Waikane Valley Impact Area Feasibility Study Report

RI/FS Progress

- Work Plans – Dec 2009- Feb 2010
- Field Work - March to May 2010
- Final RI Report – July 2011
- Draft FS Report – September 2011
- Final FS Report – November 2011
- Proposed Plan – December 2011
- Public Meeting – December 2011

Topics

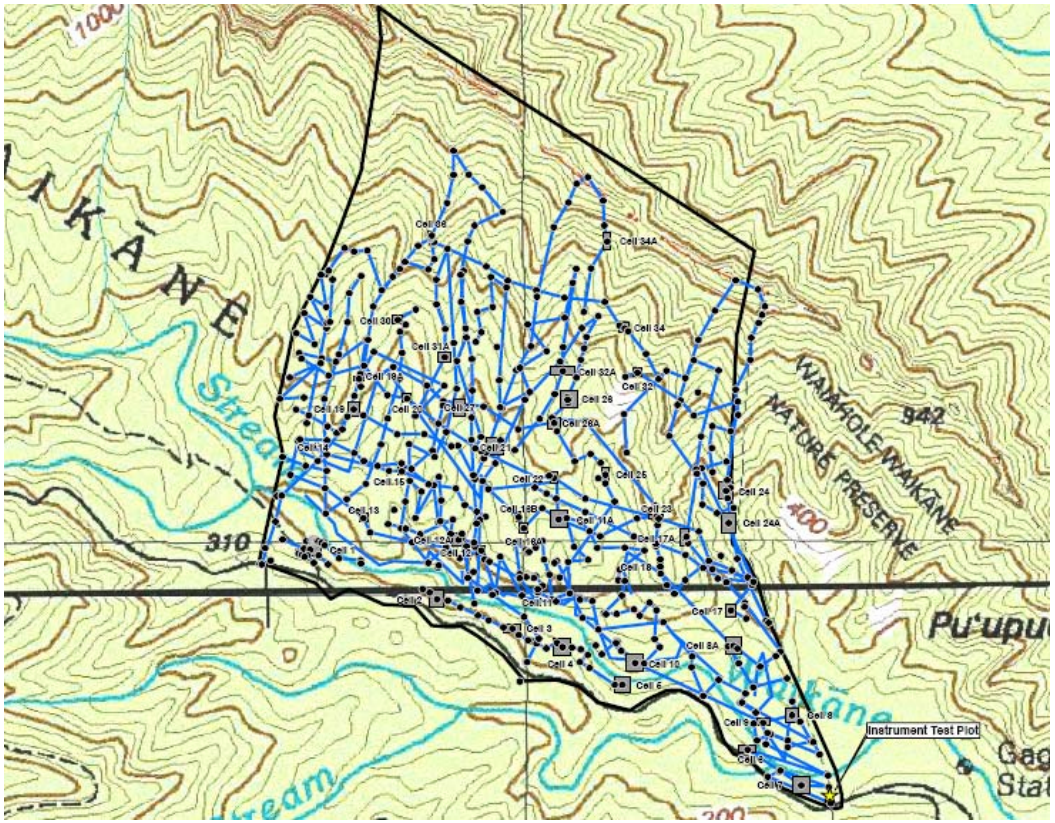
- Review Previous Investigations
- Feasibility Study Process
  - Objectives
  - Alternatives Analyzed
  - Analysis Criteria
  - Comparative Analysis
  - Proposed Alternative

Investigation Results

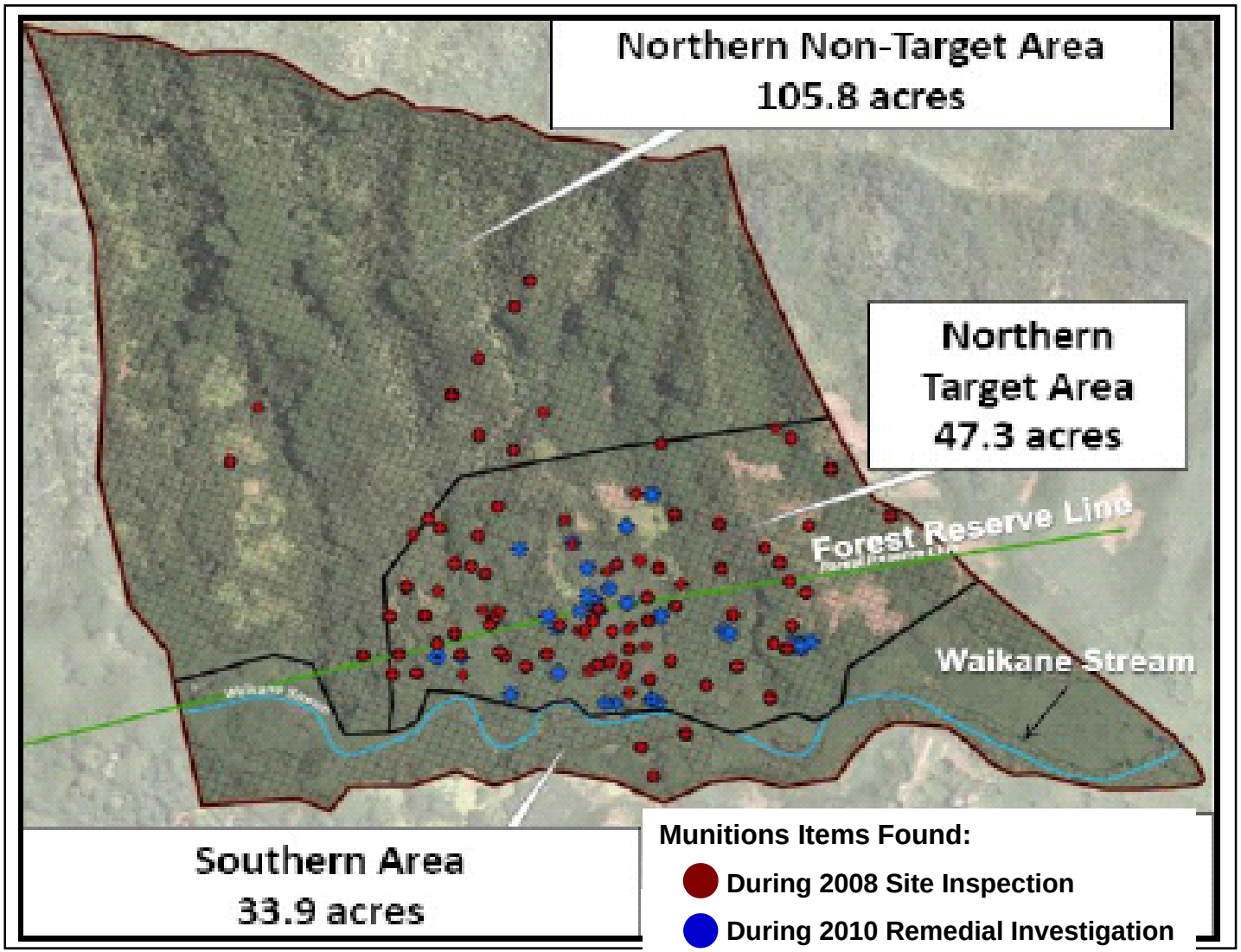
- MC
  - Soil and sediment samples
  - No harm to human health or environment
- MEC
  - Identified 4 targets w/potential MEC
  - Surface Clearance of Targets
  - Subsurface Investigations – No munitions debris below 2 feet

Accessible Lands

- 30 Degree or less easily accessible.
- Greater slopes accessible at judgment of site supervisor.
- What is not accessible to workers is not easily accessible to public.



Areas Defined by RI



Remedial Action Objectives

- Protect human health & environment by reducing MEC hazards.
- Support existing/future land use (agricultural, recreational, & forest reserve).
- Protect & provide access to cultural sites.
- Prevent migration of MEC into accessible areas.

Analysis Criteria

- **Nine EPA Guidelines:**
  - **Threshold Criteria – must be met.**
  - **Balancing Criteria - benefits/drawbacks of each alternative.**
  - **Modifying Criteria – public/stakeholder comments.**

Threshold Criteria

- **Overall protection of human health & the environment**
- **Compliance with applicable, relevant, & appropriate requirements**

Balancing Criteria

- Long-term effectiveness and permanence
- Reduction of mobility, toxicity or volume through treatment
- Short-term effectiveness
- Implementability
- Cost

Alternatives Analyzed

- **Remedial Investigation recommended:**
  - **No action**
  - **Land use controls (LUCs)**
  - **Surface clearance (accessible) with LUCs**
  - **Surface and subsurface clearance (accessible) with LUCs**

Comparative Analysis

- Compare & score each alternative against the others
- Score “1” (least favorable) to “5” (most favorable)
- Highest score best choice

FS Report discusses reasons for relative scoring

Southern Area

Accessible Area: 30.5 acres

Criteria		Remedial Alternative			
		No Action	LUCs	Surface Clearance of Accessible Land with LUCs	Surface and Subsurface Clearance of Accessible Land with LUCs
Threshold Criteria	Overall Protection of Human Health and the Environment	Yes	Yes	Yes	Yes
	Compliance with ARARs	Yes	Yes	Yes	Yes
Balancing Criteria	Long-Term Effectiveness and Permanence	1	2	4	5
	Reduction of Toxicity, Mobility, or Volume	1	1	4	5
	Short-Term Effectiveness	4	4	3	2
	Implementability	5	4	3	2
	Comparative Cost	5	4	2	1
Relative Overall Rating		16	15	16	15
Estimated Cost of Alternative		$0	$1,310,000	**$2,270,000**	$5,060,000

Note: No MEC found

Northern Non-Target Area

Accessible Area: 2.9 acres

Criteria		Remedial Alternative				
		No Action	LUCs	LUCs with Construction Support	Surface Clearance of Accessible Land with LUCs	Surface and Subsurface Clearance of Accessible Land with LUCs
Threshold Criteria	Overall Protection of Human Health and the Environment	Yes	Yes	Yes	Yes	Yes
	Compliance with ARARs	Yes	Yes	Yes	Yes	Yes
Balancing Criteria	Long-Term Effectiveness and Permanence	1	2	2	4	5
	Reduction of Toxicity, Mobility, or Volume	1	1	1	4	5
	Short-Term Effectiveness	4	4	4	3	2
	Implementability	5	4	4	3	2
	Comparative Cost	5	4	3	2	1
Relative Overall Rating		16	15	14	16	15
Estimated Cost of Alternative		$0	$1,510,000	$1,630,000	**$2,300,000**	$2,610,000

Note: No MEC found, small arms target

Northern Target Area

Accessible Area: 17.5 acres

Criteria		Remedial Alternative				
		No Action	LUCs	LUCs with Construction Support	Surface Clearance of Accessible Land with LUCs	Surface and Subsurface Clearance of Accessible Land with LUCs
Threshold Criteria	Overall Protection of Human Health and the Environment	Yes	Yes	Yes	Yes	Yes
	Compliance with ARARs	Yes	Yes	Yes	Yes	Yes
Balancing Criteria	Long-Term Effectiveness and Permanence	1	2	2	4	5
	Reduction of Toxicity, Mobility, or Volume	1	1	2	4	5
	Short-Term Effectiveness	4	4	3	2	1
	Implementability	5	4	4	3	1
	Comparative Cost	5	4	4	3	1
Relative Overall Rating		16	15	15	16	13
Estimated Cost of Alternative		$0	$1,470,000	$1,840,000	**$2,960,000**	$5,130,000

Note: MEC found on surface, 2 MEC items @ 1” depth.

Proposed Alternatives

- **Surface Clearance for all *accessible* land within WVIA**
- **LUCs – examples are public education, signs, construction support.**
- **Cultural sites fall within accessible areas**

Modifying Criteria

- **Regulator/stakeholder acceptance**
- **Community acceptance**

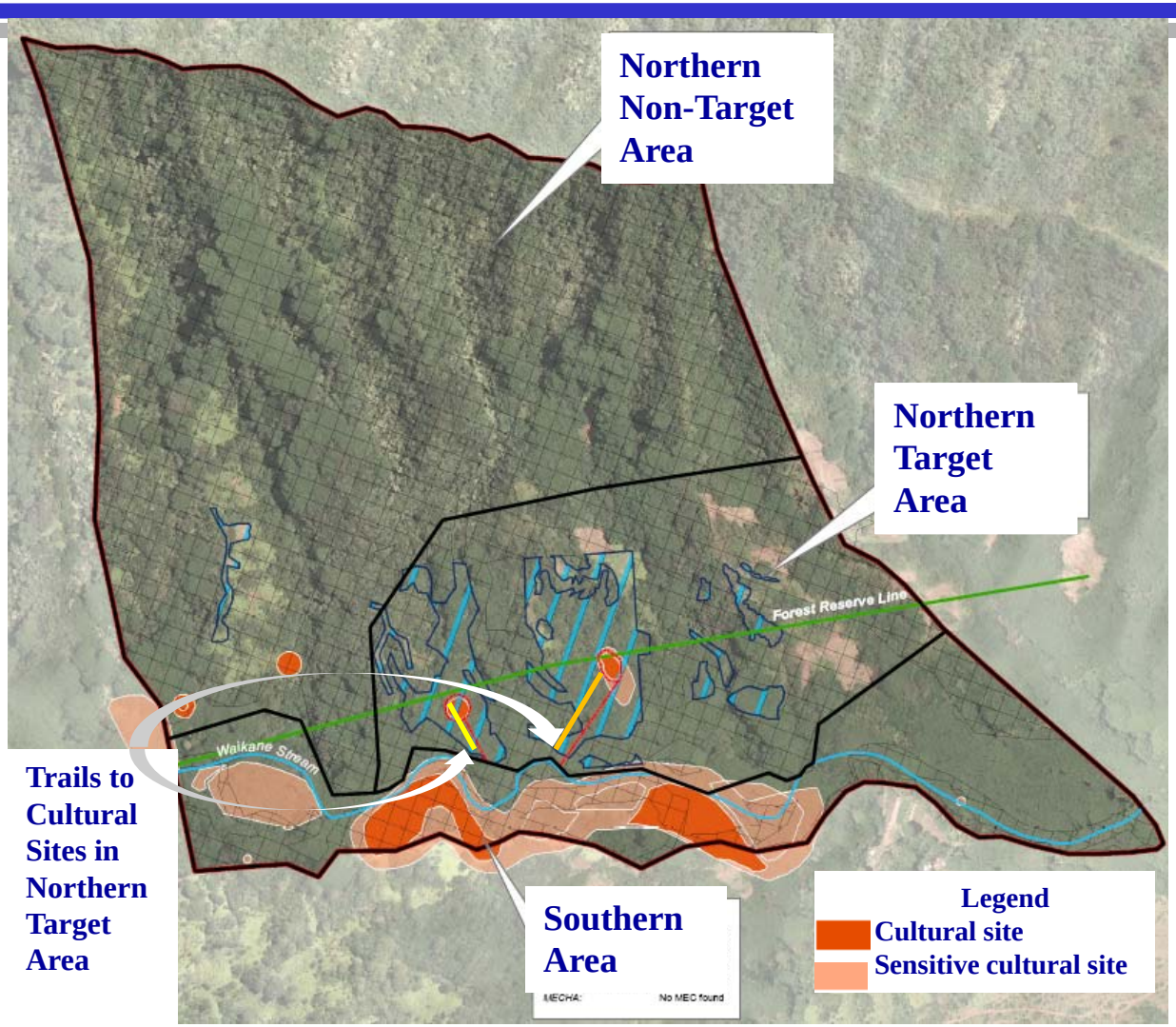
Land Use Options

- **Southern Area**
  - **Light agricultural (grazing), recreational, or cultural use with LUCs if MEC found.**
  - **May be suitable for unrestricted use if no MEC found.**
- **Northern Area**
  - **Light agricultural/recreational/cultural use with LUCs only for accessible areas**
  - **MEC history prevents unrestricted use.**

Proposed Alternative Costs

Surface Clearance with LUCs			
Response Action Area	Total Acres	Accessible Acres	Clearance Cost
Southern Area	33.9	30.5	$2,270,000
Northern Non-Target Area	105.8	2.9	$2,300,000
Northern Target Area	47.3	17.5	$2,960,000
Totals	187.0	50.9	$7,530,000

Response Action Areas



Comments?

- Please review Draft FS Report
- Offer written comments on:
  - Scoring of balancing criteria
  - Specific recommendations
- Provide comments by October 21.