

BROWNFIELD DEVELOPMENT

TURNING DIRTY DIRT INTO GOLD



MAUL FOSTER ALONGI

“BROWNFIELD”

Property where environmental, economic, and/or community reuse objectives are hindered by real or perceived environmental contamination.

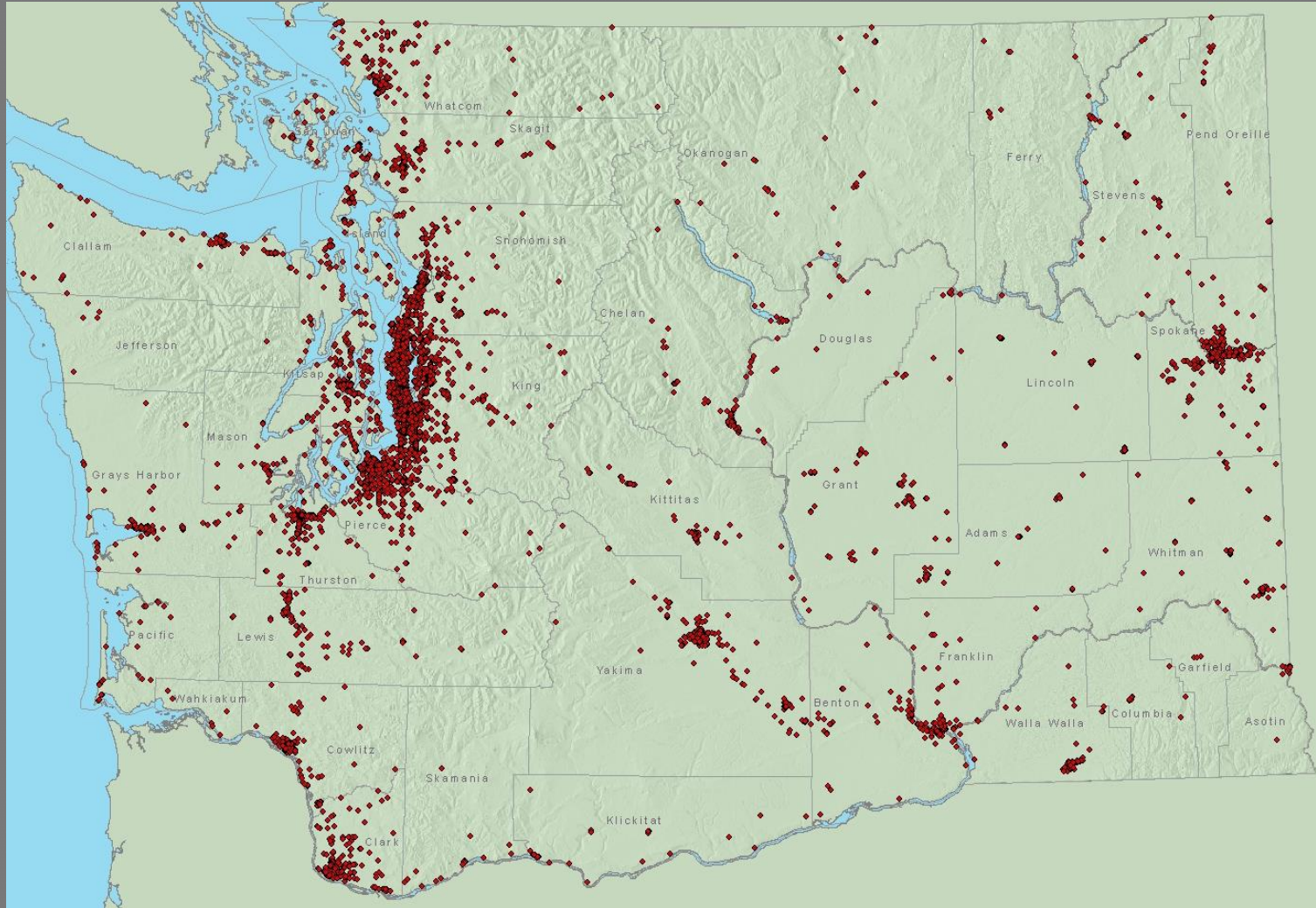


TYPICAL BROWNFIELDS

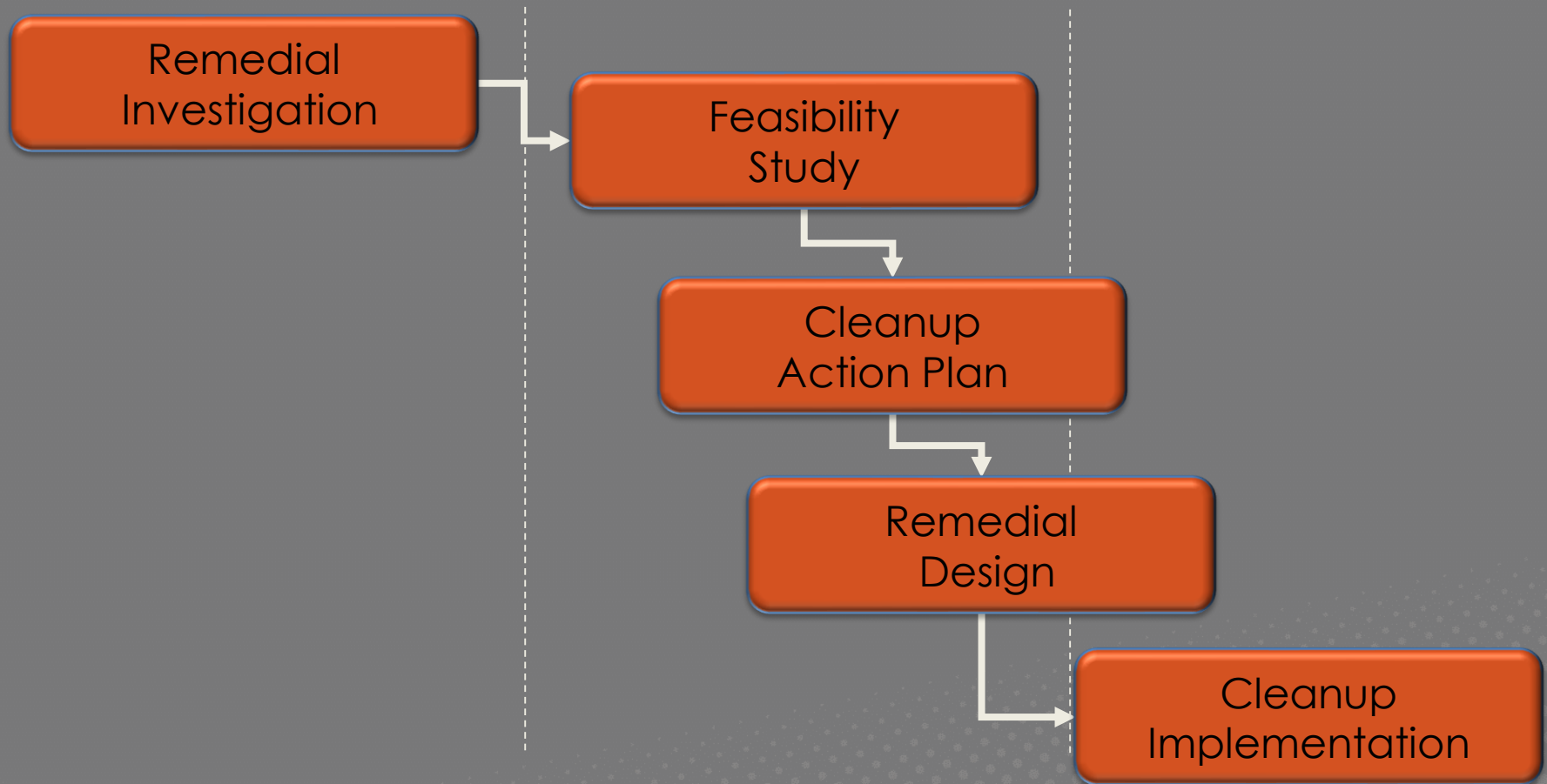
- Abandoned lumber mills
- Gas stations and bulk-fuel facilities
- Rail and transportation
- Landfills
- Light industrial
- Dry cleaners



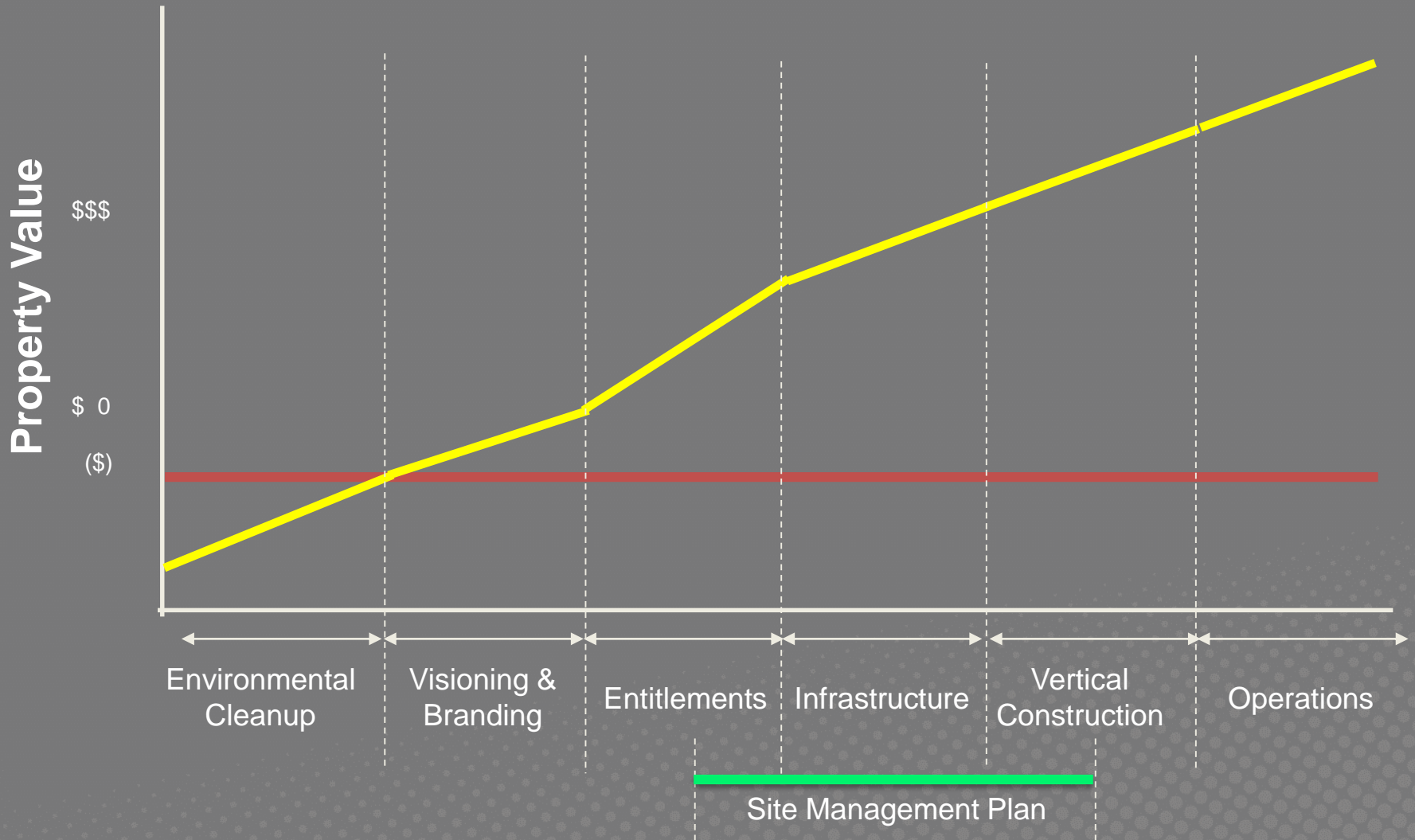
WHERE ARE THE CLEANUPS TAKING PLACE NOW?



TRADITIONAL CLEANUP PROCESS



CREATING PROPERTY VALUE



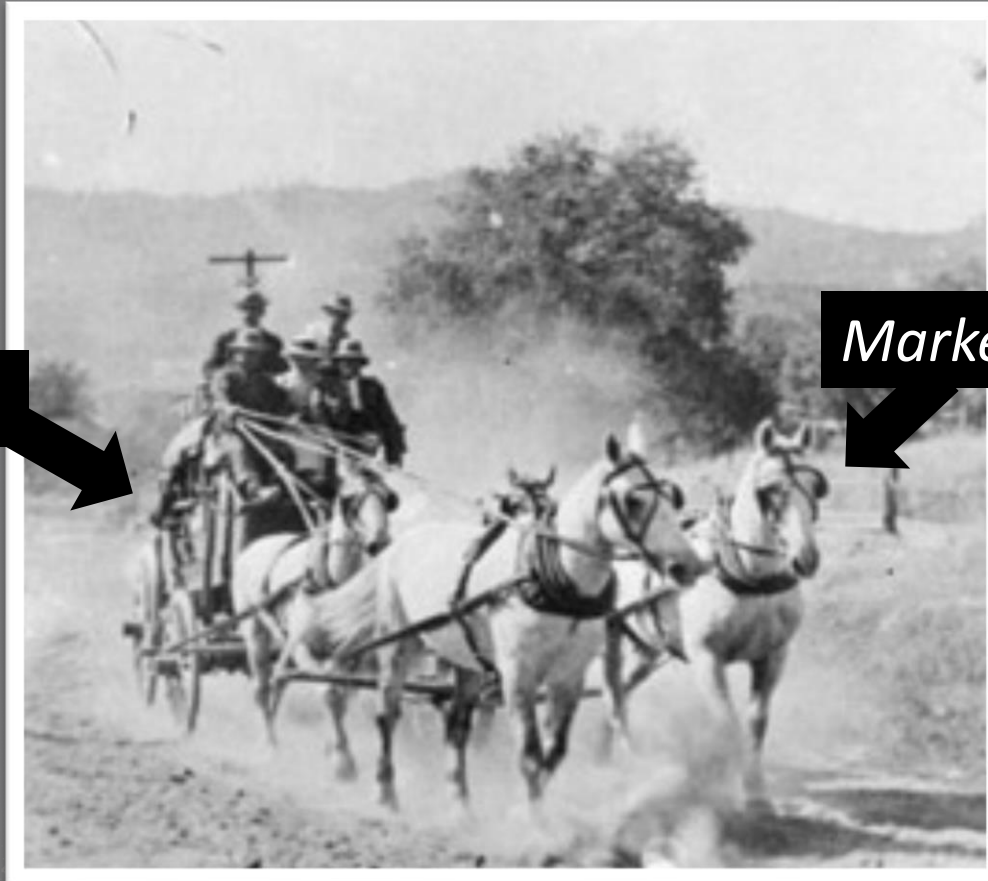
EVOLUTION OF BROWNFIELD POLICY

- Fewer cleanups are regulatory driven
 - Regulations allow for voluntary cleanup



MARKET FORCES

Harnessing real estate market forces to drive cleanups and revitalize communities






Cleanups

Market Forces



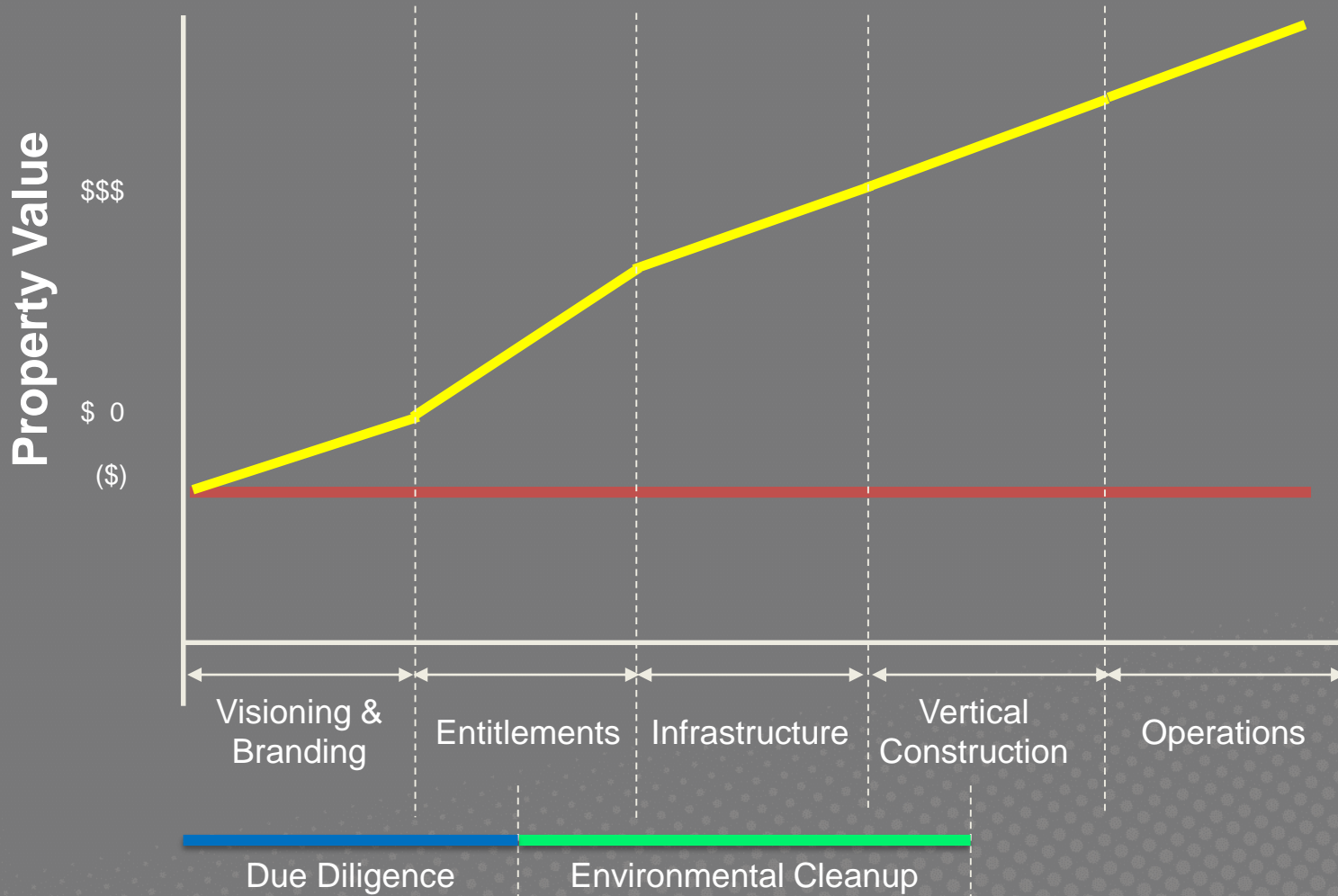
MAUL FOSTER ALONG I

STRATIFICATION OF VALUE

Category	Description	Result
	Market value of redeveloped property far exceeds costs.	Private real estate market likely to complete cleanup and redevelopment.
	Redevelopment revenues close to covering development and environmental costs.	Project not feasible for private market to undertake. Some public investment can make it viable.
	Environmental liability far greater than property value.	Difficult to redevelop. Requires significant public investment or change in market conditions.



MARKET DRIVEN CLEANUP



VANCOUVER WATERFRONT AND T1



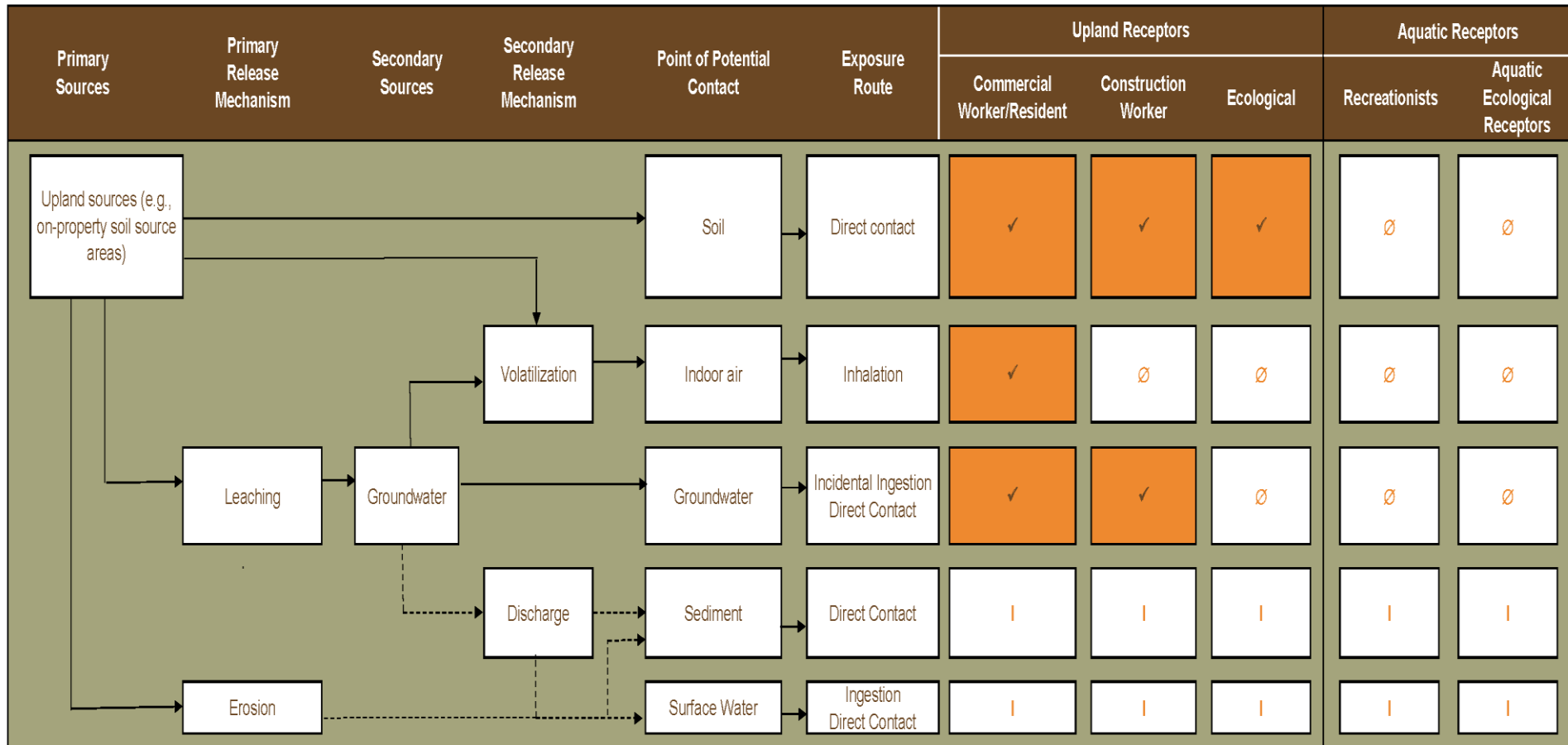
T1 SITE PLAN



SUMMARY OF CONDITIONS

BLOCK	SOIL	SOIL VAPOR	GROUNDWATER	DELINEATION
A	<ul style="list-style-type: none"> • TPH (oil range, diesel range, gas range) • PAHs • Metals (lead and chromium) 	<ul style="list-style-type: none"> • VOCs (naphthalene and 1,3-butadiene) • <C9-C12 aliphatic hydrocarbons 	TPH (oil range), Total metals (arsenic, lead, chromium) - in MW 2	Well characterized
B	<ul style="list-style-type: none"> • Lead • VOCs • Mercury (adjacent to block) 	No exceedances	TPH (oil range), Total metals (arsenic and lead) - in MW 3	Well characterized
C	<ul style="list-style-type: none"> • PAHs and lead- in one boring 	No data	No exceedances - single reconnaissance sample	Limited data
D	<ul style="list-style-type: none"> • Total cadmium - one boring 	No data	No data inside block. Well 100 feet to west had no exceedances	Limited data

CONCEPTUAL SITE MODEL



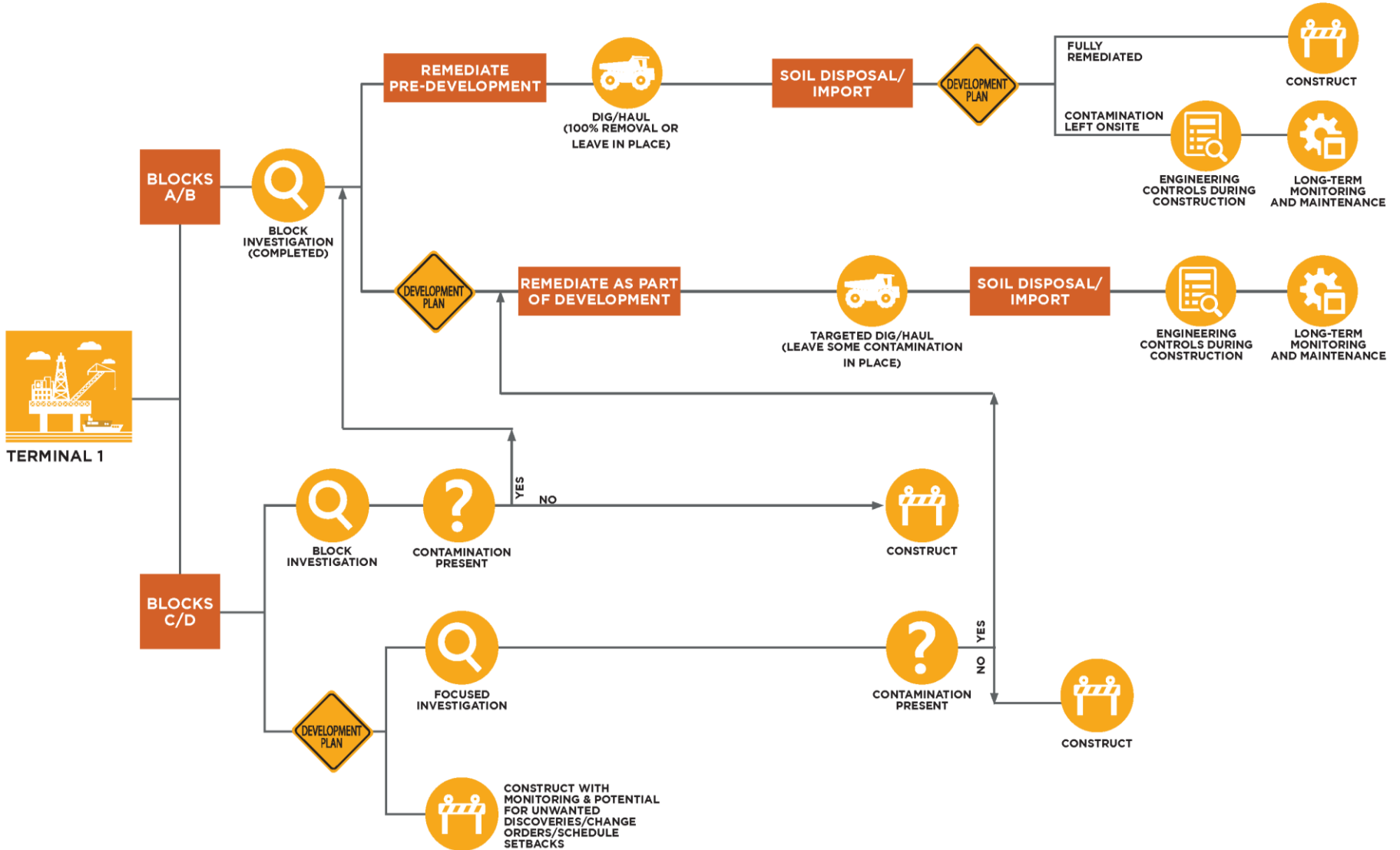
Notes:
 Aquatic ecological receptors include aquatic plants, benthos, fish, and piscivorous birds, shorebirds, and mammals.
 Terrestrial receptors include terrestrial plants, invertebrates, and animals.

- Primary pathway →
- Insignificant pathway - - ->
- Potentially Complete exposure pathway ✓
- Incomplete exposure pathway ∅
- Potential complete but insignificant exposure pathway |

EVALUATION OF MODEL TOXICS CONTROL ACT ADMINISTRATIVE PATHWAYS

Key Considerations	Options	Independent	Voluntary Cleanup Program (VCP)	Agreed Order	Consent Decree
How Critical is Project Schedule?	Cleanup must be completed in under 1 year	Best opportunity .	Possible if Port creates strong alignment with Ecology and expedites technical work	Challenging, but possible if factors all align.	Most challenging, but possible if factors all align.
	Project can accommodate completion of cleanup in more than 1 year	Control of time may not be worth lack of agency approval.	VCP timing should not be limiting factor.	Timing should not be limiting factor, but Port will need to maintain sense of urgency with Ecology.	Timing should not be limiting factor, but Port will need to maintain sense of urgency with Ecology.
What is Level of Risk Tolerance?	High – Willing to accept risk to maximize gain	Reduced time and cost valued.	Reduced time and cost valued.	Value of protections not likely worth additional requirements	Value of protections not likely worth additional requirements
	Medium – Willing to take on a cleanup, but want assurances	Consider obtaining environmental insurance policy.	No Further Action (NFA) letter is commonly accepted assurance.	Provides Ecology review but not legal liability settlement.	Legal protections may not be worth the extra time and effort.
	Low – unwilling to take on a cleanup project without a legal settlement of liability	Does not provide legal liability settlement. Consider obtaining environmental insurance.	Does not provide legal liability settlement. Consider obtaining environmental insurance.	Does not provide legal liability settlement. Consider obtaining environmental insurance.	Provides legal liability settlement, protection from 3 rd party claims.
Is Commercial Financing Needed?	Yes or Not Yet Known	Need to find lenders willing underwrite without NFA. Lack of NFA may cause concern with prospective developers.	NFA widely accepted by underwriters of commercial loans.	Substantial documentation of agency oversight for underwriters to review.	Substantial documentation of agency oversight for underwriters to review.
	No	Ensure capital sources understand the cleanup to be comfortable with risks.	NFA may not be needed, but provides documentation to capital sources for comfort.	Agreed Order may not be needed, but provides documentation to capital sources for comfort.	Consent Decree may not be needed, but provides documentation to capital sources for comfort.
Is the Port Positioning to Sell the Property?	Yes	Lack of agency approval may make buyers wary. Can mitigate concerns through Purchase and Sale Agreement Terms (release, indemnification)	NFA widely accepted as assurance that environmental issues have been resolved. Property value may still be affected by stigma.	Clearly demonstrates regulatory closure.	Clearly demonstrates regulatory closure.
	No	Reduced time and cost valued.	Additional effort may not be warranted.	Additional effort may not be warranted.	Additional effort may not be warranted.
Does the Port Need Grant Funding to Make Project Viable?	Yes	Not eligible for Remedial Action Grants (RAG). As PLP, Port not eligible for USEPA grants for this site.	RAG up to \$600K total project cost. As PLP, Port not eligible for USEPA grants for this site.	Unlimited RAG. As PLP, Port not eligible for USEPA grants for this site.	Unlimited RAG. As PLP, Port not eligible for USEPA grants for this site.
	No	Reduced time and cost valued	Additional effort may not be needed	Additional effort may not be needed	Additional effort may not be needed

TERMINAL 1 – REMEDIATION TIMING ALTERNATIVES



FROM THIS



TO THIS

