

APPENDIX C – NOP COMMENT LETTERS

NOP COMMENT LETTERS

- Dwight Monson
- Brian J. Johnson - Trout Unlimited
- Mark Delaplaine - California Coastal Commission
- Crawford Cooley - Oat Valley Vineyards, LLC
- Timothy Sable – CalTrans
- Greg Scoles – City of Santa Rosa
- Richard Burt – Town of Windsor
- Sean Swift – The Bishop's Ranch
- Fred Corson – Dry Creek Valley Association
- Douglas Lipton, Ph.D. – Lipton Environmental Group
- Lee Tolbert – Palomino Lakes Mutual Water Company (Letter #1)
- Lee Tolbert – Palomino Lakes Mutual Water Company (Letter #2)
- Brenda Adelman – Russian River Watershed Protection Committee
- Ronald Kaiser and Pamela Kaiser – Westside Farms
- Harry Black
- Clancy Burns
- Ridgely Evers
- Harold Hahn
- Bernadette Scarinzi
- Tom Todd
- Thomas Wilson

Sonoma County Water Agency
North Sonoma County Agricultural Reuse Project
Public Scoping Meeting - February 16, 2006

Comment Card

Name: Dwight Morson Address: 3400 Geysen Rd

Phone: 857-3508 Affiliation: Geyserville, CA

Please provide any comments, issues, and/or concerns regarding the proposed project that you feel should be addressed in the Draft Environmental Impact Report/Environmental Impact Statement.

Comment: I'd like to see if pipeline could go
up Geysen Road to serve a number
of ranches along the way.

Would you like your name to be added to the mailing list for this project? If you are on the mailing list you will receive notification of public meetings and notice of publication of environmental documents.

☒ YES ☐ NO

Kris Vardas

From: David Cuneo [david@scwa.ca.gov]
Sent: Thursday, March 02, 2006 11:30 AM
To: Kris Vardas; rmeredith@PADREINC.com
Subject: FW: NSCARP NOP Comments

David Cuneo
Senior Environmental Specialist
Sonoma County Water Agency
P.O. Box 11628
Santa Rosa, CA 95409

707-547-1935

-----Original Message-----

From: webmaster@scwa.ca.gov [mailto:webmaster@scwa.ca.gov]
Sent: Thursday, February 23, 2006 5:52 PM
To: David Cuneo
Subject: NSCARP NOP Comments

Submitted by web agent Thu Feb 23 17:51:49 PST 2006

[Name]
Brian J. Johnson
[Affiliation]
Trout Unlimited
[Telephone]
510-528-4772
[Mailing Address]
1808B 5th Street
[City, State, Zip]
Berkeley, CA 94710
[Comment]

Please add me to the distribution list for notices regarding this project. Thank you.

Kris Vardas

From: David Cuneo [david@scwa.ca.gov]
Sent: Tuesday, January 31, 2006 10:22 AM
To: Mark Delaplaine
Subject: RE: North Sonoma County Agricultural Reuse Project

Mark – the geographical boundaries for the project are generally the valley areas of the Russian River Valley (Forestville to Healdsburg), Dry Creek Valley, Alexander Valley, and Northern Alexander Valley. I have attached a copy of the figure that went out with our Notice of Preparation under CEQA for the project. I also attached the Notice of Preparation in case all you have is t Notice of Intent from today's Federal Register. Please let me know if you need any additional information. Thanks.

David Cuneo
Senior Environmental Specialist
Sonoma County Water Agency
P.O. Box 11628
Santa Rosa, CA 95409

707-547-1935

From: Mark Delaplaine [mailto:mdelaplaine@coastal.ca.gov]
Sent: Tuesday, January 31, 2006 9:54 AM
To: David Cuneo
Subject: North Sonoma County Agricultural Reuse Project

David - at this point, is there a geographically defined project area for the area to be consi

Mark Delaplaine
Federal Consistency Supervisor
California Coastal Commission
(415) 904-5289 - phone
(415) 904-5400 - fax no.
mdelaplaine@coastal.ca.gov

3/27/2006

A. CRAWFORD COOLEY
P.O. BOX 1146
NOVATO, CA 94948

DOCUMENT COPY TO REEF/DISCARD
SONOMA COUNTY WATER AGENCY

FEB 09 2006

Orig. Filed

PROJ/NORTH SONOMA COUNTY AGRICULTURAL
REUSE PROJECT 70-0-7 #__ Padre Associates
(3289-5) TW#04/05-51

February 6, 2006

Sonoma County Water Agency
Attn: David Cuneo, Senior Environmental Specialist
P.O. Box 11628
Santa Rosa, CA 95406-1628

Dear Mr. Cuneo:

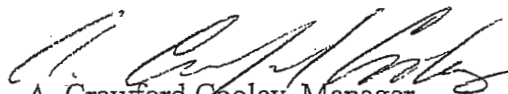
This letter is in response to your notice regarding the North Sonoma County Agricultural Reuse Project, dated January 26, 2006.

I am a part owner of Oat Valley Vineyards, LLC which owns approximately 170 acres of vineyards and pasture land in Oat Valley, Sonoma County. Oat Valley lies just north of Cloverdale and is included in the Alexander Valley Viticultural Appellation. Our land has been owned and farmed by the Cooley family since 1870 and is subject to a Williamson Act contract.

The purpose of this letter is to request the inclusion of Oat Valley in the North Sonoma County Agricultural Reuse Project. The inclusion of this area would add perhaps 300 acres of vineyard lands to the proposed project. Currently, all vineyard land in Oat Valley is irrigated from extracted groundwater and virtually all of these lands lie below the 400-foot contour. For reference, please see a portion of Cloverdale Quadrangle, enclosed.

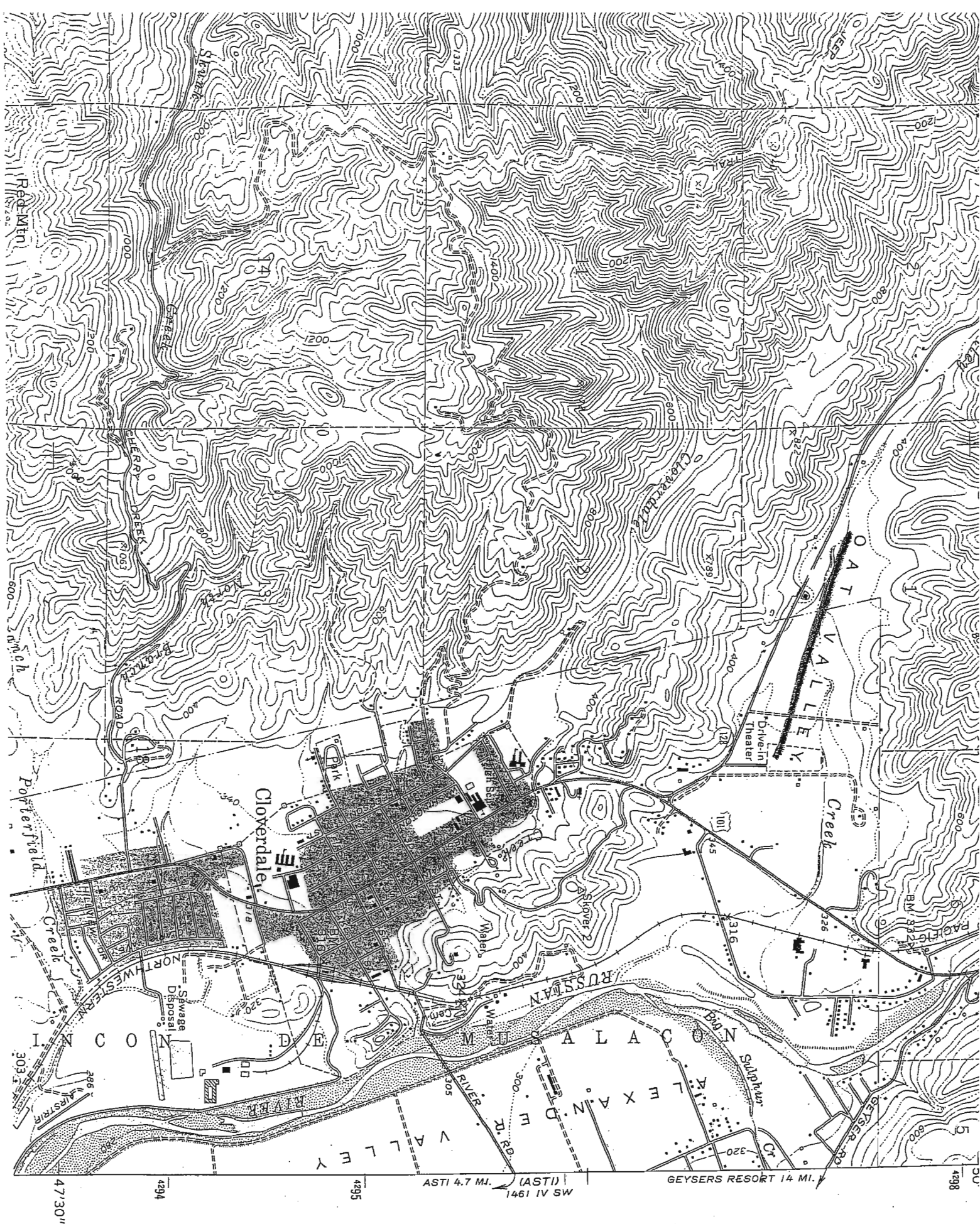
While I attended an earlier scoping meeting held at the Warm Springs Dam Visitor's Center, I am unable to attend your upcoming meeting on February 16, 2006. Please include this letter in the record of your proceedings.

Sincerely,
Oat Valley Vineyards, LLC


A. Crawford Cooley, Manager

enc: Portion of Cloverdale Quadrangle

cc: Tom Sink, Sink Ranch



DEPARTMENT OF TRANSPORTATION

111 GRAND AVENUE
P. O. BOX 23660
OAKLAND, CA 94623-0660
PHONE (510) 286-5505
FAX (510) 286-5559
TTY (800) 735-2929



*Flex your power!
Be energy efficient!*

February 22, 2006

Mr. David Cuneo
Sonoma County Water Agency
2150 W. College Avenue
Santa Rosa, CA 95401

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SONOMA COUNTY WATER AGENCY

MAR 6 2006

SON000147
SON-GEN
SCH# 2006012130

Orig. Filed ___ Proj/ NORTH SONOMA COUNTY
AGRICULTURAL REUSE PROJ. 70-0-7 #___

Dear Mr. Cuneo:

North Sonoma County Agricultural Reuse Project – Notice of Preparation (NOP)

Thank you for including the California Department of Transportation (Department) in the environmental review process for the project referenced above. We have reviewed the NOP and have the following comments:

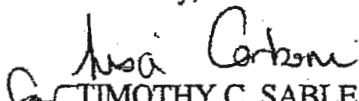
Encroachment Permit

According to Figure 1 of the NOP, the proposed distribution pipelines will cross or will be adjacent to US 101 and State Route 128 at several locations. An encroachment permit will be required from the Department in order to construct these pipelines and to complete any other work or traffic control within State right of way (ROW). To apply for an encroachment permit, submit a completed encroachment permit application, environmental documentation, and five (5) sets of plans clearly indicating State ROW to the following address:

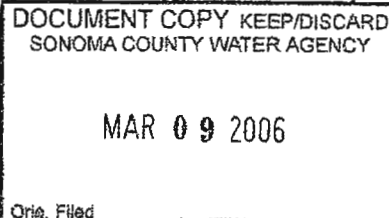
Sean Nozzari, District Office Chief
Office of Permits
California DOT, District 4
P.O. Box 23660
Oakland, CA 94623-0660

Should you require further information or have any questions regarding this letter, please call or email Ina Gerhard of my staff at (510) 286-5737 or ina_gerhard@dot.ca.gov.

Sincerely,


for TIMOTHY C. SABLE
District Branch Chief
IGR/CEQA

c: State Clearinghouse



PROJ/NORTH SONOMA COUNTY AGRICULTURAL
REUSE PROJECT 70-0-7 #__ Padre Associates
TW #04/05-51

ICE OF THE CITY MANAGER
100 Santa Rosa Avenue
Post Office Box 1678
Santa Rosa, CA 95402-1678
707-543-3010
Fax: 707-543-3030

March 7, 2006

David Cuneo, Senior Environmental Specialist
Sonoma County Water Agency
P.O. Box 11628
Santa Rosa, CA 95406

SUBJECT: Notice of Preparation of an EIR/EIS, North Sonoma County Agricultural Reuse Project

Dear Mr. Cuneo:

As a responsible agency, the City of Santa Rosa appreciates the opportunity to comment on the Notice of Preparation of the EIR/EIS for the North Sonoma County Agricultural Reuse Project (NSCARP). The City supports agricultural reuse of recycled water and would consider providing water to the NSCARP to the extent that the project provides a benefit to the City's water supply and that our recycled water is not committed to existing or future City projects. The following questions would be important to answer in the EIR/EIS:

1. What is the range of annual water volume that the project would use? How much of that would be expected to be contributed annually by the Santa Rosa Subregional System?
2. Would irrigation in the entire NSCARP area contribute to fish habitat restoration for the purpose of increasing potable water supply? If not, which parts of the project are the most beneficial in this regard?
3. What is the cost of the NSCARP in relation to other fish habitat restoration and water supply projects?
4. What is the Project's Purpose and Need? Project Alternatives in the EIR/EIS must include a reasonable range of alternatives that meet most of the Project's Purpose and Need.

We look forward to reviewing the Draft EIR and working with the Water Agency on this cooperative effort. If you have any questions regarding this letter, I can be reached at (707) 543-3021.

Sincerely,

GREG SCOLES
Deputy City Manager

GDS:rca

c: Board of Public Utilities
Dave Smith, Merritt Smith Consulting

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Town of Windsor
9291 Old Redwood Highway
P.O. Box 100
Windsor, CA 95492-0100
Phone: (707) 838-1000
Fax: (707) 838-7349

www.townofwindsor.com

Mayor
Sam Salmon

Mayor Pro Tempore
Warin Parker

Council Members
Steve Allen
Debora Fudge
Lynn Morehouse

March 14, 2006

Attn: David Cuneo, Senior Environmental Specialist
Sonoma County Water Agency
P.O. Box 11628
Santa Rosa, CA 95406-1628

Subject: North Sonoma County Agricultural Reuse Project

Dear Mr. Cuneo:

Thank you for the opportunity to comment on the Notice of Preparation dated January 26, 2006, regarding the scope of the Environmental Impact Report/Environmental Impact Statement (EIR/EIS) to be prepared for the referenced project. As you are aware, the Town of Windsor is one of several potential suppliers of recycled water to the project.

It is the Town's opinion that the EIR/EIS should fully address potential impacts of the proposed project upon potable water supply facilities in the vicinity of project improvements and that these potential impacts should be carefully considered in selecting reservoir locations, pipeline routes, and design details. Of primary concern is the proximity of any proposed recycled water pipelines to the Town's Russian River Well Field, the primary municipal drinking water supply for the Town. Due to the high groundwater transmissivity in the area, leakage or rupture of recycled water pipelines in close proximity to the Town's well field, including such leakage or rupture resulting from earthquake or other natural disaster, could quickly result in the introduction of large quantities of recycled water into the Town's drinking water system.

Thank you again for the opportunity to comment at this initial stage, and we look forward to an opportunity to review the draft EIR/EIS when available. Please address future correspondence on this matter to Attn: Wilhelm Daida, Assistant Town Engineer, Town of Windsor, P.O. Box 100, Windsor, CA 95492, telephone: (707) 838-5344, email: wdaida@townofwindsor.com.

Sincerely,

Richard W. Burt
Town Engineer/Public Works Director

cc: Matt Mullan, Town Manager
Bill Daida, Assistant Town Engineer

I:\80 - Public Works\Infrastructure Planning\Water Rec\NSCARP\Letter SCWA 03-14-06.doc

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SONOMA COUNTY WATER AGENCY

MAR 14 2006

Orig. Filed _____

PROJ/North Sonoma County
Agricultural Reuse Project 70-0-7 #
~~Padre Associates TW #04/05-5~~



The Bishop's Ranch

5297 Westside Road, Healdsburg, CA 95448

tel. 707-433-2440 • fax 707-433-3431 •

email clrancho@sonic.net

www.bishopsranch.org

Fax Transmittal

Date: 3-15-06

To: DAVID CUNEO, SONOMA COUNTY WATER AGENCY

From: SEAN SWIFT

Total Pages (including cover): 8

Subject: NORTH SONOMA COUNTY AGRICULTURAL
REUSE PROJECT COMMENTS

Received By [Signature]

MAR 15 2006

Sonoma County Water Agency

The Bishop's Ranch

of the Episcopal Diocese of California

March 14, 2006

Sonoma County Water Agency
Attention David Cuneo, Senior Environmental Specialist
P.O. Box 11628
Santa Rosa, CA 95406-1628

Dear Mr. Cuneo and SCWA,

Thank you for arranging a scoping session on February 16, 2006 and giving citizens a chance to ask questions about the North Sonoma County Agricultural Re-use Project. I am writing as a resident of the area and as Executive Director of The Bishop's Ranch, a retreat center, camp and nature preserve located at 5297 Westside Road, Healdsburg, since 1947. Although it is dated January 26th, the notice was not delivered to us until February 6th. Ten days is not adequate practical notice to provide to citizens regarding a project of this apparent size. It is quite likely that those impacted by the project would not be able to change schedules with such minimal notice. Please remember that while you and other agencies are able to focus on these issues in your work responsibilities, the average citizen is not, and would likely need more notice in order to be able to make sure they can attend. A project of this apparent size, which must involve much planning on the part of SCWA, I fail to see why more notice cannot be given. I also feel that the one scoping session scheduled is inadequate, given that many interested parties were likely unable to attend. At the Scoping Session, SCWA staff were queried by residents in the open meeting about who received the notices. The staff were unclear and contradictory in their answers to the queries, and did not seem to have given much thought as to who would need to receive notice.

The scoping session was presented to be an attempt to discover citizen concerns. However, the lack of any new information and the indistinct and indefinite nature of the information shared at the session, denies citizens enough meaningful information even to formulate queries. The information is apparently available, since according to an Executive Summary that was found on one table at the Scoping Session, a Feasibility Study is already done or almost done, archeological, botanical, and biological reviews of the reservoir sites, pipeline routes and lands have been accomplished. Yet the project as shown at the scoping session is so amorphous, as described in your flyer dated January 26, 2006 and at the Scoping Session, describing roughly the Russian, Dry Creek and Alexander valleys, an immense area with enormous variation, that it is almost impossible to ascertain just what the project is. For anyone to make meaningful comments for inclusion in an EIR/EIS, the project must be clarified, even at this point.

For example, the maps displayed on February 16 were inadequate. Even someone intimately familiar with the area and topographical maps describing it, could not determine with any accuracy the boundaries of the project area and could not determine where components such as reservoirs and pipelines may be located with any specificity. I do not understand how a feasibility study could be almost completed, as described in the Executive Summary, yet the maps shown to the public remain unreadable. The map background was dark, many landmarks were indiscernible, thus rendering the maps meaningless. This was not just my observation, but the observation of other attendees. One attendee said to me "I can't read the maps and they can't answer my questions. I'm going home. This is a waste of time." A Wagner and Bonsignore consulting engineer admitted that the maps were unclear and apologized for it. Yet when a citizen asked the engineer "Where are reservoirs likely to

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be located" the engineer stated "You are getting ahead of yourself." If the Feasibility Study is almost complete as described in your own minimal document, how can citizens merely inquiring where a reservoir site that has already been studied be getting ahead of themselves? With so many potential sites noted in an unclear fashion, all that resulted was confusion as to the project description and scope. The map that was mailed out was also inadequate and could not be used to determine what the project is. This is the second or third time inadequate maps have been displayed in regards to this wastewater irrigation project. Why can't some of the information from the feasibility study and the beginning of the EIR be shared so that citizens can begin to understand the project? It can't be interpreted as an accident at this point. The only clear point is that the project is immense, and that information comes from residents knowledge of the area, not the Scoping materials. The only conclusion is that SCWA doesn't want the public to understand the project at this juncture.

A bare-bones power-point presentation including stated benefits of the project was part of the February 16 presentation but it created confusion as to the projects purpose and scope, readily stated out loud by many in the room. Staff present were unable or unwilling to clarify. Perhaps with the approach witnessed on the 16th SCWA is attempting to learn of residents and local agencies concerns. However, the information in your flyer is essentially the same as has been presented before at "pre-scoping" sessions on the project. The Executive Summary of the Feasibility Study says that work on the EIR/EIS began in 2005 by Padre Associates and includes some cost estimates. Is the planning no further along than at the time of the pre-scoping sessions? If cost estimating has been accomplished, then considerable planning must have been accomplished to support it. Why is this information not shared at this time so residents may begin to understand the project and participate meaningfully in the EIR process? Early cost estimates are notoriously inaccurate. How were the cost estimates determined and on what level of plans? What percentage of contingency costs were included in the estimates? If SCWA is not willing to share the results of planning that must have been done, then one is led to speculate that the intention of SCWA is not really to inform or discover citizen concerns during the scoping session but simply to go through motions necessary under the law and to control the process for a pre-determined outcome. If this is the EIR process, then mere adherence to the letter of the CEQA and NEPA regulations are not adequate to safeguard the public or the environment and the entire process is a waste of time as far as comprehending the project purpose and scope from the standpoint of residents of Northern Sonoma County who do not stand to benefit directly from the disposal of the wastewater in our area.

The re-use of wastewater is laudable, and has the potential to be beneficial for the environment. However worthy, if negative environmental impacts move from one area of the county to another, from one community to another or from one set of citizens to another, then the re-use of wastewater may create additional environmental damage thereby negating any environmental benefit or worse. It is the details of the project and their careful, independent analysis that will determine these impacts. Despite the inadequacy of the project description for adequate scoping commentary by local residents, I request that the following questions and issues be addressed in the EIR/EIS.

Legal and Liability Concerns

Please detail in the EIR who will have ownership of the wastewater used in the project. Who will "own" the water at every stage from the outlet at the treatment plant into the Geyser's pipeline, outlets into corollary pipelines, delivery to storage reservoirs, storage time in reservoirs, application on vineyards or other crops, and potential runoff into surface waters? Who will have liability for environmental damage, such as pollution, and physical damage, such as erosion, if there of any runoff or spills from pipelines or reservoirs? How will rights of way be obtained for pipelines,

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roadways, reservoirs, pumping stations and other facilities? Will easements be used or will SCWA seek to own the property around pipelines and under reservoirs? What happens if a property owner along the chosen route for a pipeline does not wish to provide an easement? Does the Bureau of Reclamation or SCWA have the power of eminent domain and will it be used in this project? If multiple municipalities are providing wastewater into the project, how will liability be shared among the municipalities? Will wastewater used for agricultural irrigation within the project area be required to meet the same water quality standards as water discharged into the Russian River or one of its lower flowing tributaries? If there will be different standards, what are they? If the project is expected to be built incrementally, what are the increments and the timeline of the development? If the project is expected to be built incrementally, will the EIR address the project in its entirety? A table in the Executive Summary shows that the permitting and regulatory process has begun in early 2006 and will be completed in mid-2007, overlapping with the EIR/EIS process. How can the permitting overlap ahead of the EIR? Apparently, certification of the EIR is a forgone conclusion. If any portion of the project is expected to move forward without answering these questions, then the EIR will not be adequate for the public to understand the project description or scope. Why is SCWA bothering with the EIR at all?

Economic and Socioeconomic

Please include a detailed economic study comparing the full cost of the project and its impact on the region, and include a timeline with increases in cost for labor and materials built in. Where will the phenomenal amount of money to design and build the project, estimated at \$375.2 million dollars plus another \$27.2 million dollars in "capitalized project cost" as described in the Executive Summary, come from? What will capital maintenance costs be over the life of the project and where will this money come from? If public funds are used to construct the project, who will have precedence to the use of the wastewater in dry years? Will particular agricultural users have precedence because of membership in any group or because of providing land for storage reservoirs? Will the North Sonoma County Agricultural Water Project, or its wastewater users pay any of the costs of building the Geyser's Pipeline in order to participate in the project? Will the City of Santa Rosa recover any of the costs of the Geyser's Pipeline through this project? How were cost estimates determined and how will they increase over time? Since political problems have financial and environmental implications for the public, please study the political implication to the region over the life of the project comparing it to precedents of public and private partnerships in other large projects. Will the wastewater be used on new vineyards or restricted to existing vineyards or orchards? Will the construction of the wastewater distribution system spur any conversion of oak woodlands, pasturelands or timberlands into vineyard use? Please show how reduction of groundwater use in the North County will not lead to additional development, including impermeable roofs and paved surfaces that result in additional water flowing into the treatment plant for treatment. Please show how transport of increased wastewater back to the region where the groundwater use was reduced is to the economic benefit of Northern Sonoma County. How much will the water cost users? Who will set the cost and how often will it be increased? Since any impacts on groundwater are likely to be irreversible, what is the economic potential of a damaged groundwater supply in the North County if the wastewater is no longer available or the cost increases? How will the cost and impacts of the project be best for the majority of citizens in the region where the impacts will occur, Northern Sonoma County? Will the project create a dynamic over time of economic colonization of the urban part of Sonoma County over the Northern arc through the transfer of environmental impacts?

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Irrigation, Surface Water, Groundwater

Please include detailed plans for how wastewater irrigation in the project will be managed. From information contained in the Incremental Recycled Water Program environmental report, it is clear that the quality of the main source of the wastewater water is variable and has a high potential to pollute or degrade ground waters and surface waters in the delicate watersheds in the apparent project area. Will the wastewater used in the project meet the requirements of the California Toxics Rule? Will the wastewater and its use in the project meet the requirements of the Federal and State Anti-degradation Policies? Who will be responsible for seeing that lands are not over irrigated, creating runoff of wastewater that will contaminated surface waster? Who will determine if the amount of wastewater applied equals the uptake by the vines, grasses or other crops? Who will create an irrigation protocol to protect surface and groundwater and how will it be disseminated? Where will residents report problems or violations of any irrigation protocol? Drip irrigation systems are prone to clogging and require filters; how will filters on wastewater irrigation systems be cleaned? How often? Where and how will the products of cleaning filters be contained, transported and disposed? What specific tests will be made upon these products to determine what substances are present? How will the public know that disposal of filter residue is being done safely? If such filter residue is released into the environment of the Russian, Alexander or Dry Creek valleys, who will restore the environment to its original condition? How can the public be assured that frost protection uses for the wastewater, occurring at a time of year when soils may well be saturated, does not result in mingling of the wastewater with surface waters? Title 22, of California Code of Regulations does not contain enough protection for the environment or the public for a project of this type and magnitude in the relatively pristine valleys of the apparent project area. Exactly how many acres will use the wastewater provided by the project for frost protections uses and exactly where will these acres be located? Will SCWA staff inspect when project wastewater is used for frost protection purposes? Where and how often will groundwater be monitored? What specific biological and chemical impacts or changes will occur at the surface, in the soil, and to groundwater over twenty years of wastewater application in a particular area? Where are other examples of valuable agricultural soils being used to clean wastewater, for how long has it been occurring and how much have they been studied? If after a period of wastewater application negative impacts to soils, groundwater or surface waster are discovered how will the soil and water be returned to its original condition? At the Feb. 16 scoping session, a resident commented to SCWA staff that he works with the Regional system wastewater regularly, that it has a strong, unpleasant odor and that it causes irritation when in contact with his skin. If irrigation or storage of wastewater result in new odor locally who will residents contact for help and how will residents concerns be redressed? Will workers who are likely to come in contact with the wastewater need to wear protective clothing or equipment? If workers contract skin conditions or other conditions from contact with the water who will bear responsibility?

Reservoirs

Details of the exact location of the 18 reservoir sites are especially important in assessing the impact of wastewater reservoir installations. How will residents be assured of dam safety, especially in an earthquake prone region with large areas of unstable soils? Will a map be published in the EIR that shows the exact areas that would be inundated in the event of a dam failure when a reservoir is full? Flood insurance is expensive and can be difficult to get in Sonoma County, will SCWA pay residents for flood insurance if they are in the area of a reservoir? Will reservoirs be fully lined to prevent leakage of wastewater into surface or ground water? With what materials will they be lined and what record do similarly constructed reservoirs in equal soils have in preventing leakage? How will reservoirs be prevented from spilling over in the event of heavy, sustained rains? Will extensive independent geological studies be conducted on each reservoir site, when and where will this

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information be available to the public and how much will it cost the public to review this information? How will the potential of dry reservoirs effect on air quality be assessed? Will windblown dust from reservoirs be tested for public health impacts of close or distant residents or visitors? Who will have responsibility for testing air quality near dry reservoirs? What substances will be tested for? Who will bear liability for any health impacts to close or distant residents or visitors? When odor is present, what recourse will local residents have to impacts on their health or well being?

Pipelines, Roads and Pumping Stations

What will be the detailed impacts of 108 miles of pipeline construction on traffic, road surface, air quality, water quality, wildlife during construction and over the life of the project? If Westside Road is chosen as a pipeline route, how will it interact with the international fiber optic cable installation that already exists under and alongside Westside Road? If asphalt roads are impacted by construction, will they be resurfaced to new condition or patched? The Executive Summary mentions "numerous" pumping stations. Exactly how many and exactly where will the pumping stations be? This information will be necessary so residents can understand the project. What level of noise will be generated by pumping stations? What is the likelihood of the sound echoing in rural areas where ambient sound is generally low, especially at night? What is the impact of pumping noise when existing noise levels are low? In other words, a pumping station in a pristine area holds much more impact than one on a city street. What will pumping station buildings look like? Will property owners have the choice to decline pumping stations from being located on or near their land or residences? Will the pumping stations have permanent lighting? What will the impact be on ambient light in the night sky? Will construction of new maintenance roads be required by the project? How will the certain, combined negative impact of all the construction activity of the project compare against any water quality benefits the project might provide? How much will pumping stations cost, how long will they last and who will pay for them? How many automobile or truck trips to the region will result from maintenance of the pumping stations or appurtenances?

Aesthetics

The aesthetic beauty of the Russian River, Alexander and Dry Creek Valleys is an invaluable asset that belongs to everyone, but is also inextricably intertwined with the livelihood of North County residents. How will the aesthetics of the valleys be protected over the life of the project? Where will signs that warn the public of the use of wastewater be posted and what exactly will they say? Who will have the responsibility of posting the signs, maintaining them when they become weathered and replacing those that are removed? Will some pumping stations, reservoirs and other facilities be in sight of roads, highways and residences and where exactly will this occur? Will buildings be of wood, concrete block or other materials? How often will they be maintained? Will pumping stations be located below ground if that is the best solution esthetically? Will reservoirs be dry part of the year? Will reservoir levels rise and fall with usage of the wastewater? Will landscaping be installed to help facilities blend into the natural environment? The above ground elements of this project, given the apparent size of the project, may well contribute significantly to the transformation of Northern Sonoma County from an area of family-sized wineries and agriculture to one of industrial agriculture. How can the EIR help residents measure the likelihood of this?

Levels of Tertiary Treatment

Will communities such as Healdsburg provide wastewater for the project? How, when and where will this be done? Who will determine if the level of wastewater treatment is adequate and what tests will be done to determine this? For what substances will the wastewater be tested? Dozens of new

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of the Episcopal Diocese of California

chemicals are produced every year, please show how state laws are adequate to protect public health and the environment in the application of wastewater onto all the soil types existing within the project area over the life of the project. It is known that state and federal laws to protect public health and the environment lag behind the substances released into the waste stream. Please describe how the project will take the high ground in protecting the public and the environment over the life of the project. One of the stated goals of the project is to "provide flexibility under future regulatory environments" Please describe exactly what is meant by this "flexibility" and how it benefits all the people of Northern Sonoma County, protecting their health and livelihood as intended by environmental laws.

Wildlife

How will the loss of hunting habitat for black-shouldered kites caused by installation of reservoirs be compensated? If the EIR preparation period is about a year and a half, how can viable studies of impacts on wildlife be performed in such a short time period? How can the public be guaranteed that wastewater spills into local creeks at low water periods will not impact the growth or sexual maturation of juvenile or adult fish rearing in local streams? What will be the impact of construction activities related to the project on all indicators of surface water quality? Please show how irrigation with wastewater in the project and related construction activities will not degrade existing water quality needed for the continuance or restoration of anadromous fish populations in all watersheds, small local watersheds included, within the project area. At the scoping session on February 16, the most repeated goal of the project stated by SCWA staff was that the project would free up fresh water in the Russian River basin that would be beneficial to the fish populations in the system. How will the public be assured that any fresh water that is freed up in this concept be used to provide additional flows in the Russian River watershed for the benefit of fish populations and not become a means to provide additional water to urban areas in Sonoma and Marin counties and/or new development in those regions? What will be the specific impact of construction activity for roads, pipelines or pumping stations on wildlife? How specifically will the impacts on wildlife be mitigated?

Pasturelands, Vineyards, Native Plants

The Executive Summary of the unseen Feasibility Study states that 21,100 acres of agricultural land will be served by the project. How many acres of each specific type of agricultural activities will use wastewater provided by the project? Exactly how many acres of pastureland will be irrigated from the project? What will be the impact of irrigated pastureland locally on animals and plants adapted to the summer dry/winter wet Mediterranean climate of the region? Will the reservoirs be located in already developed agricultural lands, such as on the valley floors? Please describe each type of habitat areas involved in the project. How will residents be assured that potentially invasive, non-native plants will not be included among landscaping plants for installations or that their seeds will not be inadvertently spread through construction activities? Will project landscaping be restricted to native or drought-tolerant plants? If grass seed is used for erosion control, will native grass seed be used or will potentially invasive grasses be used which may impact zones of surviving native grasses in the region? How much water will be used to maintain landscaping? Will the water used by the landscaping provided to protect regional esthetics be from the wastewater project or will it be fresh water? How can residents be assured that plants imported for landscaping does not contain glassy-winged sharpshooters?


Conclusion

The Bishop's Ranch

of the Episcopal Diocese of California

Though asking the above questions is an attempt to discover the project scope and description of a wastewater irrigation project in north Sonoma County, it is impossible to be comprehensive with queries given the information shown at the scoping session on February 16, 2006. The range of conditions that exist within the stated project area, in the types of soils, vegetation, variations in hydrology and microclimates is too broad, and while more specific information is apparently available, SCWA is not willing to share it with the public who will be directly impacted by this proposed project. Why was the feasibility study not shared with the public during the time period that would have been helpful for the EIR/EIS process? Efforts by SCWA at the scoping session on February 16 communicated contempt for public understanding of the project or involvement in the EIR process.

Sincerely,



Sean Swift

Executive Director

DRY CREEK VALLEY ASSOCIATION

P.O. BOX 1221 HEALDSBURG, CA 95448

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SONOMA COUNTY WATER AGENCY

MAR 14 2006

Orig. Filed

March 15, 2006

Sonoma County Water Agency
Attn: David Cuneo, Senior Environmental Specialist
P.O. Box 11628
Santa Rosa, CA 95406-1628

PROJ/NORTH SONOMA COUNTY AGRICULTURAL
REUSE PROJECT 70-0-7 #__ Padre Associates
TW #04/05-51

Comments Concerning the Scope of the EIR for the North Sonoma County Agricultural Reuse Project.

These comments are made on behalf of the Dry Creek Valley Association which represents over 500 residents and property and business owners in the Dry Creek watershed.

This project, if implemented, will create new recycled wastewater reservoirs and use the water for irrigation and frost protection on up to 21,000 acres in fragile watersheds. Our main concern is that the quality of this water is inadequate for the use and will contaminate and degrade both surface waters and ground water in fragile watersheds such as Dry Creek Valley. We argue that the quality of the wastewater from the primary supplier for this project is highly variable, should but does not meet the requirements of the California Toxics Rule (CTR), contains high levels of currently undefined organic chemicals, and should but will not meet the requirements of the Federal and State Antidegradation Policies.

According to the NOP, the only quality consideration for treated wastewater for agricultural purposes is that it is consistent with California Code of Regulations, Title 22 pertaining to the use of tertiary treated recycled water. All this assures is that the wastewater has received tertiary treatment and has been disinfected. This regulation contains absolutely no standards relative to any chemicals with potential human health and environmental impacts. Our concerns relate to acute toxicity to humans and aquatic biological resources as regulated by CTR and even more specifically to chronic toxicity to humans and aquatic biological resources which is currently, essentially unregulated but serious and irreversible.

The primary source of wastewater for this project according to the NOP is the Santa Rosa Wastewater Treatment System via the Geysers Pipeline. Table 4.6-2 in the Incremental Recycled Water Program Draft EIR appears to contain the best data on the quality of this wastewater available to the public. This data indicates that the quality of the wastewater can be highly variable. For example note that the maximum detected levels of many contaminants are four times or more times higher than the mean. We believe that much of this variation comes from variable inputs to the treatment plant from industrial sources. With industrial growth and diversification anticipated in the cities feeding into this treatment system one can expect the input, output and variability of toxic chemicals to

increase. Table 4.6-2 includes limited sampling data with no information on sampling times, locations, or methods. One can speculate that the variations may indeed be significantly higher. If one is filling reservoirs of a few million or less gallons from a pipeline with flows of up to 30 million gallons or more per day, one can expect that the reservoirs could contain wastewater with contaminate levels significantly higher than the reported mean values. We have essentially no quality data on other potential sources of wastewater for this project. We believe the EIR must contain pertinent data on the current as well as projected future levels of contaminants, the variability in these levels and the methods, reliability, and quality control of sampling for all wastewater sources to be used in this project in order to allow for meaningful environmental review of worst case scenarios. We believe the EIR must also define how the specific contaminate levels in each reservoir will be reliably determined before and/or during use.

We believe the wastewater used in this project must be regulated by the California Toxics Rule for at least two reasons. First, in spite of claims by engineers, it will be impossible to effectively and completely isolate the planned reservoirs in steep canyons from surface waters at all times, especially in periods of high rainfall and runoff. Therefore discharge of wastewater into these reservoirs must be considered discharge into waters of the US, must have discharge permits, and must be subject to regulation by CTR. Second, runoff of irrigation water and more especially frost protection water into surface waters can not be effectively managed and regulated. Many of the vineyards to be irrigated are on hillsides close to small streams. Most of the vineyards which require frost protection are on the valley floors and protection is required during periods when soils are already saturated and runoff of rainwater is prevalent. We see extensive runoff of frost protection systems into surface waters along Dry Creek and its tributaries now. It is clear that wastewater from this project is intended for frost protection as well as irrigation from language in the agreement between the SCWA and Dry Creek Agricultural Water Users, Inc. in section 3.A. Runoff from irrigation or more especially from frost protection must be considered discharge into waters of the US, must have discharge permits, and must be subject to regulation by CTR. We know from Table 4.6-2 and many specific references in the text of the IRWP Draft EIR that the wastewater from the primary supplier will not meet the requirements of CTR. The EIR must describe how the wastewater will meet the requirements of CTR and/or how storage and uses can be engineered and regulated to guarantee no runoff into surface waters.

Table 4.6-2 makes it apparent that wastewater from the primary supplier for this project contains high levels of unknown organics. The mean concentration of total organic carbon is 16,800 ppb while the maximum detected is 56,000 ppb (note again the variability). The total concentration of all organic chemicals analyzed for and listed in table 4.6-2 is only 7 ppb. Thus, less than 0.05% of organic chemicals are accounted for. This leaves a very large amount of unknown organic chemicals. Study of the literature allows one to hypothesize about the identity of many of these unknown organic chemicals. Appendix I.2 of the IRWP draft EIR, titled Human Health and Wildlife Effects of Endocrine Disrupting Compounds and Other Xenobiotics, describes and provides many specific references to organic compounds with human health and environmental effects that are being found in municipal wastewater streams in increasing

amounts. Papers describing US Geological Survey (USGS) analyses for 95 organic chemicals in multiple rivers and streams in the US, especially downstream of treated wastewater discharges, indicate that many of these chemicals are being found in surface waters and even leaching into groundwater (References include Environmental Science Technology, 36 (6) 1202-1211, 2002; USGS Fact Sheet FS-027-02, June 2002; and Environmental Science and Technology/April 1, 2002, page 140A to 145A). The organic chemicals in question include such items with growing use in households, industry, and agriculture as steroids, nonprescription drugs, insect repellents, detergent metabolites, plasticizers, fire retardants, antibiotics, insecticides, reproductive hormones, antioxidants and etc. It is an educated and logical extrapolation to presume that many of these chemicals are part of the large quantity of unknown organic chemicals in the wastewater in question. In order to define environmental impacts of the extensive storage and use of this treated wastewater in fragile watersheds it is necessary to define the identity and impacts of a significant quantity of this unidentified organic carbon. I propose that a minimum requirement should be to analyze all potential wastewater sources for this project using the USGS 95 chemicals of interest screening program and depending on those results define further studies required. Independent scientific experts should be involved in this program.

In addition, private communications with Don Seymour of the SCWA indicate that extensive testing of multiple locations along the Russian River, its tributaries, and across the SCWA collectors has already taken place during 2003 to present. This program is a joint effort of the SCWA and USGS. Many organic chemicals of interest have been included in this analytical program. Data on these analyses is to be made public after appropriate USGS peer review and approval. Also, private communications with Peter Otis of the NCRWQCB indicates that additional analytical work has been done along the river by NCRWQCB with EPA. I believe it is significant that one sample taken from the Laguna de Santa Rosa near Mirabel showed significant endocrine disruption activity. Since the data from these analytical programs is available, at least to the SCWA and the NCRWQCB, and may shed additional light on the composition and impacts of this treated wastewater it should be made public as a part of this EIR. Also, I believe all potential sources of wastewater for this project should be put through the EPA endocrine screening program.

There is little doubt that treated wastewater will percolate into ground water from the storage ponds, from percolation of residues left in the soil after irrigation and frost protection, or from contaminated surface waters. The IRWP Draft EIR specifically states "some recycled water could flow from the bottom of reservoirs and may enter the regional groundwater system", page 4.5-20. Experience with leaks at the Sonoma County dump, my personal experience with chemical waste sites, and literature all indicate that it is very problematic to prevent percolation from storage ponds. The best engineered clay and plastic membrane barrier systems all tend to breakdown and leak over time with stress. It is a matter of when this will occur not if this will occur.

The nature of the Santa Rosa waste treatment process and the properties of organic chemicals which pass through this process make it highly likely that some of the organic

chemical contaminants in the treated wastewater will accumulate in the soil after irrigation. The process uses adsorption onto biomass and carbon among other unit operations to remove contaminants. Thus the organic chemicals which pass through this process are likely water soluble and likely to not readily adsorb onto solids. Upon irrigation some of these chemicals will not pass into the roots of the crop. Roots are membranes with unique transmission profiles. The chemicals not adsorbed will remain in the soil. Since they are water soluble and not readily adsorbed onto solids they will tend to percolate into the groundwater carried by rainwater. Remember also that most of the acres to be irrigated are in groundwater recharge areas. Consider the extensive overlaps of your Figure 1, Project Location Map, in the NOP with the Groundwater Basins map, Figure 4.5-1 in the IRWP Draft EIR. Mitigations for groundwater contamination such as irrigation best practices are meaningless. We are not concerned about the water, we are concerned about chronically toxic chemicals in the water which remain in the soil and are percolated to groundwater. The EIR should contain studies of the chemicals in the wastewater, their transfer into crop plants of interest, and their percolation through soils of interest.

Since groundwater will likely be contaminated by the chemicals contained in Table 4.6-2 and/or by some of the many unknown organics chemicals which are part of the mean 16,800 ppb of TOC, the project will be subject to both the Federal and California Antidegradation policies. These policies state that whenever the existing quality of water exceeds the quality necessary to maintain present and potential beneficial uses of the water, existing quality must be maintained. There is no list of specific chemicals or specific limits. The baseline is current background and the standard is no degradation in quality. We strongly believe that because of the lack of information on waste water contaminants, the lack of information on their human health and environmental impacts, the high probability that surface and groundwater will be contaminated, and the fragile nature and long term value of the watersheds in question, this project must conform with the Antidegradation policy. The EIR must contain all the data and studies on quality of the wastewater and current groundwater necessary for this analysis to be made.

Further, we believe strongly, for the same reasons stated in the paragraph above, that responsibility for appropriate quality of the wastewater used in this project and liability for damages caused by inappropriate quality must rest with the supplier. And, finally we believe that irrigation with wastewater should be allowed only with the approval of the landowner and neighbors with potential to be impacted by contamination of surface or groundwater.

Respectfully Submitted,

A handwritten signature in cursive script, appearing to read "Fred Corson".

Fred Corson

LIPTON ENVIRONMENTAL GROUP

March 15, 2006

Sonoma County Water Agency
Attention: David Cuneo, Senior Environmental Specialist
PO Box 11628
Santa Rosa, CA 95406-1628

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MAR 21 2006
Orig. Filed _____

PROJ/North Sonoma County
Agricultural Reuse Project 70-0-7 #

Subject: **Comments on NOP for EIR/EIS – North Sonoma County Agricultural Reuse Project**

Dear Sonoma County Water Agency,

This letter presents comments on the Notice of Preparation (NOP) of an Environmental Impact Report/Environmental Impact Statement (EIR/EIS) for the North Sonoma County Agricultural Reuse Project ("Ag Reuse project"). I am a fulltime resident of Dry Creek Valley (4250 West Dry Creek Road) who farms about 10 acres of fruit trees, wine grapes and other crops on the valley floor. I am also an environmental scientist and consultant who in the 1990s was a Principal Scientist with a 500-person hydrogeology and engineering firm headquartered in Emeryville, CA. I now focus my consulting work managing the largest "beneficial reuse" wetland restoration project operating in the San Francisco Bay-Delta region, the 3,000 acre Montezuma Wetlands Project ("Montezuma") that uses sediment dredged from the Bay-Delta to restore higher elevations to the subsided site so beneficial tidal wetlands can be created. Your Ag Reuse project, like Montezuma, proposes to recycle a potential resource (wastewater, that can of course be a problem in the wrong environment) to accomplish a beneficial goal. As the Project Manager for Montezuma, I am empathetic with the challenges of moving a "recycling" project from conception to implementation within a contentious agency and public arena. I offer my comments as one who strongly believes that recycling of all things in our society, including wastewater, can be accomplished in an environmentally sound and beneficial way, but caution that it must be evaluated thoroughly and with attention to detail so that there is a greater chance it can be implemented in a manner that protects the existing environmental resources and achieves the beneficial results intended.

I offered several comments on the City of Santa Rosa's IRWP ("Wastewater Ag Reuse") EIR in my letter to the City dated June 30, 2003, but like many other technical comments regarding wastewater quality and potential toxicity, the City simply deferred addressing significant technical issues to future more project-specific EIRs, like yours. Consequently, the burden of assessing the full range of potential impacts associated with reusing wastewater falls squarely on your EIR/EIS. The following are just some of the main issues that need to be addressed and analyzed fully in your EIR/EIS:

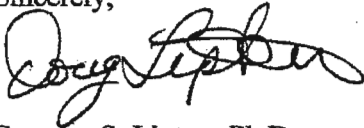
- The potential impacts of using wastewater for irrigation must consider the plethora of critical chemical, biological, and physical elements that differentiate crop production and water use in different areas and ecosystems. For example, drip irrigation on hillside vineyards away from streams poses a vastly different threat to water resources, human health, and aquatic resources than spray irrigation for flood protection in the valley floor when the soils are saturated from winter rains.
- Not only are there significant differences in how wastewater might impact resources in dissimilar cropping systems and environments, there are different regulatory criteria that will apply to the analyses and impact determinations. Continuing with the above example of spray irrigating vineyards for frost-protection in the floodplain, wastewater used in that context would require assessments against the strictest aquatic water quality objectives because the wastewater would result in direct discharge as the saturated soil is unable to absorb any more water and it runs off into the nearby streams and rivers. I observe every year in vineyards near Lambert Bridge Road and West Dry Creek Road, water used for frost protection in the Valley floor failing to percolate through the saturated soil and discharging directly into Dry Creek (via overland flow into a culvert that discharges directly into the river).
- Because of the wastewater to potentially impact surface waters with important aquatic resources and receptors (e.g., fish, invertebrates, and amphibians) as well as groundwater used for drinking water, the most stringent of human- and ecological-based water quality criteria for each chemical must be used to assess potential impacts. Many of the "drinking water standards" are not protective of aquatic resources, and many aquatic standards are not protective of human health.
- Wastewater is known to contain dozens (and likely 100s) of organic chemicals (e.g., health care products, endocrine disrupting compounds, etc.) that analytical laboratories are now only beginning to measure with confidence and appropriate QA/QC. Just because these chemicals are not currently regulated does not mean that their presence can be so easily dismissed as in the City's IRWP EIR. The State's anti-degradation policy needs to be applied with critical attention to the valley's surface and ground water resources. Background conditions of Dry Creek and the valley's shallow groundwater must be analyzed with respect to the full suite of organic chemicals that advanced analytical techniques can detect (e.g., methods used by USGS for measuring xenobiotic and "other organic compounds"). Those "background" chromatographs from Dry Creek and the valley's groundwater can be readily compared to chromatographs from the treated wastewater using the same analytical methods. There should be absolutely no potential for any organic compounds in the wastewater (as detected by the advanced analytical methods) to degrade the surface or ground waters of the area, regardless if any of the individual chemicals are regulated or not. In case the EIR/EIS consultants are tempted to use "back of the envelope" calculations similar to those presented in the City's IRWP EIR/S to elucidate human health

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risks using extremely limited toxicological information for only a few of the better known chemicals; be forewarned, that exercise was interesting but entirely inadequate to draw any meaningful conclusion concerning how dozens of unregulated organic chemicals likely to be present in the wastewater might impact human health or aquatic receptors.

Thank you for considering my comments; I look forward to reviewing how you address them in your Draft EIR/EIS. Feel free to contact me at 433-2094 or docterre@sonic.net if you have any questions regarding my letter.

Sincerely,

A handwritten signature in black ink, appearing to read "Doug Lipton", written in a cursive style.

Douglas S. Lipton, Ph.D.
Principal Scientist

PALOMINO LAKES MUTUAL WATER COMPANY

POST OFFICE BOX 687 CLOVERDALE, CALIFORNIA 95425

Sonoma County Water Agency
P.O. Box 11628
Santa Rosa, CA 95406-1628

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MAR 14 2006

Orig. Filed. PROJ/North Sonoma County
Agricultural Reuse Project 70-0-7 #
Padre Associates TW #04/05-5

ATTN: David Cuneo, Senior Environmental Specialist

3/10/2006

Re: concerns to be included in the draft EIR/EIS for the proposed Sonoma County Water Agency's Northern Sonoma County Agricultural Reuse Project

My name is Lee E. Tolbert. I am an elected representative on the Board of Directors of the Palomino Lakes Mutual Water Company (PLMWC) which has a DWR permitted diversion of 182 acre feet per year from the riparian underflow of the Russian River. Our system serves a private community of 110 homes located in the Alexander Valley south of Cloverdale.

Our potable water supply well and community which depends on the Russian River riparian underflow as our only source of potable water is immediately adjacent to planned transmission, storage, and dispersal points of the proposed Sonoma County Water Agency - Northern Sonoma County Agricultural Reuse Project (SCWA-NSCARP). The NSCARP poses several environmental and health issues that, if not mitigated, would negatively impact groundwater underflows, the waters of the Russian River, Dry Creek, Alexander Valley, and communities in Northern Sonoma County.

In the following pages I will convey what we believe to be factual and empirical statements, followed by our specific concerns noted by bullet points.

Tertiary treated municipal waste water (TTMW) is required by California & Federal Regulations to be free of chlorine, fecal coliform bacteria, and pathogenic organisms. TTMW contains non-organic components such as lead, copper, mercury, high TDS, mineral salts, boron, pharmaceuticals, and other household / industrial cleaning and sanitation products not removed from the waste stream by a municipal waste treatment plant.

- What method is planned to assure elemental & non-organic chemical components do not enter the Russian River, Dry Creek, Alexander Valley, or impact riparian or other groundwater underflows which are current or potential sources of potable water wells?

Non-organic chemical components in municipal wastewater can combine with sodium hypochlorite & chlorine in the waste stream to form more hazardous compounds.

- What method is planned to assure these chlorinated compounds do not enter the Russian River, Dry Creek, Alexander Valley, or impact any riparian or other groundwater underflows which are current or potential sources of potable water wells?

Impounding (reservoir storage) of TTMW introduces it back to the environment where it can re-assimilate bacteria, fecal coliform, and human pathogenic organisms. This water can then be redistributed by the landowner, agriculture, or commercial concerns for irrigation use onto lands adjacent to potable water wells.

- What safeguards are planned to protect these impounds from the effects of seismic activity or discharge into the Russian River, Dry Creek, Alexander Valley, or impact riparian or other groundwater underflows during winter storm events?
- What is planned to assure these impounded TTWW waters remain free from biological pollutants, such as fecal coliform and human pathogens, before distribution into the environment or removed immediately prior to release from storage for irrigation use?

Introduction of TTMW into an unconfined aquifer that is a source of a potable water supply can be by percolation from irrigation point sources, by impound storage failure, by accidental release, by vandalism or terrorist activity, or by transmission by storm water into the groundwater aquifer strata.

- What method is planned to be employed to regularly monitor the actions of individual property owners using the TTMW for irrigation?
- How will the release volumes, chemical composition, and dates of permitted releases be determined and reported to public and private agencies and the general populace?
- How will public and private agencies and the general populace be notified of any un-permitted releases?
- If there is a negative impact by contamination and pollution of organic and non-organic chemicals and bacteria/human pathogens by the proposed SCWA/NSCARP project to any potable water supplies of existing or future riparian potable wells, how will the SCWA supply the property owner and any private or public water system with a source of potable water commensurate with the property owners, a private or public water systems cost of pumping, treatment, and transmission?
- If there is a negative impact by contamination and pollution of organic and non-organic chemicals and bacteria/human pathogens by the proposed SCWA/NSCARP project to any potable water supplies of existing or future riparian potable wells, how will the SCWA monetarily compensate the property owner and any private or public water system of present and future lost revenues and capital worth of a contaminated potable water well, treatment equipment, and any future well diversion sources?

The California DHS Drinking Water Source Assessment Program (DWSAP) specifies that, in a riparian aquifer, the area that may influence a diversion point (potable well) is required to be monitored and included in the DWSAP. This area extends upstream in an elliptical configuration of a much greater distance than is required of a static groundwater lens utilized as a potable water source.

- What lead agency or engineering concern (independent of the SCWA) will specify the monitoring well design, spacing, monitoring frequency, list of organic & non-organic constituents to be analyzed, and public reporting method?

- Does this project propose installation of monitoring wells around and upstream from a potable well drawing from an unconfined riparian source or groundwater underflow?
- Will sampling from test wells and potable diversion wells be done to determine a baseline of chemical pollutants in the riparian groundwater used for potable water sources before the initiation of use of the SCWA/NSCARP proposed use of TTMW?
- Will sampling, monitoring, recording and reporting of organic & non-organic chemicals detrimental to public health be done, and by what regulatory agency (independent of the SCWA)?
- Who will be responsible for this monitoring, recording, and reporting, and to what regulatory agency (independent of the SCWA)?
- How often will this monitoring occur?

If used for irrigation, the crop plant uptakes the water for its use, but all other components in the waste water are deposited on the soil surface to percolate to lower strata by winter rains. Highest irrigation demand and lowest summer flows will change the polluted water to fresh water ratio. Different crops exhibit negative impact from various levels of boron concentration (depending on the crop type) and an imbalance in the Sodium Absorption Ratio (SAR) of TTMW can seriously impact a soils ability to absorb and transmit water.

- Who will regulate and monitor TTMW distribution to cropland, turf, and landscape irrigation?
- Will boron and the SAR be monitored to assure TTMW used for irrigation is maintained at acceptable levels before its use by agricultural, landscape, or commercial concerns?

Reduction of summer flows in the Russian River and Dry Creek may create a pollution issue due to the presence of TTMW constituents by negatively impacting the available unpolluted flow of the Russian River, Dry Creek, Alexander Valley, or impacting riparian or other groundwater underflows.

- What method will be used to determine the ratio of TTMW to the stream flow volumes of the Russian River, Dry Creek, and groundwater underflows?

BOHEMIAN NORTH BAY

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Publisher: Rosemary Olson

ADDRESS

The Palomino Lakes Mutual Water Company believes this SCWA-NSCARP is solely driven by project cost and the ease of disposal rather than the stated claim of protecting public health and the environment, and also believes Santa Rosa and other municipalities should concentrate their efforts and capital in developing infrastructure to reuse their own TTMW within their own municipal borders. The Palomino Lakes Mutual Water Company and its shareholders urge the Sonoma County Water Agency Board of Directors be forward thinking and encourage sustainable planning and management practices in the consideration of this and all other wastewater projects.

Respectfully,

Lee E. Tolbert

A handwritten signature in black ink, appearing to read 'Lee E. Tolbert', written in a cursive style.

Vice President – Palomino Lakes Mutual Water Company
PO BOX 687
Cloverdale, CA 95425

Cell – (707) 481-3475

cc: PLMWC/SCWA-NSCARP file, Minasian, Spruance, Meith, Soares & Sexton, LLP,
Howard Blake, Rick Corriea, PLMWC website

Submitted by web agent Tue Mar 14 11:44:27 PST 2006

[Name]
Lee E. Tolbert
[Affiliation]
Palomino Lakes Mutual Water Company
[Telephone]
7074813475
[Mailing Address]
PO BOX 687
[City, State, Zip]
Cloverdale, CA 95425
[Comment]
Mr. Cuneo,

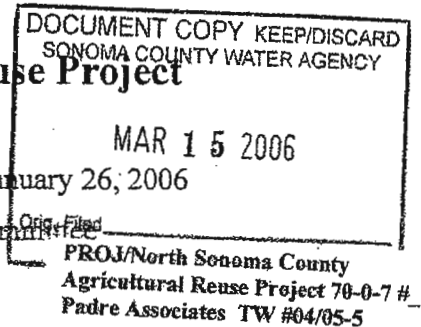
I am finding that your website address of:
www.sonomacountywater.org
is not a viable web address as reported to me by other personal
computer users. The web address supplied in the Notice of Preparation
for the NSCARP project should have been: <http://www.scwa.ca.gov/ns carp>

I suggest that under these circumstances an additional notice
correcting this erroneous web address and extending the time for public
comment should be prepared by the SCWA.

Thank you,

Lee E. Tolbert
PO BOX 687
Cloverdale, CA 95425

j-l_tolbert@comcast.net

Comments on Northern Sonoma County Ag Reuse Project

To: Sonoma County Water Agency in Response to Notice Issued January 26, 2006

From: Brenda Adelman for Russian River Watershed Protection Committee

Date: March 15, 2006

Because we have been hard hit this month with deadlines on several issues we have been tracking, we will start out with general comments, followed by segments written by myself on behalf of RRWPC for previous projects utilizing similar components and/or elements of this proposed project. That includes portions of comments on Santa Rosa's Incremental Recycled Water Project EIR (certified in 2004) and the Russian River County Sanitation District EIR of 1999. We will attempt to include only those segments that have direct relevance to the Northern Sonoma County Ag Reuse Project, hereinafter called Reuse Project.

General Comments:

First, these comments are not meant to represent all of our concerns about this proposed project, but rather a mere highlight of those issues that come to mind in the moment as we write this. We reserve the right to add new comments as the process moves forward. We wonder if this is a "Program" or a "Project" EIR?

There are several major areas of concern that we hope will be addressed in great detail. We have found in the past that the level of detail is often an issue of great disagreement, with the Agency customarily providing far less than we deem appropriate and necessary for adequate environmental review. We strongly urge the authors of this document to recognize the duty and spirit of CEQA by revealing all potential impacts and addressing them appropriately, as well as fulfilling the various other elements of the EIR that are legally required.

Mitigations should provide the means to measure compliance. Reliance on unfunded mitigations would be unacceptable; reasonable expectation of funding sources should be identified. Fiscal analysis of alternatives is needed. Data should be as current as possible and where it isn't, an explanation should be given as to why it is not. If averages are used, the full range of data should also be revealed. Every attempt should be made to construct effective mitigations that utilize meaningful and relevant information. Sincere efforts to explore mitigations should be expressed even when, in the long run, they cannot occur.

Some Major Areas of Concern:**Need for the project:**

The Urban Water Management Plan (UWMP) should be integrated into this document. The UWMP should have been complete by Dec. 31, 2005, and is currently running at least six months late. We wonder why a consultant contract to write the document has

only recently come before District Directors for approval? Why is this document running so late? It is essential that the information to be analyzed in the UWMP be incorporated into this segment of the Reuse Project. It is also essential for the document to analyze actual water use by SCWA contractors, and not just projected needs from five years ago. In fact, the status of the EIR for the long-range project, the Restructured Agreement and MOU for Impaired Water Supplies should all be referenced in this EIR in relation to the information amassed thus far. Similarly, the Biological Assessment, the latest Water Policy Statement, and the Russian River Action Plan should all be part of the background material for this project. In fact, along with the new pending EIR for the WTSTP, it almost appears as though that this is piecemealing. There should be one comprehensive planning document for water rather than all the disjointed efforts manufactured in an attempt to bypass a comprehensive public process that integrates all disparate issues and interest groups.

The status of the Potter Valley Project needs to be analyzed in great detail, including its future viability as a facility and what it would take to sustain it up to 2020 and to give a meaningful prognosis of water availability in the coming years. It is essential that all water flow and capacity information be analyzed on a seasonal basis as well as an annual one, since most shortages will occur during the irrigation season. If vintners come to rely on the water, what happens to their vines during a draught? Who is liable for damage?

Also, what recourse will agricultural users have if there is both a shortage of water AND wastewater in any given summer, a likely scenario, since they tend to go together, especially since Santa Rosa is contractually bound to make Geyser deliveries a first priority. (Santa Rosa was chided strongly last year when they could not deliver water to their irrigation contractors.) How will this project deal with that circumstance? Would there be an MOU of sorts with the irrigators about short supply situations? What would this look like?

It is very disappointing that Santa Rosa has not identified pipe repair as a high priority and an effective means to conserve the amount of sewage to be treated, a situation that would make this project less viable. We hope that an extensive irrigation program won't provide motivation for the generation of more wastewater, rather than diminishing the amount generated through conservation and pipe repair. If infiltration and inflow repair were a high priority, far less potable water would be used and consequently less wastewater generated. Conservation is much preferred over building a massive pipeline (100 to 300 miles?) project all over the North County, isn't it? In fact, to what extent might it become a growth inducing issue, if the demand for wastewater in the summertime increases to beyond the system's capacity to provide it?

Finally, the EIR for the WTSTP is going to consider a pipeline from Lake Sonoma as a direct conveyance along with a treatment plant. Since this irrigation project is billed as the ticket to increased water rights for the SCWA, the related growth inducing impacts of this increase from 75,000 AFY to 101,000 AFY should be addressed in this EIR as well. General Plan projections for Santa Rosa and Rohnert Park to 2020 are only about 31,000 people. A full analysis of the wastewater expected to be generated by this anticipated growth needs to be provided. The increased water rights need to be directly linked to anticipated population increase as indicated in General Plan.

Will there be more or less water in Dry Creek in the summer? Will current flows be sustained? If wastewater irrigation run off occurs, what water quality impacts would that have, especially when diminished flows occur? Will this EIR acknowledge and incorporate that information into this document? The whole issue of water rights and negotiated contracts for wastewater with Dry Creek vintners needs to be incorporated into this EIR as well.

Project Description:

The maps that have been included in this Scoping Notice for this project are very unclear. While the notice refers to the construction of off-stream water storage facilities, several of the sites appear to be in areas immediately adjacent to creeks. I would recommend that the EIR provide very detailed maps clearly showing the configuration of the facility in relation to nearby streams. Furthermore, the notice alludes to all storage sites as being "off-stream", yet some of the same sites in Santa Rosa's EIR appear to have been considered "in-stream". There will be a need for great detail to justify that this is more than just an alteration of terms.

There appears to be three sites noted on Sweetwater Springs Rd. but only two numbers. This needs to be clarified. We believe that these two sites were identified in the Russian River County Sanitation District EIR several years ago and we will append some of our concerns from that time. Are the sites in this current project the same ones identified in the Russian River County Sanitation District EIR? Is there any thought currently to add RRCSD to this project?

For many years, we have been told that the advanced treatment of Santa Rosa's wastewater makes it "almost drinkable". Yet city officials are enormously concerned about the requirements of the California Toxics Rule (CTR) as it applies to their NPDES permit. Furthermore, they, along with other dischargers, have been actively advocating for mixing zones, so that minimal discharge of pollutants can be allowed. There is ample evidence in Santa Rosa documents that numerous toxins are found in their final effluent.

In addition, many years ago farmers were concerned about the salts in the wastewater and the cumulative impact of irrigating with water that has a relatively high salt content. Please address how the salts in the wastewater would affect the land and the crops.

It is essential that a very detailed analysis of Santa Rosa's WASTewater quality be provided, including a full analysis of the nutrient content of their discharges. While Santa Rosa should not be blamed for all of the water quality impairments in the Laguna de Santa Rosa, they are nonetheless responsible for a significant amount. For years, runoff from their 5000+ acres of irrigated land did a lot to exacerbate Laguna water quality problems. The runoff went from being a point source to a nonpoint source, and consequently was not always regulated adequately. Irrigation controls that prevent runoff would be an essential part of this document. It is our biggest concern.

In regards to runoff, it is also important to address the issue of soil amendments, pesticides and fertilizers and the likelihood of their entering the waterway as a result of irrigation. Vineyards use large amounts of sulphur, for instance, that contribute to the methylation of mercury, which occurs in the Russian River from natural sources (and probably unnatural ones as well). What are all the contaminants that are likely to run off should over irrigation occur?

Would there be any setbacks required from streams to prevent run off? Will you incorporate any of the new General Plan recommendations? How much water could be applied for frost protection? How would that water be controlled from getting in the waterways?

Project Setting

There could be overlap in these categories, but "project setting" should include details about the precise location of the project and its surrounding environment, including geology of region, stream and fishery conditions, water quality assessment of streams in proximity to the project, erosion potential and other degradation from runoff, should it occur. We also assume that land owners would appreciate a detailed analysis of the crops that would be irrigated (types of vines, crops, etc.) and all of the issues related to the crops that could be affected by the use of the water, including economic impacts. From an environmental perspective, we are especially concerned about irrigation on hillsides. What would be the slope limits for using wastewater on hillsides? It is essential to indicate how runoff will be monitored and prevented. Actually, there should probably be no irrigation on any slopes, other than maybe very gentle ones.

There should be a full analysis of the potential for unregulated toxins in the wastewater, including, but not limited to, personal care products, caffeine, Acetaminophen, hormones, and other pharmaceuticals, and how they will impact the land to which they are applied, as well as impacts to aquatic, wildlife, and human health if they runoff.

There is all kinds of evidence coming forward indicating that even very low levels of exposure to many toxins, over a long period of time, can have detrimental effects on fish and other aquatic life. Many of the unregulated chemicals in wastewater, particularly where chlorine disinfection is used, are extremely detrimental to aquatic life. It is important to address this issue, along with the potential for these chemicals to infiltrate drinking water wells, both large and small. What would be the potential for contamination of waterways during an earthquake? How will potential discharges affect the health and safety of recreationists using the river in the summertime?

It is important to include a detailed explanation of how the wastewater will be transported and delivered. Is there any agreement between the City and SCWA about even making that water available for the project? To our knowledge, the City is moving forward with plans for an Urban Irrigation Program that, along with their continued Laguna irrigators, may make irrigation water unavailable. What is the point of this project if no agreement has been entered into? Also, SCWA is well aware of SR's conservation programs, which may further limit the amount of wastewater available.

Please address the negative growth in this County recently reported in the Press Democrat. Apparently, Sonoma County has lost population in the last year or more as a probable result of the high cost of housing, goods and services. We ask that you address the economic prognosis for Sonoma County in light of this situation. A day later, we learn that builders are asking for more permits than the current limit allows. Please address the various economic variables that could affect the growth rate. Who pays for this project if the anticipated growth does not occur? In fact, how much wastewater is necessary to make this project viable? How does that compare to the anticipated growth

in light of assumptions about the continuation of other disposal locations (i.e., Laguna irrigation) and possible continuation of other methods of disposal (river discharge)?

Apparently, wastewater generated at treatment plants other than Santa Rosa is also being considered for this project. Fully describe where all the wastewater will come from, including the current and anticipated capacity of other treatment systems that might be the source of irrigation waters. What is the level of treatment of each? Please give a detailed accounting of their record of water quality attainment, their records of violations, weaknesses of their system, capacity levels, etc. Analysis of costs associated with any projected pipelines from any of these locations would also be essential.

Given that this is an area that produces well-known, high quality wines, how would this project overcome the perception of people drinking wastes with their wine? A French woman I know was horrified at the thought. She chuckled at the idea that France's competitors might be using treated waste on their wine. How might this project affect competition with other areas, where wastewater is not allowed on the vines? What economic impact would this have on the vineyards? What about the impact on vintners who don't even agree to the program? Also, please address the possible impact of runoff from a vineyard that is not organic, to one that is, assuming such a scenario is possible.

How would this project affect the low flow recommendation as described in the Biological Assessment? How would it consequently affect tourism and the economy of the downstream residents, as well as water quality?

Cumulative Impacts and Other Related Projects...

Besides the cumulative impacts of the issues mentioned above, there are many other issues of concern. For example, the River and many of the streams have been listed on the State's 303(d) Impaired Water Body List for sediments and temperature. It would be appropriate to give a detailed analysis of impacts and cumulative impacts of this project in relation to circumstances that exacerbate erosion (such as hillside irrigation) and water temperatures (riparian removal to plant more vines).

What gravel mining is planned in the project area and how might this be impacted by the irrigation and visa versa? Shouldn't there be protective irrigation setbacks from areas where gravel mining is/will occur?

Are there any streamside habitat projects being planned and how might irrigation projects affect them? How will this EIR interplay with other planning processes occurring now and how might the various processes, some of which the SCWA is well aware, interact and support one another, such as Sonoma County General Plan Water Resources and Biotic Elements, Russian River Watershed Management Plan, SCWA Fishery Restoration Program, NOAA ESA Recovery Planning, DFG Russian River Fisheries Basin Plan, DFG Coho Recovery Plan, Salmonid Recovery Strategy Group, etc. Furthermore, what requirements are anticipated from NOAA's Biological Opinion, due to be released by the end of the year? What Basin Plan Amendments are anticipated by the Regional Board that might affect this project?

It is important to carefully and thoroughly describe how this project will interface with other long term irrigation programs managed by the City of Santa Rosa. How can you motivate North County agriculturists to take the water without remuneration, when Santa

Rosa irrigators get paid to take it? How will this basic inequity be dealt with? Furthermore, Santa Rosa tried to generate interest in their wastewater for years in the North County and got nowhere. The main problem was the perception that dirty water was being used on precious upscale wine grapes, that don't need much water anyway. How would this project differ?

It is important to identify precise numbers and locations of acres to be irrigated. What kind of long-term commitment will be made and will ag people be willing to sign a contract to take the water that specifies the circumstances as to the timing and amount of wastewater to be delivered. Since irrigation is so weather dependent, what will happen to surplus wastewater in wet years? How many irrigators are needed in any given area to make pipeline construction viable? Please explain how this project will succeed where others have run into trouble or never got off the ground?

Conclusion

RRWPC is not opposed to ag irrigation projects. In fact, we much prefer them to direct discharge to waterways. It is true however, that there is a serious risk involved that needs to be carefully address; how will the project control run off on private lands? We are very concerned that the scope of this project is too broad and that issues of toxic discharges will be inadequately addressed.

We include four articles that illustrate some of our major concerns. We have hundreds of articles and books that are similar to these. This is only a small sampling of what is out there. We anticipate addressing these issues more fully in the DEIR.

- PESTICIDES: Americans Carry Toxic Pesticide Cocktail in their Blood
- Threatened Waters: Turning the Tide on Pesticide Contamination
- Contaminated Groundwater: Traces of Prescription Drugs Found in Southland Aquifers
- Acetaminophen forms toxics during wastewater chlorination

We also incorporate by reference the many hundreds of articles on these and related subjects in Rachel's Democracy and Health News, which is an Internet publication and can be reached at Rachel@gseist.org

Russian River Watershed Protection Committee**Attachment to Comments on Ag Reuse Project****Questions from RRWPC comments on IRWP, written in 2004**

(Since the SCWA project intends to utilize the wastewater derived from the Santa Rosa project, these EIR comments should have direct relevance.)

Ag Irrigation...

What are all the requirements that a on-stream site would have to meet to qualify for this program? What role will Santa Rosa's Regional System play in meeting those requirements?

Currently (2004) Santa Rosa irrigates 6400 acres utilizing 1600 million gallons of storage. In EIR they are looking at possibility to irrigate 57,200 acres (North County) with 4100 mg storage. This represents a 900% increase in acreage and a 250% increase in storage requirements. Why don't the acre/storage ratios correspond? Why is such a huge increase needed to serve 31,000 new residents (2020 projection)?

In the past, the only way the City has persuaded farmers to use the wastewater was to pay them to use it. Is this project so expansive because few ag people have indicated a willingness to use the water and this EIR identifies everything in the hopes of getting something? Does the City plan to pay their contracting farmers to irrigate? At what rate? How would this affect water costs for those who aren't paid and will they consequently lose interest in the prog

What measures will be taken to assure that farmers do not overirrigate? Will irrigation sites be periodically screened for sensitive biological resources and endangered species by qualified scientists? Will irrigation practices conform with evapotranspiration rates and crop coefficients to avoid ponding or runoff associated with over irrigation? Will setbacks be enforced from sensitive habitat such as jurisdictional wetlands? What kind of enforcement will ensure compliance with the mitigations?

In a letter to the town of Windsor concerning their DEIR for their Water Reclamation Master Plan (Attachment #8), Dale Pierce of the US Fish and Wildlife Service writes, *"The Service believes the discharge of effluent through irrigation practices may preclude the recovery of federally listed species such as the California freshwater shrimp....Burke's goldfields..., Sonoma sunshine..., Sebastopol meadowfoam..., and the many-flowered naverretia..... The ongoing use of wastewater for irrigation on the Santa Rosa Plain is resulting in alteration of hydrology, functions, and species composition. Patterson et al. (1994) state, "the ongoing need to expand effluent irrigation acreage to keep pace with population growth will continue to jeopardize the existence of oak woodlands and vernal pools on the Santa Rosa Plain unless other, less sensitive lands are found for irrigation or other means of disposal."*

The mitigations claim that loss of habitat and biological resources from irrigation impacts will be avoided. How will you determine all sites where irrigation will not occur because of proximity to sensitive communities? Have you set a process

where all sites will be studied before being implemented for irrigation? Is this true for reservoir sites as well? Just saying that an impact will be avoided doesn't grant assurances. Please give details as to how this will be implemented.

The section on mitigations states that BMPs will be instituted and followed. How will these be monitored? What penalties will be enforced if they are not followed? What is the process for determining a violation? How has the City managed such violations and problems of over irrigation in the past? Was any farmer ever penalized? The letter above asserts that the current irrigation program in the Laguna area is very problematic. How will future irrigation programs change current practices?

Santa Rosa currently irrigates about 3.7 billion gallons a year in the Laguna area. This irrigation carries into the fall if the season is warm. When the soil is thus saturated, what happens to its capacity to hold water? Then when early winter comes and major storms occur the ground is already saturated. How do these high saturation levels affect erosion and ultimately add to cumulatively higher flows of the Russian River? How do they affect flooding in the lower river?

In regards to health impacts of irrigation and policies set by vector control agencies, the EIR promises to control ponding that results from over irrigation. Yet between 1993 to 2002, according to the Annual Report of 2002 (Attachment #2), there were 72 instances of irrigation run off that spilled into creeks indicating a high level of impact and illegal under the NPDES permit. We have personally witnessed ponding on City irrigation lands during tours. There is a chasm between the words on these pages, promising to follow the rules and protect the public, and the truth of so many excursions, subsequently decimating the City's credibility on all of these matters

Will this EIR address a winter irrigation program? In a dry winter there are opportunities for irrigation yet the circumstances and potential impacts are quite different than in the summer program. For instance, while runoff into waterways is allowed during discharge season, it must be measured and deducted from the allowed flow. Has there been or will there be an upgrade of the irrigation system on city owned lands as part of any of these alternatives? Will there be any winter irrigation programs as part of the new irrigation proposed? How will the irrigation program be monitored to assure regulations are enforced, especially as the State runs out of money to conduct such monitoring. Would the City be willing to pay a neutral third party to monitor the system? Will any of the irrigation areas be on hillsides? What protections will be in place to prohibit runoff in those circumstances?

Endocrine Disruptors

This EIR provides an analysis of Endocrine Disruptors in Vol. 3, Appendix 1.2, and the impacts on human and wildlife health. The article emphasizes the inconclusive nature of most of the current data. We have run across some studies, however, that indicate more conclusively that reproduction in fish downstream of wastewater discharges, exposed to relatively small levels of female hormone, have their reproductive capabilities cut by as much as half. We

submit the following article on this: *Spawning Trouble, Synthetic estrogen hampers trout fertility*, (Attachment #14: *Science News*, June 21, 2003, page 390). In light of the threatened and endangered status of our steelhead, coho, and Chinook in the Russian River watershed, what impact might a direct discharge into either the Laguna or the Russian River have on these species?

Another *Science News* article (Attachment #15: *Sexual Hang-Up*, Mar. 1, 2003, page 132) presents another problem that relates to Santa Rosa's wastewater discharge. That is, oxygen deprivation tampers with sex hormones in fish and impairs reproduction. It was found that oxygen-starved fish have an altered metabolism and remain smaller than normal. They found that putting fish in oxygen deprived water elevated concentrations of one form of estrogen in male fish and decreased testosterone. The hormonal shift inhibited testicular growth, sperm production and motility. In female fish, the low oxygen water reduced sex-hormone concentrations and the number of eggs hatching into healthy offspring.

It is very frustrating that as more and more information comes out about hormone disruptors and because no regulatory controls exist as yet, the agencies are not held accountable for toxins that can very well lead to the extirpation of many species before anything is done. Many scientists are now advocating policies of a *precautionary principle* which has actually become law in San Francisco. The idea behind this principle is that governments will make choices based on the least harmful alternatives. In the case of IRWP, this would clearly prioritize conservation, infiltration and inflow improvements, and emphasis on source reduction programs for wastewater dischargers. Not only that, this is the most cost effective way to go both in terms of financial, environmental, and health savings for everyone. I am enclosing the article, *Precautionary Principle Becomes Law in San Francisco*, Wed. Jun. 18, 2003 (Attachment #16). I would like to know why decision makers can't be made aware of this information and persuaded to consider it carefully?

In another vein, pesticides such as Endosulphan II occur in Santa Rosa's wastewater. We have come across another article about a court order for EPA to protect salmon from pesticides (enclosed, *SFC: Judge orders EPA to protect salmon from pesticides*, Wed. Jul. 3, 2002.) Apparently, EPA has found that pesticides harm salmon and yet have failed to follow the Endangered Species Act by consulting with National Marine Fisheries Service (NMFS). NMFS scientists have found that levels of pesticide between 1 part per billion (ppb) and 1 part per 10 billion, commonly found in salmon streams, can harm the nervous systems. Recent scientific studies have indicated that impacts of pollutants can be magnified a thousand fold when they combine synergistically.

What assurances can Santa Rosa make that the chemicals found in their wastewater will not enter the drinking water supply? What potential harm to aquatic life may occur? What monitoring will be done for these chemicals at the point of discharge? At each of the downriver water supply intakes? What opportunities for infiltration in wells may occur? What monitoring has occurred

in those wells for these various constituents? What monitoring is done by the various different water suppliers on the river?

What are the range of pesticides in the irrigation and wastewater? What is the range in the Laguna and in the Russian River? How do those chemicals interact with one another to expand total toxicity? Have there been any studies on this in the Russian River? What have they found? How might IRWP discharges, direct, indirect, and irrigated, increase the load of pesticides to which the fish are exposed? Would the City consider fish studies to determine exposure to endocrine disruptors as a mitigation? If not, why not?

Public Health and Safety.....

The EIR calls forth the risk assessment study from the Long Term EIR in regards to human health effects from the chemical constituents in recycled water. Risk assessments studies have been discredited by the scientific community as a means for determining health effects of many chemical constituents. The direct causes of serious chronic disease, such as cancer and birth defects have been too hard to trace to specific chemical exposures and next to nothing is known about the synergistic effects of approximately 87,000 chemicals in our environment. On page 19 above, I discuss the precautionary principle as adopted in San Francisco. (Attachment #16)

This principle maintains that, *"The delay between first knowledge of harm and appropriate action to deal with it can be measured in human lives cut short."* Examples are given such as belated knowledge about DDT, lead, asbestos where regulation only took place only after serious consequences had occurred. (article, Precautionary Principle Becomes Law in San Francisco) It also states, "Where there are reasonable grounds for concern, the precautionary approach to decision making is meant to help reduce harm by triggering a process to select the least potential threat."

On page 4.7-73 it says, *"While Giardia and Cryptosporidium cysts were detected in the Laguna Plant effluent, the discharge would not cause the existing concentration of cysts in the Russian River to increase."* Why not? If there are a certain number in the river and you add some, doesn't that increase the number? The same is true of coliform and other constituents. Whatever is in the river already, by adding effluent containing that constituent, you are increasing that constituent.

Cumulative Impacts....

In the Cumulative Impacts section, you mention other projects but you say nothing about the list of projects in the Russian River Action Plan, Phase 2, put out by the Sonoma County Water Agency in March of this year. And particularly, you say nothing about the Biological Assessment being developed as a result of the Section 7 consultation between the SCWA and NMFS. There is serious consideration of cutting flows by 60% to 80% from June to October. This is likely to significantly change the river's watershed environment and yet you make no mention of it. (See article, Russian River faces sharp summer cut: Attachment #17)

What are the likely impacts both on human health, but also on the general river environment as a consequence of the interaction of these two projects? Also, how might water delivery be affected which in turn governs the amount of wastewater generated? Could a lack of water curtail the amount of growth anticipated and therefore eliminate the need for this project? Have you looked at various flow scenarios from this perspective?

To what extent does over irrigation cause biostimulatory substances to be released and cause the lower river to have a large amount of algae all summer (deep green color) and extensive amounts of sediment (muddy brown color) all winter, even long after storms have ended.

Biological Resources.....

Many of the comments I made previously apply to this section as well. I will not repeat them but merely call attention to specific inconsistencies or inaccuracies.

There are quite a number of significant impacts to threatened, endangered, and special status species in the project area for the various alternatives. In most cases the mitigation is to construct the project at a time of no or minimal impact to the plant, animal, or aquatic species. But if there are several species impacted in one place and they have variable life style sensitivities, how can the project avoid all impacts? How is it determined which will be avoided and which won't? Will some species and/or habitat be sacrificed in the process?

On page 4.8-70 regarding the ag reuse distribution system it states, "This involves installing 300 miles of pipeline within the North County Agricultural Irrigation component boundary." This number (300 miles) was so astounding to me, I went to the project description on page 2.26 and found no such description under ag irrigation. I searched further and found the pipeline length on page 2-47 expressed in linear feet. The Dry Creek Valley was 353,000 linear feet and the Russian River Area was 210,000 linear feet. Those two together come to about 100 miles. 100 is a far cry from 300 but it's still a big deal. And besides, all of this is to serve 31,500 people and about 1 bg of extra effluent each year. The scope of this project is totally out of line with the need.

There are numerous instances where EQ values are referred to as being too low to cause an impact, for instance page 4.8-110. What impact would be caused by synergistic interaction of both the chemicals of concern and other possible chemicals that are in the wastestream and waterway that, by themselves might not be a problem, but in conjunction with others, become one?

Notes from RRCSD EIR 1998

Alternative 3: the Guerneville and Westside Road project...

What percentage of vineyards is being considered? Since conversion to grapes is so prevalent in Sonoma County, and since grapes use so much less water than other crops, how many acres in each area are needed to make this project viable?

The EIR states that, *"Improvements on private property would be the responsibility of the individual property owner."* Does this include public school property? What about properties that do not necessarily produce an income and yet are willing to have irrigation? Would they be forced to pay for hardware for which costs they could never recoup from realized income from the service? In what way does this project serve the economic interests of the ag people using it?

In fact, to what extent do these projects serve the economic interests of the Water Agency who is looking to increase diversions from the Russian River and therefore water sales? In order to obtain the increase, and due to the listing of the salmon and steelhead under the Endangered Species Act (ESA), SCWA has demonstrated an active interest in replacing vineyard creek diversions in order to qualify for the increased diversion. Please determine the value of the waste water in freeing up fresh water sources for SCWA water sales.

When would irrigator contracts be signed regarding contributions and participation in the irrigation system? What would be included in those contracts? Would the Agency have any say in the kind of equipment participants install, times and amounts of irrigation, safeguards against over irrigation, etc.?

Cost & environmental differentiations of West Side Rd. Storage Sites.....

Two sites were studied for storage in the West Side Road area have seemingly contradictory cost analyses. In a letter from James C. Hanson, Attachment B in Appendix D, it is estimated that the construction cost of the 800 ac.ft. reservoir on Leo Becnel's property would be \$3,950,000. Then James C. Hanson estimates that Reservoir #1 on the Bruce Russell property would be \$2,082,000. Reservoir #2 on the same property would be \$1,208,000. The combined cost of the two would be \$3,290,000. The total would come to \$3,290,000.

In Table 18 in Appendix D the Reservoirs are listed as costing \$3,375,000. What does this amount represent? Does it indicate a choice between the two basic reservoir sites, since the listed amount is much closer to the costs of the two Russell sites? Were there other estimates on those reservoirs? Without competitive bids, how can we know if the estimate is even close?

On page 4-47 it states that, *"The cost to the District for constructing storage reservoirs could range from \$0 (storage and disposal systems constructed and paid for entirely by property owners) to \$3.5 million (storage and disposal systems constructed and paid for entirely by the District). Property owners are interested in utilizing the District's recycled water and may be willing to participate in the cost of constructing irrigation systems, booster stations, and storage reservoirs on their properties, which would reduce costs to rate-payers."* If the District were dependent on these sites for irrigation the property owners would be crazy to offer to pay for a project they can get for free. Where are the bargaining chips for the District here? Besides, the Becnel site comes in just under \$4 million. Why is the \$3.5 million quoted here?

The picture is very unclear as to which vineyards could or would be irrigated with which reservoirs. It is unclear if the reservoir sites are equally appropriate for the project. Please clarify how the impacts and mitigations would differ from site to site.

If the property owners mismanage the irrigation system and/or the reservoir site(s), who is fiscally and legally responsible? What are the responsibilities of the District to assure that Clean Water Act, Endangered Species Act and Basin Plan regulations are being met at all times? How will these responsibilities be carried out?

In the first letter from James C. Hanson in Attachment B of Appendix D, it states in reference to the Becnel reservoir, *"The facility would be "on-stream" and would require perimeter ditches to intercept and re-route surface flows."* Then, according to Mr. Hanson, the same situation exists for the Russell reservoir sites. If this is true, then does this mean that the reservoirs would be considered *waters of the state* and subject to a separate discharge permit? Are property owners aware of this? Would they agree to this designation?

Would all three of these sites require findings by the National Marine Fisheries Service regarding salmon and steelhead listings and possible takings by the project? What would be the cost of both studying and accommodating these special considerations? Would the property owners be amenable to special regulations regarding the reservoirs on their properties? What other considerations might be made in regard to dam construction and its impacts on fishery habitat?

From: SWHWG Newsservice <waterstrider@comcast.net>
Reply-To: SonomaWildlife@yahoogroups.com
To: Sonoma Wildlife Habitat Working Group <SonomaWildlife@yahoogroups.com>
Date: Saturday, May 15, 2004 3:44 PM
Subject: [SonomaWildlife] PESTICIDES: Americans Carry Toxic Pesticide Cocktail in Their Blood

Newspaper clippings on habitat issues are offered to provide information and encourage conversation.

<http://www.ens-newswire.com/ens/may2004/2004-05-12-10.asp>

Americans Carry Toxic Pesticide Cocktail in Their Blood

SAN FRANCISCO, California, May 12, 2004 (ENS) - Many U.S. residents carry unsafe levels of pesticides in their bodies, according to study released Tuesday by the Pesticide Action Network. Children, women, and Mexican Americans carry disproportionate levels of the dangerous chemicals, many of which have been linked to serious short term and long term health effects including infertility, birth defects, and childhood and adult cancers.

The San Francisco based organization analyzed data collected by the U.S. Centers for Disease Control and Prevention (CDC) for its "Second National Report on Human Exposure to Environmental Chemicals." The CDC study, released in January 2003, reported the levels of 116 environmental chemicals - including 34 pesticides - in 9,282 people nationwide.

"None of us choose to have hazardous pesticides in our bodies," said Kristin Schafer, Pesticide Action Network (PAN) program coordinator and lead author of the report. "Yet CDC found pesticides in 100 percent of the people who had both blood and urine tested." More than a billion pounds of pesticides are used each year in the United States. (Photo by Tim McCabe courtesy USDA)
PAN's report, called "Chemical Trespass: Pesticides in Our Bodies and Corporate Accountability," found the average person in the study carried 13 of the 23 pesticides analyzed by the organization.

This finding supports the concern that Americans are increasingly carrying what PAN describes as a "toxic cocktail of pesticides."

"While the government develops safety levels for each chemical separately, this study shows that in the real world we are exposed to multiple chemicals simultaneously," said Dr. Margaret Reeves, a senior scientist at PAN, which is a global network of grassroots organizations that advocates alternatives to pesticide use.

"The synergistic effects of multiple exposures are unknown, but a growing body of research suggests that even at very low levels, the combination of these chemicals can be harmful to our health," Reeves said.

More than 800 pesticides are licensed for use in the United States and an estimated one billion pounds of pesticide active ingredients are applied nationwide each year.

Of concern to public health officials is their limited knowledge about human exposure and health effects, in particular among children, for the chemicals used in pesticides.

In addition, the CDC said in its report last year that the measurement of a pesticide or other environmental chemical in a person's blood or urine does not indicate a threat to human health.

Even the ability to test for these chemicals is limited. The CDC says it can currently measure only 50 pesticides or their metabolites in blood and urine samples.

But the potential for many pesticides to cause harm is widely known, PAN contends, and its report paints a worrying picture for children in particular.

For example, the CDC data analyzed by PAN found the average six year old child sampled is exposed to the organophosphorous pesticide chlorpyrifos at four times the level the federal government considers "acceptable" for long term exposure, according to the study.

Chlorpyrifos is an insecticide that has been on the market for more than three decades - it kills insects by disrupting their nervous systems.

The U.S. Environmental Protection Agency (EPA) restricted chlorpyrifos for most residential uses in 2000, but the insecticide continues to be used widely in agriculture and other settings.

It has been shown to disrupt hormones and interfere with normal development of the nervous system in laboratory animals. Pesticides remain an integral part of modern agriculture, despite concerns about health effects. (Photo courtesy the Imperial County Farm Bureau)

A spokesman for Dow Chemical, the largest manufacturer of chlorpyrifos, says the report overplays the concern about the presences of this chemical - and other pesticides - in blood or urine.

"When people are exposed, the product breaks down rapidly and is eliminated from the body in a matter of days," said Dow spokesman Garry Hamlin in a statement.

"Chlorpyrifos has been the subject of more than 3,600 studies and reports evaluating it in terms of human health and the environment," he said. "No pesticide has been more thoroughly studied."

PAN's report also found that women have significantly higher levels of three of the six organochlorine pesticides evaluated.

This class of pesticides is known to have multiple harmful effects when they cross the placenta during pregnancy, including reduced infant birth weight and disruption of brain development, which can lead to learning disabilities and other neurobehavioral problems.

Mexican Americans carry "dramatically higher" body burdens of chemicals linked to five of the 17 evaluated pesticides in urine samples, according to PAN's analysis.

These pesticides include the insecticides methyl parathion, lindane and DDT.

PAN's report contends that pesticide manufacturers and the federal government are to blame for the problem of pesticide body burden.

Manufacturers have aggressively promoted their products and have spent "millions on political influence to block or undermine regulatory measures designed to protect public health and the environment," said Skip Spitzer, corporate accountability program coordinator at PAN.

The report calls on the U.S. Congress to investigate the health concerns of the pesticide body burden and the corporate responsibility of pesticide manufacturers for this contamination.

It urges that the U.S. Environmental Protection Agency (EPA) ban use of pesticides known to be hazardous and pervasive and immediately phase out all uses of chlorpyrifos and lindane.

In addition, the report calls on the EPA to require that manufacturers bear the burden of proof for demonstrating that a pesticide does not harm human health before it can be registered.

PAN program director Monica Moore said, "The fact that our children carry dangerous pesticides in their bodies represents a dramatic failure in the way our government protects us from toxic pesticides."

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SustainNet Events Calendar:
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Opportunities for education and involvement from the Russian River Watershed Council:
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the atmosphere, and then later fall back to land as precipitation. As a result of all these pathways, pesticides are widely found in rivers, streams, lakes, and even in drinking water.

Pesticide contamination of water

Results of the United States Geological Survey's (USGS) National Water-Quality Assessment (NAWQA) studies show that pesticides are widespread in streams and groundwater sampled throughout the country. USGS found that 90% of water and fish samples from all streams sampled in the U.S. contain at least one pesticide. Not surprisingly, USGS also found that the most heavily used pesticides are the ones found most often in streams and groundwater. The top 15 pesticides found in water are among those with the highest current usage today.

The amount of pesticides in water varies both geographically and seasonally, based on land use and pesticide use patterns. Pesticide concentrations also vary yearly, based on variations in rainfall, and seasonally, based on agricultural practices. A 1991 study of watersheds in the cornbelt region found that concentrations of herbicides in May and June, the planting period, were 10 times higher than levels before planting (March and April) and after harvest (October and November).

Surface water

Surface water, which is water that sits above the surface of the earth, includes lakes, rivers, streams, ponds, and wetlands. Surface water supplies drinking water to around 47% of the U.S. population. Low levels of pesticides have been widespread in the nation's surface waters for several decades. In a large sampling of streams throughout the country, USGS found 46 pesticides and pesticide degradation products in one or more samples. In the Midwest especially, seasonal variations account for strong differences in amount of pesticide residues in surface water—in the summer, pesticides have been detected in concentrations above allowable levels set by EPA.

A number of studies show that pesticides applied to lawns and gardens contaminate local streams. In a King County, Washington study, USGS compared types of pesticides found in urban streams during rainstorms (times of high runoff) to sales data from nearby home and garden stores. The three most frequently purchased pesticides—diazinon, 2,4-D, and MCPP—were detected in water samples from all study sites. USGS also found that four of the five pesticides that exceeded recommended maximum concentrations were purchased by residents and applied in homes and gardens. A recent Canadian study reveals that the most frequently detected pesticides in Toronto streams are also diazinon, 2,4-D, and MCPP, prompting the authors to conclude, "...Stormwater drainage systems may be conveying nutrients and pesticides used on lawns in urban areas to the Don River and Humber River watersheds and ultimately, into Lake Ontario."

Groundwater

Over 50% of the U.S. population draws its drinking water supply from groundwater, which includes sources below the earth's surface, including springs, wells, and aquifers. In general, groundwater has a lower incidence of pesticide con-

tamination than streams because the water gets filtered slowly through soil and rock, allowing for degradation and sorption of the chemicals out of the water and into soil. However, once groundwater has been contaminated, it takes many years or even decades to recover, while streams and shallow water sources can recover much more rapidly. Herbicides are found more often in groundwater than insecticides, but insecticides in groundwater exceed drinking water standards more often than herbicides. A 1989 study found residues of 39 pesticides and their degradation products in the groundwater of 34 states and Canadian provinces. The pesticides were mainly herbicides used in agriculture and insecticides and nematicides used in soil treatments.

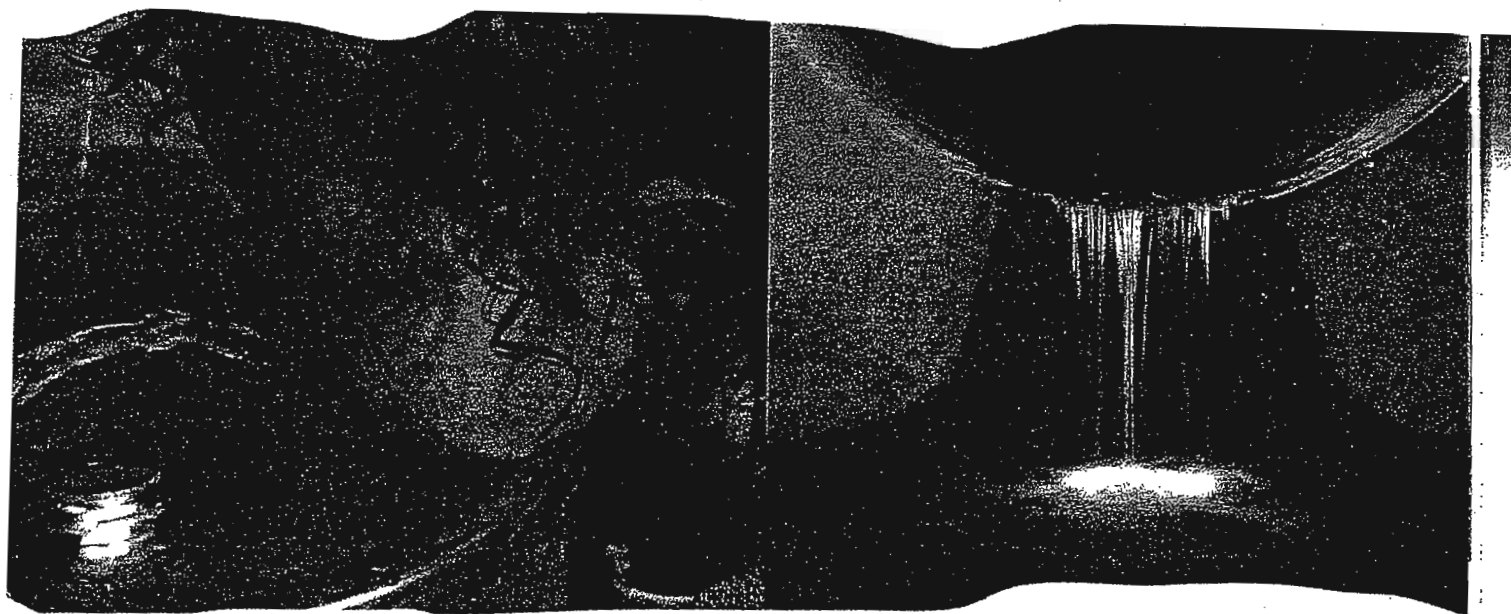
Wells

Privately or publicly owned wells draw their water from groundwater sources. USGS found that around 50% of well samples contain one or more pesticides. Those wells that tap shallow groundwater beneath agricultural and urban areas have the highest detection frequencies of pesticides. A study in the mid-1980s of well water by Monsanto, a chemical manufacturer, found the chemical alachlor in wells affecting 100,000 people in the sample area, some of whom were exposed to levels above maximum contaminant levels set by the EPA. It also found that 12.95% of the wells sampled contained detectable residues of herbicides. The herbicide atrazine was found in the highest percentage of wells and in the highest amounts, often over the EPA allowable level. A 1990 EPA survey found that over 10% of community water system wells and almost 5% of rural domestic wells contain more than one pesticide.

Human exposure through water

More water is consumed per kilogram of body weight than any other item in the diet. Drinking water comes from a variety of water sources, including surface water and groundwater, as well as public water and private well systems. There are also vast geographic and seasonal variations in quality of drinking water and amount of pesticide residues. Because of these factors and a limited amount of available information, risk estimates on exposure to pesticides from water intake and the health effects of that exposure are currently unavailable. Despite unknown information about exposure and hazards, the National Academy of Sciences (NAS), in its 1993 review *Pesticides in the Diets of Infants and Children*, noted that since pesticide residues in water generally tend to be low, the contribution in ingested food prepared by using water is expected to be low, except in areas where the water is contaminated at above-average levels. A number of pesticides have been found in drinking water sources at concentrations above EPA limits and of potential concern to human health. In that same report, NAS recommended that pesticide exposure through drinking water be evaluated along with other dietary exposures to determine exposure risks.

According to USGS, insecticides in urban streams are a concern for downstream water suppliers and possibly for recreational users. Similarly, the high levels of herbicides in



Threatened Waters

Turning the tide on pesticide contamination

By Aviva Glaser

Eds. Note. With mounting data documenting the increasing problem of water contamination and an inadequate federal regulatory response, it is urgent that policy makers (especially at the local level) and community members refocus on the threat that pesticides pose to the nation's waterways and community health.

This literature and regulatory review identifies serious threats from pesticides that cannot be ignored:

- Frogs exhibit hermaphroditism when exposed to below legal allowable levels of the herbicide atrazine in waterways;
- Human health effects, including low birth weights, increased numbers of breast cancer cases, and low sperm counts are linked to herbicide-contaminated water;
- Dozens of pesticides and their degradation products contaminate waterways and escape regulatory oversight;
- Runoff from urban lawn pesticide use contaminates local watersheds and stresses municipal water treatment plants; and,
- Children are not adequately protected by federal allowances of pesticides in water.

This review brings together the current state of knowledge, while documenting the critical deficiencies in understanding the implications for human health and the environment. The data shows that concern is warranted, and that an urgent response is

demanded. With a crisis in safety looming, steps can and must be taken to curtail pesticide uses and adopt alternative practices and products that do not end up in the nation's waterways.

Water is the most basic building block of life. Clean water is essential for human health, wildlife protection, and a balanced environment. Yet, water is being polluted at unprecedented rates, with chemicals, nutrients metals, pesticides, and other contaminants. The U.S. Environmental Protection Agency (EPA) states that, "By their very nature, most pesticides create some risk of harm to humans, animals, or the environment because they are designed to kill or otherwise adversely affect living organisms." Studies of major rivers and streams document that 96% of all fish, 100% of all surface water samples and 33% of major aquifers contain one or more pesticides at detectable levels.

How do pesticides get into water?

Around one billion pounds of pesticides are used each year in the U.S. alone. When pesticides are applied to fields, gardens, parks, and other places, a percentage of the chemicals end up as runoff. This runoff moves in streams, rivers, and lakes. Similarly, when pesticides are applied to lawns in urban and suburban areas, rain washes some of the pesticides into street gutters, where the pesticide-contaminated water goes through storm drains and pipes and eventually flows into nearby creeks and rivers. Some of the pesticides also end up in groundwater systems by leaching down through the soil. Small amounts also volatilize into