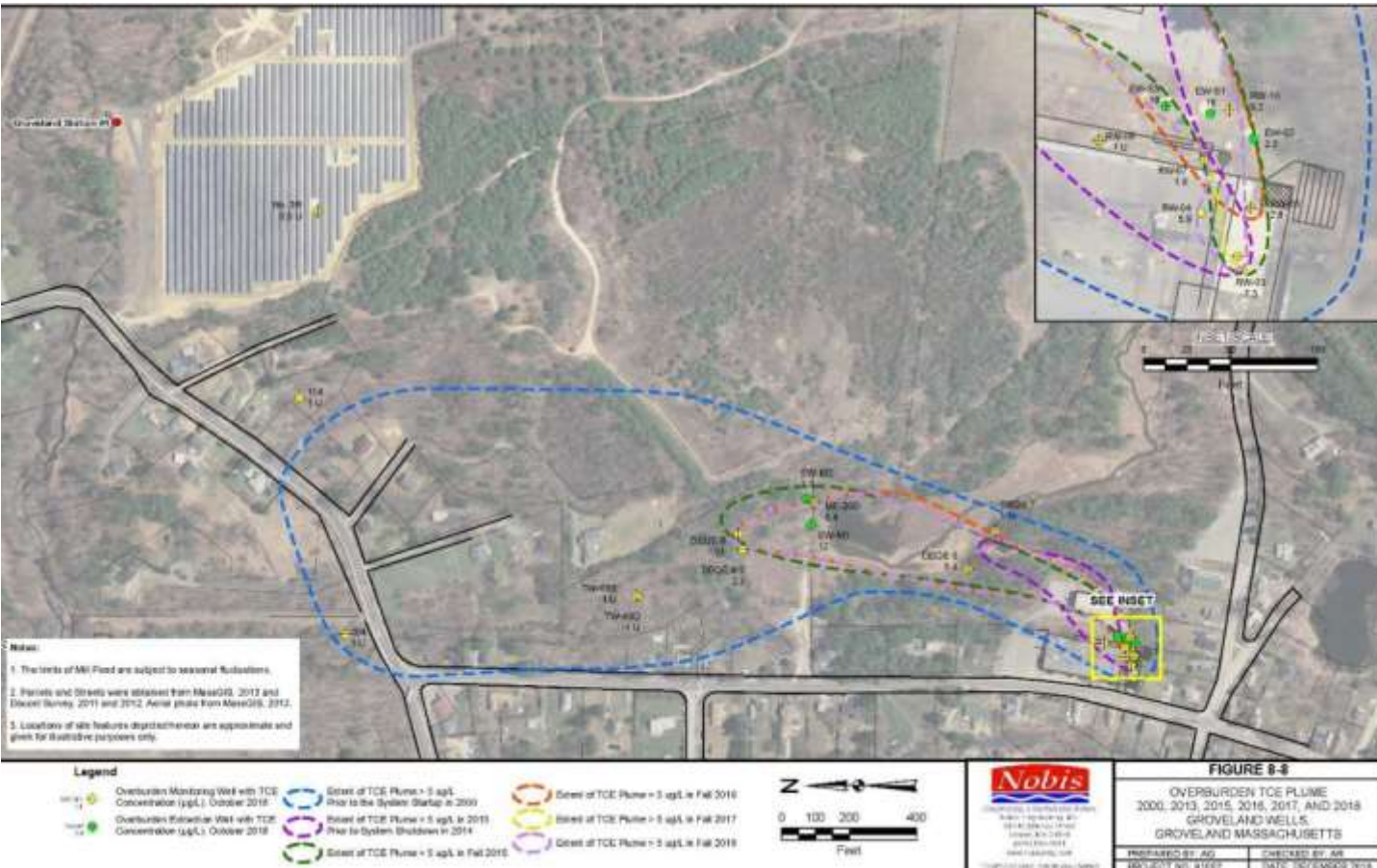


# P&T Transition to MNA

Groveland Wells Nos. 1 & 2 Federal Superfund Site  
 Johnson Creek Watershed—Groveland, MA  
 Groundwater/Soil Impact  
 Transition start—2013  
 P&T 2000–2014

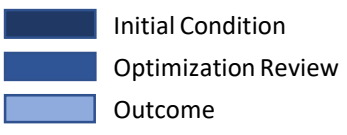
Risk Scenario— Watershed  
 and aquifer supplying two  
 municipal drinking water  
 wells impacted by VOCs.  
 One well still in use.

P&T RAOs:  
 MCLs  
 TCE: 5 ug/l  
 Cis 1,2 DCE:  
 70 ug/l



Performance evaluation summary—P&T deficiencies:  
 Optimization review (1/7/13) indicated that cost of continuing to operate P&T provides no significant benefit over MNA.

Hypothesis:  
 MNA is already occurring in downgradient plume (beyond influence of EWs). MNA is “greener” than P&T, and less costly.



Remedial technology(s) or strategy to replace P&T:  
 MNA approved for residual plume as part of the 1991 ROD and confirmed by 1996 ESD.

## P&T Transition to MNA

Groveland Wells  
Groundwater/Soil Impact  
Superfund Site  
Transition start—2013  
P&T 2000–2014



Figure: Thermal Treatment Area on Southern Side of Valley Manufacturing Building  
(Fourth Five-Year Review)

- Initial Condition
- Optimization Review
- Outcome

Lines of evidence used to support transition:

1. Due to 10+ years of P&T operation, the plume extent has been significantly reduced to the source area and the 500 feet of aquifer immediately downgradient of the source area.
2. Due to ISTT operation using ERH conducted from 2010 through 2011, the majority of source area contamination has been removed and the TCE concentrations in groundwater have been substantially reduced.
3. Flushing of the aquifer between the source area and the municipal well should quickly result in a decline of TCE below the drinking water standard.
4. Data shows municipal wells will not be impacted by P&T shutdown.

Transition Technology Decision:

USEPA headquarters in agreement with Region 1 shutdown of the groundwater treatment facility (1/14/14 email) following the optimization Final Technical Memorandum (December 2013). ROD already included MNA for the portion of the aquifer further downgradient from source area.

Groundwater monitoring frequency was increased from semiannual to monthly for one year following ISTT source treatment. Rebound above specified criteria did not occur, and P&T was shut down. Quarterly groundwater monitoring for three more years supports theory that P&T is not needed. Overall concentrations continue to decrease, with exception of concentrations in one well.

May 2018: USEPA agrees that plant can be decommissioned and prepared for transfer to property owner.

P&T Transition Conclusion:  
P&T transitioned to MNA via ISTT  
Time Span: 1 Year  
O&M cost savings: ~\$375,000/year  
Remedy effectiveness and/or risk reduction improvement: P&T provides no better protection than MNA  
Sustainability/resiliency benefits: Shut down of P&T eliminates an estimated use of 500,000 kWh/yr in electricity