

# Source Protection Risk Management

Overview of Technical Experts Report to Minister of  
Environment November 2004 for ENGO Forum on Source  
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# Technical Experts Report Risk Management

- TEC recommends three levels of risk (apart from no risk):
  - Significant Risk
  - Moderate Risk
  - Low Risk
- For Significant risks, TEC suggests the risk management goal should be “Mandatory Risk Reduction” to immediately take action to substantially reduce the risk

# Risk Management cont'd

- For Moderate Risks, the risk management goal should be “Mandatory Risk Management”, to not permit the risk to increase and to initiate plans to reduce the risk as opportunities arise
- For Low Risks, the risk management goal of “Mandatory Risk Surveillance” should be to monitor risk and make plans to prevent an increase in risk

# Outcome based approach

- While the risk management goals will be mandatory depending on the risk category, the TEC recommends that the province develop an outcome based approach that requires local development of options to meet the targets.
- There may be a variety of measures or tools that could be used to meet the required outcome

# Existing and Future

- In addition to dealing with existing risks, TEC advises that source protection plans and management actions should be implemented to prevent, as much as possible, the establishment of future risks to drinking water sources.
- The TEC recommends that the province develop guidelines on how Significant Risks should be managed.

# Risk Management Approaches

- The TEC report outlines Threats of Provincial Concern (which MUST be assessed within vulnerable areas - well head protection areas, intake protection zones, highly vulnerable aquifers and major recharge areas)
- Examples and ranges of possible risk management approaches for the threats of provincial concern are outlined by TEC in table 6.2 to that report.

# Risk Management Zones

- The TEC report re-classifies vulnerable areas in table 6.3 into risk management zones to provide illustrative guidance on risk management.
- For example, suggested Wellhead related risk management zones include a 100 metre pathogen prohibition zone where pathogen sources are prohibited around the well head; a 2 year pathogen concern zone where pathogen sources are minimized.

# Risk Management Zones cont'd

- The suggested wellhead risk management zones also include a 5 year DNAPL restriction zone to significantly restrict DNAPL's in the area and curb new DNAPL sources; a 5 year Contaminant concern zone to reduce risk from non-DNAPL contaminants and a 25 year contaminant concern zone to evaluate long term historical threats and existing threats and consider restriction of new threats.

# Other Groundwater areas

- TEC also suggests a High Aquifer Vulnerability zone and a High Recharge Area risk management zone, as well as two types of Intake Protection Zones and other water quantity related areas such as High Recharge Areas.
- See Table 6.3 in the TEC report for better detail on these and other suggested risk management zones and suggestions regarding technical methodologies to define each zone and potential management measures for each.