

Waste Treatment, Groundwater and Federal Jurisdiction

Where does the Clean Water Act Stop?

Northern California River Watch v. City of Healdsburg, California
Petition for Writ of Certiorari
filed with the United State Supreme Court
November 5, 2007

Peter McGaw

ARCHER ■ NORRIS

Presented to

The National Association of Clean Water Agencies

November 8, 2007



Questions Presented:

1. Is a subterranean aquifer a jurisdictional “wetland” regulable under the Clean Water Act?
2. Is a man-made waste treatment pond percolating to groundwater itself a “water of the United States?”

City of Healdsburg

- Sonoma County wine country, north of San Francisco
- Lies along Russian River
- 11,000 residents - 3400 connections
- Principle industries: wineries and tourism
- No major manufacturing
- Slow growth ordinance
- Limited ability to fund new facilities



Healdsburg's Wastewater Treatment System

EXPECTED PLANT PERFORMANCE

DISCHARGE TO RETENTION POND (BASALT POND)

Overall BOD Removal, %

90

90-95

Overall SS Removal, %

85

95

Coliform Removal, %

99.9

99.998

SEEPAGE FROM RETENTION POND

BOD, mg/l

0

0

SS, mg/l

0

0

Coliform, MPN/100 ml.

0

0

5.2

CITY OF HEALDSBURG, SONOMA COUNTY, CALIFORNIA

APPROVED

Macl. Burchett

Project Engineer

APPROVED

R.P.E. CIVIL

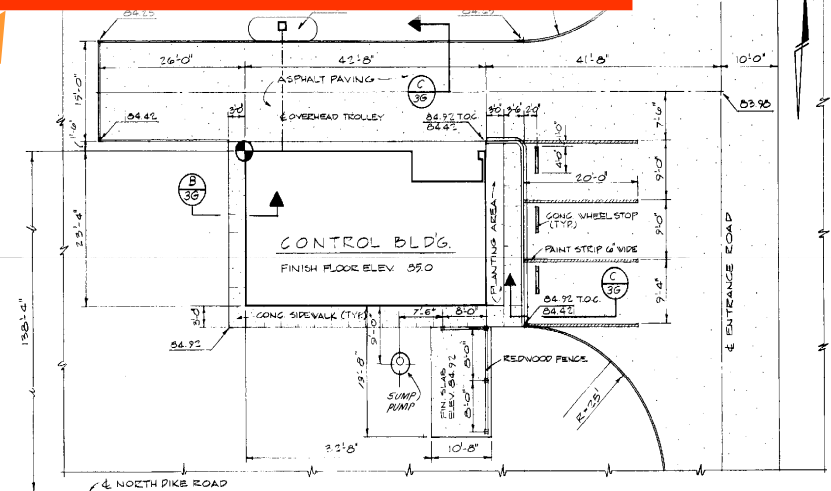
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For Yoder/O'Neil Associates

APPROVED

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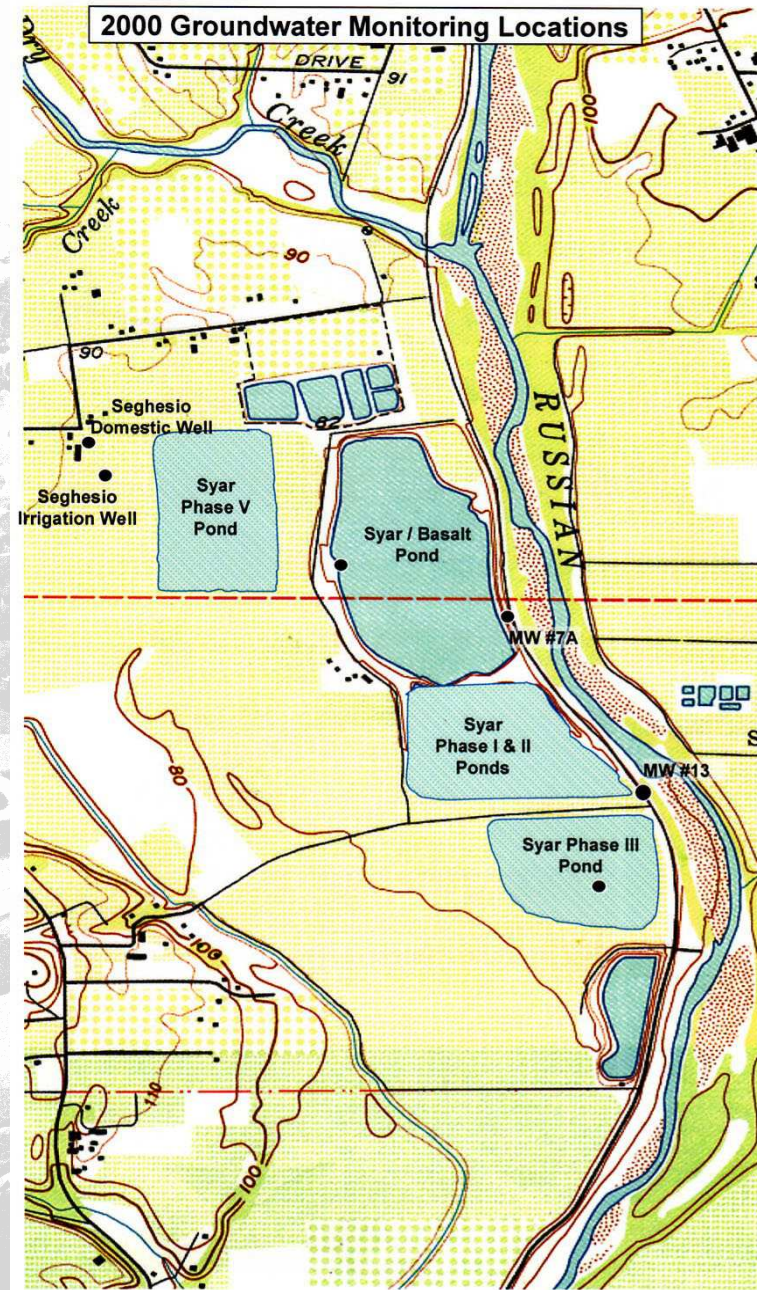
Description	Stage I	Stage II	Description	Stage I	Stage II
TYPE OF TREATMENT	AERATED LAGOONS & OXIDATION PONDS	EXTENDED AERATION	TYPE OF TREATMENT	AERATED LAGOONS & OXIDATION PONDS	EXTENDED AERATION
DESIGN FLOWS - Mgd			AERATION BASIN (STAGE II)		
DOMESTIC WASTE			Number	-	265
average dry weather	0.9	1.8	Volume, 1,000 ft. ³	-	10
peak wet weather	3.1	5.1	Depth, ft.	-	24
INDUSTRIAL WASTE			Detention Time, hr.	-	28.3
average daily	0.1	0.2	Loading, lb. BOD/1000 ft. ³ /day	-	0.17
peak rate	0.3	0.6	SECONDARY CLARIFIERS (STAGE II)		
DESIGN LOADINGS			Number	-	-
BIOCHEMICAL OXYGEN DEMAND			Diameter, ft.	-	30
POPULATION EQUIVALENT	19,850	27,700	Surface Area, ft. ²	-	7
mg/l			Depth, ft.	-	400
lbs/day	510	380	Overflow Rate, gal./ft. ² /day	-	2.5
SUSPENDED SOLIDS	4,250	6,330	Detention Time, hr.	-	-
mg/l	213	182	AEROBIC DIGESTER (STAGE II)		
lbs/day	1,780	3,230	Number	-	1
AERATED LAGOONS (STAGE I)			Volume, 1,000 ft. ³	-	265
Number	2	-	Detention Time, days	-	27
Volume, 1,000 ft. ³	530	-	CHLORINATION		
Depth, ft.	10	-	Chlorine Contact Time, minutes	30	30
Detention Time, days	4	-	Chlorinators, Number	1	1
Expected BOD Removal, %	76	-	Capacity, each, lb./day	200	200
OXIDATION PONDS (STAGE I)			EXPECTED PLANT PERFORMANCE		
Number	4	-	DISCHARGE TO RETENTION POND (BASALT POND)		
Surface Area, acres	17.7	-	Overall BOD Removal, %	90	90-95
Depth, ft.	188,365	-	Overall SS Removal, %	85	95
Loading, #BOD/ac/day	57.6	-	Coliform Removal, %	99.9	99.998
			SEEPAGE FROM RETENTION POND		
			BOD, mg/l	0	0
			SS, mg/l	0	0
			Coliform, MPN/100 ml.	0	0



BLDG. LOCATION PLAN
Grading & Paving Plan

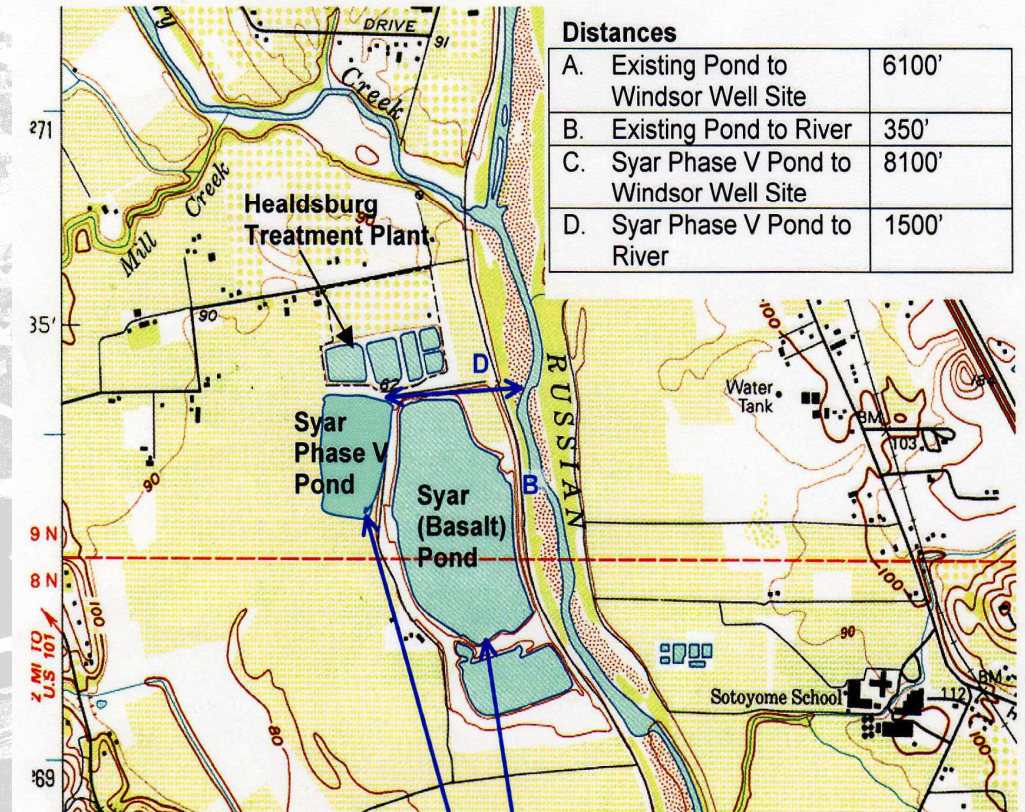
Terrace Mining Pits

- Private property
- Large holes excavated in dry land to extract gravel
- Filled with percolating groundwater
- Mandatory reclamation: fill or create wetlands



Basalt Pond

- Excavated in uplands
- Separated from river by natural land with fill and road on top ("levee")
- 60 acre surface, 750MM gallons
- 350+/- feet from the Russian River
- Levee overtopped 3xs in 30 years by floods
- Active reclamation



Hydrological Characteristics of the Basalt Pond

- Surface water flows inward
- Water resides in the pond more than one year
- Water percolates out in all directions - commingles with groundwater
- No open channel or fissure to the Russian River (ex. levee overtopping by floods)
- 3-6 months to percolate to the River
- Only 1/4 reaches the River, rest remains in aquifer
- Percolates into the River along a 2200 foot reach

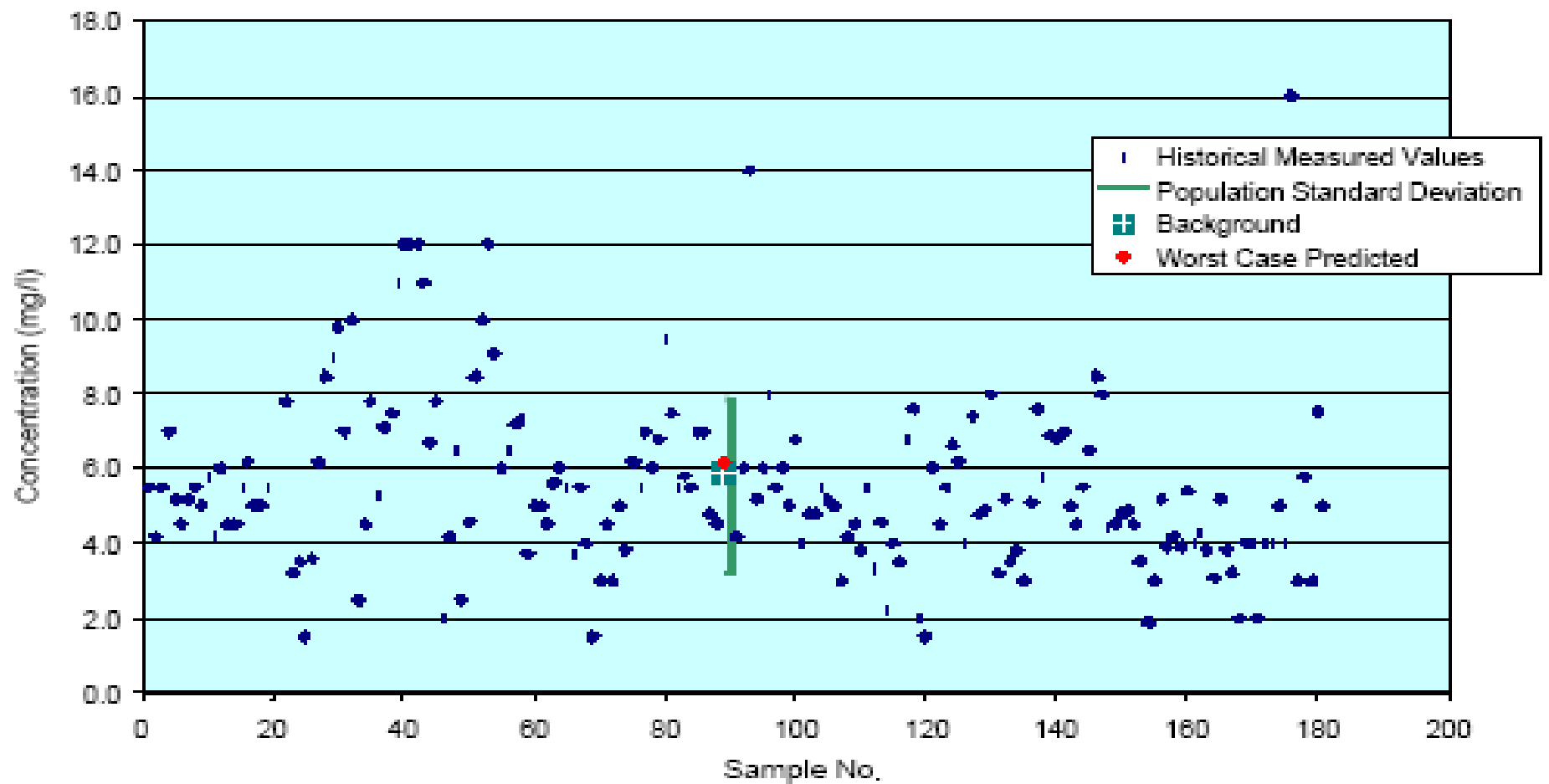
The Basalt Pond's Wetlands

- Thin band of naturally-seeded wetlands ring pond
- Shoals along shore nearest Russian river intentionally constructed as part of reclamation
- Share species with Russian River

Water Quality

- Significant polishing of effluent in pond
- Aquifer generally meets drinking water standards
- No discernable change to the water quality in the Russian River

Figure 4: Chloride Concentrations in Russian River



Healdsburg's Position #1:

- The Basalt Pond is an “isolated” waterbody, not a “water of the US.”
 - No continuous surface water connection to a navigable waterway. (*Rapanos* plurality)
 - Agency determined non-jurisdictional; defer to agency's expertise (*Stevens* dissent)
 - No substantial impact on water quality in navigable waterway (*Kennedy* concurrence)

The Ninth Circuit's Decision

(August 6, 2007)

1. “The Pond and the surrounding area . . . qualifies as a ‘wetland’ . . . because it rests on a a saturated aquifer.”

- Disregards definition’s requirement that saturated soil support vegetation
- No discussion of 5th & 7th Circuits’ cases holding that CWA does not cover groundwater, even if “hydrologically connected”

The Ninth Circuit's Decision

(August 6, 2007)

2. The Pond is an “adjacent waterbody”

- Kennedy’s *Rapanos* concurrence is controlling
 - One Justice makes the law
 - Test: “significant nexus” between “adjacent” wetlands and water quality of a navigable-in-fact water body
- “Significant nexus” is established since “substantial quantities” of chloride reach the river
 - But no evidence of impact on water quality
 - No discussion of wetlands’ special status

Healdsburg's Position #2:

- The Basalt Pond is excluded as part of Healdsburg's "waste treatment system."
 - "Waters of the United States means: . . . natural ponds . . ." 33 CFR § 328.3(a)(3); 40 CFR § 122.2(a)(3)
 - "Waste treatment systems . . . are not waters of the United States" 33 CFR § 328.3(a)(8); 40 CFR § 122.2(a)(8)
 - "A complete waste treatment system includes all of the treatment works necessary to meet title III of the Act, [including] . . . the ultimate disposal." 40 CFR § 35.2005(12)

The Ninth Circuit's Decision

(August 6, 2007)

- **Waste Treatment System Exception does not apply**
 - Applies only to “closed” systems
 - “closed” means no discharge, even to groundwater
 - and to ponds that are included in an NPDES permit
 - $C \Rightarrow (A \wedge B)$, where $(A \Rightarrow \neg B)$ and $(B \Rightarrow \neg A)$

How far does Federal CWA jurisdiction extend?

- Percolation ponds?
- Land application?
- Recycled water?
- Groundwater recharge?
- Water transfers?

SONOMA WEST

PAPER & NEWS

The Healdsburg Tribune

THE WINDSOR TIMES

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Healdsburg loses federal lawsuit over wastewater

US District Court Judge demands that city get federal permits for discharge to gravel pit

By Ray Holley, Tribune Editor

A federal judge has ordered Healdsburg to get a federal permit or stop discharging treated wastewater into an old gravel pit near the Russian River.

Dilworth also said "this judgment will set a precedent ... this decision is going to be essential in fighting Santa Rosa's plans" to dispose of its wastewater through irrigation.

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and implies that entire watersheds could come under much tighter regulatory scrutiny. He said that Alsup's ruling is "so wild and out there ... it changes the world as we know it."

River Watch spokesman Toben Dilworth said the ruling simply requires Healdsburg to get a different permit and do a better job treating its wastewater. "They've been utilizing the pond since 1978 and they've had enough time. The free ride is up. They need to start complying with the Clean Water Act."

Dilworth also said "this judgment will set a precedent ... this decision is going to be essential in fighting Santa Rosa's plans" to dispose of its wastewater through irrigation.

Hicks said that Healdsburg is in the planning stages for a new wastewater treatment plant, but that "until we get this sorted out I don't know what to build."

Healdsburg has a right to appeal the decision, but has not announced if it will do so.

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WASTEWATER POLLUTION CONTROL FACILITIES
Healdsburg, California

YODER/ORLOB ASSOCIATES

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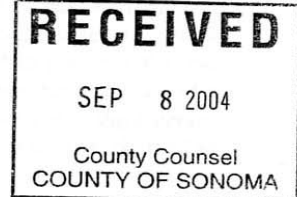
Law Office of Jack Silver

P.O. Box 5469
Phone 707-528-8175
warrioreco@yahoo.com

Santa Rosa, California 95402
Fax 707-542-7139



September 7, 2004



Certified Mail - Return Receipt Requested

Randy D. Poole, General Manager
Sonoma County Water Agency
2150 West College Avenue
Santa Rosa, CA 95407

Discharge Prohibitions **Violations** **Description**

1825 Collection system overflows, including discharges caused by surface overflows directly from overflowing manholes as well as **underground exfiltration reaching waters of the State.** Surface overflows are evidenced in the SCWA's West County Sewage Stoppage reports, such as those submitted for February 8, 2003, November

Northern California River Watch ("River Watch") hereby places the Sonoma County Water Agency ("SCWA") and the County of Sonoma on notice that following the expiration of sixty (60) days from the date of this NOTICE, River Watch intends to bring suit in Federal District Court against the SCWA for its continuing violations of an effluent standard or limitation, "permit condition or requirement and/or an order issued by the Administrator or a State with respect to such standard or limitation" under § 505(a)(1) of the Clean Water Act, 33 U.S.C. § 1365(a)(1), the Code of Federal Regulations, and the Basin Plan, as exemplified by of violations of effluent limits in its NPDES permits at the various facilities listed below.

So what?

- **Federal jurisdiction means federal regulation**
 - NPDES permit to use recycled water
 - NPDES permit to recharge groundwater basin
 - Lose state control over groundwater resources
 - Citizen's suit enforcement



Questions?

WASTEWATER POLLUTION CONTROL FACILITIES
Humboldt, California
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