

# A Forward-Thinking Approach to Contaminated Site Management

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# Topics of Discussion

- *Setting the Stage*: Contaminated Sites Management Program and Regulatory Context
- *The Journey*: Phases of the Contaminated Sites Management Program
- *A New Approach*: Development of the Guidance Document and Action Plan(s)
- *Case Studies*
- *Lessons Learned*
- *Questions*



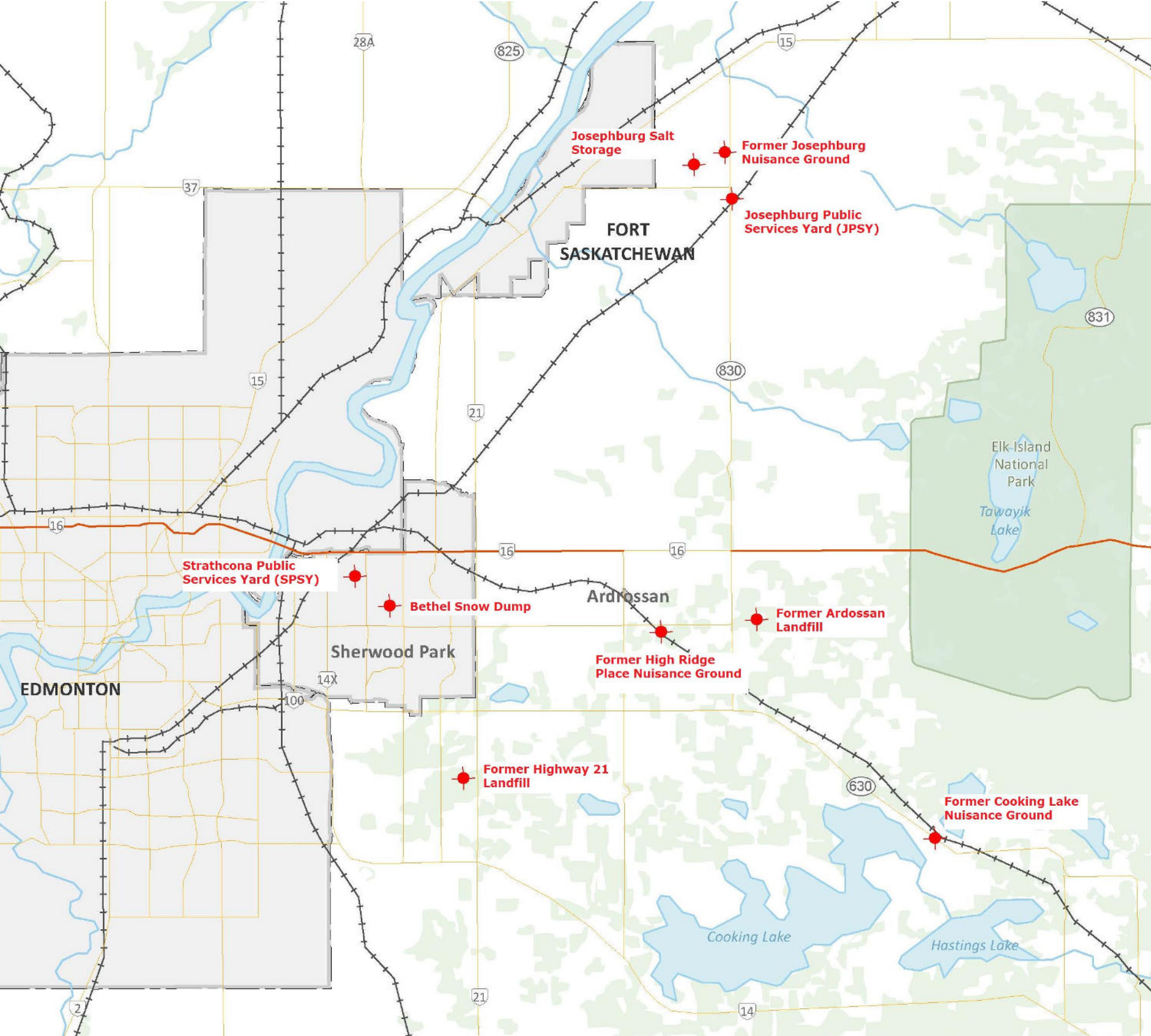
# Setting the Stage

## Contaminated Sites Management Program (CSMP)

- The CSMP actively manages the confirmed contaminated sites owned by the County and includes 9 sites:
  - 5 decommissioned landfills/nuisance grounds
  - 2 active service yards
  - 1 active storage yard
  - 1 historic snow dump
- Ongoing work includes environmental monitoring, environmental site management, and remediation

<https://www.strathcona.ca/agriculture-environment/environmental-initiatives/contaminated-sites-management-program/>



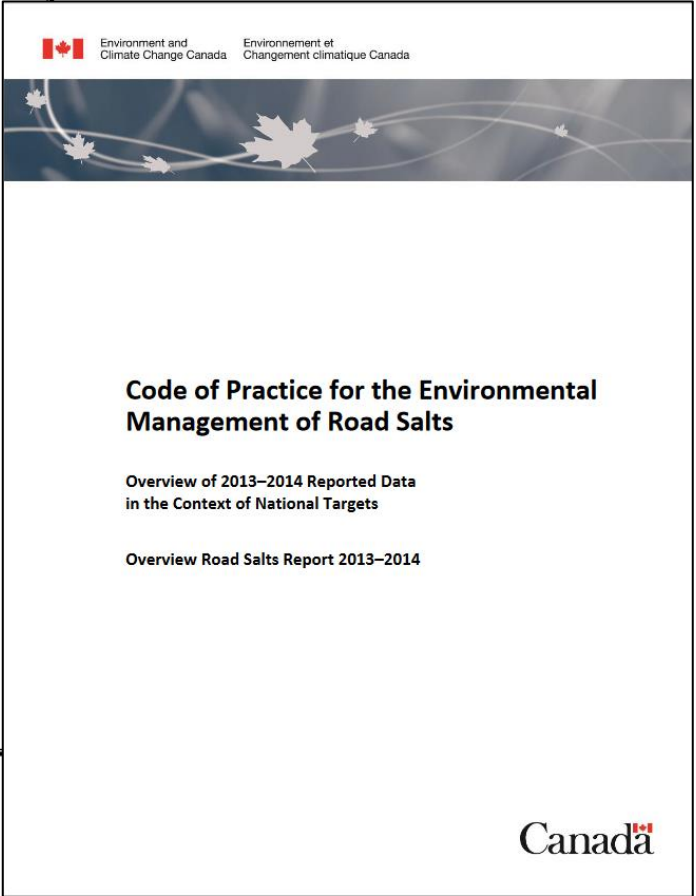
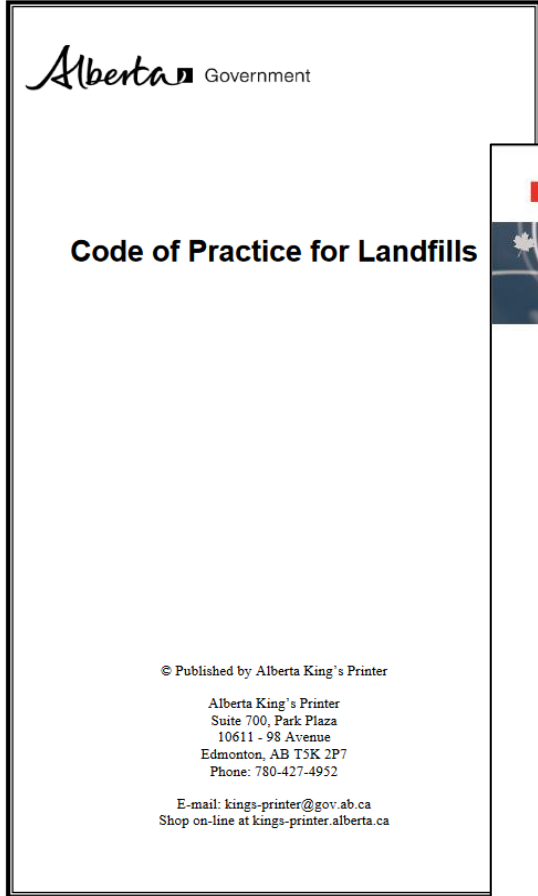
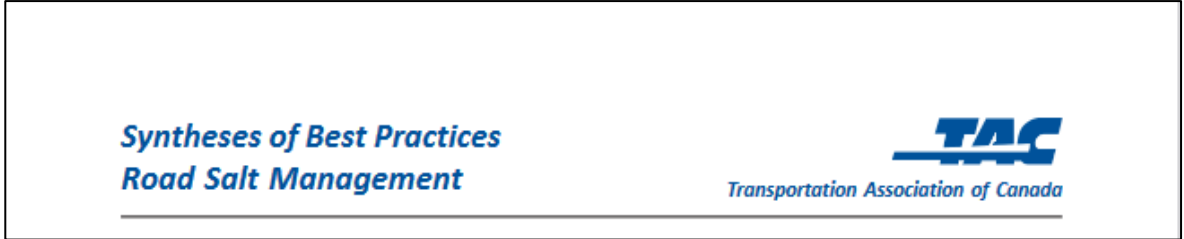
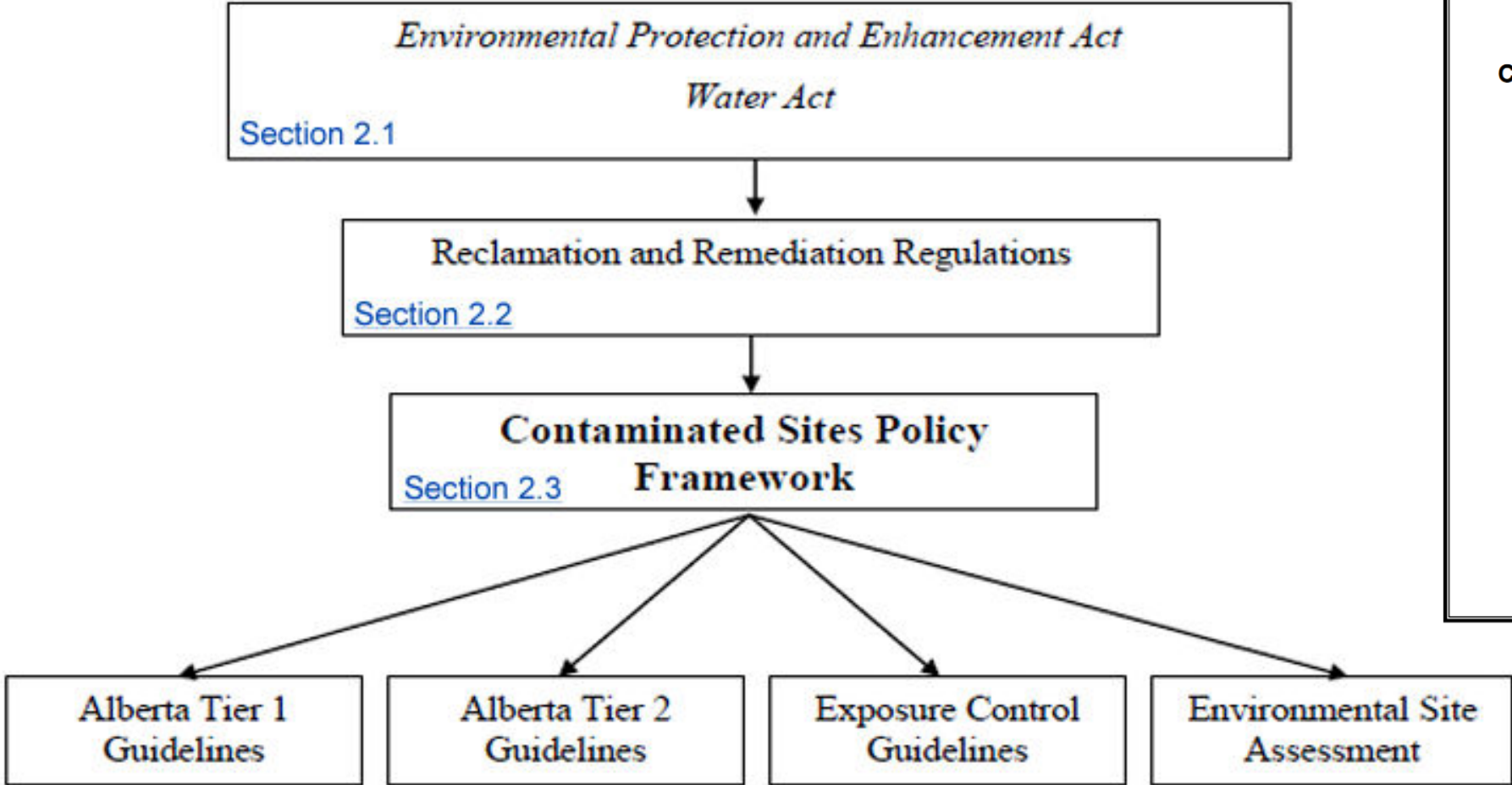


# Site Locations



# Setting the Stage

## Regulatory Context





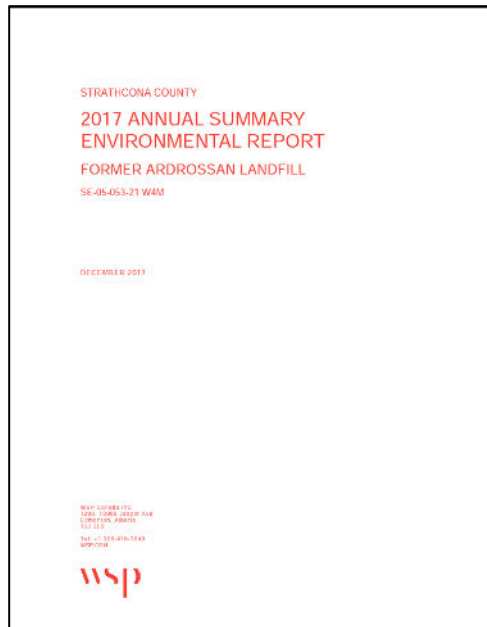
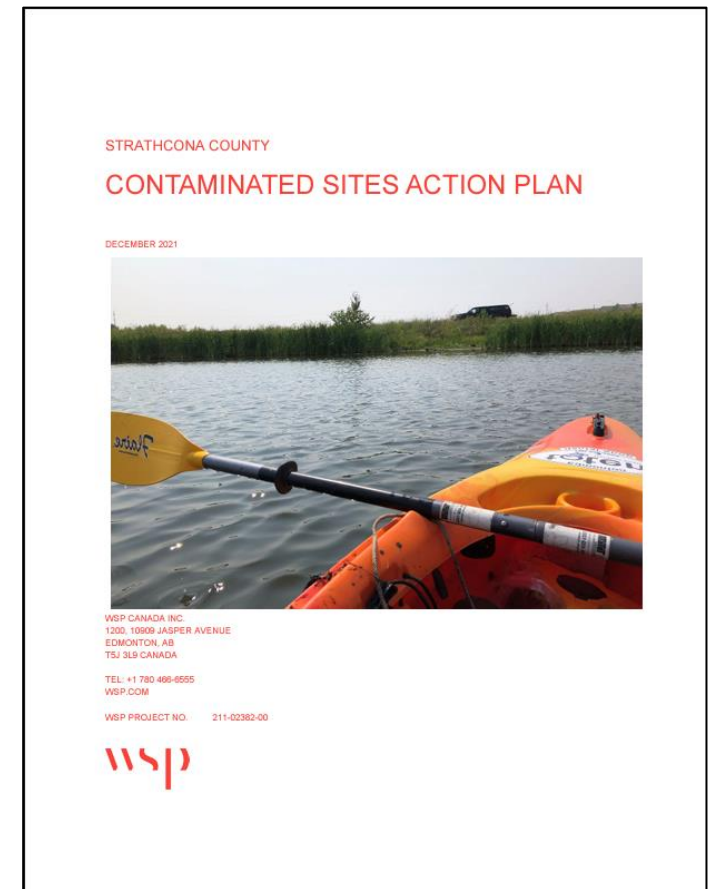
# The Journey

## Late 1990s-2015

*Initial investigations*  
*Annual monitoring*  
*Historic Program*

## 2019-2021

*Phases 1, 2, 3: annual monitoring program*  
*Phases 4, 5, 6: outstanding recommendations from the 2016-2018 program*  
*Phase 7: other related environmental work*  
*Catching Up*



## Learning and Understanding

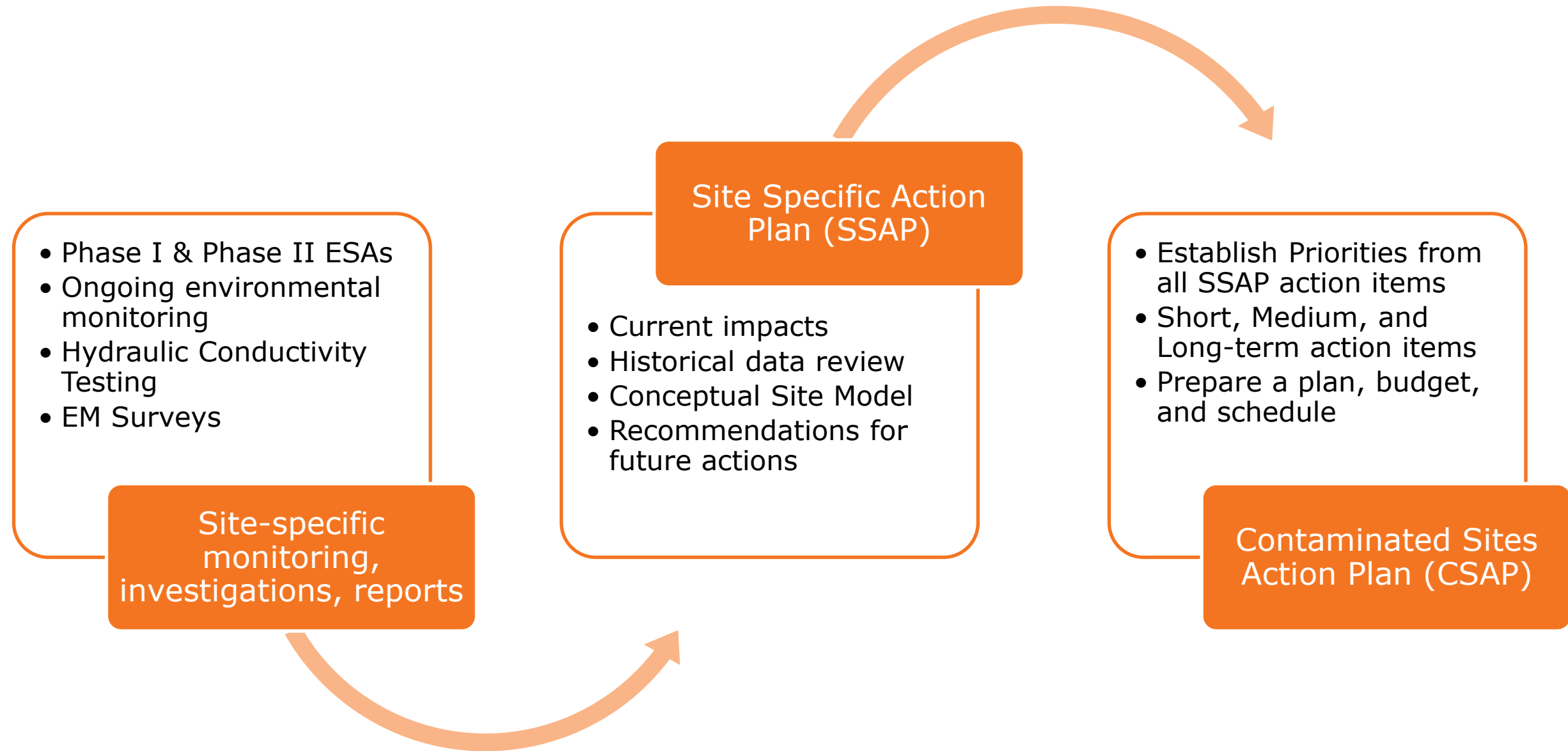
## 2016-2018

## Holistic and Proactive

## 2022-2024



# A New Approach



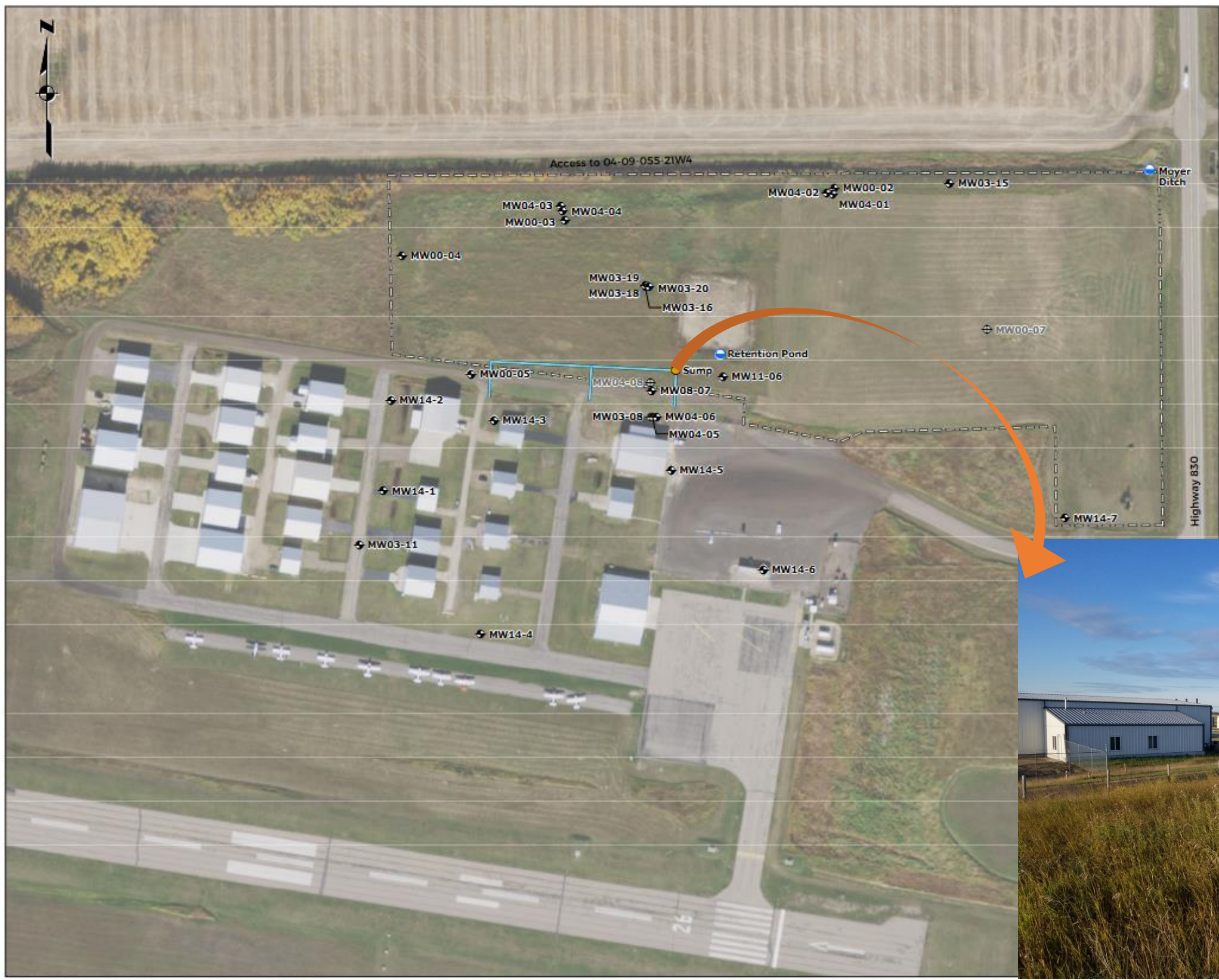
# Case Studies

- *Josephburg Nuisance Ground:*  
Groundwater Interceptor Trench
- *Strathcona Public Service Yard:*  
Remedial Options Assessment
- *Bethel Snow Dump:*  
Risk Management Plan





# Josephburg Nuisance Ground



# Josephburg Nuisance Ground

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Site-specific monitoring,  
investigations, reports

Phase I ESA

Phase II ESA

Annual Monitoring Program

Site Specific Action Plan  
(SSAP)

- CoPC
  - Primary: Salinity, Dissolved Hydrocarbons
  - Secondary: Dissolved Metals – assessed with no impacts confirmed
- Ongoing groundwater monitoring from 2000 - present
- Remediation through operation of the interceptor trench system

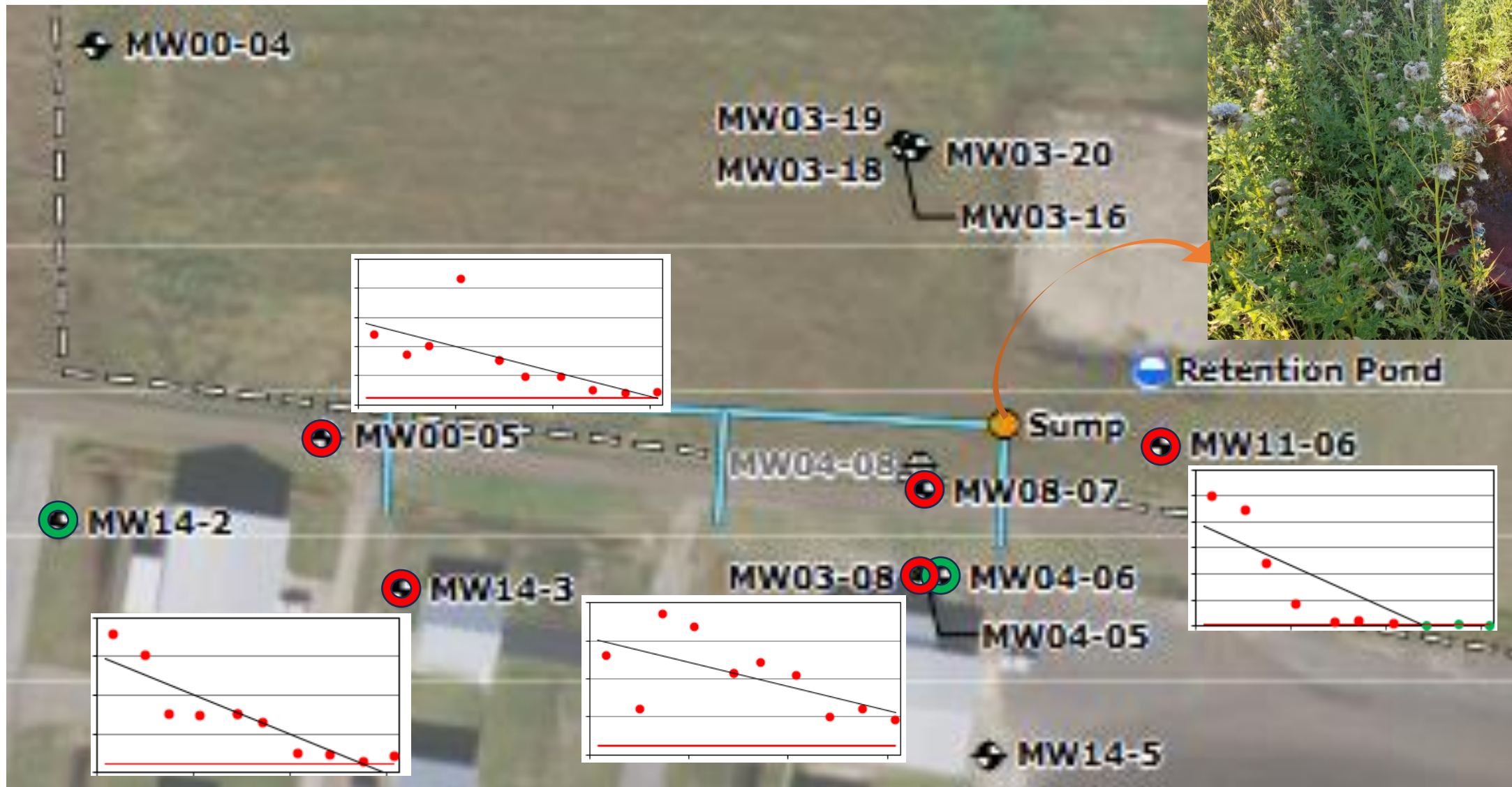
Contaminated Sites  
Action Plan (CSAP)

- **Priority 2.** Complete and manage the monthly sump pumping program every second year
- **Priority 2.** EM survey
- **Priority 3.** Risk Management Plan





# Groundwater Interceptor Trench





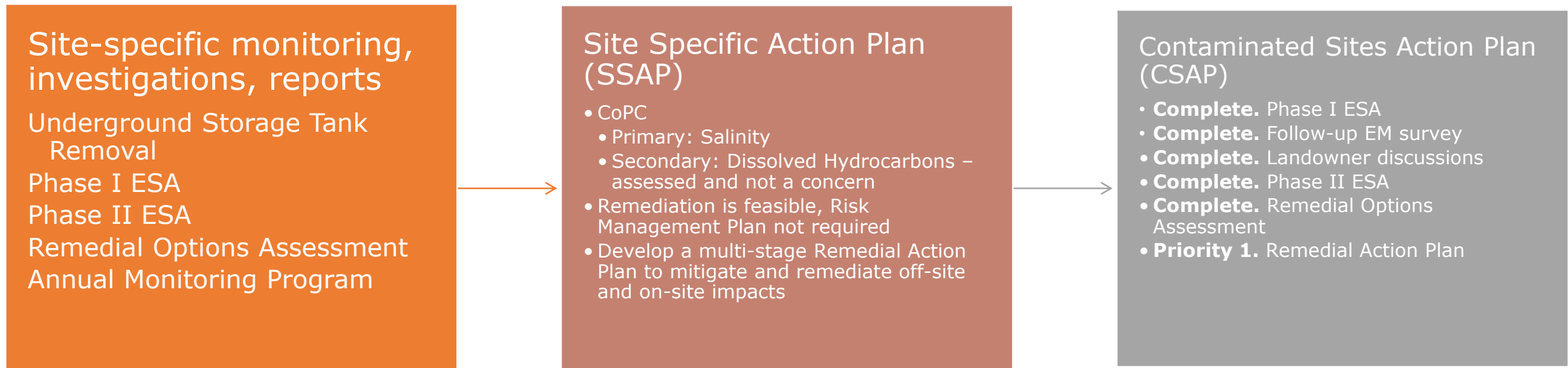
# Strathcona Public Service Yard



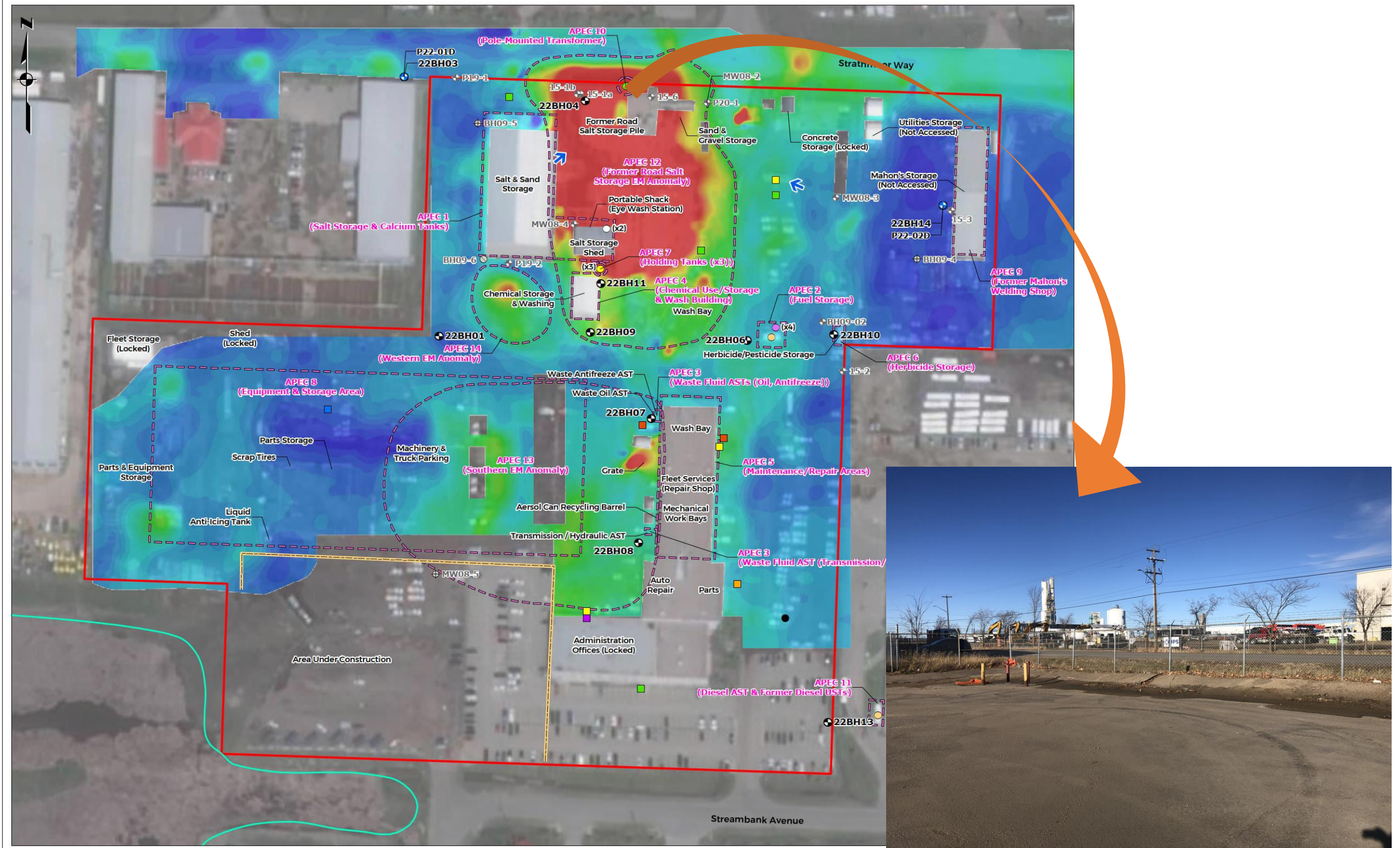


# Strathcona Public Services Yard

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# Remedial Options Assessment





# Bethel Snow Dump



# Bethel Snow Dump

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Site-specific monitoring,  
investigations, reports  
Stockpile Characterization  
ESA  
Phase I ESA  
SST and RMP  
Aquatic Survey  
Annual Monitoring Program

Site Specific Action Plan  
(SSAP)

- CoPC
  - Primary: Salinity
- Ongoing groundwater and surface water monitoring from 2016 - present

Contaminated Sites  
Action Plan (CSAP)

- **Complete.** Phase I  
ESA
- **Priority 2.** Follow-up  
EM survey





# Risk Management Plan



# Lessons Learned

## *Successes:*

Collaboration

Funding

Clear roadmap

## *Challenges:*

Shifting expectations

Regulator requests

Unknown conditions





Thank you!

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