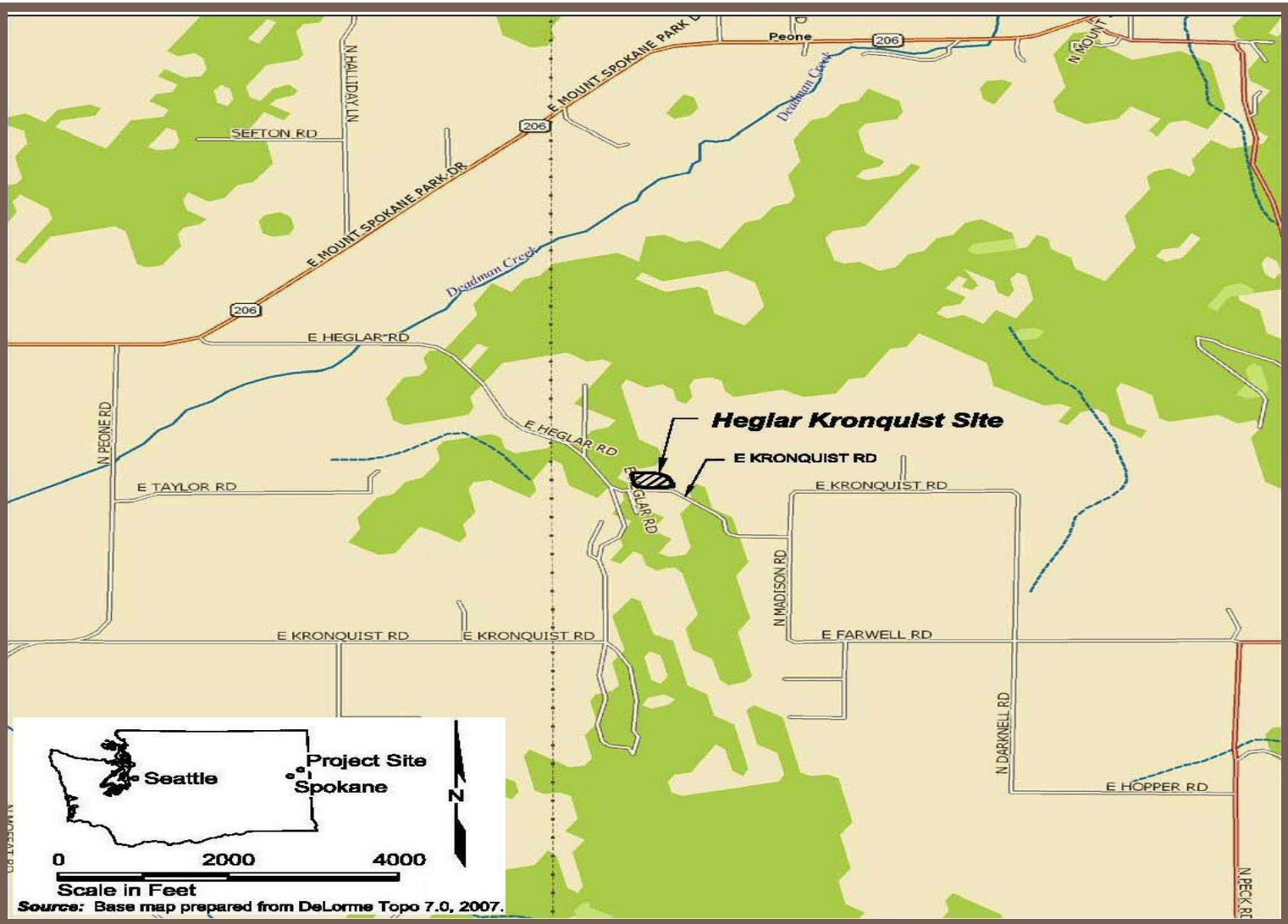
HEGLAR KRONQUIST SITE

Heglar & Kronquist Roads
Mead, WA

Presented by the

DEPARTMENT OF
ECOLOGY
State of Washington

SITE LOCATION



THE LANDFILL (DROSS SITE)

EXISTING COVER

HOW DID THIS GET STARTED?

- 2004--Trespassers broke into the fenced, formerly closed landfill and damaged the clay cap
- Residents in area expressed concerns regarding health and drinking water impacts
- 2006--Ecology conducted a Site Hazard Assessment – Ranked 2

WHAT ARE WE TALKING ABOUT?

- Site was originally a gravel pit – ceased operations in 1969
- Operated as a landfill by Gemini Management
- Received black dross from Kaiser Trentwood Plant from 1969 to 1974 (~55,000 cubic yards)

WHAT IS BLACK DROSS?

- Waste material from Kaiser's aluminum smelting--contains:
  - 40% sodium chloride
  - 20% potassium chloride
  - 35% aluminum oxide
  - 4% aluminum
  - 2% cryolite (sodium aluminum fluoride)
  - Residual carbides and nitrides

PRIMARY CONCERNS?

- High salt content: sodium and potassium chloride—leaching to groundwater and springs
- Ammonia generation from aluminum or magnesium nitrides in contact with water

WHAT HAS ALREADY BEEN DONE?

- 1973-1980--Spokane County Health Department sampling found elevated chloride and sodium levels in one spring and shallow domestic well
- Air sampling identified ammonia and methane generated from the uncovered dross landfill.
- Early 1980s--property owner at time directed to cover the dross pile

WHAT HAS ALREADY BEEN DONE?

- 1984--Kaiser installed:
  - clay cover over the dross
  - gas venting system
  - drainage control ditches
  - fence
  - and began monitoring groundwater
- Kaiser later purchased the property

WHAT HAS ALREADY BEEN DONE?

- 1987--Ecology staff inspected the cover and found it to be intact
- 1993--EPA inspection report recommended No Further Action for the site – with continued monitoring
- Up to 2004--Kaiser conducted monitoring of nearby spring:
  - Data showed decreasing nitrate and chloride levels, but still above acceptable/recommended levels

WHAT HAS ALREADY BEEN DONE?

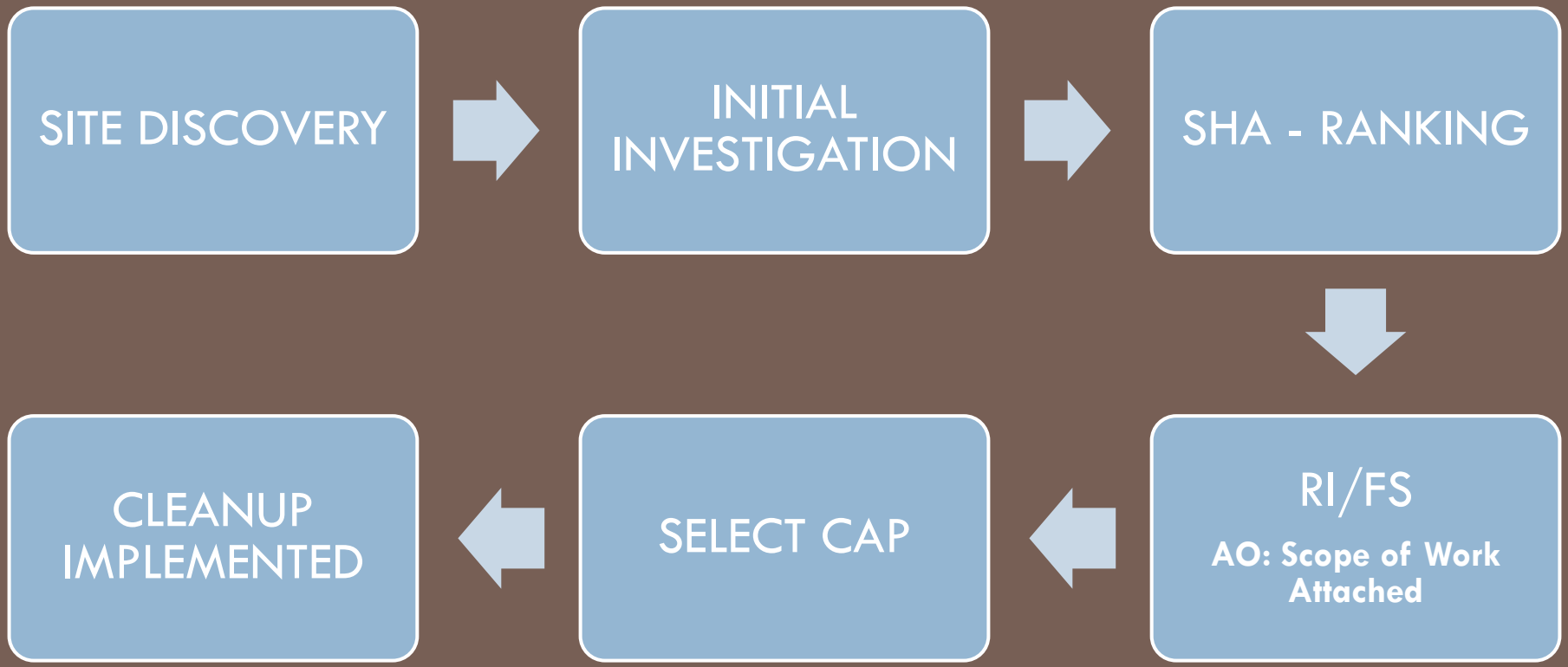
- 2006—Ecology conducted a Site Hazard Assessment: Ranked 2

- 2008--Ecology and Kaiser began negotiations for an Agreed Order for Kaiser to complete a Remedial Investigation/Feasibility Study (RI/FS)

  Ecology developed Public Participation Plan part of order

  public comment on Agreed Order (open through March 11)

WHAT IS THE CLEANUP PROCESS?



WHAT WILL BE DONE NOW?

- Work with Kaiser to complete an RI/FS
- This will include:
  - Research the historical uses of the site
  - Look at previous investigations to see what data are missing or needs to be redone
  - Drill monitoring wells
  - Dig test pits/soil borings
  - Take soil, groundwater, surface water, and air samples
  - Geologic/hydrogeologic maps
  - Identify remedial alternatives

WHAT ELSE WILL HAPPEN?

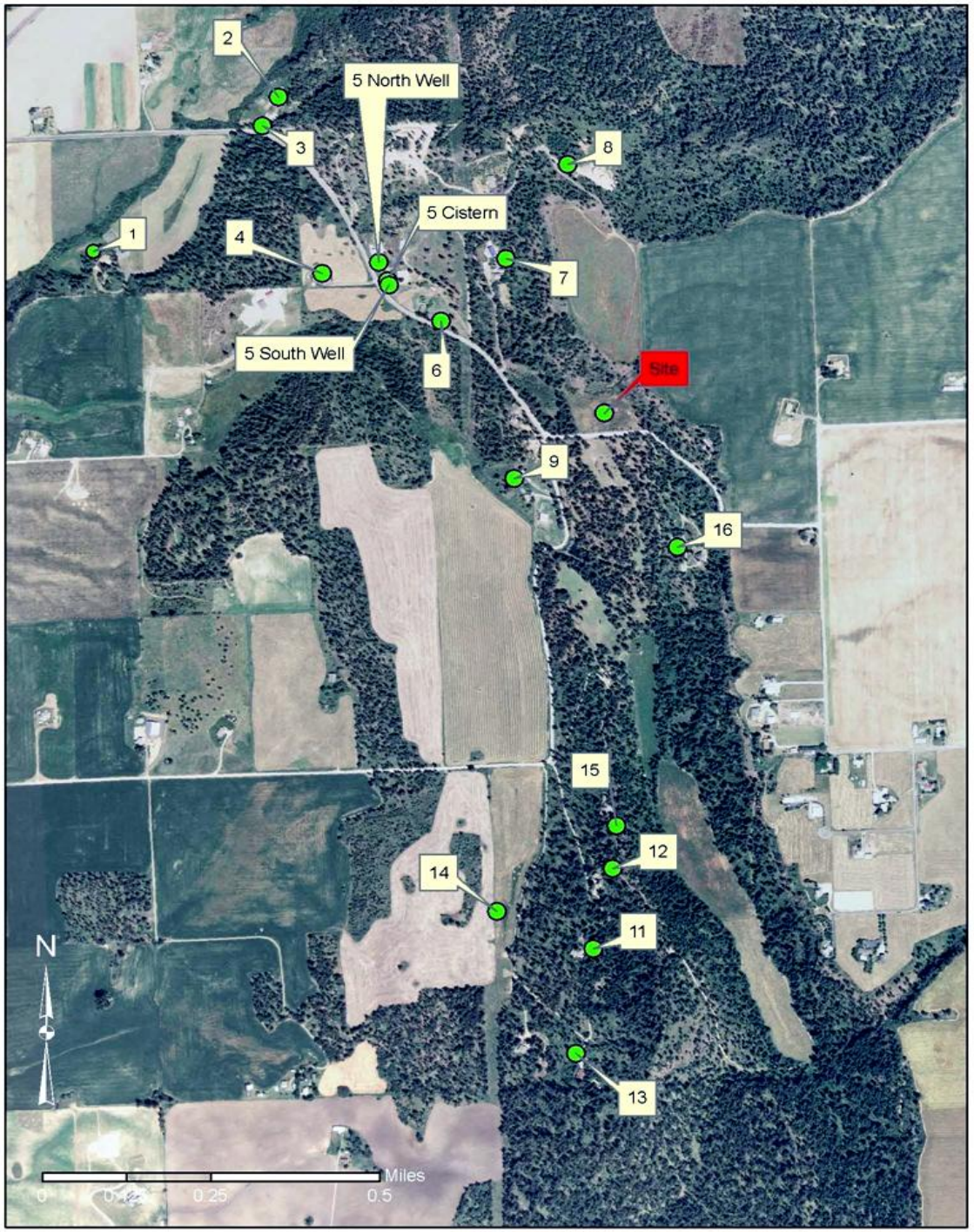
- Kaiser will report on the investigation results (RI/FS) *public comment*
- Ecology will decide what actions will be taken to clean up the contamination (CAP) *public comment*
- Ecology and Kaiser will negotiate an agreement to complete the cleanup *public comment*
- Kaiser will prepare plans for cleanup *public comment*
- Kaiser will clean up the site
- Kaiser will prepare a final report documenting the cleanup

WHO CAN I TALK TO?

- Department of Ecology
  - Teresita Bala – site manager/questions
    (509) 329-3543 or tbal461@ecy.wa.gov
  - Dave George – site questions
    (509) 329-3520 or cgeo461@ecy.wa.gov
  - Carol Bergin – public involvement and to be added to the mailing list
    (509) 329-3546 or cabe461@ecy.wa.gov
  - Fact Sheet: site, document review, health contacts

DOMESTIC WELL SAMPLING RESULTS

-- Outside RI/FS --



Chemicals of Interest	Drinking Water Standards		Well No. 1	Well No. 16	Spring	Range in Other Wells
	Primary MCLs	**Secondary MCLs**				
Metals in ug/l (ppb)						
Aluminum	**N/A**	**50 - 200**	50 U	50 U	8.8	50 U
Potassium	**N/A**	**N/A**	2550	3930	10,900	869-6,040
Sodium	**N/A**	**N/A**	11,600	***35,500***	***106,000***	7,560-19,400
Others in mg/l (ppm)						
Chloride	**N/A**	**250**	1.9	19.3	**242**	0.7-12.5
Fluoride	**N/A**	**2**	0.3	0.5	0.8 U	0.087-0.5
Ammonia as Nitrogen	**N/A**	**N/A**	0.05 U	0.05 U	0.8 U	0.05
Nitrate	**10**	**N/A**	0.2 UX	**13.5 X**	**15.9**	0.008-8.7
Nitrite	**1**	**N/A**	0.1 UX	0.1 X	0.023 T	0.1
pH	**N/A**	**6.5 – 8.5**	7.86	7.41	7.45	6.78-7.5
Add. Metal > MCL						
Arsenic	**10**	**N/A**	**11.6**	1.1	2	0.5 U – 2.4

FURTHER INFORMATION?

- Residents whose wells were tested will receive a copy of the results. Others, upon request – sign up sheet.
- WDOH: health assessment of potential impacts from the site and evaluate private well testing results (late Spring)
- Fact Sheet for further details and contact information

THANK YOU

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