



# **Tier 1 Soil and Groundwater Guidelines in Alberta**

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# Outline

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- Contaminated site management policies
- Guideline document overview
- Changes to guidelines
- Next steps



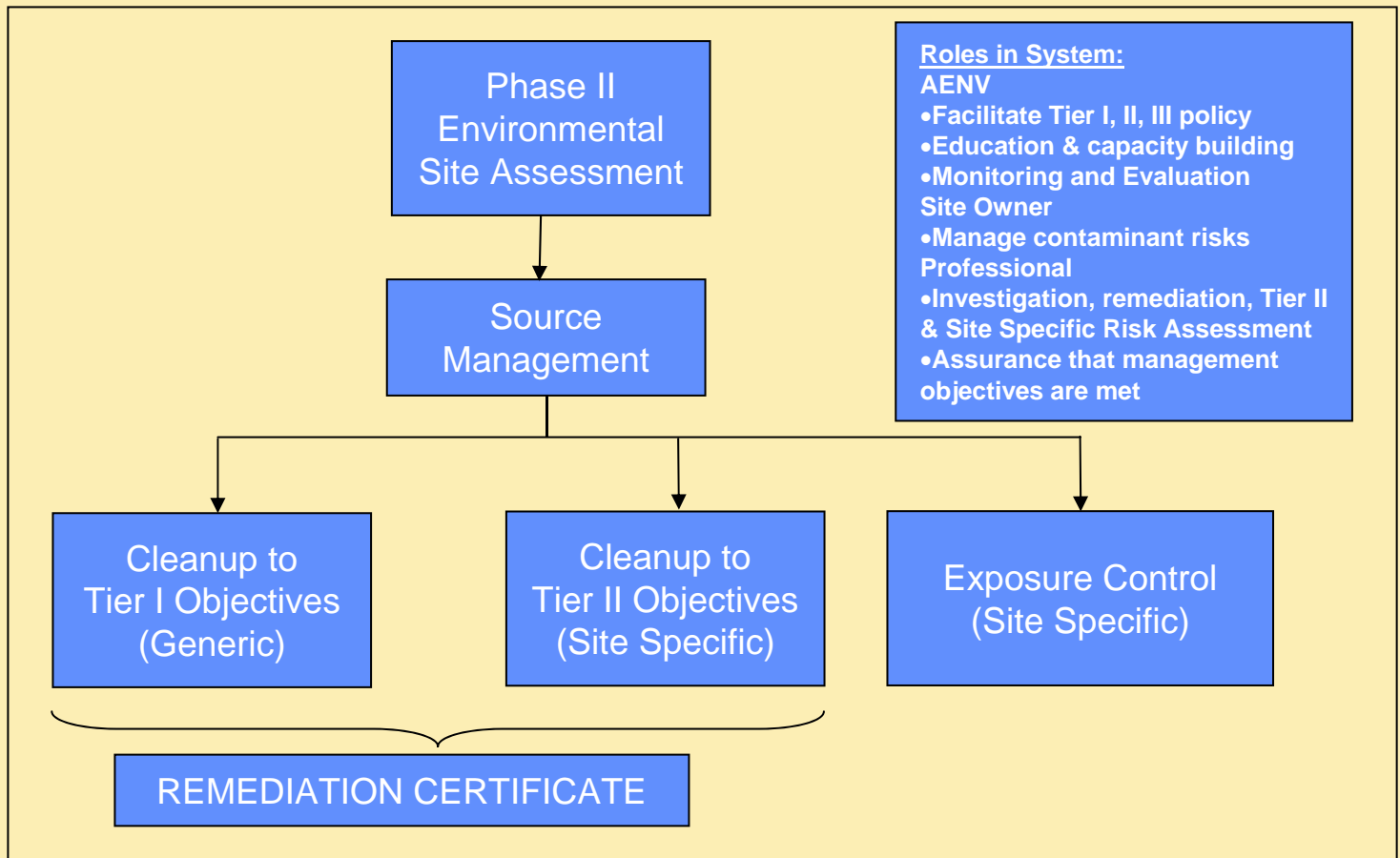
# Contaminated Site Management *-Policy*

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- Pollution prevention
- Not “pollute-up-to” guidelines
- Source control
- Full delineation
- Protection for cross-media transfer
- Protection of water resources

# Contaminated Sites Management

## *-Policy*

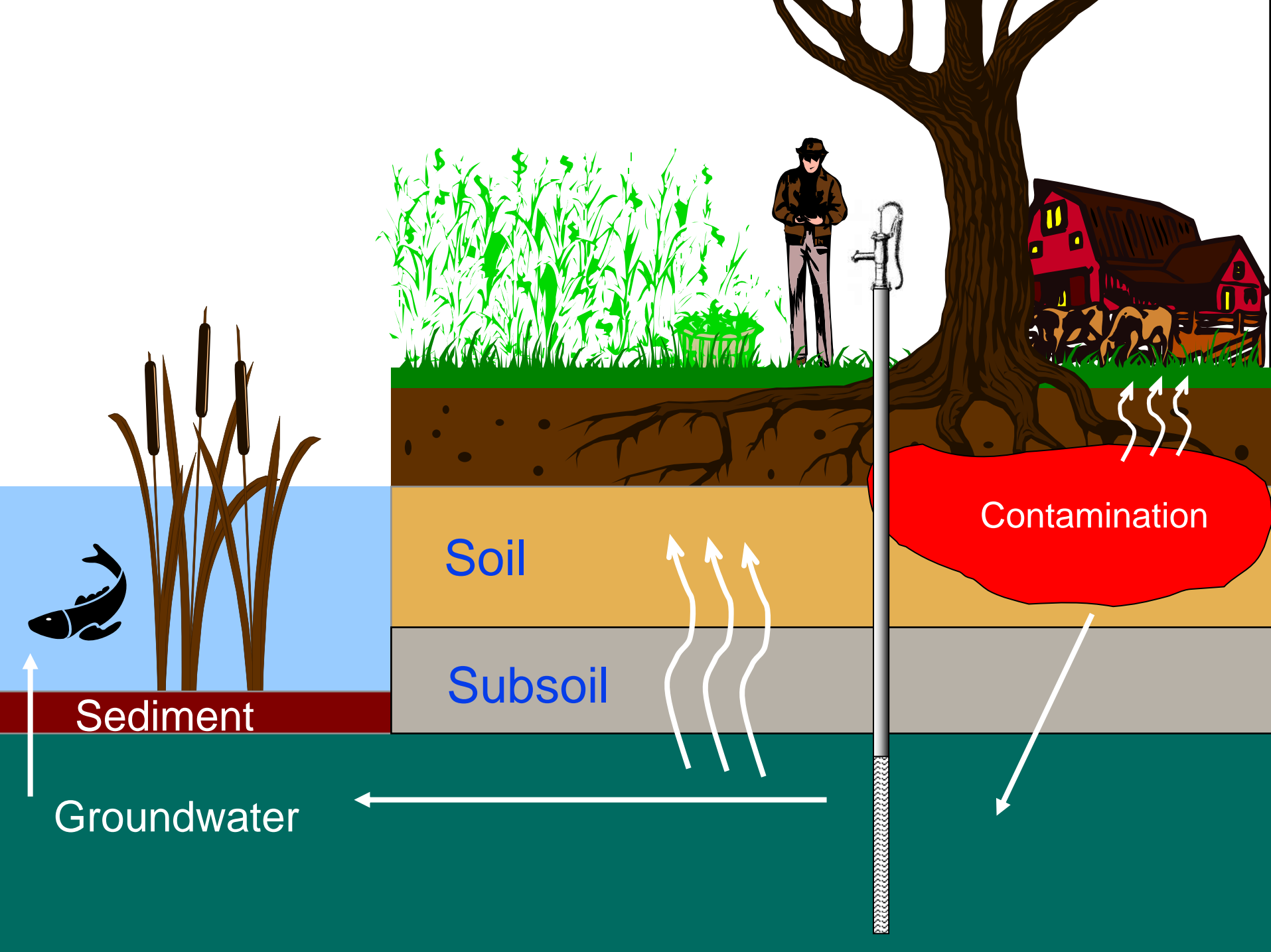




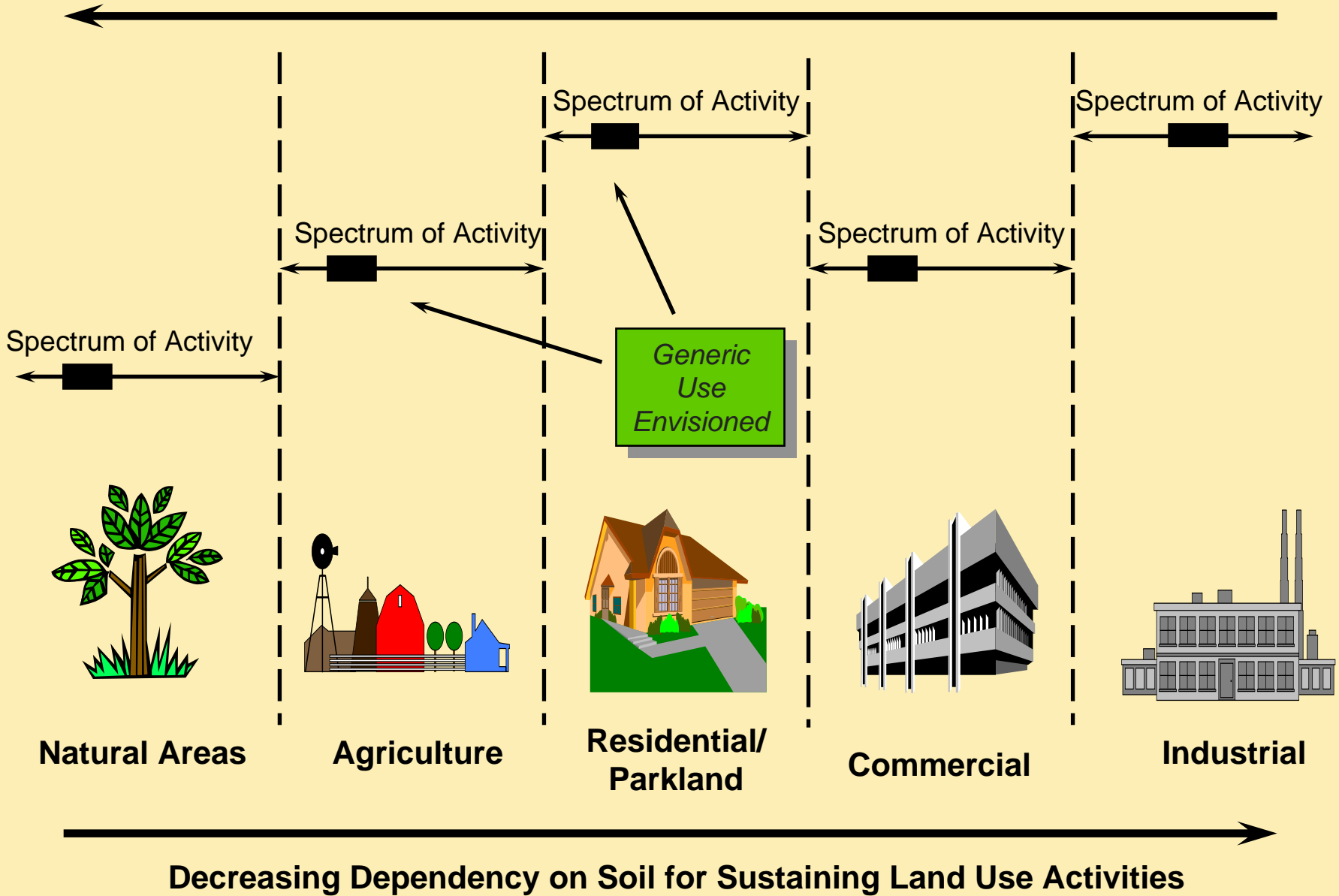
# Tier 1 Guidelines - *Contents*

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- Scientific basis
  - Full documentation of calculations and data inputs
- User guidance
  - Information requirements
  - Tier 2 triggers
- Guideline values...



# Increasing Sensitivity to Contamination







# Consolidation of old guideline documents

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## Supercedes:

- Alberta Soil and Water Quality Guidelines for Hydrocarbons at Upstream Oil and Gas Sites
- Risk Management Guidelines for Petroleum Storage Tank Sites
- Alberta Tier 1 Criteria for Contaminated Soil Assessment and Remediation





# Other Guideline Sources for Tier 1

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- CCME Canadian Environmental Quality Guidelines
- Salt Contamination Assessment and Remediation Guidelines
- Soil Quality Guidelines for Barite
- Canadian NORM Guidelines



# What's New?

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- Site specific modifications moved to Tier 2
  - No impact on closure options
- Updated to latest CCME protocols
  - CCME
  - CWS PHC
- Alberta-specific adjustments
  - Cancer risk  $10^{-5}$
  - Recharge rates
  - Natural areas land use



# What's New?

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- Human health guidelines for chlorinated organics and pesticides
  - Based on Health Canada and U.S.EPA toxicity reference values
- CCME water quality guidelines



# What's next?

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- Public review period complete
- Comments received from 33 agencies/individuals
- Comments under review
- Planning to finalize this fall