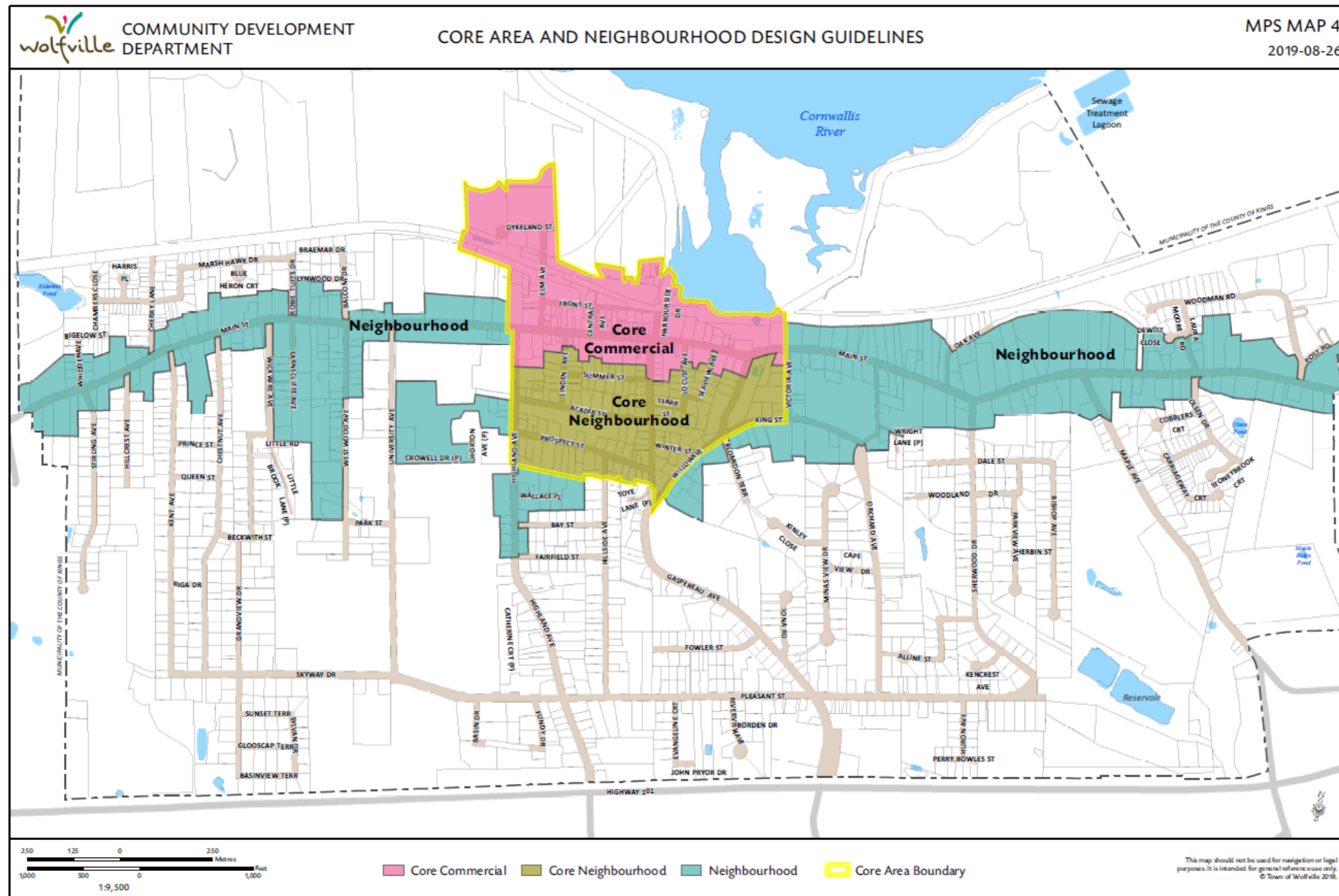


FIGURE 14.10 Sidewalk Cafe

Draft 3 – Design Guidelines

- The existing (1990s) Design Guidelines have been combined into the “Core Area and Neighbourhood Design Guidelines”
- These are guidelines to encourage quality design and complement the regulations in the Land Use By-law.



Draft 3 – Design Guidelines



Design Guidelines excerpts / examples:

2.0 DESIGN GUIDELINES



Character: Clear development patterns and continuous built form within an area allows understanding of how it is organized and how to navigate throughout it. The existing scale and rhythm of buildings and open spaces provide a sense of place that should be respected within a new development.



Pedestrian Experience: Activity in the Town of Wolfville depends on pedestrian scale streets which support comfortable and safe environments for pedestrians in all areas: commercial, neighborhood, and parkland



Diversity: A diverse community includes a range of housing types, land uses and architectural style. New development should reflect local values, history and culture yet also contribute to being a unique eclectic community with distinct features.



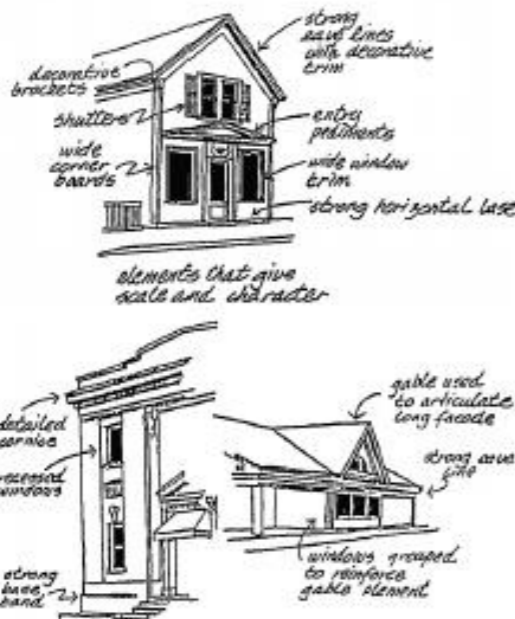
Patterns: Street edges of trees or building walls, consistent setbacks and a curated or landscaped public sphere create recurring patterns that lead to more active, vibrant and attractive environment.



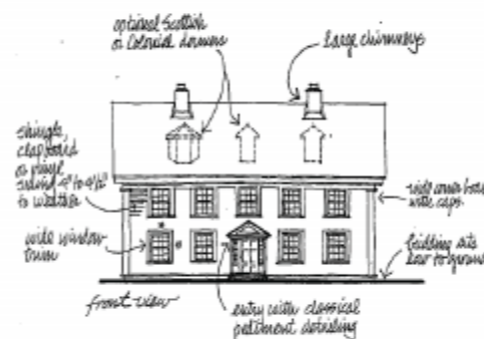
Public Realm: A quality public realm design creates a safe and vibrant community. Projects should promote public spaces and routes that are attractive, safe, uncluttered and work effectively for all in society.



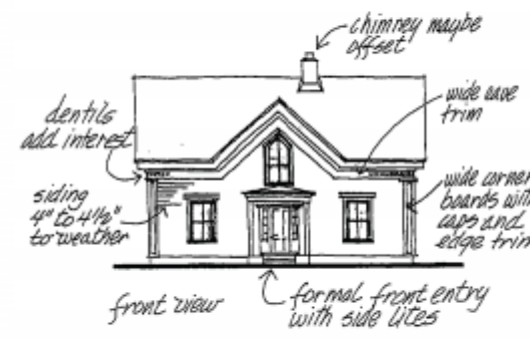
Sustainability & Resilience: Sustainable urban design provides greater connectivity for pedestrians, cyclists and public transit users to reduce fossil fuel use and encourages the preservation of existing buildings as a method to retain carbon investment in their creation.



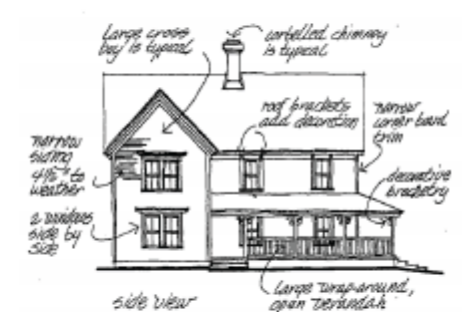
Styles of Historic Homes in the Neighborhood Area



Georgian



Victorian Gothic



Classical Revival

- **Subdivision By-law:** Responsible for the creation of new land parcels, streets and roads.
 - Largely the same as existing - minor updates. Future work required on Municipal Specifications.
- **Stormwater Management Guide:** Companion to the Land Use By-law to outline the Town's Stormwater Management approach.
- **Public Participation Program Policy:** Requirement of the *Municipal Government Act*, to outline consultation approach for planning matters.
 - Update to the existing policy, including new requirements for consultation with neighbouring municipalities.

Summary

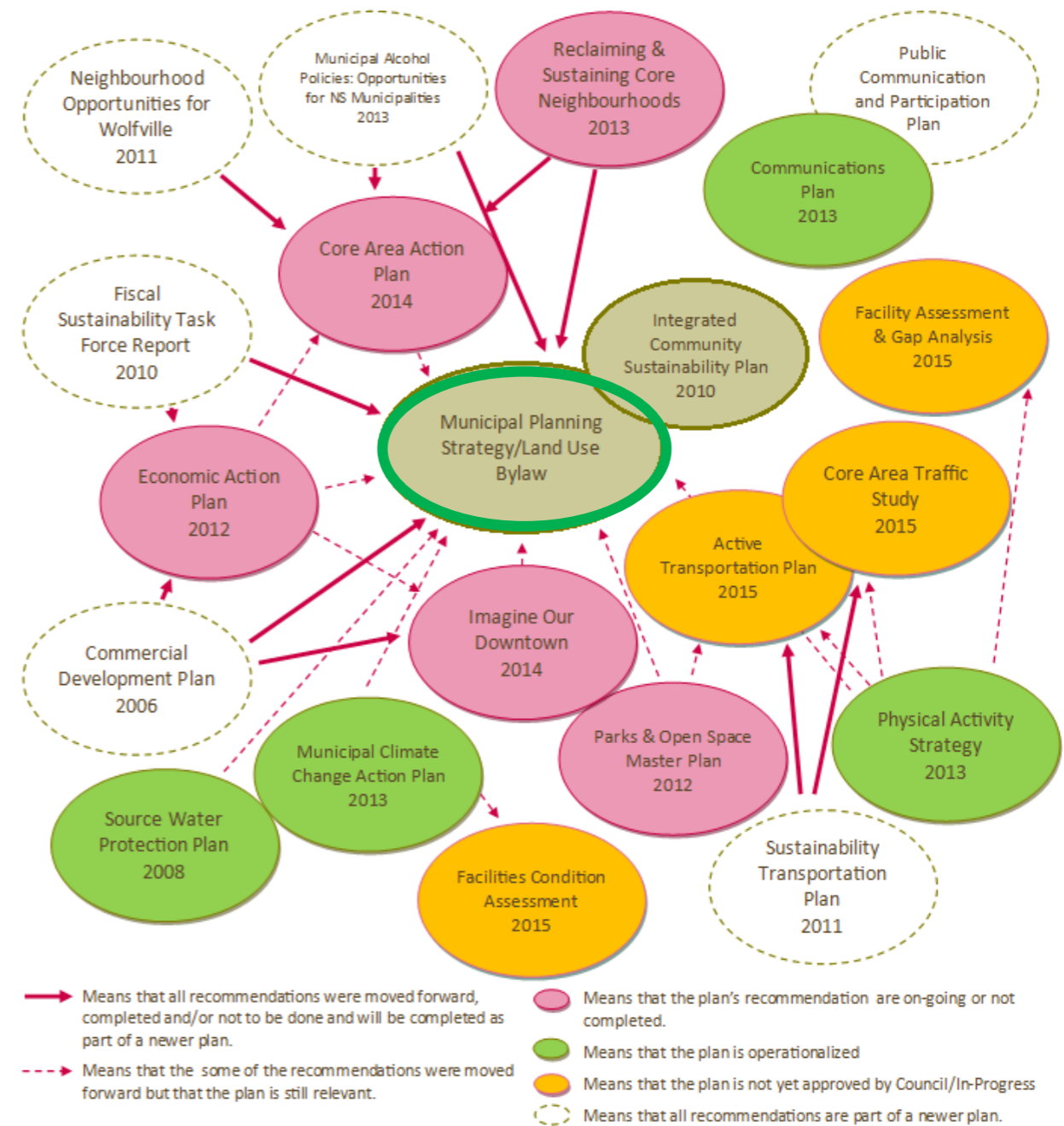
- Improved strategic decision-making framework building on 2008 planning documents
- Focus on low carbon community outcomes and doing our part to take action on climate change
- Acknowledgement that a living document (it's 2019 - fast pace of change)
- Moving away from DAs to Site Plan Approval (let's decide now what we want). Vastly improved Land Use By-law to support this direction
- Integrating most recent (2016) baseline data and other information (e.g. demographics, flood risk, etc)
- Focus on the Core Area – commercial and neighbourhood as the heart of the Town
- Refreshed Design Guidelines integrating existing 1990s documents
- Improved neighbourhood policy with a focus on housing choice, affordability, sustainability and entrepreneurship
- Improved University policies linked to partnership agreement

Original goals of Plan Review (2015)

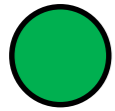


Administrative Notes

- Formatting, minor edits, cross referencing, other fine tuning is ongoing
- Plans and By-laws are being superseded or formally repealed by this plan (e.g. swimming pool & sidewalk café by-laws)
- Development Agreements are being discharged (full or partial) and replaced with zoning (e.g. Woodman's, Whispering Creek, Pompano Estates, Stonegate)
- New forms, further website updates, fees review will come when closer to adoption or after



Next Steps



September 3, 2019 Committee of the Whole

Council receives Draft 3 documents, provides initial feedback.

September 10, 2019 Joint PAC/Council Workshop

Overview and specific topics in more detail. Consultant and other Town Staff in attendance.

September 19, 2019 Regular PAC Meeting

Continue discussion with PAC and identify potential recommendations to Council.

October 17, 2019 Public Participation Meeting at PAC

Public Participation Meeting and Recommendation to Council from PAC.

November 5, 2019 Committee of the Whole

Council receives PAC Recommendation, other Committee comments and considers moving to First Reading.

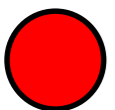
November 19, 2019 Council Meeting

First Reading

TBD late 2019/early 2020 - Public Hearing

TBD late 2019/early 2020 - 2nd Reading / Adoption

+ other
engagement,
1v1, committee
or group
meetings



Decision Making Framework

- Consultation and feedback
- Strategic Priorities, Other Town Reports
- Advice from Professionals and Best Practice
- Take us toward what you want?
- Keeping with Values of Community?
- Compliant with MGA requirements?
- Practical? Doable? Measurable?
- Broader region impacts?
- Best for all and not a few?

KEEP IN MIND:

- We must advocate for some voices and present a balanced perspective.
- No silver bullets. Land use is only one tool.
- Polarized views on some issues. No consensus.
- NIMBYism.

#growingtogether 

Tremendous amount of work has gone into these documents by both Town Planning Staff and a number of professional consultants (FoTenn, Ekistics).

Direction has been provided by Council and then thinking/deep dive into issues has been typical.

Overall, we believe these documents are a good fit with where the community is at and address a number of key issues proactively.

There is and will be tension on certain issues. Examples include:

- Parking vs Walkability
- Commercial “Creep” vs Expansion
- Social equity and Ecological footprints vs Exclusionary zoning

This is just the start on many issues and monitoring and future work will be required (living document).

Need your initial feedback to shape workshop topics.

Extra Slides

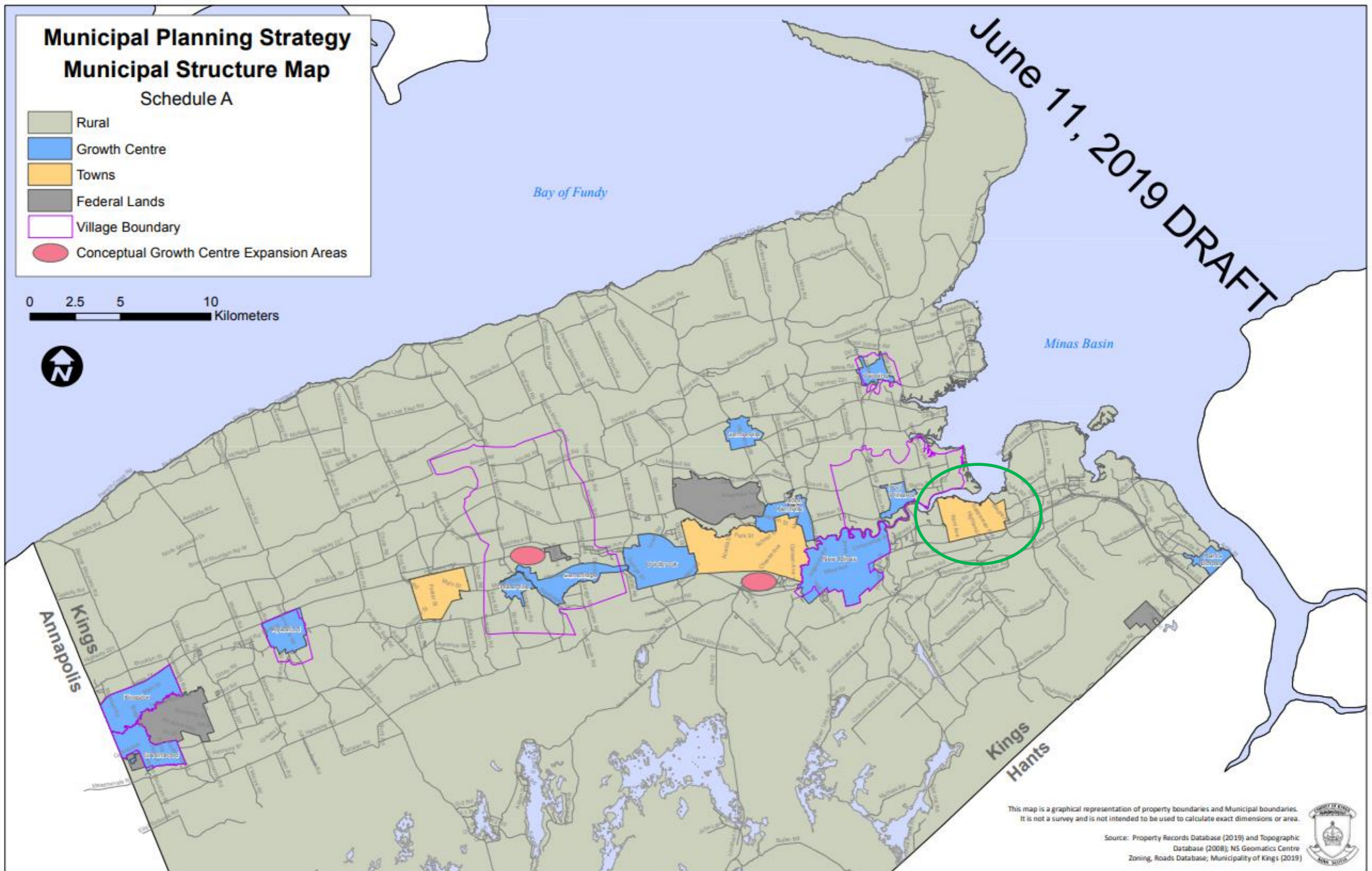
Potential Workshop Topics



- Regional Coordination
- Climate Change and Flood Risk
- Site Plan Approval
- Bill 177
- Building Height
- Bonusing
- Parking
- Neighbourhood Commercial Zoning
- Certain property specific Zoning issues
- R-1 Zone
- Active Transportation Corridor (Rail Lands)
- Single Room Occupancies and Short-term Rental
- Flag lots
- Lounges

Additional information and background will be provided on specific topics for the September 10th workshop with PAC and Council.

Regional Context



Regional Context

King's County Draft MPS – Rural Future Land Use Map (June 2019)

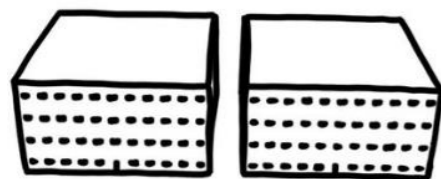


Design and Heritage



Gentle Density

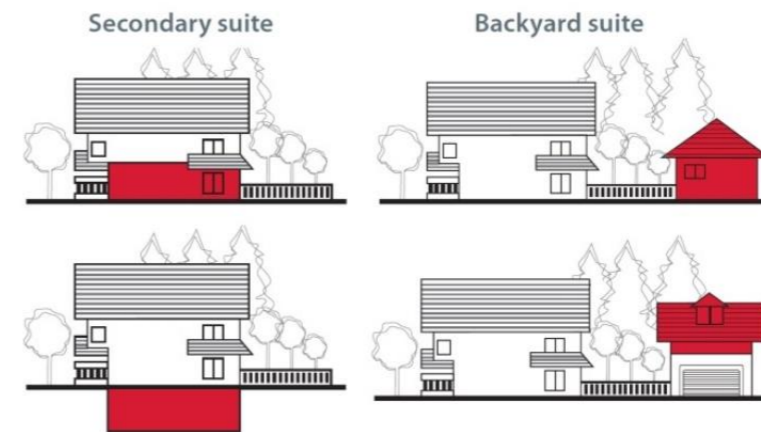
Sudden Intensification



Incremental Intensification



Cluster Housing



"Gentle" Density



Missing Middle Housing

REQUEST FOR DECISION 057-2019

Title: Annual Operating Line of Credit
Date: 2019-09-03
Department: Finance



SUMMARY

Annual Operating Line of Credit

Each year Council approves **maximum limits** for any potential use of operating lines of credit. This is separate from the Temporary Borrowing Resolutions (TBR's) approved earlier in the fiscal year for capital project funding. With regard the operating line of credit, it is established to ensure adequate cash flow is available to meet expenditure requirements during the year. Timing of cash flow receipts does not always match the timing of required payments. The approval of annual operating lines of credit provides flexibility for staff to carry out the approved budget plans of Council in an effective and efficient manner.

The limits set by Council have remained unchanged for a number of years, reflecting the continued financial health of the Town.

DRAFT MOTION:

That Council approves the following lines of credit with the Bank of Montreal, effective October 1, 2019 to September 30, 2020:

- | | |
|---|---|
| 1. Town Operating Fund, bank account | \$400,000 maximum credit |
| 2. Water Utility Operating Fund, bank account | \$150,000 maximum credit |
| 3. Corporate Credit Cards | \$ 50,000 maximum credit (all cards combined) |

...

REQUEST FOR DECISION 057-2019

Title: Annual Operating Line of Credit

Date: 2019-09-03

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1) CAO COMMENTS

The CAO supports the recommendations of staff.

2) LEGISLATIVE AUTHORITY

Municipal Government Act (MGA), Section 84.

3) STAFF RECOMMENDATION

That Council approve the recommended lines of credit to help ensure timely financial resources to meet obligations throughout the next year.

4) REFERENCES AND ATTACHMENTS

- Bank Credit Card Policy # 140-002
- Approved 2019/20 Operations Plan/Budget

5) DISCUSSION

This RFD is intended to provide Council with information to assist in the annual decision to establish lines of credit for the Town's *operating* fund bank accounts and corporate credit cards. Capital credit funding requirements have previously been approved by Council by way of Temporary Borrowing Resolutions.

The Town's operating lines of credit are renewed with the Bank of Montreal once a year, with the current agreement expiring at the end of September. The timing of the annual renewal may change in the future. In meeting with a new BMO representative in July, discussion focused on timing of our banking agreements, both operating and capital, and the goal of streamlining our process.

Given the Town's positive financial results over the past number of years, this report could be considered a housekeeping matter required to keep our agreement with the Bank of Montreal up to date. ***Much of what follows is information included in RFD's over the last few years.***

MGA Section 84 allows municipalities to utilize temporary borrowings to cover current expenditures.

Borrowing limits

84 A municipality may borrow to cover the annual current expenditure of the municipality that has been authorized by the council, but the borrowing shall not exceed fifty per cent of the combined total of the taxes levied by the municipality for the previous fiscal year and the amounts received, or to be received, by the municipality from Her Majesty in right of Canada or in right of the Province or from an agency of Her Majesty. 1998, c. 18, s. 84.

REQUEST FOR DECISION 057-2019

Title: Annual Operating Line of Credit
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Note the limit per MGA 84 is 50% of previous years tax levy. For Wolfville that would equate to approximately \$4.3 million. As reflected in amounts authorized by Council, the Town has not required a line of credit anywhere near the maximum permitted by legislation. If it were ever needed, we could come back to Council with an amendment to the amounts recommended in this report.

The amount to which a line of credit may be required depends on a municipality's unrestricted working capital and its regular cash flow requirements.

- It has been a number of years since the Town experienced any timing issues with cash flow, and when they had occurred it tended to be in April and May, prior to the due date of interim tax bills. The annual agreement with the bank (Oct to following Sept) covers this period of time.
- As noted in past reports, in 2012, a number of bank accounts were consolidated at the Bank of Montreal. This move assists the Town in avoiding the need for temporary loans from the bank within a fiscal year. Appropriate accounting ensures each fund records the interest income earned every year. To date this continues to work well for the Town. The last overdraft position for the two operating accounts (Town General and Water Operating) was:
 - Town general account required \$270,700 in temporary borrowings in April & May 2011.
 - In November 2010 the Water Utility required temporary borrowings of \$123,900.
- In addition, years with surplus results have helped eliminate the Town's reliance on short term borrowings.
- The potential still exists for the need to utilize short term borrowings, although the likelihood is low.
- The recommended credit limits (operating lines of credit) have been unchanged for at least a decade, therefore no increase recommended. *Effectively the approved borrowing limit is a lower percentage of the annual budget spending.*
- The bank requires an approved resolution in order to facilitate any temporary borrowings.

With regard to the limit required for the Town credit cards, the maximum overall credit has been set at \$50,000. This has not changed in a number of years. This coincided with changes to the Credit Card Policy (140-002) which reduced the number of cards from maximum of 20 down to 3. The suggested limit has been set at a level that would provide flexibility *if* required during the fiscal year.

- There have been no issues during the past twelve months with the limit of \$50,000. Note the Town Policy has a per-card limit of \$5,000, unless otherwise required and temporarily increased by the Director of Financial Services.

There continue to be occasions where the Director of Financial Services has had to temporarily increase an individual card limit, or the Finance Department has taken steps to make early payments on the card accounts (due to limited credit limit available). Historically this usually occurs around the time that conference registrations occur. The Finance Department will monitor the need to change the individual card limits (set at \$5,000 per card...Policy 140-002) over the remainder of this fiscal year. If increases

REQUEST FOR DECISION 057-2019

Title: Annual Operating Line of Credit

Date: 2019-09-03

Department: Finance



are warranted, a request to amend the Town Policy will be brought back to Council. Overall, the global card limit of \$50,000 has not been an issue.

There has been some discussion around the management table about whether additional credit cards might be helpful to departments, without becoming a financial issue for the Town. Cards invariably require monitoring to ensure limits are not exceeded and only authorized purchases are being made. Staff may come back later in the year if there is a strong rationale to increase the number of credit cards within the organization.

Part of the rationale for maintaining the credit card \$50,000 upper limit is in the case of unexpected need that can arise from an emergency situation. Although not part of day to day spending, if there is a circumstance that occurs, the need can be immediate.

6) FINANCIAL IMPLICATIONS

Nothing specific noted. This RFD deals with source of payments not an increase in spending.

7) REFERENCES TO COUNCIL STRATEGIC PLAN AND TOWN REPORTS

This report comes before COW/Council to ensure the Town is meeting its obligation of accountability and openness/transparency to the public.

8) COMMUNICATION REQUIREMENTS

The lines of credit are a matter of routine operation; therefore, the only communication required is with the Bank of Montreal to ensure renewed credit facilities are in place before October 1, 2019.

9) ALTERNATIVES

Council could make the decision not to authorize any operating lines of credit for the next year, or to authorize only the line of credit related to the credit cards.

These options have not been recommended for the following reasons;

- The use of operating lines of credit are an established business practice to allow for temporary shortfalls in cash flow.
- A temporary need for a line of credit would typically occur in a timeframe that does not necessarily coincide effectively with a Council meeting. If no line of credit approved, payment of bills/payroll could be held up while awaiting a Council meeting to get the necessary authorization to borrow.

REQUEST FOR DECISION 057-2019

Title: Annual Operating Line of Credit

Date: 2019-09-03

Department: Finance



REQUEST FOR DECISION 059-2019

Title: Stormwater Infrastructure – East End Gateway

Date: 2019-09-03

Department: Parks & Recreation



SUMMARY

Stormwater Management Infrastructure – East End Gateway

The 2019/20 Capital Budget included funding for a portion of the work on the East End Gateway. An allowance of \$100,000 was part of this project intended to cover a number of elements of the Gateway project including realignment of the driveway, accessible trail access, expanded parking, and fencing. Earlier this year, a portion of the stormwater management infrastructure running under the Gateway land collapsed, with a small sinkhole developing. Staff had hoped to repair/replace this stormwater infrastructure within the budgeted East End Gateway funds, however the work required is beyond that budget amount and would leave no funds left for the Gateway Project elements planned this year.

Irrespective of the Gateway Project, the stormwater infrastructure requires replacement, and as a material, unbudgeted repair Staff require Council approval to have the work carried out. To ensure no further delay in having the work contracted and completed, staff through the Office of the CAO, approached Council via email for approval to proceed earlier this summer. This RFD is intended to formalize that approval obtained in early August which allowed staff to engage a company to start the work.

DRAFT MOTION:

That Council approve funding of \$140,000 to cover the cost of stormwater repairs at the northeast corner of the parking lot across from Willow Park and that the funds be taken from the Town's Capital Reserve Fund.

REQUEST FOR DECISION 059-2019

Title: Stormwater Infrastructure – East End Gateway

Date: 2019-09-03

Department: Parks & Recreation



1) CAO COMMENTS

The CAO supports the recommendations of staff. The draft motion formalizes the informal approval that was sought earlier this summer to allow the repairs to be made in a timely manner.

2) LEGISLATIVE AUTHORITY

Municipal Government Act, Section 65

3) STAFF RECOMMENDATION

That Council approve the use of Capital Reserve Funds, up to the amount of \$140,000, to fund required replacement of stormwater management infrastructure located at the northeast corner of the parking lot at the East End Gateway.

4) REFERENCES AND ATTACHMENTS

N/A

5) DISCUSSION

As noted in the Summary, a collapse of a portion of the stormwater management system located at the East End Gateway parking lot resulted in the need for funding approval to carry out replacement of the section that has failed. This infrastructure replacement is needed to address not only the stormwater issue, but also to allow the East end Gateway Project to continue. On July 31, 2019 the CAO sent out an email requesting permission for staff to engage a contractor as soon as possible to carry out the necessary repair/replacement. The content of the email is provided here, forming the background to the discussion of the work required.

All seven members of Council responded to the CAO with a positive vote to allow staff to proceed. This report is brought to Council for formal/public ratification of the decision reached on August 1st.

The email content reads:

Planning is underway to begin the budgeted improvements to the East End Gateway.

First and foremost, capital repairs need to be made to the sink hole which appeared near the north east corner of the parking lot during a late spring storm surge. The current storm water management infrastructure at that exit point is inadequate and requires immediate repair and improvement. The work that is required was not budgeted for in the 2019/20 Capital Budget. It should be noted that this infrastructure replacement would be required even if there were no East End Gateway Project in the foreseeable future – we would still have to repair the stormwater system around the sinkhole and re-establish the pathway connections to the trail system.

REQUEST FOR DECISION 059-2019

Title: Stormwater Infrastructure – East End Gateway

Date: 2019-09-03

Department: Parks & Recreation



A plan was engineered and a tender was issued to:

- (1) repair the piping infrastructure at the exit point;*
- (2) install a new headwall (a headwall is a concrete structure installed at the outlet of a drain or culvert that functions as a retaining wall to protection against erosion, or as a means to divert flow. Precast concrete headwalls and wingwalls are a vital component of drainage culverts);*
- (3) realign existing drainage systems;*
- (4) install a check value to prevent backflow during high tides; and*
- (5) raise this section of trail to aid in our storm water management program and to provide additional floodwater protection.*

The lowest bid on this tender was \$137,671.75 (HST Included). This results in a net cost to the Town (after HST Rebate) of \$123,900. Tenders closed July 25th after the last Council session on July 16th. In addition to the construction bid costs as noted, the work tendered involved design costs of \$9,700 and the construction work will require site inspection (engineering) services typical of capital infrastructure projects. The total expected cost required is estimated to be \$140,000.

As noted above, this was an unexpected expense and was not budgeted for. We currently have capital dollars approved for the East End Gateway, however this did not include the sink hole issue which arose this year.

The approved Gateway Project includes:

- (1) the realignment of the driveway;*
- (2) providing accessible trail access (given the trail will be raised);*
- (3) providing expanded parking space along the north side of the parking lot; and*
- (4) providing fencing (fall protection) along the trail - north side.*

Staff had hoped to fit the stormwater infrastructure repair within the budgeted dollars for the Gateway project already approved, which is why this item wasn't brought to Council in July. Clearly the tender results do not make this possible.

After discussions with Mike, and in consultation with Kevin and Kelton, staff are recommending this infrastructure project be undertaken through the use of \$140,000 Capital Reserve dollars. The East End Gateway Project as approved in the budget could then proceed after this necessary infrastructure work is completed.

Given we are not meeting until September and that we would like to award and start these capital repairs as soon as possible, I am asking for your informal approval through voting yes or no to the plan as stated above. If agreed by a majority of Council, a formal ratification can happen at the September Council meeting.

REQUEST FOR DECISION 059-2019

Title: Stormwater Infrastructure – East End Gateway

Date: 2019-09-03

Department: Parks & Recreation



Please let me know your thoughts as soon as possible. I appreciate this consideration.

6) FINANCIAL IMPLICATIONS

As noted in the Discussion Section above, the total cost of the infrastructure replacement is estimated to be \$140,000. Currently no offset within the operating budget has been identified to fund this unplanned item. The replacement/repair is significant enough to warrant being capitalized at year end as a tangible capital asset. As such, use of the Town's Capital Reserve Funds is an appropriate funding option.

The Town enters this fiscal year with \$3.59 million in the Capital Reserve Fund. Based on the Town's Ten Year Capital Improvement Plan and funding assumptions, the Capital Reserve Fund is sufficient to cover projects out to the end of the ten year period. In the short term, the balance on hand will cover the requested work and in the longer term the Town will continue to work to ensure adequate funding for all capital work required.

7) REFERENCES TO COUNCIL STRATEGIC PLAN AND TOWN REPORTS

None provided. The work noted is a required part of the stormwater management infrastructure.

8) COMMUNICATION REQUIREMENTS

N/A

9) ALTERNATIVES

The work itself is required to ensure the integrity and functionality of the stormwater system. The only practical options relate to how to fund the work. Those options could cover the range of 100% to be found elsewhere in the Operating Budget to long term debt funding. Given the balance in the Capital Reserve and the nature of the work, it makes sense to use Capital Reserves. Reserves are intended both for future planned work (CIP) and for unexpected requirements.

REQUEST FOR DECISION 050-2019

Title: Shoreline Protection and Wharf Repairs

Date: 2019-09-03

Department: Public Works



SUMMARY

SHORELINE PROTECTION AND WHARF REPAIRS

The 2019/20 capital budget includes \$350,000 for shoreline protection and wharf repairs in Waterfront Park. Tenders for this project closed on August 1st. We received one tender and the tendered price is over the budgeted amount and requires Council's approval to proceed with the scheduled shoreline protection and wharf repairs.

DRAFT MOTION:

That Council award the shoreline protection and wharf repair contract as tendered for the total contract price of \$524,550 plus HST.

REQUEST FOR DECISION 050-2019

Title: Shoreline Protection and Wharf Repairs

Date: 2019-09-03

Department: Public Works



1) CAO COMMENTS

The CAO supports the recommendations of staff.

2) LEGISLATIVE AUTHORITY

- Procurement Policy 140-001
- Approved 2019/20 Capital Budget

3) STAFF RECOMMENDATION

That Council accept the tender for shoreline protection and wharf repair and award the contract to Dexter Construction Limited for the tendered amount of 524,550 plus HST.

4) REFERENCES AND ATTACHMENTS

- 2019/20 Capital Budget

5) DISCUSSION

An inspection report of the timber wharf and shoreline protection in waterfront park was completed by Hatch in 2016. The report identified necessary repairs to the wharf and the addition of riprap along the shoreline. We issued a request for quotations for the wharf repairs identified, in 2017 but didn't receive any interest. We tried to get pricing from interested contractors but again were unsuccessful. It was decided to group the shoreline protection and wharf repairs together in one larger contract to generate more interest. This tender closed August 1, 2019 with Dexter Construction Limited being the only bidder. The tender has been reviewed and is compliant however it is over budget and Hatch consider some of the unit pricing high relative to their experience.

All the work is necessary and should be completed as soon as possible to avoid further damage and more extensive repairs.

Options for Council to consider are as follows;

Award the contract as tendered with the additional funding coming from capital reserves.

Award a revised contract for the budgeted amount if the contractor is willing which would reduce the shoreline protection by 50%.

Retender the entire project next year and have a structural assessment of wharf completed this year to ensure its safety until repairs can be completed.

REQUEST FOR DECISION 050-2019

Title: Shoreline Protection and Wharf Repairs

Date: 2019-09-03

Department: Public Works



6) FINANCIAL IMPLICATIONS

The shoreline protection and wharf repairs were included in the 2019/20 capital budget. \$350,000 was budgeted. We received one tender and the total tender price is \$524,550 plus the Town portion of the HST \$22,451 for a total of \$547,001. Engineering costs of \$27,757 bring the estimated total project cost to \$574,758. The original \$350,000 budgeted was from long term debt.

The revised estimate for the entire project is 224,800 over budget. The options for funding this additional amount range from all long term debt to 100% reserve funding. Factors to consider:

- At this stage of the year, the Town has already processed the Capital Program funding paperwork for Temporary Borrowing (TBR) which includes obtaining the Minister's sign off on the document. This process can take up to 3 months (we have only just received this week the original TBR back from Dept of Municipal Affairs).
- The Town entered this fiscal year with \$3.59 million in Capital Reserves. The 2019/20 Ten Year Capital Investment Plan (CIP) showed capital reserve funding adequate for the ten year period. In the short term, re is adequate reserves. In the long term, staff will update reserve fund impacts and will bring updated information with the first draft of the 2020/21 Draft CIP to be presented in November. The Director of Finance will also be available to answer questions with regard this RFD or the others on the agenda looking for increases to budgeted projects.
- Capital Reserves (as well as Operating Reserves) are not only intended for long term planned projects, but also unexpected requirements.

Given the timing of this request, the recommended approach is to utilize the capital reserve fund.

7) COMMUNICATION REQUIREMENTS

Once awarded the public will be notified of restricted use of Waterfront Park. If the contract is delayed a structural assessment of the wharf will be completed and the public notified as required depending on the assessment.

8) ALTERNATIVES

- Award a revised contract for the budgeted amount if the contractor is willing which would reduce the shoreline protection by 50%.

Retender the entire project next year and have a structural assessment of wharf completed this year to ensure its safety until repairs can be completed.

REQUEST FOR DECISION 053-2019

Title: Community Development Public Works Facility Upgrade

Date: 2019-09-03

Department: Public Works



SUMMARY

COMMUNITY DEVELOPMENT PUBLIC WORKS FACILITY UPGRADE

Upgrades to the Community Development Public Works facility are being considered to address code deficiencies, improve accessibility and provide more office space. The current capital budget includes \$200,000 for upgrades to this facility. The cost estimates based on our consultant's preliminary design is \$500,000 and a decision on how to proceed is required.

DRAFT MOTION:

Move that Council commit an additional \$250,000 to the Community Development Public Works facility upgrade to address code deficiencies identified and complete the renovations required to make the ground floor accessible and provide additional office space for staff.

REQUEST FOR DECISION 053-2019

Title: Community Development Public Works Facility Upgrade

Date: 2019-09-03

Department: Public Works



1) CAO COMMENTS

The CAO supports the recommendations of staff.

2) LEGISLATIVE AUTHORITY

- Procurement Policy 140-001
- Approved 2019/20 Capital Budget

3) STAFF RECOMMENDATION

Staff recommend that Council commit \$250,000 in additional funds to the project to address the code deficiencies identified and complete the renovations needed to make the ground floor more accessible and provide additional office space for staff.

4) REFERENCES AND ATTACHMENTS

- 2019/20 Capital Budget

5) DISCUSSION

A condition assessment report completed in 2016 identified some code deficiencies with the Community Development Public Works facility. As staff began planning to rectify these issues, we discussed options to make the facility more accessible and renovation options to provide more office space. Stantec was contracted to assist with the design stage of the project. The preliminary design was temporarily put on hold while the Town decided on the use of the RCMP space. With the decision to maintain the RCMP presence in their existing space, Stantec was asked to continue with preliminary design options for the CD/PW facility including additional office space and to include a preliminary review of the Rick Hansen Foundation certification requirements. This is also an opportunity to complete some of the work that has been identified in previous energy efficiency audits, with any outstanding recommendations that do not fit the current project scope to be completed through operations in coming years.

Stantec are recommending as part of the preliminary design that the code issues identified in the Hatch condition assessment report be addressed. In addition, in an effort to address the accessibility and space requirements, Stantec are proposing a more user friendly reception area on the ground floor, adding office space to the ground floor, renovating the washrooms and incorporating energy management/conservation measures where appropriate. Renovation to the second level are not included in the current scope of work.

The work is in the preliminary design stage and details will have to be finalized. The preliminary estimate to complete the work is \$450-500,000 with an additional \$100,000 suggested to address the Rick Hansen Accessibility Foundation gold standards should Council wish to proceed with this on this

REQUEST FOR DECISION 053-2019

Title: Community Development Public Works Facility Upgrade
Date: 2019-09-03
Department: Public Works



particular renovation. The Accessibility Plan (AP) adopted by Council earlier in the year set a goal of ensuring all new/major building renovations be done in a way to meet the RHFC gold standard. As noted at the time the AP was adopted, the Mgt Team was to go back through the Plan and identify areas where goals/actions were outside possibly outside the Town's ability to achieve. This particular renovation is one such example. It comes before Council before the full staff review of the AP has been completed, but staff felt it important to note that the recommendation in this report does not fully meet the current AP goal. The Town's Accessibility Coordinator will be at the Committee of the Whole meeting and can respond to any questions around this particular issue.

The estimated cost to address the code deficiency issues only, is estimated at \$200,000. The current capital budget includes \$200,000 for the Community Development/Public Works facility renovations and included \$50,000 for renovations to the RCMP space if we were going to move town staff into this space. There are no changes planned to the RCMP space so this funding could be used toward the Community Development Public Works facility upgrades. An additional \$250,000 is required to complete the code deficiency issues and the renovations to the ground floor of the facility. If the Rick Hansen Foundation certification is pursued Stantec are suggesting, we budget an additional \$100,000. This should be considered a soft estimate as staff have not obtained sufficient data on building cost impacts of an accessibility goal which exceeds current building codes. Note that a gold RHFC standard would generally exceed requirements of the building code.

The Community Development/Public Works renovations was included in the 2019/20 capital budget. The first draft of the 2019/20 CIP presented to COW last November included an estimate of \$300,000 to complete both the fire safety and office space revisions. The office revisions were intended to allow a first floor reception area as well as a few workstations/offices for some of the Community Development staff. The goal was to improve accessible access to the Community Development/Planning staff all of whom are currently located on the non-accessible second floor of the building.

After discussion during the 2019/20 budget process, Council gave direction to staff to look at providing budget dollars to renovate the RCMP for use by the Community Development staff and change the Public Works building renovation to only include fire safety improvements. This change resulted in the approved budget having \$50,000 for RCMP renovations and \$200,000 P Wks renovations providing an overall budget savings. It is important to note that Council committed to reviewing whether to have the Wolfville RCMP detachment report out of the new New Minas Facility or to have them remain Wolfville based offices. Ultimately Council decided to have the RCMP remain in Wolfville offices. This has required staff to go back and review the renovations that would be required at the Public Works Building to once again do both fire safety and accessibility improvements.

REQUEST FOR DECISION 053-2019

Title: Community Development Public Works Facility Upgrade
Date: 2019-09-03
Department: Public Works



6) FINANCIAL IMPLICATIONS

As noted above, the approved funding in the budget totals \$250,000 for building renovations (\$50,000 at RCMP wing of Town Hall and \$200,000 at Public Works). Current estimates now show the combined renovation being carried out at the Public Works location to be \$500,000 before any consideration of the added changes that would be needed to achieve RHFC gold status. This requires an additional \$250,000 to be approved by Council.

As with other requests, Council's options for funding can range from all long term debt to 100% reserves and any combination in between. Although buildings would typically be candidates for long term debt, the work envisioned here is not such that it necessarily extends the useful life, but rather improves safety and accessibility. The use of the building is anticipated to change within the next 9 years, once the new Town Hall facility is completed (this could be a new building or a major renovation of the current Town Hall). Refer to the CIP, Year 9. Two of the issues which would argue against the use of long term debt are:

The Town has already put in place its capital borrowing requirements for 2019/20. This process, including having the Minister sign off on the borrowing, can take several months.

A portion of the renovations relate to what amount to temporary use changes. Staff are trying to improve accessibility for a Town Service (Community Development) in the immediate term knowing that the long term plan is to bring that group of staff into a new facility within the next decade. The Town strives to ensure debt funding is for terms no more than 50% of the useful life of an asset. It would be preferable to keep the Town's debt ratio capacity for larger projects with longer expected life spans.

Finance staff would recommend using Reserves to fund this additional project funding requirement. The original project was funded out of capital reserves and it is suggested that the additional funds required also come out of capital reserves.

7) REFERENCES TO COUNCIL STRATEGIC PLAN AND TOWN REPORTS

The Accessibility Plan recently adopted by Council specifically references the following;

- By 2021, ensure that all or most municipal facilities meet the Accessibility requirements (Schedule "C") in the latest version of the Nova Scotia Building Code Regulation. For facilities not completed by that date, have a plan in place to complete the work by 2025.
- Ensure that all new municipal buildings (including major renovations) meet the Rick Hansen Foundation Accessibility Certification (RHFAC) Gold Standard.

REQUEST FOR DECISION 053-2019

Title: Community Development Public Works Facility Upgrade

Date: 2019-09-03

Department: Public Works



8) COMMUNICATION REQUIREMENTS

Any changes to the level of service offered both during construction and because of the renovations will be communicated to the public as well as the staff using the facility.

9) ALTERNATIVES

The following options are provided for Council to consider with respect to moving this project forward.

Identify the additional funds in this fiscal year and proceed with the correction of the code deficiencies and renovations to make the facility more accessible and provide additional office space.

Proceed with the code deficiencies only this year and budget and complete the renovations next year.

Complete the code deficiencies only and not complete the renovations as planned

Not pursue Rick Hansen Foundation certification for this facility at this time – the building's long term use (after new civic complex completed) is not a public meeting place

REQUEST FOR DECISION 042-2019

Title: Kings REMO Heat Advisory and Response System (HARS)
Kings REMO Hurricane Preparedness and Response Plan (HPRP)
Date: September 3, 2019
Department: CAO

SUMMARY

Kings REMO Heat Advisory and Response System (HARS), and Hurricane Preparedness and Response Plan (HPRP)

The Draft Kings REMO Heat Advisory and Response System (HARS) and the Draft Hurricane Preparedness and Response Plan (FPRP), dated March 2019, have been developed to support extreme heat events and hurricane response within Kings County. The Draft Plans have been reviewed by the Regional Emergency Management Planning Committee (REMPC), June 20, 2019, and the Regional Emergency Management Advisory Committee (REMAC), July 15, 2019.

In keeping with the Kings County municipalities Inter-Municipal Services Agreement (IMSA), dated January 16, 2018, for the adoption of a Regional Emergency Management Organization, the Heat Advisory and Response System (HARS) and the Hurricane Preparedness and Response Plan (HPRP) for Kings County will provide for a consistent standard for emergency response to both significant Heat events and a hurricane incident across all of Kings County as Emergency Management Support Plans to the Kings REMO Regional Emergency Management Plan (REMP), dated September 2018.

DRAFT MOTIONS:

That Council approve the Kings REMO Heat Advisory and Response System, dated June 2019

That Council approve the Kings REMO Hurricane Preparedness and Response Plan, dated June 2019

REQUEST FOR DECISION 042-2019

Title: Kings REMO Heat Advisory and Response System (HARS)
Kings REMO Hurricane Preparedness and Response Plan (HPRP)
Date: September 3, 2019
Department: CAO

1) COMMENT / RECOMMENDATION – CAO

The CAO supports staff's recommendation as the Kings REMO Heat Advisory and Response System and the Hurricane Preparedness and Response Plan are in keeping with a regional approach to Emergency Management as adopted by the Kings County municipalities as of April 1, 2018.

2) RECOMMENDATION

Staff recommends that Council approve the Kings REMO Heat Advisory and Response System and the Hurricane Preparedness and Response Plan, dated June 2019, for the Town of Wolfville.

3) DRAFT MOTIONS

- a. That Council approve the Kings REMO Heat Advisory and Response System, dated June 2019.
- b. That Council approve the Kings REMO Hurricane Preparedness and Response Plan, dated June 2019.

4) PURPOSE OF REPORT

To support the Town of Wolfville adopting Regional Emergency Management Support Plans – Heat Advisory and Response System, and Hurricane Preparedness and Response Plan (FPRP), as part of the Kings Regional Emergency Management Organization (REMO), as adopted by the January 2018 Inter-Municipal Services Agreement.

5) DISCUSSION

Every two years NS EMO is required to report the state of Emergency Preparedness in the Province of Nova Scotia. In meeting this requirement, NS EMO Western Zone Coordinator, Andrew Mitton, conducted an Emergency Management Program Evaluation for Kings County's Municipalities in the Fall of 2016. In keeping with observations raised during this evaluation and the adoption of a Regional approach to Emergency Management, the Kings REMO Heat Advisory and Response System (HARS) and the Hurricane Preparedness and Response Plan (HPRP), dated March 2019, were drafted as Emergency Management Support Plans to the Regional Emergency Management Plan, dated September 2018, and are submitted to Council for approval.

The Kings REMO Heat Advisory and Response System will support emergency response efforts to a significant heat incident in Kings County.

This Kings REMO Hurricane Preparedness and Response Plan will support emergency response efforts to a hurricane incident within Kings County.

REQUEST FOR DECISION 042-2019

Title: Kings REMO Heat Advisory and Response System (HARS)
Kings REMO Hurricane Preparedness and Response Plan (HPRP)
Date: September 3, 2019
Department: CAO

The [Nova Scotia Emergency Act](#) requires that all municipalities have:

- Emergency Management Organization;
- Emergency Bylaw (dated 1 November 1990 or later);
- **Emergency Management Plan;**
- Emergency Management Coordinator (EMC); and
- Standing Committee of Council

6) POLICY CONSIDERATIONS

- [Nova Scotia Emergency Measures Act](#)
- Kings REMO Inter-Municipal Services Agreement, January 16, 2018
- [Kings REMO Regional Emergency Management Plan \(REMP\), September 2018](#)
- Kings REMO Regional Emergency Evacuation Plan (REEP), January 2019
- Kings REMO Flood Preparedness and Response Plan (FPRP), March 2019

7) BUDGET CONSIDERATIONS

N/A

8) COMMUNICATIONS REQUIREMENTS

Subject to the approval of the Kings REMO Emergency Management Support Plans, Heat Advisory and Response System and Hurricane Preparedness and Response Plan, by Kings County Municipal Councils, staff will publish the approved Kings REMO EM Support Plans, dated June 2019, on the Town of Wolfville Website and post announcements via Social Media. The Draft Kings REMO Emergency Management Support Plans will be put forward to Municipal Councils in accordance with the following schedule:

2019-09-03	Wolfville Committee of the Whole
2019-09-09	Kentville Council Advisory Committee
2019-09-17	Municipality of Kings Committee of the Whole
2019-09-17	Wolfville Council for approval
2019-09-24	Berwick Committee of the Whole
2019-09-30	Kentville Council for approval
2019-10-01	Municipality of Kings Council for approval
2019-10-08	Berwick Council for approval

REQUEST FOR DECISION 042-2019

Title: Kings REMO Heat Advisory and Response System (HARS)
Kings REMO Hurricane Preparedness and Response Plan (HPRP)
Date: September 3, 2019
Department: CAO

9) REFERENCES TO COUNCIL STRATEGIC PLAN

Council Strategic Principles:

1. **Affordability:** N/A
2. **Transparency:** This decision supports municipal involvement with the approved Kings REMO EM Plan being posted to the [Town of Wolfville's Emergency Preparedness Website](#)
3. **Community Capacity Building:** The Kings REMO Emergency Management Support Plans are focused on further preparing the Town and its residents and are in keeping with a regional approach to Emergency Management.
4. **Discipline to Stay the Course:** N/A
5. **United Front:** This supports a Regional Approach to Emergency Management as agreed upon in the Kings REMO Inter-Municipal Services Agreement (IMSA)
6. **Environmental Sustainability:** N/A

10) ATTACHMENTS

- Kings REMO Heat Advisory and Response System (HARS), dated June 2019
- Kings REMO Hurricane Preparedness and Response Plan (HPRP), dated June 2019

11) SUMMARY

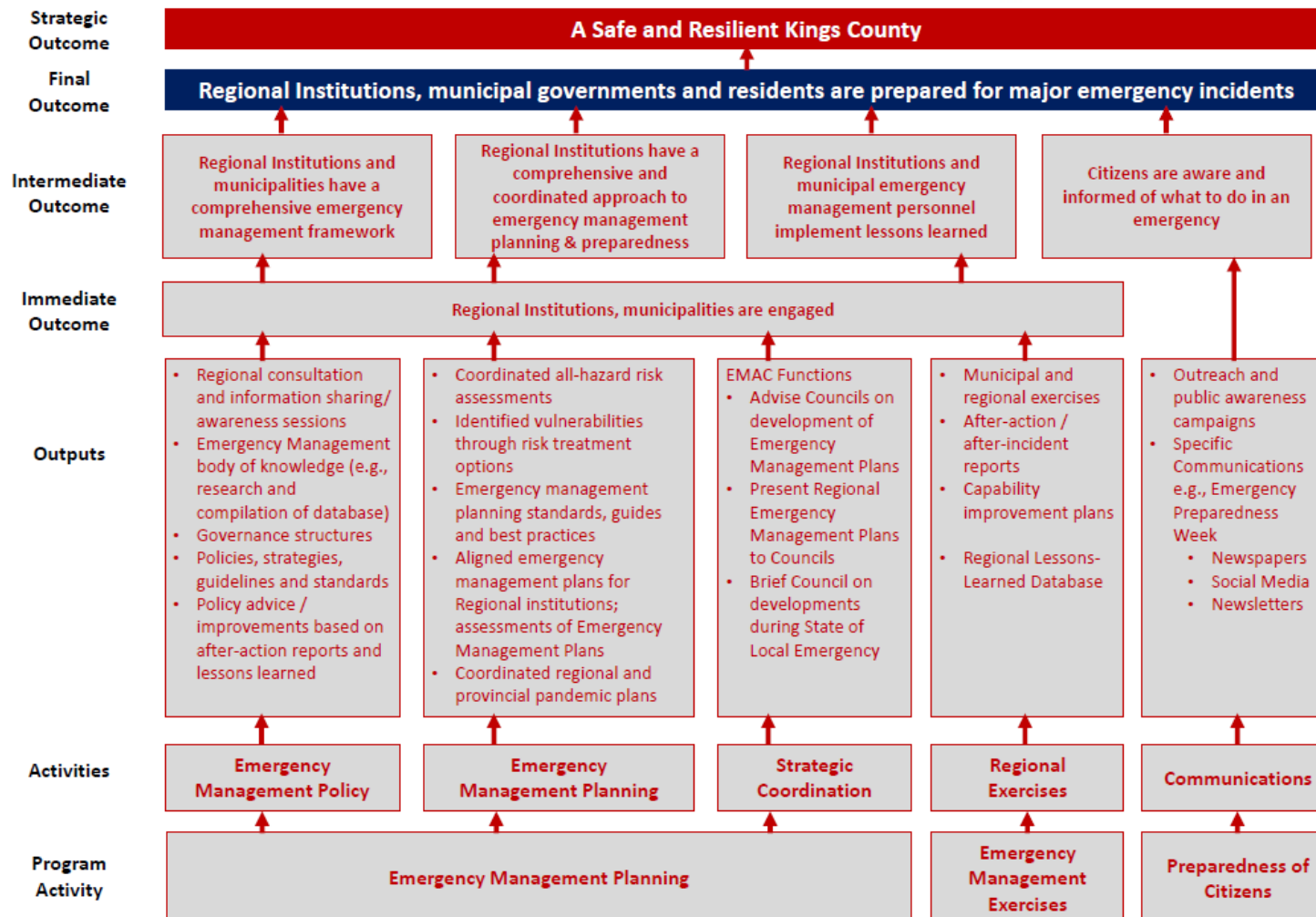
The Kings County Regional Emergency Management Coordinator (REMC) will continue to work towards ensuring that all of Kings County is fully prepared for any future Emergency that may impact any of the municipalities.

REQUEST FOR DECISION 042-2019

Title: Kings REMO Heat Advisory and Response System (HARS)
 Kings REMO Hurricane Preparedness and Response Plan (HPRP)
 Date: September 3, 2019
 Department: CAO



Kings County – Regional Emergency Management





Kings County, NS Heat Advisory & Response System (HARS)

June 2019



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DRAFT



FOREWORD

The development of a Kings County Heat Advisory and Response System (HARS) is paramount to public safety in the case of extreme heat events that may impact the citizens of Kings County, Nova Scotia. The Kings County Heat Advisory and Response System was prepared in consultation with Provincial, County and Municipal stakeholders responsible for everyday management throughout Kings County. It serves as Kings County's response plan to coordinate an integrated approach to extreme heat events.

The Kings County Heat Advisory and Response System is developed as a Support Plan to the [Kings REMO Regional Emergency Management Plan \(REMP\)](#) in order to provide the level of detail required for a comprehensive emergency response to extreme heat events.

Kings REMO strives for strong leadership within the emergency management community and is dedicated to continuous improvements and enhancements to this plan, training and exercising throughout the Kings County region. Therefore, this plan is a living document that will be amended as necessary through a planning process that is managed by the Regional Emergency Management Coordinator (REMC) in consultation with emergency management partners throughout the County.

<hr/> <p>Peter Muttart Mayor Municipality of the County of Kings</p>	<hr/> <p>Don Clarke Mayor Town of Berwick</p>
<hr/> <p>Sandra Snow Mayor Town of Kentville</p>	<hr/> <p>Jeff Cantwell Mayor Town of Wolfville</p>

EXECUTIVE SUMMARY

This Kings REMO Heat Alert and Response System (HARS) is a Support Plan to the [Kings County Regional Emergency Management Plan \(REMP\)](#).

The plan describes Operational Area coordination during heat-related emergencies and provides guidance for Kings County municipal governments (Municipality of the County of Kings, and the Towns of Berwick, Kentville and Wolfville), other governmental agencies, local businesses, community-based organizations, and faith-based organizations, in the preparation for, and response to, emergency incidents of extreme heat.



The plan recognizes the need for Kings County to:

1. Identify when the health of residents may be threatened by extreme heat conditions;
2. Communicate with the public to convey information about resources available for protection against extreme heat emergencies in time to allow for preparations to be made;
3. Communicate and coordinate with Provincial and local agencies;
4. Mobilize resources and initiate actions to augment local resources as needed; and
5. Employ the Incident Command System (ICS) in organizing a response to an extreme heat emergency.



The Kings REMO Heat Advisory & Response System (HARS) recognizes five (5) phases:

- I. Pre-Seasonal Readiness
- II. Heat Advisory
- III. Heat Warning;
- IV. Heat Wave; and
- V. Demobilization

These phases are activated based on the severity of the risk of extreme heat temperatures to vulnerable populations, the general population, and animals. The direct involvement of local agencies to protect individuals increases with the severity of the risk.

The plan contains specific actions to be taken in each of the phases and a checklist to guide actions. The specific action steps include the following:

- Coordinate amongst local agencies and the Province All phases
- Disseminate information All phases
- Identify Cooling Centres Phase I
- Review Plan and confirm roles and responsibilities Phase I
- Connect with Kings REMO Cooling Centres Phase II
- Coordinate and publicize location of Cooling Centres Phase II
- Risk communication and monitoring vulnerable population Phases III and IV
- Determine need and benefit for activating Cooling Centres Phases III and IV
- Transportation assessment Phases III and IV
- Local Government consideration for a [State of Local Emergency](#) Phases IV
- Demobilization Phase V

The Kings REMO HARS plan contains the following:

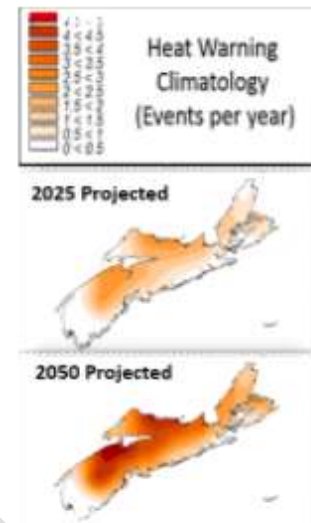
- A description of the purpose and scope of the plan;
- Background information including the history of heat emergencies in Province of Nova Scotia and Kings County;
- Descriptions of the conditions triggering each phase of the plan;
- The responsible local agencies and the actions those agencies will carry out during the different phases of the plan;
- Guidance for coordinating efforts during extreme temperature events; and
- Annexes of supporting information.

1.0 INTRODUCTION

1.1 Background

Climate projections by Environment Canada indicate that the Annapolis Valley region of Nova Scotia can expect extreme heat events of increasing intensity, duration and frequency.

Increasing average temperatures and an increased frequency of extreme heat events have brought attention to the importance of developing heat response plans by and for Canadian communities. Various Canadian municipalities have developed their own extreme heat response plans. These differ in complexity and composition depending on the availability of resources, perceived level of risk and other local factors.



1.2 References

National

- [Heat Alert and Response Systems \(HARS\) to Protect Health: Best Practices Guidebook, 2012](#)
- [Communicating the Health Risks of Extreme Heat Events: Toolkit for Public Health and Emergency Management Officials, 2011](#)
- [Extreme Heat Events Guidelines: Technical Guide for Health Care Workers, 2011](#)

Provincial

- [Nova Scotia Emergency Management Act](#)
- [Nova Scotia Department of Labour and Advanced Education – Health Safety](#)

Regional

- [Kings REMO Regional Emergency Management Plan \(REMP\), 2018-09](#)
- Kings REMO Regional Emergency Evacuation Plan, 2018-12
- Kings REMO Evacuation Operational Guidelines, 2018-05-01
- Kings REMO Emergency Coordination Centre Operational Guidelines, 2018-05-01
- [Kings REMO Policy – Comfort Centres/Emergency Shelters](#)

1.3 Purpose

The Kings REMO Heat Alert and Response System (HARS) is an Emergency Management Support Plan that outlines the actions that will be taken by Kings REMO and local government when an extreme heat event is anticipated, is in the process of occurring, or has occurred.

This plan is designed as a Support Plan to the Kings REMO Regional Emergency Management Plan (REMP) to facilitate preparedness for, and response to, future excessive heat events. It also provides guidance for local government and non-governmental organizations in the preparation of their heat emergency response plans and other related activities.

1.4 Essential Components

The essential components of the Kings REMO Heat Advisory and Response System include public education and preparedness, public warnings and response action plans.

1.4.1 Public Education

- Excessive Heat Awareness & Safety Campaign (May/June);
- Websites & Social Media;
- Information Brochures;
- Public media messaging; and
- Kings REMO Community Outreach program.

Stay Informed



1.4.2 Monitoring

- Monitoring of weather forecasts;
- Identifying weather situations that adversely affect human health; and
- Monitoring vulnerable populations

1.4.3 Response

- Implementing mechanisms for issuing warnings when a weather situation is forecasted which could adversely affect health;
- Promoting public health activities to prevent heat-related illness and death;
- Increased Community Outreach;
- Increased surveillance;
- Dissemination of educational material;
- Distribution of bottled water to vulnerable populations;
- Identify potentially dangerous situations;
- Opening of Cooling Centres when appropriate; and
- Provision of transportation to Cooling Centres.

Stay Cool



1.5 Objectives

The goal of the Kings REMO Heat Advisory and Response System (HARS) is to improve the resiliency among residents of Kings County to extreme heat events. In order to achieve this goal, the overarching objectives of this plan are to:

- To ensure that all agencies working with vulnerable groups are provided with information on what precautions to take when temperatures reach extreme levels;
- To coordinate a community response when temperatures reach extreme levels;
- To ensure that vulnerable populations are cared for when temperatures reach extreme levels;
- To provide cooling centres when appropriate; and
- To activate the Kings County Regional Emergency Management Plan (REMP) when appropriate.

1.6 Aim and Scope

The primary goal of the Kings REMO Heat Advisory and Response System is to provide an integrated planning framework that recognizes the role of individual residents, business owners, emergency responders and the Municipalities of Kings County. Together these individuals, groups and agencies represent the first line of defence in responding to an extreme heat event in Kings County.

This goal is supported by the overarching objective of enhancing public and emergency responder education, emergency preparedness and emergency response policies and procedures. Together these are intended to prevent or reduce loss of life or severe injury and/or damage to property and infrastructure during an extreme heat incident within Kings County.

If the need to relocate impacted residents is apparent, the provisions of the Regional Emergency Evacuation Plan (REEP) shall be implemented. In such events, the Municipality shall discuss the need to declare a [State of Local Emergency \(SOLE\), Annex A](#), if a mandatory evacuation is needed.

DRAFT

2.0 CONCEPT OF OPERATIONS (CONOPS)

2.1 Planning Assumptions

The following assumptions were considered in the development of the Kings County REMO Heat Advisory and Response System (HARS):

- Kings County will experience several, consecutive days of Heat Events throughout the summer months; these are normally accompanied by warm over-night temperatures as well;
- It is anticipated that extreme heat events will become more intense, more frequent, and longer lasting in the future;
- The populations at risk to heat related illnesses is vast and includes many factors including, but not limited to age, pre-existing health conditions, socio-economic factors, religious beliefs, and location;
- Heat stroke is fast setting and has a high mortality rate. Early identification and prevention are essential in prevention; and
- Warning and messaging systems are already established from Kings County REMO using various media outlets (news, radio, websites, social media, and emergency email notification system).

2.2 Situation Overview

Heat waves and emergencies do not cause damage or elicit the immediate response of floods, fires, earthquakes, or other more “typical” disaster scenarios. While heat waves are obviously less dramatic, they are potentially deadlier.



Heat emergencies are often slower to develop, taking several days of continuous, oppressive heat before a significant or quantifiable impact is seen. Heat waves do not strike victims immediately, but rather their cumulative effects slowly take the lives of vulnerable populations. Some of those most impacted may be at special risk because of their own Functional and Access Needs (e.g. physical disabilities, the elderly, medically fragile populations, socially isolated, homeless, etc.).

The precise definition of an Extreme Heat Event (EHE) varies, but always refers to unusually hot temperature and/or high Humidex readings as compared to the typical regional average for that season. EHEs are not new to Canada. Between 1900 and 2005, five major EHEs occurred in Canada - from Ontario to the Atlantic Ocean (1912), Western and Central Canada (1936), Toronto region (1953), Halifax region (1963), Prairie Provinces and Central and Southern Ontario (1988) - causing over 1,200 deaths and many heat-related illnesses. And more recently, more than 90 people are suspected to have died as a result of a July heat wave in Quebec.

Health Canada doesn't keep information about heat-related deaths in Canada because it's not one of the "nationally notifiable" diseases that the provinces must report to federal authorities, nor does it collect the information itself.

Bouts of extreme heat are expected to become more frequent, notes a [2018 report from Canada's federal and provincial Auditors General](#), with their evaluation concluding that governments had under-delivered on commitments to deal with climate change. The report states that "by 2100, the number of days above 30 degrees Celsius in Canadian cities is expected to double, and a one-in-20-year hottest day may become a one-in-two-year event."¹

Extreme heat impacts different people in different ways, depending on their age, underlying medical conditions and how well they are acclimatized to hot conditions. Exposure to extreme heat over prolonged periods of time without access to cooling intervals (such as typically occur at night) makes it hard for the human body to maintain a consistent internal temperature. This stress can result in a rise of internal temperature, and/or increased stress on respiratory and circulatory systems. Either circumstance can result in related health problems or death. Even a short break from the extreme heat helps to reduce this stress.

2.3 Heat Sensitive and Vulnerable Populations

Some groups of people are more vulnerable to hot weather and heat related illness and death. Heat vulnerable groups include²:

- older adults;
- infants and young children;
- people with chronic illness such as asthma, cardiovascular diseases and kidney disease;
- people with mental illness or who are physically impaired;
- people taking certain medications;
- socially disadvantaged or socially isolated individuals and communities;
- newcomers to Canada;
- occupational groups; and
- people who work and recreate outdoors



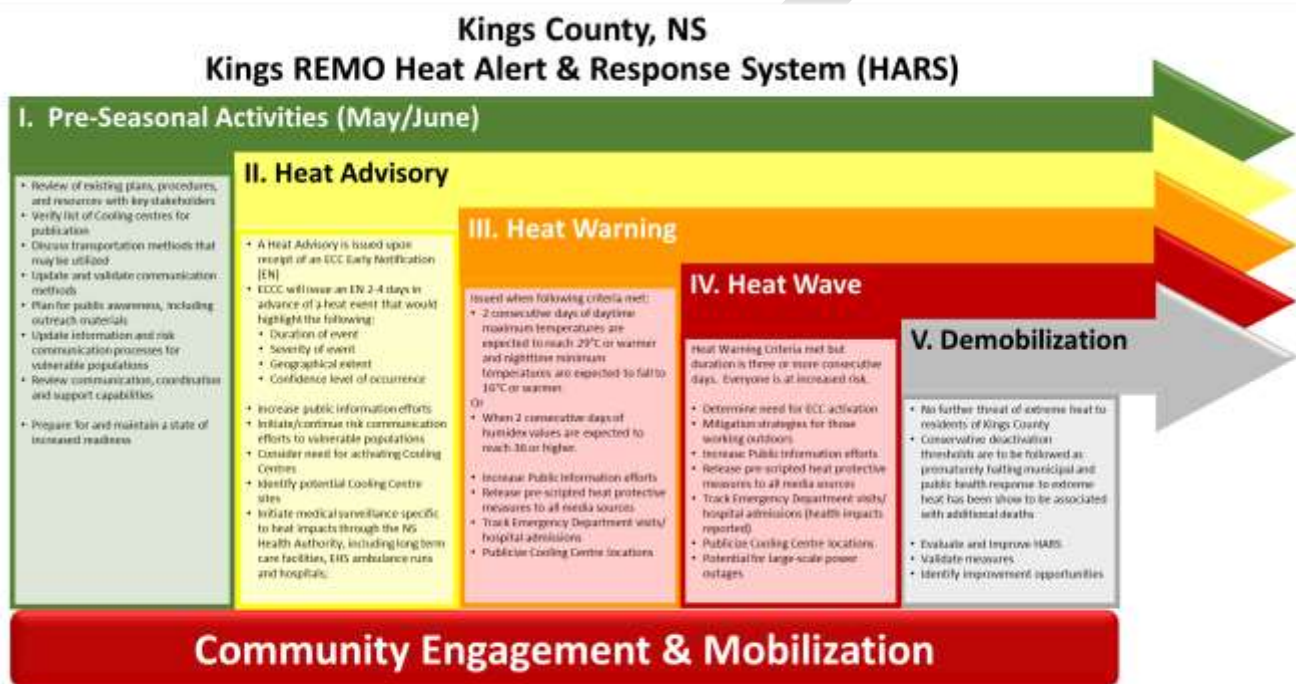
Any individual, regardless of age, sex, or health status can develop heat stress if engaged in intense physical activity and/or exposed to environmental heat (and humidity). If heat exposure exceeds the body's capacity to cool a range of heat-related symptoms and conditions can develop – from relatively minor treatable heat cramps to severe life-threatening heat stroke, which is always an extreme medical emergency. Adequate hydration is critical to avoid development of heat-related illness.

¹ [Perspectives on Climate Change Action in Canada-A Collaborative Report from Auditors General](#), March 2018

² Health Canada (2011). [Adapting to Extreme Heat Events: Guidelines for Assessing Health Vulnerability](#)

2.4 Local Response Phases

To prepare members of the public and government resources for extreme heat conditions, there are a series of five response levels within Kings County, depending upon severity of the threat to public health as well as animals. Severity is determined by a number of factors, including the absolute degree of temperature deviation to the levels that threaten health, contributing factors such as humidity and diurnal (daily) variation, the expected duration of the extreme temperature event, the status of community infrastructure (e.g. utilities, transportation) to allow the public to mitigate the impact of the temperature extremes. The general criteria for gauging the severity of threat posed by a heat emergency are described in this section.



2.4.1 Phase I – Pre-Seasonal Activities

Phase I actions are taken prior to hotter months (usually in May/June) to prepare for and maintain a state of increased readiness. Pre-Seasonal Readiness will be initiated each year in May or early June by the Regional Emergency Management Coordinator (REMC) with the Kings County Regional Emergency Management Planning Committee (REMPC), which includes representatives from Nova Scotia Health Authority, Emergency Social Services, Emergency Health Services, other County Departments, and Non-Governmental Agencies (NGOs).

This includes the following actions:

- Review of existing plans, procedures, and resources with key stakeholders;
- Dissemination of plans to key stakeholders;

- Verify list of Cooling Centres for publication;
- Discuss transportation methods that may be utilized in Phase III and Phase IV for Cooling Centres;
- Update and validate communication methods for response agencies;
- Develop a plan for public awareness including outreach materials that outline steps on how to prepare before extreme heat, what to do during extreme heat and includes web links and phone numbers for more information. Identify and verify list of vulnerable populations and coordinating agencies;
- Update information and risk communication processes for vulnerable populations; and
- Review communication, coordination and support capabilities and methods with local non-governmental and faith-based organizations.

2.4.2 Phase II – Heat Advisory

Heat Advisories for Kings County are issued upon receipt of an Environment Canada and Climate Change (ECCC) Early **Notification for extreme temperatures**. An Early Notification for extreme temperatures will be issued 2-4 days in advance of a heat event and would highlight the following information:

- Duration of event;
- Severity of event;
- Geographical extent; and
- Confidence level of occurrence



Benchmarks for Phase II are monitored by local government and include but are not limited to credible predictions by Environment and Climate Change Canada of excessive heat or of power outages during warmer than normal weather conditions in Kings County. During this phase, contact with local agencies, stakeholders and coordination among Provincial agencies increases.

Specific benchmarks include:

- An Early Notification (EN) from Environment and Climate Change Canada (ECCC), giving an outlook for an extended period of much above average temperatures.

Phase II actions by Kings REMO may include the following:

- Increase Public Information efforts including Social Media and Kings REMO Emergency Email Notification System;
- Release pre-scripted heat protective measures to all media sources;
- Initiate/continue risk communication efforts to vulnerable populations as outlined in Phase I;
- Ensure employees have updated heat emergency materials;
- Coordinate with the managers and owners of any Cooling Centres considered for publication;
- Publicize and communicate Cool Centre locations;

- Consider need for activating Cooling Centres;
- Identify potential Cooling Centre sites; and
- Develop a transportation working group consisting of public, private, volunteer and service organizations to identify and develop a transportation component and procedures to ensure vulnerable populations are provided transportation to Cooling Centres.

2.4.3 Phase III – Heat Warning

Heat Warnings for Kings County will be issued by Environment and Climate Change Canada (ECCC) to inform the public when air temperature and/or humidex are forecast to be above defined criteria for two consecutive days so that the public can take action to protect themselves from the risks associated with extreme heat.



Criteria for issuing a **Heat Warning** in Nova Scotia:

- Issued when 2 or more consecutive days of daytime maximum temperatures are expected to reach 29°C or warmer and nighttime minimum temperatures are expected to fall to 16°C or warmer.
- Or
- Issued when 2 or more consecutive days of humidex values are expected to reach 36 or higher

Specific benchmarks include:

- A **Heat Warning** from Environment and Climate Change Canada, giving an outlook for an extended period of much above average temperatures;
- Increased EHS calls and Emergency Department visits;
- Increased wellness checks by Kings RCMP and Kentville Police Services; and
- Credible predictions of power outages, electrical blackouts, or rotating blackouts are issued during periods of high heat.

During Heat Warnings, everyone may be at increased risk of heat stress and heat stroke:

- People living alone without air conditioning are at high risk especially if the heat wave lasts many days;
- Check regularly on your neighbours and relatives to make sure they are not in danger; and
- Organizers of sport and recreational activities should build in regular water breaks and rest or consider rescheduling activities.

Phase III actions by Kings REMO may include the following:

- Continuing actions identified in Phase II;
- Participate in periodic or daily calls as needed with Provincial agencies (NS EMO) regarding weather and power updates;

- Increase Public Information efforts including Social Media and Kings REMO Emergency Email Notification System;
- Release pre-scripted heat protective measures to all media sources ([Annex E](#) and [Annex F](#));
- Initiate/continue risk communication efforts to vulnerable populations as outlined in Phase II;
- Initiate medical surveillance specific to heat impacts through the NS Health Authority, including long term care facilities, EHS ambulance runs and hospitals;
- Track Emergency Department visits and hospital admissions;
- Ensure employees have updated heat emergency materials;
- Coordinate with local utilities to assess power restrictions or limitations;
- Consider need for activating Cooling Centres and identify potential Cooling Centre sites;
- Publicize and communicate Cooling Centre locations;
- Develop a transportation working group consisting of public, private, volunteer and service organizations to identify and develop a transportation component and procedures to ensure vulnerable populations are provided transportation to Cooling Centres;
- Coordinate with local utilities to assess power restrictions or limitations;
- Coordinate with NS Power / Berwick Electric to identify and develop procedures for the operations of volunteered "Cooling Centres" that could be exempted from rotating blackouts;
- Ensure pet and animal heat impacts are being addressed through special facilities or pet accommodations at Cooling Centres or other locations; and
- Coordinate with local utilities to assess power restrictions or limitations.

2.4.4 Phase IV – Heat Wave

A **Heat Wave** will be issued to residents of Kings County to inform the public when air temperature and/or humidex are forecast to be above defined criteria for three (3) or more consecutive days so that the public can take action to protect themselves from the risks associated with extreme heat.

Criteria for issuing a Heat Wave in Kings County:

- Issued when 3 or more consecutive days of daytime maximum temperatures are expected to reach 29°C or warmer and nighttime minimum temperatures are expected to fall to 16°C or warmer.
- Or
- Issued when 3 or more consecutive days of humidex values are expected to reach 36 or higher

Specific benchmarks include:

- A Heat Warning from Environment and Climate Change Canada, giving an outlook for an extended period of much above average temperatures;
- Increased EHS calls and Emergency Department visits; and
- Credible predictions of power outages, electrical blackouts, or rotating blackouts are issued during periods of high heat.

Phase IV actions by Kings REMO may include the following:

- Continuing actions identified in Phase III;
- Consider activation of the Kings REMO Regional Emergency Coordination Centre (ECC)
- Consider activating community information and public health call lines;
- Conduct bed polling status of hospitals and monitor status of medical facilities;
- Monitor for possible medical impacts of prolonged power outages or rolling blackouts;
- Monitor Cooling Centres providing regular updates on numbers of persons at each, access and functional related needs, support issues, and power availability;
- Track heat related fatalities and medical emergencies; and
- Monitor impacts to agriculture including animal mortality, rendering plant impacts and coordination with industry. Determine potential impacts to landfills due to heat related animal mortality.

2.4.5 Phase V – Demobilization

A Heat Warning Demobilization will be announced by Kings REMO when there is no further threat of extreme heat to the citizens of Kings County. Upon confirmation that the Heat Warning has ended. Kings REMO Regional Emergency Management Coordinator will communicate this information to community partners.

A Heat Warning response should only be deactivated on a day on which Environment and Climate Change Canada's 2-day forecast (i.e., today and tomorrow) does not exceed the thresholds of temperature or humidex. Conservative deactivation thresholds are to be followed as prematurely halting municipal and public health responses to extreme heat has been shown to be associated with additional deaths.

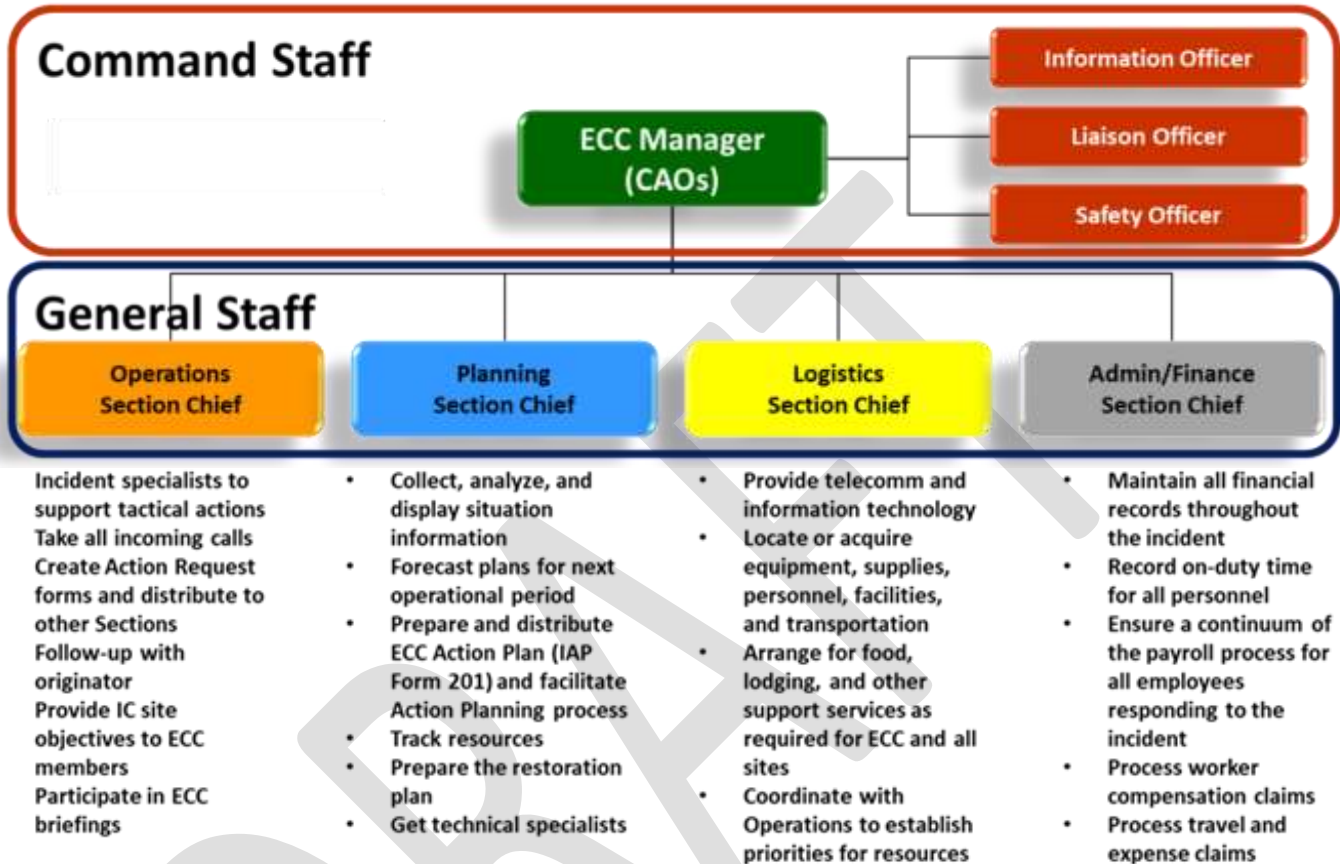
Following confirmation of termination, the ECC Information Officer will issue a news release as approved by the ECC Manager. The news release will:

- Announce the end of the Heat Warning/Heat Wave;
- Specify the criteria upon which the deactivation is based;
- Specify the need for continued vigilance against heat-related health effects within vulnerable populations as there can be a lag period between exposure to heat and ill health effects;
- Provide directions on where the public may obtain additional information; and
- Announce the closure of Cooling Centres.

Kings REMO will monitor the demobilization process as the premature halting of municipal and public health responses to extreme heat has been shown to be associated with additional deaths.

2.5 Extreme Heat Response Organizational Structure

To support an extreme heat incident within Kings County, the Kings REMO Emergency Coordination Centre is structured under the Incident Command System (ICS).



2.6 Municipal Public Warning Strategy

As there are limited audible warning systems within the Municipalities of Kings County, the public will be alerted to extreme heat incidents through local media (radio, television, newspaper) and social media (Facebook, Twitter). Warnings will also be posted on all Municipal websites and distributed through the Kings REMO Emergency Email Notification System. In extreme circumstances, public warning may also be done through vehicle public address systems and/or door-to-door contact by municipal services and/or volunteers.

Municipal Websites:

- [Municipality of the County of Kings](#)
- [Town of Berwick](#)
- [Town of Kentville](#)
- [Town of Wolfville](#)

2.7 Heat Waves and Large Public Events

Summer is a time for people to get outside and enjoy themselves. Large scale public events, such as music and arts festivals; sports events; and national celebrations are held throughout Kings County every summer providing enjoyment to millions of people.

While local agencies are generally well equipped to plan and deal with such events, the effects of excessive heat and sun exposure are sometimes not highlighted enough. Large public events increase exposure to heat and direct sunlight and can make organisational responses more difficult. Individual behaviours often change (for example, people may be reluctant to use the toilet facilities due to the long queues and so purposely reduce fluid intake). At many large events, people get into a good position to see the event and then reduce fluid intake and heat avoidance behaviours so as not to lose their spot. This can lead to heat-related illness, dehydration and/or collapse.

2.7.1 Heatwave advice and Mass Gatherings

The following table provides a quick heat-health checklist that can be used when planning large scale public events (mass gatherings):

Heat-health Risk	Actions to consider
Increased exposure to heat	<ul style="list-style-type: none"><input type="checkbox"/> Provide temporary shaded areas at event locations (umbrellas, tents)<input type="checkbox"/> Reduce the need to line-up (efficient check-in, additional staffing, or staggered ticket entry)<input type="checkbox"/> Provide a water spray/mist area/spraying (showers, garden hose)<input type="checkbox"/> Make available a map of local public air-conditioned spaces where people can have respite from the heat (consider extending opening hours of these venues)<input type="checkbox"/> Divert strenuous activities for cooler days or cooler periods of the day and provide an alternative, less strenuous program for hot days
Communication Barriers	<ul style="list-style-type: none"><input type="checkbox"/> Prepare advice for tourists and distribute around hotels, and transportation hubs<input type="checkbox"/> Produce and distribute heat-health advice printed onto free fans or caps (can be used to fan/protect against sun while containing information on protecting against recognizing heat-related illnesses, and provide emergency phone number in case of identified heat related illness)<input type="checkbox"/> Inform your audience and/or your members about the health risks and possible preventive measures through digital screens/speakers/announcements
Reduced access to Water	<ul style="list-style-type: none"><input type="checkbox"/> Distribute water bottles or temporary water dispensers<input type="checkbox"/> Ensure an adequate supply of drinking water – on hot days it is advisable to provide free drinking water

Heat-health Risk**Actions to consider****Severe Heat Emergency**

- Consider moving date, location or cancel event in extreme heat conditions
- Ensure adequate immediate relief for people in emergency and ensure their transport to the first aid/EHS unit

Medical Needs

- Remember that people with asthma, heart disease and/or other additional chronic conditions are additionally health sensitive to ozone and/or heat
- Keep in mind that alcohol and some (prescription) drugs can worsen effect of heat
- Ensure adequately trained personnel who notify authorities as soon as there are incidents of heat illness observed

Food Needs

- Provide water-rich foods such as salads, yogurt and ensure that food is kept cool to prevent contamination

DRAFT

3.0 RESPONSIBILITIES

3.1 Federal

In December 2007, the Government of Canada committed to help Canadians adapt to the challenges of a changing climate and its impacts.³

Environment and Climate Change Canada (ECCC) are responsible for issuing Special Weather Statements, Early Notifications and Heat Warnings for heat related events. Municipal staff across departments receive regular weather reports, advisories and warnings from Environment Canada weather services. These services are provided by weather meteorologists located in at Nova Scotia EMO Headquarters in Dartmouth, NS

3.2 Provincial

3.2.1 Nova Scotia Emergency Management Office (NS EMO)(DMA)

- [NS EMO](#) takes an “all-hazards” approach to emergency management that recognizes that mitigation, preparedness, response and recovery can be used to address the impact of disasters.
- [NS EMO](#) regional staff (Emergency Management Planning Officers - EMPO’s) work with municipal emergency management coordinators to ensure there are emergency management plans in place for each municipality in Nova Scotia.
- Municipal planning and local knowledge are represented in the development of emergency management plans.
- The [MCCAP](#) process requires municipal emergency management coordinators to work with EMPOs in the development of their respective climate change action plans.

3.2.2 Nova Scotia Health Authority (NSHA)

The Nova Scotia Health Authority developed the ‘[Heat Stress Management](#)’ program to promote a healthy workplace and to comply with legislative requirements. The program provides guidance and direction to staff who may be exposed to conditions which could result in a worker's core body temperature exceeding 38°C (100°F), or conditions which are in excess of the screening criteria values for heat stress exposure.

3.3 Regional – Kings REMO

Kings REMO is responsible for developing and implementing mitigation strategies to prevent or lessen the occurrences and/or severity of extreme heat events.

These strategies include:

- Local partner notification processes
- Public communications and support to public health heat education opportunities
- Making cooling centres and hydration accessible to the public
- Working to address the needs of vulnerable populations

³ Health Canada – [Climate Change and Health: Health Effects](#)

- Responding to impacts on municipally delivered health services such as Emergency Medical Services or Long-Term Care
- Responding to impacts on critical infrastructure such as power supply
- Occupational health and safety for their own workers in hot weather
- Potential activation of Emergency Coordination Centre, and activation of other local emergency response plans/protocols as required

Kings REMO roles may involve a range of various departments/divisions, ranging from recreation to public works to social services, as well as multiple community partners, from the Red Cross and utility companies to landlords, faith-based organizations, and smaller local service organizations

3.4 Role of the Private Sector

3.4.1 Residents

The residents of Kings County play an important role in managing an extreme heat event by ensuring that they and their families are prepared before an event takes place and knowing what to do during an extreme heat event. All residents of Kings County need to be prepared to care of themselves and their family for up to 72 hours or longer.



Nova Scotians are encouraged to be ready to cope on their own for at least the first 72 hours of an emergency.

Resources on how to stay safe when extreme heat threatens are available on the Government of Canada website [Extreme Heat: Heat Waves \(Annex E\)](#)

3.4.2 Businesses

An extreme heat event may negatively impact service provision by businesses as well as affect the health of employees. Preparing the workforce, building safe facilities, investing in supplier relationships, and connecting to the community are essential to building business community resilience. Businesses within Kings County are encouraged to develop and maintain comprehensive business emergency response plans which include a business impact analysis, business continuity plan and a training and exercise schedule to evaluate the recovery strategies and the plan. Information for developing a Business Continuity Plan can be found on the [website of the Department of Public Safety and Emergency Preparedness](#).

3.5 Phase I – Pre-Season Readiness

These Action Checklists may be used when an Extreme Heat Incident is at Phase I – Pre-Season Readiness

KINGS REMO

- Conduct pre-season meeting with stakeholders to review plans and confirm actions.
- Update and validate communication methodologies with stakeholders.
- Monitor Early Notifications and Heat Warnings from Environment Canada throughout the season.
- Coordinate Public Information campaign including updating websites, county-wide social media messages, and preparing handouts for County Departments to distribute.

MUNICIPAL UNITS (Municipality of the County of Kings, Towns of Berwick, Kentville, Wolfville)

- Verify list of Cooling Centres for municipalities
 - Name of Facility
 - Address
 - Hours of Operation
 - Will facility extend hours during a heat incident
- Coordinate with managers and owners of Cooling Centres that their information may be publicized during a heat incident.
- Identify and discuss transportation methods that may be used in Phase II and Phase III for Cooling Centres.
- Identify communication methodology and transportation methods for local vulnerable populations.
- Participate in providing consistent media campaign messages via webpage, fliers, and social media platforms.

EMERGENCY SOCIAL SERVICES (ESS)

- Verify list of Cooling Centres for County facilities.
 - Name of Facility
 - Address
 - Hours of Operation
 - Will facility extend hours during a heat incident
- Coordinate with managers and owners of Cooling Centres that their information may be publicized during a heat incident.
- Coordinate with agencies that service people with disabilities and access and functional needs.

NS HEALTH AUTHORITY

- Provide initial risk communication and public information that may be duplicated, and that jurisdictions and agencies may share with vulnerable populations.
- Discuss developing and/or updating public outreach materials.
- Identify information that may be shared via social media.
- Identify and verify list of medically fragile and vulnerable populations (e.g. socially isolated individuals, elderly, outside labourers) and coordinating agencies.

- Coordinate with County Departments that provide services to medically fragile and vulnerable populations.

NON-GOVERNMENT AGENCIES (including but not limited to Canadian Red Cross)

- Identify capabilities to support local government and communities during a heat incident.
- Identify communication and monitoring methods for vulnerable populations that the NGO serves.
- Help identify other partner agencies.

3.6 Phase II – Heat Advisory

These Action Checklists may be used when an Extreme Heat Incident has reached Phase II – Heat Advisory of Extreme Temperatures.

KINGS REMO / ECC MANAGER

- Review Emergency Coordination Centre (ECC) Position Checklists.
- Participate in periodic or daily calls as needed with County agencies regarding weather and power updates.
- Coordinate between Kings County REMO, the NS Health Authority, Emergency Social Services, Department of Community Services, NS Department of Agriculture, Community Based Organizations (CBOs), Faith Based Organizations (FBOs), and First Responder Agencies regarding potential convening of the Regional Emergency Management Planning Committee (REMPC) to consider response actions.

REMPC

- Conduct Threat Assessment

INFORMATION OFFICER

- Review Information Officer Position Checklist in Emergency Coordination Centre.
- Increase public information efforts including Social Media and Municipal websites
- Consider methods to alert and warn vulnerable populations.
- Release pre-scripted heat protective measures to all media sources.
- Publicize and communicate Cooling Centre locations.
- Publicize that fans alone are insufficient for extended periods of excessive indoor heat.
- Publicize request for citizens and agencies to enhance checks on homebound individuals.
- Consider use of 2-1-1 for public phone contact.
- Consider use of Volunteers for public hotline or door-to-door contact.

LIAISON OFFICER

- Review Liaison Officer Position Checklist in Emergency Coordination Centre.
- Ensure employees have updated heat emergency materials.
- Coordinate with NS Power and Berwick Electric to assess power restrictions or limitations.

HEALTH BRANCH

- Review Medical Health Branch Position Checklist in Emergency Coordination Centre.
- Initiate or continue risk communication efforts to vulnerable populations as outlined in Phase I.

- Initiate medical surveillance specific to heat impacts including long-term care facilities, skilled nursing facilities, and dialysis centres.
- Track Emergency Department visits and EHS calls.
- Track heat related fatalities, medical emergencies and ambulance runs.
- Advise at-risk medical facilities to monitor ambient indoor temperature.
- Prepare Public Health staff for possibility of Cooling Centre coordination and support.

AGRICULTURE BRANCH

- Review Agriculture Branch Position Checklist in Emergency Coordination Centre.
- Monitor impacts to agriculture including animal mortality, rendering plant impacts, and coordination with industry

CARE AND SHELTER BRANCH

- Review Care and Shelter Branch Position Checklist in Emergency Coordination Centre.
- Coordinate with the managers and owners of any Cools Centres being considered for publication.
- Consider need for activating Cooling Centres.
- Identify potential Cooling Centre sites and needed staffing.
- Coordinate with Animal Services for care and shelter of pets.
- Coordinate with agencies that service people with disabilities and access and functional needs.

LOGISTICS SECTION

- Review Logistic Section Coordinator Position Checklist in Emergency Coordination Centre.
- Develop a transportation working group consisting of public, private, volunteer and service organizations to identify and develop a transportation component and procedures to ensure vulnerable populations are provided transportation to Cool Centres

PLANNING/INTELLIGENCE SECTION

- Review Planning/Intelligence Section Position Checklist in Emergency Coordination Centre.
- Confirm details of agency participation, staffing.
- Consider long-term planning needs including advanced planning for extended incident.
- Develop ECC Incident Action Plan (IAP)

3.7 Phase III – Heat Warning

These Action Checklists may be used in addition to the Phase II Checklist when a Heat Warning has reached Phase III – Heat Warning.

KINGS REMO / ECC MANAGER

- Review ECC Manager Position Checklist in Emergency Coordination Centre.
- Increase coordinating calls with local, regional and Provincial resources

POLICY GROUP

- Review Kings County Policy.
- Conduct Threat Assessment.
- Determine need to activate the Emergency Coordination Centre (ECC)

- Identify any regulatory or ordinance issues that may need to be suspended

INFORMATION OFFICER

- Review Public Information Officer Position Checklist in Emergency Coordination Centre.
- Increase and continue public information efforts.
- Consider activating community information and public health call lines.

LIAISON OFFICER

- Review Liaison Position Checklist in Emergency Coordination Centre.
- Ensure employees have updated heat emergency materials.

OPERATIONS SECTION

- Review Operations Section Coordinator Position Checklist in Emergency Coordination Centre.
- Determine need for mutual aid resources.

MEDICAL HEALTH BRANCH

- Review Medical Health Branch Position Checklist in Emergency Coordination Centre.
- Conduct bed polling status of hospitals and skilled nursing facilities and monitor status of all medical facilities.
- Track Emergency Department Visits and EHS calls.
- Track heat related fatalities and morbidity.
- Establish communication with local dialysis centres if there is concern regarding potential power outages.
- Monitor for medical impacts of prolonged power outages or rolling blackouts

AGRICULTURE BRANCH

- Review Agriculture Branch Position Checklist in Emergency Coordination Centre.
- Monitor rendering capacity County-wide

CARE AND SHELTER BRANCH

- Review Care and Shelter Branch Position Checklist in Emergency Coordination Centre.
- Consider activating Cooling Centres.
- Coordinate with Canadian Red Cross to open Cooling Centres.
- Coordinate with Animal Services to ensure pet and animal heat impacts are being addressed through special facilities or pet accommodations at Cooling Centres or other locations.
- Monitor Cooling Centres and provide regular updates on numbers of persons at each, access and functional needs, support issues, and power availability.
- Ensure that Cooling Centres know the importance of maximizing fluid dissemination and minimizing food.
- Develop process to check on shut-in or vulnerable populations

LOGISTICS SECTION

- Review Logistic Section Position Checklists in Emergency Coordination Centre.
- Identify transportation resources for Cooling Centres

PLANNING/INTELLIGENCE SECTION

- Review Planning/Intelligence Section Checklists in Emergency Coordination Centre.
- Confirm details of agency participation, staffing.
- Consider GIS function for mapping heat related trends and/or fatalities.
- Develop ECC Incident Action Plan (IAP)

3.8 Phase IV – Heat Wave

These Action Checklists may be used in addition to the Phase III Checklist when a Heat Warning has reached Phase IV – Heat Wave.

KINGS REMO / ECC MANAGER

- Review ECC Manager Position Checklist in Emergency Coordination Centre.
- Review Phase III Checklist.
- Increase coordinating calls with local, regional and Provincial resources
- Determine need / level for ECC Activation
 - Level 1 – Monitoring (Key personnel only)
 - Level 2 – Partial Activation (Key personnel and personnel from responding agencies)
 - Level 3 – Full Activation (all personnel)

POLICY GROUP

- Review Kings County Policy.
- Conduct Threat Assessment.
- Consider declaring a [State of Local Emergency](#)
- Identify any regulatory or ordinance issues that may need to be suspended

INFORMATION OFFICER

- Review Public Information Officer Position Checklist in Emergency Coordination Centre.
- Increase and continue public information efforts.
- Consider activating community information and public health call lines.

LIAISON OFFICER

- Review Liaison Position Checklist in Emergency Coordination Centre.
- Ensure employees have updated heat emergency materials.

OPERATIONS SECTION

- Review Operations Section Coordinator Position Checklist in Emergency Coordination Centre.
- Determine need for mutual aid resources.

MEDICAL HEALTH BRANCH

- Review Medical Health Branch Position Checklist in Emergency Coordination Centre.
- Conduct bed polling status of hospitals and skilled nursing facilities and monitor status of all medical facilities.
- Track Emergency Department Visits and EHS calls.
- Track heat related fatalities and morbidity.

- Establish communication with local dialysis centres if there is concern regarding potential power outages.
- Monitor for medical impacts of prolonged power outages or rolling blackouts

AGRICULTURE BRANCH

- Review Agriculture Branch Position Checklist in Emergency Coordination Centre.
- Monitor rendering capacity County-wide

CARE AND SHELTER BRANCH

- Review Care and Shelter Branch Position Checklist in Emergency Coordination Centre.
- Consider activating Cooling Centres.
- Coordinate with Canadian Red Cross to open Cooling Centres.
- Coordinate with Animal Services to ensure pet and animal heat impacts are being addressed through special facilities or pet accommodations at Cooling Centres or other locations.
- Monitor Cooling Centres and provide regular updates on numbers of persons at each, access and functional needs, support issues, and power availability.
- Ensure that Cooling Centres know the importance of maximizing fluid dissemination and minimizing food.
- Develop process to check on shut-in or vulnerable populations

LOGISTICS SECTION

- Review Logistic Section Position Checklists in Emergency Coordination Centre.
- Identify transportation resources for Cooling Centres

PLANNING/INTELLIGENCE SECTION

- Review Planning/Intelligence Section Checklists in Emergency Coordination Centre.
- Confirm details of agency participation, staffing.
- Consider GIS function for mapping heat related trends and/or fatalities.
- Develop ECC Incident Action Plan (IAP)

3.9 Phase V – Demobilization

KINGS REMO / ECC MANAGER

- Upon confirmation that the Heat Warning/Heat Wave has ended, communicate this information to community partners
- A level II, III or IV response should only be deactivated on a day in which Environment Canada's 2-day forecast (i.e., today and tomorrow) does not exceed the thresholds of temperature or humidex.

POLICY GROUP

- Deactivate the Kings REMO Emergency Coordination Centre

INFORMATION OFFICER

- The demobilization news release will:
 - Announce the end of the Heat Warning/Heat Wave
 - Specify criteria upon which the deactivation is based
 - Specify the need for continued vigilance against heat-related health effects within vulnerable populations as there can be a lag period between exposure to heat and ill health effects
 - Provide directions on where the public may obtain additional information
 - Announce the closure of cooling centres.

LIAISON OFFICER

- Obtain After Action Review information from supporting agencies

OPERATIONS SECTION

- Direct closure of cooling centres

MEDICAL HEALTH BRANCH

- Confirm that hot weather has ended

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4.0 PUBLIC EDUCATION & AWARENESS OF EXTREME HEAT INCIDENTS

4.1 Emergency Public Information

Timely and effective communication of information to the public and between participating agencies is critical during a Heat Warning. During or immediately following a public emergency, critical information may be disseminated by the Information Officer (IO) or the Incident Commander through a variety of methods including, but not limited to:

- Press Conferences
- Press Releases
- Operational Area Briefings
- Partner E-mails
- Conference Calls
- Mass Notifications
(Kings REMO Emergency Email Notification System)
- Municipal Websites & Social Media
- Phone banks



Communications materials should be distributed before and during extreme heat events. Municipal Websites may be updated with heat health messaging, including 'look out for each other', and which medications might put people at great risk of heat related complications. Paper materials may also be distributed to senior and community centres, schools, low-income housing areas, pharmacies and medical centres, as well as outdoor events.

Printed materials should inform citizens of the location of cooling centres and public water fountains, and information about transport to get there.

During a heat warning, heat wave, including compounding factors such as power outages, water shortages or boil water advisories, or air quality alerts, should also be sent out to media outlets and internal staff.

Outdoor municipal workers should be alerted that they may be at higher risk for heat illness and be trained to monitor outdoor spaces for people experiencing heat-related illnesses.

4.2 Public Safety Tips

Heat illnesses are preventable. During extreme heat, the most important thing is to keep cool and stay hydrated. The following safety steps can be communicated to the public to protect them and their families in very hot weather.

Know the Risks	<ul style="list-style-type: none">• Hot temperatures can be dangerous• Heat illnesses can affect you quickly and are mainly caused by over-exposure to heat or over-exertion in the heat
Prepare for the Heat	<ul style="list-style-type: none">• Tune in regularly to local weather forecasts & alerts• Arrange for regular visits• If you have an air conditioner, make sure it works properly
Pay Close Attention to how you feel	<ul style="list-style-type: none">• Watch for symptoms of heat illness• Heat stroke is a medical emergency! Call 911 immediately
Stay Hydrated	<ul style="list-style-type: none">• Drink plenty of cool liquids before you feel thirsty• Thirst is not a good indicator of dehydration.
Stay Cool	<ul style="list-style-type: none">• Dress for the weather• Keep your home cool
Avoid Exposure to very Hot Temperatures	<ul style="list-style-type: none">• Never leave people or pets in your care inside a parked vehicle or in direct sunlight• Plan outdoor activities during cooler parts of the day• Avoid sun exposure

4.2.1 Know the Risks

- Hot temperatures can be dangerous
- Heat illnesses can affect you quickly and are mainly caused by over-exposure to heat or over-exertion in the heat.

4.2.2 Prepare for the Heat

- **Tune in regularly to local weather forecasts and alerts** so you know when to take extra care.
- **Arrange for regular visits** by family members, neighbours or friends during very hot days in case you need help. Visitors can help identify signs of heat illness that could be missed over the phone.
- **Find ways to keep cool** before the hot weather starts. If you have an air conditioner, make sure it works properly. If you have ceiling fans or other fans they can help if the humidity isn't high. Find an air-conditioned spot close by where you can cool off for a few hours on very hot days. This will help you cope with the heat.
- **Have cool drinks in your vehicle** and keep your gas tank topped up.

4.2.3 Pay Close Attention to How You – And Those Around You - Feel

Watch for symptoms of heat illness, which include:

- dizziness or fainting
- nausea or vomiting
- headache
- rapid breathing and heartbeat
- extreme thirst (dry mouth or sticky saliva)
- decreased urination with unusually dark yellow urine
- changes of behaviour in children (like sleepiness or temper tantrums)

If you have any of these symptoms during extreme heat, move to a cool place and drink liquids right away. Water is best.

While waiting for help - **cool the person right away by:**

- moving them to a cool place, if you can
- applying cold water to large areas of their skin or clothing
- fanning the person as much as possible

4.2.4 Stay Hydrated

Drink plenty of cool liquids (especially water) before you feel thirsty to decrease your risk of dehydration (not having enough fluids in your body). Thirst is not a good indicator of dehydration.

- Remind yourself to drink water by leaving a glass by the sink.
- Flavouring water with natural fruit juice may make it more appealing.
- Eat more fruits and vegetables as they have a high-water content.
- If you eat less, you may need to drink more water.
- Drink water before, during and after physical activity.

Heat Stroke is a medical emergency!

Call 9-1-1 immediately if you are caring for someone who has a high body temperature and is either unconscious, confused or has stopped sweating

**STAY
HYDRATED.**

During extreme heat, drink plenty of water even if you don't feel thirsty.

4.2.5 Stay Cool

Dress for the weather

- Wear loose-fitting, light-coloured clothing and a wide-brimmed hat made of breathable fabric.
- When you buy sunglasses, make sure they provide protection against both UVA and UVB rays.

Take a break from the heat

- If you must do physical activity in extreme heat, take extra breaks, remove gear to let your body cool off and drink lots of water. Don't expect your usual performance in hot weather. Give your body time to recover after being in the heat.

Keep your home cool

- Make meals that don't need to be cooked in an oven.
- Block the sun by closing awnings, curtains or blinds during the day.
- If safe, open your windows at night to let cooler air into your home.
- If you have an air conditioner with a thermostat, keep it set to the highest setting that is comfortable (somewhere between 22°C/72°F and 26°C/79°F). This will reduce your energy costs and provide you with needed relief. If you are using a window air conditioner, cool only one room where you can go for heat relief.

If your home is extremely hot

- Take cool showers or baths until you feel refreshed.
- Use a fan to help you stay cool and aim the air flow in your direction.
- Spend a few hours in a cool place. It could be a tree-shaded area, swimming facility or an air-conditioned spot like a shopping mall, grocery store, or public library.

Did you know?

Your body is not used to (not acclimatized to) extreme heat at the beginning of the summer. If you are physically active, you are also not acclimatized if you don't exercise regularly during hot weather.

4.2.6 Avoid Exposure to Extreme Heat when Outdoors

Never leave people or pets inside a parked vehicle or in direct sunlight.

- When the outside air temperature is 23°C/73°F, the temperature inside a vehicle can be extremely dangerous - more than 50°C/122°F.

Reschedule or plan outdoor activities during cooler parts of the day.

- Before heading out, check the Air Quality Health Index in your area, if available. Air pollution tends to be at higher levels during very hot days.
- Plan strenuous outdoor activities for cooler days or choose a cooler location like a place with air conditioning or with tree shade.

Avoid sun exposure. Find or bring shade when possible.

- Tree-shaded areas can be as much as 5°C/9°F cooler than the surrounding area.
- Shade yourself by wearing a wide-brimmed, breathable hat, or using an umbrella.
- Wear loose-fitting, light-coloured clothing made of breathable fabric.
- Wear sunglasses that have UVA and UVB protection.
- Use a sunscreen with sun protection factor (SPF) 15 or higher and follow the manufacturer's directions. Don't use sunscreen on a child less than 6 months old

Did you know?

Sunburned skin loses its sweating efficiency. This makes it harder for your body to regulate its temperature.

5.0 PLAN TESTING, REVIEW & MAINTENANCE

5.1 Plan Testing Schedule & Responsibility

The Kings County Regional Emergency Management Coordinator (REMC) is responsible for coordinating the annual testing (in whole or in part) of the Kings REMO Heat Alert and Response System in order to verify its overall effectiveness and provide training to the emergency personnel. The exercise can take the form of a simple tabletop or a more elaborate functional exercise.

5.2 Plan Review & Maintenance

The Kings REMO Heat Alert and Response System (HARS) will be maintained by the Regional Emergency Management Planning Committee (REMPC) and the Regional Emergency Management Coordinator (REMC).

This Plan will be reviewed annually and, where necessary, revised by a meeting(s) of the Regional Emergency Management Planning Committee (REMPC) and the Regional Emergency Management Advisory Committee (REMAC). The Plan shall be revised subject to the approval of Municipal Councils.

REVIEWS

MONTH	DAY	YEAR	BY

PLAN REVISIONS

MONTH	DAY	YEAR	CHANGE	APPROVED

6.0 DISTRIBUTION LIST

Distributed electronically:

Municipal Units:

- [Municipality of the County of Kings](#)
- [Town of Berwick](#)
- [Town of Kentville](#)
- [Town of Wolfville](#)

- [Village of Aylesford](#)
- [Village of Canning](#)
- Village of Cornwallis Square
- [Village of Greenwood](#)
- [Village of Kingston](#)
- [Village of New Minas](#)
- [Village of Port Williams](#)

Fire Departments

- Kings County Fire Departments

Regional Emergency Management Planning Committee (REMPC)

- [NS EMO](#) – Western Zone Planning Officer
- [Acadia University](#)
- [Annapolis Valley Amateur Radio Club](#) (AVARC)
- [Annapolis Valley First Nation](#)
- [Annapolis Valley Regional Centre for Education](#) (AVRCE)
- [Brigadoon Village](#)
- Community Services – Kings County
- [NS Department of Lands and Forestry](#)
- [NS Department of Transportation and Infrastructure Renewal](#) (DTIR)
- [NS Emergency Health Services](#)
- Fire Services
- [Glooscap First Nations EMO](#)
- [Kentville Police](#) / [Kings County RCMP](#)
- [Kings Transit Authority](#) (KTA)
- [NS Department of Agriculture](#)
- [NS Health Authority](#)
- [Canadian Red Cross](#)
- [Valley Communications](#)
- [Valley Search and Rescue](#) (SAR)

Annexes

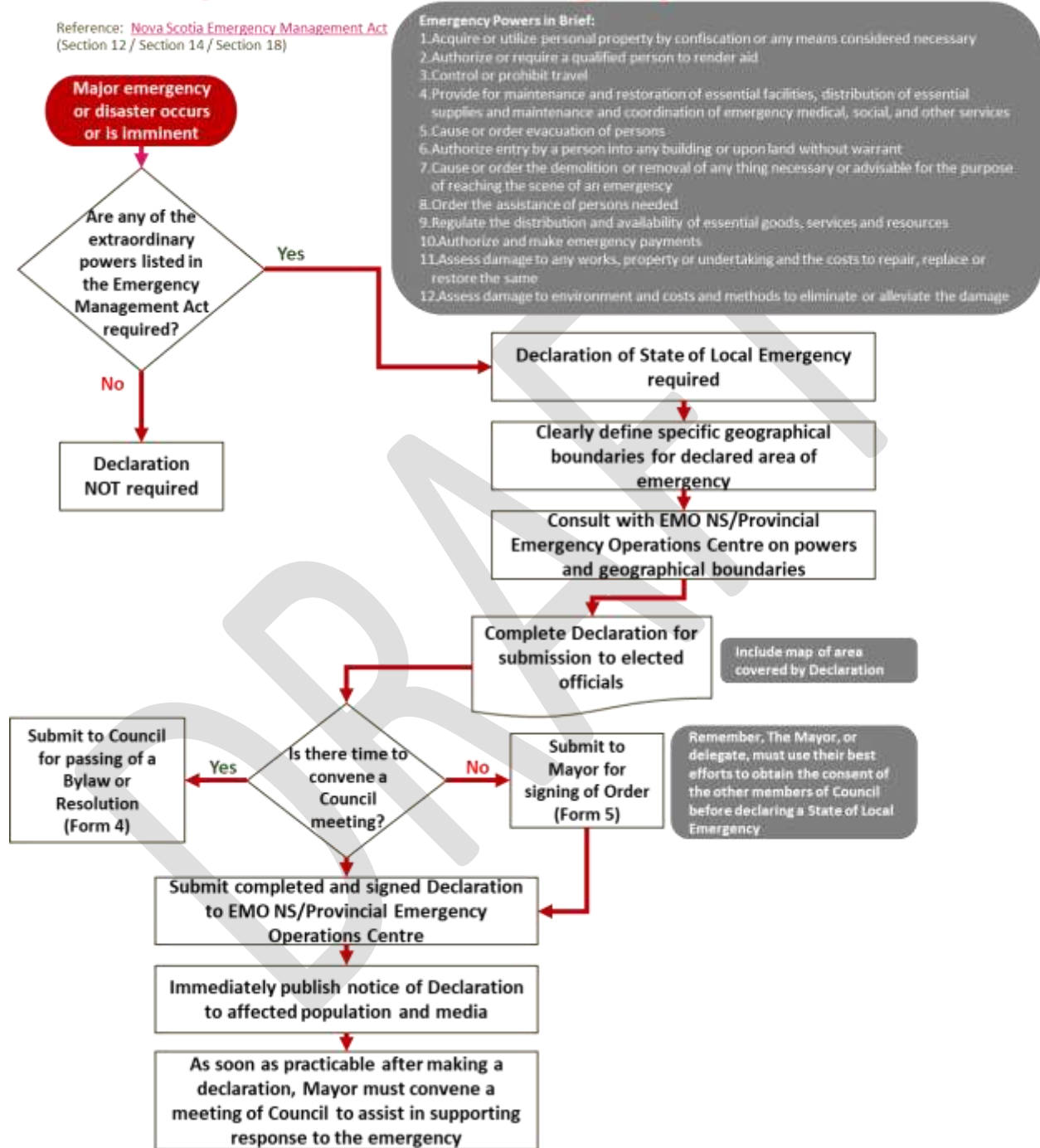
- A [Declaring a State of Local Emergency \(SOLE\)](#)
 - [Form 4 \(Council\)](#)
 - [Form 5 \(Mayor\)](#)
- B [Extreme Heat – Human Vulnerabilities](#)
- C [Extreme Heat – Animal Vulnerabilities](#)
- D [Cooling Centre Checklist](#)
- E [Key Public Health Messages](#)
- F [Heat Health Messages](#)
- G [Public Service Announcements \(Examples\) – Extreme Heat](#)
- H [Abbreviations & Definitions](#)
- I [Frequently Asked Questions \(FAQ\) – Extreme Heat](#)
- J [Resources](#)

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Annex A – Declaring a State of Local Emergency (SOLE)

Declaring a State of Local Emergency

Reference: [Nova Scotia Emergency Management Act](#)
(Section 12 / Section 14 / Section 18)



FORM 4

DECLARATION OF A STATE OF LOCAL EMERGENCY

MUNICIPALITY: _____

Section 12(2) of the *Emergency Management Act*, S.N.S. 1990, c.8

WHEREAS the area herein described is or may soon be encountering an emergency that requires prompt action to protect property or the health, safety or welfare of persons therein;

Emergency Area:

The area general described as:

Province of Nova Scotia (hereafter referred to as the "Designated Area(s)")

Yes

No

Nature of the Emergency:

AND WHEREAS the undersigned is satisfied that an emergency as defined in Section 2(b) of Chapter 8 of the Statutes of Nova Scotia, 1990, the *Emergency Management Act*, exists or may exist in the Designated Area(s) noted above;

THE UNDERSIGNED HEREBY DECLARES pursuant to Section 12(2) of the *Emergency Management Act*, a State of Local Emergency in the Municipality noted above as of and from _____ o'clock in the forenoon () or afternoon () of the _____ day of _____, 20____.

THIS DECLARATION OF STATE OF LOCAL EMERGENCY shall exist until _ o'clock in the forenoon () or afternoon () of the _____ day of _____, 20____, or for a maximum of 7 days from the date and time specified above unless the Declaration is renewed or terminated as provided in Section 20 of the *Emergency Management Act*.

DATED at _____, in the Municipality of _____, Province of Nova Scotia, this _____ day of _____, 20____.

Council, Municipality _____

Name _____

Positions _____

[Authorized by Resolution No. _____ dated the _____ Day of _____, 20____.

FORM 5

DECLARATION OF A STATE OF LOCAL EMERGENCY

MUNICIPALITY: _____

Section 12(2) of the *Emergency Management Act*, S.N.S. 1990, c.8

WHEREAS the area herein described is or may soon be encountering an emergency that requires prompt action to protect property or the health, safety or welfare of persons therein;

Emergency Area:

The area general described as:

[Empty rectangular box for describing the emergency area]

Province of Nova Scotia (hereafter referred to as the "Designated Area(s)")

Yes

No

Nature of the Emergency:

[Empty rectangular box for describing the nature of the emergency]

AND WHEREAS the undersigned is satisfied that an emergency as defined in Section 2(b) of Chapter 8 of the Statutes of Nova Scotia, 1990, the *Emergency Management Act*, exists or may exist in the Designated Area(s) noted above;

AND WHEREAS the Council of the Municipality is unable to act;

AND WHEREAS the undersigned has (check appropriate box)

- (a) Consulted with a majority of the members of the Municipal Emergency Management Committee Yes No
- (b) Found it impractical to consult with the majority of the Municipal Emergency Management Committee Yes No

THE UNDERSIGNED HEREBY DECLARES pursuant to Section 12(3) of the *Emergency Management Act*, a State of Local Emergency in the Municipality noted above as of and from ____ o'clock in the forenoon () or afternoon () of the _____ day of _____, 20____.

THIS DECLARATION OF STATE OF LOCAL EMERGENCY shall exist until _ o'clock in the forenoon () or afternoon () of the _____ day of _____, 20____, or for a maximum of 7 days from the date and time specified above unless the Declaration is renewed or terminated as provided in Section 20 of the *Emergency Management Act*.

DATED at _____, in the Municipality of _____, Province of Nova Scotia, this _____ day of _____, 20____.

Mayor's Signature _____

Municipality of _____

Annex B – Extreme Heat – Human Vulnerabilities

Heat Fatigue

Signs include impaired performance of skills, mental concentration, or vigilance. Heat fatigue is generally due to the individual not being used to working in heat.

- First Aid - There is no specific treatment except to remove the person to a cooler environment before more serious conditions develop

Heat Rashes

Most common problem. Prickly heat rash shows itself as red bumps normally where clothing is restrictive or chafes. As sweating increases the bumps begin to feel prickly. Prickly heat occurs in skin that is persistently wet from unevaporated sweat. Rash may become infected if not careful.

- First Aid - In most cases heat rash will disappear when the individual returns to a cooler environment.

Heat Collapse

In a collapse or faint, the brain does not receive enough oxygen because blood pools in the extremities. The individual may lose consciousness. The onset of collapse is rapid and unpredictable.

- First Aid - Move to cooler area, loosen clothing, and give fluids

Heat Cramps

Heat Cramps are not immediately dangerous but is a signal of significant stress on the body from heat. It occurs when the salts in the body fluids become out of balance as a result of sweating in an effort to maintain cooler temperatures during hot weather and inadequate fluid and salt replacement.

- Symptoms – Severe painful cramping of the muscles in the arms, legs or abdomen often accompanied by swelling of the legs and feet
- First Aid – Move to a cooler spot and drink electrolyte replacement fluids (juices, non-carbonated sports drinks without caffeine)
- Without intervention – It can lead to heat exhaustion and/or heat stroke

Heat Exhaustion

Heat Exhaustion is more serious and generally includes an elevated core body temperature up to 104°F. It occurs when the body becomes dehydrated with a consequential imbalance of electrolytes (salts). This causes progressive compromise of the circulatory system.

- Symptoms -- Headache, nausea, dizziness, cool and clammy skin, pale face, cramps, weakness, profuse perspiration
- First Aid -- Move to a cooler spot, drink water with a small amount of salt added (one teaspoon per quart) or rehydration solution or sports drinks without caffeine
- Without Intervention -- It can lead to collapse and heat stroke within minutes or hours

Heat Stroke

Heat Stroke is the most serious illness and is a severe and life-threatening failure of the body's ability to cool. It occurs when natural cooling mechanisms are overwhelmed, including perspiration and circulatory reflexes. Brain and nerve functions begin to fail, and the body temperature rises out of control.

- Symptoms – Severe mental status changes, seizures, loss of consciousness, kidney failure, abnormal cardiac rhythm, confusion, rapid pulse, hot and dry skin, shortness of breath, facial flushing with no perspiration, core body temperature over 104°F
- First Aid – Immediately call 9-1-1 for emergency medical assistance. Cool person immediately, move to shade or indoors, wrap in a cool, wet sheet
- Without Intervention -- it can lead to permanent neurological impairment, coma, and death

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Children Vulnerabilities

Did you know there is no safe amount of time to leave any child in a car alone? Every 10 days in the U.S. a child dies when left alone in the car. Avoid heatstroke-related injury and death by never leaving your child alone in a car, not even for a minute. If you see a child alone in a car, call 911. Emergency personnel want you to call. One call could save a life.

The temperature in a car rises rapidly in the first 30 minutes, even on a cool day. Additionally, leaving the car windows open or cracking them open does not allow enough air into the vehicle.

Facts:

Car with window rolled down slightly + windows collecting light, trapping heat inside = pressure cooker effect.

Outside air = 30 degrees Celsius

- After 10 minutes: inside car = 39 degrees Celsius
- After 30 minutes: inside car = 49 degrees Celsius

Outside air = 22 degrees Celsius + humidity

- After 30 minutes: inside car = 40 degrees Celsius
- After 60 minutes: inside car = 44 degrees Celsius

Prevention:

- Never leave children in a car alone
- Call 9-1-1 immediately if you see a child alone in a car or in distress
- It takes only a body temp of 40 degrees Celsius for heat stroke to occur. 42 degrees is usually fatal
- A child's body warms up 3-5 times faster than an adult's body
- Be alert for any sign of heat stress:
 - Agitation
 - Disorientation
 - Dizziness
 - Nausea
 - Rapid breathing
 - Seizure
 - Unconsciousness
 - Vomiting

Treatment:

- Bring your child to a cooler place indoors, an air-conditioned car, or shady area
- Remove your child's excess clothing
- Encourage your child to drink cool fluids containing salt and sugar, such as sports drinks
- Put a cool, wet cloth or cool water on your child's skin
- Call your doctor for advice

Annex C – Extreme Heat – Animal Vulnerabilities

Pets

Dogs and cats are designed to conserve heat and are less efficient at cooling than humans. They are in danger of heat stroke at 43 degrees Celsius. Sweat glands on pets are located on the nose and footpads, which are inadequate for cooling on hot days. Panting and drinking water help cooling, but if the air temperature is overheated, brain and organ damage can occur in 15 minutes. Risk factors to heat stress include body size, age (young and old), breed (short nosed breeds, such as bulldogs), obesity, and existing metabolic, cardiovascular, or respiratory disease.

Facts:

Car with window rolled down slightly + windows collecting light, trapping heat inside = pressure cooker effect.

Outside air = 29 degrees Celsius

- After 10 minutes: inside car = 39 degrees Celsius
- After 30 minutes: inside car = 49 degrees Celsius

Outside air = 22 degrees Celsius + humidity

- After 30 minutes: inside car = 40 degrees Celsius
- After 60 minutes: inside car = 44 degrees Celsius

Prevention:

- Never leave pets in a car on warm days
- Call animal control or law enforcement immediately if an animal is in distress in a car
- Be alert for any sign of heat stress: heavy panting, glazed eyes, a rapid pulse, unsteadiness, a staggering gait, vomiting, deep red or purple tongue
- Never leave pets tied up without shade, air circulation, and fresh water
- Offer a cool place to rest when temperatures are uncomfortable
- If you are going to take advantage of a local cooling centre and feel the need to bring your pet, always call ahead to find out if they are able accept pets and what preparations are necessary (i.e., leash for dog, cage for cats, etc.)

Treatment:

- Overheated pets must be cooled immediately
- Move pet to shade
- Apply cool water all over body
- Apply ice packs to neck and chest area
- Allow licking ice and small amount of water (large amount will cause vomiting)
- Take to veterinarian immediately for evaluation

Livestock and Poultry

Producers should assure that all livestock and poultry are provided adequate and accessible drinking water, shade, and fans and water-cooling, where feasible.

Many producers have back-up generators for their facilities, which should be inspected to ensure operational condition in the event of rolling or rotating blackouts or power failures. Emergency power should also be available for fans and well pumps. Misters, soakers, and fans should be checked to ensure they are operational. Shade structures (especially shade cloths) should be in good repair.

During an excessive heat emergency, dairy producers have used a variety of temporary cow-cooling methods. Fire hoses can be hooked up to water trucks and used to soak the cattle. Strings of cows can be cooled in sprinkler pens, if they are not in constant use for milking. Temporary soaking lines can be devised using flexible landscaping PVC hose and high-volume emitters positioned over the cattle. Industrial fans have been rented to augment these water-cooling methods. Temporary shade structures have been erected. In general, working cattle should be avoided except in the early morning.

If producers are experiencing difficulties or delays in having dead animals picked up by rendering companies, they should immediately contact the Department of Agriculture, or Environmental Health Department and make them aware of the situation. Local officials are in a position to assist with alternate methods of disposal, including evaluating the need for declaring a State of Local Emergency.

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Annex D – Cooling Centre Checklist

The following is a partial list of suggested criteria for setting up a Cooling Centre. There are no established criteria for Cooling Centres. Additionally, unless a special exemption has been given by the local utilities, facilities used as Cooling Centres are not exempt from rotating blackouts.

Important Criteria

- Cooling Centres should be a pre-identified Canadian Red Cross emergency shelter site
- Cooling or equivalent (temperature maintained at a minimum of 20°C)
- Accessible to people with disabilities
- Ample seating appropriate to the jurisdiction
- Public restrooms accessible to people with disabilities
- Access to potable water (drinking fountain, etc.)
- Access to 911 services (phone or payphone)
- Publicly advertised
- Parking access
- Proximity to public transit
- Need for Security

Suggested Criteria

- Back-up generators
- Area for pets
- Secure, facility has security service
- Communications, phone, internet access, sign-language interpreters
- Child friendly with materials for children to play with while at the Cooling Centre
- Medical personnel such as nurses and/or aides
- Capable of 24-hour, 7 days a week operation
- Large capacity
- Personnel assistance services for people with disabilities
- Available televisions, books, games
- Transportation for those lacking their own, including wheelchair accessible services
- Follow-up procedures for those in need of additional services (health care, social services)
- Adjacent pet housing resources available if needed

Annex E – Key Public Health Messages

Stay out of the Heat:

- Keep out of the sun between 11:00am and 3:00pm
- If you must go out in the heat, walk in the shade, apply sunscreen and wear a hat and light scarf
- Avoid extreme physical exertion
- Wear light, loose-fitting cotton clothes

Cool Yourself Down

- Have plenty of cold drinks, and avoid excess alcohol, caffeine and hot drinks
- Eat cold foods, particularly salads and fruit with a high-water content
- Take a cool shower, bath or body wash
- Sprinkle water over the skin or clothing, or keep a damp cloth on the back of your neck

Keep Your Environment Cool:

- Keeping your living space cool is especially important for infants, the elderly or those with chronic health conditions or who can't look after themselves
- Place a thermometer in your main living room and bedroom to keep a check on the temperature
- Keep windows that are exposed to the sun closed during the day, and open windows at night when the temperature has dropped
- Close curtains that receive morning or afternoon sun, however, care should be taken with metal blinds and dark curtains, as these can absorb heat – consider replacing or putting reflective material in-between them and the window space
- Turn off non-essential lights and electrical equipment – they generate heat
- Keep indoor plants and bowls of water in the house as evaporation helps cool the air
- If possible, move into a cooler room, especially for sleeping
- Electric fans may provide some relief, if temperatures are below 35 deg C

Longer-Term

- Consider putting up external shading outside windows
- Use pale, reflective external paints
- Have your loft and cavity walls insulated – this keeps the heat in when it is cold and out when it is hot
- Grow trees and leafy plants near windows to act as natural air-conditioners

Look Out for Others:

- Keep an eye on isolated, elderly, ill or very young people and make sure they can keep cool
- Ensure that babies, children or elderly people are not left alone in stationary cars
- Check on elderly or sick neighbours, family or friends every day during a heatwave
- Be alert and call a doctor or social services if someone is unwell or further help is needed

If You Have a Health Problem:

- Keep medicines below 25 deg C or in the refrigerator (read the storage instructions on the packaging)
- Seek medical advice if you are suffering from a chronic medical condition or taking multiple medications

If You or Others Feel Unwell:

- Try to get help if you feel dizzy, weak, anxious or have intense thirst and headache; move to a cool place as soon as possible and measure your body temperature
- Drink some water or fruit juice to rehydrate
- Rest immediately in a cool place if you have painful muscle spasms (particularly in the legs, arms or abdomen, in many cases after sustained exercise during very hot weather), and drink oral rehydration solutions containing electrolytes
- Medical attention if needed if heat cramps last more than one hour
- Consult your doctor if you feel unusual symptoms or if symptoms persist

Annex F – Heat Health Messages

Message 1: Heat illnesses are preventable.

Message 2: While extreme heat can put everyone at risk from heat illnesses, health risks are greatest for:

- older adults;
- infants and young children;
- people with chronic illnesses, such as breathing difficulties, heart conditions, or psychiatric illnesses;
- people who work in the heat;
- people who exercise in the heat;
- homeless people; and
- low-income earners.

Message 3: If you are taking medication or have a health condition, ask your doctor or pharmacist if it increases your health risk in the heat and follow their recommendations.

Message 4: Heat illnesses include heat stroke, heat exhaustion, heat fainting, heat edema (swelling of hands, feet and ankles), heat rash and heat cramps (muscle cramps). Watch for symptoms of heat illness, which include:

- dizziness or fainting;
- nausea or vomiting;
- headache;
- rapid breathing and heartbeat;
- extreme thirst; and
- decreased urination with unusually dark yellow urine.

If you experience any of these symptoms during extreme heat, immediately move to a cool place and drink liquids. Water is best.

Message 5: Heat stroke is a medical emergency! Call 911 or your local emergency number immediately if you are caring for someone, such as a neighbour, who has a high body temperature and is either unconscious, confused or has stopped sweating. While waiting for help - cool the person right away by:

- moving them to a cool place, if you can;
- applying cold water to large areas of the skin or clothing; and
- fanning the person as much as possible.

Message 6: Frequently visit neighbours, friends and older family members, especially those who are chronically ill, to make sure that they are cool and hydrated.

Message 7: Drink plenty of cool liquids, especially water, before you feel thirsty to decrease your risk of dehydration. Thirst is not a good indicator of dehydration.

Message 8: Reschedule or plan outdoor activities during cooler parts of the day.

Message 9: Wear loose-fitting, light-coloured clothing made of breathable fabric.

Message 10: Never leave people or pets in your care inside a parked vehicle or in direct sunlight.

Message 11: Take a break from the heat by spending a few hours in a cool place. It could be a tree-shaded area, swimming facility or an air-conditioned spot such as a public building, shopping mall, grocery store, place of worship or public library.

Message 12: Take cool showers or baths until you feel refreshed.

Message 13: Prepare meals that don't need to be cooked in your oven.

Message 14: Block sun out by closing awnings, curtains or blinds during the day.

Message 15: Avoid sun exposure. Shade yourself by wearing a wide-brimmed, breathable hat or using an umbrella.

Supplemental Messages

Message 17 (Heat-Health and Air Quality): Reduce strenuous activity during periods of extreme heat and plan physical activities for cooler parts of the day. Exercise in an air-conditioned place, or a cooler outdoor location such as a tree-shaded area away from high traffic to avoid high levels of air pollution. Pollution levels tend to be higher on hot days; the Air Quality Health Index can be used to determine the air quality in your neighbourhood.

Annex G – Public Service Announcements (Examples) – Extreme Heat

Keeping Cool in a Heat Wave

This is an important message from the Kings Regional Emergency Management Organization. In a heat wave, keeping your cool will keep you healthy. People and animals should stay indoors. If you don't have air-conditioning, go to the mall or the library or a community relief shelter (if activated). Remember to drink more fluids but avoid alcohol and high sugar drinks. When going out, wear light clothing and never leave any persons, especially infants or young children, or animals in a closed, parked vehicle.

Power Failures in Hot Weather

This is an important message from the Kings Regional Emergency Management Organization. In hot weather, power failures can be deadly. When the "heat is on", but the power is out, check on neighbors, relatives and others at risk, including the elderly and young children. To keep yourself and loved ones cool, drink plenty of non-alcoholic fluids, reduce activities, take cool showers or baths, wear light colored clothing and know where to go for emergency relief.

Stay Healthy and Safe in Hot Weather

This is an important message from the Kings Regional Emergency Management Organization. When you must be outdoors in hot weather, take steps to stay cool and healthy. Cut down on exercise and other hard tasks. Drink two to four glasses of cool, non-alcoholic fluids every hour. Rest often in shady areas. Wear light clothing and protect yourself from the sun with a wide brimmed hat, sunglasses and sunscreen - SPF 15 or higher.

Extreme Heat

Heat kills by pushing the human body beyond its limits. In extreme heat and high humidity, evaporation is slowed, and the body must work extra hard to maintain a normal temperature.

Most heat disorders occur because the victim has been overexposed to heat or has over-exercised for his or her age and physical condition. Older adults, young children, and those who are sick, or overweight are more likely to succumb to extreme heat.

During a Heat Wave

What you should do if the weather is extremely hot:

- Stay indoors as much as possible and limit exposure to the sun.
- Stay on the lowest floor out of the sunshine if air conditioning is not available.
- Consider spending the warmest part of the day in public buildings such as libraries, schools, movie theaters, shopping malls, and other community facilities.
- Circulating air can cool the body by increasing the perspiration rate of evaporation.
- Eat well-balanced, light, and regular meals. Avoid using salt tablets unless directed to do so by a physician.
- Drink plenty of water. Persons who have epilepsy or heart, kidney, or liver disease; are on fluid-restricted diets; or have a problem with fluid retention should consult a doctor before increasing liquid intake.
- Limit intake of alcoholic beverages.
- Dress in loose-fitting, lightweight, and light-colored clothes that cover as much skin as possible.
- Protect face and head by wearing a wide-brimmed hat.
- Check on family, friends, and neighbors who do not have air conditioning and who spend much of their time alone.
- Never leave children or pets alone in closed vehicles.
- Avoid strenuous work during the warmest part of the day. Use a buddy system when working in extreme heat and take frequent breaks.

Annex H – Frequently Asked Questions (FAQ) – Extreme Heat

What happens to the body as a result of exposure to extreme heat?

People suffer heat-related illness when the body's temperature control system is overloaded. The body normally cools itself by sweating. But under some conditions, sweating just isn't enough. In such cases, a person's body temperature rises rapidly. Very high body temperatures may damage the brain or other vital organs. Several factors affect the body's ability to cool itself during extremely hot weather. When the humidity is high, sweat will not evaporate as quickly, preventing the body from releasing heat quickly. Other conditions that can limit the ability to regulate temperature include old age, youth (age 0-4), obesity, fever, dehydration, heart disease, mental illness, poor circulation, sunburn, and prescription drug use and alcohol use.

Who is at greatest risk for heat-related illness?

Those at greatest risk for heat-related illness include infants and children up to four years of age, people 65 years of age and older, people who are overweight, and people who are ill or on certain medications.

What is heat stroke?

Heat stroke is the most serious heat-related illness. It occurs when the body becomes unable to control its temperature: the body's temperature rises rapidly, the sweating mechanism fails, and the body is unable to cool down. Body temperature may rise to 40°C or higher within 10 to 15 minutes. Heat stroke can cause death or permanent disability if emergency treatment is not provided.

What are the warning signs of a heat stroke?

Warning signs of heat stroke vary but may include the following:

- An extremely high body temperature (above 39°C)
- Red, hot, and dry skin (no sweating)
- Rapid, strong pulse
- Throbbing headache
- Dizziness
- Nausea
- Confusion
- Unconsciousness



What should I do if I see someone with any of the warning signs of heat stroke?

If you see any of these signs, you may be dealing with a life-threatening emergency. Have someone call for immediate medical assistance while you begin cooling the victim. Do the following:

- Get the victim to a shady area.
- Cool the victim rapidly, using whatever methods you can. For example, immerse the victim in a tub of cool water; place the person in a cool shower; spray the victim with cool water from a garden hose; sponge the person with cool water; or if the humidity is low, wrap the victim in a cool, wet sheet and fan him or her vigorously.
- Monitor body temperature and continue cooling efforts until the body temperature drops to 38-39°C.
- If emergency medical personnel are delayed, call the hospital emergency room for further instructions.
- Do not give the victim alcohol to drink.
- Get medical assistance as soon as possible.

What is heat exhaustion?

Heat exhaustion is a milder form of heat-related illness that can develop after several days of exposure to high temperatures and inadequate or unbalanced replacement of fluids. Those most prone to heat exhaustion are elderly people, those with high blood pressure, and those working or exercising in a hot environment.

Heat Exhaustion



What are the warning signs of heat exhaustion?

The warning signs of heat exhaustion include the following:

- Heavy sweating
- Paleness
- Muscle cramps
- Tiredness
- Weakness
- Dizziness
- Headache
- Nausea or vomiting
- Fainting

The skin may be cool and moist. The pulse rate will be fast and weak, and breathing will be fast and shallow. If heat exhaustion is untreated, it may progress to heat stroke. See medical attention if symptoms worsen or last longer than one hour.

What steps can be taken to cool the body during heat exhaustion?

- Drink cool, non-alcoholic beverages.
- Rest.
- Take a cool shower, bath, or sponge bath.
- Seek an air-conditioned environment.
- Wear lightweight clothing.

What are heat cramps and who is affected?

Heat cramps are muscle pains or spasms – usually in the abdomen, arms, or legs – that may occur in association with strenuous activity. People who sweat a lot during strenuous activity are prone to heat cramps. This sweating depletes the body’s salt and moisture. The low salt level in the muscles causes painful cramps. Heat cramps may also be a symptom of heat exhaustion. If you have heart problems or are on a low-sodium diet, seek medical attention for heat cramps.

What should I do if I have heat cramps?

If medical attention is not necessary, take the following steps:

- Stop all activity and sit quietly in a cool place.
- Drink clear juice or a sports beverage.
- Do not return to strenuous activity for a few hours after the cramps subside because further exertion may lead to heat exhaustion or heat stroke.
- Seek medical attention for heat cramps if they do not subside in 1 hour.

What is heat rash?

Heat rash is a skin irritation caused by excessive sweating during hot, humid weather. It can occur at any age but is most common in young children. Heat rash looks like a red cluster of pimples or small blisters. It is more likely to occur on the neck and upper chest, in the groin, under the breasts, and in elbow creases.

What is the best treatment for heat rash?

The best treatment for heat rash is to provide a cooler, less humid environment. Keep the affected area dry. Dusting powder may be used to increase comfort.

Can medications increase the risk of heat-related illness?

The risk for heat-related illness and death may increase among people using the following drugs: (1) psychotropics, which affect psychic function, behavior, or experience (e.g. haloperidol or chlorpromazine); (2) medications for Parkinson’s disease, because they can inhibit perspiration; (3) tranquilizers such as phenothiazines, butyrophenones, and thiozanthenes; and (4) diuretic medications or “water pills” that affect fluid balance in the body.

How effective are electric fans in preventing heat-related illness?

Electric fans may provide comfort, but when the temperature is in the high 30s, fans will not prevent heat-related illness. Taking a cool shower or bath or moving to an air-conditioned place is a much better way to cool off. Air conditioning is the strongest protective factor against heat-related illness. Exposure to air conditioning for even a few hours a day will reduce the risk for heat-related illness. Consider visiting a shopping mall or public library for a few hours.

How can people protect their health when temperatures are extremely high?

Remember to keep cool and use common sense. Drink plenty of fluid, replace salts and minerals, wear appropriate clothing and sunscreen, pace yourself, stay cool indoors, schedule outdoor activities carefully, use a buddy system, monitor those at risk, and adjust to the environment.

How much should I drink during hot weather?

During hot weather you will need to increase your fluid intake, regardless of your activity level. Don't wait until you're thirsty to drink. During heavy exercise in a hot environment, drink enough non-alcoholic cool fluids each hour to maintain normal color and amount of urine output.

Should I take salt tablets during hot weather?

Do not take salt tablets unless directed by your doctor. Heavy sweating removes salt and minerals from the body. These are necessary for your body and must be replaced. The easiest and safest way to do this is through your diet. Drink fruit juice or a sports beverage when you exercise or work in the heat.

What is the best clothing for hot weather or a heat wave?

Wear as little clothing as possible when you are at home. Choose lightweight, light-colored, loose-fitting clothing. In the hot sun, a wide-brimmed hat will provide shade and keep the head cool. If you must go outdoors, be sure to apply sunscreen 30 minutes prior to going out and continue to reapply according to the package directions. Sunburn affects your body's ability to cool itself and causes a loss of body fluids. It also causes pain and damages the skin.

What should I do if I work in a hot environment?

Pace yourself. If you are not accustomed to working or exercising in a hot environment, start slowly and pick up the pace gradually. If exertion in the heat makes your heart pound and leaves you gasping for breath, STOP all activity. Get into a cool area or at least in the shade, and rest, especially if you become lightheaded, confused, weak, or faint.

Annex I – Glossary of Terms & Definitions

Advisory	Means actual or expected weather conditions may cause general inconvenience or concern, but do not pose a serious enough threat to warrant a weather warning. Examples of advisories include Air Quality Advisory, Humidex Advisory, Dust Storm Advisory, and Cold Wave Advisory. An advisory may also be used when conditions show signs of becoming favourable for severe weather when the situation is not definite enough or too far in the future to justify a warning.
Cooling Centre	A Cooling Centre is a temporary air-conditioned public space set up by local authorities to deal with the health effects of extreme heat over an extended period of time. Cooling Centres are meant to prevent hyperthermia, especially among the elderly without air conditioning at home. Cooling Centres provide shade, water, and sometimes medical attention, along with referrals to social services.
ECCC	Environment and Climate Change Canada
Excessive Heat Wave	Term used by some public health authorities in Canada, to designate excessive heat over two to three days or more that can cause a high risk of excess mortality and other potential health impacts.
Heat Cramps	Painful and often incapacitating cramps in muscles. Heat cramps are caused by depletion of salt in the body as a result of heavy sweating, and ingestion of water without replacing salt.
Heat Exhaustion	Weakness, lassitude, dizziness, visual disturbance, feeling of intense thirst and heat, nausea, vomiting, palpitations, tingling and numbness of extremities after exposure to a hot environment.
Heat Stroke	Acute illness caused by overexposure to heat. Symptoms are dry, hot skin, high body temperature (usually over 40 deg C) and mental dysfunction.
Heat Warning	<p>Issued by Environment and Climate Change Canada to inform the public when air temperature and/or humidex are forecast to be above defined criteria for tow consecutive days so that the public can take action to protect themselves from the risks associated with extreme heat.</p> <p>Criteria for issuing a Heat Warning in Nova Scotia:</p> <ul style="list-style-type: none">• Issued when 2 or more consecutive days of daytime maximum temperatures are expected to reach 29°C or warmer and nighttime minimum temperatures are expected to fall to 16°C or warmer.Or• Issued when 2 or more consecutive days of humidex values are expected to reach 36 or higher.

Humidex

This is a way of expressing what hot, humid weather really feels like. The air of a given temperature and humidity is equated in terms of comfort to air with a higher temperature and low humidity. Some people are uncomfortable when the humidex is 30°C. Most people are uncomfortable when the humidex is above 40°C or 45°C.

Environment Canada uses humidex ratings to inform the general public when conditions of heat and humidity are possibly uncomfortable:

Humidex Range Degree of Comfort

20-29	Comfortable
30-39	Some Discomfort
40-45	Great Discomfort; Avoid Exertion
Above 45	Dangerous; Heat Stroke Possible

Humidity

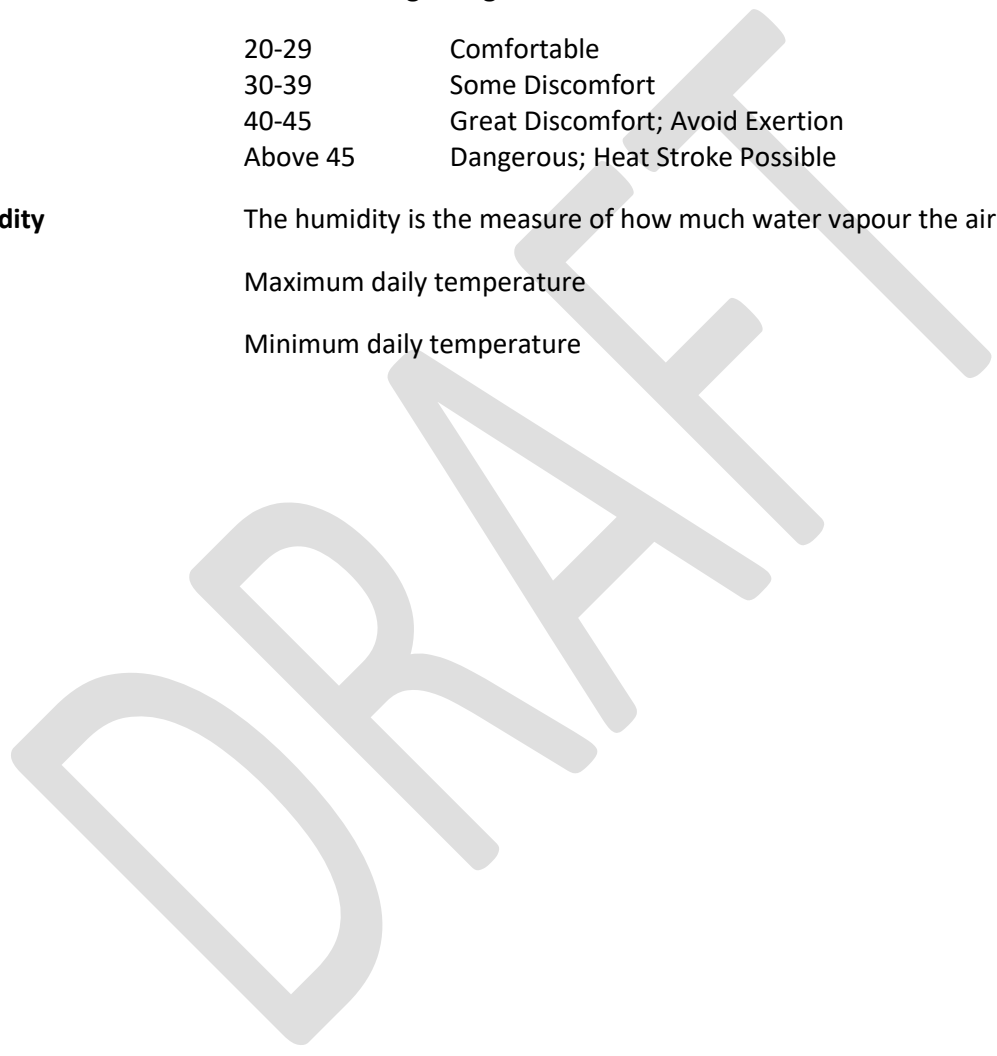
The humidity is the measure of how much water vapour the air contains.

Tmax

Maximum daily temperature

Tmin

Minimum daily temperature



Annex J – Resources

Federal

- Health Canada
 - [Protect Yourself from Extreme Heat](#)
 - [Heat Alert and Response Systems to Protect Health: Best Practices Guidebook](#)
 - [It's Way too Hot – Protect Yourself from Extreme Heat](#)
 - [Keep Children Cool – Protect Your Child from Extreme Heat](#)
 - [You're Active in the Heat. You're at Risk – Protect Yourself from Extreme Heat](#)
 - [Acute Care during Extreme Heat: Recommendations and Information for Health Care Workers](#)
 - [Health Facilities Preparation for Extreme Heat: Recommendations for Retirement and Care Facility Managers](#)
 - [Infographic: Staying Healthy in the Heat](#)

Provincial

- [Province adopts new Heat Alert System, June 29, 2018](#)

Articles

- [Heat Alert and Response Systems in Urban and Rural Canada](#)
- [Climate change, extreme heat and health – Protecting Canadians from the health impacts of extreme heat](#), Science media Centre of Canada





Kings County, NS Hurricane Preparedness & Response Plan (HPRP)

June 2019



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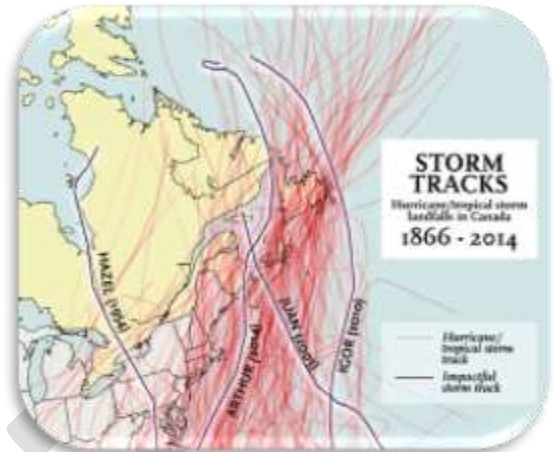
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FOREWORD

The development of a Kings County Regional Hurricane Preparedness and Response Plan (HPRP) is paramount to public safety in the case of natural disaster threats. The Kings County Regional Hurricane Preparedness and Response Plan was prepared in consultation with County and Municipal stakeholders responsible for everyday management throughout Kings County. It serves as Kings County's Emergency Hurricane Plan to coordinate an integrated approach to Hurricane response.



As a Support Plan to the [Kings REMO Regional Emergency Management Plan \(REMP\)](#), the Kings County Regional Hurricane Preparedness and Response Plan is augmented by the Regional Emergency Evacuation Plan (REEP), the Flood Preparedness and Response Plan (FPRP) the Emergency Coordination Centre (ECC) Operational Guidelines and Evacuation Guidelines in order to provide the level of detail required for a comprehensive emergency response to a hurricane event.

Kings REMO strives for strong leadership within the emergency management community and is dedicated to continuous improvements and enhancements to this plan, training and exercising throughout the Kings County region. Therefore, this plan is a living document that will be amended as necessary through a planning process that is managed by the Regional Emergency Management Coordinator (REMC) in consultation with emergency management partners throughout the County.

Peter Muttart
Mayor

[Municipality of the County of Kings](#)

Don Clarke
Mayor

[Town of Berwick](#)

Sandra Snow
Mayor

[Town of Kentville](#)

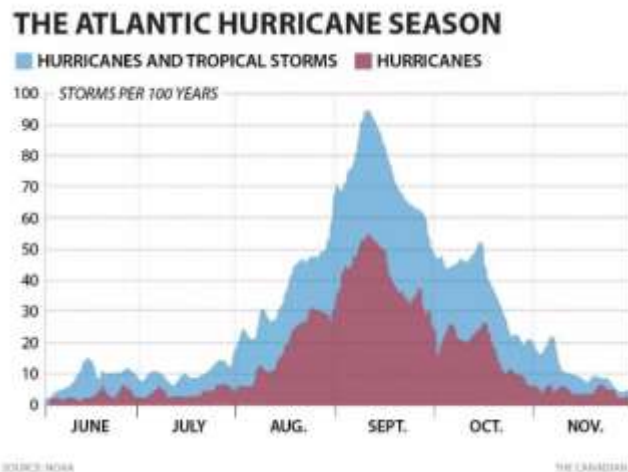
Jeff Cantwell
Mayor

[Town of Wolfville](#)

1.0 INTRODUCTION

1.1 Background

Hurricane season in Nova Scotia runs from June through November, but the risk of hurricanes in Nova Scotia is highest during the months of September and October. While Canadian cities and towns aren't hit as hard as places in the United States, hurricanes and tropical storms can have a significant impact on the country, especially on the east coast.



This Regional Hurricane Preparedness and Response Plan is only one part of preparedness efforts that include training, exercises and the debriefing of actual events. As Kings County evolves, so will the Hurricane Plan, which will be regularly reviewed and adapted. Due to the nature of major emergencies, there may be a need to adapt the plan during a Hurricane. Therefore, the following plan should not be seen as a final, rigid solution, but rather the foundation for continuous planning efforts.

1.2 Authorities

The authority for an evacuation as a response to a hurricane is afforded by the [Nova Scotia Municipal Government Act](#) and the [Emergency Management Act](#).

The legal authority for local authorities to order an evacuation rests within the [Nova Scotia Emergency Management Act](#) (1990) Section 14(f) – Protection of property and health or safety

Protection of property and health or safety – Section 14

Upon a state of local emergency being declared in respect to a municipality or an area thereof, the mayor may, during the state of local emergency, in respect of such municipality or an area thereof, do everything necessary for the protection of property and the health and safety of persons therein may:

- a. Cause an emergency management plan or any part thereof to be implemented;
- b. Acquire or utilize or cause the acquisition or utilization of personal property by confiscation or any means considered necessary;
- c. Authorize or require a qualified person to render aid of such type as that person may be qualified to provide;
- d. Control or prohibit travel to or from an area or on a road, street or highway;
- e. Provide for the maintenance and restoration of essential facilities, the distribution of essential supplies and the maintenance and coordination of emergency medical, social and other essential services;

- f. Cause or order the evacuation of persons and the removal of livestock and personal property threatened by an emergency and make arrangements for the adequate care and protection thereof;
- g. Authorize the entry by a person into any building or upon land without warrant;
- h. Cause or order the demolition or removal of any thing where the demolition or removal is necessary or advisable for the purpose of reaching the scene of an emergency, or attempting to forestall its occurrence or of combating its progress;
- i. Order the assistance of persons needed to carry out the provisions mentioned in this Section;
- j. regulate the distribution and availability of essential goods, services and resources;
- k. authorize and make emergency payments;
- l. assess damage to any works, property or undertaking and the costs to repair, replace or restore the same;
- m. assess damage to the environment and the costs and methods to eliminate or alleviate the damage

1.3 References

- [Nova Scotia Emergency Management Act](#)
- [Kings REMO Regional Emergency Management Plan \(REMP\), 2018-09](#)
- Kings REMO Regional Emergency Evacuation Plan (REEP), 2018-12
- Kings REMO Flood Preparedness and Response Plan (FPRP), 2019-03
- Kings REMO Evacuation Operational Guidelines, 2018-05-01
- Kings REMO Emergency Coordination Centre Operational Guidelines, 2018-05-01
- [Kings REMO Policy – Comfort Centres/Emergency Shelters](#)

1.4 Purpose

The purpose of this Emergency Management Support Plan is to provide Kings County municipal employees with information and guidelines that may be required in the event of a tropical storm or hurricane. In order to meet the basic requirements for the warning, evacuation, and sheltering of residents throughout Kings County, it is crucial to have a coordinated effort among provincial, county, and municipal governments for preparation and response.

This Emergency Management support plan outlines the basic responsibilities, resources, and actions necessary for responding to tropical storm events that may impact Kings County.



1.5 Aim and Scope

- The information in this Plan is to be used to prevent loss of life from the hazards of hurricanes and severe tropical storms that may impact Kings County.
- The basic responsibilities, resources, and actions necessary for responding to storm events are outlined in this plan.
- The information in this plan is specific to hurricane and tropical storm response efforts and is not intended as a complete comprehensive all-hazards emergency plan.

If the need to evacuate and relocate residents of the affected area(s) is apparent, the provisions of the Regional Emergency Evacuation Plan (REEP) shall be implemented. In such events, the Municipality shall discuss the need to declare a State of Local Emergency (SOLE), [Annex A](#), if a mandatory evacuation is needed. If there is a fire or the possibility of fire, the Fire Chief has the authority to declare the mandatory evacuation at the current time there is no advantage to declaring a SOLE.



DRAFT

2.0 CONCEPT OF OPERATIONS (CONOPS)

Emergency response efforts during a hurricane will require coordination of all Municipal Governments within Kings County as well as additional support agencies. The prime requirement for effective communication is the Emergency Coordination Centre (ECC) where authorities can coordinate emergency operations, assistance and resources.



Most emergency incidents require the use of a graduated response based on the extent, size, duration and/or complexity of the event. Initially, at the onset of an emergency, a single or dual response from municipal departments (i.e., Police and Fire) may be sufficient to handle the incident. If the emergency escalates beyond the capability of a single or dual response, additional measures will be implemented as needed. The Kings County Emergency Coordination Centre provides resource-coordination across the County and maintains Situational Awareness through a Current Operating Picture (COP).

2.1 Planning Assumptions

The Hurricane Preparedness and Response Plan assumes the following:

- Hurricanes have the potential to cause catastrophic damage, mass casualties, mass fatalities, critical infrastructure disruptions and inundation of communities throughout the province of Nova Scotia.
- Hurricanes have the potential to quickly overwhelm Kings REMO and rapidly deplete and damage provincial resources.
- When provincial resources are depleted, assistance may be sought from the federal government.
- Flooding and loss of power from a hurricane can cause critical public works infrastructure components to be out of service for days or weeks. These include NS Power/Berwick Electric, water, wastewater, storm water drainage, roads and bridges. Disruption of these services impacts the ability of key businesses to reopen and citizens to return.
- There may be widespread and extensive power outages across Kings County due to high winds knocking down power lines. Due to the extent of power outages, some areas may not have electricity for days to weeks.
- Hurricanes have the potential to hinder the delivery of key emergency services such as firefighting, Emergency Health Services and law enforcement.
- Effective prevention and preparedness operations, early warning and evacuation, and well-trained and equipped response forces may reduce the number of casualties caused by a hurricane

2.3 Plan Activation

This plan may be activated in whole or in part, as required, by the Kings REMO Emergency Coordination Centre Management Team (ECCMT), with or without the formal declaration of a state of local emergency.

Upon activation, all participating agencies will respond in accordance with the procedures described within this plan and in accordance with their agency operating procedures.

2.3 Hurricane Information

2.3.1 Hurricane Development

A tropical cyclone is the technical term for what many people refer to as a hurricane. It is described as a rotating, organized system of clouds and thunderstorms characterized by a low-pressure centre, strong winds, and a spiral of thunderstorms that produce heavy rain. Tropical cyclones rotate counterclockwise in the Northern hemisphere. Tropical cyclones are classified as follows:

- **Tropical Depression.** A tropical cyclone with maximum sustained winds of less than 63 km/h
- **Tropical Storm.** A tropical cyclone with maximum sustained winds between 63 and 118 km/h
- **Hurricane.** When sustained winds in a tropical cyclone reach or exceed 119 km/h, it is called a hurricane. Hurricanes are further designated by categories on the Saffir-Simpson scale.
- **Major Hurricane.** A tropical cyclone with maximum sustained winds of 178 km/h or higher, corresponding to a Category 3, 4 or 5 on the [Saffir-Simpson Hurricane Wind Scale](#).

The figure below shows the composition of a hurricane. The hurricane's eyewall, surrounding the relatively calm eye, is composed of dense clouds that contain the highest winds in the cyclone. The storm's outer rain bands are made up of dense thunderstorms. Due to the counter-clockwise motion of the cyclone, the right-front quadrant is usually the most dangerous part of hurricanes and tropical storms with regard to storm surge, and winds.

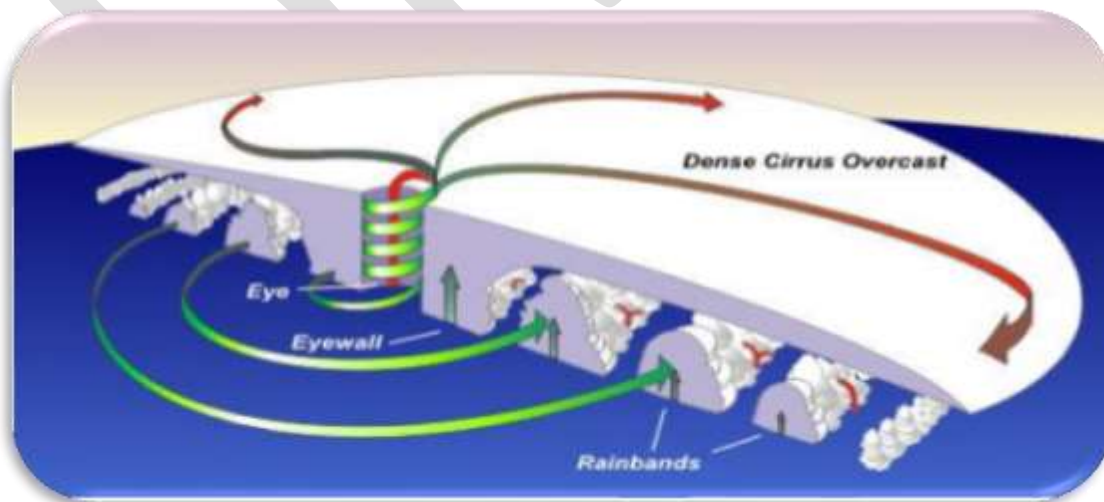


Figure 1: This image shows the composition of a hurricane including the eye, eyewall, rainbands and dense cirrus overcast

2.3.2 Hurricane Types

The evacuation and sheltering of hurricane vulnerable residents and medical facilities in Kings County are planned in response to any of the three major types of hurricanes:

- **Landfalling:** A hurricane characterized by the track of its eye crossing from water to land and continuing inland, as in Hurricane Juan in 2003
- **Paralleling:** A hurricane characterized by the track of its eye approaching but not crossing the coastline, often moving parallel along the shore, yet still producing significant hurricane hazards.
- **Exiting:** A hurricane characterized by its return to open water after traversing a significant land mass.



2.3.3 Hurricane Hazards

- **Storm Surge.** Storm surge has the potential to cause the largest loss of life in hurricanes. Water, not wind may account for the highest number of all tropical cyclone deaths. Storm surge is dangerous because a mere 15cm of fast-moving flood water can knock over an adult. It takes only 60cm of rushing water to carry away most vehicles-including large pickup trucks and SUVs
- **High Winds.** High winds will render segments of the population vulnerable to the passing hurricane. This hazard applies to residents of structures unable to withstand the stress of hurricane-force winds, measured at a sustained velocity exceeding 119 km/h
- **Rainfall.** Since the structure of every hurricane is unique, there is no way to determine the rate and distribution of the expected 15cm to 30cm of rainfall generally accompanying a storm. However, it is known that the rainfall has only minor influence on the storm surge water levels. Rainfall in itself will not normally require the emergency evacuation of large numbers of residents during the passage of a hurricane as does the storm surge, but it may cause the slowing of traffic or the severing of evacuation routes, adding critical hours to overall evacuation time.



2.3.4 Hurricane Categories and Damage Potential

The five categories of hurricanes and the resulting damage potential are:

Category 1 – Sustained winds 119 – 153 km/h

- Some damage to shrubs, trees and foliage
- Some damage is likely to poorly constructed signs.
- Some damage to unanchored mobile homes
- Loose outdoor items will become projectiles, causing additional damage.
- Persons struck by windborne debris risk injury and possible death.
- Many areas will experience power outages with some downed power poles.
- Expected storm surge levels from 4-8 feet above tide level.
- Flooding on low-lying coastal roads and barrier islands

1 Winds of 119 to 153 kph

Dangerous:
Damage to poorly constructed homes, tree branches, power lines



Category 2 – Sustained winds 154 – 177 km/h

- Some damage to shrubs, foliage and trees
- Major damage to exposed mobile homes
- Extensive damage to poorly constructed signs
- Some damage to roofing, windows and doors
- Extensive damage to power lines and poles with widespread power outages
- Considerable damage to piers and unprotected small craft
- Storms surge 8-10 feet above normal
- Flooding on low-lying coastal roads and barrier islands

2 154 - 177 kph

Very dangerous:
Damage to roofs, windows, walls. Shallow-rooted trees blown down. Severe power outages



Category 3 – Sustained winds 178 – 208 km/h

- Many trees will be snapped or uprooted and block numerous roads.
- Some structural damage to houses and buildings.
- Mobile homes and poorly constructed signs are destroyed.
- Persons struck by windborne debris risk injury and possible death.
- Near total power loss is expected with outages for several days to weeks.
- Expected storm surge levels 14-19 feet above normal
- Serious flowing along the coast and barrier islands
- Larger structures damaged by flooding and floating debris

3 178 - 208 kph

Devastating:
Damage to building structures. Many trees uprooted. Flooding near coast. Power and water shortages



Category 4 – Sustained winds 209 – 251 km/h

- Shrubs and trees blown down.
- All signs blown down.
- Extensive damage to roofing materials, windows and doors.
- Complete destruction of mobile homes
- Electricity will be unavailable for weeks after the hurricane passes.
- Storm surge of 19-26 feet above normal
- Major damage to lower floors of structures near the coast



Category 5 – Sustained winds greater than 252 km/h

- Complete roof failure on many buildings
- Small buildings blown over or blown away.
- All signs blown down.
- Complete destruction of mobile homes
- Severe and extensive window and door damage will occur.
- Nearly all trees will be snapped or uprooted, and power poles downed.
- Power outages will last for weeks to possibly months.
- Major damage to lower floors of all structures less than 15 feet above sea level within 500 yards of shore.
- Nearly all trees will be snapped or uprooted, and power poles downed.
- Power outages will last for weeks to possibly months.
- Major damage to lower floors of all structures less than 15 feet above sea level within 500 yards of shore.



2.4 Kings County Critical Infrastructure

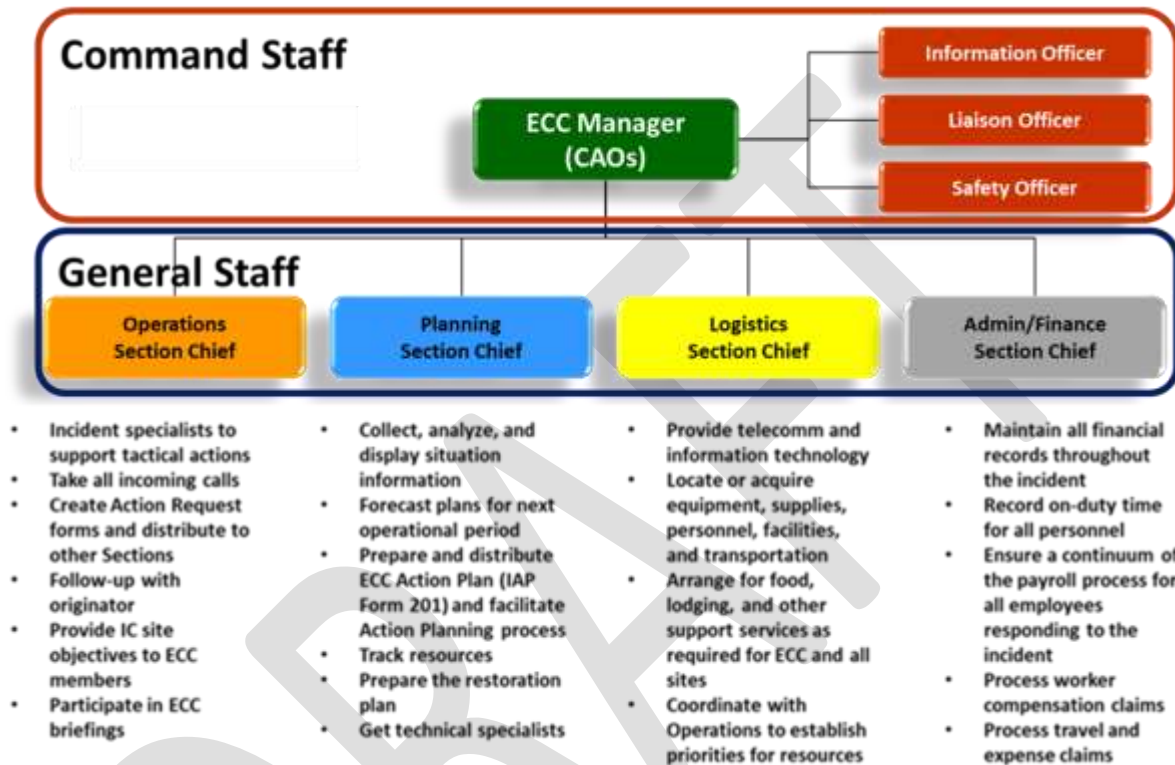
Reference: [NS Report of the Auditor General – Municipal Affairs, November 2016](#)

As outlined in the reference, the following sectors are identified as Critical Infrastructure in Kings County:

- Bridges & roadways
- Communications & Public Safety Systems
- Dykes & Dams
- IT Systems
- Electrical Grids (NS Power & Berwick Electric)
- Health Services – Hospitals & Medical Care
- Water and wastewater Treatment facilities
- Police services (Kentville Police / Kings RCMP)
- Transportation equipment

2.5 Hurricane ECC Organizational Structure

The management of an incident, no matter the type or magnitude, utilizes the principles of the Incident Command System (ICS). Based on this structure, the incident is managed by Incident Command with support provided by staffed areas of Operations, Logistics, Planning, and Administration/Finance if needed. This structure allows incident management to expand or contract along with the incident as the situation demands. As an incident grows, so does the command system.



2.6 Emergency Coordination Centre (ECC)

The ECC is a critical link for supporting emergency management functions before, during, and after an incident such as:

- Monitoring and assessing an emergency or disaster to anticipate needed response and recovery operations.
- Securing resource support for regional operations at the incident scene from other departments, the Province of NS, Federal agencies and adjacent jurisdictions.
- Making policy decisions and planning and prioritizing county-wide emergency response and disaster recovery operations.
- Coordinating, processing, and disseminating information
- Maintaining a common operating picture to ensure that all personnel have the same information.
- Coordinating and communicating with Kings County Emergency Management first responders, as well as liaising with Emergency Coordination Centres of other municipalities.

- Ensuring that appropriate documentation regarding response and recovery operations is maintained by all departments.
- Assigning a liaison, whenever needed or upon request, to emergency response or disaster recovery facilities activated by Kings County, the Province of Nova Scotia or Federal agencies for operations affecting the County.
- Directing or supporting other operations by or within the County for emergency response and recovery.
- Coordinating the County's transition from response to recovery.
- During an evacuation, the Kings County RCMP and Kentville Police Departments will maintain traffic flow within Kings County in coordination with other municipal and county agencies involved in evacuation procedures.
- The Kings County Fire Departments will proceed with Special Needs Evacuation when the evacuation order is issued, and public shelters are opened.

DRAFT

2.7 Notification and Activation Timeframes – Core Emergency Response Functions

This table provides possible notification and activation timeframes for core emergency response functions. There are four timeframes:

	Advisory	Notification of a Potential Threat
	Alert	Personnel prepare for activation
	Activation	Resource begin movement to support response operations
	Onsite / Operational	Resources perform Response Function

Emergency Function	H-120	H-96 to 72	H-72 to 48	H-48 to 0	H-Hr +	R-Hr +
Emergency Management	Onsite / Operational	Onsite / Operational	Onsite / Operational	Onsite / Operational	Onsite / Operational	Onsite / Operational
Communications	Onsite / Operational	Onsite / Operational	Onsite / Operational	Onsite / Operational	Onsite / Operational	Onsite / Operational
Warning	Onsite / Operational	Onsite / Operational	Onsite / Operational	Onsite / Operational	Onsite / Operational	Onsite / Operational
Public Information	Onsite / Operational	Onsite / Operational	Onsite / Operational	Onsite / Operational	Onsite / Operational	Onsite / Operational
Resource Support	Onsite / Operational	Onsite / Operational	Onsite / Operational	Onsite / Operational	Onsite / Operational	Onsite / Operational
Food & Water	Onsite / Operational	Onsite / Operational	Onsite / Operational	Onsite / Operational	Onsite / Operational	Onsite / Operational
Health & Medical	Alert	Onsite / Operational	Onsite / Operational	Onsite / Operational	Onsite / Operational	Onsite / Operational
Transportation	Alert	Activation	Onsite / Operational	Onsite / Operational	Onsite / Operational	Onsite / Operational
Evacuation	Alert	Activation	Onsite / Operational	Onsite / Operational	Onsite / Operational	Onsite / Operational
Shelter / Mass Care	Alert	Activation	Onsite / Operational	Onsite / Operational	Onsite / Operational	Onsite / Operational
HAZMAT Response	Alert	Alert	Activation	Onsite / Operational	Onsite / Operational	Onsite / Operational
Animals / Agriculture	Advisory	Alert	Activation	Onsite / Operational	Onsite / Operational	Onsite / Operational
Firefighting	Advisory	Alert	Activation	Onsite / Operational	Onsite / Operational	Onsite / Operational
Search & Rescue	Advisory	Alert	Alert	Activation	Onsite / Operational	Onsite / Operational
Law Enforcement	Advisory	Alert	Alert	Activation	Onsite / Operational	Onsite / Operational
Energy	Advisory	Advisory	Alert	Activation	Onsite / Operational	Onsite / Operational
Public Works / Engineering	Advisory	Advisory	Alert	Activation	Onsite / Operational	Onsite / Operational
Volunteer / Donations Management	Advisory	Advisory	Alert	Activation	Onsite / Operational	Onsite / Operational
Recovery	Advisory	Advisory	Alert	Activation	Onsite / Operational	Onsite / Operational

Important: The amount of warning time prior to the onset of hurricane hazards can vary greatly depending on the storm. While some hurricanes may afford an H - 120, or five-day, warning, other tropical cyclones may arise with little notice and require immediate activation. Timelines in this plan are meant to provide a frame of reference only. The timing of response decisions varies, depending on storm forecasts and effects.

Key to Hurricane Response Timeframes

H = number of hours before (-) or after (+) the onset of hurricane hazards.

R = number of hours before (-) or after (+) post-landfall operations resume.

- H-120 Monitor
- H-96 to 72 Elevated Threat
- H-72 to 48 Credible Threat
- H-48 to 0 Pre-Incident
- H+0 to TBD Post-Incident
- R+0 to TBD Recovery

2.8 Notification and Warning

Early warning to members of the public, the private sector and other critical partners saves lives and minimizes potential damage from hurricanes.

2.6.1 General

There are three essential ingredients in the mitigation of the potential for large scale loss of life in hurricane events:

- Ensure the official evacuation order is issued in sufficient time to allow for safe evacuation from hurricane-vulnerable areas prior to arrival of tropical storm forces winds (39mph)
- Ensure the evacuation order and other emergency information is disseminated to the appropriate response agencies and the general public
- Residents in mandatory evacuation areas must heed the evacuation order

2.6.2 Warning Systems

The existing warning system is composed of several key entities throughout National, Provincial, and Regional levels. Each entity plays an important role in gathering, interpreting and disseminating hazard data on the approaching hurricane so an adequate warning is issued. A potential evacuation in the Kings County area would involve the following key entities in the warning process:

- Environment and Climate Change Canada
- Nova Scotia Emergency Management Office (NS EMO)
- Kings County Regional Emergency Management Organization (Kings REMO)
- Kings REMO Emergency Email Notification System
- Public Media (TV/Radio)
- Municipal websites ([Municipality of Kings](#), Towns of [Berwick](#), [Kentville](#), [Wolfville](#))
- Social Media (Facebook, Twitter, etc.)
- Kings County RCMP and Kentville Police

2.8.2 Watches and Warnings

Hurricane Watch

- When, within the following 36 hours, a hurricane or a developing hurricane is expected to pose a possible threat, with the risk of hurricane force winds (average sustained winds of 118 km/h or higher) threatening the area.



Action: Plans reviewed, and preparations made for evacuation

Hurricane Warning

- When hurricane-force gales (average sustained winds of 119 km/h or higher) caused by a hurricane, or a strong tropical storm that may strengthen to hurricane force before making landfall, are expected to occur in 24 hours or less. It may also include areas where storm surge or exceptionally high waves are expected, even though winds may be less than hurricane force.

Action: Storm preparations completed, and evacuation conducted of threatened areas

Rainfall Warning

- When 25 mm or more of rain is expected within one hour.



Storm Surge

- Issued for abnormally high-water levels and high waves (storm surge or storm tide) caused by storms, which have the potential to cause coastal flooding. This usually occurs when astronomical tides are at their maximum.

Tropical Storm Watch

- When, within the following 36 hours, a tropical storm or a developing tropical storm is expected to pose a possible threat, with the risk of tropical-storm force winds (average sustained winds of 63-117 km/h) threatening the area. This watch could be issued for:
 - A tropical storm; or
 - A hurricane that might approach an area but be far enough away that it is expected to bring gales that are less than hurricane force (118 km/h or higher).

Tropical Storm Warning

- When coastal and/or coastal winds of 63 to 117 km/h caused by a tropical cyclone are expected to occur.

Wind Warning

- 90 km/h or more sustained wind; and/or Gusts to 110 km/h or more.



2.9 Evacuation

Reference: Kings REMO Regional Emergency Evacuation Plan, 2018-12

The concept of evacuation in Kings County is designed to prevent loss of life from the hazards of “worst probable” hurricanes. This would be accomplished through the mass evacuation of citizens and medical facilities from vulnerable areas into safe areas and shelters, based on the following factors:

- the identification of five levels of evacuation for future probable hurricane threats

- the identification of elderly, disabled and handicapped “special Needs” individuals requiring assistance during any evacuation
- the determination of evacuation time based on the specific hurricane threat
- the designation of evacuation routes
- the establishment of a traffic control system
- the designation of evacuation shelter for the general population, medical facilities (hospitals and nursing homes), and person with “special needs”
- the assignment of public emergency transportation resources for evacuation of the elderly, handicapped and medical facilities.

The implementation of hurricane evacuation procedures will be based on the understanding that there is no necessity for total evacuation of Kings County even in the “worst probable” hurricane situation. Large areas of Kings County will remain above water and sound structures in those areas will provide shelter for residents and evacuees.

2.10 Recovery

The ability to recover from the physical damage, injury, economic impairment and human suffering resulting from a disaster is a critical element of any emergency program. It is essential to recognize that successful recovery planning and activities depend on the rapid start-up of a recovery plan and must begin during the emergency response phase.

Through the implementation of a municipal disaster recovery strategy, Kings County Municipalities will work with their Departments, partner agencies, and volunteer resources to restore critical infrastructure (both public and private), systematically clean up affected areas, and return the community to a state of normalcy.

To some extent, hurricanes can be tracked, planned for, stocked up for and braced for. But unfortunately, no matter how prepared Kings County may be, a relentless storm system can overtake everything in its path. If Kings County has been affected by a hurricane, the aftermath of clean up and transitioning into a 'new normal' can be the hardest part.

The prioritization of restoration and clean up efforts will be determined by the Kings REMO ECC Management Team based on a number of influencing factors, with the primary focus being on the protection of public safety. Recovery activities take place after a hurricane and include actions to return to normal or an even safer situation following an emergency situation. These activities could include:

- **Response to a Power Outage** – During a power outage, several issues may arise. Depending on the time of year, extreme temperatures could impact residents of Kings County and actions outlined in the Kings REMO Heat Advisory and Response System (HARS) may need to be implemented. Food and water safety, as well as safe generator use, will be important to consider in recovery efforts.

- **Returning to Affected Areas** – Children should be the last to return to evacuated area or when disaster clean-up is needed.
- **Prevention of Infectious Diseases** – Flooding can increase the transmission of many communicable diseases. Preventative measures should be taken, including enforcing the importance of hand-hygiene when running water is available.

Be Prepared for Hurricanes

Stay Informed - Register for Kings REMO 'Emergency Email Notifications'

Send a Registration request to
REMO_KingsCounty@countyofkings.ca

- Prepare your 'Emergency Kit'
- Collect & Safeguard critical documents
- Know your 'Evacuation Routes'
- Have a 'Family Communications Plan'

3.0 RESPONSIBILITIES

3.1 Federal

The [Canadian Hurricane Centre](#) (CHC) provides Canadians with meteorological information on tropical cyclones that helps them make informed decisions to protect their safety and secure their property.



The primary responsibility of the CHC is to provide forecasts and warnings on tropical cyclones that threaten Canada or Canadian waters within the next 72 hours by doing the following tasks:

- Preparing and issuing Canadian tropical cyclone information statements to provide general information and guidance to all Canadians and technical information for the meteorological community
- Preparing and issuing hurricane and tropical storm watches and warnings for all coastal and inland regions that are threatened within specified lead times
- Preparing and issuing tropical cyclone track maps to provide a graphical overview of all tropical cyclones in the North Atlantic
- Preparing other tropical cyclone-related products, as required, to satisfy the needs of Environment Canada or its clients
- Providing media interviews on meteorological matters relating to tropical cyclones

3.2 Provincial

Several Nova Scotia government departments and agencies are engaged in hurricane related activities, including:

3.2.1 Nova Scotia Department of Agriculture (NSDA)

- The [NSDA](#) Land Protection Section is responsible for the management and maintenance of 240 kilometers of tidal dykes (including 260 aboiteau structures) along the Bay of Fundy for the purpose of protecting 17,400 hectares of agricultural land (marshbodies) from sea water incursions.
- Department of Agriculture will assess impact on food, agriculture, agribusiness, animals and other areas regulated by NSDA.

3.2.2 Nova Scotia Emergency Management Office (NS EMO)(DMA)

- [NS EMO](#) takes an “all-hazards” approach to emergency management that recognizes that mitigation, preparedness, response and recovery can be used to address the impact of disasters.
- [NS EMO](#) regional staff (Emergency Management Planning Officers - EMPO’s) work with municipal emergency management coordinators to ensure there are emergency management plans in place for each municipality in Nova Scotia.
- Municipal planning and local knowledge are represented in the development of emergency management plans.

- The [MCCAP](#) process requires municipal emergency management coordinators to work with EMPOs in the development of their respective climate change action plans.

3.2.3 Nova Scotia Department of Transportation and Infrastructure Renewal (NS TIR)

- [NS TIR](#) is responsible for delivering quality public infrastructure for Nova Scotia and deal with approximately 23,000 km of roads, 4,100 bridges, 7 ferries, and 2,400 buildings.
- [NS TIR](#) designs, constructs and operates this infrastructure in accordance with nationally and internationally recognized standards.
- [NS TIR](#) consults with communities on infrastructure developments. Often this infrastructure is developed or renewed in partnership with the Federal or municipal governments.

3.2.4 Nova Scotia Environment (NSE)

- [NSE](#) is the lead provincial department partnering with Environment Canada on maintaining and monitoring 28 real-time hydrometric monitoring stations. This information is critical for monitoring rising water in real-time during extreme weather events where flooding is a high-risk.
- [NSE's](#) Water for Life: Water Resource Management Strategy sets climate change impact studies as a priority action for the department. Flood risk studies will be a key component of studying climate change impacts to the province.
- The Climate Change Unit provides information and guidance on climatic factors relevant to flooding, such as historic data and future projections of sea levels, storms and rainfall amounts and intensity.
- The Climate Change Unit has funded and coordinated several community climate change assessments through the Atlantic Climate Adaptation Solutions program, which include aspects of coastal and inland flood mapping and risk in six pilot areas (13 municipalities) in Nova Scotia.
- [NSE](#) regulates 114 activities in the province by developing, implementing and monitoring standards and conditions of approval. Many of these have some relevance to flood management.

3.3 Regional – Kings REMO

3.3.1 Prevention and Mitigation

Kings REMO is responsible for developing and implementing mitigation strategies to prevent or lessen the occurrences and/or severity of hurricanes.

These strategies include:

- Working to map the flood areas and the impact on [critical infrastructure](#).
- Developing and circulating public education material concerning hurricane awareness and preparedness.

3.3.2 Response / Recovery Responsibilities

All Kings County Emergency Management agencies and organizations that support hurricane response are responsible for the tasks listed below.

3.3.3 Regional Emergency Management Coordinator (REMC)

- Develop and maintain contact lists and notification procedures
- Coordinate hurricane specific education materials for distribution to residents and business owners
- Coordinate activation of the Kings REMO Emergency Coordination Centre (ECC)

3.3.4 Site Operations (Incident Commanders)

The Incident Commanders (ICs) assume responsibility for the overall coordination of all operations at the emergency site and is the point of contact between the ECC Management Team and site operations.

The Incident Commander is responsible for:

- Identifying the risk areas.
- Prioritizing response activities.
- Evaluating and identifying equipment and resources needed

3.3.5 Fire Services

- Rescue / evacuate any persons in danger with minimum delay and provide first aid as necessary.
- Assist Police Services with evacuations in the affected areas as required.
- Control fires, released chemicals and other hazards.

3.3.6 Kings RCMP/Kentville Police

- Evacuate the affected areas as required.
- Perform traffic and crowd control operations.
- Disperse people not directly connected with the operations who, by their presence, are considered to be in danger, or whose presence hinders in any way the efficient functioning of operations.
- Secure the affected areas (based on need and availability of staff).
- Provide community security to prevent against looting and other unruly activities.
- Identify and establish detour routes due to high water and maintain proper traffic flow patterns as deemed appropriate.

3.3.7 Canadian Red Cross

- Provide staffing support to the Kings County Emergency Coordination Centre (ECC).
- Provide relief operations management.
- Conduct shelter and mass care operations.
- Assist in locating a source to procure, transport, store, prepare and distribute emergency food, water and ice supplies.
- Position resources to distribute mass care supplies.
- Provide volunteer support for mass care.
- Provide blood services.
- Provide first aid at feeding sites and shelters.

3.3.8 Infrastructure Services – Water / Wastewater

- Implement actions to protect water and sewer systems and identify threats to drinking water.
- Work with ECC Information Officer to advise the public of protective actions that may be required in the event of damage or concerns related to the sewer systems and/or drinking water sources.
- Request the disconnection or discontinuance of any service that may constitute a public hazard.
- In the event a flood emergency results in the release of untreated or partially treated sewage into lakes and rivers, implement internal procedures and notify the Ministry of the Environment, and the Department of Fisheries and Oceans Canada.

3.3.9 NS TIR & Engineering Departments

- Clear roadways and highways of debris.
- Install hurricane evacuation route signage along highways that are designated as hurricane evacuation routes.
- Perform emergency highway repairs to allow evacuation routes to remain open as long as weather conditions permit.
- Free obstructions to storm and wastewater drainage.
- Keep evacuation routes open for as long as prudent to ensure evacuees can exit the evacuation zones safely.
- Install temporary barricades, traffic cones and other traffic control devices to assist law enforcement in effective evacuation traffic management.

3.3.10 Infrastructure Services – Transit

- Provide transportation for residents and emergency responders as required.

3.3.11 Community Development – Social Services

- Provide assistance to residents displaced by flooding as required.
- Coordinate Emergency Shelter operations.

3.3.12 Utilities (NS Power, Berwick Electric, Gas etc.)

- Perform disconnect operations where this is considered necessary and in the interest of public safety.
- Secure services and equipment to ensure continuity of supply.
- Coordinate the priority restoration of affected services as dictated by emergency needs of municipal services and other essential users.
- Assist with clean up and restoration of services.
- Repair and restore any downed power lines and/or transformers.
- Assess ability to resume normal operations.

4.0 PUBLIC EDUCATION & AWARENESS OF HURRICANE PREPAREDNESS

Emergency public information is used to keep the public informed of the general progress of the storm and provide information on health and safety. The release of timely, consistent and effective public information helps all Kings County residents and visitors understand threats, potential impacts, available services and timelines for response and recovery. Pre-scripted Public Service Announcements (PSAs) are outlined at [Annex E](#).

Ongoing public awareness and education shall be an integral component of this plan. To this end, this Plan, as part of the Regional Emergency Management Plan, shall be posted on the [Municipality of the County of Kings](#), the Towns of [Berwick](#), [Kentville](#) & [Wolfville](#)'s websites in order that the public may have access to it and printed information shall be provided to residents in historically vulnerable areas. During an emergency evacuation, residents are to be able to access to the local media sources for information and instructions.

As part of Community Outreach, the Kings REMO Regional Emergency Management Coordinator will provide an overview of Hurricane Awareness to members of the community on an ongoing basis.

4.1 Evacuation Warnings

To be effective, Evacuation Warnings/Announcements should have the following characteristics:

- Authority**—Warnings are more credible and more likely to stimulate appropriate public actions if they are issued by a recognised authority.
- Consistency**—To avoid confusion and uncertainty, it is important that consistency be maintained when multiple warnings are issued to the public.
- Accuracy**—Accuracy and currency of information contained in the warning also affect understanding and belief. Errors can cause people to doubt subsequent warnings.
- Clarity**—An unclear warning can cause people to misunderstand or ignore it. Warnings should be in simple language, without the use of jargon.
- Level of Certainty**—Certainty determines the level of belief in a warning and affects decision making by those to whom the warning is given.
- Level of Detail**—Insufficient information creates confusion, uncertainty and anxiety, and public imagination will tend to fill the information void. This can promote rumours, uninformed misconceptions or fears.

- ❑ **Clear Guidance**— Messages containing clear guidance about protective actions people should take and the time available for doing so are more effective than those which provide no specific instructions.
- ❑ **Repetition of Warnings**—Where time permits, warnings should be repeated preferably using more than one delivery method. This provides confirmation of the warning message, helps increase persuasiveness and overcomes the problem of people not responding after hearing a warning only once.
- ❑ **Impact Areas**—Warning information that clearly states the areas actually or likely to be affected by the event is most effective.
- ❑ **Methods of Information Dissemination**—Warnings are more effective if a range of methods is used rather than a single method, thereby reaching as many people as possible in the shortest time. Methods need to be chosen to fit the time-frame available and should recognise that some modes are appropriate in reaching many people but with only relatively simple or generalised information (e.g. radio, television) whereas others can provide more specific information to targeted individuals (e.g. telephone, facsimile machine, computer, two-way radio, door-knocking or use of community leaders or wardens). Use of the Standard Emergency Warning Signal (SEWS) “[Alert Ready](#)” will enhance the effectiveness of electronic media warnings by alerting listeners for an urgent safety message to follow.
- ❑ **Information Dissemination for Special Needs Groups**—Consideration must be given to the specific problems of special needs groups. Dissemination to, and receipt of information by, many of these groups will pose different challenges, for example, language. Neighbours can also help by checking on special-needs people in close proximity.

5.0 PLAN TESTING, REVIEW & MAINTENANCE

5.1 Plan Testing Schedule & Responsibility

The Kings County Regional Emergency Management Coordinator (REMC) is responsible for coordinating the annual testing (in whole or in part) of the Regional Hurricane Preparedness and Response Plan in order to verify its overall effectiveness and provide training to the emergency personnel. The exercise can take the form of a simple tabletop or a more elaborate functional exercise.

5.2 Plan Review & Maintenance

The Kings County HPRP will be maintained by the Regional Emergency Management Planning Committee (REMPC) and the Regional Emergency Management Coordinator (REMC).

The HPRP will be reviewed annually and, where necessary, revised by a meeting(s) of the Regional Emergency Management Planning Committee (REMPC) and the Regional Emergency Management Advisory Committee (REMAC). The REMP shall be revised subject to the approval of Municipal Councils.

REVIEWS

MONTH	DAY	YEAR	BY

PLAN REVISIONS

MONTH	DAY	YEAR	CHANGE	APPROVED

6.0 DISTRIBUTION LIST

Distributed electronically:

Municipal Units:

- [Municipality of the County of Kings](#)
- [Town of Berwick](#)
- [Town of Kentville](#)
- [Town of Wolfville](#)

- [Village of Aylesford](#)
- [Village of Canning](#)
- Village of Cornwallis Square
- [Village of Greenwood](#)
- [Village of Kingston](#)
- [Village of New Minas](#)
- [Village of Port Williams](#)

Fire Departments

- Kings County Fire Departments

Regional Emergency Management Planning Committee (REMPC)

- [NS EMO](#) – Western Zone Planning Officer
- [Acadia University](#)
- [Annapolis Valley Amateur Radio Club](#) (AVARC)
- [Annapolis Valley First Nation](#)
- [Annapolis Valley Regional Centre for Education](#) (AVRCE)
- [Brigadoon Village](#)
- Community Services – Kings County
- [NS Department of Lands and Forestry](#)
- [NS Department of Transportation and Infrastructure Renewal](#) (DTIR)
- [NS Emergency Health Services](#)
- Fire Services
- [Glooscap First Nations EMO](#)
- [Kentville Police](#) / [Kings County RCMP](#)
- [Kings Transit Authority](#) (KTA)
- [NS Department of Agriculture](#)
- [NS Health Authority](#)
- [Canadian Red Cross](#)
- [Valley Communications](#)
- [Valley Search and Rescue](#) (SAR)

Annexes

A [Declaring a State of Local Emergency \(SOLE\)](#)

- [Form 4 \(Council\)](#)
- [Form 5 \(Mayor\)](#)

B [Criteria for Hurricanes](#)

C [Kings REMO Actions - Hurricane](#)

D [Hurricane Event Checklist](#)

E [Public Service Announcements \(PSA\)](#)

F [Hurricane Safety Tips](#)

G [Protecting Property from High Winds](#)

H [Lessons Learned – Hurricane Disasters](#)

I [Hurricanes – Frequently Asked Questions \(FAQ\)](#)

J [Hurricanes - References](#)

K [Abbreviations and Acronyms](#)

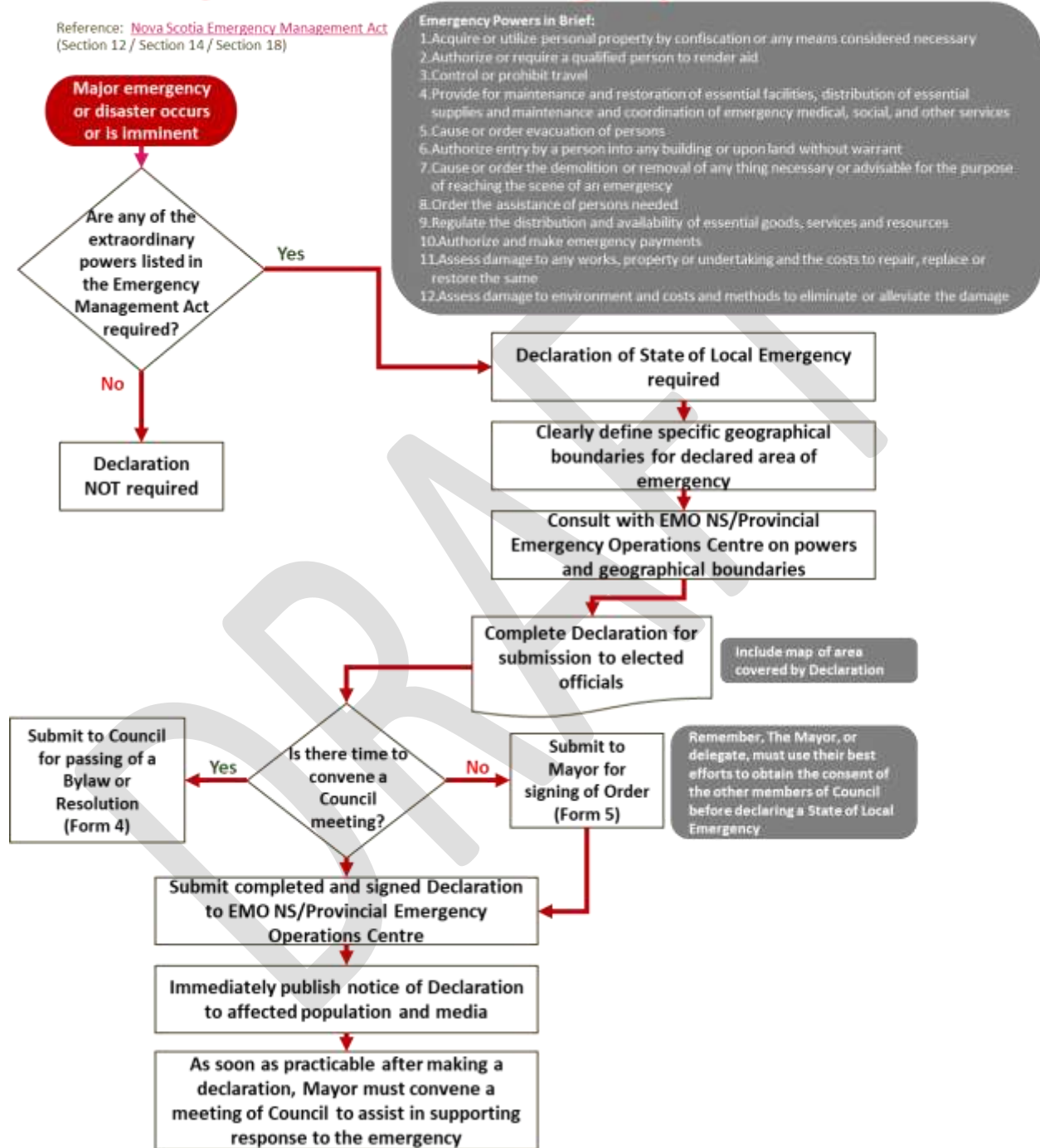
L [Definitions](#)

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Annex A – Declaring a State of Local Emergency (SOLE)

Declaring a State of Local Emergency

Reference: [Nova Scotia Emergency Management Act](#)
(Section 12 / Section 14 / Section 18)



FORM 4

DECLARATION OF A STATE OF LOCAL EMERGENCY

MUNICIPALITY: _____

Section 12(2) of the *Emergency Management Act*, S.N.S. 1990, c.8

WHEREAS the area herein described is or may soon be encountering an emergency that requires prompt action to protect property or the health, safety or welfare of persons therein;

Emergency Area:

The area general described as:

Province of Nova Scotia (hereafter referred to as the "Designated Area(s)")

Yes

No

Nature of the Emergency:

AND WHEREAS the undersigned is satisfied that an emergency as defined in Section 2(b) of Chapter 8 of the Statutes of Nova Scotia, 1990, the *Emergency Management Act*, exists or may exist in the Designated Area(s) noted above;

THE UNDERSIGNED HEREBY DECLARES pursuant to Section 12(2) of the *Emergency Management Act*, a State of Local Emergency in the Municipality noted above as of and from _____ o'clock in the forenoon () or afternoon () of the _____ day of _____, 20____.

THIS DECLARATION OF STATE OF LOCAL EMERGENCY shall exist until _ o'clock in the forenoon () or afternoon () of the _____ day of _____, 20____, or for a maximum of 7 days from the date and time specified above unless the Declaration is renewed or terminated as provided in Section 20 of the *Emergency Management Act*.

DATED at _____, in the Municipality of _____, Province of Nova Scotia, this _____ day of _____, 20____.

Council, Municipality _____

Name _____

Positions _____

[Authorized by Resolution No. _____ dated the _____ Day of _____, 20____.

FORM 5

DECLARATION OF A STATE OF LOCAL EMERGENCY

MUNICIPALITY: _____

Section 12(2) of the *Emergency Management Act*, S.N.S. 1990, c.8

WHEREAS the area herein described is or may soon be encountering an emergency that requires prompt action to protect property or the health, safety or welfare of persons therein;

Emergency Area:

The area general described as:

[Empty rectangular box for describing the emergency area]

Province of Nova Scotia (hereafter referred to as the "Designated Area(s)")

Yes

No

Nature of the Emergency:

[Empty rectangular box for describing the nature of the emergency]

AND WHEREAS the undersigned is satisfied that an emergency as defined in Section 2(b) of Chapter 8 of the Statutes of Nova Scotia, 1990, the *Emergency Management Act*, exists or may exist in the Designated Area(s) noted above;

AND WHEREAS the Council of the Municipality is unable to act;

AND WHEREAS the undersigned has (check appropriate box)

- (a) Consulted with a majority of the members of the Municipal Emergency Management Committee Yes No
- (b) Found it impractical to consult with the majority of the Municipal Emergency Management Committee Yes No

THE UNDERSIGNED HEREBY DECLARES pursuant to Section 12(3) of the *Emergency Management Act*, a State of Local Emergency in the Municipality noted above as of and from ____ o'clock in the forenoon () or afternoon () of the _____ day of _____, 20____.

THIS DECLARATION OF STATE OF LOCAL EMERGENCY shall exist until _ o'clock in the forenoon () or afternoon () of the _____ day of _____, 20____, or for a maximum of 7 days from the date and time specified above unless the Declaration is renewed or terminated as provided in Section 20 of the *Emergency Management Act*.

DATED at _____, in the Municipality of _____, Province of Nova Scotia, this _____ day of _____, 20____.

Mayor's Signature _____

Municipality of _____

Annex B – Criteria for Hurricanes

Category	Description	Injury Risk to People/Animals	Damage Risk to Homes	Damage Risk to Industrial Structures	Power Outages
1	<p>Sustained winds 119-153km/h</p> <p>Very dangerous winds will produce some damage</p>	<p>People, livestock and pets struck by flying or falling debris could be injured or killed</p>	<p>Potential loss or damage to roof and porch coverings and awnings; unprotected windows may break if struck by flying debris; masonry chimneys can be toppled</p>	<p>Potential loss or roofing and siding especially from windward corners, rakes and eaves; damage to overhead doors and unprotected windows; windows in high rise buildings can be broken by flying debris; falling and broken glass will pose a significant danger; occasional damage to commercial signage, fences and canopies</p>	<p>Extensive damage to power lines and poles will likely result in power outages that could last a few to several days</p>
2	<p>Sustained Winds 154-177 km/h</p> <p>Extremely dangerous winds will cause extensive damage</p>	<p>Substantial risk of injury or death to people, livestock and pets due to flying and falling debris.</p>	<p>High chance of roof structure removal if not anchored properly; high probability of unprotected windows broken by flying debris; substantial risk of roof and siding damage to apartment buildings; unreinforced masonry walls can collapse.</p>	<p>Substantial risk of roof and siding damage; falling and broken glass pose a significant danger; commercial signage, fences and canopies could be destroyed; roads blocked due to broken trees</p>	<p>Near-total power loss is expected and could last from several days to weeks. Potable water could become scarce as filtration systems begin to fail.</p>
3	<p>Sustained Winds 178 – 208 km/h</p> <p>Devastating damage will occur</p>	<p>High risk of injury or death to people, livestock and pets due to flying and falling debris.</p>	<p>High risk of removal of roof and exterior walls to poorly constructed homes; unprotected windows broken by flying debris; high percentage of roof covering and siding damage to apartment buildings</p>	<p>High risk of roof covering and siding damage; isolated structural damage to wood or steel framing; significant damage to older metal buildings including collapse of older unreinforced masonry buildings; windows blown out of highrise buildings could result in falling glass; most commercial signage, fences and canopies will be destroyed; roads blocked due to tree damage.</p>	<p>Electricity and water will be unavailable for several days to a few weeks after the storm passes.</p>

Category	Description	Injury Risk to People/Animals	Damage Risk to Homes	Damage Risk to Industrial Structures	Power Outages
4	Sustained Winds 209 – 251 km/h Catastrophic damage will occur	Very high risk of injury or death to people, livestock and pets due to flying and falling debris.	High risk of collapse of older unreinforced masonry buildings; most windows blown out of high-rise buildings resulting in falling glass; fallen trees and power poles will isolate residential areas.	Steel frames in older industrial buildings can collapse; nearly all commercial signage, fences and canopies will be destroyed; most trees will be snapped or uprooted, and power poles downed.	Power outages will last for weeks to possibly months. Long-term water shortages will occur. Most of the area will be uninhabitable for weeks or months.
5	Sustained Winds > 252 km/h	Very high risk of injury or death to people, livestock and animals from flying or falling debris, even if indoors in mobile homes or framed homes.	High risk of frame homes being destroyed, with total roof failure and wall collapse; extensive damage to roof covers, windows and doors; wind-borne debris will be lofted into the air causing damage to nearly all windows, whether protected or unprotected; fallen trees and power poles will isolate residential areas; high risk of low-rise apartment buildings being destroyed.	Significant damage to wood roof commercial buildings; complete collapse of many older metal buildings; most unreinforced masonry walls will fail, which can lead to collapse of the buildings; high risk of industrial buildings being destroyed; nearly all commercial signage, fences and canopies will be destroyed; nearly all trees will be snapped or uprooted, and power poles downed.	Power outages will last for weeks to possibly months. Long-term water shortages will occur. Most of the area will be uninhabitable for weeks or months.

Annex C – Hurricane Event – Kings REMO Actions

Reference: Kings REMO Regional Emergency Management Plan (REMP), 2018-09

Hurricane

A. Possible Major Effects	Probability
1. Casualties / Deaths	Low
2. Disruption of community	High and Localized
3. Disruption of utilities	Low to Moderate
4. Damage to property	High in localized areas
5. Disruption of traffic	High
6. Disruption of communications	Low to Moderate
7. Evacuation	Moderate to High
8. Contamination of normal water supplies	Moderate to High
9. Loss of economic activities	Low to Moderate

B. Potential Actions at the Scene	Agency Responsible
1. Warning of imminence	Provincial flood authority
a. Long term	Meteorological services/Canadian Tide & Current Tables (Environment Canada)
b. Short term	Police
2. Establish an emergency headquarters	Town Council Chambers – ECC
3. Establish adequate communications	Communication Coordinator
4. Establish a control perimeter	Police
5. Establish routes for emergency vehicles	Police
6. Notify hospitals of casualties including number and type	Medical/Police
7. Rescue	Fire/Police/Rescue services
8. Establish a temporary morgue	Medical Coordinator
9. Establish a news release system	Information Officer (Command Staff)
10. Establish emergency welfare services	Welfare/Social Services/Volunteer agencies
11. Establish an inquiry service	Welfare/Social Services
12. Eliminate hazards from damaged utilities	Engineering/Utilities
13. Protection of property and relocate resources where necessary	Police
14. Provide auxiliary power	Engineering
15. Clear debris	Engineering
16. Mobilize necessary manpower & equipment	EMO/Canada Manpower Centres
17. Establish jurisdiction	Government
18. Establish traffic control	Police
19. Establish dyking as required	Engineering
20. Check stocks of sand and sandbags	Engineering
21. Evacuation of personnel, livestock, etc.	Welfare/Social Services/Volunteer agencies/Agriculture
22. Storage of furnishings and equipment	EMO
23. Establish emergency health facilities	Health service

C. Equipment	Sources
1. Rescue equipment	Police/EMO
2. Pumps	Engineering/Fire Department
3. Medical and health supplies	Health Services
4. Transportation/Boats	EMO/Various sources/Transportation Coordinator
5. Communication equipment	Province/Police/EMO/Communication Coordinator
6. Auxiliary generators	Various sources
7. Mobile public-address equipment	Police/EMO/Radio Stations/Fire Department
8. Food and lodging	Welfare/Social Services
9. Diving equipment	Engineering/Industry
10. Heavy equipment (bulldozers, etc.)	Engineering/Industry
11. Auxiliary lighting equipment	Engineering/Utilities/Fire Department
12. Storage facilities for equipment, furnishings, livestock	Province

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Annex D – Hurricane Event Checklist

Pre-Incident Phase

- Arrange for personnel to participate in necessary training and develop exercises relevant to hurricane events in Kings County
- Coordinate the County's preparedness activities, seeking understanding of interactions with participating agencies in hurricane scenarios
- Ensure that emergency contact lists are updated
- Contact supporting emergency response agencies to review and determine whether major developments have arisen that could adversely affect response operations (e.g., personnel shortages, loss of equipment, etc.)
- Annually review and update the Kings REMO Regional Emergency Management Plan (REMP) and Supporting Plans
- Familiarize staff with requirements for requesting a State of Local Emergency (SOLE)
- Ensure that supplies, such as communications devices and sandbags, are prepared and ready for use. This includes primary and alternate communications and warning systems
- Identify and review local contractor lists to see who may provide support specific to flood response
- Review, revise, and, where necessary, establish mutual aid agreements with local agencies and other County agencies and private contractors relevant to multiple agency response to the impacts from a hurricane

Response Phase

- The Kings REMO ECC Manager will provide overall guidance for the deployment of resources across Kings County
- Activate mutual aid agreements
- Activate the Kings REMO Emergency Coordination Centre (ECC) and implement appropriate staffing plans. Contact appropriate supporting agencies to assign liaisons to the ECC for coordination of specific response activities
- Estimate emergency staffing levels and request personnel support, including specialized staff such as engineers, building inspectors, heavy equipment operators, and/or environmental remediation contractors
- Develop and initiate shift rotation plans, including briefing of replacements during shift changes (set the operational period briefing cycle)
- Submit request for State of Local Emergency (SOLE), as applicable
- Coordinate the evacuation of affected area, if necessary. Assign appropriate agency liaisons to the ECC, as the situation requires
- Support Search and Rescue operations by coordinating resource requests outside of the jurisdiction
- Request the Canadian Red Cross to activate Emergency Shelters and open shelters, if needed
- Formulate Emergency public information messages and media response using “one voice, one message” concept
- Record all ECC activities, completion of personnel tasks, incoming and outgoing messages, and the names of those sending and receiving them. These should be documented in ECC logbooks
- Coordinate damage assessments in coordination with Public Works Departments

- Assist with coordinating Public Works activities, such as debris removal from:
 - Storm drains
 - Main arterial routes
 - Public right-of-way
 - Dams
 - Other structures, as needed
- Contact local contractors for support, if necessary. Establish contact with private sector partners
- Coordinate with law enforcement agency (Kentville Police and/or Kings RCMP) to provide law enforcement to affected areas (road closures, security, etc.)
- Collect and chronologically file records and bills generated during the incident in order to ensure timely submittal of documents for reimbursement (Finance/Administration Section)

Recovery Phase

- Monitor secondary hazards associated with floods (contamination, damage to bridges/roads, impacts to utility lines/facilities) and maintain on-call personnel to support potential response to these types of hazards
- Deactivate/demobilize the ECC. Deactivate mutual aid resources as soon as possible
- Activate and implement applicable mitigation plans, community recovery procedures, and continuity of operations/governments plans until normal daily operations can be completely restored
- Implement revisions to the Kings REMO Regional Emergency Management Plan (REMP) and Supporting Plans based on lessons learned and best practices adopted during response
- Offer recommendations to Municipal Government and Public Works departments for changes in planning, zoning, and building code ordinances
- Participate in After Action Reports and critiques
- Submit valuable success stories and/or lessons learned to NS EMO and other County partners

Annex E – Public Service Announcements (PSA) - Hurricanes

Preparing for Hurricane Season

There are basic steps you can take to prepare for hurricane season:

- Learn about the [Kings REMO Regional Emergency Management Plan](#) and EM Support Plans, warning signals, and evacuation routes.
- Know where to find emergency shelters.
- Inform local authorities about anyone with special needs, such as the elderly or bedridden, or anyone with a disability. Don't wait until the hurricane is on its way. Do this now.
- Make plans to ensure your pets' safety. Emergency shelters can not accept pets due to safety and sanitation requirements.
- Locate and secure your important papers, such as insurance policies, wills, licenses, and stocks.
- Post emergency phone numbers at every phone and program these into your cell phone.
- Make sure you have a battery-powered radio on hand. A weather radio can be especially helpful for up-to-the minute reports on weather and location-specific storm watches and warnings.
- Be prepared to turn off electrical power and gas in case you are asked to evacuate.



Before hurricane season, stock your home with supplies. At a minimum, these should include:

- Several clean containers for water—enough to hold two litres of water per person per day for at least three days. This should be enough for drinking and sanitation. You should also have water-purifying supplies on hand, such as chlorine or iodine tablets, or unscented ordinary household chlorine bleach.
- A first aid kit and manual.
- Prescription medicines and special medical supplies.
- Baby food and prepared formula, diapers, and other baby supplies.
- A 3 to 5-day supply of non-perishable food.
- Flashlights and extra batteries.
- Sleeping bags and extra blankets.
- Personal hygiene supplies, such as soap, toothpaste, and sanitary napkins. Baby wipes are useful for the whole family in cases where bathing facilities are not available.
- And an emergency kit for your car with food, flares, booster cables, maps, tools, first aid kit, fire extinguisher, and sleeping bags.



Expect to evacuate and prepare for it. When a [hurricane watch](#) is issued, you should:



- Review your emergency plans and supplies, and check to see if any items are missing. Make sure you have supplies in your home and an emergency kit in your car.
- Turn on the radio or television for weather updates.
- Listen for disaster sirens and warning signals.
- Fill sinks and bathtubs with water as an extra supply for washing.
- Fill your car's gas tank.
- If no vehicle is available, make arrangements with friends or family for transportation.
- Secure any items outside which may cause injury or damage property during high winds—items such as bicycles, grills, propane tanks, lawn furniture, and flowerpots. Secure any structurally unstable buildings and tie down loose building materials.
- Cover windows and doors with plywood or boards, and place large strips of masking tape on the windows to reduce the risk of breakage and flying glass.
- Put livestock and family pets in a safe area.
- If possible, put vehicles under cover.
- Adjust the thermostat on refrigerators and freezers to the coolest possible temperature.

Because of the destructive power of a hurricane, you should never ignore an evacuation order. Authorities will most likely direct you to leave if you are in a low-lying area, or within the greatest potential path of the storm. If a hurricane warning is issued for your area or you are directed by authorities to evacuate:



- Take only essential items with you.
- Make sure you have an emergency kit in your car.
- If you have time, turn off the gas, electricity, and water.
- Unplug appliances to reduce the likelihood of electrical shock when power is restored.
- Follow the designated evacuation routes and expect heavy traffic.

If you are ordered NOT to evacuate, there are things you can do to get through the storm in the safest possible manner:

- Monitor the radio or T.V. for weather conditions.
- Stay indoors until the authorities declare the storm over.
- Even if the weather appears to have calmed—do not go outside. The calm “eye” of the storm can pass quickly, leaving you outside when strong winds resume.
- Stay away from all windows and exterior doors. Take shelter in an interior bathroom or in a basement that will provide protection from high winds and flying debris. Bathtubs can provide shelter, especially if you can cover yourself with plywood or other similar material. These spaces can help assure your safety during a structural collapse.

- Turn off power when there is standing water or fallen power lines.
- Prepare to evacuate to a shelter or to a neighbor's home if your home is damaged, or if you're instructed to do so by emergency personnel.
- Many hurricane-related injuries are cuts caused by flying glass and debris. Other injuries include bone fractures and puncture wounds from exposed nails, metal, or glass.

Learn about the Dangers of Hurricanes

Hurricanes are among nature's fiercest storms. The three greatest dangers hurricanes pose are extreme wind speeds, storm surge and torrential rains.

- **Hurricane-force winds** are 119 kilometres per hour and greater. Even the weakest storms can uproot trees, down power lines and damage buildings. Category 5 storms can cause catastrophic wind damage to residential and commercial buildings.
- When hurricanes come ashore, they push a dome of sea water over the land. This is called **storm surge**. Storm surges may range from a few feet high to more than 3 metres above normal sea level. A storm surge can batter buildings off their foundations and present an extreme drowning danger. It is never safe to "ride out" a hurricane in a surge zone. Do you live in a surge zone?
- Hurricanes bring with them **torrential rainfalls** that often cause severe flooding. Generally, storms that move slowly produce heavier rainfall. Inland areas also are at risk from flooding and flash flooding caused by hurricanes.



Hurricane Evacuation

This is an important message from the Kings County Regional Emergency Management Organization. If a hurricane warning is issued for your area, or authorities tell you to evacuate, take only essential items. If you have time, turn off gas, electricity, and water and disconnect appliances. Make sure your automobile's emergency kit is ready. Be sure to take prescription drugs with you. Follow the designated evacuation routes and expect heavy traffic. To learn more, contact your local emergency management authorities.

Returning Home

- Avoid downed and sagging power lines
 - Report them immediately to the power company, police or fire department
- Be alert for driving restrictions
 - Avoid flooded roads and washed-out bridges and roadways
 - Follow directions provided by public safety officials
- Enter your home with caution
 - Open windows and doors to ventilate and dry out your home
 - Check refrigerated foods for spoilage
 - Use the telephone only for emergency calls
 - Do not use candles or open flames indoors. Use a flashlight to inspect for damage

- Inspect the utilities in your home
 - **Check for gas leaks.** If you smell gas or hear a blowing or hissing noise, open a window and quickly leave the building. Turn off the gas at the outside main valve if you can. From a safe place, call to report a gas leak to your utility provider. If you turn off the gas for any reason, it must be turned back on by a professional
 - Look for **electrical system damage.** If you see sparks, broken or frayed wires, or if you smell something burning, turn off the electricity at the main fuse box or circuit breaker. If you have to step in water to get to the fuse box or circuit breaker, call an electrician for advice
 - Check for **sewage and water line damage.** If you suspect sewage lines are damaged, avoid using the toilets and call a plumber. If water pipes are damaged, contact the water company and void water from the tap.

Power Pointers

- If you see a downed power line, do not touch it. Do not touch tree limbs or other objects touching a power line.
- Do not attempt to tie generators into the house circuit. This can be dangerous to you, your neighbors and to linemen. Plug appliances directly into the generator.
- Should the power go out while you are cooking, remember to turn the stove off and remove any cookware from the cooking surfaces and oven.
- Do not open refrigerators or freezers during an outage unless absolutely necessary.
- Repeated openings cause the cold air to escape and food to thaw more quickly.
- If you smell gas, leave your home immediately, and call the power company.

Safeguarding Your Health

Conditions following hurricanes are uncomfortable and pose numerous health risks. Keep in mind that power outages may last for several days or weeks. Take the following precautions to avoid illness:

- Discard food from your refrigerator if it has reached room temperature. Foods that are still partially frozen or "refrigerator cold" are safe to eat. If in doubt, throw it out.
- Don't drink tap water until authorities say it is safe. Instead, drink bottled water or boil water for at least one minute before drinking. You also can disinfect water with chlorine or iodine (follow package directions) or with ordinary household bleach -- one-eighth teaspoon (about eight drops) per gallon of water. Sterilize water containers and drinking cups with a solution of household bleach.
- Poisoning from carbon monoxide is an avoidable hazard during power outages. Never use generators, camp stoves or charcoal grills inside your home, garage or near open windows, doors or vents. Carbon monoxide is a colorless and odorless gas that can build up and cause sudden illness and death. If you feel dizzy, light-headed or nauseous, seek immediate medical attention.
- Weather conditions following hurricanes are usually very hot and humid. You may not have air conditioning for a long period of time. Avoid heat-related illnesses by drinking plenty of fluids and taking care to not overexert yourself when cleaning up and repairing damage.

- When cleaning up debris, look out for broken glass and exposed nails, a leading cause of tetanus. If you are punctured by a nail or receive a deep wound, get a tetanus shot.
- After a hurricane, it's normal to experience emotional distress. Allow yourself and family members time to grieve. For more information about coping with disaster-related stress, visit the [Canadian Red Cross 'Coping with Crisis' web page](#).

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HURRICANE SAFETY TIPS



Take these steps to prepare yourself, and your loved ones from dangerous weather.

Have An Emergency Plan
Create an emergency plan and review it with everyone in your home. Make sure everyone knows the safest location in the home.



Stock Up On Supplies
Be sure to have the proper necessities, such as: water, blankets, first aid kits, flashlights, batteries, radios, and any pet care items.



Out-Of-Town Contact
Make sure to have an out-of-state friend or family member as a contact, so they can check on your whereabouts.



Follow Emergency Instructions
Follow all instructions from authorities regarding evacuation or other safety protocols. Check radio, television or other media outlets for emergency information.



Have an Evacuation Route
Make sure you know your evacuation route before the hurricane hits and keep a full tank of gas.



Protect Important Documents
Make sure important documents such as ID cards and other vital information are placed in a secured, waterproof container.



Annex G – Protecting Property from High Winds

If the area immediately surrounding your home contains trees, outbuildings, trash cans, yard debris, or other materials that can be moved by the wind, your house will be more likely to be damaged during a hurricane. The wind can topple trees onto your house and can pick up smaller objects and drive them through windows and glass doors.

You should ensure that all trees on your property are far enough away to prevent them from damaging your home if they should fall. The distance between the structure and any nearby tree should always be greater than the height the tree will reach when it is fully grown. All storage sheds and other outbuildings should be securely anchored, either to a permanent foundation or with straps and ground anchors. Smaller objects, such as trash cans, barbecue grills, and outdoor furniture should also be anchored or, if you have adequate warning, moved indoors. You should also clear away any debris, such as fallen tree branches.



Benefits of this Mitigation Strategy:

- Helps to prevent damage to a structure and its contents
- Helps to prevent injuries to occupants

Keep these points in mind during the removal of trees and potential windborne missiles:

- Remove large trees near your property. They can be extremely dangerous for both you and your home. Therefore, this is a job for a skilled contractor.
- Use the straps and ground anchors also used for manufactured homes to anchor outbuildings, especially small garden sheds that are usually not placed on a permanent foundation.
- Secure outdoor furniture and barbecue grills by bolting them to decks or patios or by attaching them to ground anchors with cables or chains.
- Secure trash cans with cables or chains attached to ground anchors or wood posts firmly embedded in the ground. Trash can lids should be attached to cans with cables or chains.
- Contact your local agricultural office to get suggestions on which varieties of trees will be less susceptible to storm damage.
- Contact an arborist for assistance with pruning existing trees properly. Improperly pruning trees or damaging root systems can make them more susceptible to storm damage.

Annex H – Lessons Learned – Hurricane Disasters

- | | |
|------------------------------|--|
| ECC Staffing | <ul style="list-style-type: none">• ECC needs to be activated in advance of disaster - Key staff deployed to ECC prior to disaster• Ensure staff is clearly identified for shift work within the ECC to avoid fatigue and unstaffed positions• Consider additional staffing depth in key positions• Mandate staffing of assigned positions for shift periods• Establish a clear delineation for shift changing and transition of duties to next shift |
| ECC Planning Process | <ul style="list-style-type: none">• Conduct more training and exercises to establish a “Battle Rhythm” and practice implementing the planning process |
| Debris Removal | <ul style="list-style-type: none">• Establish debris disposal site permits prior to the storm• Establish debris contracts in place and have signed prior to the storm – beneficial in getting recovery efforts underway early• Debris must be properly disposed of to avoid health and environmental issues• There needs to be an enhanced public communication plan to provide guidance for the removal of debris from public property |
| Environmental Hazards | <ul style="list-style-type: none">• The clean-up effort post-Hurricane impact can be an immense undertaking• A Storm’s collective environmental damage can create a potentially hazardous environment for emergency responders and the general public – regional officials need to identify environmental hazards and communicate appropriate warnings to emergency responders and the public• There needs to be a comprehensive plan to accurately and quickly communicate critical information to the emergency responders and areas residents who need it |
| Public Information | <ul style="list-style-type: none">• Create pre-planned comfort/information stations throughout the County with backup power (potentially at community centers and libraries) that provides residents the opportunity to charge devices, check emails, contact relative and receive information.• Evacuation - Informational awareness to residents needs to be improved to provide greater understanding of the hazards being mitigated by responders before re-entry can occur |

- Communications**
- Effective emergency management and incident response activities rely on flexible communications and information systems that provide a Common Operating Picture (COP) to emergency management personnel and their affiliated organizations.
 - Develop key messages in advance – many key messages can be written before disaster strikes so they can be quickly disseminated before an event, during the response, and in the recovery stages
 - Identify new Communication Channels – when all primary communication systems and technology fail, communicators must think creatively and adapt to the crisis by identifying new communication channels
- Rescues**
- The requirement may arise to re-direct Operations services staff and contractors with large equipment from protecting infrastructure to conducting rescues
 - Amphibious quads, zodiacs, front-end loaders, rock trucks and combines can be essential to rescue operations
 - Traffic control is vital to rescue and evacuation operations
- Public Health & Medical Support**
- Hurricanes can create enormous public health and medical challenges
 - Residents displaced by the storm and isolated by the flooding can find themselves without access to their usual medications and sources of medical care
 - Immediate challenges may include the identification, triage and treatment of acutely sick and injured patients; the management of chronic medical conditions in large numbers of evacuees with special health care needs; the assessment, communication and mitigation of public health risk; and the provision of assistance to local health officials to quickly re-establish health care delivery systems and public health infrastructures
- Mass Care & Housing**
- An evacuation exodus of people will create an urgent need for suitable shelters
 - Those unable to move due to health reasons or lack of transportation, or who simply did not choose to comply with the Evacuation Order, may have significant difficulty in finding suitable shelter after the hurricane has devastated the region
- Evacuation**
- Not everyone has the physical ability or financial resources to be able to leave, as much as they may want to
 - A common theme when considering failure to evacuate is that people often do not understand or appreciate the nature of the hazard or of the risk
 - A better job must be done when issuing evacuation orders, including using proper language and communications channels to ensure that both coverage and comprehension is optimal.
 - Start evacuations early, especially for those with no means of transportation

**Crisis
Communications**

- Establishing and maintaining credibility of the source and accuracy of information is critical to managing rumours
- Using opportunities to provide printed information to residents such as during evacuee registration can significantly help to supplement other forms of communication
- Anticipate disruptions in communications services, possibly for extended periods of time
- Hurricanes can cause widespread damage that can strand residents without access to working landline or cellular telephone services
- In the absence of direct channels of communication to residents, mass media must be relied upon

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Annex I – Frequently Asked Questions (FAQ)

Source: [Canadian Hurricane Centre – Frequently Asked Questions](#)

How many Hurricanes have hit Canada?

Since 1951, **23 Hurricanes** or hurricane strength post-tropical storms have made landfall in Canada (about 1 every 3 years)¹. Over the last few years, the average number of hurricanes that have entered Canadian Territory have been increasing.

Why does Canada have a Hurricane Centre?

Canada has a hurricane centre because tropical storms, hurricanes and post-tropical storms can have a significant impact on Canadian weather and on Canadians.

These storms often bring severe rainfall and wind speeds and behave differently than other types of storms and can therefore be quite complex and challenging to forecast. The Canadian Hurricane Centre provides the public with the expertise of specially trained forecasters and issues tropical cyclone-specific public warnings to warn the public about these potential weather hazards.

The [Canadian Hurricane Centre](#) (CHC) was created in 1987 after it became clear that Canadians needed an expert source for information that was focused specifically on how tropical cyclones affect Canada. Before the creation of the Centre, Canadians relied largely on forecasts from the United States for hurricane-specific information.

What is meant by a Tropical Storm Watch/Warning?

A **tropical storm watch** is a public announcement for a specific geographic area that tropical storm conditions are a possible threat within 36 hours. This includes sustained winds between 63-118 km/h.

A **tropical storm warning** is a public announcement that tropical storm conditions are expected in a specific geographic area within 24 hours. This includes sustained winds between 63-118 km/h. As tropical storms are usually accompanied by heavy rainfall, local flooding can also be expected.

¹ [Canadian Hurricane Centre](#), as of August 2018

What is meant by a Hurricane Watch/Warning?

A **hurricane watch** is a public announcement for a specific geographic area that hurricane conditions are a possible threat within 36 hours. These conditions include average sustained winds of at least 119 km/h, dangerously high-water levels, or a combination of high water and waves.

A **hurricane warning** is a public announcement that one or both of the following dangerous effects of a hurricane are expected in a specific geographic area in 24 hours or less: (1) average sustained winds of at least 119 km/h; (2) dangerously high water levels, or a combination of dangerously high water levels and exceptionally high waves. This can happen even if expected winds are less than hurricane force. A hurricane also brings the threat of local flooding from heavy rainfall.



How often does the Canadian Hurricane Centre issue Tropical Cyclone Bulletins?

Tropical cyclone bulletins are generally issued every six hours once a storm is forecast to impact Canada or Canadian waters within a 72-hour period. Bulletins are issued at 9:00 p.m., 3:00 a.m., 9:00 a.m., and 3:00 p.m. Atlantic Daylight Time. Tropical cyclone bulletins provide forecast discussions and wind speed information.

Once a storm begins to have a significant impact on Canada or Canadian waters, intermediate bulletins are issued in addition to the regular bulletins above, at 6:00 p.m., 12:00 a.m., 6:00 a.m., and 12:00 p.m.. These bulletins are brief and state the position, movement and intensity of the storm.

How many Hurricane Centres are there?

The World Meteorological Organization recognizes the [National Hurricane Center](#) in the United States as the official lead hurricane agency for the Atlantic Basin. However, many countries, including Canada, have weather offices with meteorologists specializing in tropical cyclones. In Canada, Environment Canada created the [Canadian Hurricane Centre](#) to meet our safety and security needs, and the centre is the only Canadian organization authorized to issue tropical cyclone watches and warnings.

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Annex J – References

Federal

- [Environment & Climate Change Canada – Canadian Hurricane Centre](#)
- [Public Safety Canada - Hurricanes](#)
- [Public Safety Canada: Severe Storms – What To Do?](#)
- [Canadian Red Cross – Coping with Crisis](#)
- [Canadian Red Cross – Hurricanes: Information & Facts](#)

Provincial

- [NS EMO – States of Emergency](#)

Regional

- [Kings REMO Regional Emergency Management Plan \(REMP\)](#)
- [Kings REMO Comfort Centre/Emergency Shelter Policy](#)
- [Kings REMO Regional Emergency Guide](#) (See Severe Weather - Hurricanes)

Annex K – Abbreviations & Acronyms

AREP	Agency Representative
DFAA	Disaster Financial Assistance Arrangements
ECC	Emergency Coordination Centre
ECCC	Environment and Climate Change Canada
ECCMT	Emergency Coordination Centre Management Team
EMO	Emergency Management Office
FPRP	Flood Prevention and Response Plan
IAP	Incident Action Plan
IC	Incident Commander
ICP	Incident Command Post
ICS	Incident Command System
IMT	Incident Management Team
IO	Information Officer
LO	Liaison Officer
LSC	Logistics Section Chief
MAC	Multiagency Coordination (MAC) Group
OSC	Operations Section Chief
PSC	Planning Section Chief
REMAC	Regional Emergency Management Advisory Committee
REMC	Regional Emergency Management Coordinator
REMP	Regional Emergency Management Plan
REMPC	Regional Emergency Management Planning Committee
SO	Safety Officer
UC	Unified Command

Annex L – Definitions

Cyclone	The word cyclone comes from the Greek word kyllon which means cycle, circle or coil of a snake. In the Northern Hemisphere, the counterclockwise movement of air around and into any low pressure system is called cyclonic circulation. A low which intensifies in the tropics is called a Tropical Cyclone; if the storm's winds reach 120 kilometres per hour or more, the storm is called a hurricane. In the Arabian Sea, Indian Ocean and around Australia, hurricanes are called cyclones (See Hurricane, and Typhoon)
Eye of the Storm	In a severe tropical storm such as a hurricane, there is a roughly circular area right in the centre, between six and 60 kilometres in diameter, where the winds are comparatively light, and the weather is fair. This is called the eye of the storm. (see Hurricane)
Flood/Flooding	A temporary condition caused by the accumulation of runoff from any source, which exceeds the capacity of a natural or man-made drainage system and results in inundation of normally dry land areas.
Floodplain	The area, usually lowlands adjoining a watercourse, which has been, or may be, covered by flood water.
Hurricane	<p>In the Atlantic and eastern Pacific oceans intense tropical storms with wind speeds of 120 kilometres per hour or more are called hurricanes. They are called typhoons in the western Pacific and cyclones in the Arabian Sea, Indian Ocean and around Australia. Whatever their name, these tropical storms can extend up to thousands of square kilometres in area and last for several days.</p> <p>In the North Atlantic, the hurricane season starts June 1, but most occur during August, September and October. On average, hurricanes hit the east coast of Canada less than once a year. The most famous hurricane to strike Ontario was Hurricane Hazel on October 15, 1954. In less than 18 hours, more than 178 millimetres of rain fell causing flash floods in creeks and rivers and killing 80 people. (see Eye of the storm)</p>
Hurricane Season	The portion of the year having a relatively high incidence of hurricanes. The hurricane season in the Atlantic, Caribbean, and Gulf of Mexico runs from June 1 to November 30.
Landfall	The intersection of the surface center of a tropical cyclone with a coastline. Because the strongest winds in a tropical cyclone are not located precisely at the center, it is possible for a cyclone's strongest winds to be experienced over land even if landfall does not occur. Similarly, it is possible for a tropical cyclone to make landfall and have its strongest winds remain over the water. Compare direct hit, indirect hit, and strike.
Saffir-Simpson Hurricane Wind Scale	The Saffir-Simpson Hurricane Wind Scale is a 1 to 5 categorization based on the hurricane's intensity at the indicated time. The scale provides examples of

the type of damage and impacts associated with winds of the indicated intensity.

Storm Drainage System

A drainage system for collecting runoff of stormwater on highways and removing it to appropriate outlets. The system includes inlets, catch basins, storm sewers, drains, reservoirs, pump stations, and detention basins

Storm Surge

This is the abnormal rise in the level of water along the shoreline as a result of strong winds associated with a storm.



Tropical Cyclone

A warm-core non-frontal synoptic-scale cyclone, originating over tropical or subtropical waters, with organized deep convection and a closed surface wind circulation about a well-defined center. Once formed, a tropical cyclone is maintained by the extraction of heat energy from the ocean at high temperature and heat export at the low temperatures of the upper troposphere. In this they differ from extratropical cyclones, which derive their energy from horizontal temperature contrasts in the atmosphere (baroclinic effects).

Tropical Depression

A tropical cyclone in which the maximum sustained surface wind speed is 62 km/hr or less.

Stormwater

Precipitation from rain or snow that accumulates in a natural or man-made watercourse or conveyance system

Watch & Warnings

Environment Canada issues a weather watch when forecasters expect severe and possibility dangerous weather to develop. Forecasters issue weather warnings when severe weather is occurring or about to occur.





1. Improving Quality of Life for All

- Staff have prepared draft results of the built environment assessment of accessible parking in the downtown core. The Director of Finance and Community Planner have met to review results and to set a workplan for upgrades to current designated parking locations;
- Management Team has added a recurring agenda item at their regular meeting for accessibility issues and a draft of a workplan/timelines for the Accessibility Plan implementation has been reviewed. This will be an ongoing project until action items become more fully integrated into the Annual Operations Plan;
- Staff are preparing Reports/Updates for the Accessibility Committee which will meet on September 9th to review the draft workplan. Committee members have been busy with community outreach and will have a presence during student orientation at Acadia University;
- Staff have installed Street banners at Clock Park and along Front Street promoting our partnership with NSLC and the KeepitSocial program;
- Staff have begun work to transform the Post Office green space-including the supporting work on accessibility;
- The summer Earth Leadership camps were a success for campers and families. Parents commented that it is so nice to see their campers dirty! Thank you to our Mud Creek Rotary partners who made this possible. The camp Coordinator will be presenting to Council September 3rd and to Rotary on September 5th;
- Staff are rolling out some new signage in Reservoir Park and through the Downtown Core;
- Staff held an official opening for the new Tower Community Park on August 25th. The event was well attended and words were offered by Acadia's leadership team, from Acadia Students' Union, and the Town of Wolfville;
- The Town's fall After-School program registration is now open;
- Summer events staff provided a diverse assortment of community engagement activities including Try it Wolfville events, Market Wednesdays, and a strong social media presence;
- Staff are monitoring the progress of HRM's work on the single use plastic bags issue. A draft bylaw is expected to be ready by December 2019. The 10 largest population centres in the Province have committed to following HRM's lead, which would effectively create a province-wide program which Wolfville could join. In the meantime, we've connected with the business community, who are keenly interested in the issue, and have been researching different program-types should the need arise to create our own program;

- Staff have been advancing the Town's Greenhouse Gas Emissions Inventory. Staff have been collecting data all summer and have about 90% of what we need to provide to the consultant we are working with - Sustainability Solutions Group (SSG) – through the Nova Scotia Transition 2050 program. We should have a basic inventory back from SSG before the end of 2019, and more complex spatial and financial modelling complete in early 2020. Additionally, we're working with the Town of Windsor to create a GHG inventory in advance of their consolidation with West Hants in the Spring of 2020 (part of Transition 2050 program);
- Summer Staff have carried out community outreach over the summer as part of the Inspire Wolfville program (NS Low Carbon Communities program) – to residents, Acadia, local institutions, and the business community – which will continue into the fall. Three of the summer students employed by the Town this summer have agreed to stay on as casual part time staff and continue working on this project. Research and consultation about effective pro-environmental behaviour change strategies is ongoing with the goal of launching a campaign in the spring of 2020.

2. Maximizing Our Infrastructure Investments

- Construction continues on Gaspereau Avenue. Pipe work is complete and road gravels are being installed the week of August 26th. Curbing is scheduled for the week of Sept 2nd and paving scheduled for the week of Sept 16th;
- Construction continues on Seaview Avenue. Pipe work is complete and road gravels are being installed the week of August 26th. Curbing is scheduled for the week of Sept 2nd with all work to be completed by the end of September;
- Construction on Westwood Avenue is taking place with the removal of existing asphalt to begin the week of August 26th and pipe work scheduled to begin the week of Sept 2nd with all work scheduled to be completed by the end of November;
- Staff are working with the designers Stantec to finalize the preliminary design and estimated construction costs for the Community Development Public Works facility upgrade that will include consideration of accessibility;
- Sewage treatment Plant Upgrades – design work is ongoing – the preliminary design report has been reviewed and comments returned to the designer. Additional comments regarding environmental sustainability have been forwarded for inclusion in the design
- Staff have completed work on the Main Street section between Cherry Lane and Wickwire Avenue and the road has been milled and paved;
- Staff will start work in September to repair the infrastructure at the East End Gateway;



3. Leveraging our Economic Opportunities

- The Town's Visitor Information Centre reports a record numbers of visitors so far this year – over 10,000 by the end of August;
- Work continues toward a Library Feasibility study/report that will be presented to Council once completed, along with a Staff Report.
- The WBDC Map Application is being completed. The town parking locations and parks will be included. A launch is expected in the fall.

4. Operational Updates

- A tender for solar panels for the Community Development and Public Works Building was completed with no submissions in response to the original RFQ. Staff reached out through contacts in the industry and are in the process of reviewing three submissions for the Solar Photovoltaic System. A recommendation of award should be made in September. Staff hope to schedule installation of the system in the spring 2020. Combined with potential energy efficiency upgrades, this project could produce the Town's first net-zero energy building;
- Staff have issued Letters of Award for the purchase of two new ½ ton trucks and a small wheeled loader;
- Staff closed tenders for the Shoreline Protection project August 1st. An RFD is included in the current Council package;
- Staff have completed the draft Storm water management plan to be included and considered as part of the new MPS;
- Staff are finalizing the design proposal for the Elm Avenue Lighting project;
- A full-time Operator Labourer position vacancy will be posted in September to fill an existing vacancy;
- Director of Public Works will be attending the APWA annual conference in Seattle from September 8 - 11;
- Staff have milled other streets in Town and they will be paved once existing structures have been repaired;
- Staff repaired two water main breaks in July and August;
- Staff carried out unidirectional flushing and leak detection during the first two weeks in August;
- Staff will begin Sanitary sewer flushing September 10th and work will continue for three weeks;
- Staff have provided to the CAO and Management team the financial implication impacts of a number of capital projects/acquisitions in response to underestimated budget amounts where tender results have been materially more than budget;
- The audit of the Town's 2018/19 Consolidated Financial Statements was completed in July, with Council approving both the Consolidated and Non-Consolidated statements at the July 16th Council meeting;

CAO REPORT

September 3, 2019

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- Staff have collected updated data for the Pavement Condition Index and are working to update the mapping to help inform both the upcoming draft 2020/21 Capital Plan and ongoing operational street maintenance decisions;
 - Management Team continues to work on early draft of the 2020/21 Capital Budget for presentation at the November COW meeting. Early discussions on the 2020/21 operations plan have also started;
 - Final 2019/20 Tax Bills will be issued by early September with a due date of September 30th;
 - Finance staff will be working on required annual reporting to the province for Gas Tax and Capital Investment Plan (CIP), 2018/19 Financial Information Return (FIR) and 2019/20 Statement of Estimates (SOE) during September;
 - The Town has a new corporate account contact with BMO, and staff are currently getting paperwork updated for the 2019/20 year. Still outstanding is the Town's Temporary Borrowing Resolution (TBR) for the capital program as the province has not yet processed the document for the Minister's signature. The last update from Dept of Municipal Affairs indicates we should have the document by end of August;
 - Staff have started analyzing the June 30th (1st quarter) financial results for the Town and Water utility. The Audit Committee meets September 6th to review the variance reports;
 - Staff have closed tenders for the installation of new pedestrian crossing signals on Main Street at University Avenue. The materials required have a long delivery time and this work is scheduled to be finalized by the end of the calendar year. Staff budgeted \$15,000 for the installation of the new crossing signals. Two tenders were received. The lowest bid price was \$30,435 plus HST. The quoted system uses solar panels and the hardware specified is ADA compliant and includes visual LED and two-tone audible confirmation, based on the information provided. Work includes the installation of the system, relocation of an existing catch basin and relocation of the activation button to a new pole on south side of Main Street closer to the crosswalk. The estimated extra \$15,435 plus HST will come from the existing operating budget. Potential savings have been identified to cover this overage;
 - Staff continue to work with Developers on Development Proposals (as-of-right through Development and Building Permits and the Development Agreement process to Council);
 - Council received Draft 3 of the Municipal Planning Strategy in the Council package including a summary and information on next steps. The documents are all available on the Town's website;
 - Staff have completed the last of the projects in the Town of Windsor as part of the Shared Serve arrangement the Town has held with Windsor up until April 1, 2019. The Director of Planning and the Climate Change Mitigation Coordinator will continue to provide limited service related to planning and sustainability leading up to the consolidation of Windsor and West Hants;

CAO REPORT

September 3, 2019

Department: Office of the CAO



- Staff continue focusing on Fire Inspections with training, and capacity building to better action the Municipal System of Fire Inspections requirements.
- The Nuisance Party Bylaw is waiting for the Registry of Regulations to approve the schedule of fines for completion;
- The Property Minimum Standards Bylaw (amended version) will be in front of Council for continuation of the bylaw process through the early fall;
- Staff are working on a new version of the Open Air Fires Bylaw renamed 'Outdoor Fire Bylaw' and work is 80% complete and should be ready for October Committee of the Whole and Council;
- Staff are working on overhauling the Taxi Bylaw to include other vehicles for hire, transportation options that are forecasted for the future, and should be ready for October Committee of the Whole and Council;
- Staff have noted that Compliance files are up from last year;
- Part of an initiative with the Alcohol Strategy Group, staff approached various licenced establishments in the Town regarding participating in NSLC's Keep It Social Campaign. Several businesses and wineries ordered, and were delivered, promotional material to display in their locations;
- Annapolis Valley Health connected with the town regarding a physician recruit who is thinking of moving to the area. Town reps met with the prospective physician and completed a brief town tour.
- Staff worked with the WBDC and Acadia University to organize a downtown tour for 50 Student Orientation leaders on August 27. The Student leaders will provide information to the new freshmen during welcome week. Businesses were given the opportunity to provide something to include in the Wolfville bags given to each of the 50 leaders. Twenty-four businesses provided gifts, coupons or information. The Mayor provided a welcome at Clock Park and the students were divided in two groups, each with a tour guide to lead them around town. A welcome letter from the mayor and the DOITINWOLFVILLE videos have been included in the welcome week student App.
- Staff worked in collaboration with the Wolfville Historic Society and WBDC, to organize an event to celebrate the 100th anniversary of the creation of Grape Nut Ice cream by Hannah Young from Wolfville. Several businesses took part. The event started at The Real Scoop who provided close to 100 free samples of grape nut ice cream. Following this, a reading from Butch Youngs's book about the Palms Restaurant was held at Joes Emporium.

COMMITTEE UPDATE

Title: Kings Point-to-Point
Date: September 3, 2019
Department: Town Council



UPDATE

The Kings Point to Point Transit Society Board met July 23rd, 2019.

Rob Frost, Deputy Chief Administrator of Municipality of the County of Kings, gave a presentation outlining the perspective of Kings, asking if the \$700,000 spent on Kings Transit and Kings Point to Point is for the best/most transportation, if the KPPT fares are as affordable as possible, and if there are efficiencies to be had for transportation. He offered the assistance of Kings finance staff in developing a business case for all of the above.

The board agreed to start the business case discussions at the regular September board meeting.

Deputy CAO Frost also offered municipal assistance in removing regulatory hurdles. One such hurdle is tagging. That is, a vehicle starting in Wolfville and going to a hospital in Halifax is not permitted to pick up and drop off clients along the way, even though there may be many such clients. The same applies to dial-a-rides in Barrington, New Glasgow, and so on, that also drive long distances with only one client. Allowing this efficiency would reduce green house gas emissions and reduce the costs for the clients.

It was noted that the previous annual general meeting motion to prohibit municipal councillors from serving as chair or vice-chair was invalid as it didn't meet the 2/3 majority required to change the by-laws.

The board approved a \$0.45 pay raise for all office staff and drivers, for a total yearly increase of \$7,171.

The June 2019 statement of operations shows a year-to-date surplus of \$23,188, with a 26% increase over budget in revenue from operations.