

TO: BOARD OF DIRECTORS
FROM: BRUCE BUEL *BB*
DATE: JULY 17, 2009



MANAGER'S REPORT

ITEM

Standing report to your Honorable Board --*Period covered by this report July 2, 2009 through July 15, 2009.*

DISTRICT BUSINESS

Administrative

Maria Vista Estates has set a total of ten water meters.

Golden State Water Company, Rural Water Company and the Woodlands have agreed to pay for the "at risk" cost of forming an assessment district to pay for the capital portion of the Waterline Intertie Project. Staff is awaiting a follow up meeting with the County's Debt Issuance Council regarding the formation of a JPA to facilitate formation of the proposed assessment district.

Attached is a memo from AECOM documenting the change in the cost of the pressure reduction valve stations for the Waterline Intertie Project.

Attached is a memo from Mike LeBrun documenting the various water purveyors on the Mesa.

Attached is a copy of a staff letter to Dept of Public Health detailing NCSD efforts to comply with the new Federal Groundwater Rule.

Attached is a printout from NOAA predicting an El Nino for Winter 2009-10

Safety Program - No new accidents and/or injuries.

RECOMMENDATION

Staff seeks direction and input from your Honorable Board.

ATTACHMENTS

- AECOM Memo re Change in Cost for PRV Stations
- LeBrun Memo re Mesa Water Purveyors
- NCSD Letter to DPH re Federal Groundwater Rule
- NOAA printout re Winter 2009-10 El Nino

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Draft Memorandum

Date: July 1, 2009
To: Bruce Buel – General Manager
Peter Sevcik, PE – District Engineer
From: Mike Nunley, PE
Josh Reynolds, PE
Eileen Shields, EIT
Subject: NCSD Waterline Intertie Project
Updated Budget for Pressure Reducing Valve Stations

This memorandum discusses the change in the opinion of probable construction cost for the pressure reducing valve (PRV) stations of the Waterline Intertie Project when comparing the May 2008 Preliminary Engineering Memorandum (PEM) to the April 2009 Concept Design Report (CDR). A summary table from the CDR is attached for reference, and shows the Opinion of Probable Construction Cost from the respective reports. As shown in the attached table, the opinion of cost for Line Item 9 - Pressure Reducing Valve Stations - went from \$18,000 in the PEM to \$243,000 in the CDR.

The cost shown in the PEM was based on preliminary design considerations and objectives. The CDR, which represents the 30% design level, included an update to the opinion of probable construction cost and is based on the refined 30% project plans and objectives. There have been several design changes that have occurred in the 11 months between the two reports which have resulted in the change in the price for the PRV Stations.

In the May 2008 PEM, the preliminary design included installation of a single pressure reducing valve (on Maria Vista Way) installed in a small vault to serve the Maria Vista housing development. Technical Memorandum 9 (Pressure Reduction Study, September 23, 2008) investigated alternatives to individual service pressure regulators recommended in the PEM to mediate increased pressures in the Nipomo area. The design presented in TM 9 and in the CDR includes five PRV stations to create and maintain a separate pressure zone. Dividing \$243,000 by 5, the cost per PRV station is \$48,600.

The cost opinion for the PEM was created prior to detailed design. It assumed one pressure-reducing valve would be required to reduce pressure for the homes in the Maria Vista development. With only one PRV station, located near the pump station and reservoir site, SCADA was assumed to be unnecessary and was not included in the cost opinion.

The cost opinion for the Concept Design Report was created with 30% of the project design complete, including design details for the PRV stations such as sizing of the valves, determination of fittings, station layout, and vault sizing. Two pressure-reducing valves per station are recommended – one to maintain flow during average demands, and a larger one for high-flow, or emergency, needs. (Two valves per station increased the size of the vault, compared to the PEM). SCADA interconnection and the associated control panels and radio masts at the PRV stations are included in the CDR to assist with monitoring, operations, and alarm notification in case of a valve failure. With the more detailed design completed, and preliminary locations determined for each PRV station, a more precise cost opinion was developed for the CDR.

Waterline Intertie Project

Opinion of Probable Project Costs from Concept Design Report (April 2009)

Table 8.1 – Opinion of Probable Project Costs

Item	Description	Budgeted Amount May 2008 Preliminary Engineering Memo.	Updated Amount 22-Apr-09 Concept Design Report
1	Mobilization	\$580,000	\$607,000
2	Blosser Extension (18-in)	\$1,247,000	\$1,129,000 -
3	Pump Station No. 1 turnout & meter (Blosser Rd)	\$61,000	\$158,000
4	River Crossing (24-in HDD & levee jack & bore)	\$6,135,000	\$5,462,500
5	24-in Pipeline to Joshua	\$656,000	\$400,000
6	Reservoir (0.5-MG)	\$1,361,000	\$1,365,000
7	Pump Station No. 2	\$603,000	\$1,572,500
8	Pressure Regulators (200 homes)	\$30,000	--
9	Pressure Reducing Valve Stations	\$18,000	\$243,000
10	Chloramination (Joshua & 5 wellheads)	\$707,000	\$739,500
11	Upgrade Southland to 12-in	\$799,500 (1)	\$849,000 (7)
12	Upgrade Frontage to 12-in	\$1,101,300 (1)	\$957,000 (7)
13	Upgrade Orchard to 12-in	\$509,000	\$1,103,500 (8)
14	Upgrade Division to 10-in between Allegre and Meridian (6)	\$53,000	--
15	Oakglen Avenue 12-in main (5)	--	\$457,000
16	Darby Lane 12-in main (5)	--	\$153,000
17	HWY 101 Bore & Jack (5)	--	\$241,000
18	Isolation Valves (5)	--	\$12,000
19	Pump Station All Weather Access Road	--	\$128,000
	Construction Subtotal	\$13,860,800	\$15,577,000
20	Contingency	\$3,643,000	\$3,115,400 (10)
	Construction Subtotal + Contingency	\$17,503,800	\$18,692,400
21	Property Allowance	<i>not included</i> (4)	\$500,000 (4)
22	Design-Phase Engineering		
	Original Agreement (July 2008)		\$744,993
	Budget Revision 1 - Pressure Reduction		\$132,798
	Budget Revision 2 - Biological Survey for HDD		\$4,050
	Budget Revision 3 - Modeling for GSW/Woodlands Turnouts		\$8,380
	Budget Revision 4 - Additional Survey Services		\$9,900
23	Office Engineering during construction		\$175,837
24	Estimated Construction Management (3)	\$2,428,000 (2)	\$1,507,170 (9)
25	Permitting Fees To Date	--	\$1,573
26	Non-Final Design Funds Spent To Date	<i>not included</i>	\$1,402,879 (11)
27	Estimated Other Costs (Assessment, etc)	<i>not included</i>	\$415,420 (11)
	PROJECT TOTAL (Rounded to 1000)	\$19,932,000	\$23,596,000

Waterline Intertie Project

Opinion of Probable Project Costs from Concept Design Report (April 2009)

Table 8.1 (continued)**Table 8.1 Notes:**

ENR CCI: March 2008 = 8109; March 2009 = 8534


- (1) Costs are from the December 2007 Water and Sewer Master Plan (Cannon).
 - (2) Engineering and Construction Management were originally presented as a "lump sum" amount
 - (3) Includes material testing, construction staking, and environmental monitoring
 - (4) Estimate only. Item not included in previous construction cost opinions, but was added to the Concept Design Report to provide a complete assessment of anticipated project costs.
 - (5) These work items were added to relieve high pressures on Mesa as an alternative to service pressure regulating valves (See Tech Memo 9). One PRV station at Maria Vista was required initially. Four are recommended for revised project. This was design Budget Revision #1.
 - (6) Based on review of record drawings, this pipeline is already a 10-in main
 - (7) Initial estimate incorporated Master Plan project costs. Revised estimate includes higher unit costs to reflect paving 1 traffic lane, per County standards
 - (8) Updated unit costs include higher costs to reflect paving 1 traffic lane, per County standards
 - (9) To be provided by CM team - Has not been revised to reflect additional work for construction management of Oakglen, Darby, and Orchard extensions.
 - (10) Contingency was modified to 20% which is more appropriate for 30% design phase.
 - (11) Provided by District staff.
- not included* = Item was not included in previous construction cost opinions, but was added into the Concept Design Report to provide a complete assessment of anticipated project costs.

M. S. LeBrun Environmental Engineering
PE C55787
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mslenve@verizon.net
805-305-1885

Technical Memorandum

✓ To: Bruce Buel
General Manager
Nipomo Community Service District

Copy: Peter Sevcik
District Engineer

From: Michael S. LeBrun, PE 55787 

Date: July 6, 2009

Subject: Water Companies Utilizing the Nipomo Mesa Management Area Aquifer

This Memorandum responds to Request for Services Task Order #09-005, *NMMA Mutual Water Company Research*, dated May 20, 2009.

The District desires a summary of publicly available information regarding the various water supply organizations drawing water from the NMMA aquifer. The District would like to better understand the process by which 'small' water companies are formed and regulated.

Water System Regulation

Wells supplying a single private parcel are required to provide basic water quality and flow rate data to the County upon well completion and prior to transfer of parcel ownership. No further information is collected on these wells. The County Health Department's Environmental Health Services division regulates water supply systems with between 1 and 199 connections. These systems are inspected upon completion and once every five years thereafter. If the supply system includes treatment, the system is inspected every two years. California Department of Public Health's Drinking Water Program regulates water systems with 200 or more connections. These larger systems are inspected upon completion and annually thereafter for systems with 1000 or more connections or systems that have water quality treatment systems or exceedances. State regulated systems with under 1000 connections are inspected every two years.

Inspection reports by regulatory agencies are generally public information made available by filing a public records request with the Agency. Both the County and State were contacted and inspection records for all water companies utilizing the NMMA were requested. The information is summarized in Table 1a. & 1b. County Regulated NMMA Water Systems, and Table 2. State Regulated Water Systems, below. A complete copy of all Inspection Reports and other information obtained during the course of this investigation is provided to the District under separate cover.

Table 1a. County Regulated NMMA Water Systems

C o u n t	Purveyor	Type	Date of Info	Location	Certified Operator	#	
						C o n n e c t i o n s	S e r v i c e s
1	Ball Tagawa Growers	Nontransient-noncommunity	Jan. 2006	819 Zenon Way, Arroyo Grande, CA	None Required	1	55
2	Black Lake Canyon Water Supply	State Small	Mar. 2006	1205 Pomeroy Road, Arroyo Grande, CA	None	11	40
3	Callender Grove MWC	Community	Feb. 2006	Callender Rd. at Highway 1	FRM	37	45
4	Callender Water Association	State Small	Mar. 2007	2542 Callender Road, Arroyo Grande	None	7	15
5	Conoco Phillips	Nontransient-noncommunity	Jan. 2006	2555 Willow Road, Arroyo Grande	Kristen Kopp, D1	1	200
6	Crossroads Community Church Water	Transient-noncommunity	Feb. 2007	330 Stanton Street, Arroyo Grande, CA	FRM	1	25
7	Greenheart Water Supply	Nontransient-noncommunity	Jul. 2005	902 Zenon Way, Arroyo Grande	Required, None listed	2	70
8	La Colonia Water Association	State Small	Aug. 2007	Moss Lane, Nipomo	None required	6	18
9	La Mesa Water Co.	State Small	Jan. 2007	Hermosa Vista Way, Arroyo Grande	None Required	11	30
10	Laguna Negra MWC	Community	Nov. 2006	Guadalupe @ Laguna Negra Road, AG, CA	Butch Kwid, T5, D2	29	80
11	Mutual Water Association	Nontransient-noncommunity	Feb. 2006	834 Sheridan Road, Arroyo Grande, CA	Required, none listed.	8	35
12	Nunes Water Company	State Small	Feb. 2006	610 Mesa View Dr., Arroyo Grande	Butch Kwid, T5, D2	12	45
13	T&A Properties Water Company	Nontransient-noncommunity	Jun. 2006	2460 Willow, Arroyo Grande, CA	Butch Kwid, T5, D2	7	25
14	True Water Supply	State Small	Mar. 2006	1079 Summer Lane, Nipomo, CA	None	7	20
15	Vista De Las Flores	State Small	May. 2005	Mesa View Drive, Arroyo Grande	None	12	40
16	Woodland Park MWC	Community	Apr. 2006	Silver Charm Drive, Arroyo Grande, CA	Dave Johnson, T1&D1	151	500
TOTAL						303	1243

Table 1b. County Regulated NMMA Water Systems

County	Purveyor	# Connections	# Served	Source	Storage (gal)	Dist.
	1 Ball Tagawa Growers	1	55	Well 1, 450 feet, 50-foot seal, 400 ft 8-inch PVC casing, perforated 295-400, 25hp pump producing 125 gpm.	23,000	3" PVC, booster pump
	2 Black Lake Canyon Water Supply	11	40	Well 1, const. 9/96, depth 440-feet, 50-foot seal, 8-inch PVC casing to 425-feet, perf 250-425, 15hp pump, ?gpm,	10,000	2-inch pvc, boosters
	3 Callender Grove MWC	37	45	Well 1, constructed 11/02, 470-feet, 54 foot seal, 8"PVC to 460 feet, perf. :210-460, 10hp pump, 200gpm: Well2, 11/02, 470 feet, 57-foot seal, 8"PVC to 460, perf 210-460, 10hp, 200gpm	188,000	8", 2booster, one fire pump
	4 Callender Water Association	7	15	Well1, const. 1966, 216 foot, 50 foot seal, 8" steel to 216, perf 205 to 216, 1hp, 25gpm	10,000	2"pvc, booster
	5 Conoco Phillips	1	200	Well 02, const. 10/54, 600 feet, ? Seal, 16" & 14" steel, perf 384-600, vertical turbine pump, 1000gpm. Well 04, 1985, 420 feet, 50 foot seal, 10" PVC to 420 feet, perf260-420, submersible, 1000gpm. Well 05	2,400,000	3-4" galv, two 15hp boosters
	6 Crossroads Comm Church Water	1	25	Well 01, const. 1993, 295 feet, 50 foot seal, 6" PVC to 295, perf 150-295, submersible, 2gpm	10,500	1.5 inch pvc, booster
	7 Greenheart Water Supply	2	70	Well 01, const, 1986, 450-feet, 50 foot seal, 8"PVC to 400 feet, perf 250-400 feet, 25hp submersible at 357 feet, 200gpm.	10,000	3" PVC
	8 La Colonia Water Association	6	18	Well 01, const 1952 to 203 feet, no seal, perf 107- 203	5,000	1.5 inch galv, pooster
	9 La Mesa Water Co.	11	30	Well 01, const 08/1948, 83 foot depth, no seal, 6-inch casing to 80 feet, perf 4--80 feet, 3hp submersible, 35gpm	10,000	3"PVC
	10 Laguna Negra MWC	29	80	Well 01 const. 10/1978 to 601 feet, 5.1 foot seal, 10" steel to 525 feet, perf 290-525 feet, submersible, 200gpm. Well 02 const 07/1987 to 320 feet, 50 foot seal, 10" steel to 320 feet, perf?, submersible, :115 gpm	64,000	4-6" asbestos cement and PVC, booster
	11 Mutual Water Association	8	35	Well 01 const. 11/1962 to 332 feet, 20 foot seal, 8"steel to 300 feet with 6" liner to 332 feet, perf 288-332 feet, submersible, gpm ?,	5,000	6" transite, 2 inch galv, booster
	12 Nunes Water Company	12	45	Well 01 const. 1951 to 103 feet, no seal, sleeved in 12/1976 with 5"PVC to 100 foot, perf 60-100 feet, submersible, 40 gpm	15,000	4" galv. Booster
	13 T&A Properties Water Company	7	25	Well 01 const10/1985 to 400 feet, so foot seal, 6" PVC to 400feet, perf 320-400 feet, 2Hp submersible, 37gpm	10,000	2-3" PVC, booster
	14 True Water Supply	7	20	Well 01 const 11/1974 to 430 feet, 50 foot seal, 6" steel to 400 feet. Perf unkn, 2.5 hp submersible, 75 gpm	6,000	2.5" PVC, booster
	15 Vista De Las Flores	12	40	Well 01 const 1950 to 105 feet, no seal, 8" steel casing to 100 feet, perf 47-100 feet, submerisble, 24 gpm	20,000	4"PVC and 3" galv, booster
	16 Woodland Park MWC	151	500	Well 01 Ralcoa const 1950 to 240 feet, 20 foot seal, 9" steel to 239 feet, perf 231-239, sanded in to depth of 220 feet, 5Hp submersible, 75gpm, static water at 65 feet, serves 12 connections primarily; Well 03 Hillview const1993 to 340 feet, 50 foot seal, 6" PVC to 340 feet, perf 200-340, 7.5Hp submersible at 273 feet, 75gpm, static water at 105; Well 04 Silver Charm const. 10/1998 to 400 feet, 75 foot seal, 8" PVC to 380 feet, perf 200-380, 20Hp submersible set at 315, 90gpm, static water at 141	56,000	8, 6, and 2.5 Inch PVC
	Total	303	1243		Total 2,842,500	

Table 3. State Regulated NMMA Water Systems

Purveyor	Date of Info	Certified Operator	# C o n n e c t i o n s	# S e r v e d	Source	Storage (gal)	Notes:
1 Golden State Water Co - Nipomo	2004	Various	1,465	4,782	Seven Wells - report contains well depth and screen information, 1765 GPM combined	500,000	Fe/Mn treatment on four wells, 2004 production = 496.2 MG
2 Mesa Dunes	Aug. 2004	Skip Permenter	304	700	Three Wells - report contains depth and screen information, 210 GPM combined.	43,000	2003 produciton = 27.4 MG
3 Nipomo CSD	2009	Various	3,886	12,696	nine wells - report contains depth and screen information, 3920 GPM	3,400,000	Report indicates Dana School Well 3 remains connected to system.
4 Rural Water Company	Jun. 2007	Clifford Kwid, T5/D2	917	1,989	Eleven wells - report contains depth and screen information.	1,200,000	4 pressure zones, 3 inactive wells, recycled water system at C.Ridge
5 Woodlands Mutual Water Co	Jun. 2009	Fluid Resource Mgmt	377	1,000	Three Wells - 3200 GPM combined.	930,000	Additional 71 irrigation connections. At build out; 4120 served through 1300 connections.
TOTALS			6949	21167		6,073,000	

There is one existing systems not included in the Tables; The “SLO Trio” system, a small County regulated system at the corner of Dawn and Sundale. This system has been installed and inspected, however it has not been operated and is not yet included in the County inspection records.

There are two County regulated water systems near the Highway 101/Highway 166 interchange. One system serves the Santa Maria Speedway; the other serves the commercial properties in the area. Neither system draws water from the NMMA.

Irrigation supply wells and irrigation systems are not regulated by either health agency. This includes golf courses, greenhouses, public parks, and outdoor growers.

New water systems are formed when a new development is proposed for which no existing system is available. In general, County Planning and Health Department staff discourage small systems, however when a development is otherwise allowable and no existing entity is willing or able to provide water service, new systems are allowed.

Consideration for impact to water resources caused by new water demands/new water systems is made through the County’s development review process.

NIPOMO COMMUNITY

BOARD MEMBERS

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LARRY VIERHEILIG, VICE PRESIDENT
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BILL NELSON, DIRECTOR



SERVICES DISTRICT

STAFF

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LISA BOGNUDA, FINANCE DIRECTOR/ASST. GM
JON SEITZ, GENERAL COUNSEL
PETER SEVCIK, P.E., DISTRICT ENGINEER

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July 6, 2009

Mr. Kurt Souza, P.E.
Regional Engineer
California Department of Public Health
Drinking Water Field Operations Branch – Santa Barbara District
1180 Eugenia Place, Suite 200
Carpinteria, CA 93013

SUBJECT: PWS NO. 4010026
PROPOSED REGULATORY COMPLIANCE MEASURES

Dear Mr. Souza:

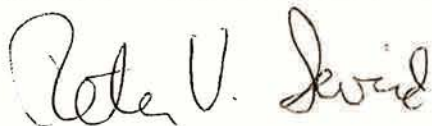
The District's consultant, AECOM, prepared the attached Technical Memorandum that outlines the compliance tasks the District needs to complete to comply with the new Federal Groundwater Rule as well as integrate the Waterline Intertie Project, which is currently being designed, into its operations in the near future. We would welcome any comments you have regarding our proposed regulatory compliance measures.

Regarding the Groundwater Rule, we are planning to perform triggered source water monitoring and are presently in the process of developing the Triggered Source Water Monitoring Plan for the current system. We will forward the plan to your office once it is completed.

Thank you for your continued assistance. Should you have any questions or require additional information, please call me.

Very truly yours,

NIPOMO COMMUNITY SERVICES DISTRICT



Peter V. Sevcik, P.E.
District Engineer

Enclosures

C: Bruce Buel, General Manager
Lisa Bognuda, Assistant General Manager
Tina Grietens, Utility Superintendent
Mike Nunley, AECOM

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Memorandum

Date: May 20, 2009
To: Bruce Buel, General Manager
Peter Sevcik, PE
From: Kirk Gonzalez, PE
Josh Reynolds, PE
Subject: Water System Regulatory Compliance Measures

1.0 Introduction

In anticipation of updated Federal EPA regulations affecting operation of the NCSD potable water system, and changes to water sources and system operation for the Waterline Intertie Project, AECOM has prepared this memorandum to summarize new Groundwater Rule (GWR) requirements, Stage 2 Disinfection Byproducts Rule (S2DBP) requirements, and the Long Term 2 Enhanced Surface Water Treatment Rule (LT2), as they apply to the current and future NCSD water system. Additionally, requirements for a Chloramination Operation Monitoring and Control Plan and application for a Water System Permit Amendment are summarized at the end of this memorandum.

2.0 Groundwater Rule

The Groundwater Rule (GWR) was issued by the EPA to protect the public from potential microbial pathogens in public drinking water systems with groundwater sources. The GWR consists of four components developed to identify and address water system deficiencies which could result in contaminated water reaching the public. These components are periodic sanitary surveys, triggered source water monitoring, compliance monitoring, and corrective action for significant deficiencies or source water contamination.

Sanitary Surveys will be conducted by the California Department of Public Health (CDPH) to identify deficiencies and potential deficiencies in eight groundwater system elements (see Attachment 1). The first survey will be conducted before the December 12, 2010 State deadline and additional sanitary surveys will be performed every 3 to 5 years. If significant deficiencies are noted in the sanitary surveys, the District will be required to take corrective action approved by the State.

To satisfy GWR requirements, the District will need to perform either triggered source water monitoring or 4-log virus inactivation/ removal with compliance monitoring for each groundwater source. Driven by Total Coliform Rule (TCR) sampling results, triggered source water monitoring involves immediate sampling of all active water sources and analysis for a fecal indicator (e.g. E. coli., enterococci, or coliphage) if any water sample analyzed as part of TCR bacteriological sampling is total coliform-positive. Triggered samples will be required within 24 hours of a total coliform-positive result to determine the source(s) of contamination. Repeat samples and corrective action will be necessary if any of the triggered samples result in one or more fecal indicator-positive result. An overview of Triggered Source Water Sampling requirements is provided in Attachment 2.

As an alternative to triggered source water monitoring, compliance monitoring allows a water system providing 4-log treatment (deactivation or removal) of groundwater sources to avoid triggered source water monitoring by demonstrating effectiveness of the treatment process. For systems using chlorination for 4-log treatment, regular analysis of disinfection concentration (continuous monitoring required for systems serving more than 3,300 people) in samples from State-approved locations and demonstration of sufficient contact time is required. For 4-log treatment processes not using chlorination for primary disinfection, compliance monitoring consists of monitoring treatment process parameters according to State requirements.

Corrective action will be required to address water source contamination and significant deficiencies discovered through triggered monitoring, compliance monitoring or sanitary surveys. Corrective action would likely include correcting deficiencies, eliminating contamination and providing an alternative source of water or 4-log treatment before water reaches the first customer. Compliance monitoring may also be prescribed by CDPH if 4-log treatment is needed.

GWR Compliance Measures

Develop Triggered Source Water Monitoring Plan

It is anticipated the District will not be providing log-4 treatment of groundwater sources in the near future or as part of the WIP and will therefore conduct triggered source water monitoring for GWR compliance. The District will be required to submit a Triggered Source Water Monitoring Plan to CDPH which will include details on sample collection and analysis, and a map of the current distribution system showing sample locations (representative of each water source, consistent with TCR bacteriological sampling plan). The District should submit the Triggered Source Water Monitoring Plan before December 1, 2009, and be prepared to execute triggered sampling and corrective action to remedy any significant deficiencies discovered in surveys and contamination from that day forward.

Update Triggered Source Water Monitoring Plan and TCR Bacteriological Sampling Plan

It is anticipated the GWR Triggered Source Water Monitoring Plan and the Total Coliform Rule Bacteriological Sampling Plan will need to be updated for WIP improvements to include sampling locations representing the City of Santa Maria water source and new pressure zones being created as part of the WIP. These monitoring plans will need to be updated before the intertie with the City of Santa Maria as the District should be ready to perform TCR sampling and Triggered Source Water Monitoring according the updated plans as soon as the waterline intertie is in operation (expected to go online in the first quarter of 2011). As previously described, corrective action will be necessary to address any significant deficiencies discovered in sanitary surveys and contamination in the distribution system.

3.0 Disinfectants and Disinfection Byproducts Rule (DBPR)

Developed to reduce potential public health risks from disinfection byproducts (DBPs) in drinking water, the Stage 2 Disinfectants and Disinfection Byproducts Rule (Stage 2 DBPR) requires TTHM and HAA5 maximum contaminant levels (MCLs) not be exceeded at individual monitoring locations in systems utilizing surface water sources. Stage 2 compliance will be determined based on a calculation of locational running annual average for each DBP monitoring location (Stage 1 used system-wide averages).

The Stage 2 rule calls for an Initial Distribution System Evaluation (IDSE) to determine appropriate DBP monitoring locations but allows four compliance alternatives for water systems: standard monitoring, a system specific study, 40/30 certification, or a small system waiver. The District water system, classified as Schedule 3, has been granted 40/30 certification based on previous DBP sampling results. Although the 40/30 certification satisfies IDSE requirements, the certification does not relieve the District from submitting a Stage 2 DBP Monitoring Plan and DBP Compliance Monitoring requirements. An overview of the Stage 2 Disinfectants and Disinfection Byproducts Rule is included in Attachment 3.

DBPR Compliance Measures

Stage 1 DBPR Compliance Monitoring

Because the current District water system has obtained 40/30 certification (and has therefore met Stage 2 Initial Distribution System Evaluation requirements), the District need only continue with TTHM and HAA5 sampling on an annual basis (reduced from quarterly) until the waterline intertie comes online. Once the waterline intertie is online, the District will be required to resume quarterly Stage 1 DBPR Compliance Monitoring. This is the minimum frequency for systems with surface water sources serving more than 10,000 people.

DBP Characterization for Stage 2 DBPR

Since the waterline intertie will deliver Santa Maria groundwater and CCWA surface water to the NCSD water system, DBP formation will be a greater concern in the combined system than in the current groundwater system. The District will be required to conduct additional TTHM and HAA5 sampling at eight CDPH-approved monitoring locations: one near the intertie site, two average residence time sites, three high TTHMs sites and two high HAA5 sites. Quarterly DBPs sampling at each of the eight sites should begin soon after the waterline intertie comes online.¹ These DBP characterization requirements are in lieu of IDSE requirements for systems using surface water and were recommended by CDPH (letter dated February 19, 2009 and subsequent communication). The District should work with CDPH to select monitoring locations and will be required to submit documentation of DBP characterization results to CDPH in lieu of an IDSE report.

Stage 2 DBPR Compliance Monitoring

A Stage 2 DBPR Compliance Monitoring Plan will be required for the District water system. The Compliance Monitoring Plan should specify quarterly sampling from four of the eight DBP characterization sites and should include sampling schedule, compliance calculation procedures and copies of monitoring plans of other systems connected to the combined system (Santa Maria). It is recommended that consecutive water systems coordinate Stage 2 DBPR compliance monitoring to coincide with the supplier's monitoring schedule, compensating for transmission time from the supplier to the consecutive system. Coordinated monitoring schedules will allow better understanding of DBP formation in the combined system and may simplify correcting problems with DBP compliance, if necessary.

Although the NCSD water system is classified as a Schedule 3 system, the Stage 2 DBPR defines compliance dates for consecutive systems based on the larger system's classification (Santa Maria is a Schedule 2 system). Therefore, the October 1, 2012 compliance date for the City of Santa Maria water system should tentatively be adopted as the NCSD Stage 2 DBPR compliance date. However, due to the timing of the WIP, CDPH may provide the District with an extension for compliance monitoring to allow sufficient time for DBP characterization and developing the Stage 2 Compliance Monitoring Plan.

4.0 Long Term 2 Enhanced Surface Water Treatment Rule (LT2)

The Surface Water Treatment Rule established requirements for pathogen inactivation or removal and includes standards for turbidity, primary disinfection, and minimum chlorine residual (secondary disinfection) in distribution systems. The Long Term 2 Enhanced Surface Water Treatment Rule is intended to minimize risk from surface water contaminants while water systems adopt monitoring plans and implement operational changes for DBPR compliance and requires that minimum disinfectant levels be maintained in a water distribution system.

¹ CDPH has recommended the District begin DBP characterization sampling within 3 months following the intertie coming online to maximize time for determination of sample locations for the Stage 2 DBPR Compliance Monitoring.

LT2 Disinfectant Residual Monitoring Plan

Upon receiving combined surface and ground water from the waterline intertie, the District will be required to ensure compliance with SWTR minimal disinfectant requirements in the District's water system. Based on communication with CDPH, once the intertie with the City of Santa Maria is in operation, monitoring of residual disinfectant concentration will be required. The District will need to develop a Disinfectant Residual Monitoring Plan and identify sampling locations consistent with the updated TCR Bacteriological Sampling Plan.

5.0 Additional Tasks

Chloramination Operation Monitoring and Control Plan

The District is required to develop a plan for operation, monitoring, and control of the WIP system components which include the booster chloramination system, well chloramination systems, pumps, storage tanks, PRV stations and the booster station. Operational goals will be to minimize water age, maintain sufficient turnover rates in storage tanks, maintain adequate disinfectant concentrations system-wide, and to monitor and correct nitrification in the system, as necessary. It is recommended the District develop a Chloramination Operation Monitoring and Control Plan once design of WIP improvements is complete and submit the plan to CDPH no later than three months before the intertie is scheduled for operation.

Water System Permit Amendment

Due to the significant changes planned for the NCSD water system with the WIP, the District will be required to submit a Water Supply System Permit Amendment Application no later than three months before the intertie is scheduled for operation (see Attachment 4). CDPH has requested that the following are submitted with the permit amendment application:

- Plans and specifications for water system improvements
- Chloramination/ Nitrification Control Plan
- Disinfectant Residual Monitoring Plan (SWTR requirement)
- Updated Bacteriological Monitoring Plan (TCR requirement)
- Proof of public notification of change to chloraminated drinking water delivery

Plans and specifications for the WIP are currently being developed. Public notification should be prepared by the District and distributed before the intertie is online and according to CDPH recommendations to allow residents and businesses to prepare for the change in disinfectant. Additional routine notifications will be required as well as annual notification for the short term change back to chlorination (coinciding with the CCWA and City of Santa Maria chlorination period) for system maintenance.

Draft Summary of Compliance Tasks

Rule	Task	Description	Date or WIP Phase
GWR	Triggered Source Water Monitoring Plan	Prepare and submit Triggered Source Water Monitoring Plan for current water system.	Before Dec. 1, 2009
	Triggered sampling	Conduct triggered sampling, as necessary, according to TCR results. Take corrective action as necessary.	Beginning Dec. 1, 2009
	Update Triggered Source Water Monitoring Plan & TCR Bact. Sampling Plan	Update Triggered Source Water Monitoring Plan and TCR Bacteriological Sampling Plan to include sampling for the Santa Maria intertie source and pressure zones.	Before waterline intertie is operational
	Triggered sampling	Conduct triggered sampling, as necessary, according to TCR results per updated Triggered Source Water Monitoring and TCR Bacteriological Sampling Plans. Take corrective action as necessary.	Once intertie is operational (Q1 2011)
DBPR	Stage 1 DBPR Monitoring	Continue with DBP Monitoring at current reduced annual sampling frequency	Ongoing
	Stage 1 DBPR Monitoring	Resume quarterly DBP Monitoring (due to introduction of surface water source)	Once intertie is operational (Q1 2011)
	S2 DBPR Characterization for combined system	Conduct additional sampling to characterize DBPs in the combined system. Sampling at eight representative sites quarterly. ^a	Once intertie is operational (Q1 2011)
	S2 DBPR Compliance Monitoring Plan	Develop Stage 2 DBPR Monitoring Plan based on DBP characterization. Compliance monitoring to include (4 sites quarterly, if reduced to 2 sites quarterly)	Before October 1, 2012 ^b
	S2 DBPR Compliance Monitoring	Conduct quarterly Stage 2 DBPR Compliance Monitoring according to the Compliance Monitoring Plan and using LRAA. Sampling at four sites to be conducted quarterly.	October 1, 2012 ^b
SWTR LT2	Disinfectant Residual Monitoring Plan	Develop Disinfectant Residual Monitoring Plan consistent with updated TRC Bacteriological Sampling sites.	Before intertie is operational
	Disinfectant Residual Monitoring	Sample for minimum disinfectant residual at TCR Bacteriological Sampling sites.	Once intertie is operational (Q1 2011)
Additional tasks		Description	Date or WIP Phase
Chloramination Operation, Monitoring, and Control Plan		Develop plan for operation, monitoring, and control of intertie booster chloramination, well chloramination, pumps, and storage systems.	Once design of WIP is completed
NCSD Water System Permit Amendment		Submit CDPH Domestic Water Supply Permit Amendment Application and include updated TCR Bacteriological Monitoring Plan, Disinfectant Residual Monitoring Plan, project plans, specifications, and proof of notification to the public.	> 3 months before intertie is operational (Q3 2010)

a. CDPH may require a DBP Characterization Plan.

b. Stage 2 DBPR Compliance Monitoring tentatively scheduled to coincide with Santa Maria (Schedule 2) compliance monitoring date (October 1, 2012).

Attachment 1

Groundwater Rule Sanitary Surveys Fact Sheet



Ground Water Rule Factsheet: Sanitary Surveys

WHAT IS THE GROUND WATER RULE?

The U.S. Environmental Protection Agency (EPA) published the Ground Water Rule (GWR) on November 8, 2006. One goal of the GWR is to provide increased protection against microbial pathogens, specifically bacterial and viral pathogens, in public water systems (PWSs) that use ground water (or ground water systems (GWSs)). Instead of requiring disinfection for all ground water sources, the GWR establishes a risk-targeted approach to identifying ground water sources that are susceptible to fecal contamination. The GWR requires GWSs with ground water sources at risk of microbial contamination to take corrective action to protect consumers from harmful bacteria and viruses. Sanitary surveys are an important way for states to identify at-risk systems.

WHAT IS A SANITARY SURVEY?

A sanitary survey provides an on-site review of how a GWS is maintained and operated. The survey is conducted by a trained surveyor, who reviews the system's water source, equipment, facilities, and treatment procedures. The purpose of the survey is to:

- Ensure that the GWS' operational, monitoring, reporting, and recordkeeping practices are in compliance with drinking water regulations.
- Identify any significant deficiencies.
- Better ensure that safe drinking water is distributed to the public.

Furthermore, the sanitary survey is a proactive public health measure that allows states to better understand a GWS' progress and needs.

WHAT ARE THE DIFFERENCES BETWEEN THE GWR AND THE TOTAL COLIFORM RULE?

Total Coliform Rule & Sanitary Surveys

The Total Coliform Rule (TCR) was published on June 29, 1989, by the EPA. Under the TCR, community water systems (CWSs) and non-community water systems (NCWSs) that collect fewer than 5 TCR samples per month were required to receive a sanitary survey every 5 years. NCWSs that use protected and disinfected ground water were only required to receive a sanitary survey once every 10 years. Furthermore, the TCR did not state what elements needed to be evaluated during the sanitary survey.

GWR & Sanitary Surveys

The GWR sanitary survey requirement will increase public health protection by requiring more frequent and complete sanitary surveys. The GWR requires that all community GWSs receive a sanitary survey every 3 years. Non-community GWSs must have a sanitary survey at least every 5 years. If the state determines that a community GWS has outstanding performance or the GWS provides 4-log treatment of viruses, the state can conduct a sanitary survey of the community system every 5 years instead of every 3 years. This provides states with flexibility and gives them the option of reducing their survey workload. For both community and non-community GWSs the sanitary survey must include a review of all eight elements described in this factsheet. All eight elements do not need to be reviewed at the same time, as long as they are reviewed within the 3- or 5- year timeframe specified above.

HOW OFTEN IS A SANITARY SURVEY ADMINISTERED FOR GWSS?

Ground Water System Type	Minimum Frequency of Surveys
Community GWSS	Every 3 years
Community GWSS that the state determines have outstanding performance OR provide 4-log treatment of viruses (i.e., performance criteria) ¹	Every 5 years
Non-community GWSS	Every 5 years

DATES TO KEEP IN MIND

December 31, 2012

This is the last day states have to complete the initial eight element sanitary survey for all community GWSS² under the GWR.

December 31, 2014

This is the last day states have to complete the initial eight element sanitary survey for non-community GWSS and for those community GWSS that the state determines have met state performance criteria for outstanding performance or provide 4-log treatment of viruses.¹

WHAT ELEMENTS ARE EXAMINED DURING THE SURVEY?

The GWR requires that a sanitary survey include a review of eight elements. The state will identify significant deficiencies found during the survey. The GWS will then need to take corrective action to fix any significant deficiencies found.

Eight Elements of the Sanitary Survey

* *Source*

Protecting the source prevents contaminants and pathogens from reaching consumers. The state will review information relating to source water quality and wellhead protection. Observations will be made about well construction, potential sources of contamination, setback distances, source quantity and capacity, well locations, source water transmission mains, site security, and general housekeeping.

Possible source significant deficiencies

- ✦ Well near source of fecal contamination
- ✦ Well in flood zone
- ✦ Improperly constructed well
- ✦ Spring boxes are poorly constructed and/or subject to flooding

* *Treatment*

Treatment varies among GWSS based on the quality of the source water and state regulatory requirements. The state will take into consideration design criteria, plant records, and past inspections during the review. The overall design, operation, maintenance, and management of the treatment facility will be examined.

Possible treatment significant deficiencies

- ✦ Improper application of treatment chemicals
- ✦ Lack of redundant mechanical components where treatment is required
- ✦ Unprotected cross-connections with treatment systems
- ✦ Inadequate monitoring

1. Performance criteria are established when a community GWS provides a 4-log inactivation/treatment of viruses or has an outstanding performance record document for previous sanitary surveys. Furthermore, a community GWS that has an outstanding performance record cannot have a history of any violations under TCR since its last sanitary survey.
2. Except for those that meet performance criteria.

● **Distribution System**

Improper upkeep and maintenance of pipes and fixtures comprising the distribution system can compromise the safety of drinking water. Since the infrastructure is typically underground, the state will usually do a paper review of schematics, operation and maintenance records, operating procedures, construction standards, and distribution system water quality data.

Possible distribution system significant deficiencies

- ↙ Low or negative pressure that could result in contamination
- ↙ Lack of system flushing
- ↙ Unprotected cross-connections

● **Finished Water Storage**

The condition of the storage facility can affect both water quality and water quantity. The state will review the GWS' files; perform field inspections to assess the tank's integrity, operational readiness, site security, and potential sanitary risks; ensure maintenance checks have been completed; and discuss current operation and maintenance (O&M) procedures with staff.

Possible finished water storage significant deficiencies

- ↙ Inadequate internal cleaning/maintenance of storage tanks
- ↙ Improper screening of overflow pipes, drains, or vents
- ↙ Necessary repairs of storage tank roofs or covers

● **Pumps, Pump Facilities, and Controls**

The purpose of reviewing the pumps is to see if they are in proper working order, are the best fit for their intended use, and to determine their reliability and establish if there are any sanitary risks. The state will obtain information about the pumps, including available data from previous sanitary surveys, the emergency power system (if available), pump tests, and remote monitoring controls and alarms.

Possible pumps, pump facilities, and controls significant deficiencies

- ↙ Inadequate pump capacity
- ↙ Inadequate maintenance
- ↙ Inadequate/inoperable control system

● **Monitoring, Reporting, and Data Verification**

Verifying the quality of the drinking water distributed to the public ensures that the water complies with drinking water regulations and requirements. The state will determine whether site sampling and monitoring plans are being followed and requirements are being met by checking test results, monthly reports, and daily logs. The surveyor will determine whether the system has complete, up-to-date, and reasonable monitoring data.

Possible monitoring, reporting, and data verification significant deficiencies

- ↙ Not monitoring according to site sampling plan or monitoring plan
- ↙ Not meeting reporting requirements
- ↙ Improper recordkeeping

● **System Management and Operation**

Proper management can provide a GWS with direction, sufficient funding, and strong support. Reviewing a system's goals, plans, and budgets can give the state a good idea of whether the system's team is working well together or might need some assistance. The state will evaluate whether the GWS is sufficiently staffed and has enough funding for equipment to operate in a sustainable and safe manner.

Possible system management and operation significant deficiencies

- ↙ Failure to meet water supply demands
- ↙ No approved emergency response plan
- ↙ Inadequate follow-up to deficiencies

- **Operator Compliance with State Requirements**
Operators and staff must be properly trained based on system type, size, and treatment. The state will confirm that operators are properly certified for their roles and responsibilities.

Possible operator compliance with state requirements significant deficiencies

- ▲ Operator is not qualified as required by the state
- ▲ Lack of operator training

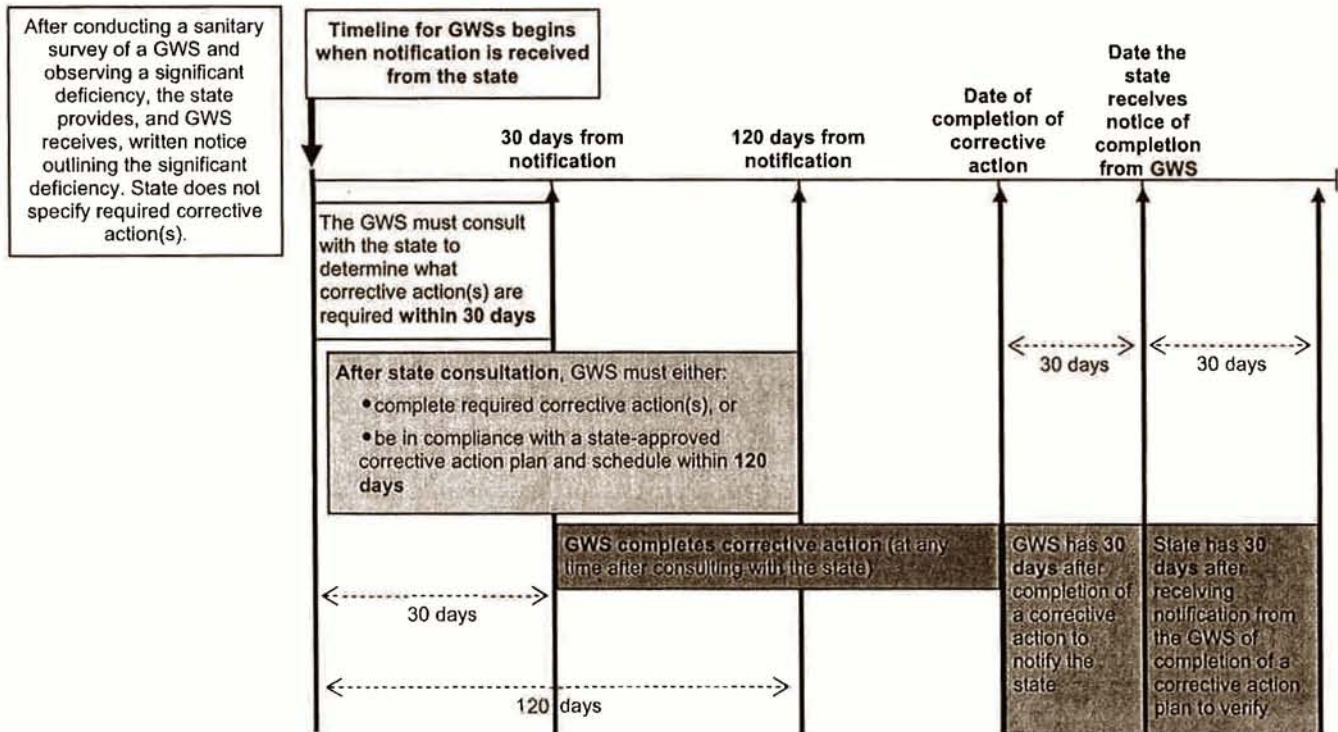
WHAT HAPPENS IF A SIGNIFICANT DEFICIENCY IS IDENTIFIED?

After the sanitary survey has been completed, the state must provide written notification to the GWS no more than 30 days after a significant deficiency has been identified. The state may also specify the corrective action(s) it requires the GWS to complete and may provide deadlines for those actions. If the state does not specify the corrective action(s) required, the GWS has 30 days from receiving written notice from the state to consult with the state regarding appropriate corrective action needed to address the significant deficiency. The GWS has 120 days after the **initial state notification** of a significant deficiency to complete the required corrective action or be in compliance with a state-approved corrective action plan and schedule. Failure to comply with the required corrective action plan or schedule will result in a treatment technique (TT) violation for the GWS. The GWS must notify the state within 30 days of completing the required corrective action.

Corrective Action Alternatives

- Correct all significant deficiencies.
- Provide alternative source of water.
- Eliminate the source of contamination.
- Provide 4-log treatment of viruses before first customer.

EXAMPLE TIMELINE



ADDITIONAL GUIDANCE MATERIALS

The following guidance materials for states and PWSs have been released or will be released in 2008:

Ground Water Rule: A Quick Reference Guide - This guide provides a description of the GWR and includes critical deadlines and requirements.

www.epa.gov/ogwdw/disinfection/gwr/compliancehelp.html.

Ground Water Rule Factsheets - Including factsheets on GWR general requirements, monitoring requirements, and Public Notice, Consumer Confidence Reports, and Special Notices.

Ground Water Sanitary Survey Guidance Manual, November 2007, EPA 815-D-07-006 - This guidance provides states, tribes, and other primacy agencies with a brief review of the sanitary survey regulatory provisions, give examples of what may constitute a significant deficiency, and provide a checklist of elements that should be evaluated during the course of a sanitary survey inspection.

www.epa.gov/ogwdw/disinfection/gwr/compliancehelp.html.

Source Water Assessment Guidance Manual, September 2007, EPA 815-R-07-023 - This guidance provides states, tribes, and other primacy agencies with a brief review of hydrogeologic sensitivity assessments, an overview of the characteristics of a sensitive aquifer, information about how source water assessments may be used, and information about how to determine if a sensitive aquifer has a hydrogeologic barrier. www.epa.gov/ogwdw/disinfection/gwr/compliancehelp.html.

Ground Water Rule Source Water Monitoring Methods Guidance Manual, July 2007, EPA 815-R-07-019 - This guidance provides GWSs, states, tribes, and other primacy agencies with a brief review of the source water monitoring provisions. Primacy agencies may select fecal indicators (e.g., *E. coli*, enterococci, coliphage) that systems would be required to test for in the ground water source sample. The source water monitoring guidance manual provides criteria to assist primacy agencies in their determination of which fecal indicator(s) may be most appropriate.

www.epa.gov/ogwdw/disinfection/gwr/compliancehelp.html.

Corrective Action Guidance Manual (under development) - This guidance will provide states, tribes, other primacy agencies and GWSs with an overview of the treatment technique requirements of the GWR. The guidance manual will provide assistance with determining the information that should be included in a system's corrective action plan.

Consecutive System Guide for the Ground Water Rule, July 2007, EPA 815-R-07-020 - This guidance describes the regulatory requirements of the GWR that apply to wholesale GWSs and the consecutive systems that receive and distribute that ground water supply.

www.epa.gov/ogwdw/disinfection/gwr/compliancehelp.html.

Complying with the Ground Water Rule: Small Entity Compliance Guide: One of the Simple Tools for Effective Performance (STEP) Guide Series, July 2007, EPA 815-R-07-018 - This document is intended to be an official compliance guide to the GWR for small PWSs, as required by the Small Business Regulatory Enforcement Fairness Act of 1996. This guide contains a general introduction and background for the GWR, describes the specific requirements of the GWR and provides information on how to comply with those requirements. www.epa.gov/ogwdw/disinfection/gwr/compliancehelp.html.

For additional information, please contact the Safe Drinking Water Hotline at 1-800-426-4791, or visit www.epa.gov/safewater/disinfection/gwr.

Attachment 2

GWR Triggered and Representative Monitoring Quick Reference Guide

Ground Water Rule Triggered and Representative Monitoring: A Quick Reference Guide

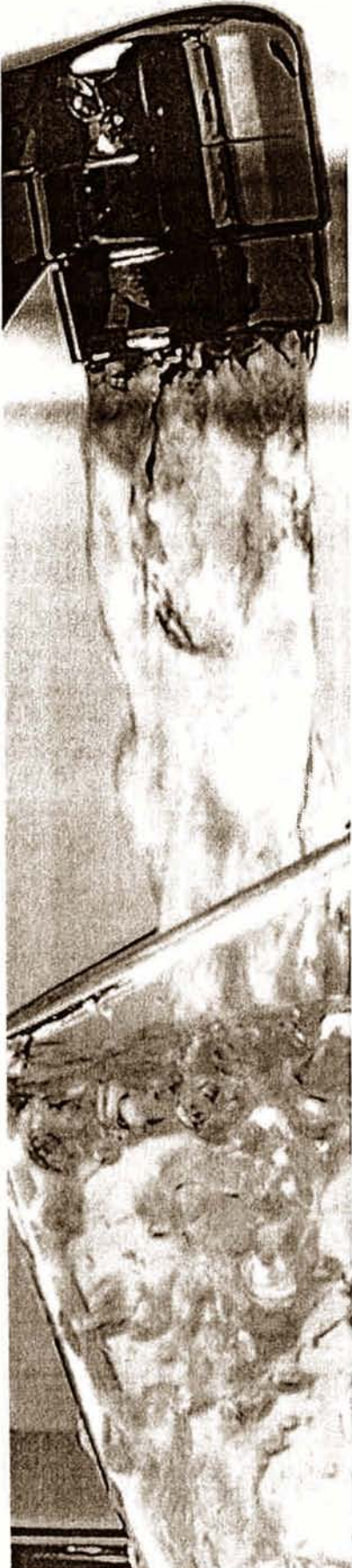
Overview of the Rule	
Title	Ground Water Rule (GWR) 71 FR 65574, November 8, 2006, Vol. 71, No. 216 Correction 71 FR 67427, November 21, 2006, Vol. 71, No. 224
Purpose	Reduce the risk of illness caused by microbial contamination in public ground water systems (GWSs).
General Description	The GWR establishes a risk-targeted approach to identify GWSs susceptible to fecal contamination and requires corrective action to correct significant deficiencies and source water fecal contamination in all public GWSs.
Utilities Covered	The GWR applies to all public water systems (PWSs) that use ground water, including consecutive systems, except that it does not apply to PWSs that combine all of their ground water with surface water or with ground water under the direct influence of surface water prior to treatment.

Purpose of Triggered Source Water Monitoring	
▶	The purpose of triggered source water monitoring is to evaluate whether the presence of total coliform in the distribution system is due to fecal contamination in the ground water source.
▶	This type of source water monitoring is triggered by routine total coliform monitoring required by the Total Coliform Rule (TCR) (40 CFR 141.21). <ul style="list-style-type: none"> ■ Since TCR monitoring is conducted regularly, triggered source water monitoring can occur at any time and thus provides an ongoing evaluation of ground water sources.

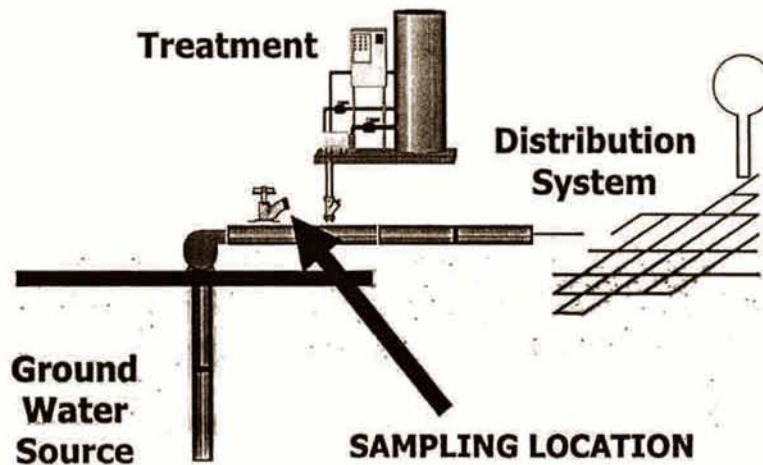
Triggered Source Water Monitoring Requirements	
Systems Required to Conduct Triggered Source Water Monitoring	
GWSs are subject to triggered source water monitoring if they:	<ul style="list-style-type: none"> ▶ Do not provide, and conduct compliance monitoring for, at least 4-log treatment of viruses (through inactivation and/or removal). <ul style="list-style-type: none"> ■ This includes systems that decide to discontinue 4-log treatment. ▶ Do not purchase 100% of their water (and therefore have a source at which to sample).

Situations Leading to Triggered Source Water Monitoring	
GWSs must conduct triggered source water monitoring when:	<ul style="list-style-type: none"> ▶ The system is notified of a total coliform-positive sample collected in compliance with the TCR unless: <ul style="list-style-type: none"> ■ The total coliform sample is invalidated by the State. ■ The State allows an exception to the GWR triggered source water monitoring requirements. <p>OR</p> <ul style="list-style-type: none"> ▶ The system is a wholesale system and is notified by one of its consecutive systems that the consecutive system had a total coliform-positive sample during TCR monitoring.

Collecting and Analyzing Triggered Source Water Monitoring Samples	
When triggered source water monitoring is required, GWSs must:	<ul style="list-style-type: none"> ▶ Collect at least one ground water source sample from each source in use at the time the total coliform-positive sample was collected. <ul style="list-style-type: none"> ■ Samples must be collected within 24 hours of being notified of the total coliform-positive sample (unless the 24-hour limit is extended by the State). ■ Sample must be taken before treatment or at a State-approved location after treatment (see the diagram on the next page). ▶ Ensure all samples are analyzed for the presence of a fecal indicator (e.g., <i>E. coli</i>, enterococci, or coliphage) using an approved GWR method. ▶ If a fecal indicator-positive source sample is invalidated by the State, the GWS must collect another source water sample within 24 hours of being notified by the State of the sample invalidation using an approved method. See the "Analytical Methods Approved for the Ground Water Rule" at http://www.epa.gov/safewater/methods/analyticalmethods.html.



- ▶ The diagram below represents an appropriate sampling location for triggered source water monitoring. GWSs should have a sample tap at each source that enables triggered source water monitoring.



Additional Sampling

- ▶ If the initial triggered source water sample is fecal indicator-positive, and the State does not require corrective action in response, GWSs must conduct additional source water monitoring.
 - GWSs must collect five additional source water samples (from the source(s) that contained the original fecal indicator-positive samples) within 24 hours of being notified of the fecal indicator-positive sample.
 - The additional samples must be tested for a fecal indicator using an approved GWR method.
- ▶ If any one of the five additional samples is fecal indicator-positive, the system must take corrective action.
- ▶ If any additional sample is found to be fecal indicator-positive but is subsequently invalidated by the State, the GWS must resample for the same fecal indicator within 24 hours of being notified of the invalidation.

Note: If the GWS is a wholesale system, it must notify all consecutive systems served by a source of any fecal indicator-positive samples from that source within 24 hours of being notified of the sample result.

Sampling at Representative Sources and Triggered Source Water Monitoring Plans

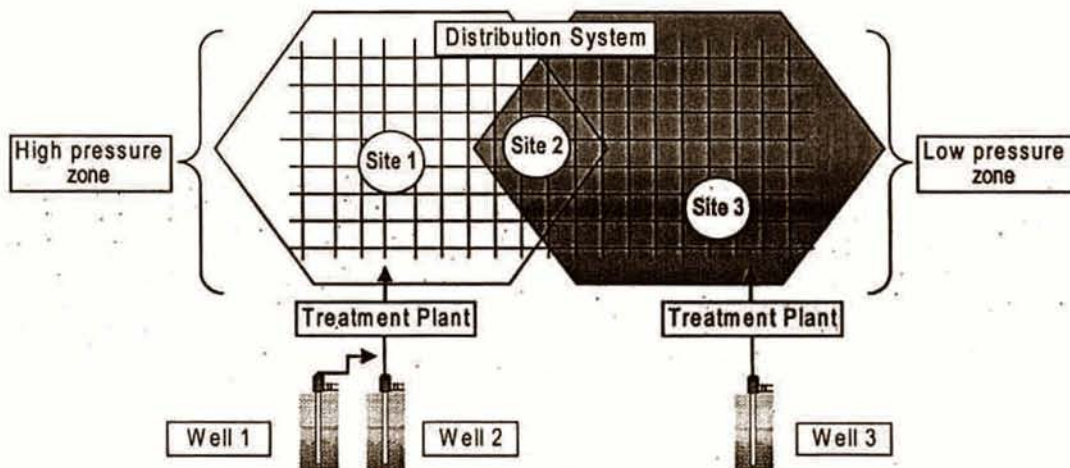
Representative Source Sampling

- ▶ If a GWS has multiple sources, the State may allow the GWS to conduct representative source sampling.
- ▶ Representative source water sampling allows systems to collect samples from the sources that represent (serve) the TCR monitoring site rather than from all sources. These representative ground water sources must be approved by the State.
- ▶ Systems must still:
 - Sample within 24 hours of total coliform-positive sample.
 - Analyze using an approved GWR method.

Triggered Source Water Monitoring Plan

- ▶ If the State allows representative site sampling, the State may require the GWS to submit a triggered source water monitoring plan for approval before the GWS starts conducting representative source sampling.
 - A triggered source water monitoring plan may include:
 - A map of the water system (including location of ground water sources, location of pressure zones, and location of storage facilities),
 - A written explanation of how the GWS knows which source feeds which section of the distribution system, and
 - Seasonal or intermittent ground water sources and when they are used.
 - Regardless of whether or not the State requires a plan to be submitted, all representative source sampling locations must be approved by the State.

- ▶ The diagram below provides an example of a system schematic that could be used to determine representative sources and develop a triggered source water monitoring plan, based on where in the distribution system the total coliform-positive sample is found. If approved by the State, the system could sample sources 1 and 2 after a total coliform-positive at Site 1 since Site 1 is in the zone served by those sources. A total coliform-positive at Site 2 would require source sampling from all sources since this area is served by all sources.



Variations in Requirements Based on System Size

GWSs Serving Fewer than 1,000 Persons

- ▶ GWSs that serve fewer than 1,000 persons may be able to meet TCR repeat monitoring requirements and GWR triggered source water monitoring requirements together if the State allows:
 - Repeat TCR monitoring at the source
 - AND
 - *E. coli* to be used as a fecal indicator under the GWR.
- ▶ If the State allows this situation, then the GWS can use a TCR repeat sample collected at the source to meet the triggered source water monitoring requirement of the GWR. The fourth TCR repeat sample is collected at the source. Upstream and downstream samples and a sample at the TCR site are still needed to meet TCR requirements.
- ▶ Labs must use an approved GWR method to test for *E. coli*.

Note: If the TCR repeat sample collected at the source is TCR-positive but *E. coli* is not found, the GWR does not require further action but the system is in violation of the TCR MCL.

Consecutive Systems and Wholesale Systems

Consecutive Systems	<ul style="list-style-type: none"> ▶ Consecutive systems that purchase 100% of their water (and therefore do not have a source from which to sample) must: <ul style="list-style-type: none"> ■ Notify their wholesale system within 24 hours of receiving notice of a total coliform-positive sample taken under the TCR. ■ Upon hearing from the wholesale system of a fecal indicator-positive source water sample (either initial triggered samples or additional samples), notify the public within 24 hours. ▶ Consecutive systems that purchase only some of their water must: <ul style="list-style-type: none"> ■ Notify their wholesale system within 24 hours of receiving notice of a total coliform-positive sample taken under the TCR. ■ Collect GWR triggered source water monitoring samples and additional samples as required. ■ Upon receipt of notification from the laboratory about a fecal indicator-positive source water sample at the system's source(s) take corrective action, if required, and notify the public within 24 hours. ■ Upon receipt of notification from the wholesale system of a fecal indicator-positive sample (either initial triggered samples or additional samples) at the wholesale system's source(s), notify the public within 24 hours.
Wholesale Systems	<ul style="list-style-type: none"> ▶ Wholesale systems that are notified by a consecutive system of a total coliform-positive sample must: <ul style="list-style-type: none"> ■ Within 24 hours of being notified, collect at least one ground water source sample from each source in use (unless representative sampling is allowed) when the total coliform-positive sample was collected. ■ Notify the public and ALL consecutive systems served by the source within 24 hours of learning that a source water sample is fecal-indicator positive.

Invalidation of Fecal Indicator-Positive Samples

- ▶ The State can invalidate a fecal indicator-positive triggered source water sample if:
 - The system provides the State with written notice from the laboratory that improper sample analysis occurred or
 - The State determines there is substantial evidence that the sample does not reflect source water quality.
 - The State must document in writing there is substantial evidence that the fecal indicator-positive ground water source sample is not related to source water quality.
- ▶ If any sample is found to be fecal indicator-positive and is subsequently invalidated by the State, the GWS must resample for the same indicator within 24 hours of being notified of the invalidation.

Exceptions to the Triggered Source Water Monitoring Requirements

Extension of the 24-hour collection limit

- ▶ The State may extend the 24-hour limit for collecting source water samples on a case-by-case basis if the State determines the system cannot collect the ground water source water sample within 24 hours due to circumstances beyond its control.
- ▶ In the case of an extension, the State must specify how much time the system has to collect the sample.

Total Coliform-Positive Sample Is The Result of Distribution System Conditions

- ▶ A GWS is not required to conduct triggered source water monitoring under one of the following circumstances:
 - The State determines and documents in writing that the total coliform-positive TCR sample is caused by a distribution system deficiency.
 - The GWS determines the total coliform-positive TCR sample was collected at a location that meets State criteria for distribution conditions that will cause total coliform-positive samples and notifies the State within 30 days.

Notification Requirements

If a GWS receives notice of a fecal indicator-positive source water sample collected under the GWR, the system must:	<ul style="list-style-type: none"> ▶ Consult with the State within 24 hours. ▶ Notify the public within 24 hours. <ul style="list-style-type: none"> ■ Tier 1 Public Notification. ▶ If the system is a community GWS, they must provide Special Notice of the fecal indicator-positive sample in their CCR.
If a GWS fails to conduct required triggered or additional monitoring, the system must:	<ul style="list-style-type: none"> ▶ Notify the public within 12 months. <ul style="list-style-type: none"> ■ Tier 3 Public Notification. ▶ Community GWSs may be able to use their CCR.
Wholesale and consecutive systems are subject to:	<ul style="list-style-type: none"> ▶ The same notification requirements outlined above, in addition to the requirements to notify the wholesale or consecutive systems.

Critical Deadlines for Triggered Source Water Monitoring for Drinking Water Systems

November 30, 2009	New ground water sources put in place after this date must conduct triggered source water monitoring if the GWS does not provide 4-log virus treatment and conduct compliance monitoring and the GWS is notified that a sample collected for the TCR is total coliform-positive.
December 1, 2009	GWSs must conduct triggered source water monitoring if the GWS does not provide 4-log virus treatment and conduct compliance monitoring and the GWS is notified that a sample collected for the TCR is total coliform-positive.

Attachment 3

Stage 2 Disinfectants and Disinfection Byproducts Rule Fact Sheet



Fact Sheet: Stage 2 Disinfectants and Disinfection Byproducts Rule

In the past 30 years, the Safe Drinking Water Act (SDWA) has been highly effective in protecting public health and has also evolved to respond to new and emerging threats to safe drinking water. Disinfection of drinking water is one of the major public health advances in the 20th century. One hundred years ago, typhoid and cholera epidemics were common through American cities; disinfection was a major factor in reducing these epidemics.

However, the disinfectants themselves can react with naturally-occurring materials in the water to form byproducts, which may pose health risks. In addition, in the past 10 years, we have learned that there are specific microbial pathogens, such as *Cryptosporidium*, which can cause illness, and are highly resistant to traditional disinfection practices.

Amendments to the SDWA in 1996 require EPA to develop rules to balance the risks between microbial pathogens and disinfection byproducts (DBPs). The Stage 1 Disinfectants and Disinfection Byproducts Rule and Interim Enhanced Surface Water Treatment Rule, promulgated in December 1998, were the first phase in a rulemaking strategy required by Congress as part of the 1996 Amendments to the Safe Drinking Water Act.

The Stage 2 Disinfectants and Disinfection Byproducts Rule (Stage 2 DBPR) builds upon the Stage 1 DBPR to address higher risk public water systems for protection measures beyond those required for existing regulations.

The Stage 2 DBPR and the Long Term 2 Enhanced Surface Water Treatment Rule are the second phase of rules required by Congress. These rules strengthen protection against microbial contaminants, especially *Cryptosporidium*, and at the same time, reduce potential health risks of DBPs.

Questions and Answers

What is the Stage 2 DBPR?

The Stage 2 Disinfection Byproducts Rule will reduce potential cancer and reproductive and developmental health risks from disinfection byproducts (DBPs) in drinking water, which form when disinfectants are used to control microbial pathogens. Over 260 million individuals are exposed to DBPs.

This final rule strengthens public health protection for customers by tightening compliance monitoring requirements for two groups of DBPs, trihalomethanes (TTHM) and haloacetic acids (HAA5). The rule targets systems with the greatest risk and builds incrementally on existing rules. This regulation will reduce DBP exposure and related potential health risks and provide more equitable public health protection.

The Stage 2 DBPR is being promulgated simultaneously with the Long Term 2 Enhanced Surface Water Treatment Rule to address concerns about risk tradeoffs between pathogens and DBPs.

What does the rule require?

Under the Stage 2 DBPR, systems will conduct an evaluation of their distribution systems, known as an Initial Distribution System Evaluation (IDSE), to identify the locations with high disinfection byproduct concentrations. These locations will then be used by the systems as the sampling sites for Stage 2 DBPR compliance monitoring.

Compliance with the maximum contaminant levels for two groups of disinfection byproducts (TTHM and HAA5) will be calculated for each monitoring location in the distribution system. This approach, referred to as the locational running annual average (LRAA), differs from current requirements, which determine compliance by calculating the running annual average of samples from all monitoring locations across the system.

The Stage 2 DBPR also requires each system to determine if they have exceeded an operational evaluation level, which is identified using their compliance monitoring results. The operational evaluation level provides an early warning of possible future MCL violations, which allows the system to take proactive steps to remain in compliance. A system that exceeds an operational evaluation level is required to review their operational practices and submit a report to their state that identifies actions that may be taken to mitigate future high DBP levels, particularly those that may jeopardize their compliance with the DBP MCLs.

Who must comply with the rule?

Entities potentially regulated by the Stage 2 DBPR are community and nontransient noncommunity water systems that produce and/or deliver water that is treated with a primary or residual disinfectant other than ultraviolet light.

A community water system (CWS) is a public water system that serves year-round residents of a community, subdivision, or mobile home park that has at least 15 service connections or an average of at least 25 residents.

A nontransient noncommunity water system (NTNCWS) is a water system that serves at least 25 of the same people more than six months of the year, but not as primary residence, such as schools, businesses, and day care facilities.

What are disinfection byproducts (DBPs)?

Disinfectants are an essential element of drinking water treatment because of the barrier they provide against waterborne disease-causing microorganisms. Disinfection byproducts (DBPs) form when disinfectants used to treat drinking water react with naturally occurring materials in the water (e.g., decomposing plant material).

Total trihalomethanes (TTHM - chloroform, bromoform, bromodichloromethane, and dibromochloromethane) and haloacetic acids (HAA5 - monochloro-, dichloro-, trichloro-, monobromo-, dibromo-) are widely occurring classes of DBPs formed during disinfection with chlorine and chloramine. The amount of trihalomethanes and haloacetic acids in drinking water can change from day to day, depending on the season, water temperature, amount of disinfectant added, the amount of plant material in the water, and a variety of other factors.

Are THMs and HAAs the only disinfection byproducts?

No. The four THMs (TTHM) and five HAAs (HAA5) measured and regulated in the Stage 2 DBPR act as indicators for DBP occurrence. There are many other known DBPs, in addition to the possibility of unidentified DBPs present in disinfected water. THMs and HAAs typically occur at higher levels than other known and unknown DBPs. The presence of TTHM and HAA5 is representative of the occurrence of many other chlorination DBPs; thus, a reduction in the TTHM and HAA5 generally indicates a reduction of DBPs from chlorination.

What are the costs and benefits of the rule?

Quantified benefits estimates for the Stage 2 DBPR are based on reductions in fatal and non-fatal bladder cancer cases. EPA has projected that the rule will prevent approximately 280 bladder cancer cases per year. Of these cases, 26% are estimated to be fatal. Based on bladder cancer alone, the rule is estimated to provide annualized monetized benefit of \$763 million to \$1.5 billion.

The rule applies to approximately 75,000 systems; a small subset of these (about 4%) will be required to make treatment changes. The mean cost of the rule is \$79 million annually. Annual household cost increases in the subset of plants adding treatment are estimated at an average of \$5.53, with 95 percent paying less than \$22.40.

What are the compliance deadlines?

Compliance deadlines are based on the sizes of the public water systems (PWSs). Wholesale and consecutive systems of any size must comply with the requirements of the Stage 2 DBPR on the same schedule as required for the largest system in the combined distribution system (defined as the interconnected distribution system consisting of wholesale systems and consecutive systems that receive finished water). Compliance activities are outlined in the following table.

PUBLIC WATER SYSTEMS	ACTIONS			
	Submit IDSE monitoring plan, system specific study plan, or 40/30 certification	Complete an initial distribution system evaluation (IDSE)	Submit IDSE Report	Begin subpart V (Stage 2) compliance monitoring
CWSs and NTNCWSs serving at least 100,000	October 1, 2006	September 30, 2008	January 1, 2009	April 1, 2012
CWSs and NTNCWSs serving 50,000 - 99,999	April 1, 2007	March 31, 2009	July 1, 2009	October 1, 2012
CWSs and NTNCWSs serving 10,000 - 49,999	October 1, 2007	September 30, 2009	January 1, 2010	October 1, 2013
CWSs serving fewer than 10,000	April 1, 2008	March 31, 2010	July 1, 2010	October 1, 2013
NTNCWSs serving fewer than 10,000	NA	NA	NA	October 1, 2013

*States may grant up to an additional two years for systems making capital improvements.

What technical information will be available on the rule?

The following Guidance Documents will be available:

- Initial Distribution System Evaluation (IDSE) Guidance Manual
- Operational Evaluation Guidance Manual
- Consecutive Systems Guidance Manual
- Small Systems (SBREFA) Guidance Manual
- Simultaneous Compliance Guidance Manual

Where can I find more information about this notice and the Stage 2 DBPR?

For general information on the rule, please visit the EPA Safewater website at <http://www.epa.gov/safewater/disinfection/stage2> or contact the Safe Drinking Water Hotline at 1-800-426-4791. The Safe Drinking Water Hotline is open Monday through Friday, excluding legal holidays, from 10:00 a.m. to 4:00 p.m., Eastern Time. For technical inquiries, email stage2mdbp@epa.gov.

Attachment 4

Water Supply System Permit Amendment Application

STATE OF CALIFORNIA
APPLICATION
FOR
DOMESTIC WATER SUPPLY PERMIT AMENDMENT
FROM

Applicant: _____
(Enter the name of legal owner, person(s) or organization)

Address: _____

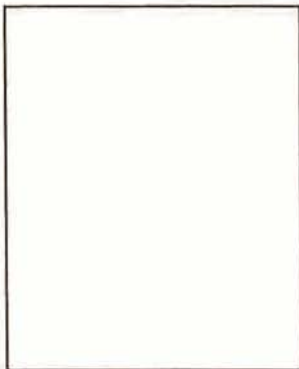
System Name: _____

System Number: _____

TO: (District Engineer Name)
(Name of District) District Engineer
Drinking Water Field Operations Branch
California Department of Public Health
(Address)



Pursuant and subject to the requirements of the California Health and Safety Code, Division 104, Part 12, Chapter 4 (California Safe Drinking Water Act), Article 7, Section 116550, relating to changes requiring an amended permit, application is hereby made to amend an existing water supply permit to _____



I (We) declare under penalty of perjury that the statements on this application and on the accompanying attachments are correct to my (our) knowledge and that I (we) are acting under authority and direction of the responsible legal entity under whose name this application is made.

Signed By: _____

Print Name: _____

Title: _____

Address: _____

Telephone: _____

Dated: _____

DDWEM: 08/2007



NOAA NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

UNITED STATES DEPARTMENT OF COMMERCE

El Niño Arrives; Expected to Persist through Winter 2009-10

July 9, 2009

NOAA scientists today announced the arrival of El Niño, a climate phenomenon with a significant influence on global weather, ocean conditions and marine fisheries. El Niño, the periodic warming of central and eastern tropical Pacific waters, occurs on average every two to five years and typically lasts about 12 months.

NOAA expects [this El Niño](#) to continue developing during the next several months, with further strengthening possible. The event is expected to last through winter 2009-10.

"Advanced climate science allows us to alert industries, governments and emergency managers about the weather conditions El Niño may bring so these can be factored into decision-making and ultimately protect life, property and the economy," said Jane Lubchenco, Ph.D., under secretary of commerce for oceans and atmosphere and NOAA administrator.

El Niño's impacts depend on a variety of factors, such as intensity and extent of ocean warming, and the time of year. Contrary to popular belief, not all effects are negative. On the positive side, El Niño can help to suppress Atlantic hurricane activity. In the United States, it typically brings beneficial winter precipitation to the arid Southwest, less wintry weather across the North, and a reduced risk of Florida wildfires.

El Niño's negative impacts have included damaging winter storms in California and increased storminess across the southern United States. Some past El Niños have also produced severe flooding and mudslides in Central and South America, and drought in Indonesia.

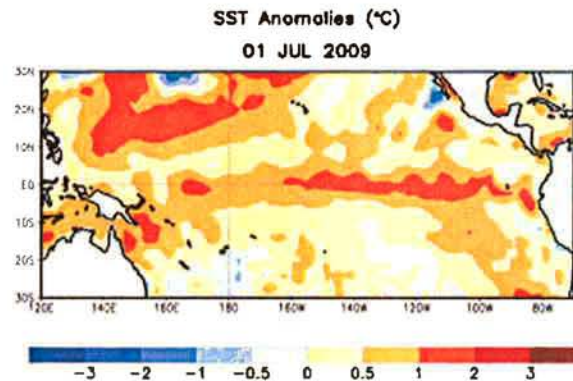
An El Niño event may significantly diminish ocean productivity off the west coast by limiting weather patterns that cause upwelling, or nutrient circulation in the ocean. These nutrients are the foundation of a vibrant marine food web and could negatively impact food sources for several types of birds, fish and marine mammals.

In its monthly El Niño diagnostics discussion today, scientists with the [NOAA National Weather Service Climate Prediction Center](#) noted weekly eastern equatorial Pacific sea surface temperatures were at least 1.0 degree C above average at the end of June. The most recent El Niño occurred in 2006.

El Niño includes weaker trade winds, increased rainfall over the central tropical Pacific, and decreased rainfall in Indonesia. These vast rainfall patterns in the tropics are responsible for many of El Niño's global effects on weather patterns.


NOAA will continue to monitor the rapidly evolving situation in the tropical Pacific, and will provide more detailed information on possible Atlantic hurricane impacts in its updated Seasonal Hurricane Outlook scheduled for release on August 6, 2009.

NOAA understands and predicts changes in the Earth's environment, from the depths of the ocean to the surface of the sun, and conserves and manages our coastal and marine resources.



Sea surface temperatures along the equatorial Eastern Pacific, as of July 1, are at least one degree above average — a sign of El Niño. [Animation](#).

[High resolution](#) (Credit: NOAA)

TO: BOARD OF DIRECTORS
FROM: BRUCE BUEL 
DATE: JULY 17, 2009



COMMITTEE REPORTS

ITEM

Review Committee Matters.

BACKGROUND

The Infrastructure Committee is scheduled to meet at 2pm on Monday July 20, 2009.

The Budget, Audit and Personnel Committee is scheduled to meet at 1pm on Thursday July 23, 2009.

The Parks Committee is scheduled to meet at 1:30pm on Friday August 7, 2009.

RECOMMENDATION

It is recommended that your Honorable Board discuss the meetings as appropriate.

ATTACHMENT – NONE

T:\BOARD MATTERS\BOARD MEETINGS\BOARD LETTER\BOARD LETTER 2007\COMMITTEE REPORTS 090722.DOC