



BE PREPARED. BE AWARE. WORKING TOGETHER.

FLOOD RAPID RESPONSE PLAN (FRRP)

Regular Council Meeting

May 30, 2023

PRESENTATION OVERVIEW

-  Background & Purpose
-  4 Elements of the FRRP
-  Flood Alert Levels
-  Flood Response Team Management
-  Flood Mitigation Activities
-  Communication Plan
-  Next Steps



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BACKGROUND & PURPOSE

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BACKGROUND

Lakeshore Council supported the implementation of the Flood Mitigation and Protection Framework (Motion #264-08-2021) at the Special Council Meeting.

July
2021

A significant rainfall event occurred in the Municipality of Lakeshore. This event, which spanned 3 days and resulted in considerable flooding along the more northern part of Lakeshore.

August
2021

May
2023

The final version of the Flood Rapid Response Plan is presented to Council on by the Corporate Leader – Operations at the Regular Council Meeting for endorsement.

FRRP PURPOSE

- Assist with the management and deployment of resources in a consistent and organized manner during extreme rainfall/runoff events where flooding occurs within Lakeshore.
- Outlines the expectations and clearly defines the roles and responsibilities of the staff and external partners when responding to a flooding event.
- Lakeshore's FRRP will be led by the Operations Department.
- MERP would be activated accordingly for the need of any emergency response during these extreme situations. FRRP process will remain in effect when MERP is activated, as required.
- Larger scale emergencies and disasters beyond (or in addition to) the detailed events outlined in the FRRP are to be managed using the Lakeshore's Municipal Emergency Response Plan (MERP) which is led by the Municipal Emergency Control Group (MECG) and are not intended to be managed under this Plan.
- After each flood event, a post-mortem will be conducted to assist with future revisions and updates of the FRRP based on the Lessons Learned from the event. This will allow for continuous improvement of the FRRP.





OUR COMMUNITIES. OUR HOME.



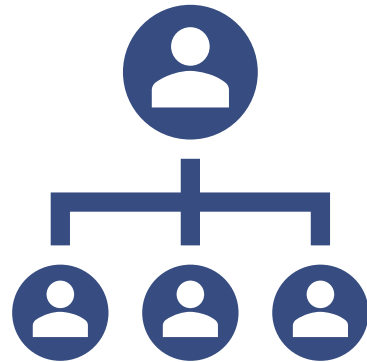
4 MAIN ELEMENTS OF THE FRRP

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4 MAIN COMPONENTS OF THE FRRP



Flood Alert Levels



**Flood Response
Team Management**



**Flood Mitigation
Activities**



Communication Plan

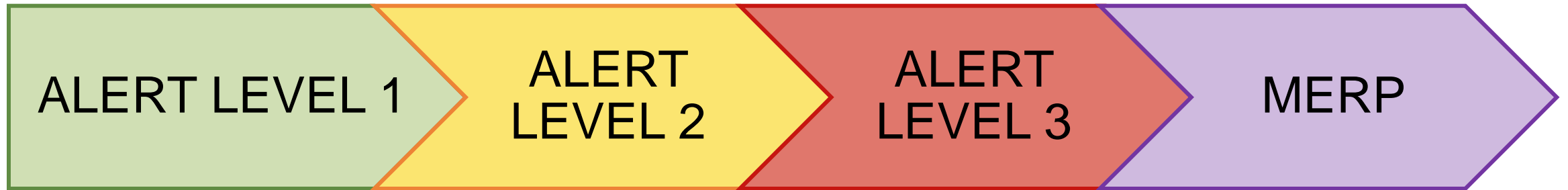


FLOOD ALERT LEVELS



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FLOOD ALERT LEVELS



- Sets expectations and provides confirmation on the level of response Council, the team and public can expect during each event including actions and communication.

ALERT LEVEL 1



LEVEL TRIGGER

- 2 to 5-year storm event or a higher intensity storm with duration of more than 5 to 10 minutes.
- Forecast indicates that storm event will continue with a duration of no more than 2 hours.
- Little to no resident calls are being received.
- Stormwater infrastructure can manage the flows with little to no surface flooding in roadways.



ACTIONS TAKEN

- Flooding Response Leader and Flood Field Manager are made aware of the event by the Flooding Response Manager.
- Monitoring of stormwater pumping stations and drains by field staff
- Monitor pumping station alarms by OCWA/Security 1
- Documentation of event occurs.



COMMUNICATION

- During Alert Level 1 - communication is limited to internal communication within Operations.
- Communication occurs between the Flooding Response Leader Flood Response Manager, and Flood Field Manager, with the relative field staff support (as required).

ALERT LEVEL 2



LEVEL TRIGGER

- Greater than 5-year storm event, up to a 10-year storm event with duration > 1 hour.
- Forecast indicates that storm event will continue +3 hours.
- Calls are being received from the public regarding surface/overland flooding in some areas.
- Stormwater infrastructure not able to manage flows appropriately.



ACTIONS TAKEN

- Flooding Response Leader is being updated on severity and intensity of storm.
- Continuous monitoring of pump stations and any high-level alarms under the direction of the Flood Field Manager.
- Administration Manager to work with Administrative staff to monitor public calls, commence with flooding survey and keep updated, detailed phone logs.
- Monitoring for start of areas of overland flooding.
- Documenting flooding severity and effectiveness of system and response of plan.



COMMUNICATION

- Initial email goes to Council and CAO identifying Alert Level 2, prompting Media & Public Engagement Support to commence with public notifications.
- Flood Team is provided updates related to the event.

ALERT LEVEL 3



LEVEL TRIGGER

- Greater than a 10-year storm event with duration > 1 hour.
- Forecast indicates that storm event will continue +6 hours.
- Receiving calls from the public regarding various areas experiencing overland flooding.
- Basement flooding is occurring.
- More than 5 local road closures or at least one major road closure due to flooding.
- Portable pumps in operation.



ACTIONS TAKEN

- Continuous monitoring continues
- Debris cleaning in ditches and drains.
- Portable pumps and tractor PTOs deployed.
- Administration Manager working closely with Administrative Staff and Public Service Unit based on significant calls being received.
- Closing and monitoring of flooded areas.



COMMUNICATION

- Updates are provided to both Council and CAO more frequently, followed by public notifications.
- Flood Team is communicating per the Internal Communication Plan.

MUNICIPAL EMERGENCY RESPONSE PLAN (MERP)



LEVEL TRIGGER

- Storm duration and FRRP activated for more than 24 hours (staff working hours exceeded).
- Extensive areas of basement flooding.
- Significant major road closures have occurred.
- Power outage areas across Lakeshore.
- Major failures of multiple pumping stations.



ACTIONS TAKEN

- Municipal Emergency Response Plan (MERP) is activated at Town Hall.
- Flooding event is ongoing and not being managed by Municipal Emergency Control Group (MECG).
- Flood Rapid Response Plan (FRRP) still in effect at OPS Center.

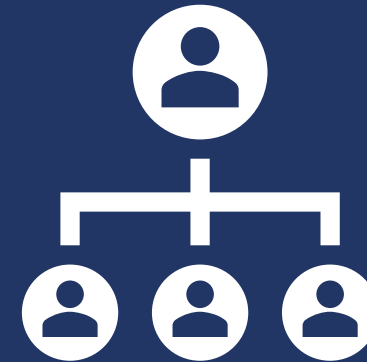


COMMUNICATION

- Follows ERP protocol and communication through Emergency Information Officer (EIO)



FLOOD RESPONSE TEAM MANAGEMENT



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FLOOD MITIGATION OFFICE (FMO)

- The flood mitigation response will be coordinated through the Flood Mitigation Office (FMO) which is located at:

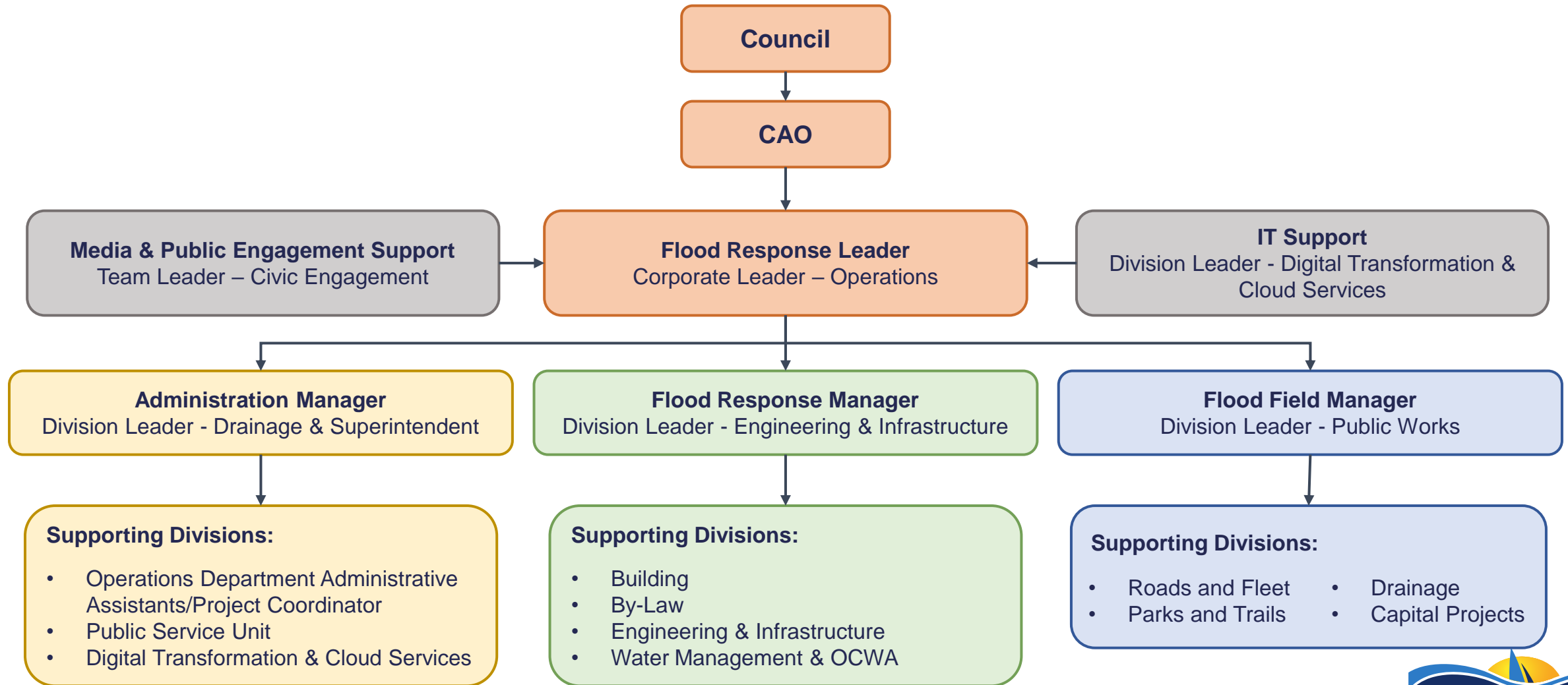


**Municipality of Lakeshore
Operations Centre
304 Rourke Line,
Belle River, Ontario N0R 1A0**

- Contains all the required materials, equipment, monitors, data and design information needed to respond to flood events.
- Further, back up power generation is recommended to be installed as soon as possible at the FMO office to be able to effectively support this plan during events that may involve power outage in the area that may impact the FMO.



ORGANIZATIONAL CHART



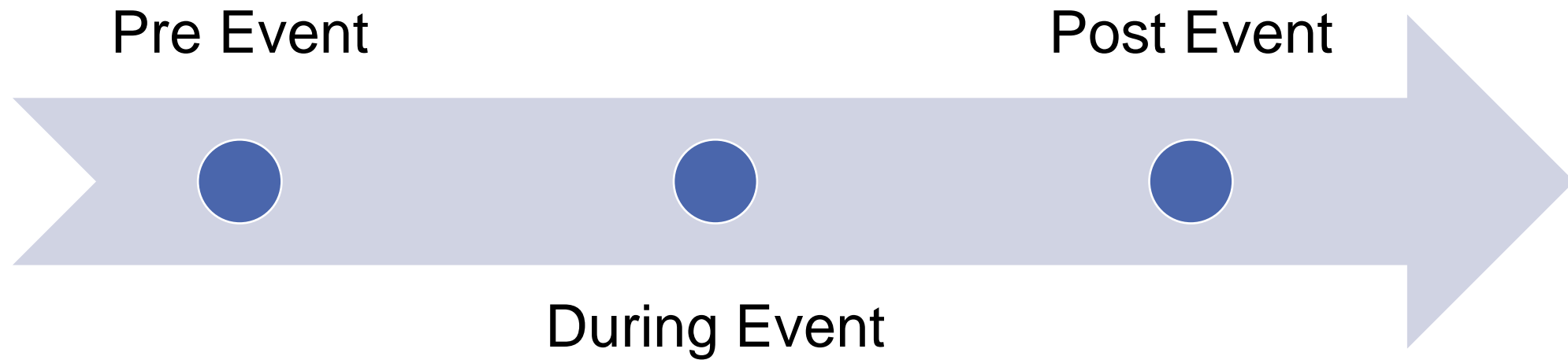


FLOOD MITIGATION ACTIVITIES



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FLOOD MITIGATION ACTIVITIES



PRE-EVENT MITIGATION ACTIVITIES

Flood Plan Training

- Training will be provided to all staff identified in the plan and dry runs of the plan will be conducted annually and/or as required with key staff. This will ensure staff are prepared and have the necessary tools to react to an event.

Preparation of Equipment

- Ensure all maintenance is undertaken in a timely manner on stormwater pumping stations, ensure standby generators are operational, have sufficient fuel and that regular cleaning is being done on trash racks.
- Keep an up-to-date map in Operations (Incident Map) related to past flooding event information, critical infrastructure, maintenance concerns, etc. available for use during events and ensure that the on-line flooding survey is active, operational and implement any changes or upgrades, as required.

Regular Inspection of Infrastructure & Monitoring Devices

- Set up and complete regular checks on required systems for monitoring weather reports and watersheds, weather radar and Tempest rainfall stations.
- Coordinate the inspection all the stormwater pumping stations immediately in advance of an event if possible and complete any open Service Requests and Works Orders within City Works that would impact Flood Mitigation and Protection.

FLOOD EVENT MITIGATION ACTIVITIES

Information Monitored and Displayed During the Flood Event

- While the FRRP is in place, weather information, SCADA, a flood incident map, and reported field information, etc. will be monitored, and the required information displayed on the larger monitors in the Operations Centre.

Field Activities

- The activities of the Municipal staff mitigating the Flood event in the field include the following: Management of field staff/teams, observation/maintenance of stormwater pumping stations, deployment of portable pumps, clearing of drains and ditches, closing of flooded roads, etc.

Information Collection

- Information will be crucial in recommendation of improvements based on the observed system function and operation during extreme events.
- Data collection including the extent and severity of the flood as well as the Municipal response activities is important to assist with future Flood Mitigation Planning as well as to document the field conditions.

POST-EVENT MITIGATION ACTIVITIES

Documentation of Event

- Finalize the documentation of the recent Flood event with the information collected during the event. Update and/or improvements to the webpage, online flooding survey, call Log, GIS mapping and Incident Map as required.

Communication/Clean-Up

- Follow up calls with the Public who requested a follow up by applicable Flood Team Members (to be assigned post event).
- Continue Public Outreach and Education to the residents pertaining to Flood Mitigation and Protection and Flood Readiness after the event including severity of event, impact of the storm and public calls, feedback, and any reminders related to Flood Mitigation and Protection measures.
- Clean, maintain and store the portable pumps, flood mitigation equipment and Road Closure Signs and Equipment.

Lesson Learned

- Post-Event Mitigation Activities will be undertaken to ensure continuous improvement and identify gaps to ensure the plan is effective based on the effects of the event and municipal response.
- Operations Department may initiate any Capital Works that were identified either during or after the event that would assist in reducing property damage during future flood events.



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COMMUNICATION PLAN



ALERT LEVEL COMMUNICATION PLAN

START OF EVENT



Flood Response Manager notifies Flood Response Leader & Flood Field Leader of flood event via email, chat, or phone.



Alert level determined by Flood Response Leader and an email is sent to Council, CAO, and Flood Alert Distribution List (*pending Level of Alert – Level 2 and 3 only*).



Flood Response Leader works with Media & Public Engagement Support to prepare public notifications based on alert level.



Media & Public Engagement Support sends out public notification via press release, social media engagement, and Lakeshore website



DURING EVENT



Flood Response Leader sends email notification update to Council, CAO, and Flood Alert Distribution List.



Media & Public Engagement Support sends updates via press release, social media, and Lakeshore website concurrently.



AFTER EVENT

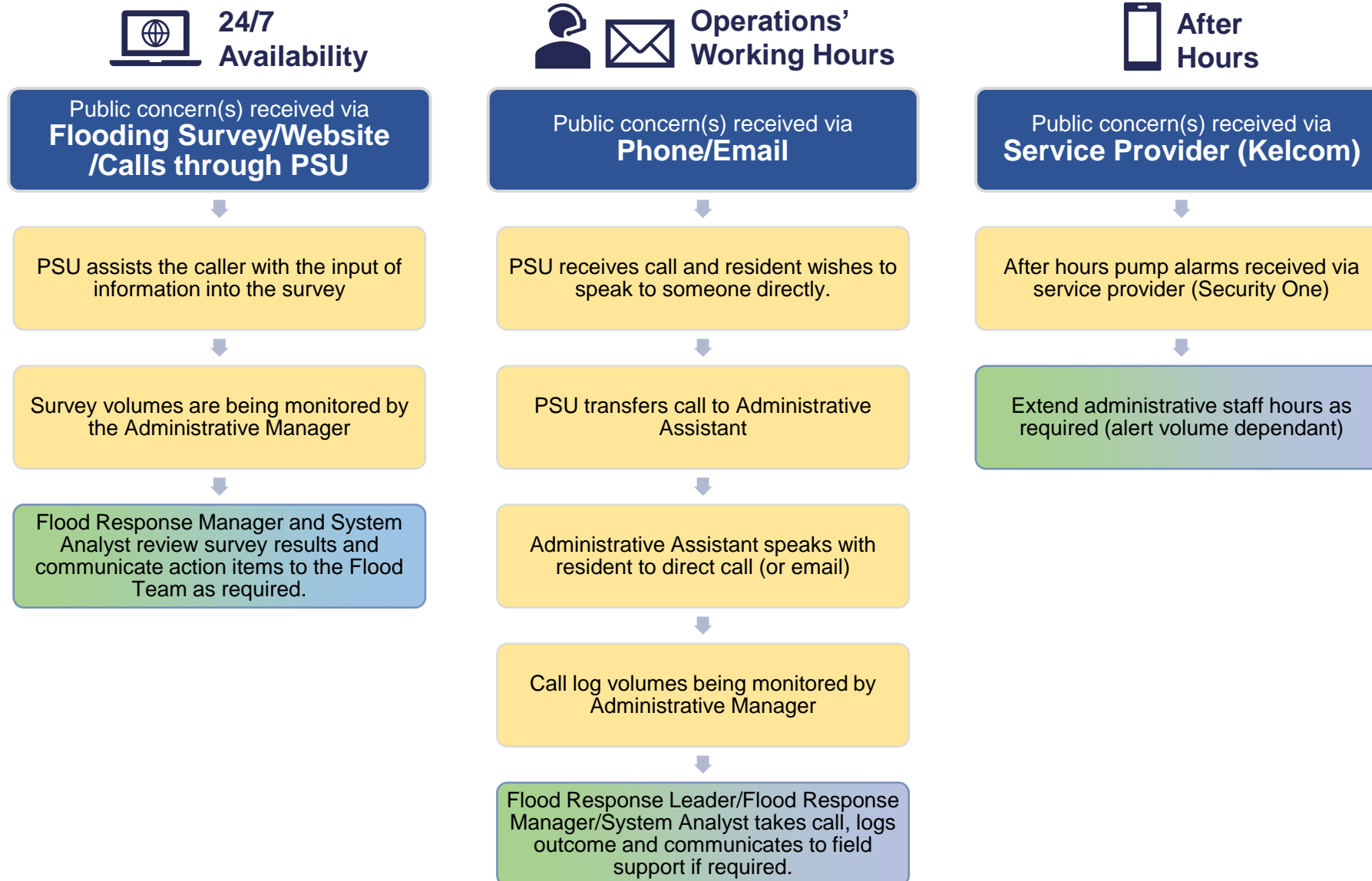


Flood Response Leader sends email notification update to Council, CAO, and Flood Alert Distribution List.



Media & Public Engagement Support sends updates via press release, social media, and Lakeshore website concurrently.

PUBLIC COMMUNICATION PLAN - ADMINISTRATION



PUBLIC COMMUNICATION PLAN - COUNCIL



Public concern(s) received by
**Council Member via
phone/email**



Council member sends request via
email to the Flood Response Leader.



Flood Response Leader addresses
concern or forwards to Flood Team
member to log and address concern.



Follow up post-event with Council
Members on the status of the resident
follow up, if needed.

PUBLIC COMMUNICATION PLAN - EXTERNAL



Media & Public Engagement Support provides notifications of Alert Levels via **Website/Social Media**



Updates are provided to the public on road closures via website/social media during the event.



Media & Public Engagement Support updates at end of event via website/social media.



After the event (Alert Level 2 and 3) an update will be provided on the storm, call volumes, and flooding survey results.



Flood Response Leader contacts Conservation Authorities, County of Essex & Neighbouring Municipalities (as required)



Email/phone updates on event status, road closures, and possible requests for assistance/support.



Flood Response Leader sends email at end of event.

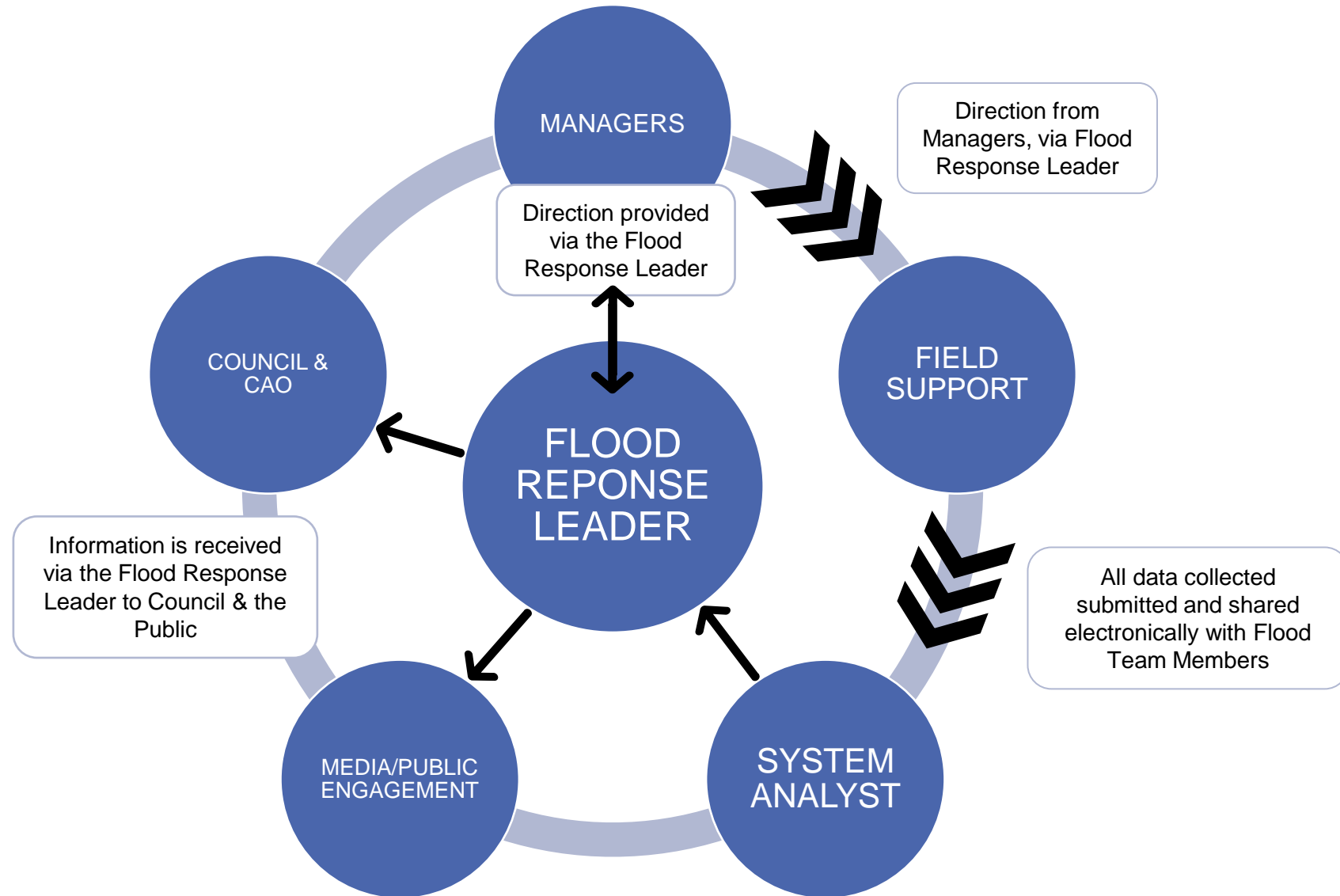


County of Essex contacted for any road closures required on County Roads.



Municipal 511 to be updated by Capital Projects Coordinator (as required)

INTERNAL COMMUNICATION PLAN





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NEXT STEPS

NEXT STEPS

Staff Training

- All Lakeshore employees participating in the FRRP will undertake training presented by the Flood Response Leader and Managers.
- Third-party instructors brought in to provide staff emergency response safety training.

Flood Monitoring Database (FMD) Creation

- Digitize all forms required to implement the FRRP
- Create interactive live mapping for monitoring purposes during events.
- Initiate an advanced notification system for the Flood Team to implement when a storm is anticipated.

Office & Equipment Upgrades

- Back up power generation is recommended to be installed as soon as possible at the FMO office to be able to effectively support this plan during events that may involve power outage in the area that may impact the FMO.
- Obtain required equipment, conduct regular inventory and equipment inspections.