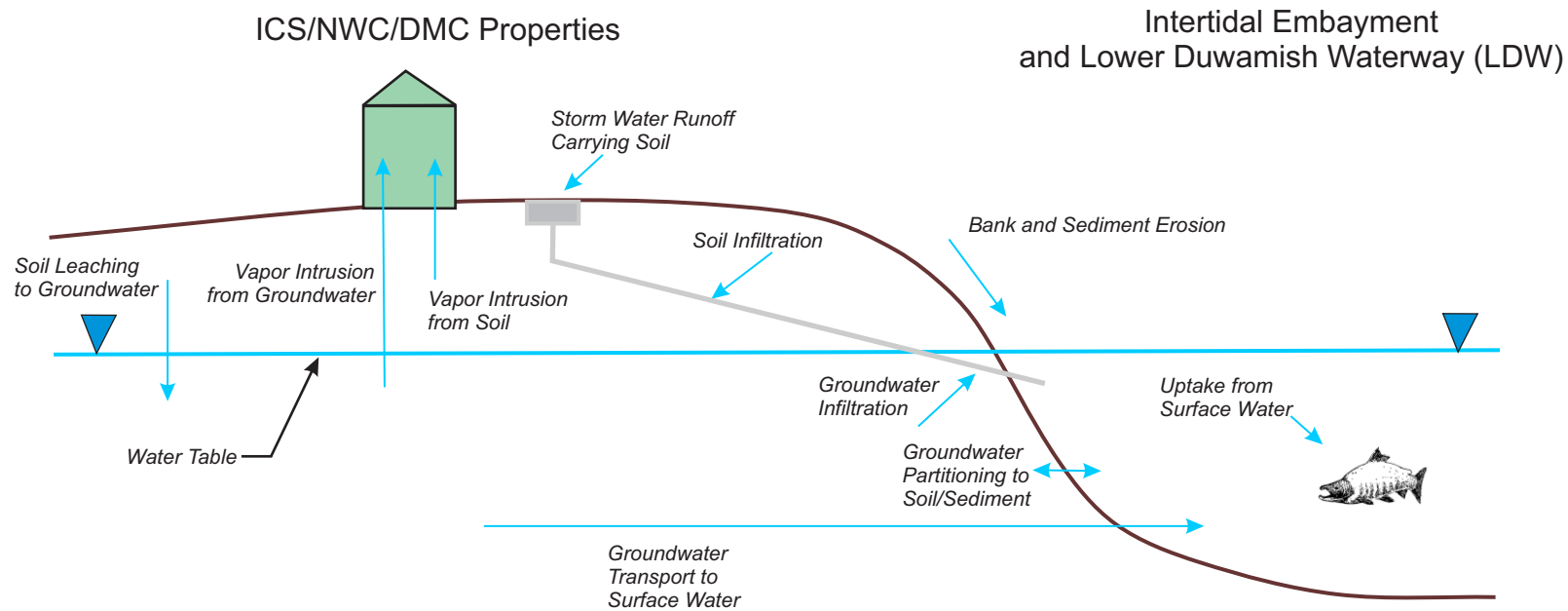


<b>ICS/NW Cooperage Site</b>	
<b>Possible Exposure/Receptor Pathways</b>	
<i>SUM-008-00</i>	<i>Mar. 2018</i>
<i>Dalton, Olmsted &amp; Fuglevand, Inc.</i>	

**FIGURE 5-1**

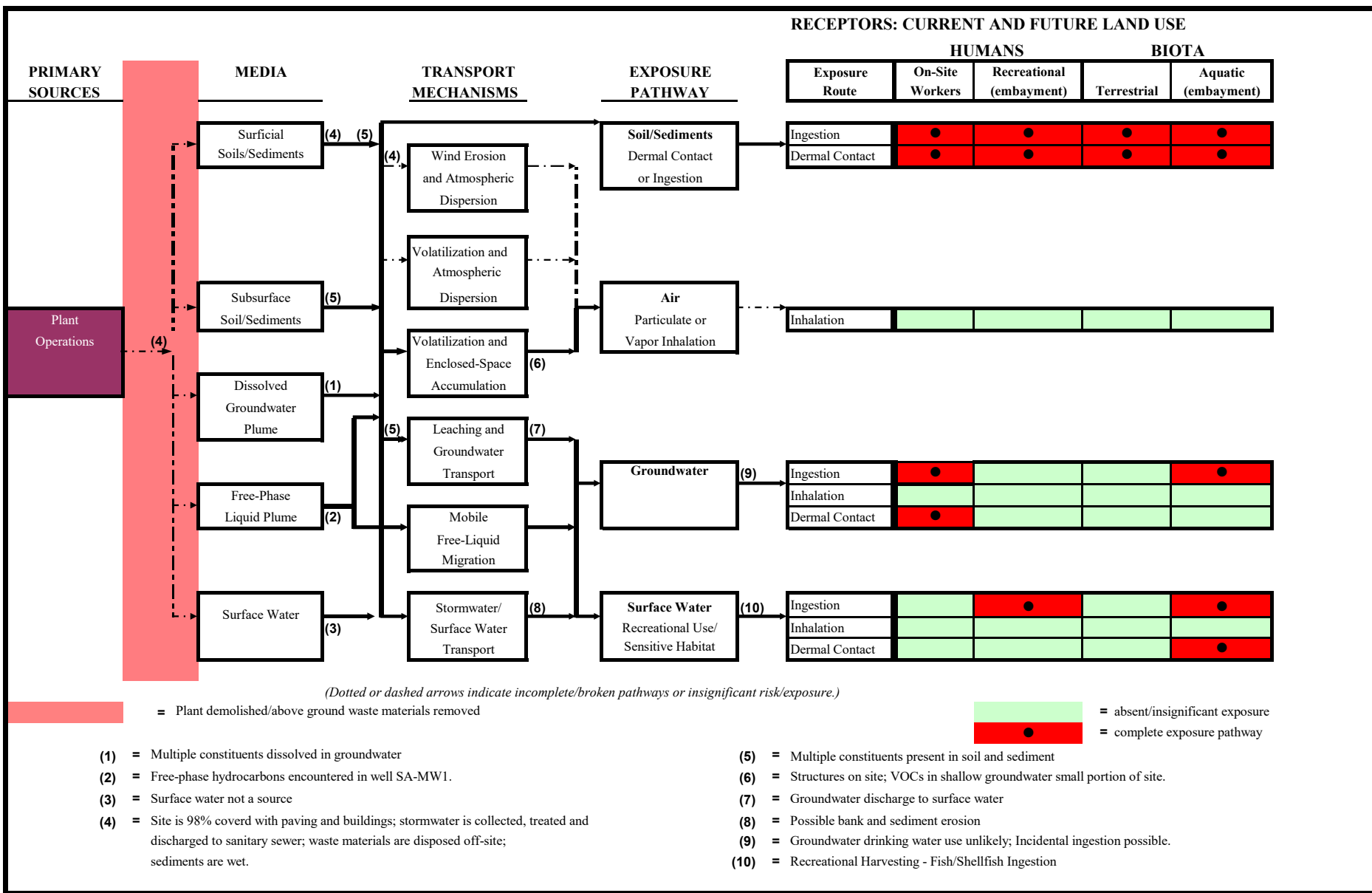
Ref: Exposure Pathways.cdr Adapted From Figure 2 Ecology (2017b)

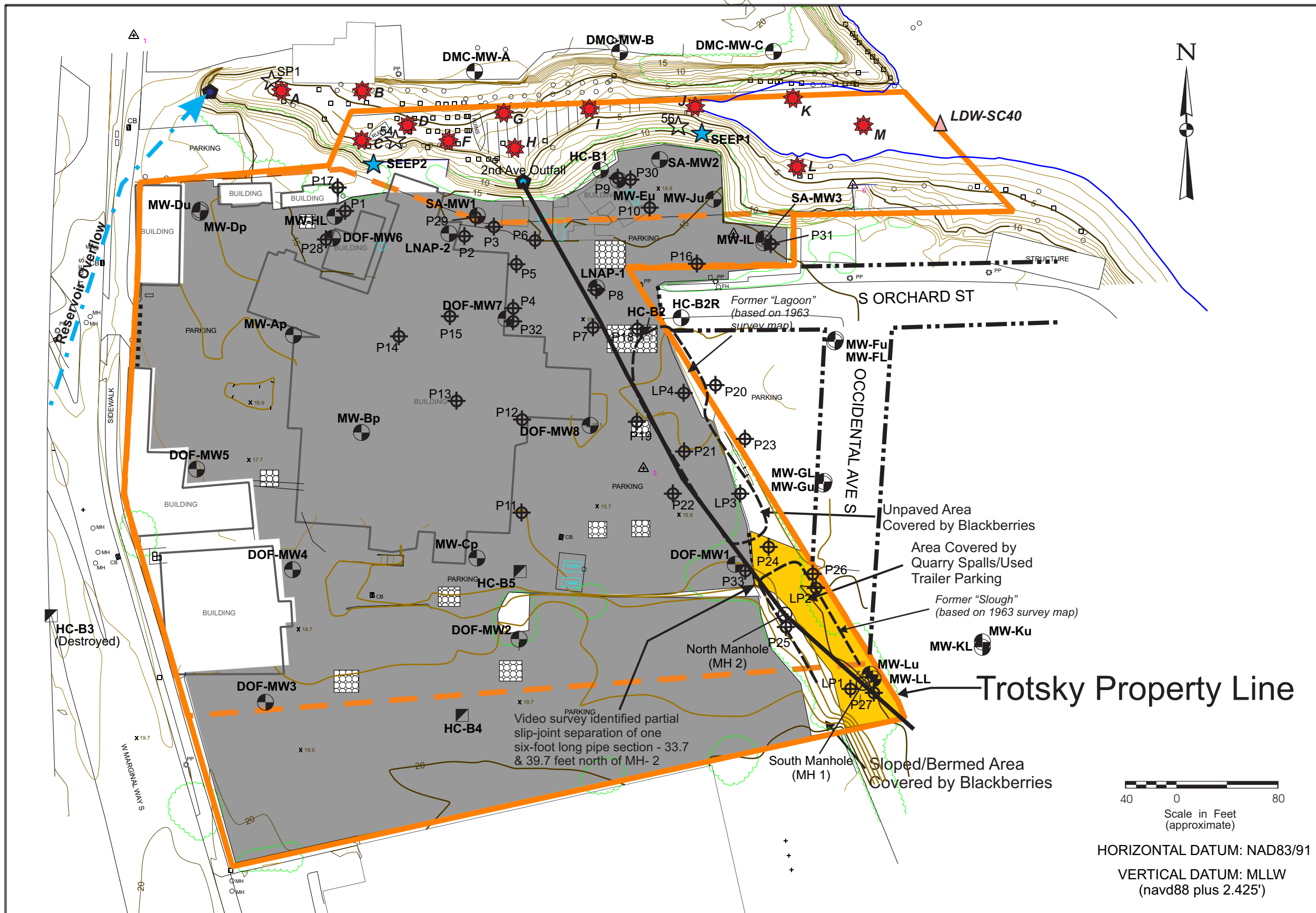


<b>ICS/NW Cooperage Site</b>	
<b>Possible Transport Pathways</b>	
<i>SUM-008-00</i>	<i>Mar. 2018</i>
<i>Dalton, Olmsted &amp; Fuglevand, Inc.</i>	

**FIGURE 5-2**

Ref: Conceptual Transport.cdr Adapted From Figure 1 Ecology (2017b)





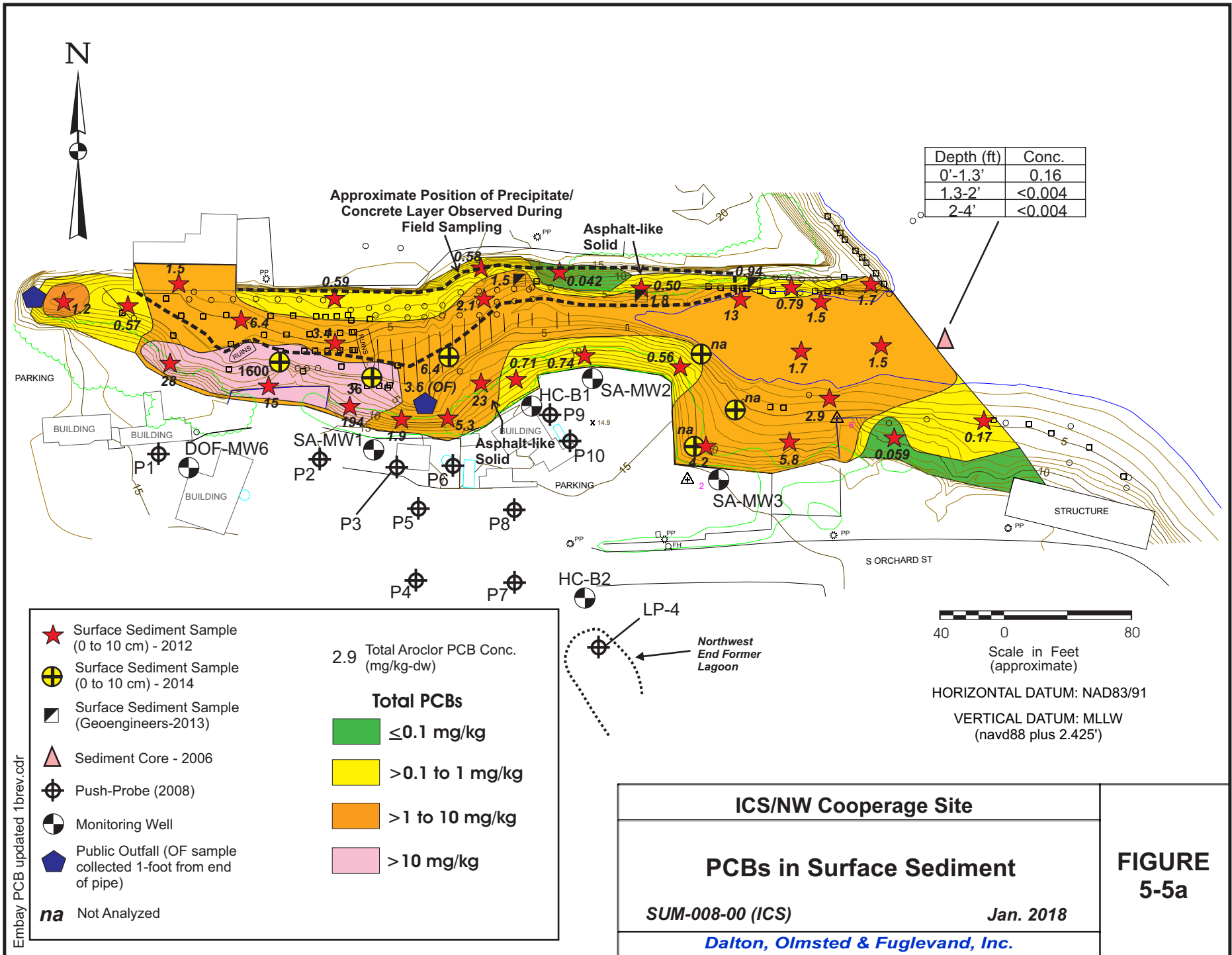
- ### Legend
- Pole/Piling
  - Post
  - PP Power Pole
  - X 15.8 Spot Elevation (ft-MLLW)
  - 3+ Photogrammetry Marker
  - ▨ CB Catch Basin
  - ⬢ Public Outfall
  - ⊕ Monitoring Well
  - ⊕ Push Probe
  - ⊖ Abandoned Monitoring Well
  - X Surface Sediment Sample SAIC - 1991
  - ⊕ Surface Sediment Sample SAIC - 2007
  - ⊕ LDW-RI Surface Sample Locations RI Report
  - △ Sediment Core - RI Report (2006)
  - ★ Sediment Core - DOF (2012)
  - ☆ Embayment Seep (2004 to 2008)
  - ★ Embayment Seep (2012)
  - ⊕ Discrete Soil Sample (1991)
  - ⊕ Man-hole
  - Composit Soil Sample (1986)
  - 1986 Soil Spl. Composite Area
  - Property Line
  - - - Tax Parcel Boundary

**Notes:**

- 1) Property Survey by Continental Survey Co. (12-15-09)
- 2) Topography by David C. Smith Associates (flown 3-18-10 @ 1412 PDT)

Ref: TEE Unpaved Areas.cdr

<b>ICS/NW Cooprage Site</b>		<b>FIGURE 5-4</b>
<b>Sample Locations in Paved and Unpaved Areas</b>		
SUM-008-00 (ICS)	May 2018	
<i>Dalton, Olmsted &amp; Fuglevand, Inc.</i>		



Embay PCB updated 1brev.cdr

**ICS/NW Cooperage Site**

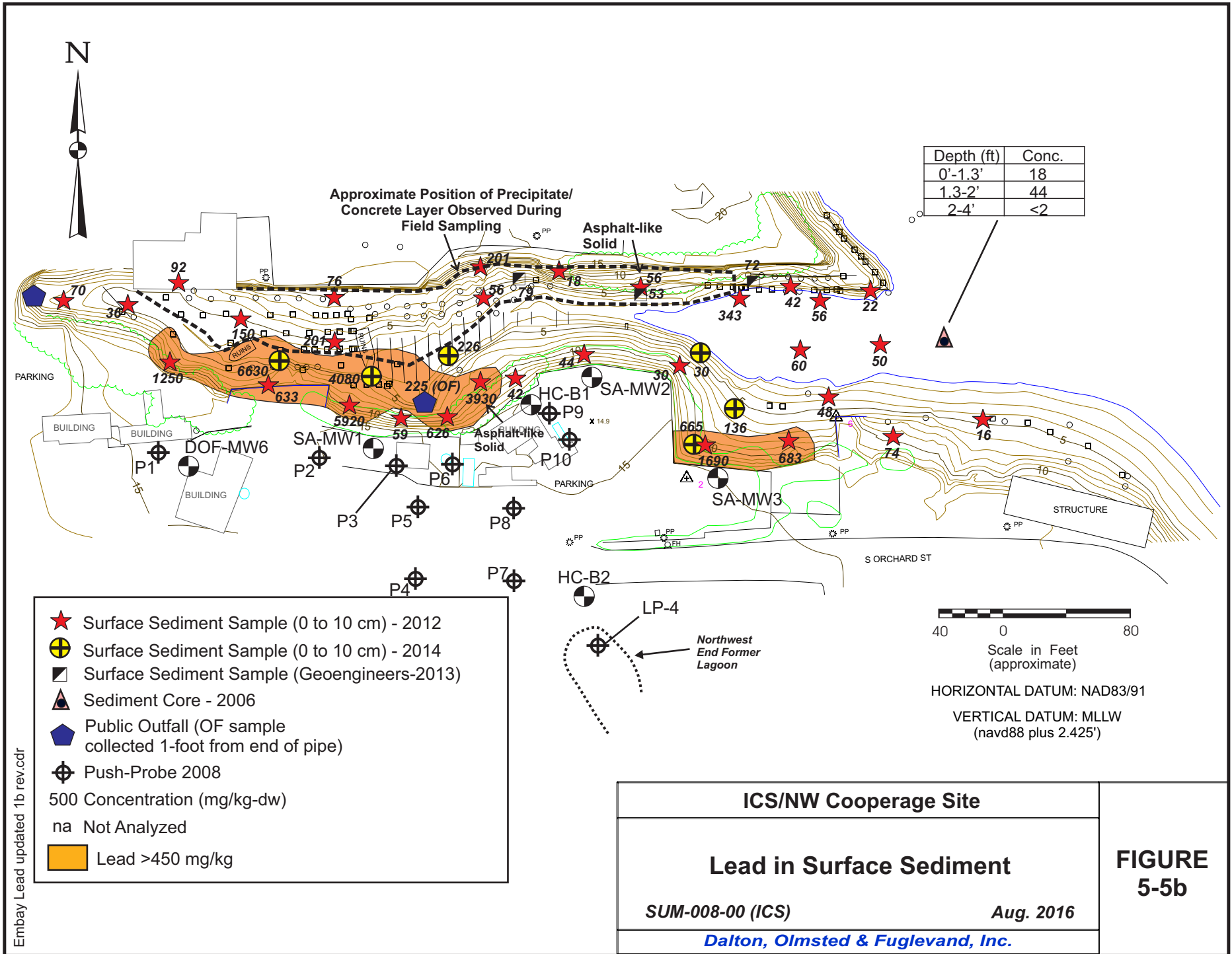
**PCBs in Surface Sediment**

SUM-008-00 (ICS)

Jan. 2018

*Dalton, Olmsted & Fuglevand, Inc.*

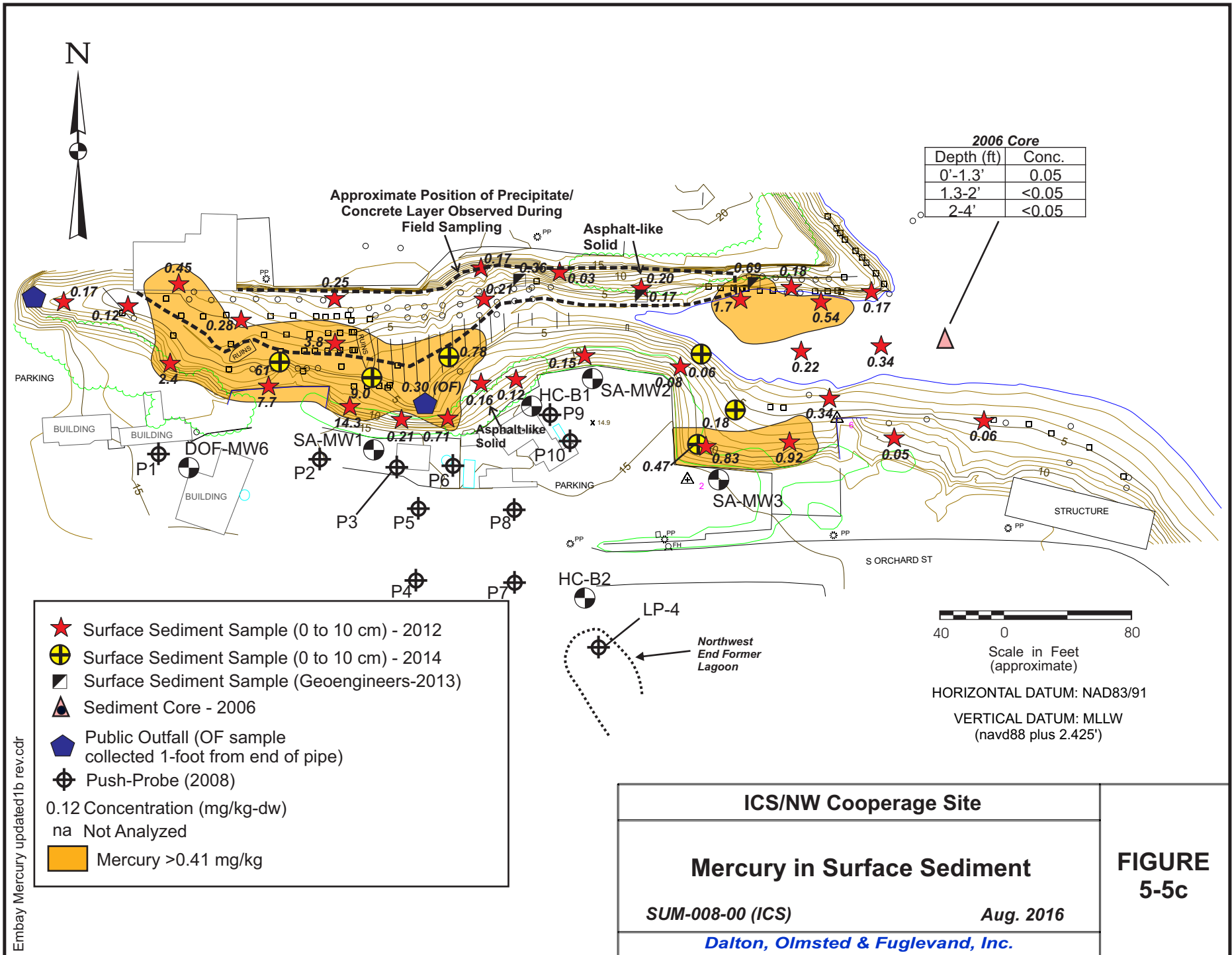
**FIGURE 5-5a**



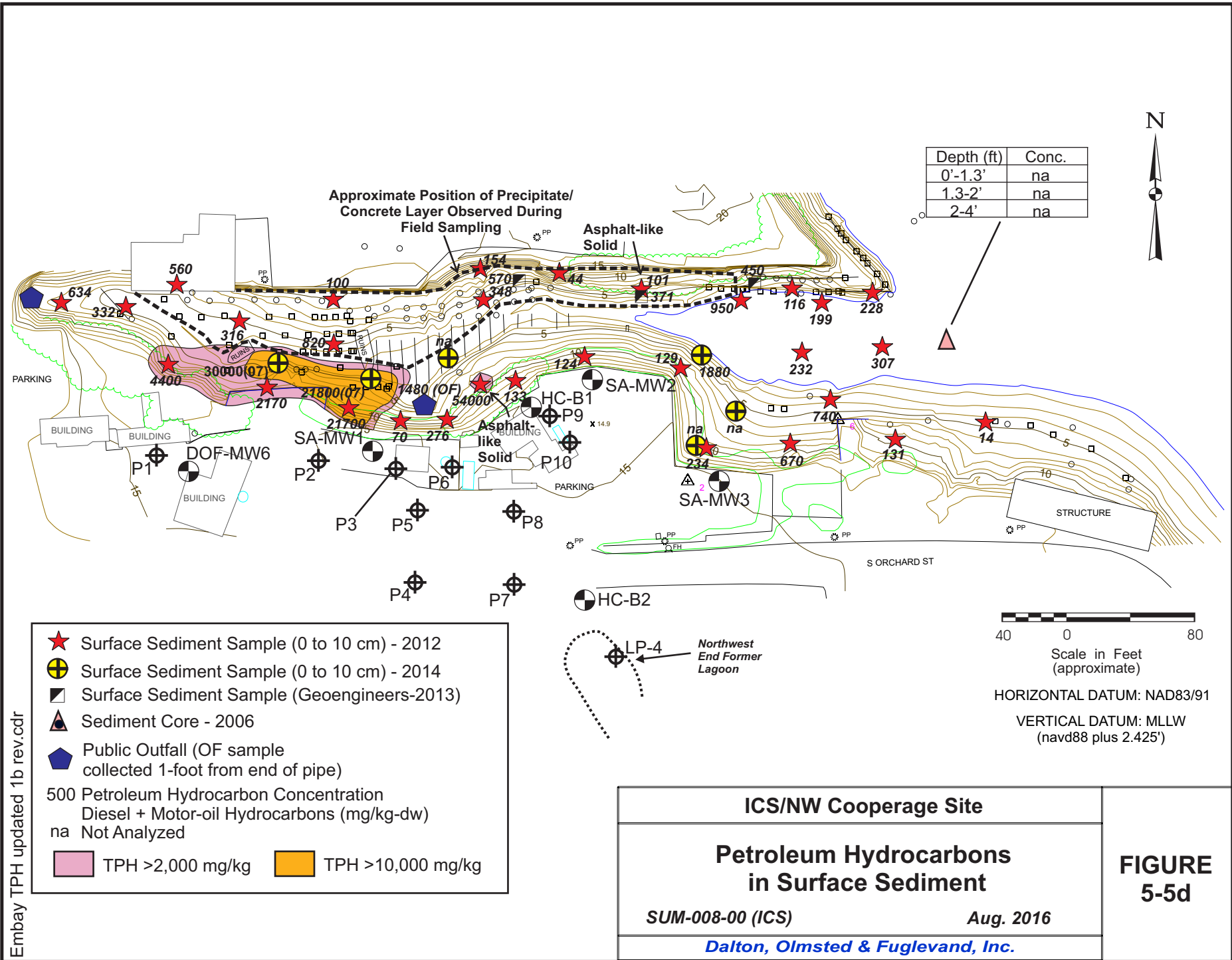
Embay Lead updated 1b rev.cdr

<b>ICS/NW Cooperage Site</b>	
<b>Lead in Surface Sediment</b>	
SUM-008-00 (ICS)	Aug. 2016
<i>Dalton, Olmsted &amp; Fuglevand, Inc.</i>	

**FIGURE 5-5b**

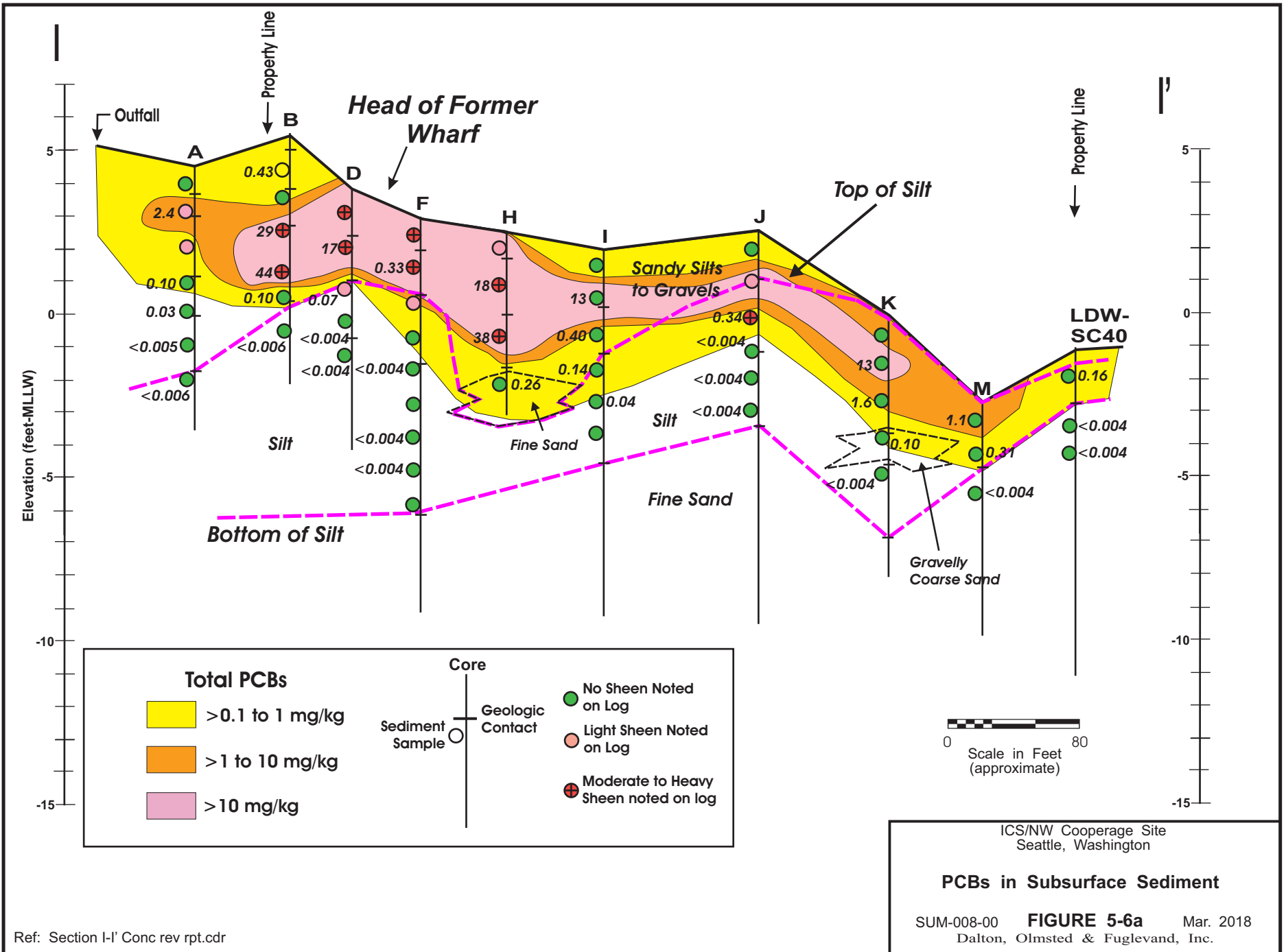


Embay Mercury updated1b rev.cdr

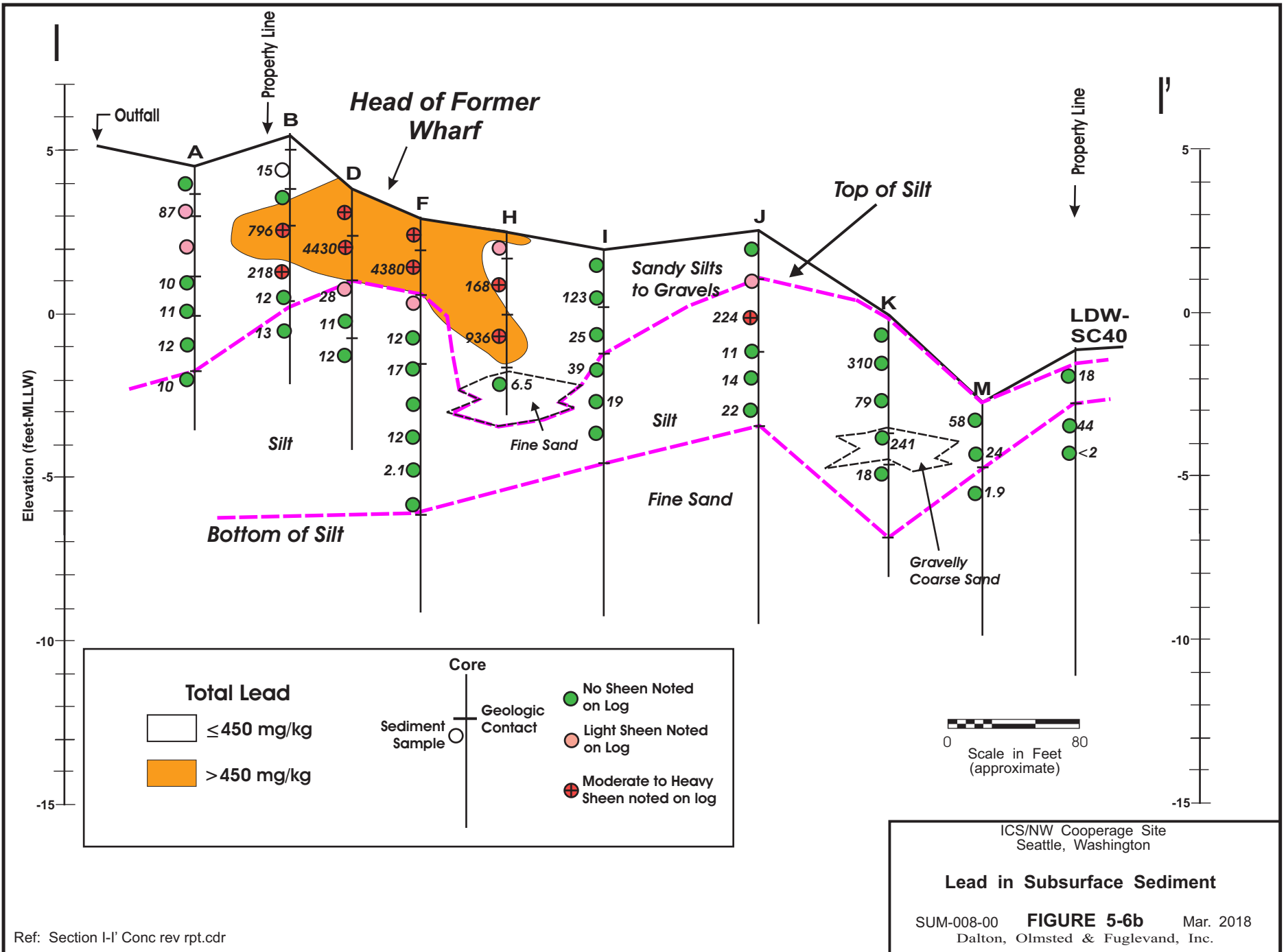


Embay TPH updated 1b rev.cdr

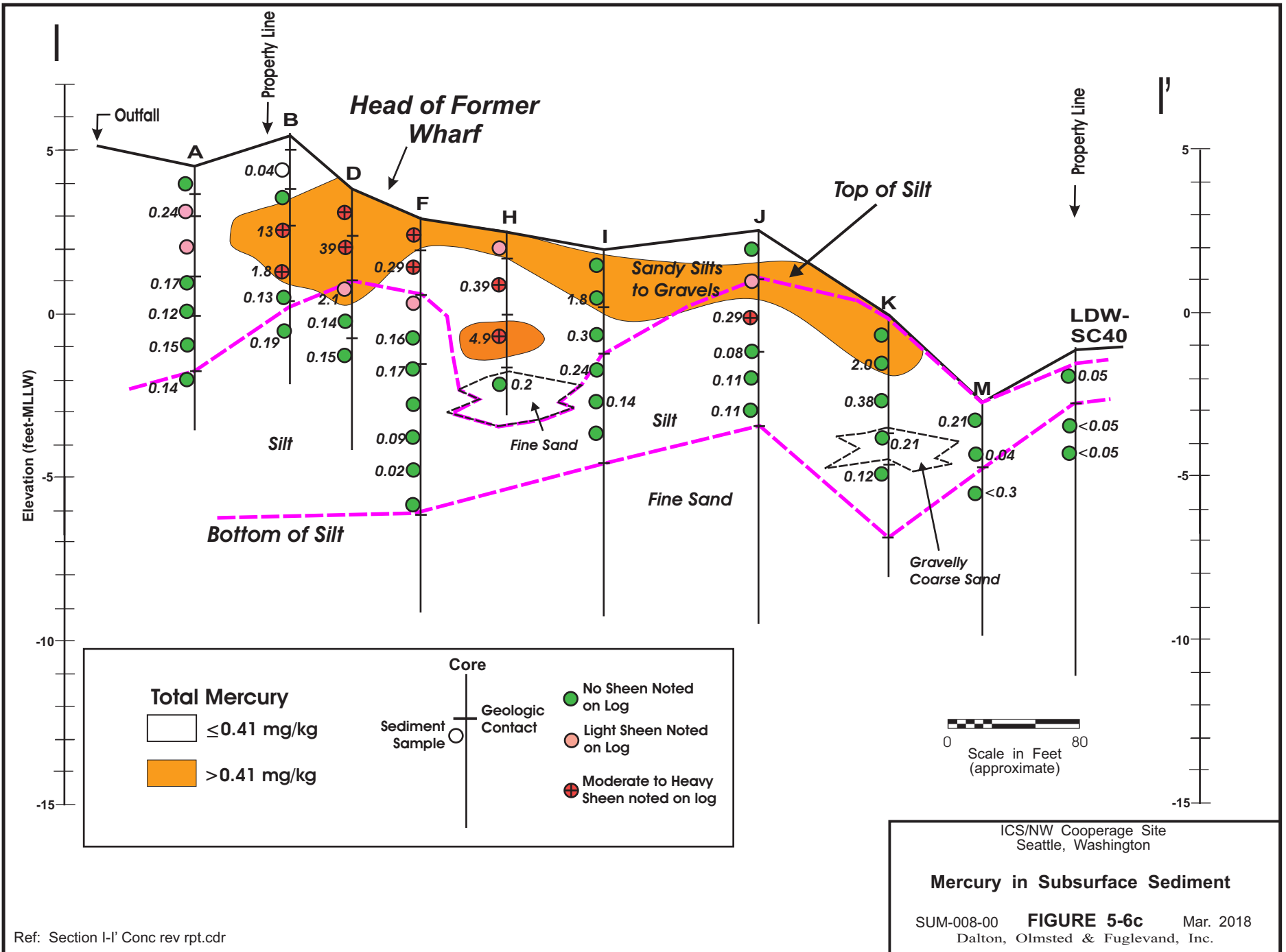




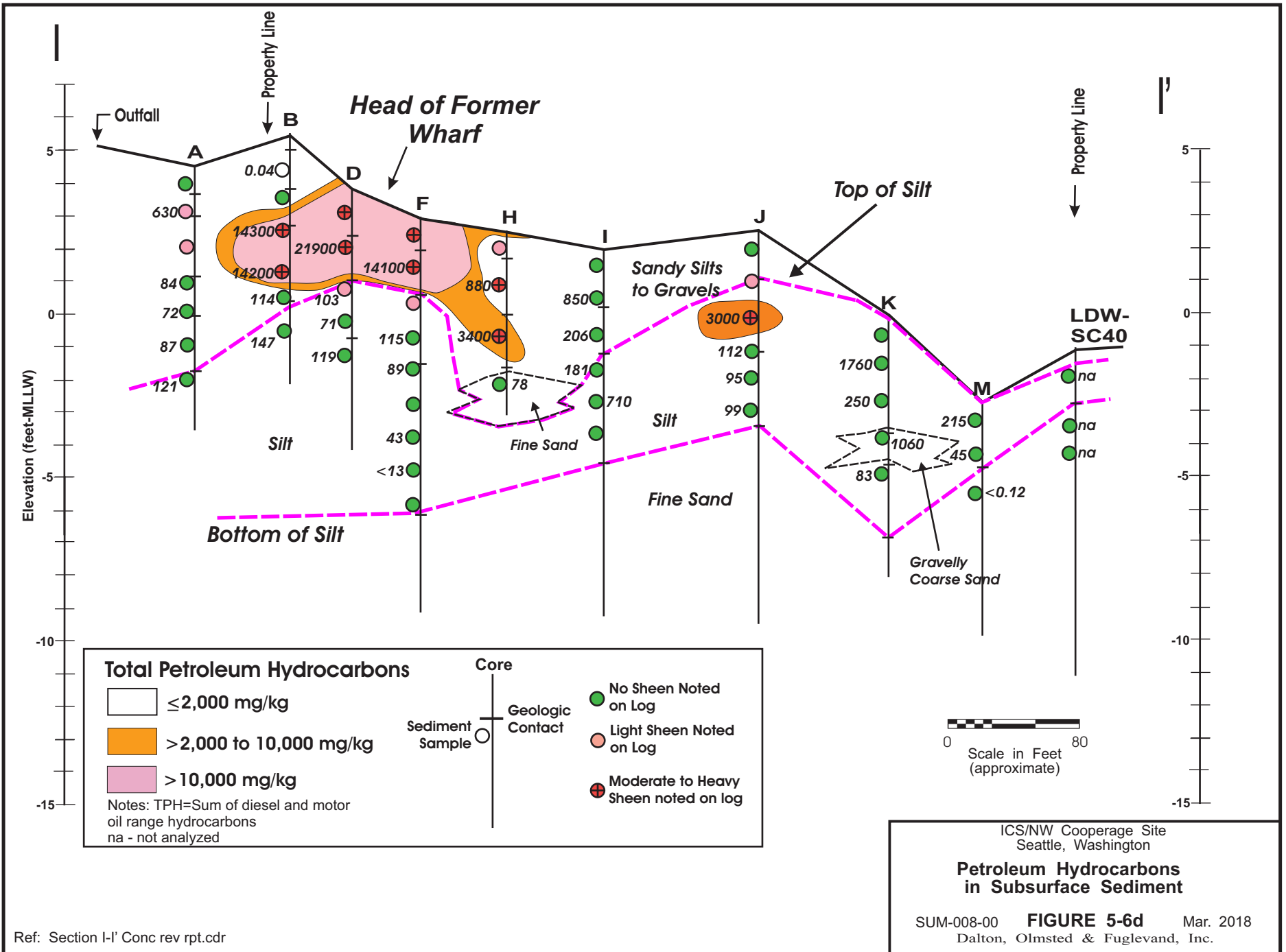
Ref: Section I-I' Conc rev rpt.cdr

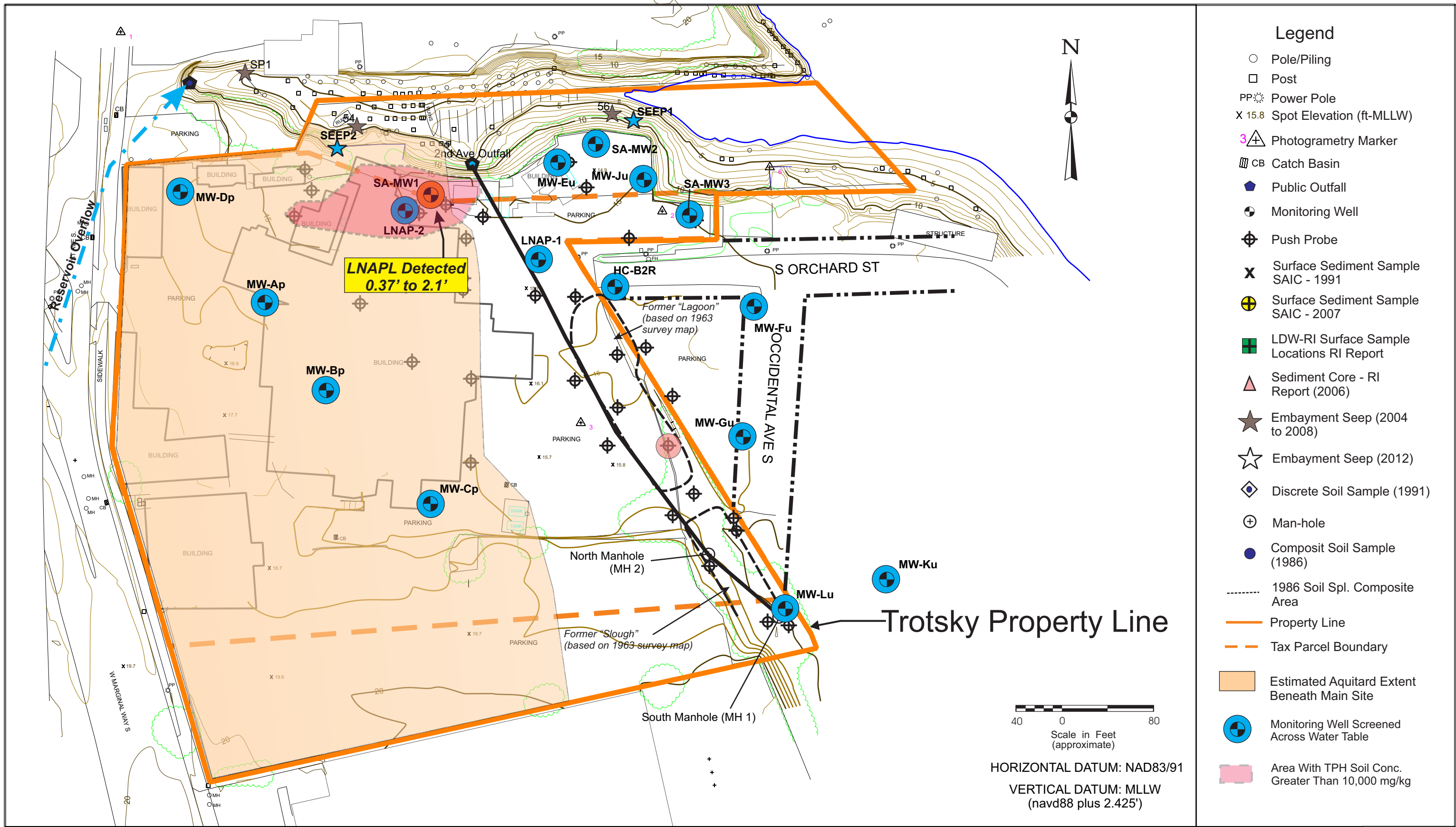


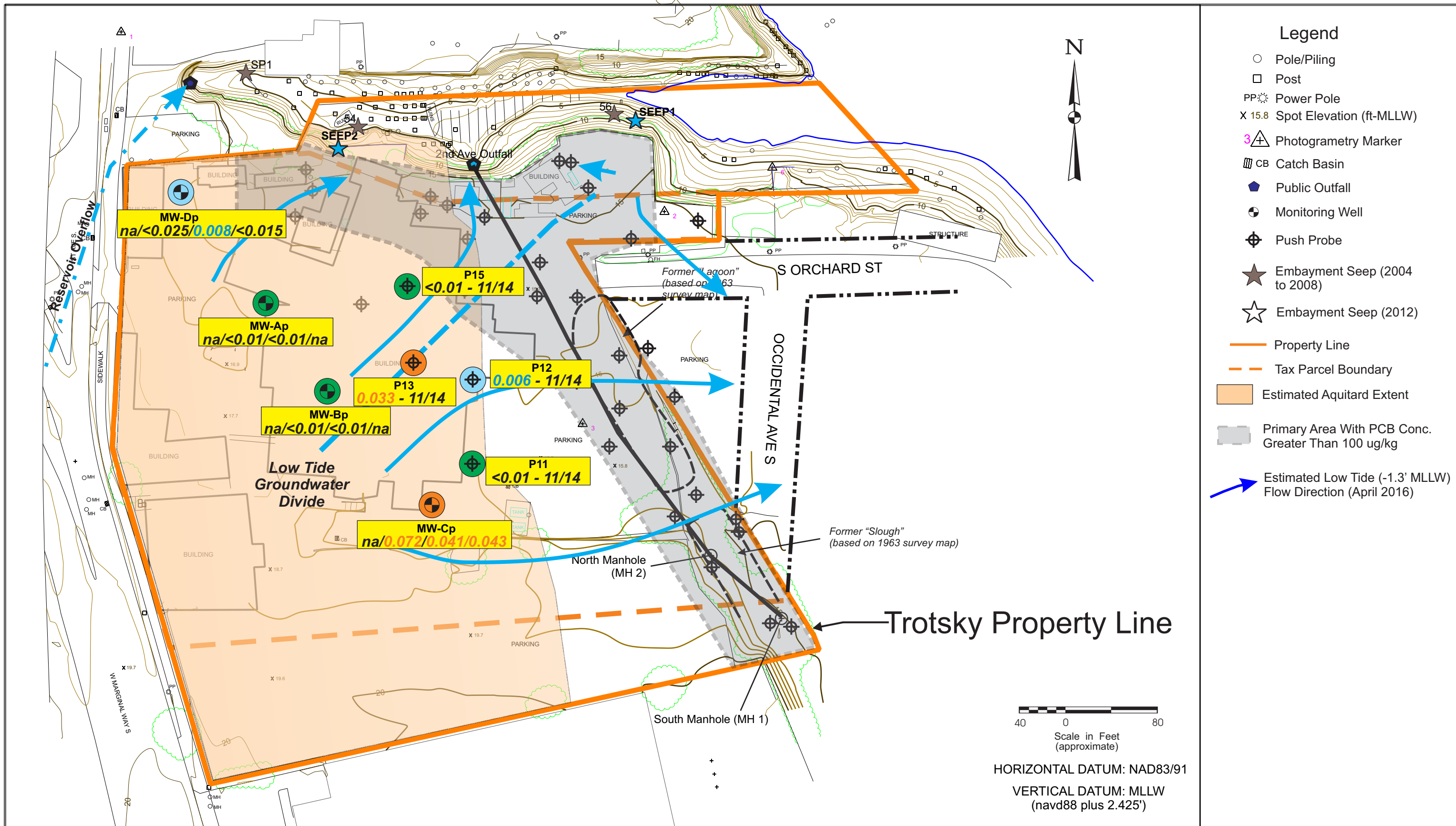
Ref: Section I-I' Conc rev rpt.cdr



Ref: Section I-I' Conc rev rpt.cdr



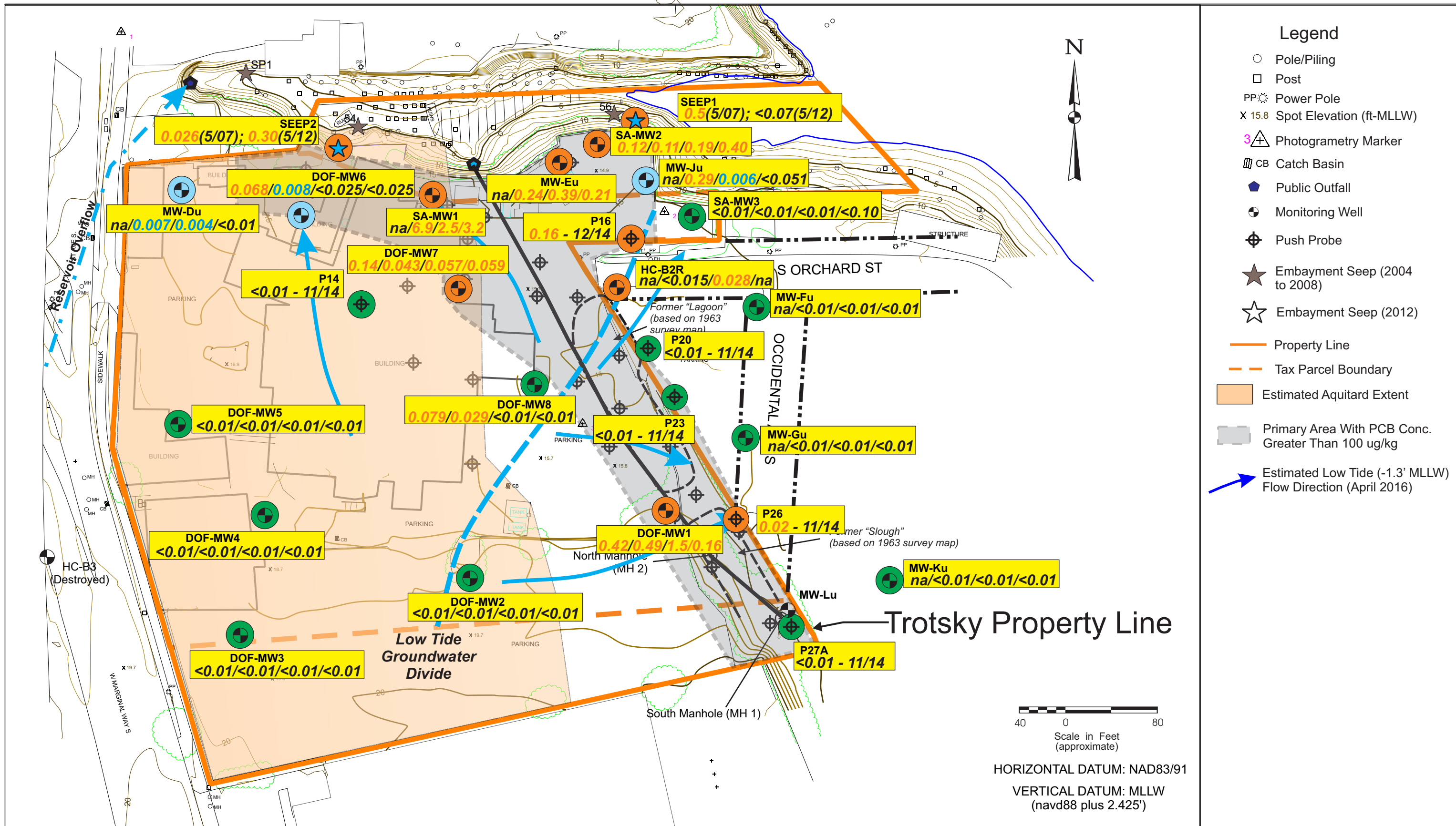




● Concentration ≤ Screening Level (SL= 7.0E-06\*; PQL=0.01 ug/l)    2.0/5.3/6.0/2.0 Concentration - ug/l (11-2012/11-2015/3-2016/9-2016)  
● Concentration > Screening Level (SL= 7.0E-06\*; PQL=0.01 ug/l)    na - Not Available; \* SL Based on PQL  
● Detection at or below PQL

Ref: TPCBs GW Plot R1-R3rev.cdr

<b>ICS/NW Cooperage Site</b>		<b>FIGURE 5-8a</b>
<b>Total PCB Concentrations Water Table Zone Above Aquitard</b>		
SUM-008-00 (ICS)	Mar. 2018	
Dalton, Olmsted & Fuglevand, Inc.		

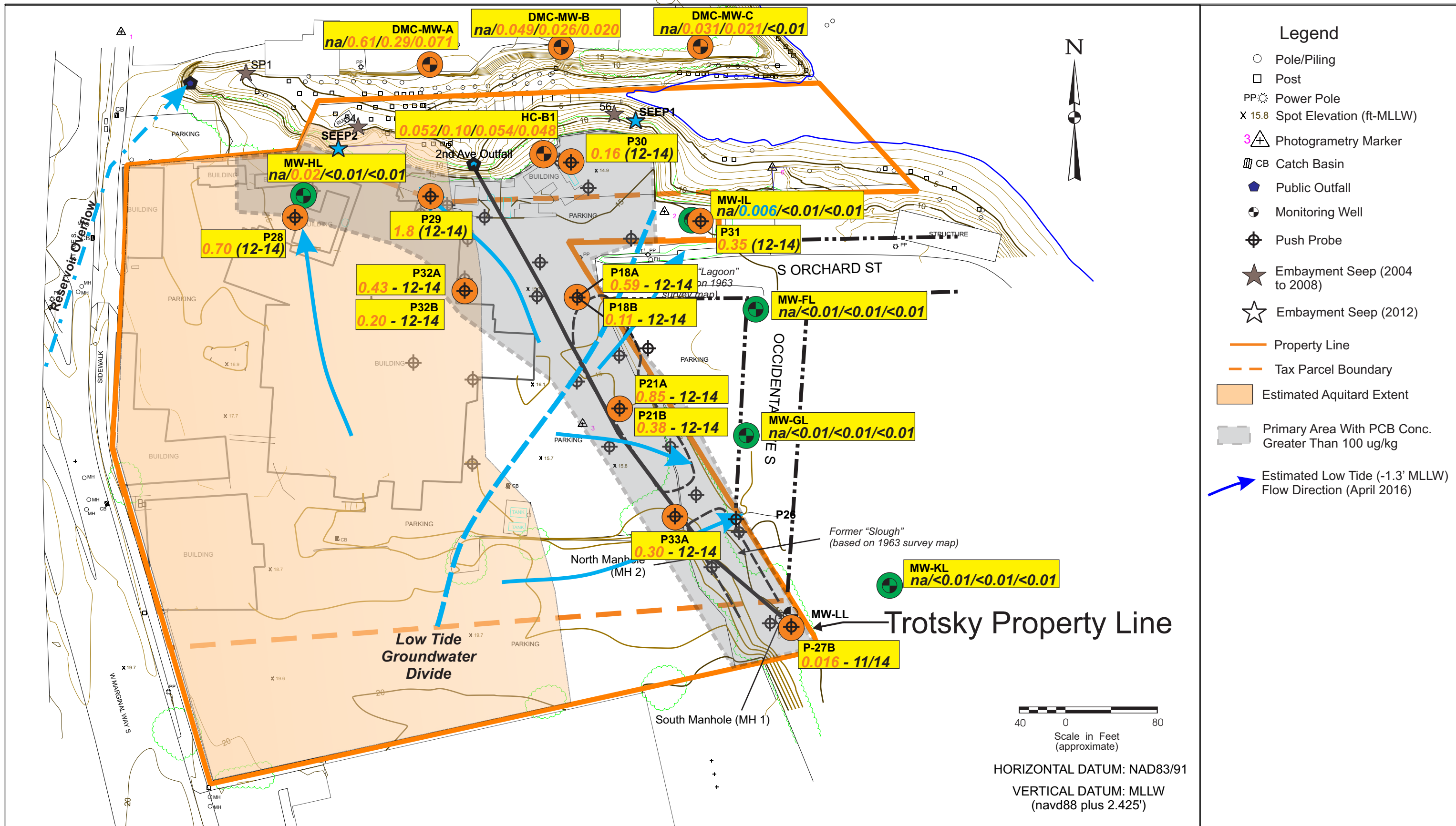


● Concentration ≤ Screening Level (SL= 7.0E-06\*; PQL=0.01 ug/l)  
● Concentration > Screening Level (SL= 7.0/E-06\*; PQL=0.01 ug/l)  
● Detection at or below PQL

2.0/5.3/6.0/2.0 Concentration - ug/l (11-2012/11-2015/3-2016/9-2016)  
 na - Not Available; \* SL Based on PQL

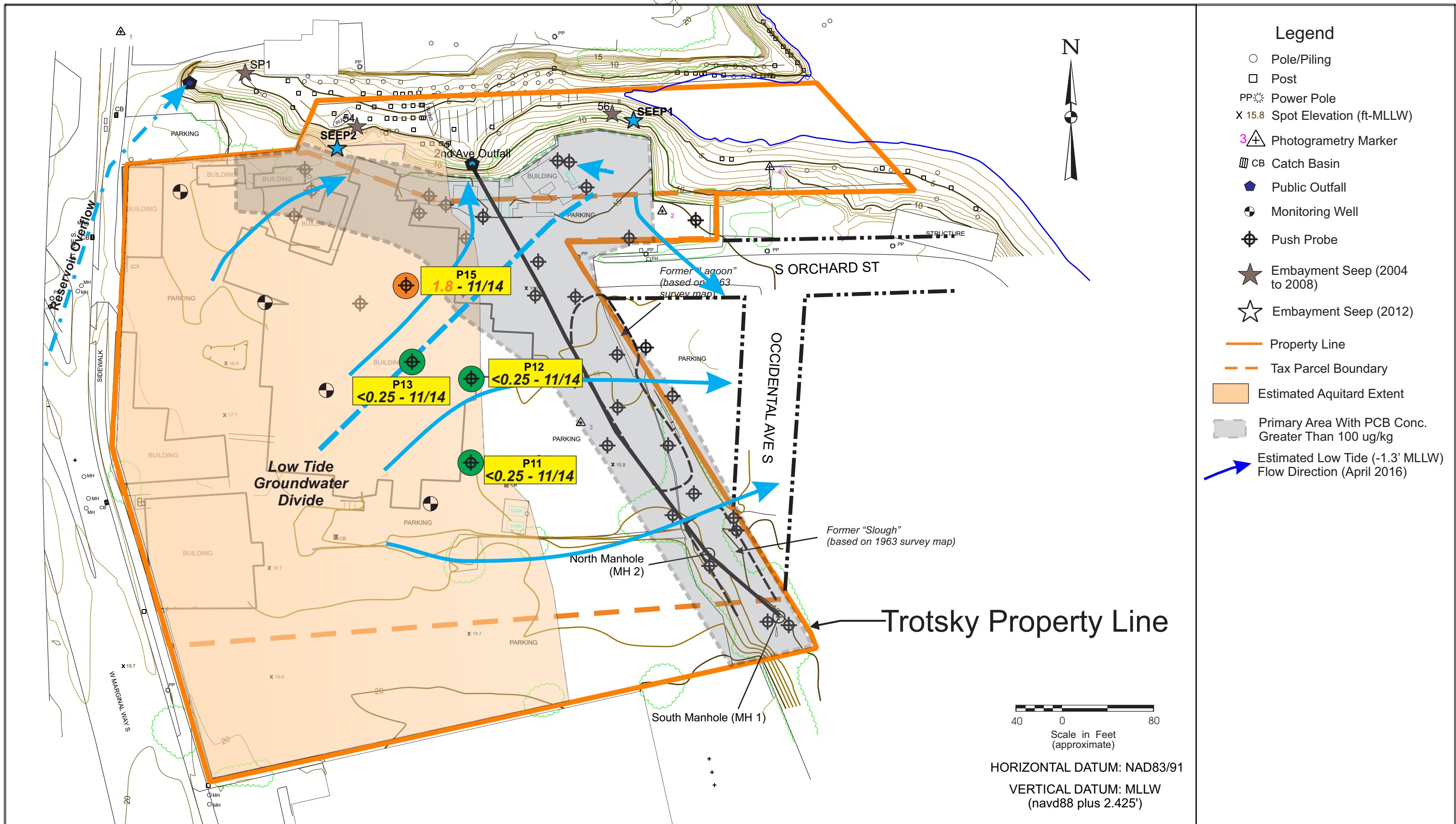
Ref: TPCBs GW Plot R1-R3rev.cdr

<b>ICS/NW Cooperage Site</b>		<b>FIGURE 5-8b</b>
<b>Total PCB Concentrations Upper Zone</b>		
SUM-008-00 (ICS)	Mar. 2018	
<i>Dalton, Olmsted &amp; Fuglevand, Inc.</i>		



<p>● Concentration ≤ Screening Level (SL= 7.0E-06*; PQL=0.01 ug/l) 2.0/5.3/6.0/2.0 Concentration - ug/l (11-2012/11-2015/3-2016/9-2016)</p> <p>● Concentration &gt; Screening Level (SL= 7.0/E-06*; PQL=0.01 ug/l) na - Not Available; * SL Based on PQL</p> <p>● Detection at or below PQL</p>	<b>ICS/NW Cooperage Site</b>		<b>FIGURE 5-8c</b>
	<b>Total PCB Concentrations Lower Zone</b>		
	SUM-008-00 (ICS)	Mar. 2018	
Ref: TPCBs GW Plot R1-R3rev.cdr		Dalton, Olmsted & Fuglevand, Inc.	



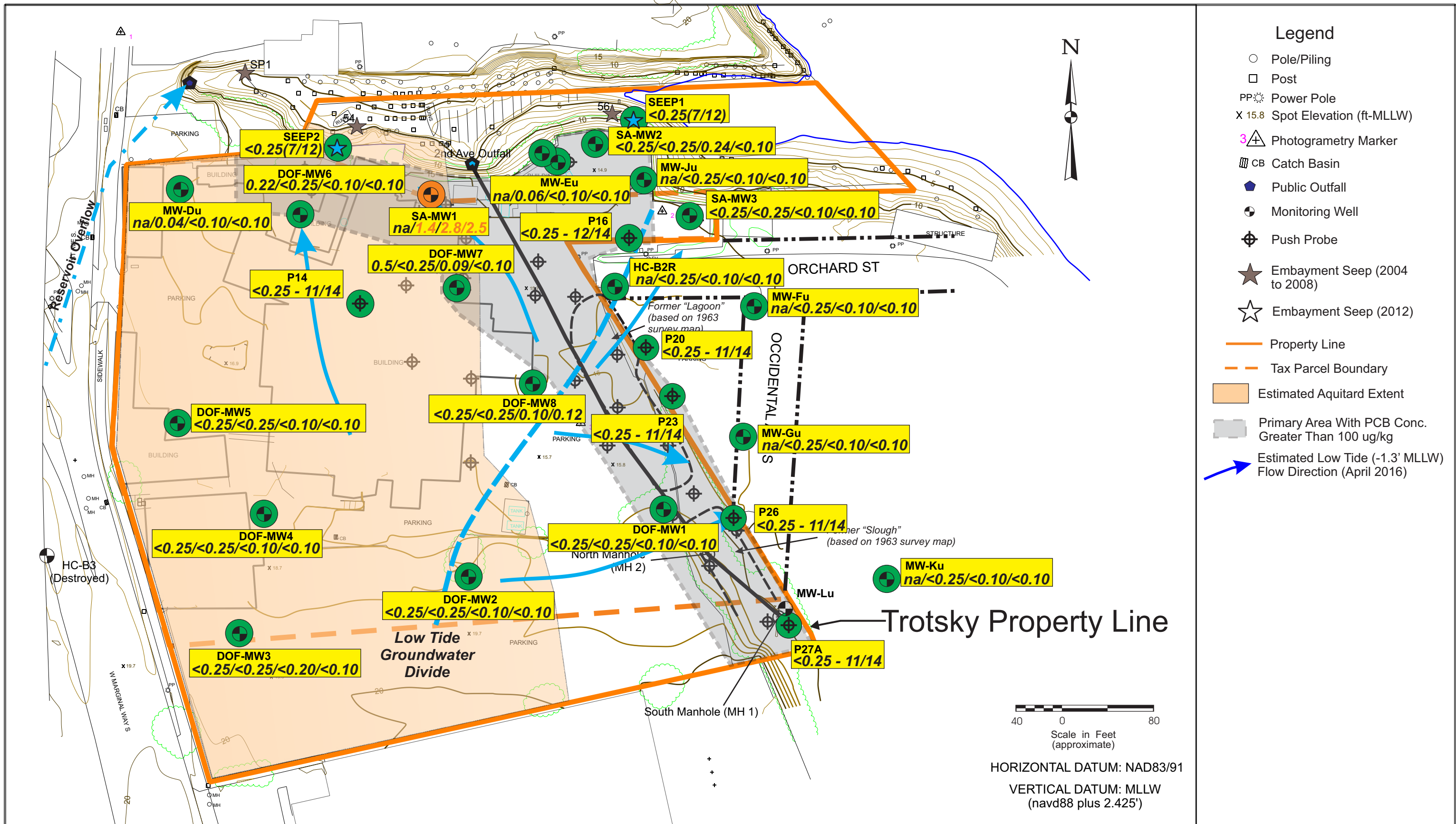


● Concentration ≤ Screening Level (SL= 0.8\* mg/l) 2.0/5.3/6.0/2.0 Sum Concentration - mg/l (11-2012/11-2015/3-2016/9-2016)  
● Concentration > Screening Level (SL= 0.8\* mg/l) na - Not Available; \* Groundwater Method A

**ICS/NW Cooperage Site**  
**Gasoline Range Organics**  
**Concentrations - Water Table Zone**  
**Above Aquitard**  
 SUM-008-00 (ICS) Mar. 2018  
 Dalton, Olmsted & Fuglevand, Inc.

**FIGURE 5-9a**

Ref: TPHG GW Plot R1-R3rev.cdr

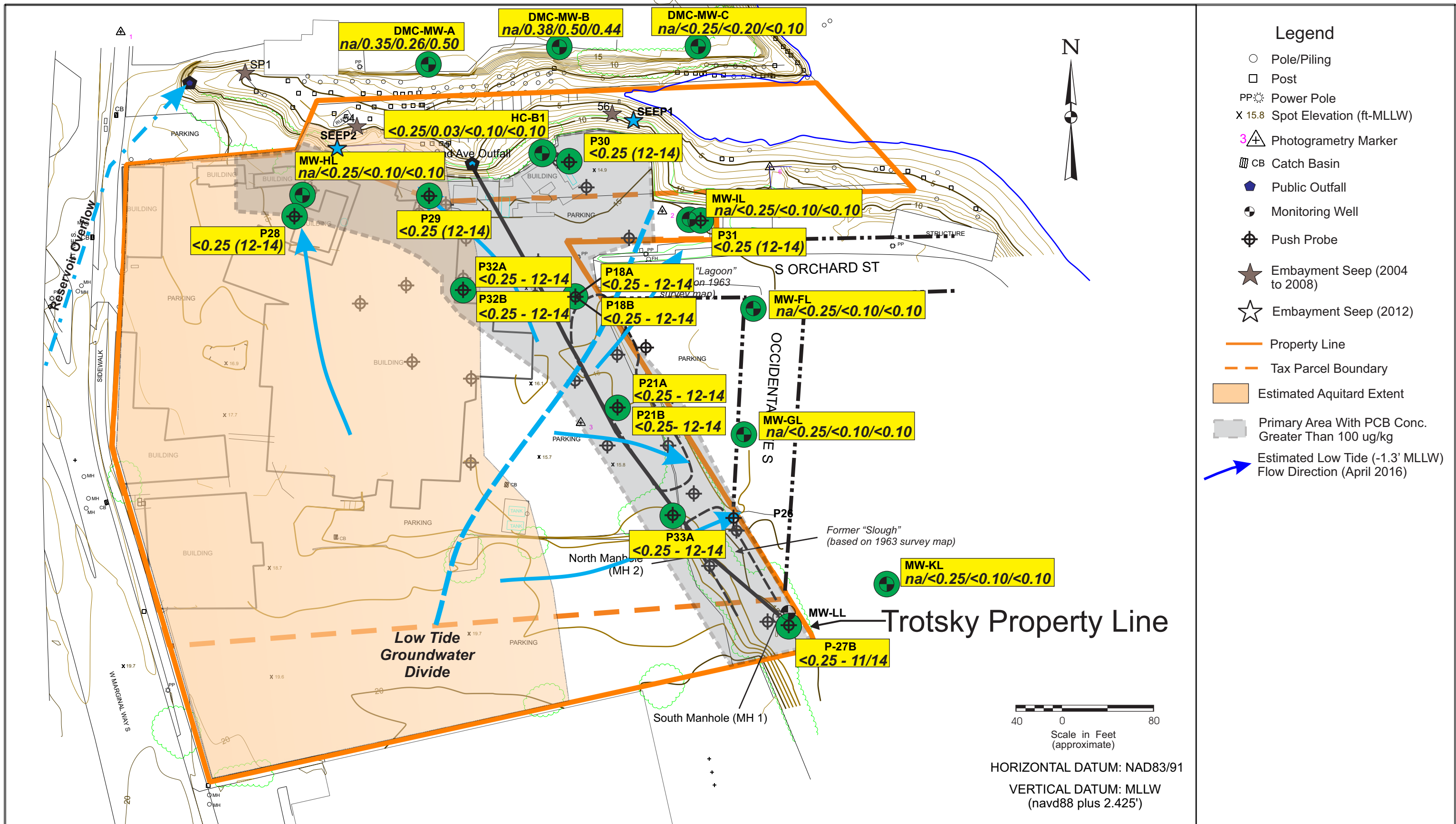


● Concentration  $\leq$  Screening Level (SL= 0.8\* mg/l) 2.0/5.3/6.0/2.0 Sum Concentration - mg/l (11-2012/11-2015/3-2016/9-2016)  
● Concentration  $>$  Screening Level (SL= 0.8\* mg/l) na - Not Available; \* Groundwater Method A

**ICS/NW Cooperage Site**  
**Gasoline Range Organics Concentrations - Upper Zone**  
 SUM-008-00 (ICS) Mar. 2018  
 Dalton, Olmsted & Fuglevand, Inc.

**FIGURE 5-9b**

Ref: TPHG GW Plot R1-R3rev.cdr

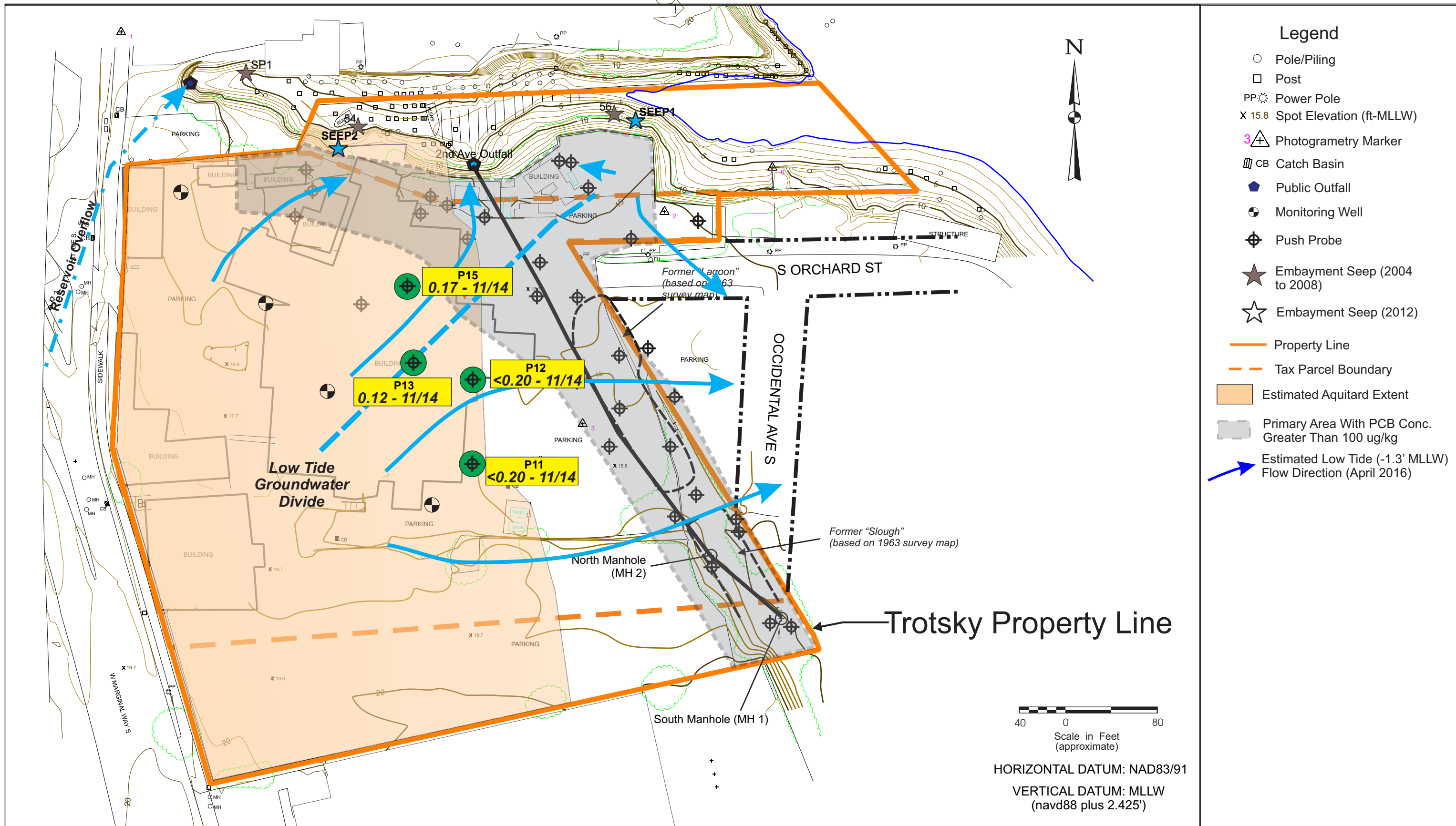


● Concentration ≤ Screening Level (SL= 0.8\* mg/l) 2.0/5.3/6.0/2.0 Sum Concentration - mg/l (11-2012/11-2015/3-2016/9-2016)  
● Concentration > Screening Level (SL= 0.8\* mg/l) na - Not Available; \* Groundwater Method A

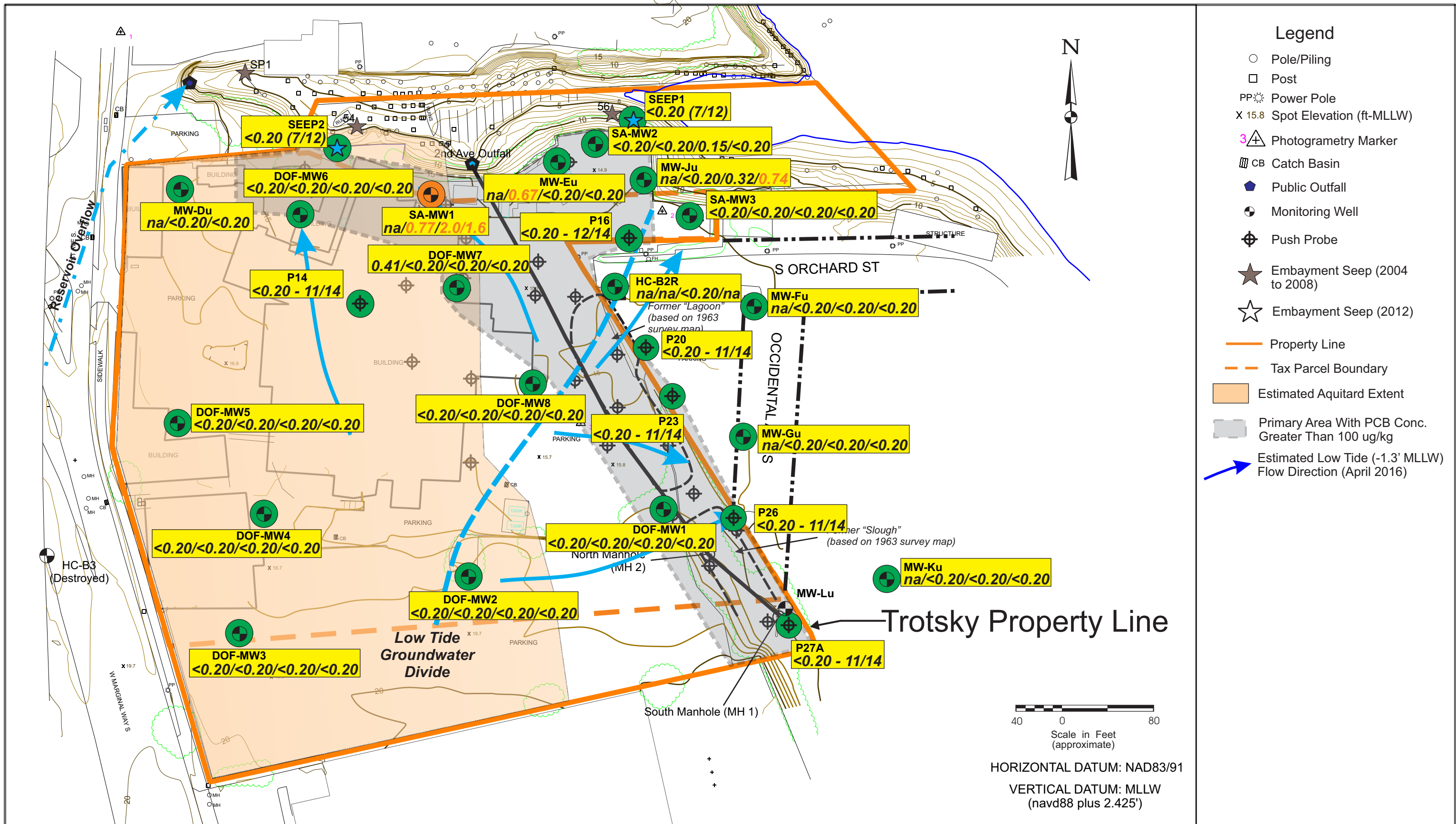
**ICS/NW Cooperage Site**  
**Gasoline Range Organics Concentrations - Lower Zone**  
 SUM-008-00 (ICS) Mar. 2018  
 Dalton, Olmsted & Fuglevand, Inc.

**FIGURE 5-9c**

Ref: TPHG GW Plot R1-R3rev.cdr



<p>● Concentration ≤ Screening Level (SL= 0.5* mg/l) 2.0/5.3/6.0/2.0 Sum Concentration - mg/l (11-2012/11-2015/3-2016/9-2016)</p> <p>● Concentration &gt; Screening Level (SL= 0.5* mg/l) na - Not Available; * Groundwater Method A</p>	<p><b>ICS/NW Cooperage Site</b></p> <p><b>Diesel/Heavy-Oil Range Organics Concentrations - Water Table Zone Above Aquitard</b></p> <p>SUM-008-00 (ICS) Mar. 2018</p> <p>Dalton, Olmsted &amp; Fuglevand, Inc.</p>	<p><b>FIGURE 5-10a</b></p>
	<p>Ref: TPH-Dx GW Plot R1-R3rev.cdr</p>	

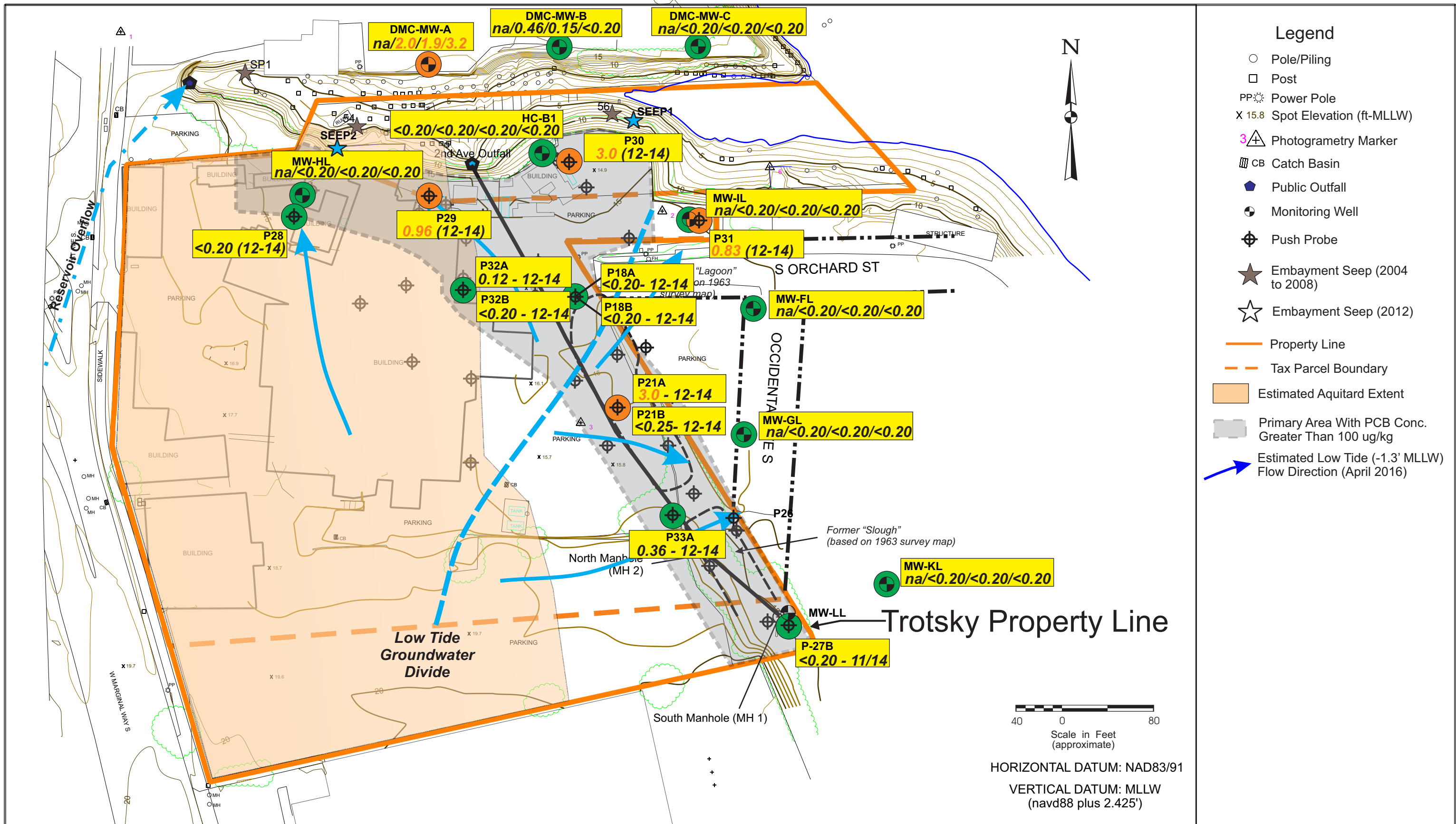


● Concentration  $\leq$  Screening Level (SL= 0.5\* mg/l)      2.0/5.3/6.0/2.0 Sum Concentration - mg/l (11-2012/11-2015/3-2016/9-2016)  
● Concentration  $>$  Screening Level (SL= 0.5\* mg/l)      na - Not Available; \* Groundwater Method A

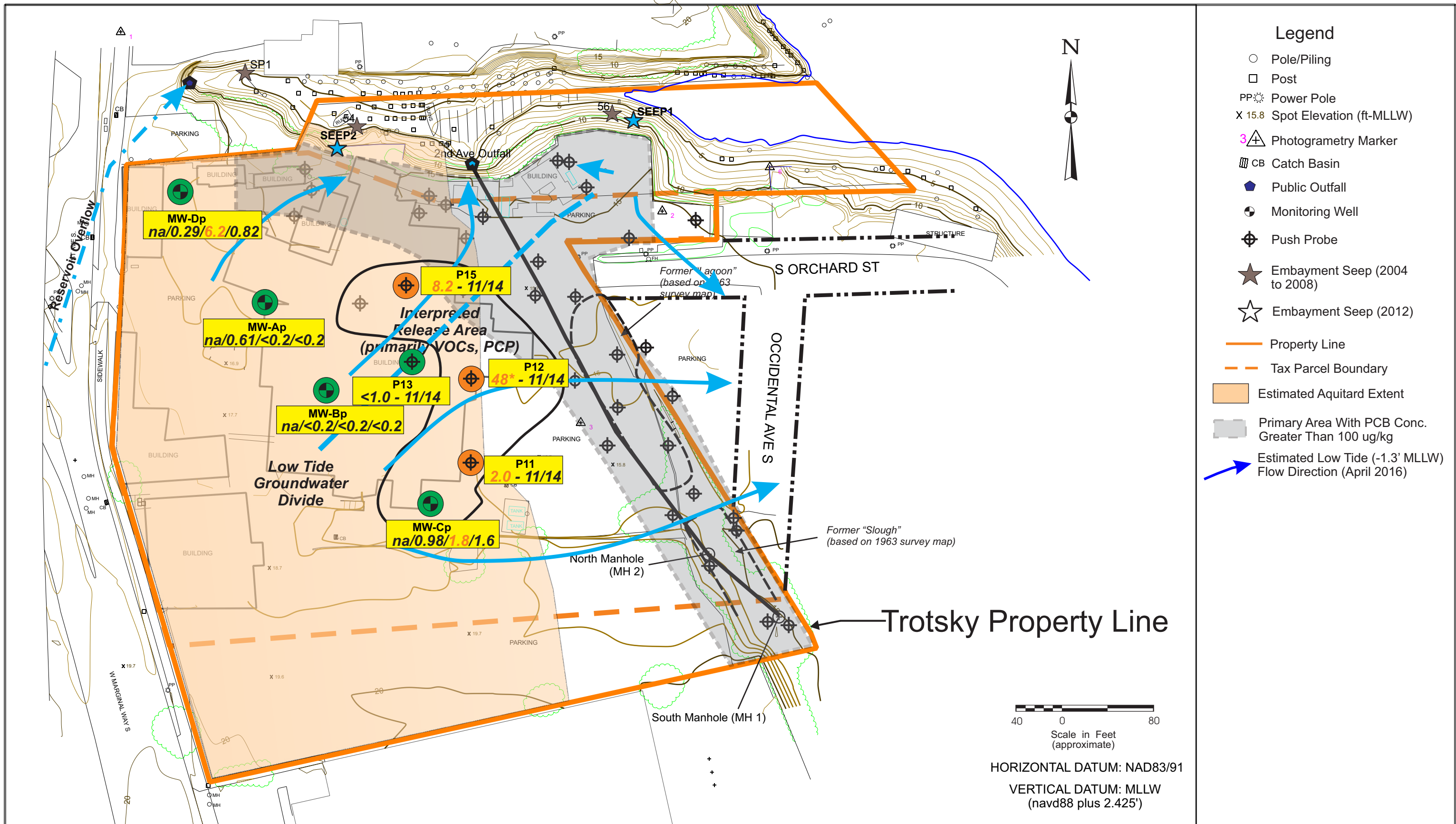
**ICS/NW Cooperage Site**  
**Diesel/Heavy-Oil Range Organics Concentrations - Upper Zone**  
 SUM-008-00 (ICS)      Mar. 2018  
*Dalton, Olmsted & Fuglevand, Inc.*

**FIGURE 5-10b**

Ref: TPH-Dx GW Plot R1-R3rev.cdr



Ref: TPHG GW Plot R1-R3rev.cdr ● Concentration ≤ Screening Level (SL= 0.5* mg/l) ● Concentration > Screening Level (SL= 0.5* mg/l)	2.0/5.3/6.0/2.0 Sum Concentration - mg/l (11-2012/11-2015/3-2016/9-2016)	<b>ICS/NW Cooperage Site</b>	<b>FIGURE 5-10c</b>
	na - Not Available; * Groundwater Method A	<b>Diesel/Heavy-Oil Range Organics Concentrations - Lower Zone</b>	
		SUM-008-00 (ICS) Mar. 2018 Dalton, Olmsted & Fuglevand, Inc.	

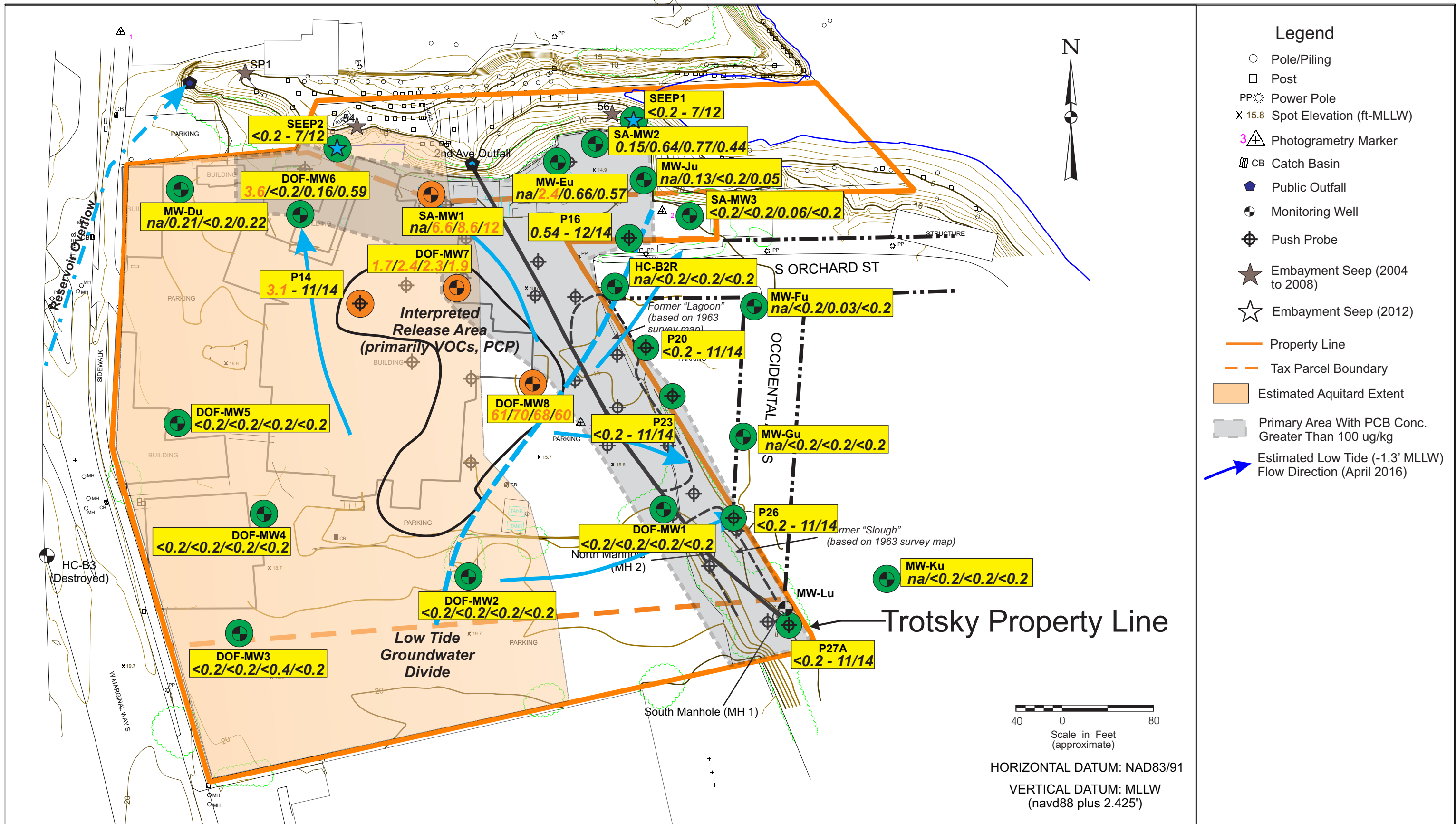


● Concentration  $\leq$  Screening Level (SL = 1.6\* ug/l)  
● Concentration  $>$  Screening Level (SL = 1.6\* ug/l)

2.0/5.3/6.0/0.61 Concentration - ug/l (11-2012/11-2015/3-2016/10-2016)  
 na - Not Available; \* Surface Water

<b>ICS/NW Cooperage Site</b>		<b>FIGURE 5-11a</b>
<b>Benzene Concentrations Water Table Zone Above Aquitard</b>		
SUM-008-00 (ICS)	Mar. 2018	
<i>Dalton, Olmsted &amp; Fuglevand, Inc.</i>		

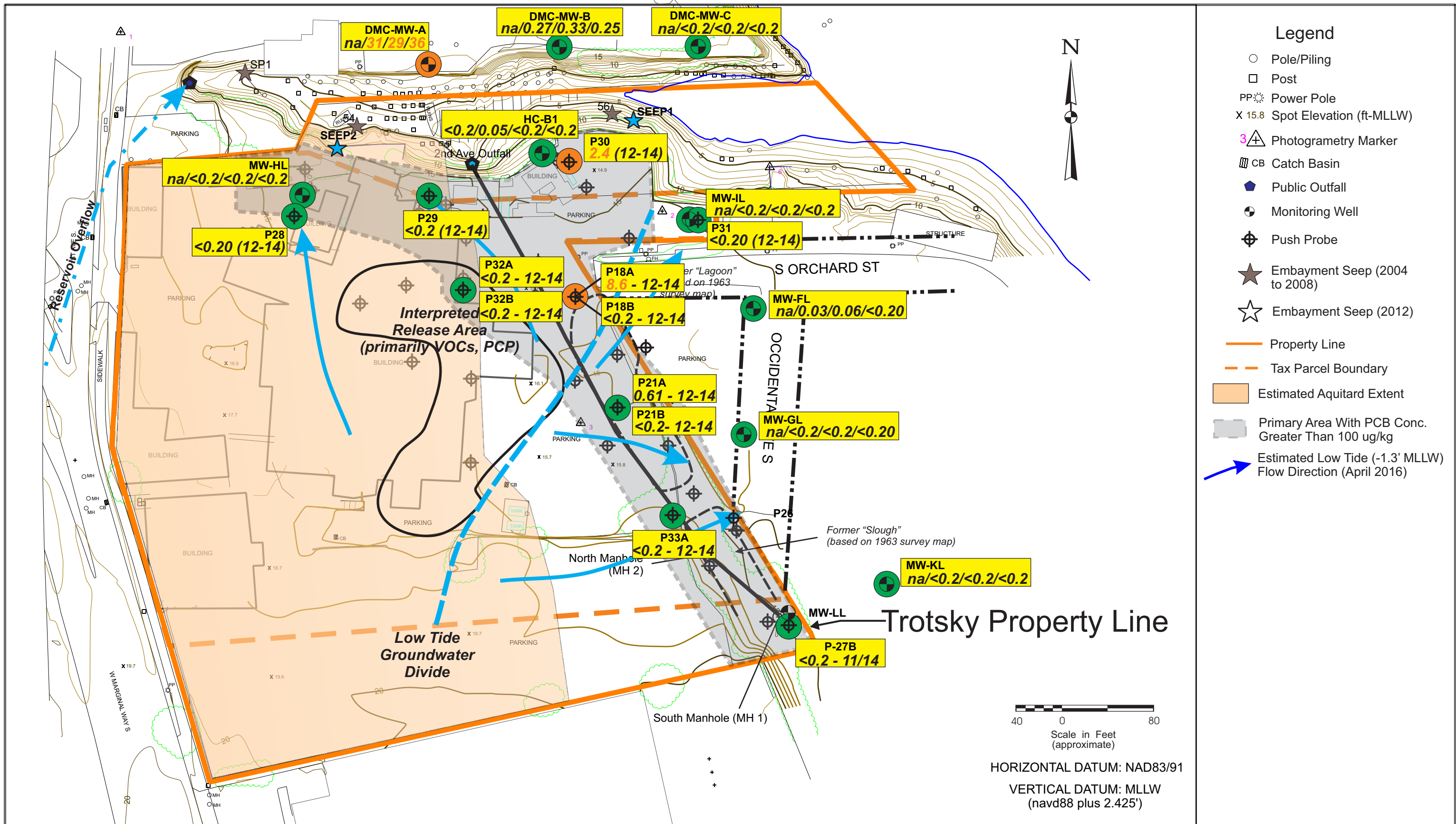
Ref: Benzene GW Plot R1-R3rev.cdr



● Concentration ≤ Screening Level (SL = 1.6\* ug/l)      2.0/5.3/6.0/0.61 Concentration - ug/l (11-2012/11-2015/3-2016/9-2016)  
● Concentration > Screening Level (SL = 1.6\* ug/l)      na - Not Available; \* Surface Water

<b>ICS/NW Cooperage Site</b>		<b>FIGURE 5-11b</b>
<b>Benzene Concentrations Upper Zone</b>		
SUM-008-00 (ICS)	Mar. 2018	
<i>Dalton, Olmsted &amp; Fuglevand, Inc.</i>		

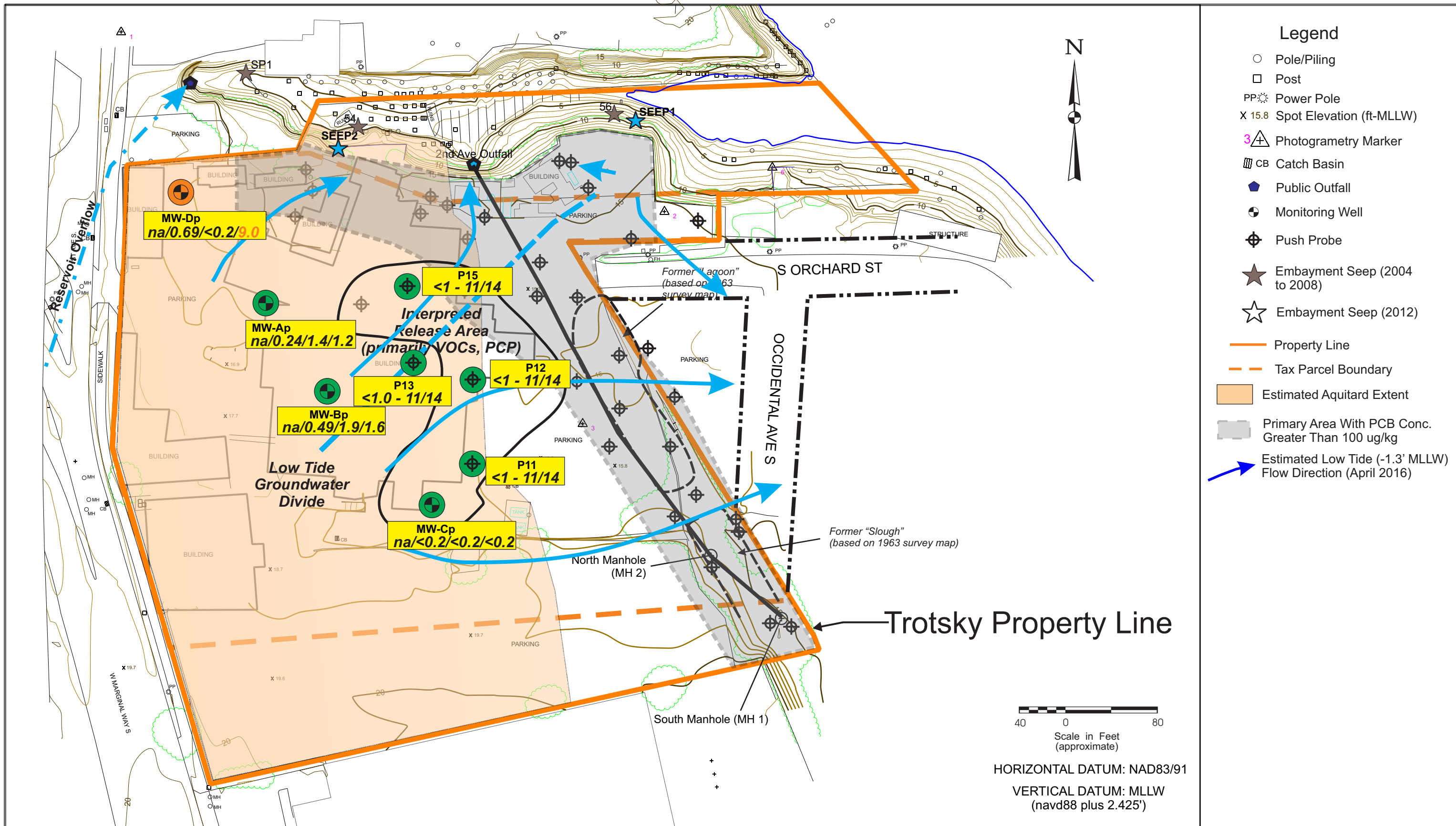




● Concentration ≤ Screening Level (SL= 1.6\* ug/l)      2.0/5.3/6.0/0.61 Concentration - ug/l (11-2012/11-2015/3-2016/10-2016)  
● Concentration > Screening Level (SL= 1.6\* ug/l)      na - Not Available; \* Surface Water

**ICS/NW Cooperage Site**  
**Benzene Concentrations**  
**Lower Zone**  
 SUM-008-00 (ICS) Mar. 2018  
 Dalton, Olmsted & Fuglevand, Inc.

**FIGURE 5-11c**



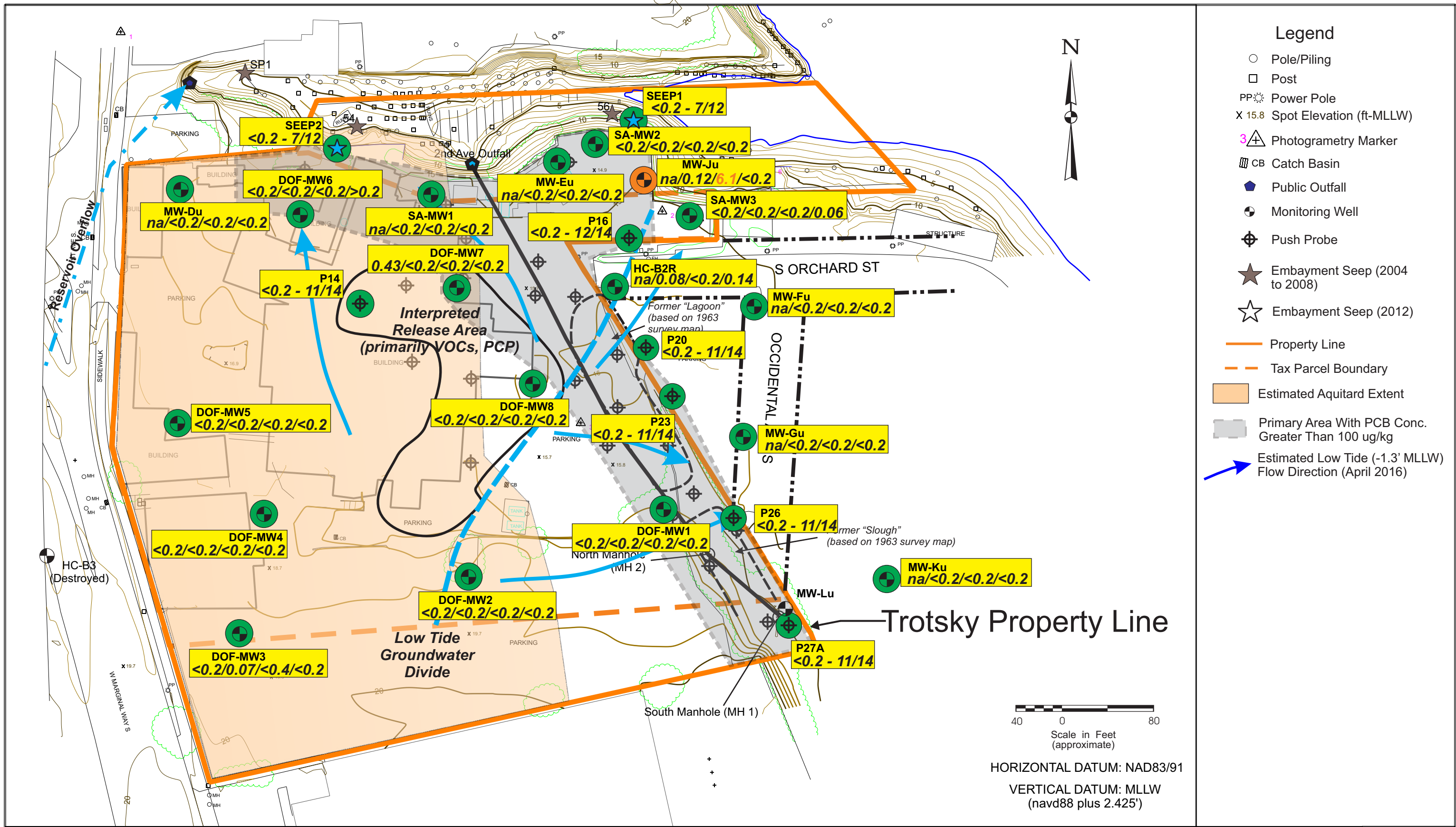
● Concentration ≤ Screening Level (SL=2.9\*ug/l)  
 ● Concentration > Screening Level (SL= 2.9\* ug/l)

2.0/5.3/6.0/2.0 Concentration - ug/l (11-2012/11-2015/3-2016/9-2016)  
 na - Not Available; \* Surface Water

**ICS/NW Cooprage Site**  
**Tetrachloroethene Concentrations**  
**Water Table Zone Above Aquitard**  
 SUM-008-00 (ICS) Mar. 2018  
 Dalton, Olmsted & Fuglevand, Inc.

**FIGURE 5-12a**

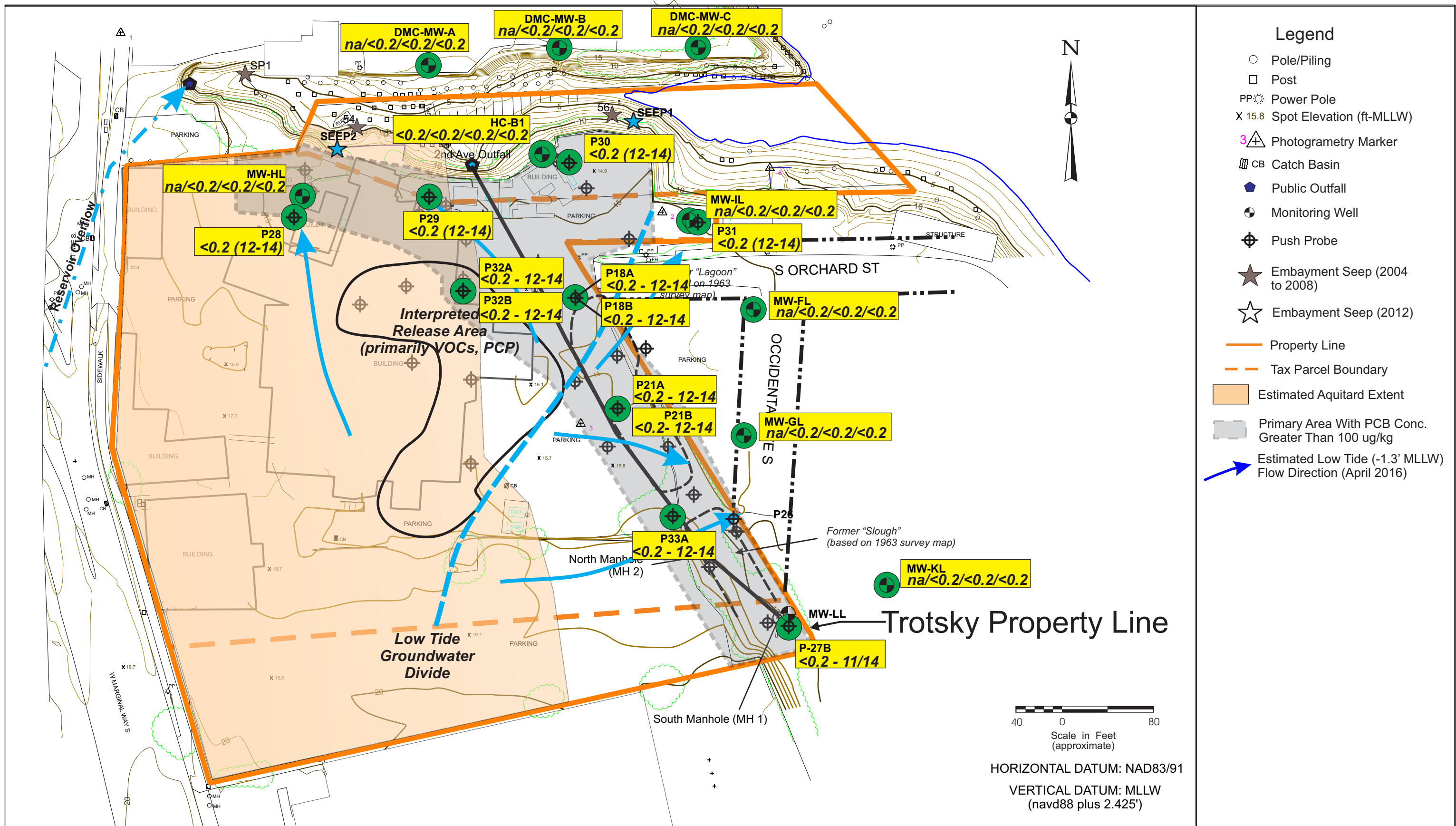
Ref: PCE GW Plot R1-R3rev.cdr



● Concentration ≤ Screening Level (SL=2.9\*ug/l)      2.0/5.3/6.0/2.0 Concentration - ug/l (11-2012/11-2015/3-2016/9-2016)  
● Concentration > Screening Level (SL= 2.9\* ug/l)      na - Not Available; \* Surface Water

<b>ICS/NW Cooperage Site</b>		<b>FIGURE 5-12b</b>
<b>Tetrachloroethene Concentrations Upper Zone</b>		
SUM-008-00 (ICS)	Mar. 2018	
<i>Dalton, Olmsted &amp; Fuglevand, Inc.</i>		

Ref: PCE GW Plot R1-R3rev.cdr



- Concentration ≤ Screening Level (SL=2.9\*ug/l)
- Concentration > Screening Level (SL= 2.9\* ug/l)

2.0/5.3/6.0/2.0 Concentration - ug/l (11-2012/11-2015/3-2016/9-2016)  
 na - Not Available; \* Surface Water

ICS/NW Cooprage Site

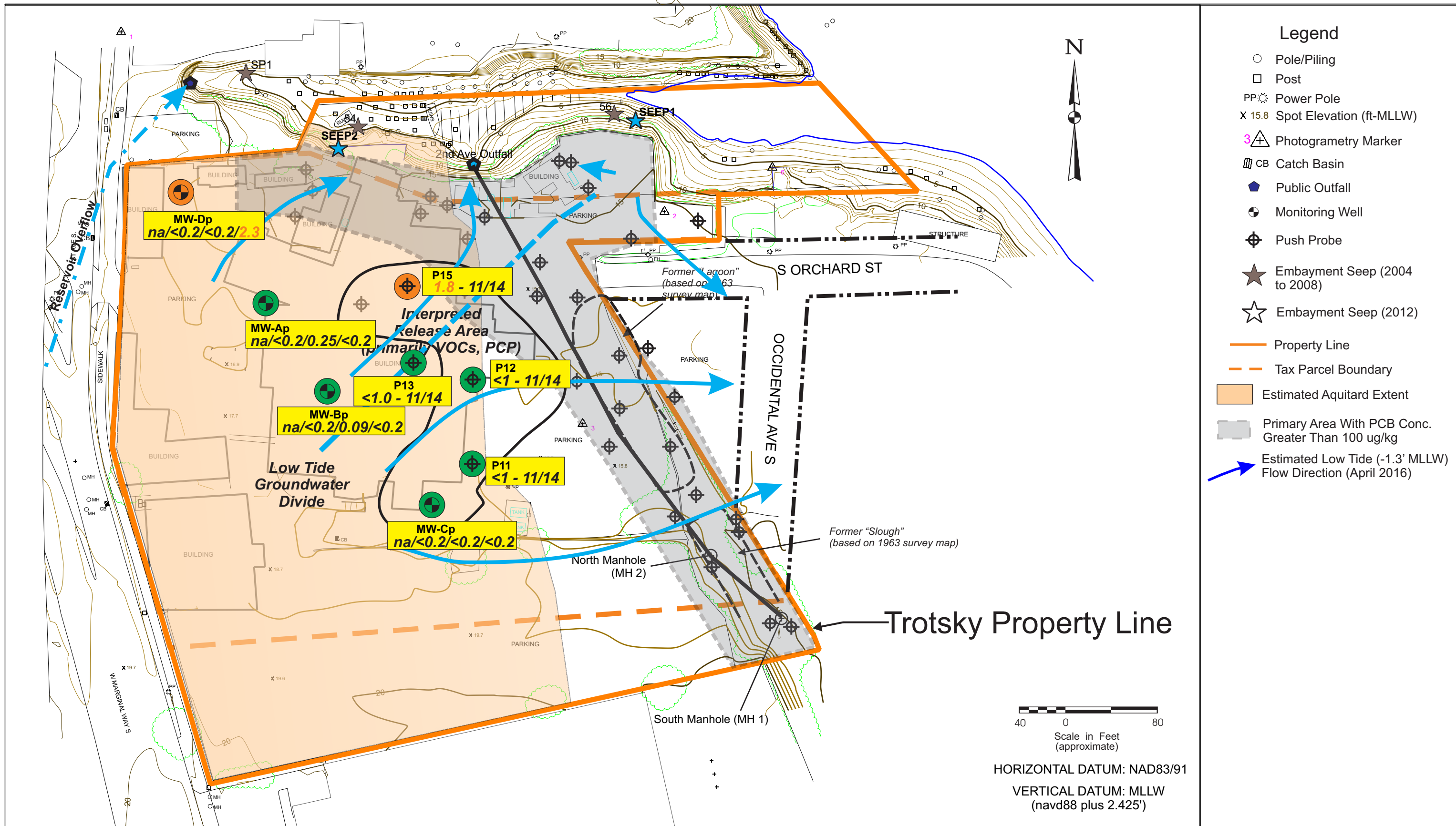
**Tetrachloroethene Concentrations  
Lower Zone**

SUM-008-00 (ICS)

Mar. 2018

Dalton, Olmsted & Fuglevand, Inc.

**FIGURE  
5-12c**

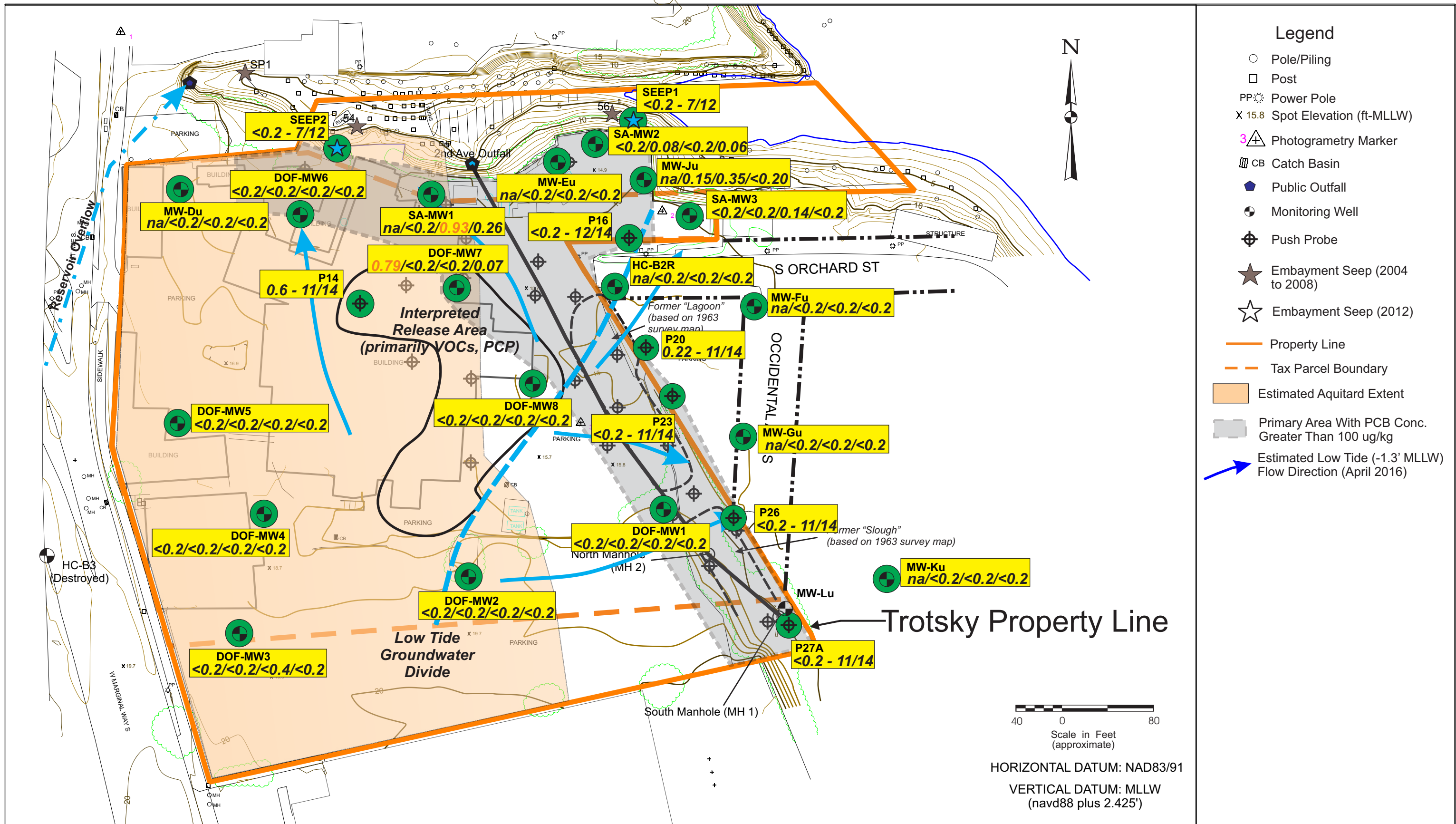


● Concentration ≤ Screening Level (SL= 0.7\* ug/l)  
 ● Concentration > Screening Level (SL= 0.7\* ug/l)

2.0/5.3/6.0/2.0 Concentration - ug/l (11-2012/11-2015/3-2016/9-2016)  
 na - Not Available; \* Surface Water

<b>ICS/NW Cooprage Site</b>		<b>FIGURE 5-13a</b>
<b>Trichloroethene Concentrations Water Table Zone Above Aquitard</b>		
SUM-008-00 (ICS)	Mar. 2018	
<i>Dalton, Olmsted &amp; Fuglevand, Inc.</i>		

Ref: TCE GW Plot R1-R3rev.cdr



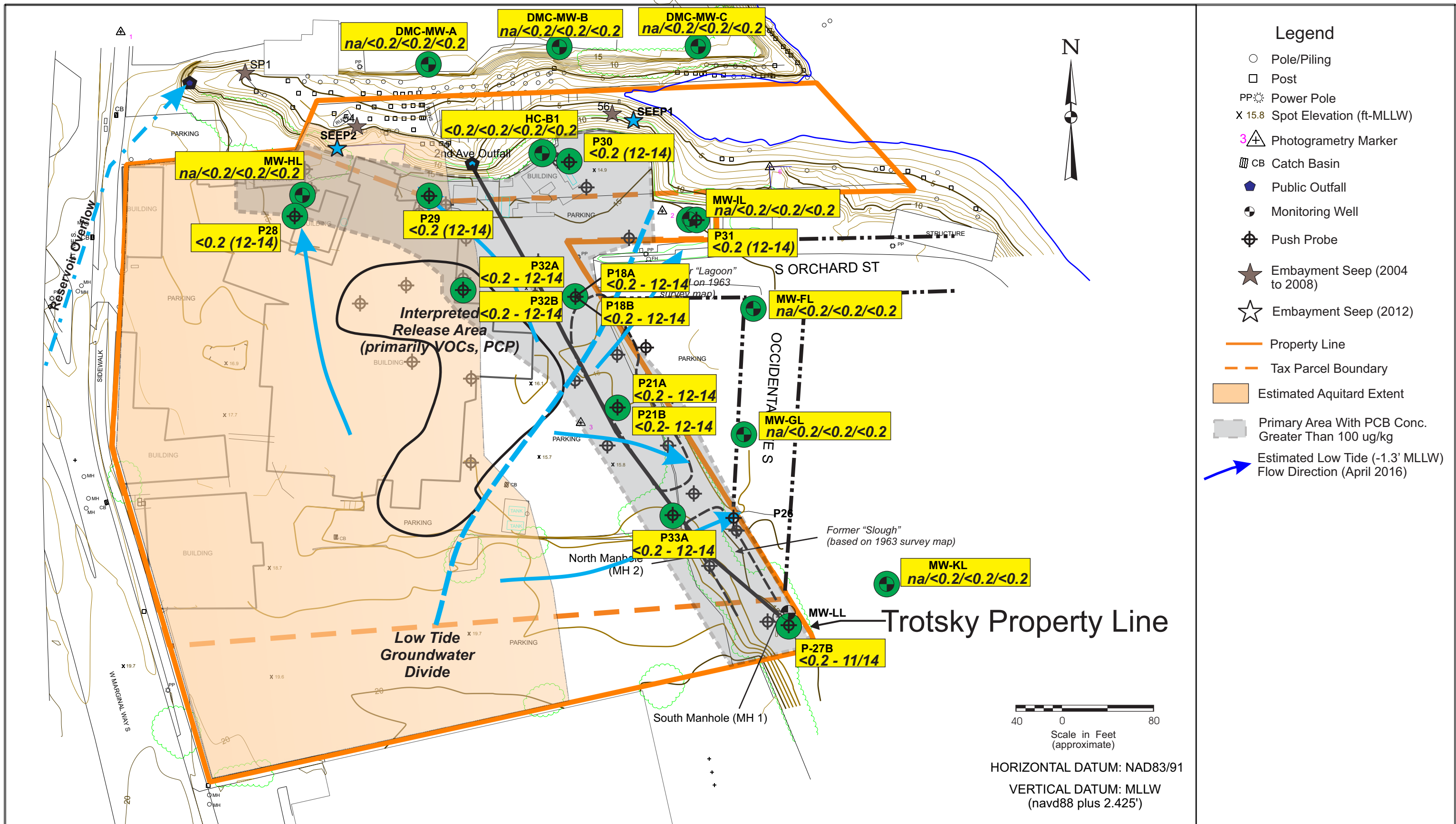
● Concentration ≤ Screening Level (SL= 0.7\* ug/l)  
● Concentration > Screening Level (SL= 0.7\* ug/l)

2.0/5.3/6.0/2.0 Concentration - ug/l (11-2012/11-2015/3-2016/9-2016)  
na - Not Available; \* Surface Water

**ICS/NW Cooprage Site**  
**Trichloroethene Concentrations Upper Zone**  
SUM-008-00 (ICS) Mar. 2018  
Dalton, Olmsted & Fuglevand, Inc.

**FIGURE 5-13b**

Ref: TCE GW Plot R1-R3rev.cdr

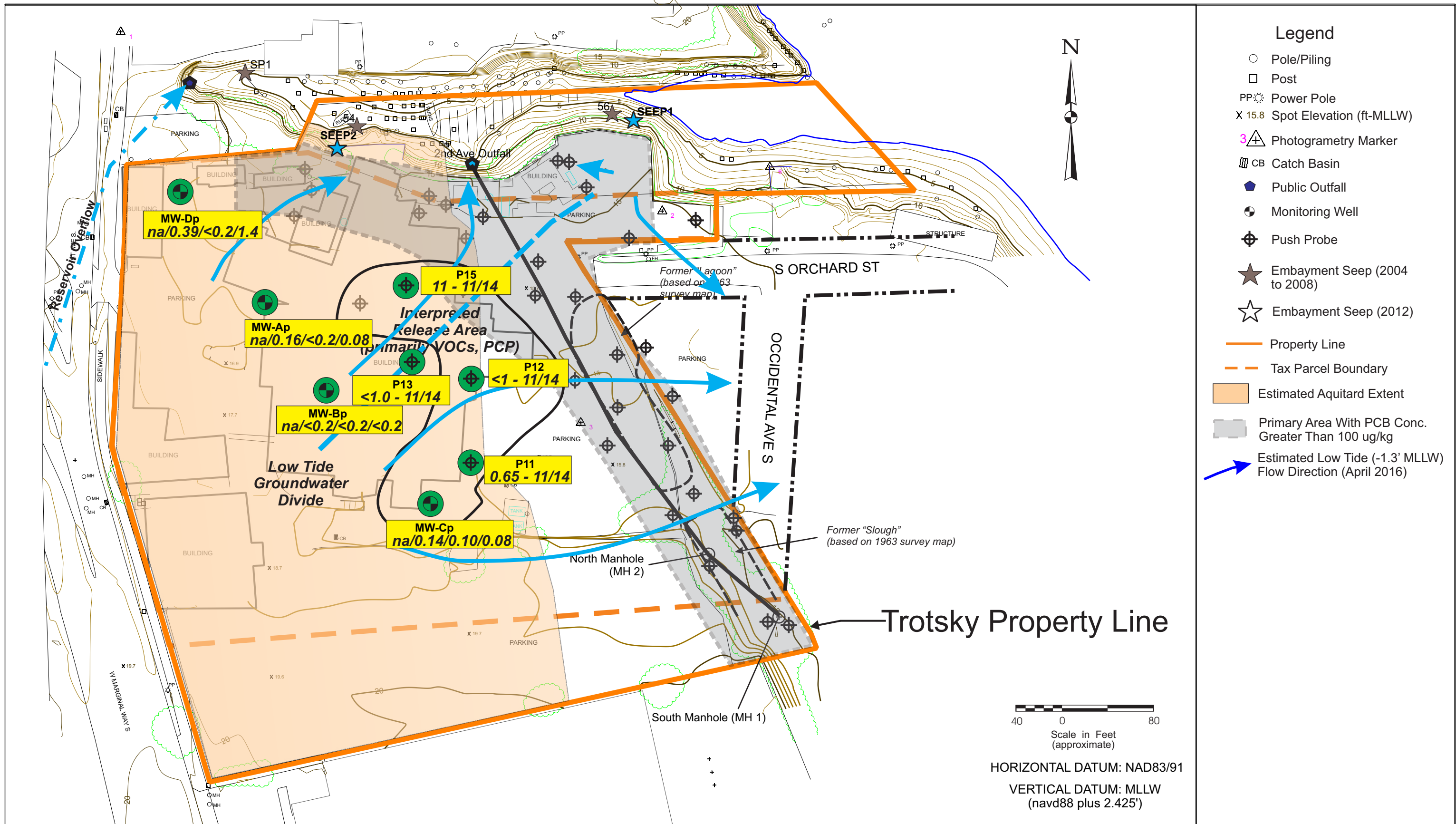


● Concentration ≤ Screening Level (SL= 0.7\* ug/l)  
● Concentration > Screening Level (SL= 0.7\* ug/l)

2.0/5.3/6.0/2.0 Concentration - ug/l (11-2012/11-2015/3-2016/9-2016)  
 na - Not Available; \* Surface Water

<b>ICS/NW Cooperage Site</b>		<b>FIGURE 5-13c</b>
<b>Trichloroethene Concentrations Lower Zone</b>		
SUM-008-00 (ICS)	Mar. 2018	
Dalton, Olmsted & Fuglevand, Inc.		

Ref:TCE GW Plot R1-R3rev.cdr



● Concentration ≤ Screening Level (SL= na\*/16\*\* ug/l)  
 ● Concentration > Screening Level (SL= na\*/16\*\* ug/l)

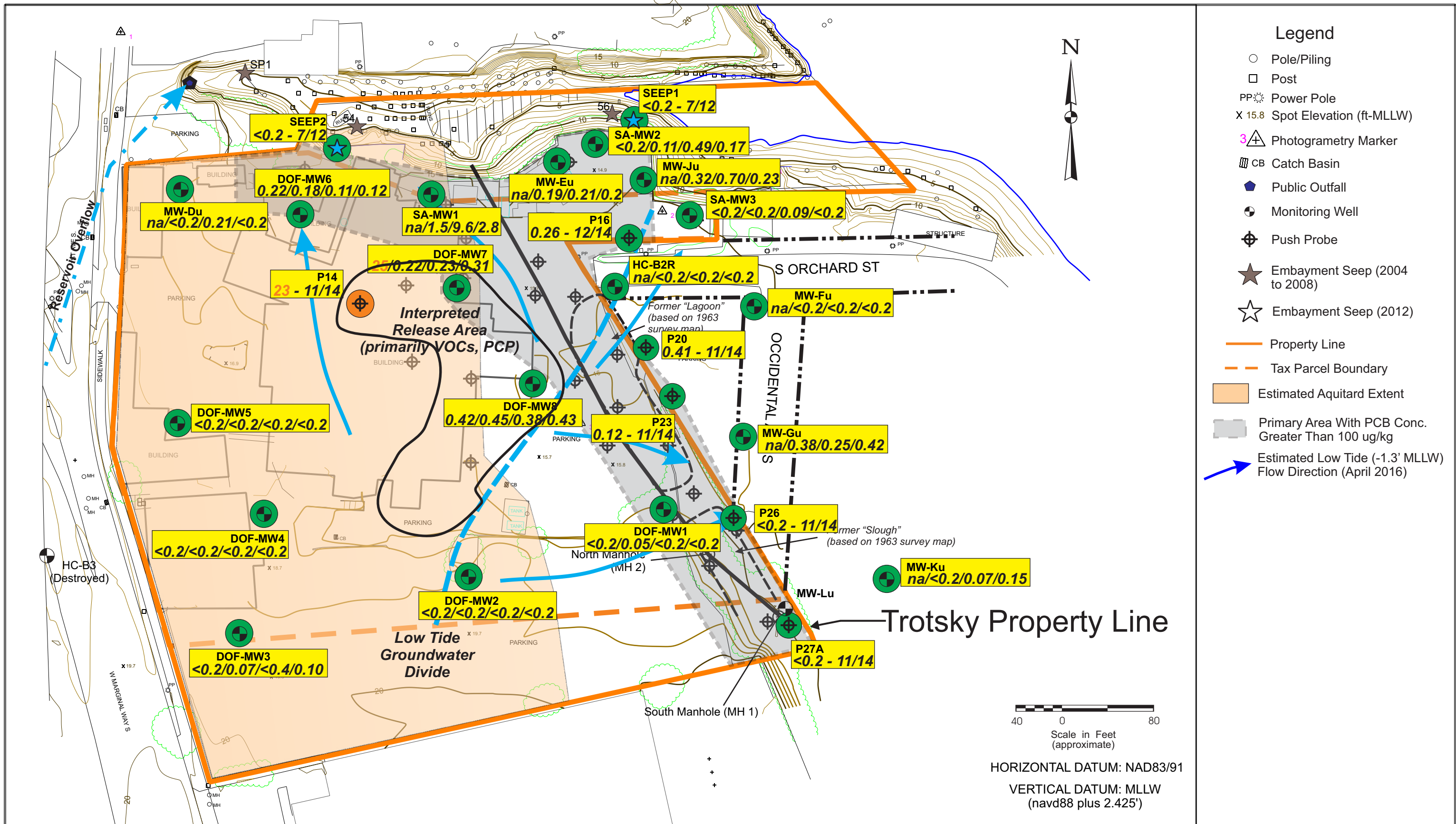
2.0/5.3/6.0/2.0 Concentration - ug/l (11-2012/11-2015/3-2016/9-2016)  
 na - Not Available; \* Surface Water; \*\* Groundwater - MTCA Method B

**ICS/NW Cooprage Site**  
**cis-1,2-Dichloroethene Concentrations**  
**Water Table Zone Above Aquitard**  
 SUM-008-00 (ICS) Mar. 2018  
 Dalton, Olmsted & Fuglevand, Inc.

**FIGURE 5-14a**

Ref: cis12DCE GW Plot R1-R3rev.cdr





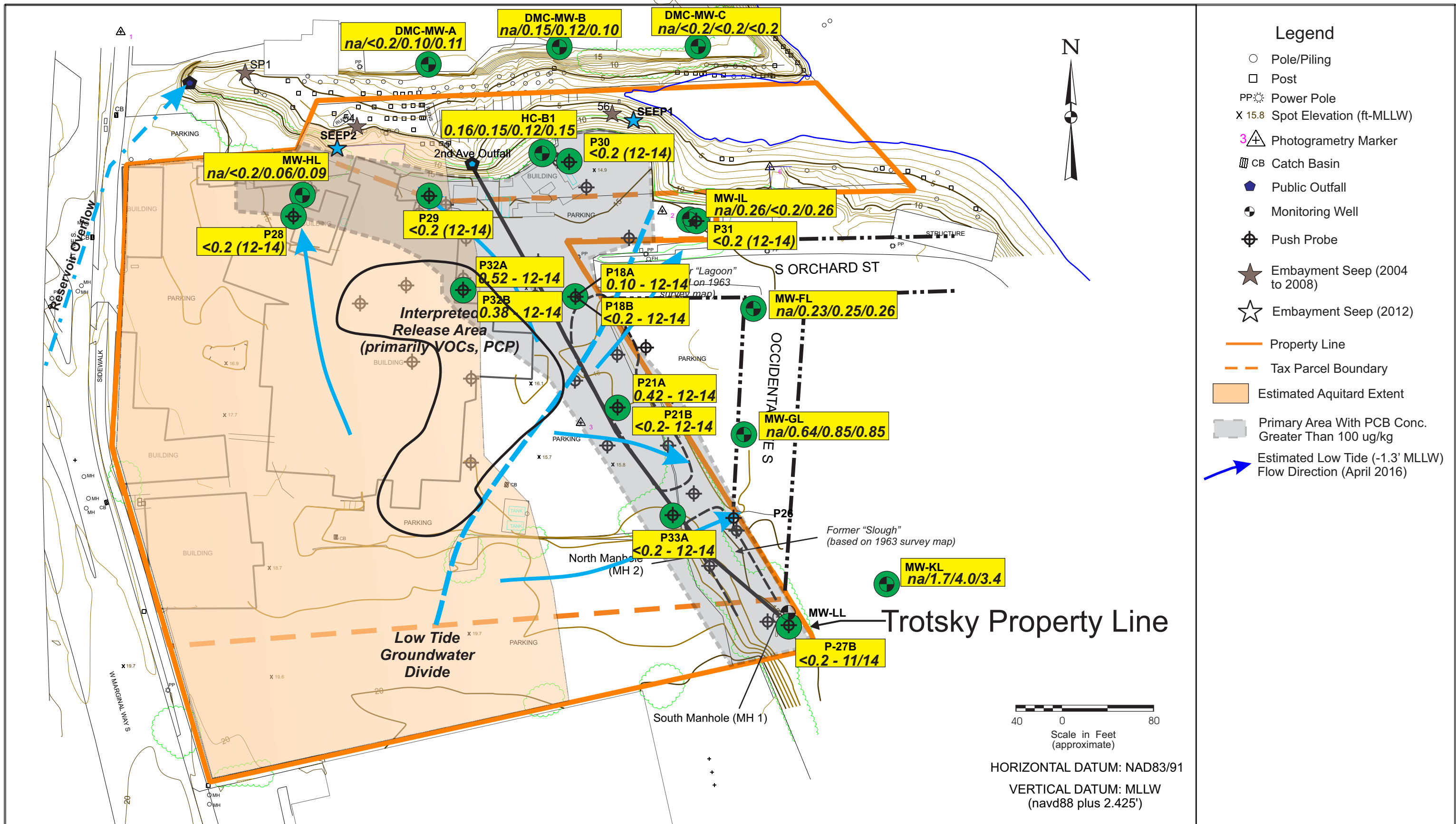
- Concentration ≤ Screening Level (SL= na\*/16\*\* ug/l)
- Concentration > Screening Level (SL= na\*/16\*\* ug/l)

2.0/5.3/6.0/2.0 Concentration - ug/l (11-2012/11-2015/3-2016/9-2016)  
 na - Not Available; \* Surface Water; \*\* Groundwater - MTCA Method B

**ICS/NW Cooperage Site**  
**cis-1,2-Dichloroethene Concentrations**  
**Upper Zone**  
 SUM-008-00 (ICS) Mar. 2018  
 Dalton, Olmsted & Fuglevand, Inc.

**FIGURE 5-14b**

Ref: cis12DCE GW Plot R1-R3rev.cdr



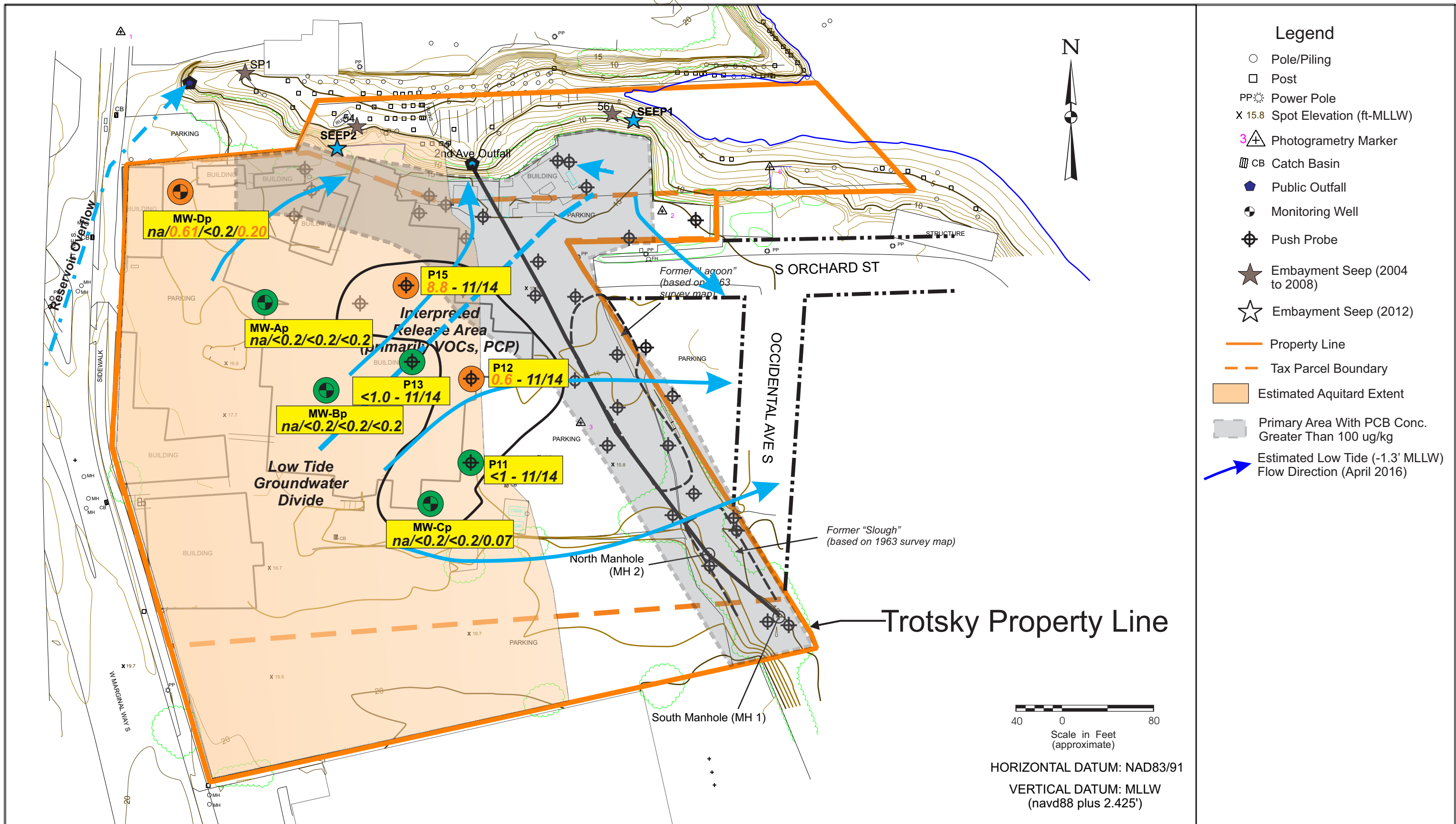
● Concentration ≤ Screening Level (SL= na\*/16\*\* ug/l)  
 ● Concentration > Screening Level (SL= na\*/16\*\* ug/l)

2.0/5.3/6.0/2.0 Concentration - ug/l (11-2012/11-2015/3-2016/9-2016)  
 na - Not Available; \* Surface Water; \*\* Groundwater - MTCA Method B

**ICS/NW Cooperage Site**  
**cis-1,2-Dichloroethene Concentrations**  
**Lower Zone**  
 SUM-008-00 (ICS) Mar. 2018  
 Dalton, Olmsted & Fuglevand, Inc.

**FIGURE 5-14c**

Ref:Cis12DCE GW Plot R1-R3rev.cdr



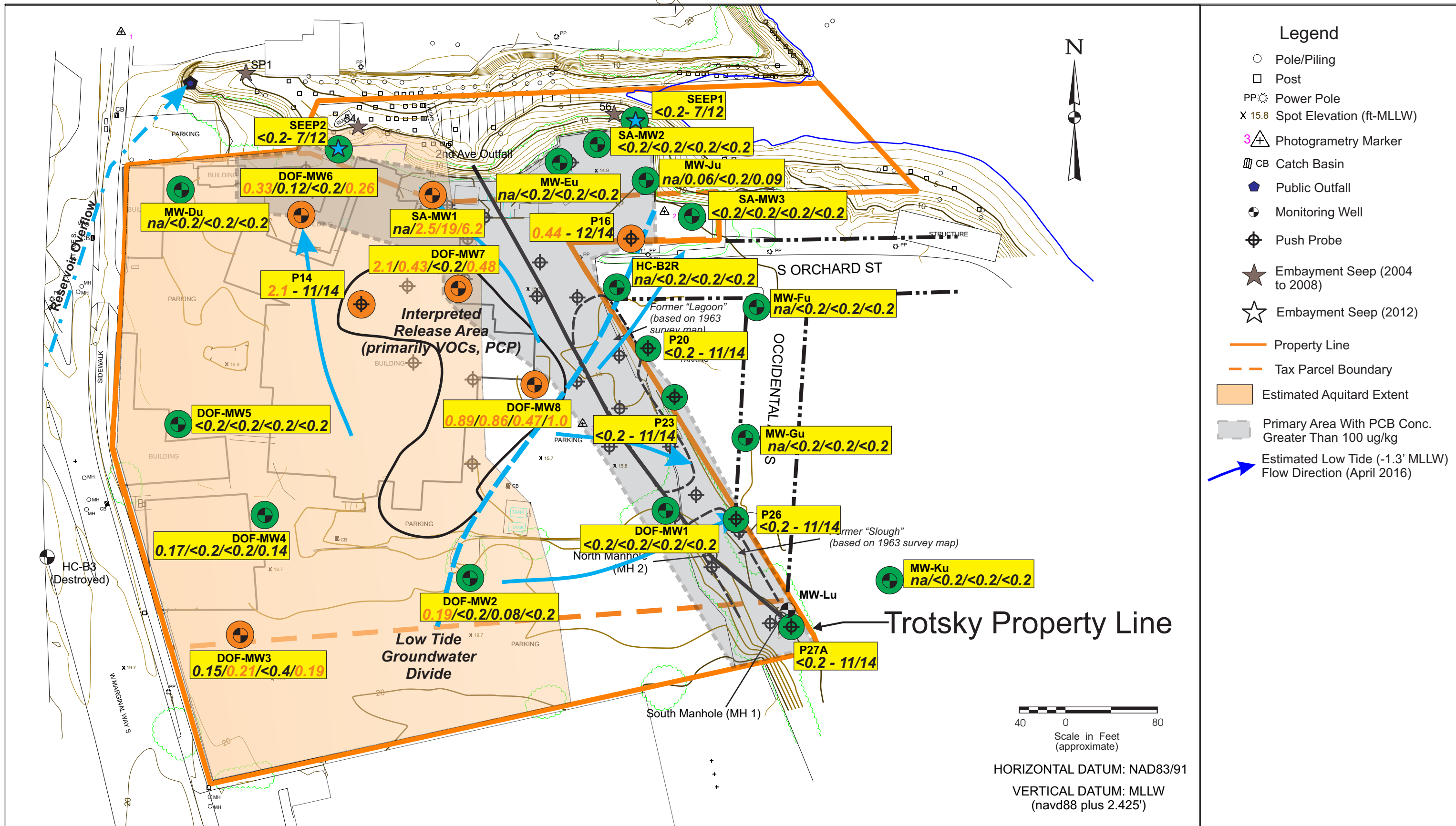
- Concentration ≤ Screening Level (SL = 0.18\* ug/l)
- Concentration > Screening Level (SL = 0.18\* ug/l)

2.0/5.3/6.0/2.0 Concentration - ug/l (11-2012/11-2015/3-2016/9-2016)  
 na - Not Available; \* Surface Water

**ICS/NW Cooprage Site**  
**Vinyl Chloride Concentrations**  
**Water Table Zone Above Aquitard**  
 SUM-008-00 (ICS) Mar. 2018  
 Dalton, Olmsted & Fuglevand, Inc.

**FIGURE 5-15a**

Ref: VC GW Plot R1-R3rev.cdr

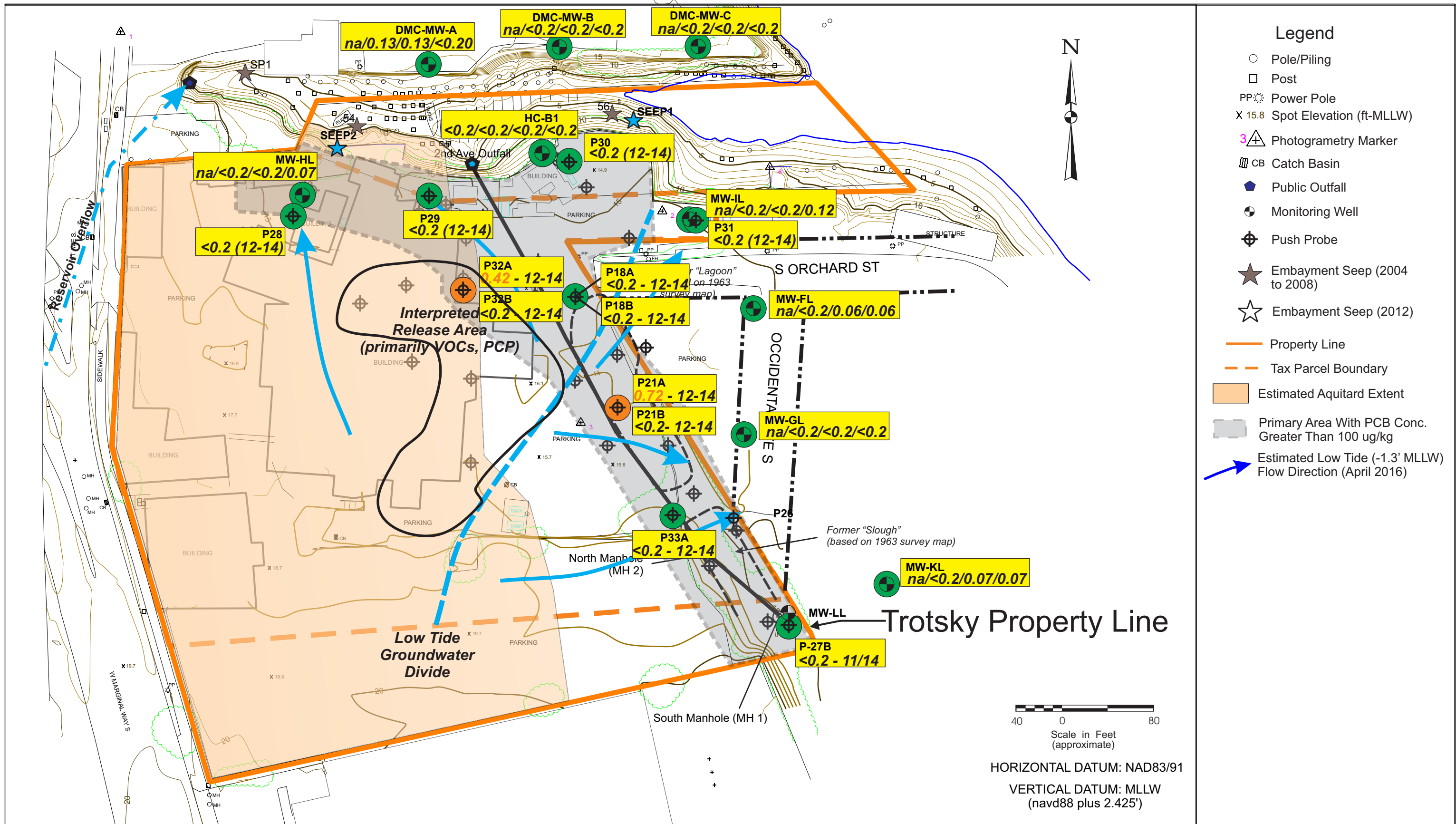


- Concentration ≤ Screening Level (SL = 0.18\* ug/l)
- Concentration > Screening Level (SL = 0.18\* ug/l)

2.0/5.3/6.0/2.0 Concentration - ug/l (11-2012/11-2015/3-2016/9-2016)  
 na - Not Available; \* Surface Water

<b>ICS/NW Cooperage Site</b>		<b>FIGURE 5-15b</b>
<b>Vinyl Chloride Concentrations Upper Zone</b>		
SUM-008-00 (ICS)	Mar. 2018	
<i>Dalton, Olmsted &amp; Fuglevand, Inc.</i>		

Ref: VC GW Plot R1-R3rev.cdr



- Concentration ≤ Screening Level (SL = 0.18\* ug/l)
- Concentration > Screening Level (SL = 0.18\* ug/l)

2.0/5.3/6.0/2.0 Concentration - ug/l (11-2012/11-2015/3-2016/9-2016)  
 na - Not Available; \* Surface Water

**ICS/NW Cooperage Site**

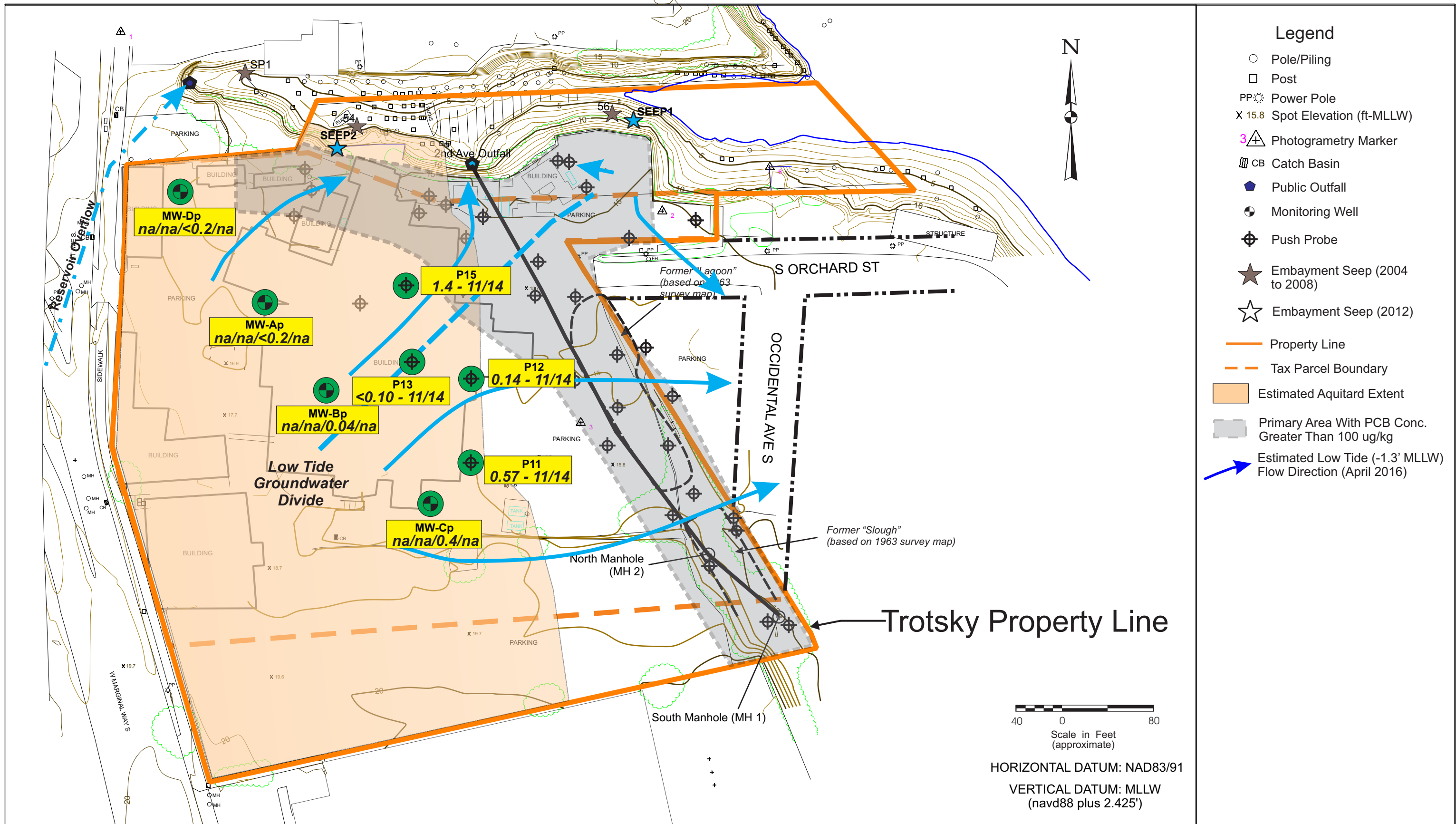
**Vinyl Chloride Concentrations  
Lower Zone**

SUM-008-00 (ICS) Mar. 2018

*Dalton, Olmsted & Fuglevand, Inc.*

**FIGURE 5-15c**

Ref: VC GW Plot R1-R3rev.cdr



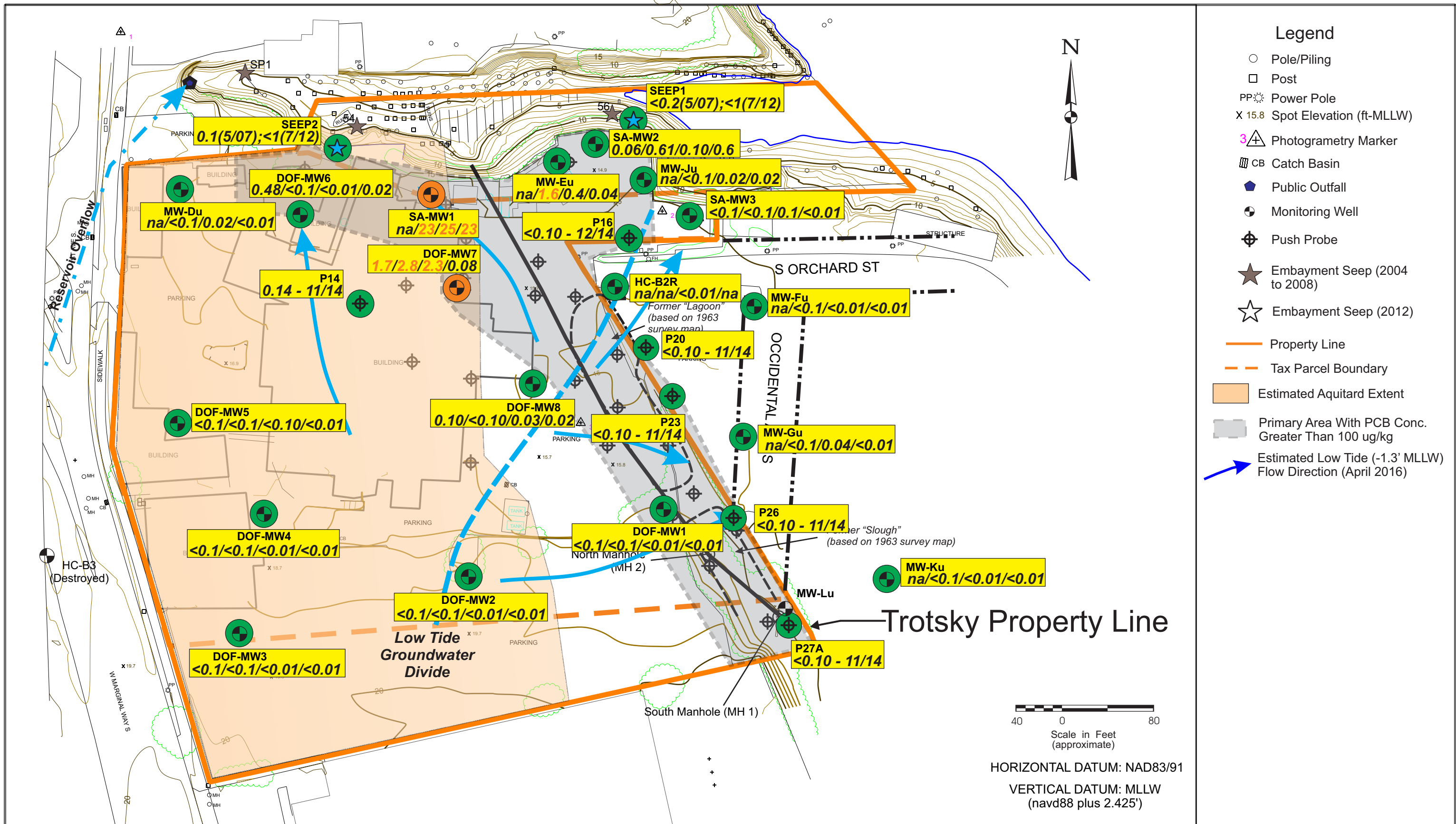
- Concentration ≤ Screening Level (SL= 1.4\* ug/l)
- Concentration > Screening Level (SL= 1.4\* ug/l)

2.0/5.3/6.0/2.0 Concentration - ug/l (11-2012/11-2015/3-2016)  
 na - Not Available; \* Surface Water

**ICS/NW Cooperage Site**  
**Naphthalene Concentrations**  
**Water Table Zone Above Aquitard**  
 SUM-008-00 (ICS) Mar. 2018  
 Dalton, Olmsted & Fuglevand, Inc.

**FIGURE 5-16a**

Ref: Naph GW Plot R1-R3rev.cdr



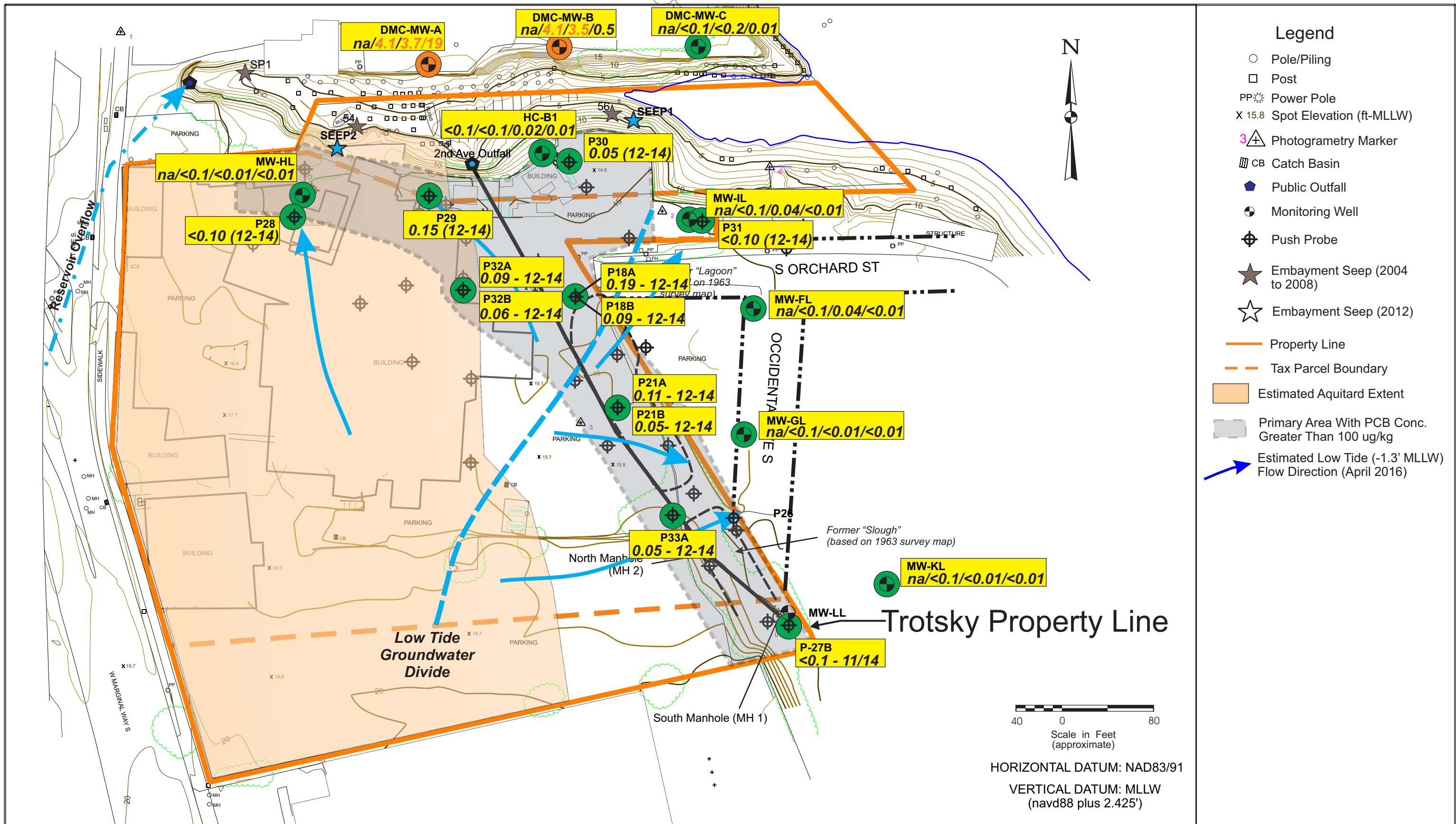
- Concentration ≤ Screening Level (SL= 1.4\* ug/l)
- Concentration > Screening Level (SL= 1.4\* ug/l)

2.0/5.3/6.0/2.0 Concentration - ug/l (11-2012/11-2015/3-2016)  
 na - Not Available; \* Surface Water

**ICS/NW Cooperage Site**  
**Naphthalene Concentrations**  
**Upper Zone**  
 SUM-008-00 (ICS) Mar. 2018  
 Dalton, Olmsted & Fuglevand, Inc.

**FIGURE 5-16b**

Ref: Naph GW Plot R1-R3rev.cdr



● Concentration ≤ Screening Level (SL= 1.4\* ug/l)  
 ● Concentration > Screening Level (SL= 1.4\* ug/l)

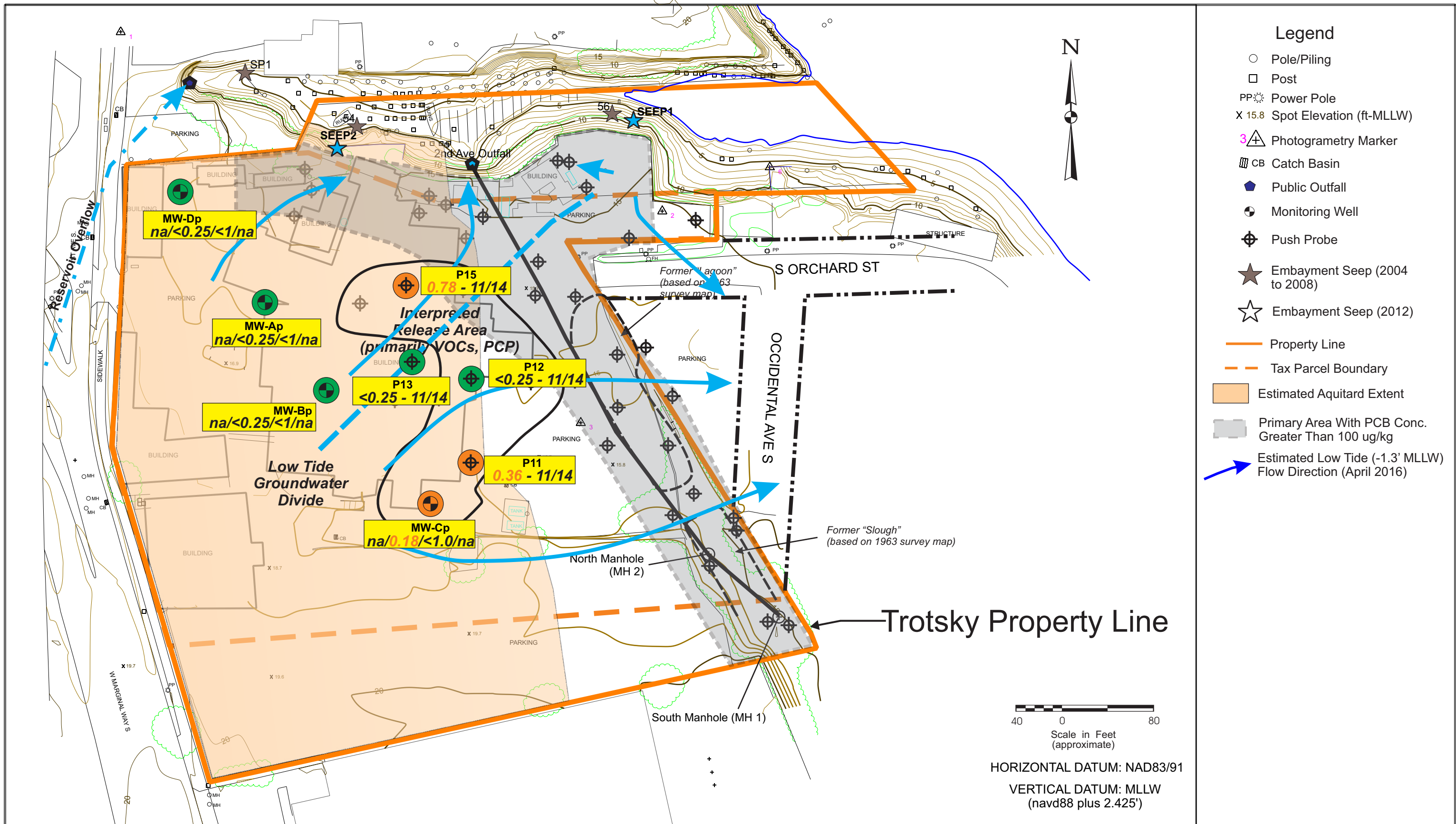
2.0/5.3/6.0/2.0 Concentration - ug/l (11-2012/11-2015/3-2016)  
 na - Not Available; \* Surface Water

**ICS/NW Cooperage Site**  
**Naphthalene Concentrations**  
**Lower Zone**  
 SUM-008-00 (ICS) Mar. 2018  
 Dalton, Olmsted & Fuglevand, Inc.

**FIGURE 5-16c**

Ref: Naph GW Plot R1-R3rev.cdr

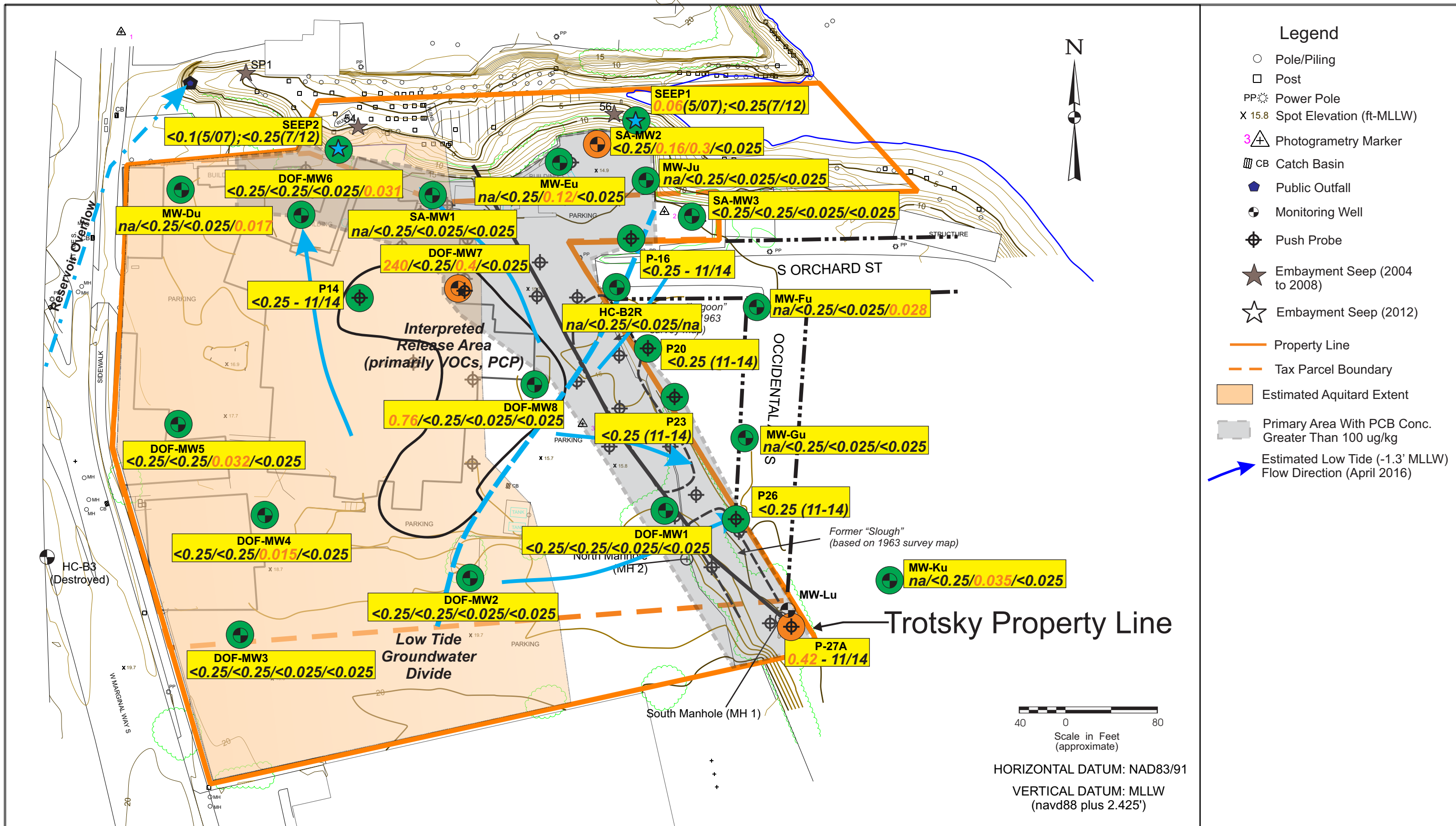




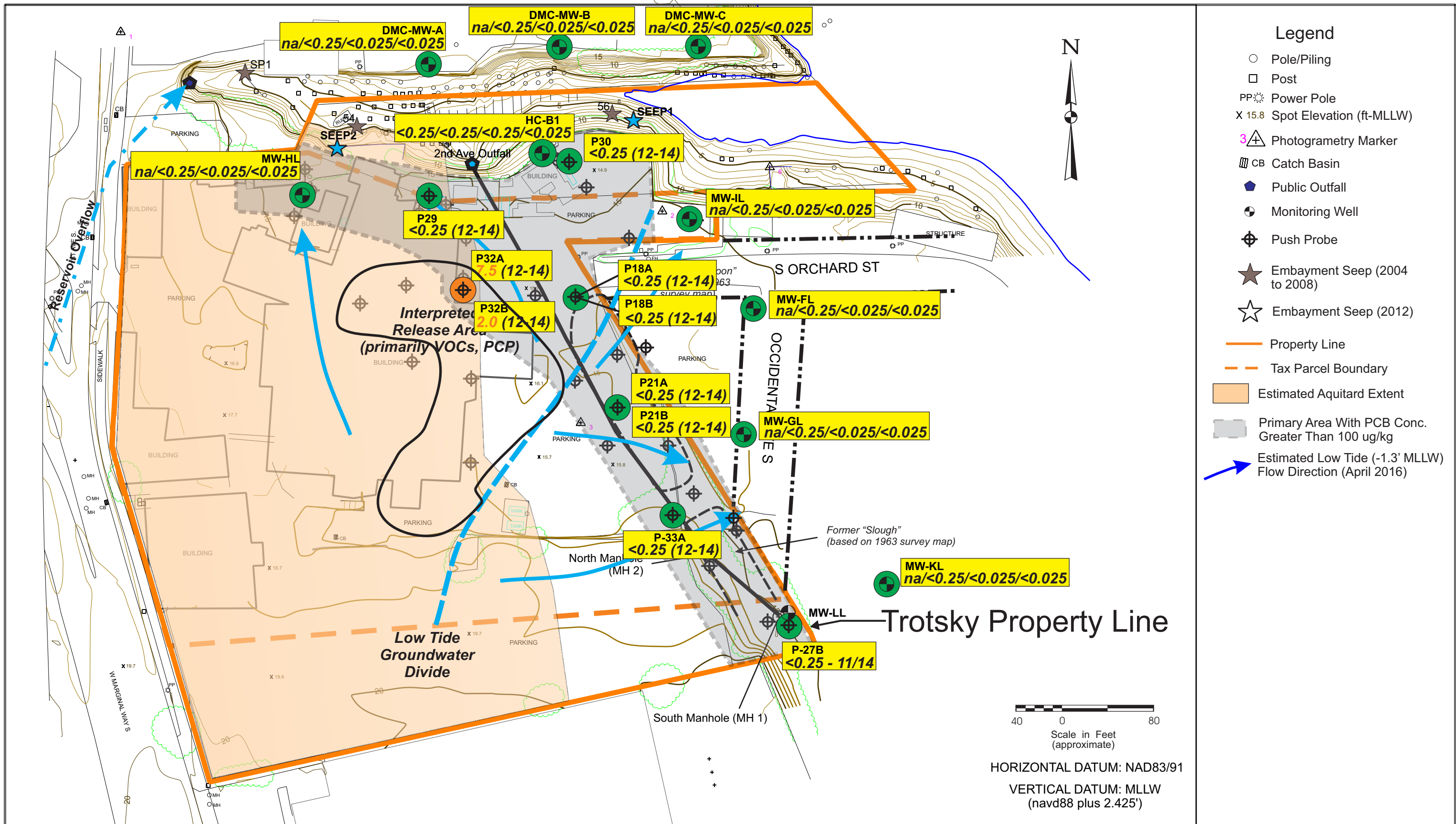
● Concentration ≤ Screening Level (SL= 0.002 ug/l - PQL=0.025 ug/l) 2.0/5.3/6.0/2.0 Concentration - ug/l (11-2012/11-2015/3-2016/9-2016)  
● Concentration > Screening Level (SL= 0.002 ug/l- PQL=0.025 ug/l) na - Not Available

Ref: PCP GW Plot R1-R3rev.cdr

<b>ICS/NW Cooperage Site</b>		<b>FIGURE 5-17a</b>
<b>Pentachlorophenol Concentrations Water Table Zone Above Aquitard</b>		
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<i>Dalton, Olmsted &amp; Fuglevand, Inc.</i>		



● Concentration ≤ Screening Level (SL= 0.002 ug/l - PQL=0.025 ug/l) 2.0/5.3/6.0/2.0 Concentration - ug/l (11-2012/11-2015/3-2016/9-2016)  
● Concentration > Screening Level (SL= 0.002 ug/l- PQL=0.025 ug/l) na - Not Available



● Concentration ≤ Screening Level (SL= 0.002 ug/l - PQL=0.025 ug/l) 2.0/5.3/6.0/2.0 Concentration - ug/l (11-2012/11-2015/3-2016/9-2016)  
● Concentration > Screening Level (SL= 0.002 ug/l- PQL=0.025 ug/l) na - Not Available

Ref: PCP GW Plot R1-R3rev.cdr

<b>ICS/NW Cooperage Site</b>		<b>FIGURE 5-17c</b>
<b>Pentachlorophenol Concentrations Lower Zone</b>		
SUM-008-00 (ICS)	Mar. 2018	
<i>Dalton, Olmsted &amp; Fuglevand, Inc.</i>		