

## Land Use – Municipal Works Yard

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**Scenario:** A municipal works yard is located partially within the IPZ-2 of a great lakes intake. The vulnerability assessment on this intake has identified a vulnerability score within IPZ-2 as 6.3. The yard includes a garage for vehicle repairs, fuel storage facilities and salt storage. There is a large paved parking lot in the yard.

### **Case Study preparation**

A) Identify any of the 21 Activities which are applicable to this site

|   |  |   |  |
|---|--|---|--|
|   | Operation of Waste Disposal Site                                       |   | Sewage treatment facilities  |
| x | Handling and storage of road salt                                      | x | Application of road salt   |
| x | Storage of snow  | x | Handling and storage of fuel   |
|   | Storage of agricultural source material                                |   | Management of agricultural source material   |
|   | Application of agricultural source material to land                    |   | Handling and storage of non-agricultural material  |
|   | Application of non-agricultural source material                        |   | Handling and storage of organic solvents   |
|   | Use of land for livestock grazing or outdoor confinement area or yard  | x | Handling and storage of dense non-aqueous phase liquid (DNAPL's)   |
|   | Handling and storage of fertilizer                                     |   | Application of commercial fertilizer   |
| x | Handling and storage of pesticide                                      | x | Application of pesticide   |
|   | Any activity which reduces the recharge of an aquifer                  |   | Any activity which takes water from an aquifer or surface water body without returning to the same aquifer or surface water body |
|   | Management of runoff that contains chemicals used in de-icing aircraft |   | Other  |

B) Vulnerability

Location: IPZ-2

Vulnerability Score: 6.3 (Great Lake Intake)

### **Case Study 1- Salt Storage**

The storage of Road salt in an IPZ with a vulnerability of 6.3 is a low risk the drinking water source with a risk score of between 42 and 57. The risk depends only slightly on the amount of salt stored with salt storage in excess of 5000 tonnes receiving the highest risk and less than 500 tonnes receiving the lowest score. The risk score is also dependant on whether the storage is protected from precipitation and runoff.

A) Policy Approach – Identify the policy approach(es) that could be applied to this land use/activity

| Policy Approach  | May be Applied To   |                                   |
|--|---------------------|-----------------------------------|
|  | significant threats | Moderate and Low Threats          |
| Education & Outreach Programs  |                     | education                         |
| Incentive Programs   |                     | Federal and provincial Incentives |
| Monitoring Activities  |                     | In compliance                     |
| New or Amended Provincial Instruments (only those to be prescribed)                    |                     |                                   |
| Land Use Planning Approaches (e.g. official plans, zoning by-laws, site plan controls) |                     | x                                 |
| Risk Management Plans (s. 58 of CWA)   |                     |                                   |
| Prohibitions (s. 57 of CWA)  |                     |                                   |
| Restricted Land Uses (s. 59 of CWA)  |                     |                                   |

Others that you might propose :

B) Identify any provincial instruments which may apply to this scenario

**Is there a salt management plan including storage? Need to do research, Check with operator/landowner. Stormwater management. BMPs for all ministries being gathered, need to be revisited.**

C) Proposed Policy – Draft a policy based on one or more of the approaches identified above to address the risk posed in this scenario.

**Not required to write a policy for moderate & low. Policy of celebration.**

D) Consider how the policy might change in a WHPA-B with a vulnerability score of 10. The storage facility is protected from precipitation and runoff and has a capacity of less than 4000 tonnes. The risk is moderate from this facility. Also think about how the policy might apply to a facility which is not protected from precipitation.

**Could prohibit condition. Are there minimum standards? Does committee recommend provincial standards change? Changes to site cannot result in site becoming a significant risk**

## Case Study 2 - Vehicle Repair

The works yard includes a large vehicle storage and repair garage. Bays are included for the storage of tandem axle dump trucks, tractors and small motor equipment. Routine maintenance of the vehicles and equipment are undertaken onsite. Diesel and regular fuel storage is located near the building. An external wash bay is provided with pressure washing facilities. The building is service by a septic system. The lookup tables supplied by the MOE suggest that automotive maintenance and repair facilities may generate wastes or use a number materials which may pose risks to drinking water sources. Some of these are DNAPLs and others are identified as hazardous wastes. The risk scores associated with these chemicals range from 40 to 55 in this IPZ-2 with a vulnerability score of 6.3.

E) Policy Approach – Identify the policy approach(es) that could be applied to this land use/activity

| Policy Approach  | May be Applied To   |   |
|--|---------------------|---|
|  | significant threats | Moderate and Low Threats                |
| Education & Outreach Programs  |                     | Make staff aware of chemical            |
| Incentive Programs   |                     | Hazardous chemical disposal opportunity |
| Monitoring Activities  |                     |   |
| New or Amended Provincial Instruments (only those to be prescribed)                    |                     | Fuel storage existing standards         |
| Land Use Planning Approaches (e.g. official plans, zoning by-laws, site plan controls) |                     | N/A                                     |
| Risk Management Plans (s. 58 of CWA)   |                     |   |
| Prohibitions (s. 57 of CWA)  |                     |   |
| Restricted Land Uses (s. 59 of CWA)  |                     |   |

Others that you might propose:

F) Identify any provincial instruments which may apply to this scenario

**Waste generator a certificate of operation - oil disposal, separation.**

G) Proposed Policy – Draft a policy based on one or more of the approaches identified above to address the risk posed in this scenario.

**Educate building inspectors and agencies. Interagency education of high risk areas. Ensure flexibility, yet be clear and concise.**

H) Consider how the policy might change in a WHPA-B with a vulnerability score of 10. In this area many DNAPLs have a chemical risk score resulting in a moderate risk. One such product is 1,4-Dioxane which is common in automotive coolants. The risk score is 74, however the handling or storage of all DNAPLs in WHPA-B are significant.

**Education and outreach - how is it operated? How will it apply to sites like this. Existing instruments - C of A . Risk Management Plan that ensures meeting C of A. use land use restriction for future activity.**