



Individual Risk Assessments

Hazard/threat Category:	
3. Severe/extreme weather conditions - drought	
Date of Revision	Next review date
01/07/2014	01/07/2017
Overview of hazard or threat:	
<p>Droughts happen when there is insufficient rainfall to maintain adequate water levels in reservoirs and underground aquifers (groundwater). The climate of England and Wales is variable. Droughts occur naturally as a result of lack of rainfall. In long periods of dry weather, water levels in rivers and the ground drop and the amount of water in aquifers (water-bearing rocks below ground) and reservoirs falls. Each drought can be different in terms of its severity, location and duration.</p> <p>A drought has the potential to start when total rainfall is well below average for several months. Other signs of drought include: unusually low river flows, low groundwater levels, low reservoir levels, very dry soils, reduced crop yields or even crop failure and algal blooms in reservoirs or lakes. This can lead to reduction in ability to supply water, either public water supply or other forms of abstractions. After any dry winter, water levels in reservoirs, rivers and underground aquifers can be below average. There is no immediate risk to public water supplies, but prolonged dry weather could lead to more serious shortages in summer. Norfolk is more accustomed to low rainfall than other parts of the UK so the infrastructure is in place to cope more effectively. A number of key measures are available to assist in the reduction of water demand during a drought period, which can be applied by the Water Supply Companies or the Environment Agency.</p>	
Key historical evidence (last 5 years or of particular note)::	
<ul style="list-style-type: none"> • 2011/12 – West Norfolk recent history winter 2011-2012 were dry conditions 	
Likelihood:	
Hazard	Likelihood
3. Severe/extreme weather conditions	Medium
Impact:	
Summary:	
Hazard	Impact
3. Severe/extreme weather conditions	Minor
Details:	
Impact associated with risk (i.e 1 of x)	
Primary:	
<p>Agriculture</p> <ul style="list-style-type: none"> • Reduced crop production • Forest fires and die-back <p>Water resources</p> <ul style="list-style-type: none"> • Restrictions on domestic water use • Increased competition for water amongst sectors • Impact of supply to other areas (e.g Essex (from Denver)) <p>Transport</p> <ul style="list-style-type: none"> • Damage to road and rail infrastructure 	

<p>Environment</p> <ul style="list-style-type: none"> Biodiversity losses due to water temperatures, water quality and eutrophication Biodiversity losses due to dry soils and lower river flows / groundwater levels <p>Built Environment</p> <ul style="list-style-type: none"> Structural damage and subsidence Heat island and air quality problem <p>Health</p> <ul style="list-style-type: none"> Restrictions in Public water supply 		
<p>Secondary</p> <p>Agriculture</p> <ul style="list-style-type: none"> Increased costs for irrigation and feed for livestock Soil damage and erosion <p>Water resources</p> <ul style="list-style-type: none"> Stress on protected sites Saline intrusion to coastal aquifers <p>Tourism/leisure</p> <ul style="list-style-type: none"> Restrictions to recreational activities on rivers/lakes Restricted water supply for hotels, swimming pools <p>Transport</p> <ul style="list-style-type: none"> Passenger discomfort Restrictions to navigation on waterways Waste disposal (if bottle water needs to be distributed as alternative water source) 		
<p>Overall assessment:</p>		
<p>Category:</p>		
<p>3. Severe/extreme weather conditions</p>		
Likelihood Description	Impact	Risk Rating
Medium	Overall	12
	Fatalities	1
	Casualties	2
	Economic	5
	Social Disruption	2
	Psychological	2
		Medium
<p>Controls in place</p> <p>Section 57 of the Water Resources Act - The Environment Agency can enforce restrictions on the use of spray irrigation for agricultural use. All water supply companies have Drought Plans which set out the actions water companies will take during a drought to maintain public water supply, including hosepipe bans, leakage control, drought permit applications and publicity campaigns encouraging water conservation. The Environment Agency review these plans to make sure that companies take appropriate action to balance the need for public water supply with the needs of the environment. Water companies can decide to ban hosepipe and sprinkler use without permission from the Environment Agency or government. Non-essential use bans - stopping for example fountains and car washes - require a drought order. Drought permits and drought orders allow water companies to abstract water or change the conditions of their existing abstraction licenses. They can use them only when there is a shortage of water caused by a drought. The public and other organisations have the opportunity to object to any proposed drought permit or order.</p> <p>Norfolk holds two high volume pumps capability</p>		