



REPORT N° INF2019-005

Date	10/05/2019
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Subject	2019 Flood : Sandbag and Debris Removal Strategy
File N°	Click here to enter text.

1) NATURE/GOAL :

The purpose of this report is to secure Council approval of a removal strategy for sandbags, debris etc. that are located on properties affected by the 2019 flood.

2) DIRECTIVE/PREVIOUS POLICY :

N/A

3) DEPARTMENT'S RECOMMENDATION :

WHEREAS the City of Clarence-Rockland has been subject to severe flooding conditions as a result of this year's spring snow melt and excessive periods of rain; and

WHEREAS extensive preventative measures, including the placement of sandbags, have been implemented to residences and seasonal properties situated along the Ottawa River to address the flooding conditions; and

WHEREAS, there is a necessity to develop a strategy to remove the sandbags, restore impacted roadways, and remove contaminated construction materials once the floodwaters have subsided;

BE IT RESOLVED THAT Council, hereby, endorses Option 2(b) as detailed in Report No. INF2019-005, to address the removal of sandbags, construction debris, and other waste goods from the affected flood zones.

4) BACKGROUND :

2017 Flood

In the spring of 2017, approximately 59 residences and seasonal properties adjacent to the Ottawa River experienced severe flooding conditions and property damage. The City, in conjunction with a

provincial agencies and emergency response providers, developed and coordinated a Disaster Recovery Plan (DRP).

One of the key components of this Plan was a strategy to address the collection and removal of sandbags, appliances and electronics, household hazardous waste, construction and demolition materials and miscellaneous woody debris. The coordination of this component of the DRP rested with City staff. Attachment 1 is an extract from the DRP which details the Debris/Waste/Sandbags management initiatives.

Response to the flooding conditions experienced in 2017 resulted in the placement of 125,000 sand bags. After assessing the capabilities of contractors to provide the required services, the City retained Tomlinson Environmental Services Limited to pick up the sandbags from individual residences, deposit them to curbside and ultimately transport the sandbags to the City's landfill site where the contents were used for landfill capping operations.

Tomlinson, as well, provided special curbside collection services for appliances and electronics, construction and demolition materials and miscellaneous woody debris.

The cost of the cleanup operation was approximately \$375,000 (\$3.00 per bag or \$6356 per dwelling). Approximately 61% of this cost was attributable to moving sandbags to curbside. The remaining 39% represented the cost to transport the sandbags from curbside to the City's landfill site.

2019 Flood

The response required for the 2019 flood has been considerably more intensive than 2017. The 2017 flood resulted in a maximum water elevation of 43.69 m. The response to the 2019 flood was based on a projected peak water level of 44.10 m. In order to provide adequate protection to the residents along the Ottawa River based on the projected peak water level, approximately 250,000 sandbags have been placed around individual homes and seasonal properties.

As of the writing of this report, the water levels in the Ottawa River and adjacent tributaries are now subsiding. It is, therefore, critical to develop and implement an effective and efficient strategy to remove the sandbags, contaminated construction materials, white goods, woody debris etc. from those properties affected by the flooding conditions.

5) **DISCUSSION :**

Timing of Removal Operations:

The optimum timing for implementation of the removal strategy will be contingent on favourable site conditions. Once the floodwaters have receded, it will be necessary to ensure that the land surrounding the affected properties is reasonably dry.

In 2017, our contractor resisted any removal operations until a person could walk on a lawn without sinking into the grass. Extreme care needs to be taken to initiate removal operations too early due to the likelihood of causing excessive damage to lawns, shrubs, plants etc. homeowner. These costs are the financial responsibility of the individual property owner.

Sandbag/Waste/Debris Management Options:

Staff has carefully reviewed the success and lessons learned from the recovery management plan utilized in the 2017 flood. Accordingly, the following presents a summary of the options considered by staff, the associated costs and the pros and cons of each initiative.

Option 1: Contractor Managed Process

Process:

This option would “mirror” the removal program utilized in the 2017 flood. Since there are twice as many sandbags in place, there will be a proportional increase in labour and equipment costs. In 2017, the contractor’s labour force varied from 28-45 labourers. This workforce took approximately 11 working days to affect the cleanup operations.

It would be extremely difficult for the contractor to double the labour workforce to complete cleanup operations within the same 11 day working period. In view of this constraint, staff estimates that using the 28-45 labour workforce would result in cleanup operations taking approximately one full month to be completed.

Financial Implications:

The cost of this option is estimated to be \$730,000 (\$700,000 contractor+\$30,000 landfill operational costs).

Pros:

- the results and implementation timelines are guaranteed
- this option does not require the solicitation of the same volunteers that placed the sandbags etc.

Cons :

- This represents the most expensive option with the cost of \$730,000 or \$2.92 per bag
- the likelihood of provincial reimbursement for this option is risky since the city was closely scrutinized in 2017 for its reported contractor costs.
- In view of the labour manpower limitations, it will take an extended period of time (approximately one month) to complete the cleanup operations.

Option 2: Volunteer Collection Program:

Process:

Staff has had preliminary discussions with an organization called Team Rubicon (TR). This organization is "an international non-profit disaster response organization that unites skills and experience of military veterans with first responders to rapidly deploy disaster response teams free of charge to communities affected by disasters...." TR is currently involved in the City of Ottawa's flood response.

TR comprises a roster of 35,000+ volunteers and is able to respond to disaster needs in a reasonably quick timeframe. For example, they are able to mobilize 30 volunteers within a 96 hours. TR recruits, trains, equips and organizes and deploys veterans to aid in disaster response operations. They have been involved in over 225 missions: rebuilding communities from such disasters as hurricanes, tornadoes, floods etc.

Staff has met with a representative of TR and they are in the process of assessing the requirements to provide the required removal services for our affected residences and seasonal properties. We anticipate hearing back from them shortly.

With this option, TR would be responsible for the management and recruitment of volunteers to relocate the sandbags, building waste, white goods etc. to either a designated location or on individual driveways. These two options are discussed below.

Property owners would have to be notified of TR's mandate and make their own arrangements with TR to have the sandbags, white goods,

construction debris etc. relocated for pickup by a City retained contractor. It is expected that property owners will have to sign a right of entry waiver for the cleanup operations. It will also be necessary to ensure that the cleanup works are carried out within a specified timeframe determined jointly by TR and the City.

Once the specifics of the cleanup operation are finalized, it is recommended that a public meeting be convened with the affected property owners to ensure they are familiar with the roles and responsibilities of TR, the property owner, the contractor and the City.

It is important that Council recognize that the City relinquishes the control and management of the sandbags removal until they are placed in a designated area or at the end of the driveway (depending on which option is approved) for removal by the City's contractor to the landfill site. This phase of the operation will be between TR and the individual property owner.

Option 2 (a)-Driveway Collection:

Volunteers would place sandbags and debris at individual driveways for pickup by a collection contractor retained by the city. Collection would be done using smaller loaders and rolloff containers. Sandbags located in the front of a residence would not have to be relocated for collection by the contractor. The City would then load the sandbags, etc. and transport them to the City's landfill site.

The estimated cost of the City's collection contractor would be approximately \$275,000 (\$245,000 contractor; \$30,000 landfill operations).

Staff will solicit at least three invitational quotations from qualified contractors to provide the driveway/central collection services

Option 2(b)- Centralized Collection:

This option requires the property owners to move the sandbags to a designated collection area(s) on an adjacent roadway. The volunteers would remove the sandbags from around a residence/recreational property and transport them to the identified collection areas.

This option enables the contractor to use larger equipment and thus be more efficient in loading the material into dump trucks. TR's volunteers would remove the sandbags from the residences/seasonal properties and transport them to the designated central collection areas.

The cost of this option is approximately \$215,000 (\$185,000

contractor; \$30,000 landfill operations). Similar to Option 2(a), staff will solicit at least three invitational quotations from qualified contractors to provide the collection services and distribute the material to the landfill site.

Pros:

- this option is less costly than Option 1
- higher likelihood of reimbursement from the province since city investigated all possible options
- more universally accepted strategy since this concept is being used by bigger cities such as the city of Ottawa

Cons:

- represents a longer process to complete removal operations
- dependent on commitment/availability of volunteers
- proactive volunteers' solicitation program experience needed

Option 3: Property Owner Managed

Process:

This option contemplates that each individual property owner will be responsible for the removal of sandbags, hazardous material, contaminated material, debris from their property and ensure that it is directed to the City's landfill site.

The City's role would be to ensure that the landfill site remains open for a specified time to facilitate the disposal operations from the homeowners. Staff would recommend that the landfill tipping fee be waived for the disposed materials.

It would also be necessary to define a specific time limit for the transfer of sandbags etc. to the landfill site. It would be the responsibility of the homeowner to transport the materials to the landfill site within the specified timeframe.

Financial:

This operation will require the City to retain an excavator and operator at the landfill site for about a one-month time period. This will cost approximately \$30,000. This expenditure is common to the aforementioned options.

Pros:

- minimal cost to the City (approximately \$30,000 for excavator and operator for one month)
- the City's management of the disposal program is minimal

Cons:

- onus of removal operations rests solely with the individual property owner. This represents a variance with the 2017 flood strategy
- overall cleanup will be staggered since some property owners will delay cleanup operations.

6) CONSULTATION :

The emergency response team has been extremely diligent in liaising with those property owners affected by the flooding emergency. Consultation with the owners will continue until the recovery operations are completed

7) RECOMMENDATIONS OR COMMENTS FROM COMMITTEE/ OTHER DEPARTMENTS:

N/A

8) FINANCIAL IMPACT (expenses/material/etc.) :

It is difficult to fully assess the financial impacts of the flood response at this time. In order to be considered for provincial funding assistance through the Municipal Disaster Recovery Assistance Program (MDRA), the City must realize eligible expenditures that are at least equal to 3% of the municipality's taxation levy. This means that the City must incur expenditures of at least \$575,000 in order to be considered for funding assistance.

9) LEGAL IMPLICATIONS :

Staff is recommending Option 2(b): Volunteer Collection Program to affect the removal of sandbags etc. There is a potential that some volunteers may experience a mishap during the collection process and decide to take legal action against the City. Prior to pursuing this option, staff should consult with the City's legal counsel in this regard to ensure that city has adequately protected itself as best it can against third-party claims.

10) RISK MANAGEMENT:

The risks associated with Option2(b) are highlighted in Section 5 of this report. Using a third-party firm such as Team Rubicon will be beneficial in terms of recruiting volunteers that have not been involved in the initial emergency response operations

11) STRATEGIC IMPLICATIONS:

The recommended strategy highlighted in this report is consistent with the Emergency Preparedness Strategy Priority outlined in the Health and Wellness section of the approved strategic plan

12) SUPPORTING DOCUMENTS:

Attachment 1:2017 Disaster Recovery Plan Extract re-debris management