

## Drought Emergency: Mandatory Water Use Restrictions

### Turf Watering:

- a) The use of potable water for watering established turf is prohibited. However, the following uses of potable water are permitted, only to the minimum extent necessary to prevent damage:
- Use of potable water for turf watering shall be limited to between the hours of 5 pm and 9 am by any efficient means and only for newly sodded or seeded areas

*Exception:* Where a source of non-potable water exists at the location of use, it must be used in lieu of potable water in a conservative manner.

### Agricultural Watering

- a) The use of potable water for watering of established plants and trees is prohibited. However, the following uses of potable water are permitted, only to the minimum extent necessary to prevent damage:
- b) Use of potable water is allowed for production of food, fibre, nursery stock, sod, flowers, livestock, and poultry; otherwise newly planted (less than one year old) outdoors plants may only be watered manually or with soaker hoses, and only between the hours of 5 pm and 9 am with the user in attendance.
- c) Nursery stock may be watered by any efficient means for only two periods per day totalling no more than six hours, with no more than ten minutes of syringing of stressed plants between the hours of 12 noon and 3 pm.
- d) Public gardens may be watered by any efficient means to prevent damage.
- e) Watering required in earthworks projects shall be done under officially approved plans.

*Exception:* Irrigation bags or similar devices may be used for trees and other individual plants. Commercial plantings may have maintenance periods longer than one year after planting - as required under contract. Where a source of non-potable water exists at the location of use it must be used in lieu of potable water in a conservative manner.

### Golf Courses and Athletic Fields

- a) Use of potable water is allowed between the hours of 5 pm and 9 am only for tees and greens to prevent damage.
- b) Watering of grass or clay courts and athletic fields is allowed only between the hours of 5 pm and 9 am to maintain playability.

*Exception:* Daytime syringing for heat sensitive grasses is permitted to prevent damage. Where a source of non-potable water exists at the location of use it must be used in lieu of potable water in a conservative manner for tees, greens, and fairways.

### Miscellaneous Uses

- a) Water shall be served in public establishments only at the customer's request.
- b) The use of potable water for non-commercial washing of private vehicles is prohibited.
- c) The use of potable water for washing paved surfaces is prohibited, except for sanitation.
- d) Flushing water mains or hydrants is prohibited except for public protection purposes and only by authorized personnel.
- e) The use of potable water for the filling of swimming pools is prohibited except for filling therapeutic pools or to prevent structural damage to new pools.
- f) The use of potable water for topping off swimming pools is permitted only to the extent necessary to maintain proper filtration.

*Exception:* Where a source of non-potable water exists at the location of use it shall be used, when appropriate, in lieu of potable water in a conservative manner.

## 3. ESF Participation

Dept/Org.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
<b>Ministry of:</b>																			
Agr, Land, & Marine						●						●							
Community Devel.						●									●				
Education					●	●													
Energy			●		●					●		●							
Finance					●		●							●	●				
Finance - Customs					●						●						●	●	
Foreign Affairs					●										●				●
Health				●	●	●		●	●		●	●					●	●	
Information					●										●				
Legal Affairs					●						●								
Local Gov't	●		●	●	●	●						●			●				
Local Gov't: PH Inspectors					●				●										
Nat'l Security					●	●		●							●				
Nat'l Security - Immigr.						●												●	●
Nat'l Security - ODPM						●													
Planning Housing/ Envir.					●	●				●					●				
Public Utilities		●	●	●	●							●							
Social Development					●	●	●								●				
Tourism						●													
Trade and Industry					●														
Works and Transport	●		●		●		●	●	●	●									
<b>National:</b>																			
Airport Authority	●				●														
Fire Service (TTFS)					●	●		●	●	●		●							
Defence Force (TTDF)	●	●	●	●	●			●	●	●	●	●					●	●	●
Dietary Services					●	●													
Electricity Commission		●	●									●							
Emerg. Mutual Aid Scheme					●						●								
Environ. Mgmt Agency			●		●					●									
Gov't Information Svc					●										●				
Gas Company			●		●							●							
Helicopter Service					●				●										
Hospitals					●			●											
Immigration					●														
Petroleum (NP)															●				
Petroleum (PETROTRIN)					●			●	●	●		●							
Police Service (TTPS)	●	●	●	●	●			●	●	●		●			●				●
Port Authority	●				●														
Power Generation			●		●							●							
Regional Health Authorities					●			●											
Special Anti-Crime Unit	●				●			●				●					●	●	●
Telecom. Authority		●	●		●														
Water & Sewage Authority		●	●		●														
<b>Private/Vol./ Non-Profit:</b>																			
Adventist Devel. & Relief					●	●	●												
Amateur Radio League		●			●														
Amateur Radio Society		●			●														
Ambulance Services					●			●											
Caribbean Airlines					●		●												
CDEMA/ USAID/OFDA					●					●									
Columbus Comm. (FLOW)		●			●														
DIGICEL		●			●														
Food Crop Farmers Assoc.					●						●								
Global Medical Response					●			●											
Inter-religious Organisation					●			●											
Oil Companies					●			●		●									
Private Contractors	●				●														
Radio Emerg. Assoc.		●			●														
Red Cross					●	●	●	●											
Salvation Army					●		●												
Security Companies					●														
Service Clubs					●	●													
United Way					●	●	●												



Government of the  
Republic of Trinidad  
and Tobago  
Ministry of National Security



SNAPSHOT:  
Drought

July 30, 2014

## National Drought Response Plan

The primary mission of government in an emergency is to protect the lives and property of its citizens. Regardless of how well all systems are organized to provide assistance, the unpredictable nature of drought and the time and space factors involved dictate that the local jurisdiction must be prepared to cope with the initial impact of a drought on its own.

Recognizing that routine emergency services will, by their nature, be inadequate to cope with the effects of a drought, it is the duty of local government to provide for the emergency expansion of its survival capabilities within the limits of available resources.

This Plan has been developed to provide a sound basis for drought-oriented emergency programmes and to establish the organizational and operational concepts and procedures designed to minimize the impact of this hazard.

Emergency duties and responsibilities have been assigned, to the extent possible, to agencies having the same or similar responsibilities in the ODPM EMP's Basic Plan. Where necessary, agencies should develop specific standard operating procedures (SOPs) explaining which tasks need to be performed and how they will be accomplished in a drought situation.

This incident annex has been developed in consonance with cited authorities that currently exist. Specific details and background from these sources are usually referenced rather than included. Agencies using this annex should, therefore, become familiar with the provisions of the various laws covering the Emergency Services.

It is well understood that being prepared to recover from the effects of a drought requires constant development and revision of emergency procedures, training of staff and auxiliary personnel, and exercises to test this aspect of the ODPM EMP. This process and the results of actual emergency response operations will allow refining this Plan, its associated SOPs and supporting plans so that we are as well prepared as possible to cope with drought effects.

**Purpose:** To define a concept of operations and the duties and responsibilities of the Emergency Support Function (ESF) agencies, specific to a drought and to more efficiently and effectively reduce losses and address public health and safety issues affecting the residents of, and visitors to, the Republic of Trinidad and Tobago

### Situations and Assumptions

- a) Drought is a prolonged period of dry weather during which there is an inadequate supply of water to meet demands. It may occur at any time of the year; although the dry season is considered to be the period where droughts are of a greater impact due to the higher demand for water.
- b) There are several types of drought. This annex covers "agricultural drought" and "water supply drought".
- c) An "agricultural drought" will have an effect upon commercial plants and animals. This results in the increased prices of basic food staples, the loss of "breeders" and "parent" stock, and the degradation of agricultural businesses.
- d) A "water supply drought" will impact population centres. Therefore businesses should curtail, delay or postpone activities that require the indiscriminate use of water such as car washes, lawn watering, and other such activities (pools). This is done until water supplies are back to normal or considered adequate. Water restrictions may also apply to residents where they may be asked to curtail or halt any unnecessary use of water.
- e) Droughts often result in health problems for humans and animals. These problems include dehydration, inadequate sanitation, and overheating.
- f) Clean bottled water should be available for use during drought conditions.





# National Drought Response Plan

## Concept of Operations

- The Water Supply Coordinating Council (WSCC): Such a council should be established appointing the most relevant body to take the lead. This may be either the Water Resource Agency (WRA) or the Water and Sewerage Authority (WASA). The mission of this body is to work cooperatively with all critical stakeholders to ensure that new water supplies are developed and/or limited resources are managed.
- It is recommended that an inter ministerial level Prime Minister's Drought Advisory Committee (PMDAC) be established: During prolonged periods of drought, regular meetings and/or telephone conference calls may be conducted by the Prime Minister's Drought Advisory Committee to discuss the current situation/status and to recommend actions to the Prime Minister. These meetings are chaired by a designee appointed by the Prime Minister, who will be the Minister with responsibility for Disaster Risk Management (DRM). Conference calls will be conducted at the Office of Disaster Preparedness and Management (ODPM) executive board room. A list of participating agencies on the PMDAC is in the appendix.

Based on the outcome of the meetings and/or conference calls, the PMDAC may recommend:

Heat Watch and Warnings	
<b>Drought Watch</b>	The potential for drought suggests that voluntary water demand reductions be requested
<b>Drought Warning</b>	An imminent (but not certain) drought recommends increased water demand reductions (though still on a voluntary basis)
<b>Drought Emergency</b>	With declining water conditions, there is no alternative but to declare a state of emergency with mandatory water use restrictions

Each stage in the drought advisory correlates to a goal of conserving public and private water supplies:

- Unnecessary water usage should cease during severe drought conditions. The greater the duration of drought, the more restrictive the measures used, to control the use and consumption of water. This may include, but not be limited to, the reduction of water used for:
  - Washing and cleaning automobiles
  - Watering lawns, plants, trees
  - Filling swimming pools
  - Operating fountains and water displays
  - Operating/maintaining industrial processes/manufacturing
- Prolonged and intense drought may lead to water rationing. The Trinidad and Tobago Fire Service (TTFS), the Water and Sewerage Authority (WASA) supported by the Trinidad and Tobago Defence Force (TTDF) may issue potable water to communities via suitable means
- Some key instalments may be exempted from restrictions. These include medical institutions, nursing homes, schools, emergency operations centres, senior citizens centres, police stations, fire stations, and the military
- Drought information and restrictions will be disseminated by the media
- Prior to drought conditions becoming severe, individuals, organizations, and agencies should make provisions to stockpile bottled water and other liquids. A three-day supply per person is recommended
- During an incident, all requests for assistance that cannot be solved at the local level will be routed to the activated National Emergency Operations Centre (NEOC). These requests will then be routed to the appropriate ESF representative for immediate action

- The Prime Minister will be informed of the situations and response being taken
- The Prime Minister may declare a State of Emergency or Disaster Area as appropriate

## Organization and Responsibilities

### The Prime Minister

- Directs implementation of the ODPM EMP through the Minister with responsibilities for DRM
- Declares a Disaster or State of Emergency
- Enacts plans for water allocation by public and private water users
- Places a ban on water use by public or private water users for specified purposes
- Encourages water rationing programmes by public water users for specified purposes
- Designates the Minister with responsibilities for DRM to chair the PM DAC meetings
- Issues supplemental declarations and orders
- Requests external assistance, as required

### The Office of Disaster Preparedness and Management (ODPM)

- Directs activation of the National EOC, if necessary
- Monitors and evaluates the forecasts together with the Meteorological Service
- Completes the checklist actions for Command and Control, Operations, and Public Information
- Implements the EMP and the required annexes
- Informs its line ministry, Ministry of National Security, of protective action and safety recommendations
- Conducts conference calls and assessments on drought conditions
- Coordinates all emergency support function resources
- Deploys emergency management liaison personnel to local EOCs to assist with response and recovery operations, if necessary
- Assists in procurement and coordinates the distribution of necessary water supplies to the public.
- Assists in the coordinating of media information and keeping the public informed.
- Coordinates external assistance

### Water and Sewage Authority

- As the custodian of Trinidad and Tobago's water resources, WASA is responsible for regulatory matters pertaining to well drilling, surface-water quality standards, and water allocation

### Water Resources Agency

(To be added)

### Emergency Support Functions (ESFs)

All ESF agencies will perform their normal emergency response functions as indicated in the ESF section of the ODPM EMP. ESF primary agencies will also ensure that these activities are accomplished:

- Review emergency plans specific to drought conditions
- Support drought operations and ensure compliance with any restrictions
- Ensure 24-hour staffing availability. If activated, ESF representatives responding to the NEOC shall be knowledgeable of their resources and shall have authority to coordinate the release of these resources
- Remind agency personnel in the field to follow safety procedures for their responsibilities

### Continuity of Government

- The Prime Minister is in control throughout and has delegated authority to coordinate state resources to the ODPM CEO through the line Minister.
- Once activated, the NEOC will coordinate state resources for preparedness, response, and recovery operations. Recommended actions will be directed through ESF representatives to the responsible responding agencies.
- Agencies will establish procedures to protect personnel, vital records, and equipment.
- Primary and secondary facilities will be identified by each agency to relocate essential operations.
- Each agency should have a Continuity of Government (COG) Plan.

### Administration and Logistics

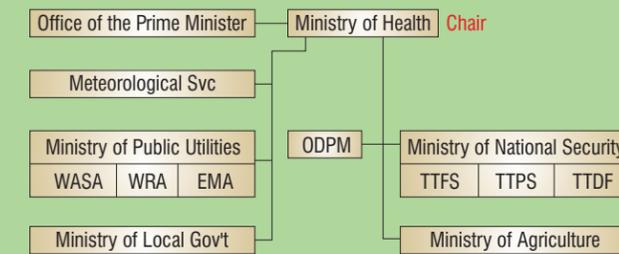
- Each response agency is responsible for its own administration and logistics
- Each response agency should develop standard operating procedures (SOPs) and implementation checklists to ensure that actions in this plan are performed in a timely, efficient, and effective manner.
- Each response agency is responsible for maintaining lists of emergency resources to include personnel, supplies, and equipment.
- Each response agency should maintain detailed logs and financial records directly related to the event. These records shall be submitted to ODPM upon request.
- ODPM will prepare an after action report describing the situation and response actions of national, local and private organizations.
- Based on after action reports and critiques, each agency should update their annexes, plans, SOPs, to facilitate preparedness, response, and recovery activities.

### Authority and References

(ODPM to input any relevant pieces of legislation in this section)

### Coordinating Committee

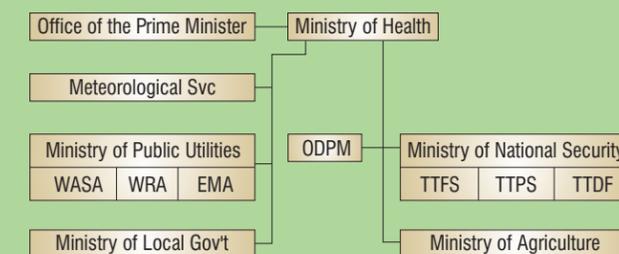
*Mission:* to work cooperatively with all critical stakeholders to ensure that new water supplies are developed/ limited resources are managed



### Prime Minister's Heat Advisory Committee (PMHAC)

During prolonged periods of heat, regular meetings/conference calls may be conducted by this Committee to discuss the current situation and to recommend actions to the Prime Minister.

Meetings will be chaired by a designee appointed by the Prime Minister (Minister responsible for Disaster Risk Mgmt). Conference calls will be conducted at the ODPM executive board room.



## Drought Watch: Water Use Recommendations

### Turf and Agricultural Watering

- Use of potable water for turf and plantings should be minimized
- All outdoor watering should be performed in a conservative manner and by efficient means

### Golf Courses and Athletic Fields

- Use of potable water for turf and plantings should be minimized
- All outdoor watering should be performed in a conservative manner and by efficient means

- A drought management plan should be developed

*Recommendation:* Where a source of non-potable water exists at the location of use, it should be used in lieu of potable water in a conservative manner.

### Miscellaneous Uses

- Water should be served in public establishments only at the customer's request

## Drought Warning: Water Use Recommendations and Restrictions

**Turf Watering:** Use of potable water for turf watering should be limited to between the hours of 5 pm and 9 am by any efficient means and only for newly sodded or seeded areas. Newly sodded or seeded means planted less than one year

*Recommendation:* Where a source of non-potable water exists at the location of use it should be used in lieu of potable water in a conservative manner

### Agricultural Watering

- Use of potable water for watering of outdoor plants should be limited to new plantings. New plantings are those less than one year old
- New plantings should be watered manually or with soaker hoses
- Irrigation bags or similar devices recommended for trees and other individual plants
- Nursery stock should be watered by any efficient means
- Watering required in earthworks projects to be done under officially approved plans

*Recommendation:* Where a source of non-potable water exists at the location of use it should be used in lieu of potable water in a conservative manner

### Golf Courses and Athletic Fields

- Use of potable water should be limited to between the hours of 5 pm and 9 am for tees, greens, and fairways to prevent damage
- Water conservation measures and drought best management practices should be used to reduce water use
- Drought management plans should be finalised
- Watering of grass or clay courts and athletic fields should be limited to between the hours of 5 pm and 9 am

*Recommendation:* Where a source of non-potable water exists at the location of use it should be used in lieu of potable water in a conservative manner

### Miscellaneous Uses

- Water should be served in public establishments only at the customer's request
- Use of potable water for washing private vehicles is permitted only by the use of a bucket and a hose with a flow-control nozzle
- Use of potable water for washing paved surfaces is prohibited, except for sanitation

