

TABLE 7.1
SUMMARY OF LONG TERM MONITORING OPTIMIZATION EVALUATION OF CURRENT GROUNDWATER MONITORING PROGRAM
LONG TERM MONITORING OPTIMIZATION
CAMP STANLEY STORAGE ACTIVITY, TEXAS

Well ID	Current Sampling Frequency	Qualitative Evaluation			Temporal Evaluation		Spatial Evaluation		Summary			Rationale
		Exclude	Retain	Recommended Monitoring Frequency	Exclude/Reduce	Retain	Exclude	Retain	Exclude	Retain	Recommended Monitoring Frequency	
On Post Monitoring Wells												
AOC65-MW1-LGR	Quarterly	✓		Sample after major rain event	Not Analyzed			↓ ^{du}		✓	Sample after major rain event	Statistics confirm qualitative evaluation
AOC65-MW2A	Quarterly	✓		Sample after major rain event		✓	-- ^{du}	--		✓	Sample after major rain event	Statistics confirm qualitative evaluation
AOC65-PZ01-LGR	Quarterly	✓		Sample after major rain event	✓		Not Included		✓		Exclude	Exclude well based on statistics
AOC65-PZ02-LGR	Quarterly	✓		Sample after major rain event	✓		Not Included		✓		Exclude	Exclude well based on statistics
AOC65-PZ03-LGR	Quarterly	✓		Sample after major rain event	✓		Not Included		✓		Exclude	Exclude well based on statistics
AOC65-PZ04-LGR	Quarterly	✓		Sample after major rain event	✓		Not Included		✓		Exclude	Exclude well based on statistics
AOC65-PZ05-LGR	Quarterly	✓		Sample after major rain event	✓		Not Included		✓		Exclude	Exclude well based on statistics
AOC65-PZ06-LGR	Quarterly	✓		Sample after major rain event	✓		Not Included		✓		Exclude	Exclude well based on statistics
CS-1	Quarterly		✓	Annual		✓		✓		✓	Annual	Statistics confirm qualitative evaluation
CS-10	Quarterly		✓	Annual	✓		--	--		✓	Annual	Qualitative factor (drinking water well) overrides statistic recommendations
CS-11	Quarterly	✓		Biennial		✓	✓			✓	Annual	Increase sampling frequency due to temporal trend
CS-2	Quarterly		✓	Semi-annual	✓		✓		✓		Annual	Decrease sampling frequency due to statistics results
CS-3	Not Sampled	✓		Remove	✓		Not Included		✓		Exclude	Statistics confirm qualitative evaluation
CS-4	Quarterly		✓	Semi-annual		✓	✓			✓	Semi-Annual	Temporal statistics confirm qualitative evaluation
CS-9	Quarterly		✓	Annual	✓		--	--		✓	Annual	Qualitative factor (drinking water well) overrides statistic recommendations
CS-D	Quarterly		✓	Semi-annual		✓		✓		✓	Semi-Annual	Statistics confirm qualitative evaluation
CS-I	Quarterly		✓	Biennial		✓	✓			✓	Annual	Increase sampling frequency due to temporal trend
CS-MW10-CC	Quarterly		✓	Biennial	✓		Not Included			✓	Biennial	Statistics confirm qualitative evaluation
CS-MW10-LGR	Quarterly		✓	Semi-annual	✓		✓			✓	Annual	Decrease sampling frequency due to statistics results
CS-MW11A-LGR	Quarterly		✓	Semi-annual	✓			✓		✓	Semi-Annual	Spatial statistics confirm qualitative evaluation
CS-MW11B-LGR	Quarterly		✓	Semi-annual	✓			✓		✓	Semi-Annual	Spatial statistics confirm qualitative evaluation
CS-MW12-BS	Quarterly		✓	Biennial	✓		Not Included			✓	Biennial	Statistics confirm qualitative evaluation
CS-MW12-CC	Quarterly		✓	Biennial	✓		Not Included			✓	Biennial	Statistics confirm qualitative evaluation
CS-MW12-LGR	Quarterly		✓	Semi-annual		✓	✓			✓	Annual	Decrease sampling frequency due to statistics results (ND sentry well)
CS-MW16-CC	Quarterly		✓	Semi-annual		✓	Not Included			✓	Semi-Annual	Statistics confirm qualitative evaluation
CS-16-LGR	Quarterly		✓	Semi-annual		✓		✓		✓	Semi-Annual	Statistics confirm qualitative evaluation
CS-MW17-LGR	Quarterly		✓	Biennial	✓			✓		✓	Annual	Increase sampling frequency due to spatial result
CS-MW18-LGR	Quarterly		✓	Semi-annual		✓		✓		✓	Semi-Annual	Statistics confirm qualitative evaluation
CS-MW19-LGR	Quarterly		✓	Semi-annual	✓			✓		✓	Semi-Annual	Spatial statistics confirm qualitative evaluation
CS-MW1-BS	Quarterly		✓	Biennial	✓		Not Included			✓	Biennial	Statistics confirm qualitative evaluation
CS-MW1-CC	Quarterly		✓	Biennial	✓		Not Included			✓	Biennial	Statistics confirm qualitative evaluation
CS-MW1-LGR	Quarterly		✓	Semi-annual		✓	✓			✓	Semi-Annual	Temporal statistics confirm qualitative evaluation
CS-MW2-CC	Quarterly		✓	Biennial	✓					✓	Biennial	Statistics confirm qualitative evaluation
CS-MW2-LGR	Quarterly		✓	Semi-annual	✓		--	--		✓	Semi-Annual	Qualitative factor (recompleted well) overrides statistic recommendations
CS-MW3-LGR	Quarterly		✓	Semi-annual	✓			✓		✓	Semi-Annual	Spatial statistics confirm qualitative evaluation
CS-MW4-LGR	Quarterly		✓	Semi-annual	✓			✓		✓	Semi-Annual	Spatial statistics confirm qualitative evaluation
CS-MW5-LGR	Quarterly		✓	Semi-annual	✓			✓		✓	Semi-Annual	Spatial statistics confirm qualitative evaluation
CS-MW6-BS	Quarterly		✓	Biennial	✓			↓		✓	Biennial	Temporal statistics confirm qualitative evaluation
CS-MW6-CC	Quarterly		✓	Biennial	✓			↓		✓	Biennial	Temporal statistics confirm qualitative evaluation
CS-MW6-LGR	Quarterly		✓	Semi-annual	✓			↓		✓	Semi-Annual	Spatial statistics confirm qualitative evaluation
CS-MW7-CC	Quarterly		✓	Biennial	✓			→ ^{du}		✓	Biennial	Temporal statistics confirm qualitative evaluation
CS-MW7-LGR	Quarterly		✓	Semi-annual		✓		↘		✓	Semi-Annual	Statistics confirm qualitative evaluation
CS-MW8-CC	Quarterly		✓	Biennial	✓			↓		✓	Biennial	Temporal statistics confirm qualitative evaluation
CS-MW8-LGR	Quarterly		✓	Semi-annual	✓		--	--↓		✓	Annual	Decrease sampling frequency due to statistics results
CS-MW9-BS	Quarterly		✓	Biennial	✓		Not Included			✓	Biennial	Temporal statistics confirm qualitative evaluation
CS-MW9-CC	Quarterly		✓	Biennial	✓		Not Included			✓	Biennial	Temporal statistics confirm qualitative evaluation
CS-MW9-LGR	Quarterly		✓	Semi-annual	✓			✓			Semi-annual	Spatial statistics confirm qualitative evaluation
CS-G-LGR	Quarterly		✓	Biennial	✓			✓		✓	Annual	Increase sampling frequency due to spatial result
CS-MWH-LGR	Quarterly		✓	Biennial	✓		✓			✓	Biennial	Statistics confirm qualitative evaluation

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LONG TERM MONITORING OPTIMIZATION
CAMP STANLEY STORAGE ACTIVITY, TEXAS

Well ID	Current Sampling Frequency	Qualitative Evaluation			Temporal Evaluation		Spatial Evaluation		Summary			Rationale
		Exclude	Retain	Recommended Monitoring Frequency	Exclude/Reduce	Retain	Exclude	Retain	Exclude	Retain	Recommended Monitoring Frequency	
Off Post Monitoring Wells												
DOM-2	Annually		✓	Annual	✓		✓			✓	Biennial	Decrease sampling frequency due to statistics results
FO-17	Annually		✓	Annual	Not Analyzed		✓			✓	Biennial	Decrease sampling frequency due to statistics results
FO-22	Annually		✓	Annual		✓		✓		✓	Annual	Statistics confirm qualitative evaluation
FO-8	Annually		✓	Annual	Not Analyzed			✓		✓	Annual	Spatial statistics confirm qualitative evaluation
FO-J1	Qtrly, 1 year thru Mar 05		✓	Annual	✓		✓			✓	Annual	Decrease sampling frequency due to statistics results
HS-2	Qtrly, 1 year thru Mar 05		✓	Annual		✓		✓		✓	Annual	Statistics confirm qualitative evaluation
HS-3	Annually		✓	Annual	✓			✓		✓	Annual	Spatial statistics confirm qualitative evaluation
I10-2	Qtrly, 1 year thru Jun 05		✓	Annual		✓	--	--		✓	Annual	Temporal statistics confirm qualitative evaluation
I10-4	Qtrly, 1 year thru Mar 05		✓	Annual		✓		✓		✓	Annual	Statistics confirm qualitative evaluation
I10-5	Annually		✓	Annual	Not Analyzed			✓		✓	Annual	Spatial statistics confirm qualitative evaluation
I10-7	Annually		✓	Annual	✓		--	--		✓	Biennial	Decrease sampling frequency due to statistics results
JW-12	Annually		✓	Annual	Not Analyzed		--	--		✓	Biennial	Decrease sampling frequency due to statistics results
JW-13	Annually		✓	Annual	✓			✓		✓	Biennial	Decrease sampling frequency due to statistics results
JW-14	Qtrly, 1 year thru Jun 05		✓	Annual		✓	✓			✓	Biennial	Temporal statistics confirm qualitative evaluation
JW-26	Qtrly, 1 year thru Dec 04		✓	Annual		✓	--	--		✓	Annual	Temporal statistics confirm qualitative evaluation
JW-27	Annually		✓	Annual	Not Analyzed		✓			✓	Biennial	Decrease sampling frequency due to statistics results
JW-28	Qtrly, 1 year thru Jun 05		✓	Annual	✓		--	--		✓	Biennial	Decrease sampling frequency due to statistics results
JW-29	Qtrly, due to location		✓	Annual	✓		✓			✓	Biennial	Decrease sampling frequency due to statistics results
JW-30	Qtrly, 1 year thru Mar 05		✓	Annual		✓	✓			✓	Annual	Temporal statistics confirm qualitative evaluation
JW-6	Annually		✓	Annual	✓		✓			✓	Biennial	Decrease sampling frequency due to statistics results
JW-7	Qtrly, 1 year thru Jun 05		✓	Annual	✓		✓			✓	Annual	Qualitative factor overrides statistic recommendations
JW-8	Qtrly, 1 year thru Mar 05		✓	Annual	✓		✓			✓	Biennial	Decrease sampling frequency due to statistics results
JW-9	Qtrly, 1 year thru Mar 05		✓	Annual	✓		✓			✓	Biennial	Decrease sampling frequency due to statistics results
LS-1	Qtrly, 1 year thru Mar 05		✓	Annual	✓			✓		✓	Annual	Spatial statistics confirm qualitative evaluation
LS-2	Qtrly, 1 year thru Jun 05		✓	Quarterly	✓		--	--		✓	Quarterly	Qualitative factor (GAC well)overrides statistic recommendations
LS-3	Qtrly, 1 year thru Jun 05		✓	Quarterly		✓	--	--		✓	Quarterly	Temporal statistics confirm qualitative evaluation
LS-4	Qtrly, 1 year thru Jun 05		✓	Annual		✓		✓		✓	Annual	Statistics confirm qualitative evaluation
LS-5	Qtrly, 1 year thru Mar 05		✓	Annual	✓		✓			✓	Biennial	Decrease sampling frequency due to statistics results
LS-6	Qtrly, 1 year thru Jun 05		✓	Quarterly		✓	--	--		✓	Quarterly	Temporal statistics confirm qualitative evaluation
LS-7	Qtrly, 1 year thru Jun 05		✓	Quarterly		✓	✓			✓	Quarterly	Temporal statistics confirm qualitative evaluation
OFR-1	Qtrly, 1 year thru Jun 05		✓	Annual		✓	✓			✓	Annual	Temporal statistics confirm qualitative evaluation
OFR-2	Qtrly, 1 year thru Jun 05		✓	Annual	✓		✓			✓	Biennial	Decrease sampling frequency due to statistics results
OFR-3	Qtrly, 1 year thru Jun 05		✓	Quarterly		✓	--	--		✓	Quarterly	Temporal statistics confirm qualitative evaluation
OFR-4	Annually		✓	Annual	Not Analyzed		✓			✓	Biennial	Decrease sampling frequency due to statistics results
RFR-10	Qtrly, 1 year thru Jun 05		✓	Quarterly		✓	✓			✓	Quarterly	Temporal statistics confirm qualitative evaluation
RFR-11	Qtrly, 1 year thru Jun 05		✓	Quarterly		✓	-- ^{a/}	--		✓	Quarterly	Temporal statistics confirm qualitative evaluation
RFR-12	Qtrly, 1 year thru Jun 05		✓	Annual		✓	--	--		✓	Annual	Temporal statistics confirm qualitative evaluation
RFR-3	Qtrly, 1 year thru Dec 04		✓	Annual	✓		--	--		✓	Biennial	Decrease sampling frequency due to statistics results
RFR-4	Annually		✓	Annual	Not Analyzed			✓		✓	Annual	Spatial statistics confirm qualitative evaluation
RFR-5	Annually		✓	Annual	Not Analyzed			✓		✓	Annual	Spatial statistics confirm qualitative evaluation
RFR-6	Annually		✓	Annual	✓			✓		✓	Biennial	Decrease sampling frequency due to temporal statistics results
RFR-7	Annually		✓	Annual	✓			✓		✓	Biennial	Decrease sampling frequency due to temporal statistics results
RFR-8	Annually		✓	Annual	✓		--	--		✓	Biennial	Decrease sampling frequency due to statistics results
RFR-9	Annually		✓	Annual	✓		--	--		✓	Biennial	Decrease sampling frequency due to statistics results
WestBay Wells												
CS-WB01-LGR-01	Monthly & after rain events		✓	Semi-annual	✓		↓			✓	Semi-Annual	Qualitative factor overrides statistic recommendations
CS-WB01-LGR-02	Monthly & after rain events		✓	Semi-annual	✓		↓			✓	Semi-Annual	Qualitative factor overrides statistic recommendations
CS-WB01-LGR-03	Monthly & after rain events		✓	Semi-annual		✓	↓			✓	Semi-Annual	Temporal statistics confirm qualitative evaluation
CS-WB01-LGR-04	Monthly & after rain events		✓	Semi-annual	✓		↓			✓	Semi-Annual	Qualitative factor overrides statistic recommendations
CS-WB01-LGR-05	Monthly & after rain events		✓	Semi-annual	✓		↓			✓	Semi-Annual	Qualitative factor overrides statistic recommendations
CS-WB01-LGR-06	Monthly & after rain events		✓	Semi-annual	✓		↓			✓	Semi-Annual	Qualitative factor overrides statistic recommendations

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Well ID	Current Sampling Frequency	Qualitative Evaluation			Temporal Evaluation		Spatial Evaluation		Summary			Rationale
		Exclude	Retain	Recommended Monitoring Frequency	Exclude/Reduce	Retain	Exclude	Retain	Exclude	Retain	Recommended Monitoring Frequency	
CS-WB01-LGR-07	Monthly & after rain events		✓	Semi-annual		✓	↓			✓	Semi-Annual	Temporal statistics confirm qualitative evaluation
CS-WB01-LGR-08	Monthly & after rain events		✓	Semi-annual	✓		↓			✓	Semi-Annual	Qualitative factor overrides statistic recommendations
CS-WB01-LGR-09	Monthly & after rain events		✓	Semi-annual		✓	--	--		✓	Semi-Annual	Temporal statistics confirm qualitative evaluation
CS-WB01-UGR-01	Monthly & after rain events		✓	Semi-annual	Not Analyzed			↓		✓	Semi-Annual	Spatial statistics confirm qualitative evaluation
CS-WB02-LGR-01	Monthly & after rain events		✓	Semi-annual		✓	--	-->		✓	Semi-Annual	Statistics confirm qualitative evaluation
CS-WB02-LGR-02	Monthly & after rain events		✓	Semi-annual		✓	--	--		✓	Semi-Annual	Temporal statistics confirm qualitative evaluation
CS-WB02-LGR-03	Monthly & after rain events		✓	Semi-annual		✓	--	--		✓	Semi-Annual	Temporal statistics confirm qualitative evaluation
CS-WB02-LGR-04	Monthly & after rain events		✓	Semi-annual	✓		↓--	--		✓	Semi-Annual	Qualitative factor overrides statistic recommendations
CS-WB02-LGR-05	Monthly & after rain events		✓	Semi-annual	✓		↓--	--		✓	Semi-Annual	Qualitative factor overrides statistic recommendations
CS-WB02-LGR-06	Monthly & after rain events		✓	Semi-annual	✓		↓	→		✓	Semi-Annual	Qualitative factor overrides statistic recommendations
CS-WB02-LGR-07	Monthly & after rain events		✓	Semi-annual	✓		↓	→		✓	Semi-Annual	Qualitative factor overrides statistic recommendations
CS-WB02-LGR-08	Monthly & after rain events		✓	Semi-annual	✓		↓	→		✓	Semi-Annual	Qualitative factor overrides statistic recommendations
CS-WB02-LGR-09	Monthly & after rain events		✓	Semi-annual	✓			↓→		✓	Semi-Annual	Spatial statistics confirm qualitative evaluation
CS-WB02-UGR-01	Monthly & after rain events		✓	Semi-annual	Not Analyzed			↓→		✓	Semi-Annual	Spatial statistics confirm qualitative evaluation
CS-WB03-LGR-01	Monthly & after rain events		✓	Semi-annual	Not Analyzed		--	--		✓	Semi-Annual	Qualitative factor overrides statistic recommendations
CS-WB03-LGR-02	Monthly & after rain events		✓	Semi-annual	Not Analyzed		--	--		✓	Semi-Annual	Qualitative factor overrides statistic recommendations
CS-WB03-LGR-03	Monthly & after rain events		✓	Semi-annual		✓	--	--		✓	Semi-Annual	Temporal statistics confirm qualitative evaluation
CS-WB03-LGR-04	Monthly & after rain events		✓	Semi-annual		✓	--	--		✓	Semi-Annual	Temporal statistics confirm qualitative evaluation
CS-WB03-LGR-05	Monthly & after rain events		✓	Semi-annual		✓		↓		✓	Semi-Annual	Statistics confirm qualitative evaluation
CS-WB03-LGR-06	Monthly & after rain events		✓	Semi-annual		✓		↓		✓	Semi-Annual	Statistics confirm qualitative evaluation
CS-WB03-LGR-07	Monthly & after rain events		✓	Semi-annual		✓		↓		✓	Semi-Annual	Statistics confirm qualitative evaluation
CS-WB03-LGR-08	Monthly & after rain events		✓	Semi-annual		✓	--	--		✓	Semi-Annual	Statistics confirm qualitative evaluation
CS-WB03-LGR-09	Monthly & after rain events		✓	Semi-annual		✓		↓		✓	Semi-Annual	Statistics confirm qualitative evaluation
CS-WB03-UGR-01	Monthly & after rain events		✓	Semi-annual		✓	↓			✓	Semi-Annual	Temporal statistics confirm qualitative evaluation
CS-WB04-BS-01	Monthly & after rain events		✓	Biennial	✓		→			✓	Biennial	Statistics confirm qualitative evaluation
CS-WB04-BS-02	Monthly & after rain events		✓	Biennial	✓		→			✓	Biennial	Statistics confirm qualitative evaluation
CS-WB04-CC-01	Monthly & after rain events		✓	Biennial	✓		→			✓	Biennial	Statistics confirm qualitative evaluation
CS-WB04-CC-02	Monthly & after rain events		✓	Biennial	✓		→			✓	Biennial	Statistics confirm qualitative evaluation
CS-WB04-CC-03	Monthly & after rain events		✓	Biennial	✓		--	--		✓	Biennial	Statistics confirm qualitative evaluation
CS-WB04-LGR-01	Monthly & after rain events		✓	Semi-annual	✓		--	--		✓	Semi-Annual	Qualitative factor overrides statistic recommendations
CS-WB04-LGR-02	Monthly & after rain events		✓	Semi-annual	✓		→			✓	Semi-Annual	Qualitative factor overrides statistic recommendations
CS-WB04-LGR-03	Monthly & after rain events		✓	Semi-annual	✓		--	--		✓	Semi-Annual	Qualitative factor overrides statistic recommendations
CS-WB04-LGR-04	Monthly & after rain events		✓	Semi-annual	✓			→		✓	Semi-Annual	Spatial statistics confirm qualitative evaluation
CS-WB04-LGR-06	Monthly & after rain events		✓	Semi-annual	✓		--	--		✓	Semi-Annual	Qualitative factor overrides statistic recommendations
CS-WB04-LGR-07	Monthly & after rain events		✓	Semi-annual	✓		--	--		✓	Semi-Annual	Qualitative factor overrides statistic recommendations
CS-WB04-LGR-08	Monthly & after rain events		✓	Semi-annual	✓		→			✓	Semi-Annual	Qualitative factor overrides statistic recommendations
CS-WB04-LGR-09	Monthly & after rain events		✓	Semi-annual		✓	→			✓	Semi-Annual	Temporal statistics confirm qualitative evaluation
CS-WB04-LGR-10	Monthly & after rain events		✓	Semi-annual		✓	→			✓	Semi-Annual	Temporal statistics confirm qualitative evaluation
CS-WB04-LGR-11	Monthly & after rain events		✓	Semi-annual	✓		→			✓	Semi-Annual	Qualitative factor overrides statistic recommendations
CS-WB04-UGR-01	Monthly & after rain events		✓	Semi-annual	Not Analyzed			→		✓	Semi-Annual	Spatial statistics confirm qualitative evaluation

^{a)} Spatial recommendation result from North to South vertical cross section analysis that do not impact LGR zone well summary evaluation result:

^{b)} Well in the "intermediate" range; received no recommendation for removal/exclusion or retention/addition in spatial evaluation

^{c)} Spatial recommendation result from West to East vertical cross section analysis that do not impact LGR zone well summary evaluation result: