

Brownfields/Land Re-Use and Public Health

Tools for Towns

Meg Harvey

November 15, 2013

Environmental Epidemiology and Occupational Health Program



In a national survey*, only 17%
of local health agencies
reported being involved in
local land re-use decisions.

*National Association of County and City Health
Officials, 2006

LHD involvement is important

- Increase community trust in redevelopment
- Identify environmental data gaps
- Prevent exposures
- Address community health concerns
- Risk communication (real and perceived)
- Identify & document public health benefits

How can Local Health
Departments increase their
capacity for involvement
at brownfields/re-use sites?

Overview

- Tools/Resources
 - ATSDR Brownfields/Land-Reuse Site Tool
 - Public Health Monitoring \$
 - ATSDR Action Model
- Environmental Data Gaps

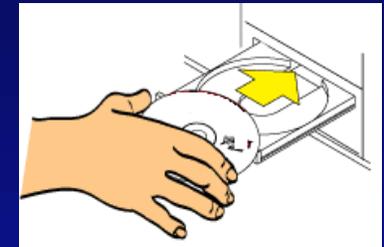
Brownfields/Land-Reuse Site Tool

Brownfields/Land-Reuse Site Tool



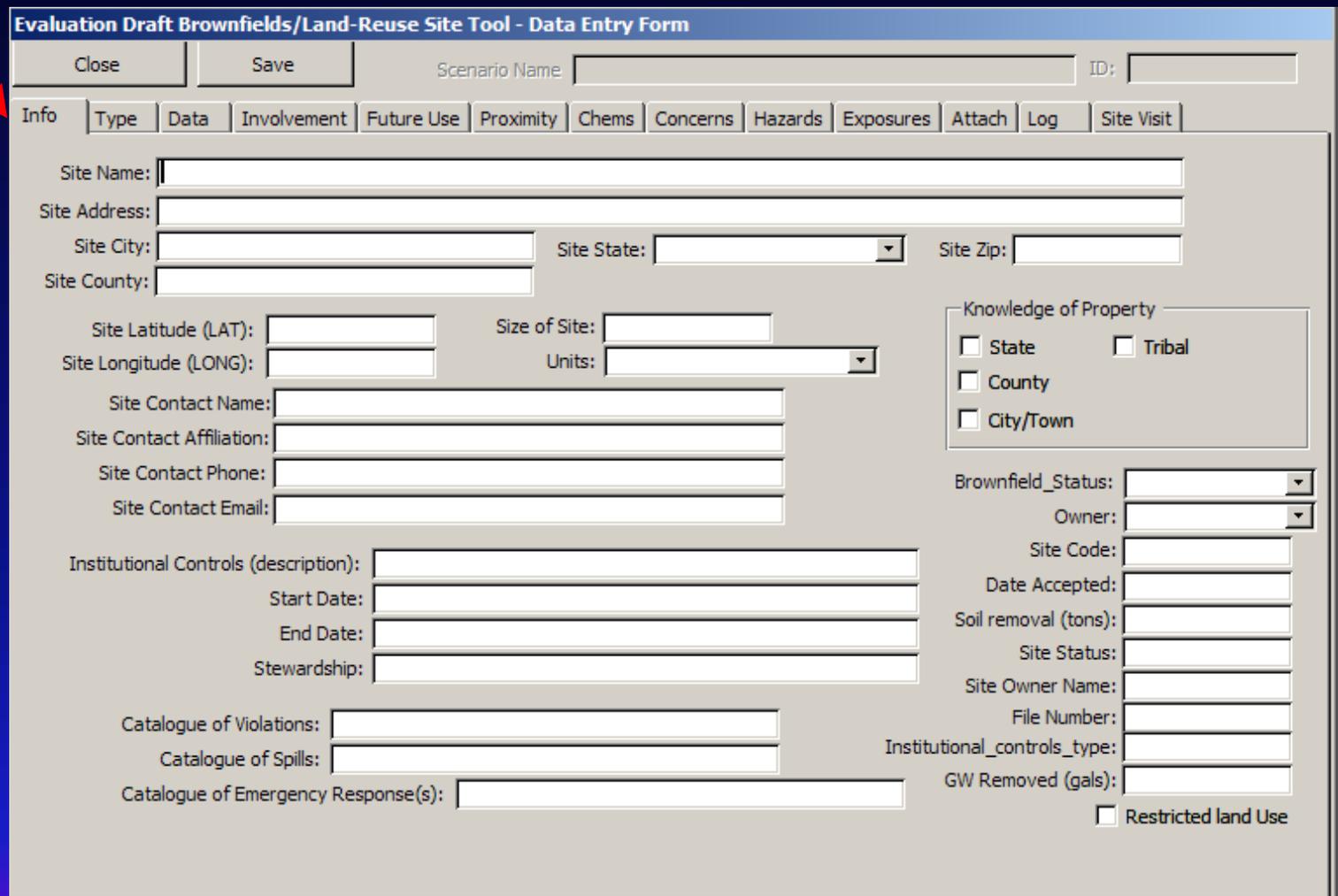
- Enter, View, Query, or Print Site Data
- Import inventory data
- Update
- Disclaimer
- Exit

version: 26Nov2010 (2007 compatible)



- Requires Microsoft® Access®
- Free! ATSDR Offers Training!
 - http://www.atsdr.cdc.gov/sites/brownfields/site_inventory.html
- Site Inventory
- Dose Calculator

Enter, Import and Query Site Information



Evaluation Draft Brownfields/Land-Reuse Site Tool - Data Entry Form

Close Save Scenario Name: _____ ID: _____

Info | Type | Data | Involvement | Future Use | Proximity | Chems | Concerns | Hazards | Exposures | Attach | Log | Site Visit

Site Name: _____

Site Address: _____

Site City: _____ Site State: _____ Site Zip: _____

Site County: _____

Site Latitude (LAT): _____ Site Longitude (LONG): _____

Size of Site: _____ Units: _____

Site Contact Name: _____

Site Contact Affiliation: _____

Site Contact Phone: _____

Site Contact Email: _____

Institutional Controls (description): _____

Start Date: _____

End Date: _____

Stewardship: _____

Catalogue of Violations: _____

Catalogue of Spills: _____

Catalogue of Emergency Response(s): _____

Knowledge of Property

State Tribal

County

City/Town

Brownfield_Status: _____

Owner: _____

Site Code: _____

Date Accepted: _____

Soil removal (tons): _____

Site Status: _____

Site Owner Name: _____

File Number: _____

Institutional_controls_type: _____

GW Removed (gals): _____

Restricted land Use

Past, Current, Future Use, Adjacent Properties

Brownfields/Land-Reuse Site Tool - Data Entry Form

Close Save Scenario Name: _____ ID: _____

Info **Type** Data Involvement Future Use Proximity Chems Concerns Hazards Exposures Attach Log Site Visit

Past Use(s) Site Type lookup list (press enter after you enter a new type)

_____ add >> remove <<

Delete This Site Type

Past Use(s)

Coal Gasification
Commercial

Current Use(s) Site Type lookup list (press enter after you enter a new type)

_____ add >> remove <<

Landfill/Junkyard/Dump
Leaking Underground Storage Tank (LUST / U
Light Bulb Mfg
Livestock Confinement Operations (CAFO)
Mall
Meth Lab
Military
Military Equipment
Mill
Mining
Mixed Use (Residential/Commercial)
Municipal
Municipal Offices
Municipal Wells
Munitions
Open Burning/Detonation
Ordnance
Park/Forest
Pesticide Storage
Pharmaceuticals

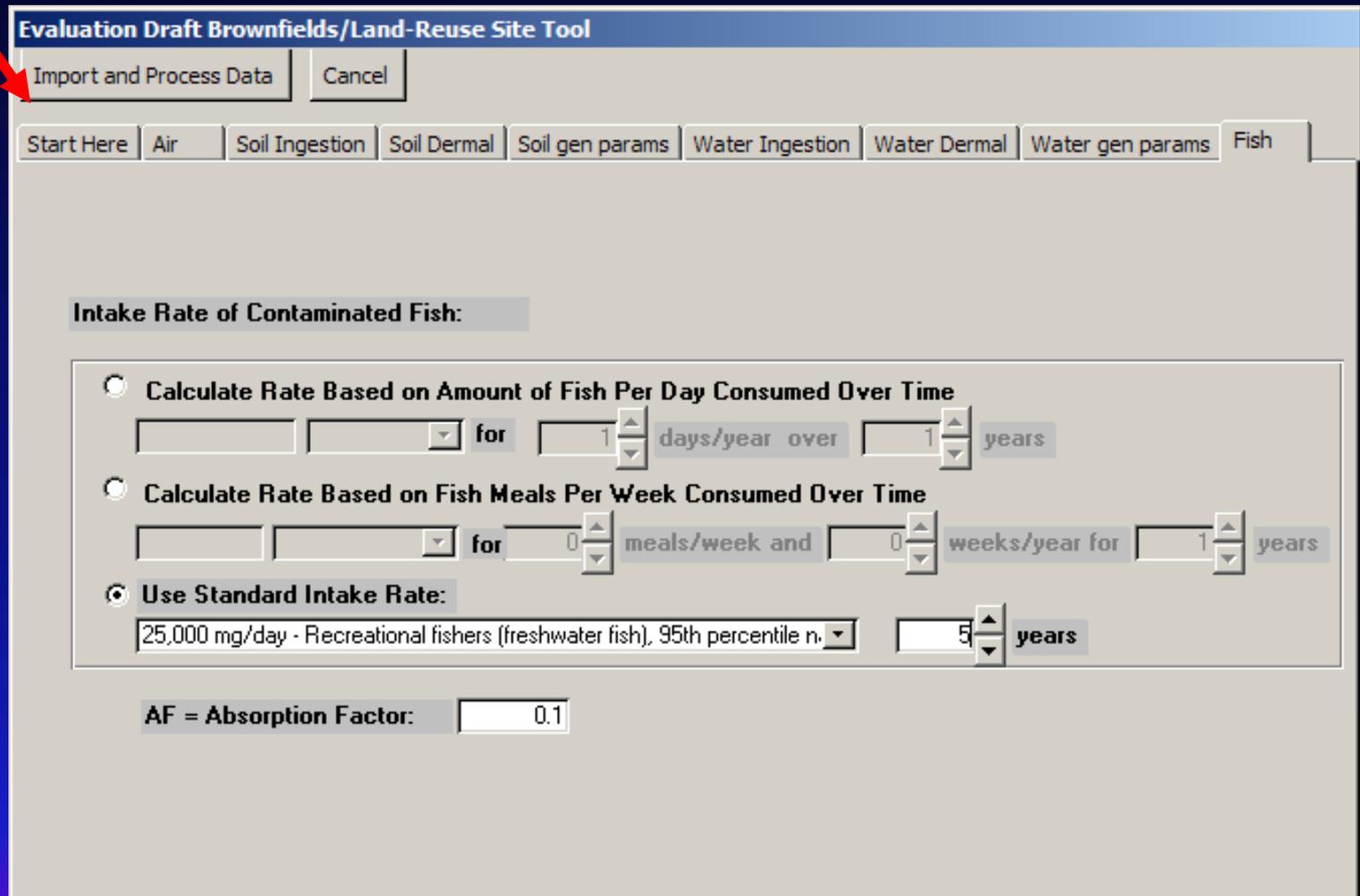
_____ add >> remove <<

Adjacent Site(s) Site Type lookup list (press enter after you enter a new type)

_____ add >> remove <<

Adjacent Site(s)

Evaluate Exposures, Calculate Doses, Statistics



Evaluation Draft Brownfields/Land-Reuse Site Tool

Import and Process Data Cancel

Start Here Air Soil Ingestion Soil Dermal Soil gen params Water Ingestion Water Dermal Water gen params Fish

Intake Rate of Contaminated Fish:

Calculate Rate Based on Amount of Fish Per Day Consumed Over Time
[] [] for [1] days/year over [1] years

Calculate Rate Based on Fish Meals Per Week Consumed Over Time
[] [] for [0] meals/week and [0] weeks/year for [1] years

Use Standard Intake Rate:
25,000 mg/day - Recreational fishers (freshwater fish), 95th percentile n. [5] years

AF = Absorption Factor: [0.1]

Public Health Monitoring \$

- Up to 10% of EPA Brownfields Grant
- Health Monitoring is Broad! Examples...
 - Survey of community concerns, health status
 - Visioning for future property use
 - Fish testing in local water body
 - Air testing during brownfields cleanup
 - Signage, addressing trespassing issues
 - Inventories: sites, parks, housing, health care access...

ATSDR Action Model

- 4-Step Framework - integrates “public health” into redevelopment
 - What are the community issues of concern?
 - How can redevelopment help?
 - What are community benefits?
 - Identify indicators to measure public health improvement

Land Re-Use: Data Gaps

- Industrial Building Interiors
 - Residual Chemicals
 - Dust, Indoor Air, Walls, Floors, Ventilation System
- Vapor Intrusion
- Outdoor Dust
 - Construction/Demolition
 - Soil Remediation
- Former agricultural land



Vapor Intrusion - Case Study

- Former Defense facility
- VOC groundwater plume on site
 - VOCs > CT soil & GW volatilization criteria
 - Vapor Intrusion in some buildings
- Town wants to lease space for offices
- DoD: all spaces okay because VOCs in air meet OSHA standards
- LHD requests DPH review
- DPH reaches different conclusion



Former Farmland - Case Study

- Warehouse construction on former farmland
- Pesticides in soil > CT Standards
- Residents concerned about dust
- Project has correct DEEP Permits
- Site NOT in any DEEP remediation program



Farmland Case Study - LHD Actions

- DEEP “consistency review” of Plan
- DPH review – health protectiveness of Plan
- DEEP fugitive dust regulations
 - 860-424-3436 or deep.aircomplaints@ct.gov
- DPH review of dust control/monitoring plan
 - Dust control procedures adequate?
 - Dust monitoring needed? Dust action levels appropriate?



Questions?