

Designated Waterfront Area: GLOBAL LEADERSHIP Sustainable Management of Subsurface Materials



WATERFRONToronto

Objective:

Designated Waterfront Area as a
Global leader for sustainable management of
subsurface materials

- Environmental
 - Social
- Economic

It's been or being done



Soil Management Life Cycle

Approvals

Site Investigation

Risk Assessment

“Global” Remediation Strategy

Property Specific Method Statements

Restoration

Bulk Earthworks

Soil Treatment

Mechanical Separation	Soil for Re-use
Soil Washing	
Bioremediation	
Stabilization &/or Thermal	

Successful LOCAL Examples: Bayfront Park Hamilton



Successful LOCAL Examples: HtO Park, Toronto



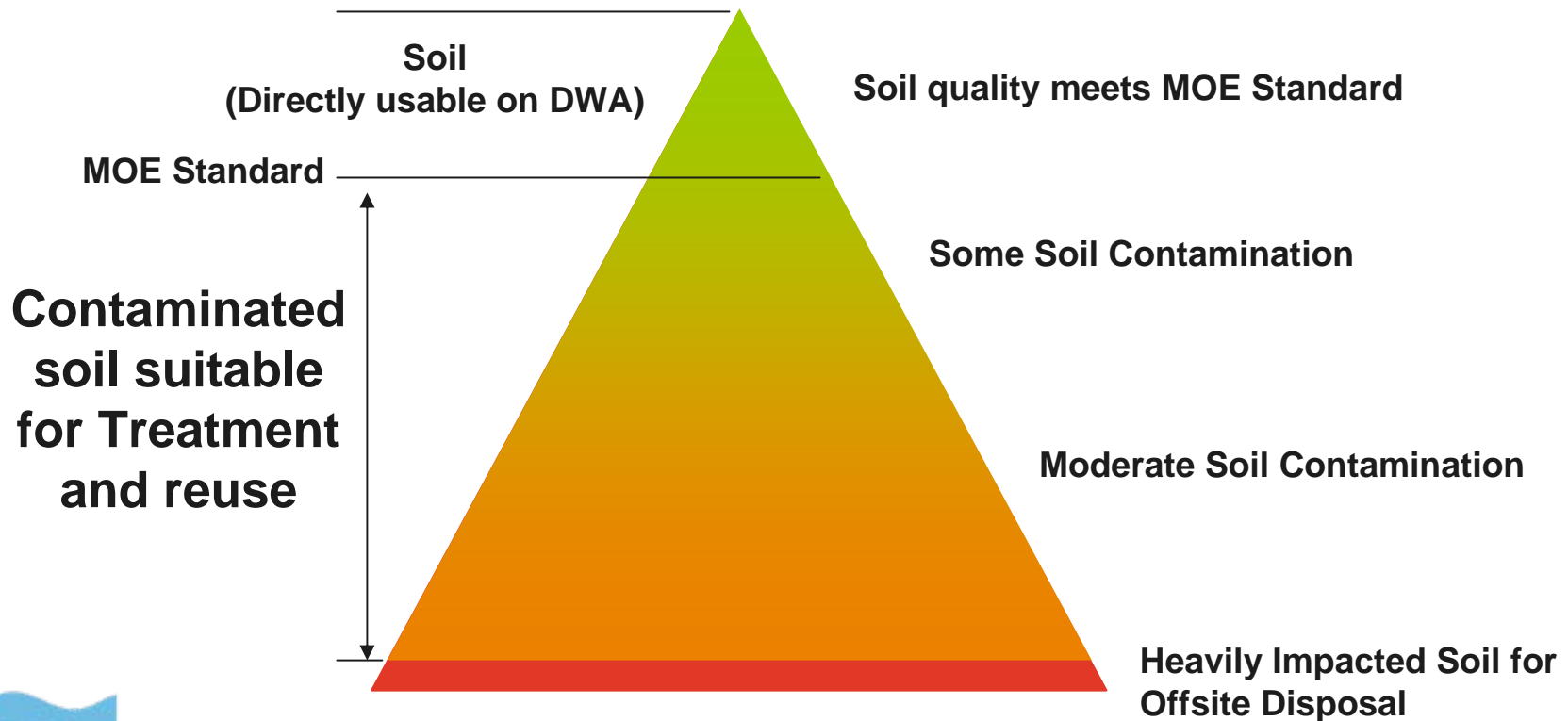
DWA Environmental Background



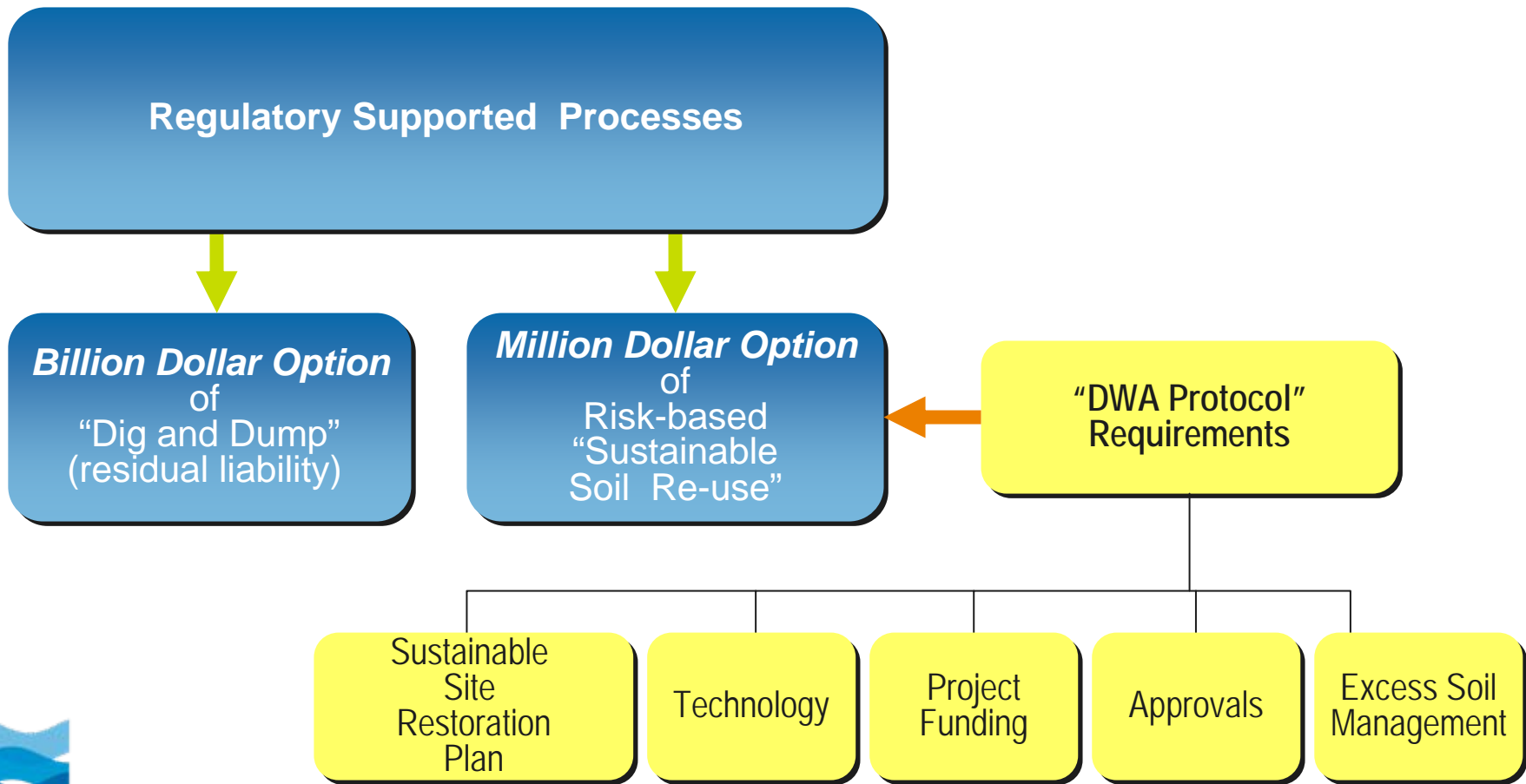
DWA has been “**Man Made**” and is covered by fill materials of variable environmental quality.



Fill Environmental Quality: A question of Manageability?



Options for Management of Subsurface Materials



The Real Environmental Impact

Soil Management Topic*	Dig and Dump	Sustainable soil Management
Soil Mass (tonnes)	7,500,000	2,500,000
Carbon Emissions (tonnes of CO ₂)	77,000	3,500
Road traffic injuries/fatalities (#)**	15 injuries 1 fatality	2 injuries
Truck travel (total km)	75,000,000	3,000,000
Other Impacts	<ul style="list-style-type: none"> -Traffic Congestion -Landfill capacity -Replacement Aggregate -Residual Environmental Liability 	
<ul style="list-style-type: none"> -Costs - Road maintenance -Traffic Accidents 		

* Five-Year Period

** Source: Statistics Canada and Transport Canada, 2003

Current Status of Issues

ISSUE	SOLUTION	OBSTRUCTION
Sustainable Site Restoration Plan	Available	Not Significant
Technology	Available	Not Significant
Project Funding	Available	Not Significant
<i>Approvals</i>	<i>Not Available</i>	<i>Timing / Regulator Agreement</i>
<i>Excess Soil Management</i>	<i>Available</i>	<i>Soil Management Plan and Treatment Facility</i>



Current Needs for Waterfront Development

- Agreement to proceed under Sustainable Management of Subsurface Materials model
- Model needs to be fiscally sustainable
- Operational “DWA Protocol” to implement and maintain Sustainable Management of Subsurface Materials model

Current Issues

- Draft City Soil RA/RM protocol:
 - establish a risk balance
 - establish affordability of proposed risk management options
- Engage MOE on DWA basis
- Requirement to move excess soil

Under WT Leadership – Next Steps

- Establish committed stakeholder (WT, City and Province) task force to develop “DWA protocol”
- Task force to establish Key Principles underlying Risk Management strategy
- Establish “DWA protocol” development and implementation timeframe/schedule
- “DWA protocol” to cover, as a minimum:
 - Agreement to deliver remedy in conformance with regulations and stakeholder requirements:
 - Ability to optimize risk assessment
 - Ability to optimize sustainable “best practices” for site management measures
 - Approval process
 - Operational Soil Management Facility:
 - Sustainable treatment and re-use of excess soils
- DWA mass soil balance
- Solicit political leadership