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OCT 07 1996

CITY OF SANTA ROSA
CITY MANAGER'S OFFICEfrom: Bob Southfield
P.O. Box 1113
Fairfax, CA 94978-1113to: Ms. Maria Meredith
City of Santa Rosa Community Development Dept.
P.O. Box 1678
Santa Rosa, CA 95402-1678
fax# 707-543-3030

Dear Ms. Meredith,

Oct. 07, 1996

Enclosed with this cover letter are comments I am submitting as an individual on the 1996 Draft EIR/S Santa Rosa Subregional System Long-Term Wastewater Project. These are submitted for the comment period ending at 4:30 pm, October 07, 1996, and they are separate and in addition to my other comments.

Please promptly notify of any difficulty or question accepting or responding to these comments.

Sincerely,

Bob Southfield

P.O. Box 1113

Fairfax, CA 94978-1113

tele# 415-456-9273

17075433030 P.01

TO

OCT-07-1996 11:14 FROM BRK PCHY 415 453 B288

OCT-07-1996 11:15 FROM BANK PHCY 415 453 8288

TO

17075433030 P.02

 Comment #1, from Bob Smithfield, 10-05-96

001

subject: West County alternatives irrigation
suitability and erosion control studies

PREFACE

This is the most difficult set of comments for me to write.

The proposed Project has, as I've stated in an earlier set of comments, a 'totality' of expected and potential environmental impacts which, in me, produce both senses of sadness and humility. As proposed, there is no doubt that the many project actions - any of the alternatives - will change the world in which we live in ways that most of us would prefer to avoid.

For those who contribute to project planning analysis in order to avoid degradation and permanent destruction of our world's and communities' life resources and to bring some enduring benefit to us and to those who come after us I am grateful.

In the years that I have spent reading and studying Project-related documents, I have come to respect work done by Questa Engineering.

It is with humility and compassion that I submit the following comments for review and comment. My personal limitations will be evident even if my comments have some merit. My commitment, as always, is to be factual and compassionate.

COMMENTS

002

In reviewing the DEIR/S Vol. VI, E-7 text and technical reports/supporting documents, it is difficult for me to clearly and straight-forwardly see how E-7 establishes some existing conditions baselines.

 It appears from comparative study of

003

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the DEIR/S Vol. VI, E-7 and "Erosion and Sediment Study, 003
(cont.)
Stemple Creek Watershed", Stemple Creek/Estero de San
Antonio Resource Enhancement Project, Marin County and
South Sonoma County Resource Conservation Districts,
February 1992, that conditions reported in the RCD study
specifically for the Stemple Creek/Estero Americano
watershed are some way selectively used but also
extrapolated or simply assumed to have scientific validity
for the entire West County, including the Americano
watershed.

Substantiation in great detail would be needed to 004
support such selective and, how shall one say, expansive
use of the RCD material.

It is clear that if the above assumption has not been 005
made, then there is either a body of information and
evaluation of conditions in the Americano watershed that
are not being referenced in the DEIR/S, or there is an
inadequate study of existing conditions (in the Americano
watershed) to support the Draft level of conclusions.

For example, the annual total sediment yield 006
measurements for the upper, middle, and lower sub-
watershed area and for cropland, low RDM, moderate RDM,

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and high RDM rangelands in each subwatershed of the
 Stemple/Estero...watershed as provided by the RCD study
 (p. 10, Tables 2 and 3) yield very different information
 about soil erosion in each subwatershed than is presented
 with the grossly more simplified or general sediment yield
 description "1,000 tons per square mile, annually" used in
 the DEIR/S for the entire West County area (DEIR/S, Vol.
 VI, E-7, p. 23). While the DEIR/S's "1,000 tons" figure
 is a mathematically accurate average for the Stemple
 Creek/Estero de San Antonio watershed based on the RCD
 study figures (about 51 square mile area and total
 sediment yield of 51,000 tons per year from the watershed
 to the estuary; RCD study, p. 5 and p. 9), it is not
 about the Americano watershed conditions (RCD study, p. 1)
 and so, WITHOUT ADDITIONAL SUBSTANTIATING EVIDENCE, it is
 questionable figure for assumptions, estimates and
 recommendations in the DEIR/S for the Americano watershed
 lands of the West County.

006
(cont.)

007

Let's look at another example, in discussing West
 County, not just the Stemple/Estero de San Antonio water-
 shed, the DEIR/S Vol. VI, E-7, p. 23 provides us with,
 "...Erosion from agricultural lands are estimated to
 generate only about one-third of the total sediment yield.

008

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of West County watersheds (Prunuske Chatham 1994), while 008
 gully erosion and stream bank failure are more significant (cont.)
 sources of sediment in the West County area....", and,
 "...Our rough estimate accounts for 40 to 50 percent or
 more of the total sediment yield in the South County area
 from sheet and rill erosion, compared to 33 percent esti-
 mated for the West County."

Here is what we find in the RCD study, p. 9:

"Channel erosion is the major sediment contributor to the
 Estero de San Antonio, producing about 68 percent of the
 total sediment yield in the watershed, or about 30,300
 tons per year (Tables 2 and 3). Channel erosion includes
 streambank erosion along Steuple Creek and its'
 tributaries, and erosion in gullies.

"Of the 30,300 tons per year, 2 percent or 570 tons
 per year comes from the upper subwatershed, 16 percent or
 4,740 tons per year from the middle subwatershed, and 82
 percent or 25,010 tons per year comes from the lower
 subwatershed. The most critical area is the lower
 subwatershed for channel erosion. The lower subwatershed
 is closest to the Estero, has Steeper slopes, and its
 floodplain areas are smaller than those in the upper and
 middle parts of the watershed."

"The streambank erosion along Steuple Creek itself is

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TO

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minimal... (o)nly about 9 percent of the total sediment yield appears to be from erosion of Stemple Creek banks. 008 (cont.)

"About 45 percent of the sediment produced by channel erosion in the lower subwatershed is from gullies, 30 percent is from tributary stream banks and 9 percent is along Stemple Creek."

On pages 10 and 11, the RCD study further informs us: "Sheet and Rill erosion produces almost 32 percent of the total sediment yield in the watershed or about 14,680 tons.... Most of this... (40 percent) originates in the middle subwatershed. The other two subwatersheds each contribute about 30 percent of the total...."

"Sheet and rill erosion is divided into cropland and rangeland sources. Although cropland comprises only about six percent of the total acreage, it contributes about 22 percent (3,290 tons) of the total sheet and rill sediment yield in the watershed."

The description of the subwatersheds of and total watersheds of Stemple Creek/Estero de San Antonio provided by the RCD study is not just more detailed than the E-7 description in the DEIR/S, it is different. | It is func- 009
tionally different and useful; the expansive and selective character of the E-7 description is not a descriptively

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nor functionally accurate representation of the 009
corresponding information in the RCD study. | (cont.)

| It appears that E-7 in Vol. VI of the DEIR/S does not 010
provide a description of existing soil erosion potential
and conditions in the West County watershed that is
faithful to technical material to which it can easily and
clearly be traced. | Can one rely on soil erosion and 011
irrigation suitability assertions related to proposed
Project actions described later in E-7? |

| Let's look again at the DEIR/S. Once again in Vol. VI 012
E-7 contains Table 5, Summary of Existing Agricultural
Land Use - West County. Table 5 contains a list of land
uses and acreage for each land use in each watershed,
Stemple and Americano. The total acreage for Stemple
is reported as 11,425 acres; within Stemple, it gives
native rangeland 8,428 acres, hay and grain 216 acres,
native pasture 464 acres, dairy 128 acres, grasslands
424 acres, idle 60 acres, sudan grass 51 acres, misc.
field crops 21 acres, and potatoes 4 acres.

The RCD study, on pages 4 and 5, tells us, "...
two main land uses in the watershed are grazing and
cropland...." Grazing low RDM is 2,343 acres, grazing

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moderate RDM is 26,451 acres, grazing high RDM is 2,189 acres, and cropland is another 2,022 acres, for a total agricultural acreage of 33,000 acres. | 012 (cont.)

Even if one allows for different sources of land use data, the discrepancies between the figures in E-7 and RCD are significant. It is a startling set of differences. 11,425 acres vs. 33,000 acres. 013

The RCD study is very helpful in respect of these vast differences. On page 5, Table 1 - COVER CLASSIFICATION provides a detailed subwatershed by subwatershed description of the low RMD, moderate RMD, high RMD, and cropland land uses in the watershed. In the lower subwatershed, the total for low, moderate and high RDM acres is 6,268 and cropland is 132 acres, for a subwatershed total of 6,400 acres; for the middle subwatershed, the total for low, moderate and high RDM acreage is 11,338 and cropland is 412, for a subwatershed total of 11,750 acres; and, for the upper subwatershed, the total for low, moderate and high RDM is 13,372 acres and cropland is 1,478 acres, for a subwatershed total of 14,850 acres.

Looking at these RCD study subwatershed subtotals and totals, it is impossible to know, as opposed to guess, how the DEIR/S E-7 figure(s) were derived. | The question 014

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becomes, what acreage was included in the E-7 table? |

014
(cont.)

Was it included on an existing conditions percentage
basis, and if so, then using what selection criteria? |

015

One more set of comparisons is useful. The DEIR/S,
Vol. VI, E-7 p. 6 says, "...The reclamation project would
stabilize many of the gullies and stream banks where they
occur within and adjacent to irrigation acreage." E-7
pp. 23-24 says, "...detailed erosion and sediment study
conducted by the NRCS for the Stemple/Americano Watershed
has not been completed for the Sonoma Mountain watershed
portion of the Russian River drainage....In addition to
to required on-farm management practices to control irri-
gation runoff and erosion, the proposed project includes
measures to stabilize and heal gullies and stream banks
on lands to be irrigated. Although lands to be irrigated
constitute only a small portion of the overall watershed
(depending on the alternative, from less than 15 to about
25 percent, per Pat Collins), incorporation of such
measures throughout the South and West county project
areas can make a significant difference in sedimentation
rates of surface water bodies." We are also cautioned
in E-7, p. 23 about irrigation: "...If careful water
management is not practiced, water logging of the soils

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during the growing season, excessive runoff and deep percolation, and accelerated soil erosion may occur. These result in water quality and biological impacts.... Even careful irrigation of some marginal lands may result in the development of drainage problems in bottom lands, and increased erosion and mass movement on steeper slopes."

016
(cont.)

The RCD study provides detailed figures for the very different profile of average annual sediment yield (Table 2) and percent of sediment yield (Table 3). Some detail from these explained in the study on page 9 has been quoted here above already.

The RCD study interprets its findings with conclusions such as, on p. 11, "Accelerated erosion is the erosion caused by man that is over and above the background rate of erosion. About 70 percent of the sediment yield to Stemple Creek is due to accelerated erosion. About 60 percent of the sediment from sheet and rill erosion and about 75 percent of the sediment from channel erosion is due to accelerated erosion....Accelerated erosion in the Stemple Creek Watershed probably began over 100 years ago when much of the land was cleared of native vegetation to make way for cultivated crops...Historical practices and

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reoccurring large storm events like those in 1982 and 1986 016
(cont.)
create the visible effects in the watershed....Today most
of the land...has been converted back to rangeland and
only about 2,200 acres out of 32,000 acres are now culti-
vated, but gullies and streambanks are still actively
eroding."

It summarizes on page 17, "The sources of sediment
reaching Stemple Creek and the Estero de San Antonio come
from three major sources: (1) sheet and rill erosion on
rangeland with low Residual Dry Matter and cropland, (2)
gully erosion, and (3) streambank erosion. Solutions
offered for these sources should be included in a
Conservation Plan, developed with the landowner."

From the figures provided in the RCD study, it is 017
clear the each subwatershed in the Stemple Creek watershed
contributes in somewhat functionally distinct ways
to total sediment yield in the watershed. It also
provides an integrated view of existing conditions
in each subwatershed with respect to contributions
from different agricultural land use practices (discussed
in terms of sheet and rill erosion sources) and to
contributions from forms of channel erosion. It provides
the basis for quantifying the human practices contribution
to total sediment yield and in relation to "the

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background or geologic rate of erosion." (RCD study, p. 11) 017
(cont.)

Let's return to the DEIR/S. Tables 2a and 5 seem to fail or stumble badly in attempting to provide a view of existing West County agriculture, agricultural practices and soil erosion factors. 018
The case studies of Table 2a appear to have been randomly selected; cumulatively they bear little resemblance to what Table 5 reports to be the way agricultural acreage can be quantified according to practice. 019
Nine of the seventeen case studies appear to involve what Table 5 shows as land use of 14,002 out of the 18,615 acres reported; the other eight case studies of Table 2a appear to involve what Table 5 shows as land use of 726 acres of the total reported.

Strikingly, these breakouts of the case studies also 020
yield a curious sediment yield picture compared to the average 1,000 tons/sq.mi./year sediment yield we read about earlier in the DEIR/S. It appears the range of specific case studies provided a source for the figures reported in Table 2b for possible Future Irrigated Conditions in the West County proposed Project area; however, when the annual soil loss rates from 2a and 2b are compared in Table 5, we have to begin to wonder again what selective criteria were used. 021
The six lower range

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rate cases from 2a are used in only twelve of the 49 total 021
(cont.)
comparisons; the one case most near the 1,000 tons average 022
is used in only 2 of the 49 comparisons (these eight in-
volve existing condition land use practices on a very
substantially large percentage of the watershed
agricultural acreage no matter whether this acreage
is referenced in the RCD study or the DEIR/S E-71);
the comparatively high and extremely high yield
case studies from 2a form the basis for the remaining 35
comparisons out of the total of 49.

One only need to reread the RCD study break-outs 023
on subwatershed and total watershed ag. land use and
sheet/rill compared to channelization erosion data
from existing conditions to realize how poorly these
DEIR/S case study tables function.

As my understanding stands now, it appears to me that 024
these figures and findings of the DEIR/S fail to
adequately portray existing conditions of agricultural
land use practices and of sources of soil erosion in the
West County area of the proposed Project. Likewise, there 025
seems to be some lack of faithfulness to data in the tech-
nical reports which needs to be corrected.

With regard to CEQA, these to failures are contrary 026
to at least section 15125(a), (b) and (c) and section

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15064(b). Furthermore, these failures causes both 027
decision-making and public participation to be impaired,
contrary to CEQA, 15126 (a) and (d)(5).

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