

Table 12
Evaluation of Osoyoos
Groundwater Quality Ambient Network

Network Name :	OSOYOOS				
Aquifer Numbers:	193 (Osoyoos West), 194 (Osoyoos east)				
Monitored Since:	August 26, 1985				
Footprint Area:	193 = 25 km ² , 194 = 4 km ²				
Number Obs wells:	27 wells at 18 sites				
Number wells in WRA:	457				
Aquifer Classification:	193=IIA (rank 16), 194 = IIA (rank 14)				
Parameters ≥ GCDWQ:	Nitrate, Uranium, Total Dissolved Solids				
Contaminants of Concern:	NO ₃ , U, TDS, Cl				
Network Objective	Measurement Criteria	Current Status	Evidence of Change	Response Options	Comments
1 Spatial and Depth Coverage	a. background well(s) b. coverage in areas of suspected impacts c. coverage of all indicated spatial mode areas d. coverage of hydraulically isolated formations	- good spatial coverage	- no evidence of geothermal - no significant land use change - several municipal wells available for sampling	- no response/change - add wells from Town of Osoyoos	- what is he purpose of so many shallow wells adjacent to Peanut Lake and Elks Hall Lake. These are likely influenced by surface water in the lakes.
2 Suite of Chemistry Parameters and Lab Methods	a. indicator parameters capable of identifying existing/potential threats b. ability for anion/cation balance c. continuity of historical parameters d. consistent suite of parameters e. new parameters reflect emerging lab methods and recs. by Kohut (2009) f. surrogate monitoring methods	- insufficient parameters to verify charge balance - HCO ₃ not regularly included - background for some parameters is modal	- NH ₄ considerable variability could be due to sampling method - NO ₃ , SO ₄ decreasing	- no response/change - sample for complete suite in all parameters annually - monitor WTN 14402 more closely - include turbidity - monitor more closely for U, As	
3 Sampling Frequency for Network + Wells of Importance	a. consistency in suite of parameters b. duration frequency for primary and secondary priority wells c. sampling for seasonal variation	- parameters not consistent - no seasonal sampling	- sample frequency is not consistent	- no response/change - sample more consistently	
4 Field Methods QA/QC Data Validation	a. field sampling + handling protocols b. QA/QC lab results c. cation/anion balance d. QA/QC data entered in EMS e. identify statistical outliers	- some outliers identified, As variable likely result of sampling methods		- no response/change - adherence to field protocols - EMS results reviewed quickly so that sample re-testing still possible	
5 Spatial and Temporal Analysis and Reporting	a. visual outliers and spatial/temporal trends b.	- one upwards trend exists - some downwards trends exist	- upward trend in Cl - downward trend in NO ₃ and SO ₄	- no response/change - regular analysis/validation to identify outliers/trends - communicate with planners - communicate with water users - communicate with planners	- nitrogen, uranium and TDS are above GCDWQ and close attention is required in WTN 14402, WTN C WTN 14602