



Western

FLOOD RESPONSE PLAN

River Flood Guide

Effective Date: January 2013
Updated: February 2014

SCOPE

This guide has been developed to deal with any situation where high water levels in the Upper Thames River basin have the potential to cause flooding on Western properties.

PURPOSE

To establish areas of responsibility and take whatever precautionary measures necessary to reduce the effects of high water by:

- a) establishing a river level monitoring process (CCPS);
- b) liaising with authorities (i.e. Upper Thames Conservation Authority – UTRCA, City of London Environmental Services, Emergency Services Coordinator);
- c) closing of parking lots and clearing of parked vehicles and other Western property in flood-prone locations. Consult Parking Services Plan. **Appendix “A”** (Parking and Visitor Services, Grounds (PPD) and CCPS);
- d) implementing flood prevention measures in Delaware Hall, Westminster Hall and other potential trouble areas (PPD);
- e) monitoring/isolation of underground high voltage and communications cables in the flooded areas (PPD and ITS);
- f) communicating with the Campus Community concerning disruptions and safety issues **Appendix “D”** (Communications & Public Affairs);
- g) activating Western’s ERT (Emergency Response Team) or EOCG (Emergency Operations Control Group), as applicable.

RESPONSIBILITY

The maintenance of this plan and the related procedures is assigned to the University’s Emergency Response & Preparedness Coordinator in collaboration with the Director, Operations & Maintenance.

UTRCA FLOOD EMERGENCY LINE

During a flood event, the UTRCA switchboard (519-451-2800) will be operated 24 hours a day. UTRCA info – Appendix ‘F’. (Emergency contact through Incident Command)

CITY OF LONDON

The city closely monitors river flood situations. Their Flood Coordinator can be reached through the AJ Tyler Operations Centre which operates 24 hours a day. Our first level of contact is with the Emergency manager for the City of London, available 24 X 7.

PROCEDURES

Upon receipt of a Flood Advisory Bulletin, Campus Police are to begin **hourly monitoring** of Western's UDR River Level Gauge that is attached to the abutment under the south side, west end of the University Drive Bridge. The gauge can be accessed by using the pathway from the northeast corner of the Talbot parking lot and going down to the riverbank. There are three yellow posts and a hydro box marking the pathway.



CCPS is to notify the Director CCPS once the river approaches the critical level of 76.0 (76.0 = 760 feet above sea level) and Advise ERT at 76.5.

Once the river reaches an elevation of 76.5, the ERT (or applicable members, i.e. CCPS- I/C, CPA and the PPD) should assess the situation. Risk areas will be monitored hourly by Campus Police and appropriate action instituted as required. Incident Command (I/C) will be established, as necessary

The Incident Commander (Emergency Manager) will initiate actions to ensure that any safety issues are addressed in accordance with the river flood plan.

The Incident Commander is responsible for ensuring appropriate safety actions are taken for the protection of the Campus community.

Impacts Summary:

Level	Impact
77.6	Talbot then Medway Parking Lots begin to flood via storm drains
79.0	Vehicles unable to enter or leave Medway Parking Lot due to flooding
79.2	Public cannot enter Medway and Talbot Parking due to flood conditions

Incident Command will address the following measures at the levels indicated:

(UTRCA - Contact Information APPENDIX 'F')

Level	Action	Completed By
Advisory at 76.0	Hourly monitoring of river level Contact Director, CCPS and Operations Leader, CCPS	Campus Community Police Service
76.0	If flood waters are rising contact Housing to alert Medway Lot and commence evacuation of vehicles. Contact Parking to provide staff to prevent vehicles entering, until barricaded. Arrange shuttle from Huron Lot. Notify Parking Manager	Campus Community Police Service
76.5	ERT Advisory/Alert, if applicable CPA develop broadcast email re: conditions and Parking lots at Medway, Talbot and E.S. of Chemistry	Incident Command – CCPS Communications & Public Affairs
77.0	Incident Commander and Command Post established Stay in contact with Housing Management re: parking lots	Emergency Response Team (ERT) Incident Commander
77.0	Communications Plan developed by Incident Command. Develop key messages. (Appendix E)	Communications and Public Affairs
77.0	Contact Parking Services to implement Parking Services – River Flood Plan (Appendix A)	Campus Community Police Service Parking & Grounds
77.0	Kings University College notified (1. Security, 2.PPD Director,	Campus Community Police Service
77.0	Walkways, roadways, paths adjacent to flooding, barricaded and taped as required. Parking staff to prevent vehicles from entering prior to barricading lots.	PPD Grounds
77.5	Notify Social Science Child Care at Westminster Hall - Alert	Campus Police
77.6	Medway and Talbot Parking Lots begin flooding Check operation of storm and sanitary sewer pumps for basement floor of Music Building and Westminster Hall	PPD Mechanical Shop
77.7	Monitoring of Flood conditions in Westminster Hall	PPD Mechanical Shop
78.1	Advise Operator of Tennis Bubble of flooding conditions Mike Richards - home (519-473-3237) – Cell: (519)495-6023	PPD
78.2	Check for leakage into Staging Building sump pit in mechanical room	PPD Mechanical Shop
78.2	Advise City of London Public Works regarding the Pumping Station in Medway Parking Lot – Operations Supervisor Gary Burrows B-519-661-0350 and cell 519-808-2744	Campus Community Police Service
78.2	Health and Safety Inspections of Staging Building and Talbot College. (Appendix B)	Occupational Health and Safety
78.2	Inspections of Westminster Hall, Staging, Talbot and Delaware Hall	PPD
78.4	Check gas-fired unit at rear of Tennis Bubble	PPD Mechanical Shop
79.0	Vehicles are unable to enter or leave Medway parking Lot Close footbridge at Chemistry Parking Lot	PPD Grounds
79.0	Review Physical Plant Considerations (Appendix C)	Incident Command
79.0	Review Appendix if anticipating 80+ (Appendix C & D)	Incident Command & O&M
79.0	EOCG Notified – depending on conditions escalating Contact Tennis Bubble Manager to initiate tear down	Incident Command Incident Command
80.0	ITS Infrastructure reviewed	Information Technology Services
80+	Review Delaware Hall ITS infrastructure and Housing Evacuation Plans	Incident Command

Overview of Vulnerable Facilities and Flood Considerations – APPENDIX 'D'

It should be noted that these are guidelines only. Based on UTRCA reports, weather (rain, snow melt) the rate of river rise and the volume of water may dictate the need for alterations to this guide.

APPENDIX 'A'

Parking Services

1. **Communications and Public Affairs representative of ERT** will communicate via emergency email procedure, evacuation of vehicles and the closure of the Medway, Talbot and east side of Chemistry parking lots. All messages will be consistent.
- Emergency communications should go out at 76.5 river reading

Example – Initial Communications

Faculty, Staff, Students and Guests who have their vehicles parked in the Medway or Talbot parking lots or the east side of the Chemistry parking lot are asked to move their vehicles immediately to the Huron or Althouse lot. This is a precautionary measure. A shuttle will be provided from the Huron and Althouse lots. Please visit the Western home page at www.uwo.ca for ALL updates.

2. Deploy flood 'Safety Hazard' signs and barricades for parking lots. Contact Physical Plant Grounds to deploy barricades, signs to prevent entry into Medway and Talbot lots and the east side of the Chemistry lot.
 - a. Signs are located in Parking Services sign storage cage in Graphics Building (contact Grounds/Parking Services)
 - b. 5 parking lots signs (4' x 4') as follows
FLOODING – SAFETY HAZARD
PARKING LOT
CLOSED
3. Incident Command/Parking Services to contact Departmental Towing Service for service or stand by service.
4. Arrange for shuttle from Huron and Althouse lots, if necessary, (Aboutown Transit or taxi Service);
5. Towing - Tow all vehicles to north end of Huron Flats if space is available OR Althouse parking lot. Costs to relocate vehicles covered by Parking Services.

Towing information:

Tow company used by CCPS and Parking Services
Walts Towing, 24 hrs radio dispatch road service, London, ON
519-451-3355 1-877-274-7360

6. Parking Services / CCPS / Incident Command to raise parking gates to lots with available space to facilitate the movement of vehicles to higher ground (Althouse, Huron Flats).
7. Parking Services staff to be available to assist where/when required.
8. **Post Flood** – Contact Grounds to arrange for lot sweeping, removal of signs, barricades and tape.
Re-open parking lots as per ERT (CPA) advisory

Environmental considerations – as per OH&S – gas tanks are water tight and should not leak during flooding situations. If we encounter any gasoline releases during a towing operation then we need to deal with it. The MOE is concerned about releases into the natural environment.

Flood waters, like all water, contain some level of bacteria. Run off of the flood waters into UWO parking lots; the hazard in the winter/spring is extremely minimal. Subsequent to contact with flood water, individuals should wash with soap and water.

Shuttle Schedule from Althouse/ Huron (if required):

Contact About town shuttle service – 519-663-2244

Shuttle Schedule (sample message)

Quantity 1 – 9 passengers Abouttown van will be deployed this evening from 4 pm to 9 pm to facilitate transportation to and from the Huron and Althouse parking lots as a result of relocation of parking and reduction of available parking space due to flooding.

Service Route – 4 stops as follows (continuous);

1. Perth Hall Circle at entrance
2. In front of Alumni Hall
3. In front of Elgin Hall (University Drive)
4. In front of Natural Science Building (Middlesex Drive)

APPENDIX 'B'

Occupational Health and Safety Flood Plan

Rooms listed below are located in areas subject to flooding and should be investigated/kept in mind in the case of flood.

Staging Building

For the following rooms contact Biology Technical Office

Room #	
102	Glass blower shop – Contains some gas cylinders – No concern
103	Storage Room – No concern
103A	Laboratory – Contains chemicals – Visit to secure chemicals
104A	Laboratory – Laser
106	Slop room – No concern
108	No concern
109	Laboratory – Contains Chemicals and Biohazard Level 1 – Visit to secure
109A	This is a laboratory containing radioactive materials as well as chemical and biohazard materials
110	Laboratory – Visit to secure
117	This is a laboratory that has radioactive materials as well as chemical and biohazard materials

For the following room contact Engineering Mike Gaylard 519-617-0958 or local 88292

Talbot College

Contact Faculty of Music Office TC Rm 210
Theatre Workshop Contains paint and other flammables

APPENDIX 'C'

Physical Plant Considerations Assess in Accordance with Flood Plan

79	Seal storm drain from steam manhole in front of Delaware Hall	PPD Grounds
79	Seal top of manhole adjacent to Talbot College	PPD Grounds
79	Seal storm drain from Steam manhole adjacent to Talbot College	PPD Grounds
79	Seal entrance to basement mechanical room in Talbot College	PPD Mechanical Shop
79	Seal sanitary sewer manhole covers around Delaware Hall	PPD Grounds
80+	Review of Delaware Hall ITS infrastructure	PPD Mechanical Shop & ITS

APPENDIX 'D'

Overview of Vulnerable Facilities and Flood Considerations

Mechanical On-Call

Once the mechanical on-call person is contacted (CCPS call at I/C or O&M request) as per the river level plan to check systems, there isn't a need for this person to remain on site. They can be called back if the situation changes quickly. This is a judgment call based on the rate of the river rising, weather, UTRCA, etc.

Caretaking

As an addition to the plan, it may be beneficial to have the option of calling in caretaking for some initial clean-ups in Westminster, Staging and Music. This call-in will be a judgment call based on what is happening at the time and what the predictions are for rising of water levels, weather, UTRCA etc. The call should be made to the caretaking supervisor of the particular building. O&M Director will be able to assist with this.

Staging

There are no WES alarm points for the sump pumps in Staging. Therefore, this location must be checked. Rooms 102, 103, 103A and 110 are all keyed to work on the staging building master key. The building master key for this building is under the control of the 'Yale' great grand master key which CCPS has in the key cabinet and cruiser key rings and CCPS key rings.

Rooms 104A and 016 are keyed on the Yale mechanical key, opened by a Mechanical Yale Master, on the CCPS key rings.

Music

There is an under floor water sensor in the Music Building for the large piano in room 12 which is alarmed by WES. There are no sump alarms; therefore this location is to be checked.

Westminster Hall

There are 3 sump high levels monitored at Westminster Hall which are located in rooms 30 (storm) 33 (storm) and 2 (sanitary). These high level alarms are monitored by WES and alarms are received by the WES Control pagers.

Elgin Hall Residence

If the basement were flooded there would be a significant impact on the existing phone system and potentially the data network for this building. Power would be affected and the active data equipment is in the basement (rack mounted). Elgin is also the 'node' for the UDR campus fibre backbone. For the most part these are passive circuits that are patched in a rack 6 feet AFF (above finished floor). This is the lowest likely point of vulnerability that would affect service.

Delaware Hall Residence (Infrastructure Considerations)

There is no active electronic equipment in the basement of DHR. Unless there was four feet of water in the basement the telephone service and cable would be unaffected. The network service is fed by fibre and is direct to the first floor.

Sydenham, Medway and Alumni Hall Residences

These residences all have service in the basement closets. These would be vulnerable only if power was affected. In almost all cases the equipment is in a rack but the power connection is only 10 to 20 inches AFF (above finished floor) and this would be the weakest link.

University Drive Bridge

There are two large conduits strapped under the walkway of the bridge that could potentially be damaged if the water levels were to rise to unprecedented levels. This is the only link to UDR and the entrance facilities at the Bank Building where our fibre demarcation point is. All the manholes with communications cable in them are often filled with water. We generally do not have issues unless there are splice enclosures that are susceptible to getting wet. There are no splice points in any UDR manholes.

APPENDIX 'E'

Key Communications Messages From April 2008 Experience

What's happening?

We are monitoring the Thames River water level, which has risen rapidly overnight. As a result, flooding occurred in the Medway and Talbot Parking lots. Last evening around 10 p.m. when it became apparent that a potential flooding may occur, residence staff went door-to-door in Elgin Hall, Alumni House, Medway-Sydenham Hall and Delaware Hall to advise residents to remove their cars immediately from the Medway Parking lot.

What about my vehicle?

Do not try to move or access vehicles that are still in flooded parking lots. Vehicles are being towed from the above lots to the Huron Parking Lot (near TD Waterhouse Stadium lot at the north end). If your vehicle has already been towed, contact Campus Community Police at 519-661-3300 and proceed to the Huron Parking Lot to retrieve it. Campus Police has the most current list of license plates of vehicles that have been towed.

Will my car run?

We are unsure. Some vehicles were deeper in water than others. You should check it out when you retrieve it. If it won't start, you can call a towing company. We also recommend that you contact your insurance company. If your vehicle has not yet been towed, you will have to wait for the towing company to assist you. For your own safety, you are not permitted to enter the flooded areas.

What if my car is damaged?

If your car is damaged, contact your own insurance company as quickly as possible. If you have any additional questions regarding insurance, please direct them to (UWO Insurance division 519-661-2111 Ext: 85540).

What if I have an urgent appointment that requires the use of my car?

Abouttown taxi chits are available for urgent situations. Please contact the Elgin Hall Front Desk.

Why do we tow from flood waters?

- a) Safety – to prevent students from going to their vehicles through the flood waters
- b) To prevent further damage to their vehicles.

APPENDIX 'F'

UTRCA Contact Information for Incident Command

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