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Hullcar Producer Meeting

Hullcar Hall
March 21, 2016
1:00 to 4:00 pm



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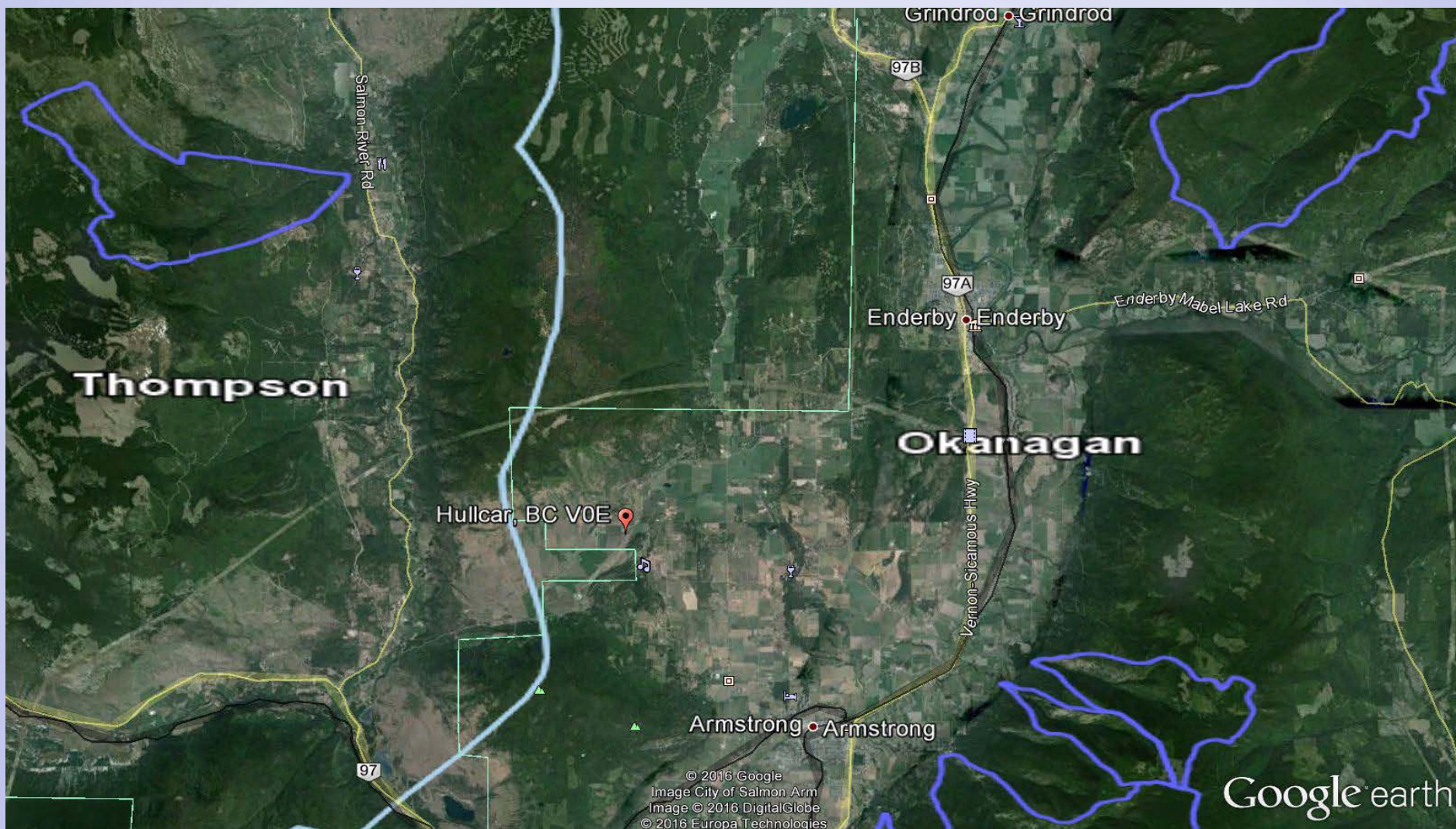
Surface and Ground Water Quality Review

Hulcar Aquifers

E. Dennis Einarson RPBio
Environmental Protection Division
Monitoring, Assessment and Stewardship
March 17, 2016



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Okanagan

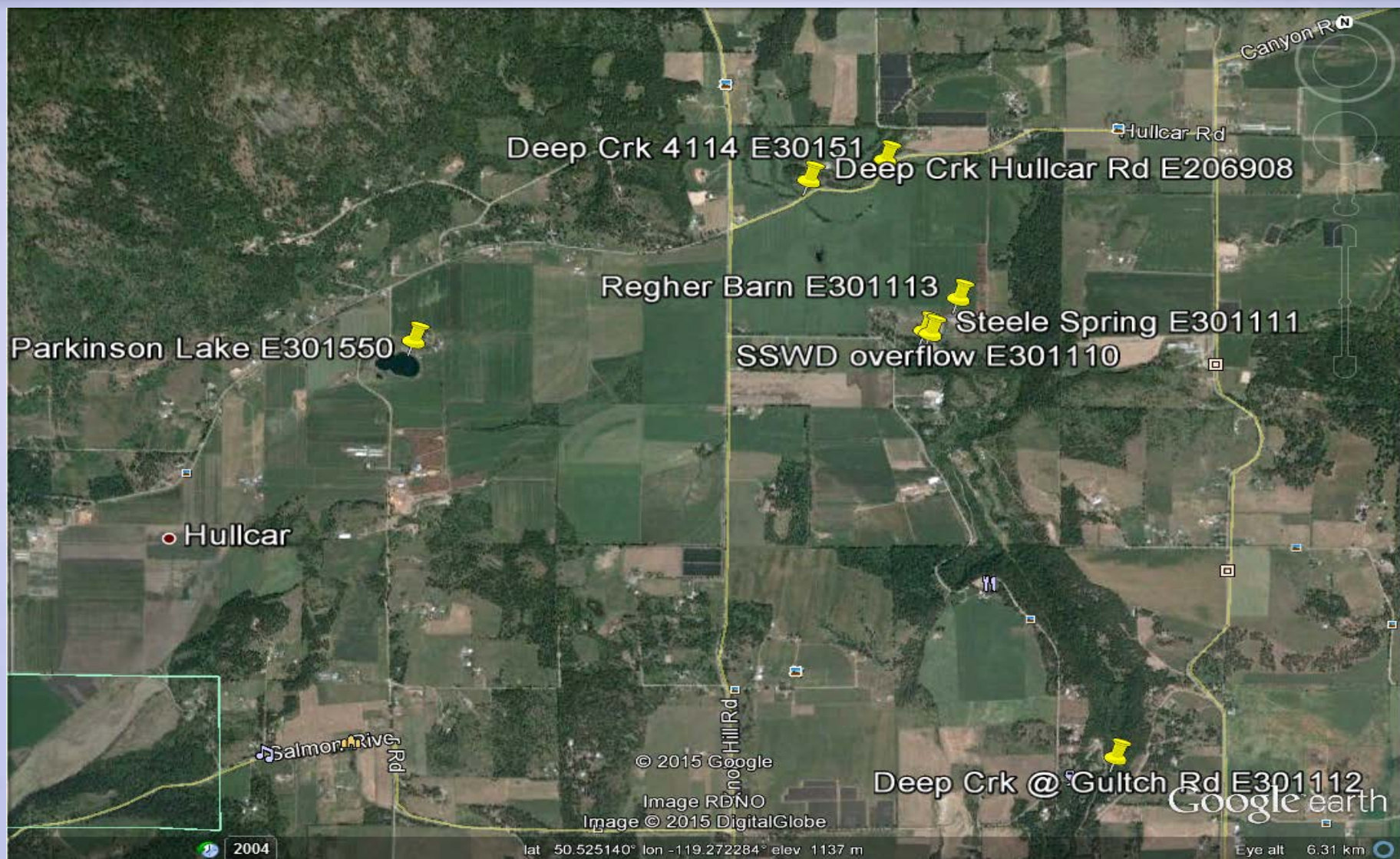
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Google earth

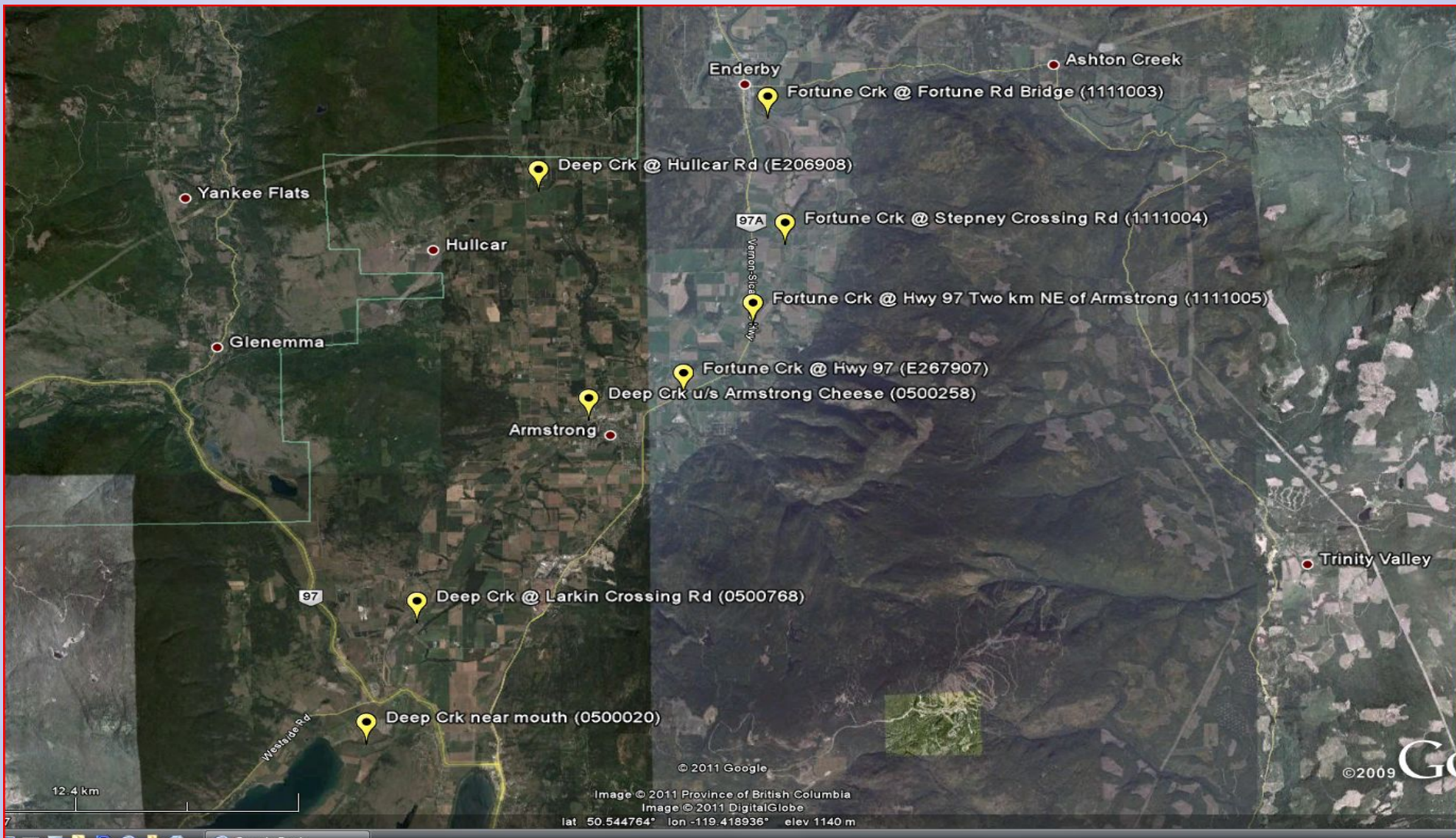


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Date: February 15, 2016

File: 76600-20 Armstrong

To: Cassandra Caunce, Director Compliance Section, Environmental Protection Division, Ministry of Environment

Cc: Stephanie Little, Environmental Protection Officer, Penticton

Greg Tamblyn, Water Quality Section Head, Smithers

Re: Ministry of Environment Nitrate-Nitrogen Water Data for the Hullcar Aquifer area {2014-2016}



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Table 1. Summary of Nitrate-Nitrogen data collected by MOE at SSWD Overflow
Detection (E30110)

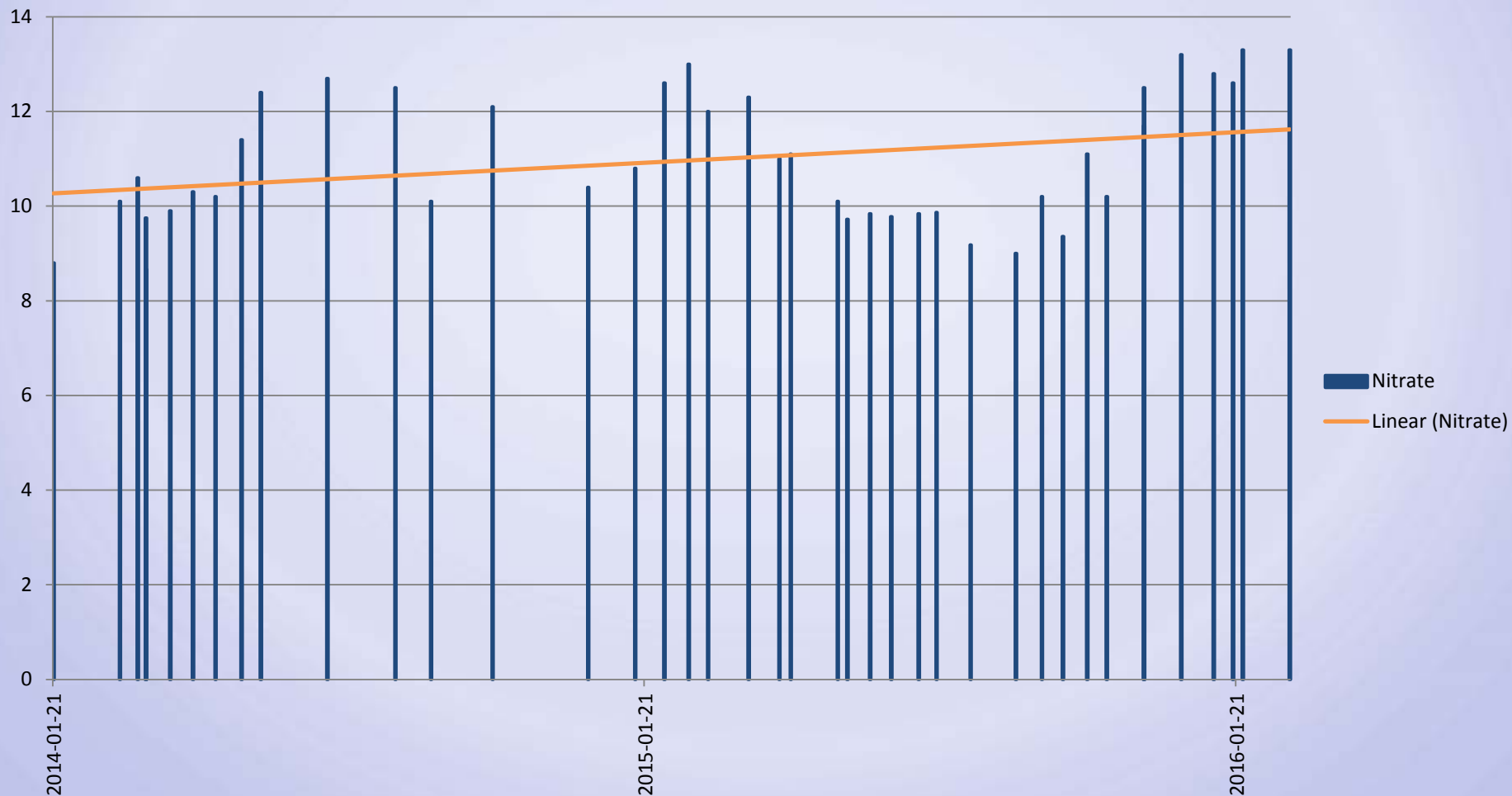
Sample Date	Analyzing Laboratory	Limit (mg/L)	Nitrate-Nitrogen (mg/L)
21-Jan-14	Maxxam	0.02	8.8
13-Mar-14	Maxxam	0.02	10.6
17-Feb-15	Maxxam	0.02	13
26-Mar-15	Maxxam	0.02	12.3
21-Apr-15	Maxxam	0.02	11.1
20-May-15	Maxxam	0.02	10.1
22-Jun-15	ALS	0.015	9.78
20-Jul-15	ALS	0.015	9.87
26-Aug-15	ALS	0.015	9.76
23-Sep-15	ALS	0.015	10.2
21-Oct-15	ALS	0.015	11.1
25-Nov-15	ALS	0.015	12.5
18-Dec-15	ALS	0.015	13.2
25-Jan-16	ALS	0.015	13.3



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Nitrate -SSWD Overflow

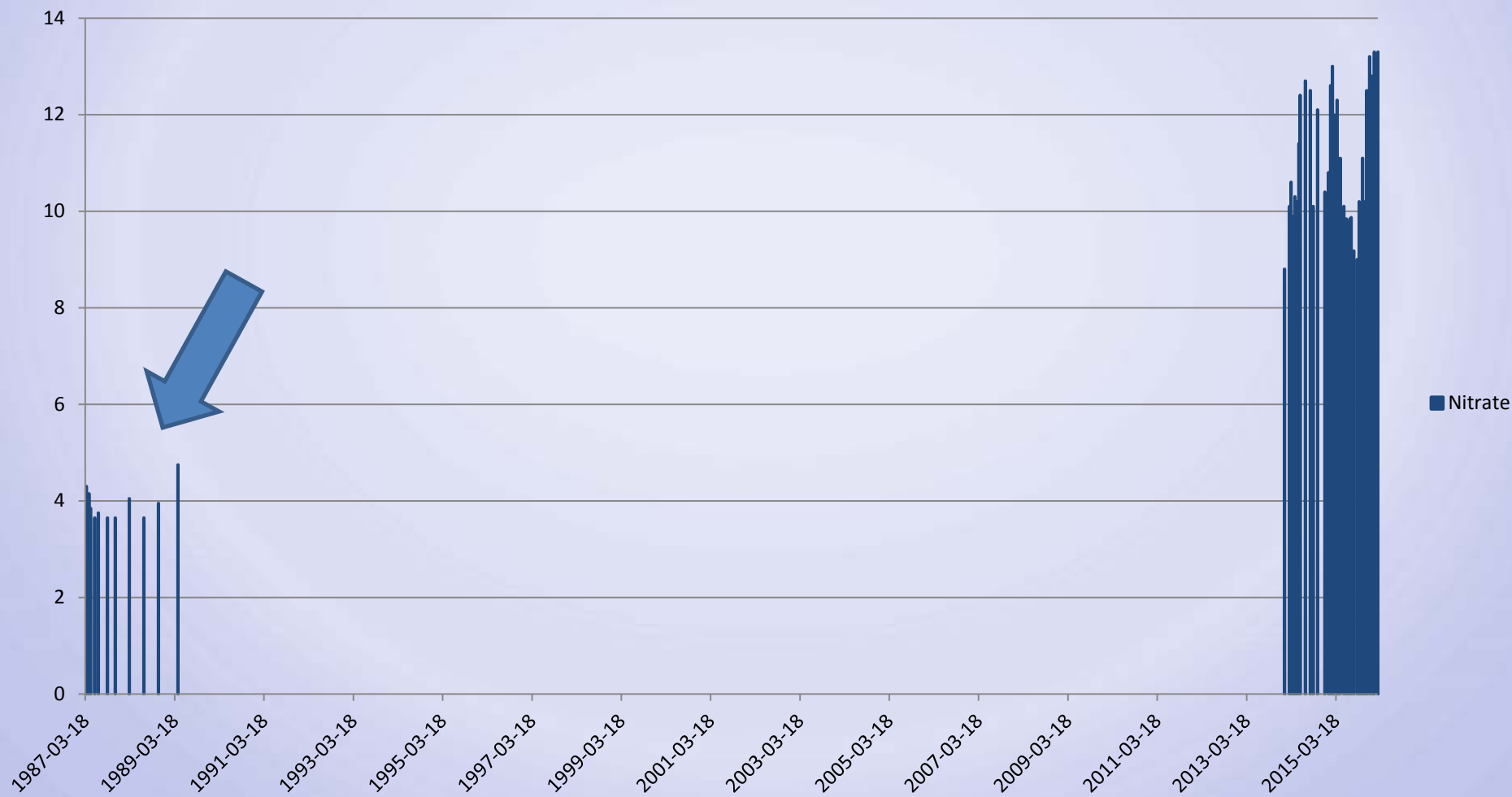




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Nitrate - SSWD Overflow





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Table 2. Summary of Nitrate-Nitrogen data collected by MOE at Surface Water Stations.

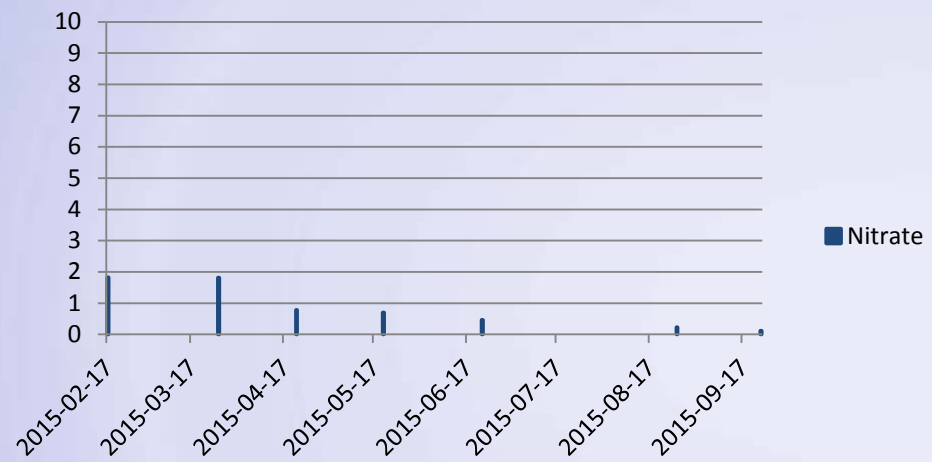
Sample Location			E206908	E301551 Deep	E260908	E301112	E301550
Sampling Date	Analyzing Laboratory	Detection Limit (mg/L)	Steele Springs below outlet	Creek at Hullcar Rd (across from 4114)	Deep Creek at Hullcar Rd (above culvert)	Deep creek at Gulch Rd	Parkinson Lake
17-Feb-15	Maxxam	0.02	9.47		1.8	1.92	
26-Mar-15	Maxxam	0.02	9.3	3.3 2	1.79	2.2	0.0028
21-Apr-15	Maxxam	0.02	9.13	0.796	0.775	1.33	0.0211
20-May-15	Maxxam	0.02		0.678	0.685	2.07	0.0642
22-Jun-15	ALS	0.015		0.0475	0.457	3.31	
20-Jul-15	ALS	0.015					
26-Aug-15	ALS	0.015	8.7	0.281	0.22	6.28	
23-Sep-15	ALS	0.015		0.186	0.117	6.82	



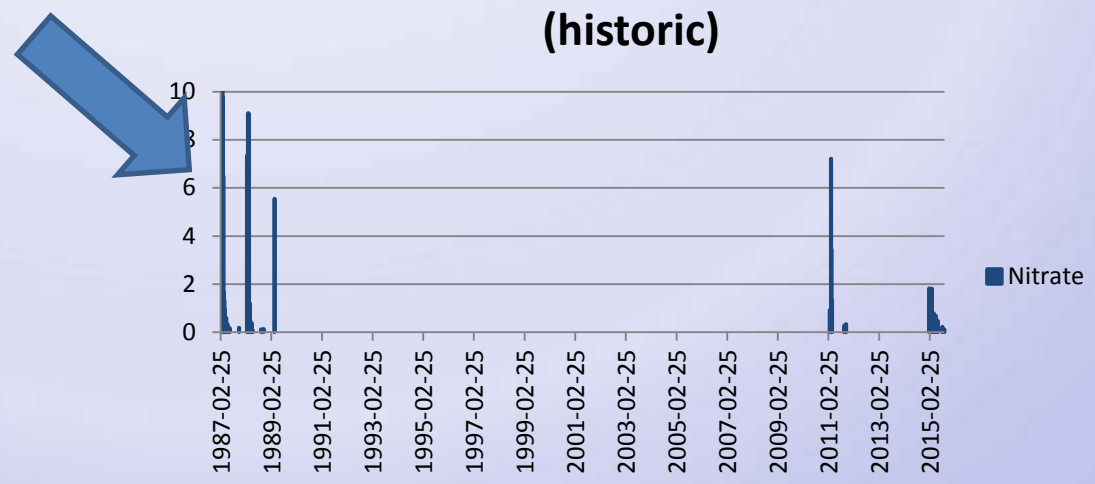
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Nitrate - Deep C d/s Hullcar Rd



Nitrate - Deep Cr d/s Hullcar Rd (historic)





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Nitrate - Deep C across from 4114

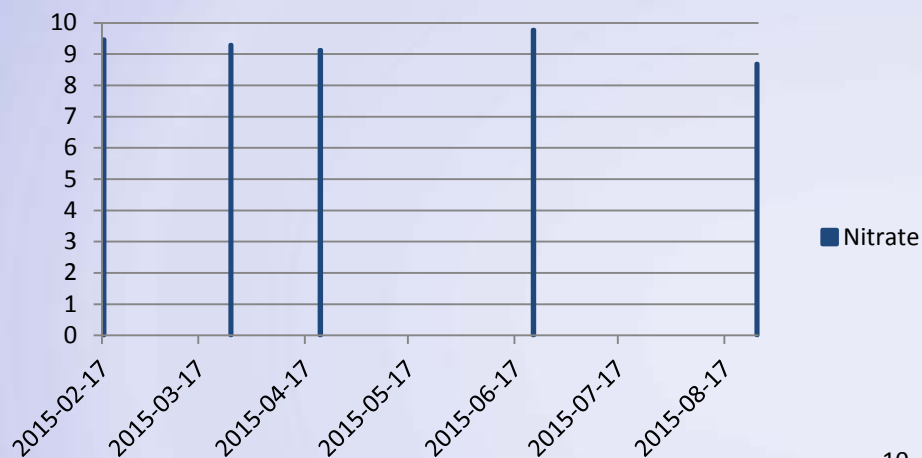




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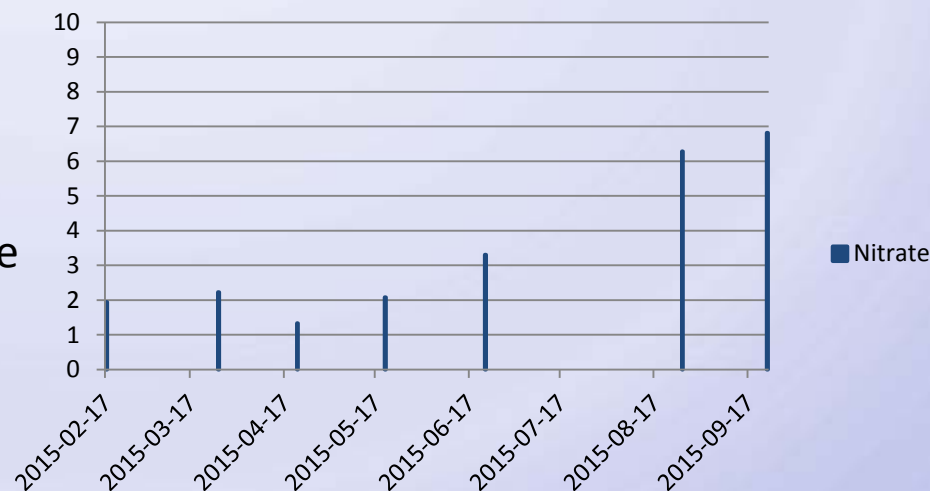


Nitrate - Deep C at SSWD overflow



BC Water Quality Aquatic Life Guideline
Chronic = 3.0 mg/L
Acute = 32.8 mg/L

Nitrate - Deep C at Gultch Rd

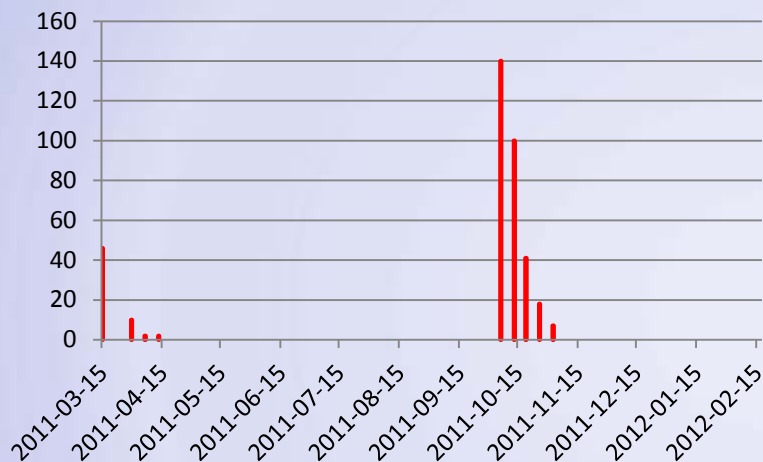




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E ColiL



E. Coli and Enterococci – Deep C d/s Hullcar Rd

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Enterococ

