

Drought FAQs 2010

1. **What is a drought?** Drought is generally defined as a long period – months or even years - of little or no rain, but there are also some more precise definitions for specific types of drought conditions. These are:
 - a. *Agricultural drought* – a period when soil moisture is inadequate to meet the demands for crops to initiate and sustain plant growth.
 - b. *Hydrological drought* – period of below average or normal stream-flow and/or depleted reservoir storage.
 - c. *Meteorological drought* – a period of well-below normal precipitation (rainfall) that spans from a few months to a few years.

Water supply systems around the world are vulnerable to drought conditions.

2. **What causes droughts?** Droughts are caused by irregularities in weather patterns (including global warming, el nino and other weather phenomena) that result in insufficient rainfall. Localized droughts may also be exacerbated by poor environmental practices such as de-forestation, watershed degradation and over-use or pollution of water sources.
3. **How does the current dry season caused by El Nino impact on the NWC's operations?** A number of the NWC's systems are supplied by surface water sources (rivers, springs). The below normal rainfall over the past year has severely affected the flow of these sources which in turn impacts the volume and quantity of water entering the NWC's facilities. The dwindling inflows are not sufficient to sustain normal operations, which result in daily shut down of the facilities.
4. **How severe is the current drought?** The current drought affecting sections of Jamaica varies in severity from area to area or from one water supply system to the other. Of the 460 water supply systems operated by the National Water Commission (NWC), approximately 70 of these systems – including the largest systems serving much of the

Corporate Area of Kingston and St. Andrew – are experiencing declines ranging between 20% and 90%. Water supply systems served by surface sources – i.e., rivers and springs – tend to be more severely affected than systems supplied from underground well sources. The demand for NWC-supplied water has also grown by as much as 50% in some areas. For customers served by the Mona Water Supply System, this hydrological drought is the most severe in more than 20 years.

5. **What is NWC doing about the current drought?** NWC has implemented a range of short-term, medium-term and long-term measures to combat the current and future drought conditions. These measures include:

- Regulation of the water supply, whereby, water is provided to an area on particular days during specific hours;
- Measures to access additional sources of water for treatment and distribution;
- Measures to maximize existing sources and to reduce wastage and leakage;
- Sharing of water from least-affected systems with worst-affected areas, where possible;
- Trucking of water to worst affected areas (priority is given to hospitals, health centres, schools, public institutions and communities which are severely affected for prolonged periods);
- Imposition of Prohibition Notice making it illegal for the excessive or wasteful use of potable water in drought-affected areas;
- Encouragement of significant conservation measures.

6. **What is being done in the medium and long terms?** Medium-term projects primarily aimed at developing new wells or rehabilitating existing unused wells and initiating changes to distribution network to enable distribution of water from least affected systems to worst affected systems are also being implemented.

Longer term projects such as the Jamaica Water Supply Improvement Project to provide an additional 20 million gallons of water to the Corporate Area and many other projects to protect existing water sources, develop larger, more drought-resistant water supply

systems, replace existing old and inefficient infrastructure, interconnect more water supply systems for improved manageability and various sewerage projects to protect the underground water supplies are also being undertaken at great cost.

- 7. Even when I am scheduled to get water, why is there none in my pipe?** As far as is possible, the National Water Commission continues to provide water through the pipes to its customers. There are instances where a customer may receive very low pressure or no water at all even during the hours that water is being supplied. This could be due to a number of factors, including elevation; location on the system; the distribution network; or customer demand in the particular area.
- 8. As it relates to trucked water, how is this coordinated?** Areas that are currently without usual piped water supply have been placed on a trucked water schedule. This schedule is in keeping with the specific days that water would have been supplied to these areas under the current restriction/regulation arrangement. (Customers are being reminded that based on the nature of trucking water, particularly as it relates to time, turnover and expense and location of an area, that the effectiveness of the exercise may be compromised, often times resulting in incomplete delivery.)
- 9. Should customers pay for water that is provided by NWC trucks?** **NO.** Trucks and personnel deployed by the National Water Commission are not authorized under any circumstances to collect any monies from customers for water provided. **N.B.** Private trucking operators are also offering their services to the public, at a price, and this is within their right and NWC has nothing to do with these arrangements.
- 10. How would a customer know that the truck providing water is from the NWC?**
There is no easy way of knowing for sure. While trucks deployed by the National Water Commission to provide water to its customers are monitored/accompanied by a NWC supervisor, this supervisor is often responsible for monitoring more than one truck at a time.

- 11. What should a customer do if they are asked to pay for water that they suspect was sent by NWC?** They should note the license number of the truck and get any other identifying details and the date and time and report this to the NWC at 1 888 CALL NWC; the respective Area Manager's Office; the Security Department at 929-5430-5; or the Corporate Public Relations Department at 929-5430-5 or 9291128. The NWC will then investigate and determine if that trucker/truckload was being paid for by the NWC and take the appropriate actions.
- 12. How will bill payment be treated in light of the prevailing drought condition and no water supply?** All charges based on meter readings for water supplied – even on scheduled basis or at below normal pressure – is due and payable. Estimated customers or customers with other particular issues caused by intermittent water supply during the drought may seek redress through the normal process at the NWC commercial office.
- 13. How long does the NWC anticipate that this drought condition will last?** Drought conditions will continue until there is significant rainfall in the particular drought-affected watersheds. Information from Meteorological Centre indicates that the drought conditions are most likely to last until May/June or, in a worse case scenario, until September/October.
- 14. Has the NWC considered desalination as an alternate means of supplying water to its customers?** This has been considered. Desalination options, because of three-fold process - the construction of the desalination treatment plant, the desalination technology and then the actual treatment - would attract tremendous start-up, operating and maintenance costs. The current water supply rates of the NWC do not cover these high desalination costs.
- 15. Can the NWC recycle waste water for potable water supply to customers?** The NWC is not contemplating recycling waste water for potable water supply. However, treated effluent from NWC facilities is available for irrigation and other purposes. In addition, NWC is working with other agencies at better utilization of treated wastewater.

16. Are there any immediate plans to build dams and storage reservoirs for future supply should there be a reoccurrence of this weather condition? Building dams by itself does not prevent drought or prepare for a drought. All dams/reservoirs, to be useful, need to be connected to good, adequate and reliable sources of raw water. NWC continues to explore all reasonable and viable options to access, harness and develop more robust and drought-resistant water supply systems.

While there are no immediate plans to build more dams, within the next 24-36 months the NWC will be undertaking the Jamaica Water Supply Improvement Project. Under this project, an additional 20 million gallons of water will be produced daily to augment the current supply to the Kingston Metropolitan Area (KMA). A number of corporate and rural areas will experience improved water supply. Particular highlights of this project will include;

- Replacement of the Rio Cobre Pipeline which brings water from Bog Walk to the KMA. This will reduce leaks and improve the reliability of supply;
- Rehabilitation of the Constant Spring Water Treatment Plant and intakes. This will restore production capacity and also improve reliability of supply;
- Rehabilitation of the Seaview Treatment Plant and Stony Hill water supply network;
- Construction of new wells;
- Construction of new pipelines from Ferry to Red Hills;
- Improvements to the Forest Hills Supply through main replacement;
- Construction of a new 15 million gallon daily water treatment plant in Spanish Town to provide additional water to the KMA;
- A number of rural water supply projects.

16. Will the NWC be drilling any new wells in the corporate area to provide water to customers? Currently the NWC is conducting exploratory drilling of boreholes in Halls Green and Temple Hall which once in operation will bring an additional 2 million gallons of water per day. Other wells are also being drilled or rehabilitated.

17. What can customers and individuals do? In this severe shortage of water affecting sections of the country, we all need to adjust and make do with less water. Voluntary,

personal conservation can go a far way in both saving money and saving water for use another day or for use by others in need. Studies show that water use in an average household can be reduced by 30% by simply practicing good conservation measures without any significant inconvenience.

Conserve water by:

- **Reducing** water use wherever possible and finding alternatives to water-intensive activities. For example, turn off all taps as soon as the water isn't being used and don't use the toilet to dispose of things that should be in a wastebasket, but do use disposables to eliminate the need to wash dishes.
- **Repairing** all leaks – whether they are a nuisance or not or whether they appear to waste a lot of water or not. Even small leaks waste a lot of water over time and various studies show that about 10% of water in homes is wasted due to leaks.
- **Re-use** or re-cycle water whenever possible. For example, re-use the water used to wash plates or clothes to water plants, wash cars or water lawns.
- **Re-place** water wasting devices such a 7- and 5-gallons per flush toilets or gushing showerheads with water-saving devices such as flow restrictors and aerators.
- **Do not** leave taps turned on even when there is no water in the pipes as when water returns you may be unaware and the pipe would be left running.