

# Update on the development of guidelines for site contamination of water

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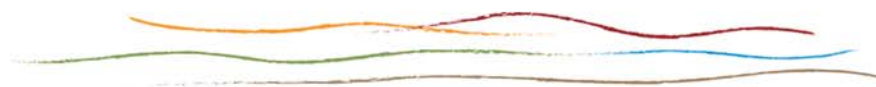
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*because the environment matters*



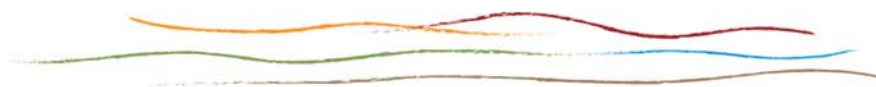
## Site contamination

- Chemical substances are present in concentrations above background
- Chemical substances are present as a result of an activity
- Presence of chemical substances have resulted in actual or potential harm to water that is not trivial



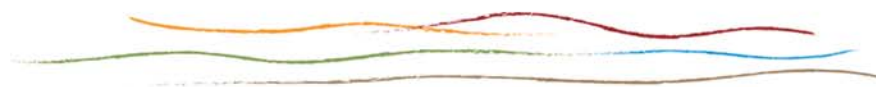
# Water

- The current definition of water is as follows:
  - *water occurring naturally above or under the ground; or*
  - *water introduced into an aquifer or other area under the ground; or*
  - *an artificially created body of water or stream that is for public use or enjoyment.*



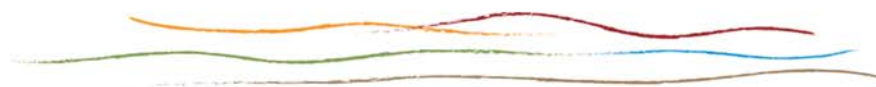
# Actual or potential harm to water that is not trivial

- Guideline in draft format
- External consultation shortly
- Covers all waters not just groundwater
- Harm to water does not mean that the EPA will require complete clean-up or restoration.
- Decisions based on risk to human health and safety and/or the environment, taking into account potential future uses of the water.



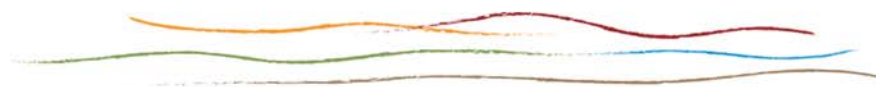
# What is harm to water that is not trivial?

- Actual harm to water has occurred if any chemical substance is present in water at a concentration in excess of:
  - background concentration for **naturally occurring chemical substances** in the receiving waters (outside of any mixing or attenuation zones as exempted by the EPA) and above the water quality criteria for the appropriate protected environmental value, or
  - the laboratory limit of reporting for any anthropogenic substance in the receiving waters (outside of any mixing or attenuation zones as exempted by the EPA) and above the water quality criteria for the appropriate protected environmental value, using a laboratory method approved by the Authority.



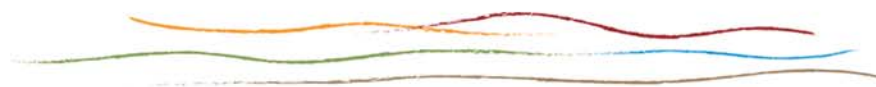
# Notification of site contamination of underground water

- Section 83A of the EP Act
- Draft guideline currently in progress
- Out for consultation - September
- Only refers to notification of underground water not surface water
- Duty to notify is irrespective of when the activity took place
- Obligation is on the owner, an occupier, a site contamination auditor and a site contamination consultant to inform of site contamination that affects or threatens underground water
- The penalty for non-compliance is \$120,000 for a body corporate and \$60,000 for an individual

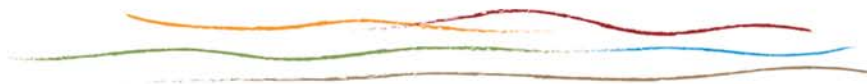
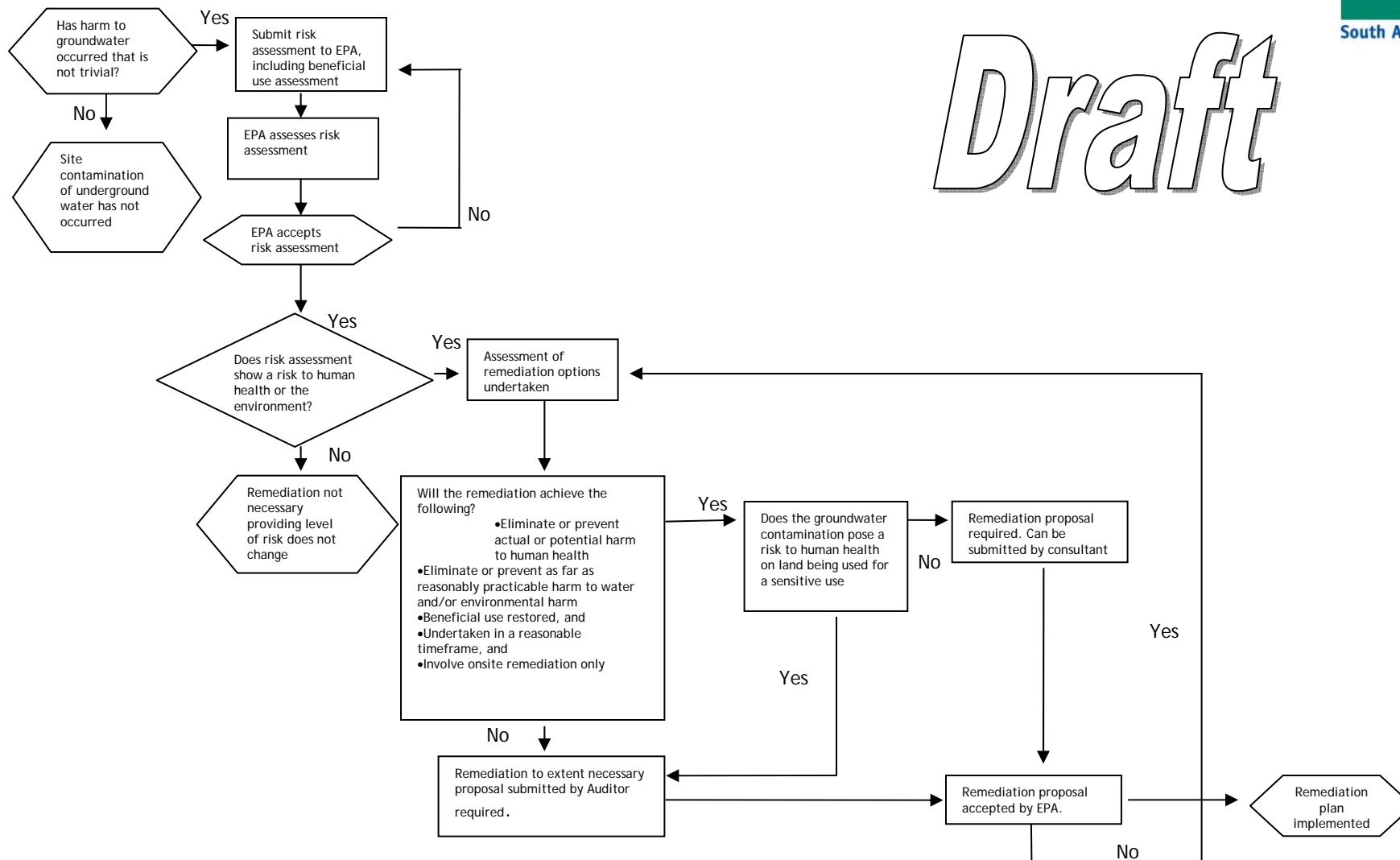


# Assessment of groundwater

- Assessment guidelines are currently being drafted
- Establishing a risk based system
- Guideline will be providing a framework for the assessment
- Wont be prescribing methodologies
- Follows principles of the NEPM

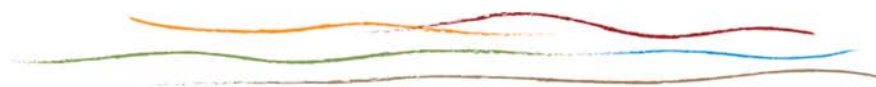


*Draft*



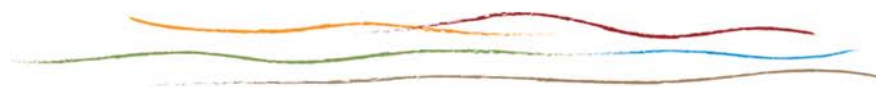
# Remediation process

- *Remediate a site means to **treat, contain, remove or manage** chemical substances on or below the surface of the site so as to-*
- *Eliminate or prevent actual or potential harm to the health or safety of human beings that is not trivial taking into account current or proposed land uses; and*
- ***Eliminate or prevent as far as reasonably practicable -***
  - ***Actual or potential harm to water that is not trivial; and***
  - *Any other actual or potential environmental harm that is not trivial, taking into account current or proposed land uses.*



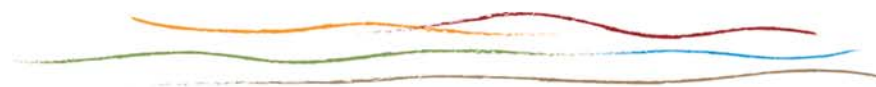
# Remediation guideline

- Currently being drafted concurrently with assessment guideline
- Remediation will depend upon the risk to human health and/or the environment
- Remediation does not only involve active measures
- Monitoring may be an appropriate form of remediation at some sites
- Will include reporting requirements
- Two types of remediation submissions



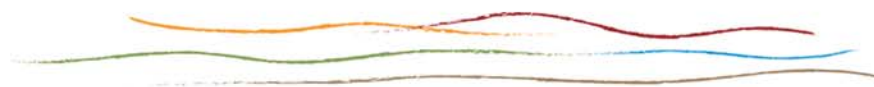
# Remediation proposal

- Submitted by an environmental consultant
- Remediation will achieve the following
  - Eliminate or prevent actual or potential harm to human health
  - Eliminate or prevent as far as reasonably practicable harm to water and/or environmental harm
  - Beneficial use is restored and
  - Undertaken in a reasonable time frame and
  - Involves on site remediation only



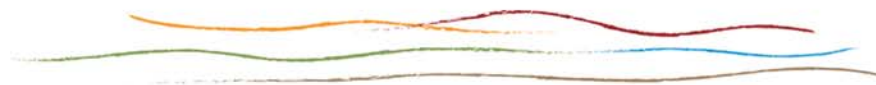
## RTEN process

- Similar to Vic EPA's CUTEP process
- Can only be submitted by an Auditor
- Auditor should ensure that all assessment has adequately considered:
  - The nature and extent of the site contamination
  - The risk of the site contamination on human health and/or the environment
- Auditor will determine practicability of remediation taking into account
  - Technical
  - Logistical
  - Financial



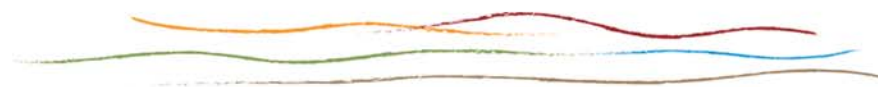
# Groundwater restriction and prohibition

- EPA will be able to restrict or prohibit the taking of groundwater under Section 103S of the EP Act
- EPA must be satisfied that contamination will affect or threaten water and that action is required to prevent actual or potential harm to **human health** or safety
- Zones will affect the community's right to use the water
- The details will be recorded on all parcels of land in the zone
- Zones are able to be removed



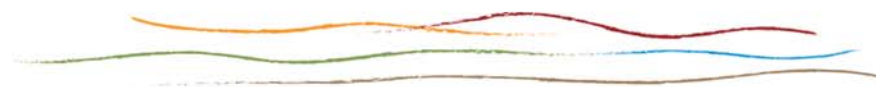
# Groundwater modelling and the EPA

- EPA envisages groundwater models will be used by consultants as a resource to establish a restriction or a prohibition zone
- EPA needs to ensure that groundwater modelling is used appropriately and that models are of the highest standard
- Level of modelling undertaken needs to reflect the risk and be appropriate for the site



# Groundwater modelling guidelines

- Envisage that modelling will be one method for the establishment of restriction and prohibition zones
- Guideline has been scoped and drafting will commence in the near future
- Using existing guidelines to complement EPA's requirements



## Finally

- Developing guidelines and information sheets to provide guidance to assist in the assessment and remediation of groundwater
- The guidelines are consistent with the Water Quality EPP and other EPA tools
- Site contamination of groundwater is applicable to all sites including sites that hold an EPA licence.

