Ontario Low Water Response

in Summary

Fresh water is a natural resource crucial to the economic and environmental well being of Ontario. Water supports almost all aspects of human activity including health, industrial development, and recreation. The Ontario Low Water Response (OLWR) is intended to ensure provincial preparedness, to assist in co-ordination and to support local response in the event of a drought. The OLWR has been active in Ontario since 2000 and since then many improvements have been made to the program. This summary will tell you how OLWR works, how local water users will be affected and where you can get further information.

Low Water Level Indicators

The MNR's Surface Water Monitoring staff notify and confer with Conservation Authority, MOE, OMAF and local MNR staff when streamflow and weather data indicate that an area may be in a Level I, II or III low water condition. Indicators are described in the chart below. (This chart is incomplete and some watersheds have local variations of the indicators. For more information on indicators please see the OLWR document at the website listed under "Maps, Bulletins and Conditions.")

	LEVEL I	LEVEL II	LEVEL III
rain	<80% of the monthly average	<60% of the monthly average	<40% of the monthly average
Streamflow	Spring: Monthly flow< 100% of the lowest average summer month flow Other times: Monthly flow< 70% of the lowest average summer month flow	Spring: Monthly flow< 70% of the lowest average summer month flow Other times: Monthly flow< 50% of the lowest average summer month flow	Spring: Monthly flow< 50% of the lowest average summer month flow Other times: Monthly flow< 30% of the lowest average summer month flow

Streamflow and Weather Monitoring

The Ministry of Natural Resources, Conservation Authorities, Environment Canada and Ministry of Environment monitor streamflow and weather data. Staff in the MNR's Surface Water Monitoring Centre (SWMC) in Peterborough collect flow and rainfall information from streamflow and precipitation gauges (see photo on left) every week for the Low Water Response Program. This information is compared to long-term records. Many gauges have been recording information for 30 years or more. When current conditions fall below the drought indicator levels described on the left the Low Water Response Program takes affect.

Maps, Bulletins and Conditions

Maps (such as the one above) and reports that show how current conditions compare to the indicator values are posted on MNR's low water website every week. Check out the website to view conditions in your area.

www.mnr.gov.on.ca/MNR/water/p774.html

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Water Response Teams

Organization

CAs (or MNR Districts where CAs do not exist) will take the lead in establishing a Water Response Team (WRT). This generally occurs after the CA or MNR District has received a notification from the SWMC and a Level I condition has been confirmed. (An existing WRT can also confirm a Level I condition.) The lead organization will then arrange and host the first WRT meeting at which time a chair and secretary will be elected and the WRT will develop its terms of reference, detailing its mandate, membership, meeting frequency, quorum conditions etc.

If a multi-stakeholder committee currently exists, it may assume the role of a WRT. New members may need to be added.

Jurisdiction

WRTs are based on watershed boundaries. Conservation Authority boundaries will generally guide each team's geographical jurisdiction, although some CAs may wish to divide their area into subwatersheds in order to address local conditions. Where no CA exists, the MNR will determine the appropriate watershed units.

Membership

- Provincial staff (MNR,MOE, OMAF)
- Conservation Authority staff
- Municipal staff
- Representatives of local interests including:
  - Agriculture
  - Rural private industry
  - Business
  - Recreation
  - Resource management interests
  - First Nations

Roles

WRTs are focused on reacting to current local low water conditions.
WRTs do not replace existing agencies, policies and statutes but rather they facilitate the coordination of water management agencies, non-government groups and users.
WRTs do not possess any unique legislative authority but can help by advising on the current regulations and tools, such as the *Ontario Water Resources Act* and *Environmental Protection Act.*
There is no distinction in decision-making power or responsibility among members of the WRT with the exception of provincial government representatives (their focus is on advice rather than participation in the decision-making process.)

Responsibilities

Responsibilities for team members include attending meetings, communicating back to their sectors, sharing relevant data, and implementing drought management tools (eg. municipal by-laws, coordinated irrigation, signage, public awareness communications.)
WRTs should meet regularly for the duration of the low water conditions in order to:

1) Collect and share data including:
Precipitation, streamflow and groundwater level data, watershed characteristics; status of municipal, rural dug and drilled wells, list of Permit to Take Water (PTTW) permit holders; estimates of the environmental, social and economic impacts of the low water conditions and, in a potential Level III situation, the impacts of proposed restrictions.

2) Confirm Local Conditions:
The low water indicators described previously are only a guideline. WRTs can use the data they collect, their knowledge of local conditions and local indicators to confirm whether their watershed should be in a Level I or II condition (the process for confirming a Level III is described in the "Level III Protocol" section).

3) Plan a Conservation Strategy:
WRTs will collectively plan and implement actions that will promote water conservation. Actions should be relevant and specific to the local issues identified.

4) Communicate the Conservation Plan:
Messages should be timely and directed to the public and/or specific target audiences identified in the conservation plan. Communication is described further in the "Response to Low Water" section.

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Response to Low Water

Water Response Teams are formed so that local water users, stakeholders and water managers can collectively make decisions about water use within their watershed during a time of shortage. The chart below shows some of the actions that may be taken by a Water Response Team once a Level I, II or III has been confirmed. Actions at Levels I and II are generally focused on voluntary conservation measures and some restrictions such as municipal outside water use by-laws. All water users taking amounts greater than 50,000L per day are required by law to have a permit to take water. At any time those without a permit or those not adhering to the terms of the permit may be prosecuted. During low water conditions enforcement of the PTTW program will be increased.

These measures are put in place in order to mitigate negative impacts to the natural environment as well as socioeconomic impacts on various sectors and water users. A Level III is only enacted when Level I and II measures are ineffective and conditions continue to deteriorate. Level III water restrictions, which may include water-taking bans will be strictly enforced.

OLWR outlines the process for confirming the low water conditions within a watershed (see indicators) and recommends potential actions. It does not address "emergency" response measures as defined by the *Emergency Plans Act.* The declaration of any level of low water condition does not imply compensation for economic losses.

Communicating the Conservation Message

Communication is a critical component of the Low Water Response Program. At a Level I and II voluntary conservation and restrictions (by-law enactment/ enforcement) are promoted through local media and sector specific forums. Each member of the Water Response Team should represent a certain sector of water users or stakeholders and should be responsible for ensuring that messages are communicated within their respective sector. For example, municipalities will make residents aware of bylaws restricting lawn water and car washing, while agricultural organizations can promote conservation to farming communities through their own publications.

Level	Goal	Communication	Supply Management	Demand Management
I- Potential water supply problems	Voluntary Conservation 10% reduction in water use	WRT members to own groups, media releases, newsletter etc.		
II- minor problems, potential major supply problems	Voluntary Conservation and Restrictions Additional 10% or greater reduction	Direct contact with major users, sector-specific information on restrictions	Modify reservoir operations	Recommend limiting new permits, implementing bylaws, monitor and enforce compliance with existing permits
III- supply fails to meet demand, social and economic impact	Conservation, Restriction and Regulation Maximum reduction	Sector and user specific information on restrictions and regulation	Modify reservoir, water power operations, consider hauling water	Reduce permit levels, set and institute water use priorities, enforcement

Promoting Voluntary Conservation

Water Response Teams should promote voluntary conservation measures as the first step in protecting water resources during a shortage. News releases and other communication material may include the following information:

- Current flow and precipitation conditions
- Ecological implications of low water
- Economic implications of low water
- What voluntary conservation measures and restrictions are being requested
- Reasons for voluntary conservation i.e. protecting ecosystems and preventing a Level III
- Where to get further information eg. MNR's low water website, OMAF's Best Management Practices booklets etc.
- Actions required at a Level II
- Implications of a Level III eg. the potential for restrictions and increased enforcement

Level III Protocol

Recommending a Level III

When conditions indicate a Level III low water condition there is the potential that supply will no longer meet demand. In some areas of the province where water demand is low, a Water Response Team may decide that actions beyond Levels I and II are not required; demand does not surpass the current supply and does not have an adverse impact on aquatic ecology due to water takings.

However, in the case where water use is adversely affecting watershed conditions and all options at Levels I and II have been exhausted, a Water Response Team can make a recommendation to the Ontario Water Directors' Committee (OWDC) Low Water Committee to declare a Level III. A recommendation to the OWDC Low Water Committee should include the following information:

- Actions taken at Levels I and II
- A demonstration that the majority of water users have participated in the above actions
- Environmental, social and economic impacts resulting from the current low water conditions
- Recommendations on priorities and water allocation
- Environmental, social and economic impacts resulting from the recommendations

This is described in greater detail in the document entitled "Requirements for Recommending a Level III". Upon receiving the report, the Low Water Committee may consult further with the Water Response Team and/or provide alternative recommendations on water allocation. The Low Water Committee, in consultation with the WRT, may declare a Level III.

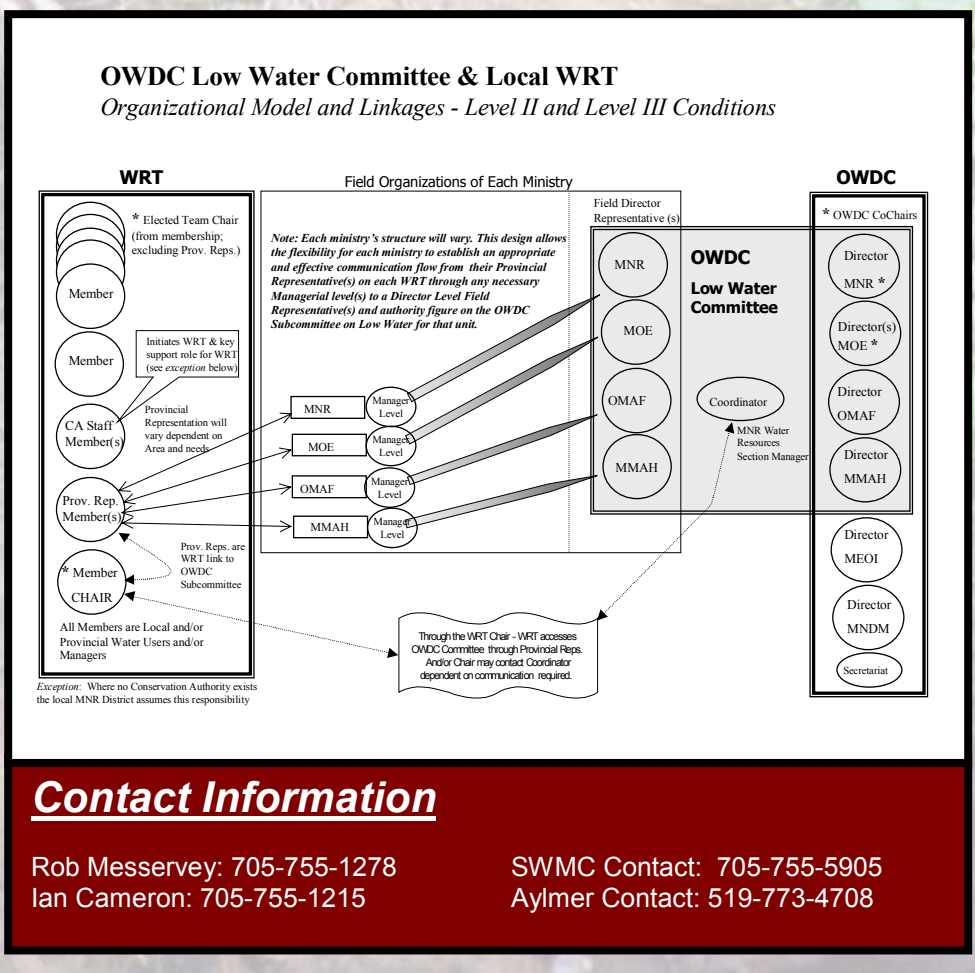
Setting Priorities

WRT members should agree on restrictions and set priorities for water use that are relevant and specific to local issues.

The Ontario Water Directors' Committee Low Water Committee

The OWDC Low Water Committee is made up of two representatives from each provincial ministry: the Policy Directors and Field Directors. The Low Water Committee deals with low water issues. WRTs can contact the Low Water Committee through two avenues:

- Provincial government reps on the WRT provide information to their Field Director, or
- The WRT chair can contact the OWDC coordinator directly.



Contact Information

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Ontario Low Water Response Protocol

SWMC monitors monthly flow and precipitation data against low water indicators and produces maps, reports and charts.

Notification of potential Level I condition sent to CA, OMAF MNR and MOE contacts.

CA refers to own data and confirms local conditions.

CA refers to own data and does not confirm condition; responds to SWMC.

LEVEL I

CA confirms condition to SWMC. SWMC then informs MNR, MOE and OMAF contacts.

CA takes the lead and assembles a WRT. The WRT meets to plan actions to promote 10% voluntary reduction in water use through activities such as staggering of takings in the watershed etc. Community makes reductions.

WRT or CA approves move out of Level I; confirms normal conditions with SWMC.

Weekly updates from the SWMC to CA show if conditions are improving or worsening.

If worsening weekly notification of potential Level II will be sent to CA, MNR, OMAF and MOE contacts from the SWMC. WRT consults SWMC and CA data

WRT does not confirm Level II; remains in Level I; informs SWMC.

WRT or CA approves move out of Level I; confirms normal conditions with SWMC.

Conditions improve.

LEVEL II

WRT confirms Level II to the SWMC. EMO, PRC, MMAH and MOE, MNR and OMAF contacts are informed by SWMC.

WRT meets to plan actions to promote 20% or greater reduction in water use through voluntary conservation activities such as staggering of takings in the watershed, restrictions such as bylaws and other activities. Community makes reductions.

WRT or CA approves move out of Level II; confirms Level I condition with SWMC.

Weekly updates from the SWMC are sent to CA indicating whether conditions are improving or worsening. CA also consults own data. If conditions are worsening, the SWMC will send weekly notification of potential Level III to the CA, MOE, OMAF, and MNR contacts, the OWDC, PRC, EMO and MMAH.

WRT does not recommend Level III conditions; remains in Level II; informs SWMC.

WRT prepares a report outlining recommendations on water restrictions and social, economic and environmental impacts resulting from the low water conditions and from the recommended actions

WRT or CA approves move out of Level II; confirms Level I condition with SWMC.

Conditions improve.

WRT chair contacts the OWDC secretary or provincial government reps contact their Regional Director with recommendations, questions etc; OWDC, PERC and WRT meet to discuss conditions and agree on recommended actions.

LEVEL III

OWDC (secretary or Regional Director) informs SWMC and WRT of declared Level III. SWMC informs PRC, EMO, MMAH, MNR, OMAF and MOE contacts.

WRT and government agencies work together to communicate to the public and ensure water restrictions are put in place and enforcement is enhanced.

WRT & OWDC approve move out of Level III.

Weekly updates from the SWMC to the CA and OWDC show conditions are improving or worsening; regular meetings of the OWDC are held to discuss conditions.

Appropriate measures and restrictions are applied until conditions improve.

Abbreviations:

SWMC= Surface Water Monitoring Centre, MNR Peterborough

WRT= Water Response Team

OWDC= Ontario Water Directors' Committee, Low Water Committee

PRC= Provincial Response Centre

EMO= Emergency Management Ontario

PERC= Provincial Emergency Response Coordinator

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