



County of Santa Cruz

OFFICE OF THE AGRICULTURAL COMMISSIONER

DAVID W. MOELLER
 AGRICULTURAL COMMISSIONER
 SEALER OF WEIGHTS AND MEASURES
 DIRECTOR, MOSQUITO AND VECTOR CONTROL

October 16, 2000

Agenda Date: October 24, 2000

County of Santa Cruz
 BOARD OF SUPERVISORS
 701 Ocean Street
 Santa Cruz, CA 95060

Study on the Feasibility of Expanding the Mosquito and Vector Control District

Dear Members of the Board:

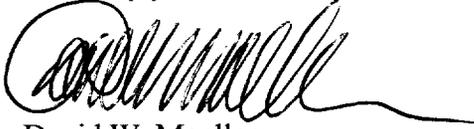
At your meeting on June 27, 2000, your Board accepted a preliminary report on the feasibility of adding zones of benefit to the Mosquito Control District, and directed the Agricultural Commissioner to return with more information on the feasibility of expanding the District, with an additional directive that the report back include GIS information from the Planning Department to locate high water table areas.

Since its last report to you, the staff of the mosquito district further refined its criteria for evaluating potential areas for mosquito control, applied those criteria to the unincorporated mid-county area and the City of Santa Cruz in order to define two possible future zones of benefit, reviewed the process for annexing new zones and for levying fees under the provisions of Proposition 218, developed expenditure and fee summaries for each of these two zones, and examined the various ways to measure property owner support for new fees for mosquito control. All of these elements are described in much greater detail in the attached Study on the Feasibility of Expanding the Mosquito and Vector Control District.

Based on our findings, we believe there is insufficient data at this point to support a conclusion that property owners would support an annexation vote in the two areas studied for this report. It is our recommendation that we wait until the District must go to property owners in active Zones 2 and 4 with a ballot measure to increase fees to keep revenues apace with expenditures, which we anticipate will be necessary in 2003 or 2004. At that time, we believe it would be more appropriate to consider including a proposal to annex and levy fees in areas not currently served by the District.

It is therefore RECOMMENDED that your Board accept and file this report.

Sincerely yours,



David W. Moeller
Agricultural Commissioner

Approved: _____



SUSAN A. MAURIELLO
COUNTY ADMINISTRATIVE OFFICER

DWM:dm

Attachment

Cc: County Counsel

**A Study on the Feasibility of Expanding the
Mosquito and Vector Control District
October 2000**

0011

At its June 27, 2000 meeting, the Santa Cruz County Board of Supervisors accepted a preliminary report on the feasibility of adding zones of benefit to the Mosquito and Vector Control District, and directed the Agricultural Commissioner to return with additional information on the feasibility of expanding the District; with an additional directive that the report back include GIS information from the Planning Department to locate high water table areas. In response to the Board's direction, the following study was prepared by the staff of the Mosquito and Vector Control District.

Selection of Zones of Benefit - Measuring the Need

Since the formation of the District in 1993 and the initial activation of Zones 2 and 4 based on supervisorial district boundaries, geography and number of mosquito complaint calls, the District has compiled information or calls recorded from throughout the County. We have also conducted occasional trap surveillance in problem areas outside Zones 2 and 4 and conducted inspections and treatments when requested or within the flight range of mosquitoes to protect District residents.

To narrow the scope of this report, we studied two possible zones of benefit comprised of the City of Santa Cruz (Evaluated Zone 3) and the mid-County coastal unincorporated area (Evaluated Zone 1). (**ref. Map 1-SC and Map 1-LO**)

Since 1995, mosquito-related calls and calls for other vector services (informational) have been recorded into a caller database. The number of calls per area is a good indicator of resident's perception of a nuisance, so is important for evaluating areas for annexation. Also applicable is knowledge of mosquito biology: species significance, breeding site preference and flight range. For this report, this information was processed in the following manner:

1. Calls were analyzed with Assessor's parcel (APN) data to derive indices of demand for service (per 100 parcels) for each APN book within the mid-County. Those APN books with the highest index were within the Live Oak / Soquel area and the City of Santa Cruz. These areas were considered for further evaluation. (**ref. Table.1 and Chart 1**)
2. Mosquito-related calls were then plotted spatially in relation to surface water and breeding source surveillance information to see where calls were clustered. High ground water is also a pertinent feature but a digital map could not be obtained for this study. (A San Lorenzo Valley GIS study used a groundwater layer, but not exclusively high groundwater).
3. Then these identified, presumed and potential breeding sites were buffered with lines representing the likely minimum flight range (dispersal) of the mosquito species which breed in natural drainages, freshwater marshes, wastewater and flood channels. Not shown was dispersal from residential sources such as yard containers, street drainage, swimming pools and ornamental ponds which provide significant breeding in urban / suburban areas.
(**ref. Map 2-SC, Map 2-LO and Table 2**)

0012

4. From this geographic and biological analysis were distilled the APN books that had high indices and/or that contained large identified/presumed/potential breeding sources.
5. The calls received for each year since 1995 from these 'evaluated zones' were compared to the existing zones and to all calls received, as a number and as a percent. **(Table 3)**

Determining Service Delivery Costs

Estimating staffing needs requires an **estimation of work load**, by way of an analysis of the number of service requests generated, land area involved, travel distances and the amount of sources that need to be treated, only partly predictable in a new area prior to extensive surveillance.

The zones of benefit being evaluated have many residential sources (street drainage and yard containers, ponds and pools). The natural marshes and stream drainages are extensive and also significant because of the **proximity** of large numbers of residences nearby. The threshold of breeding requiring action is low, meaning more servicing is necessary for fewer mosquitoes as compared to rural areas.

The District serves the two South County zones with two Vector Control Specialists (VCS) responsible for 35 square miles each, with help from the manager and seasonal extra-help. Comparisons with evaluated zones:

<u>Zone</u>	<u>Area (square miles)</u>	<u>Density (parcel&q. mi.)</u>
• Current Zone 2 benefit area	11.9	709
• Current Zone 4 benefit area	58.4	242
• Evaluated City of Santa Cruz zone of benefit	12.3	1,220
• Evaluated unincorporated zone of benefit	14.9	909

One additional VCS could serve one or both zones of the size being evaluated. If both zones were to be served a seasonal extra-help worker may be necessary.

We estimated costs of one additional staff, Department and District administration, vehicle costs and charges, spray and truck equipment, materials, miscellaneous supplies and services (such as helicopter) at \$109,000 start-up and \$87,000 for second year expenses. Add \$27,000 to these figures if both zones were to be activated, reflecting additional help, supplies, services and materials. **(Table 4)**

Funding Mechanisms for Annexation and Assessment Procedure

0013

For reasons of flexibility, given the year-round activity, area-wide breeding and broad dispersal of mosquitoes that mosquito districts typically service large benefit areas funded by diverse revenue sources to ensure fees remain low and stable. Forty-three of fifty California mosquito programs receive a portion of the ad valorem property taxes, and a majority of these augment property taxes with other funding sources, typically a service charge, assessment or special tax.

One method of funding service to annexed areas would be by decision of the governing bodies, the Board of Supervisors or a city council in their respective areas, to annex according to provisions of Sections 2330 - 2332 of the California Health and Safety Code, and to provide a transfer of a portion of the 1% ad valorem property taxes subject to the provisions of Section 2302, for the tax code areas which we serve.

The alternative funding method for an unincorporated area would be by benefit assessment or special tax as described below:

Former County Counsel Dwight Herr provided the District with this opinion dated Feb. 14, 2000:

"The inclusion of inactive zones or of other unincorporated areas within the mosquito abatement program of CSA 53 would not be subject to LAFCO procedures, but would have to follow the

assessment procedures established by Proposition 2 18 for assessments and as implemented by Government Code Sections 53750 et. seq. (i.e. preparation of an engineer's report allocating benefit, mailed notice and assessment ballots to all affected property owners, and imposition of the assessment would be dependent on the proposed assessment receiving approval by a weighted majority property owner ballot vote). Procedural rules for the conduct of the mailed assessment ballot vote have been established by the Board of Supervisors in Resolution No.346-97."

Proposition 2 18 also allowed for an alternative procedure for funding, by a special tax approved by two-thirds of the electorate of the affected area, in a general or special election.

Annexation of a City

Former County Counsel Herr further opined: "The inclusion of city areas within the mosquito abatement program of CSA 53 would instead be subject to LAFCO procedures. First of all, a resolution of approval by the city council with jurisdiction of the area would be needed to initiate a proposed annexation of city area to CSA 53 (See Health & Safety Code Section 233 1). Then the Board of Supervisors would need to submit the proposed annexation to LAFCO for review and approval. The proposed annexation may be made subject to an election. There is a recent opinion of the State Attorney General's Office, 82 Ops. Atty. Gen. 180 (1999), which discusses the procedures applicable when an annexation to a district (e.g. CSA) includes an assessment.

Annexation procedures are governed by Health & Safety Code Sections 2330 et seq. rather than the procedures set forth in Sections 2211 et seq. for formation of a mosquito abatement district."

Note: In his February, 2000 opinion, County Counsel Herr also answered the District's questions as to what source of funds can be used to pay assessment ballot procedures for activating zones, or otherwise including

additional unincorporated areas in an existing zone or establishing a new zone, or to pay the costs of annexing city areas:

"The existing zones in CSA 53 that are part of the mosquito abatement program could be benefitted by the inclusion of additional areas by spreading overhead costs over a greater area. In addition, the operational effectiveness of the program can be enhanced by treatment of a larger area to avoid migration of mosquitoes from one area to another. Accordingly, CSA reserve funds could be used to pay for assessment ballot procedures for activating (unincorporated) zones or the costs of annexing city areas."

"The Board could also decide to require cities wishing to annex to the CSA to advance or pay the costs, or the Board could decide to advance or expend general fund monies to pay for the costs of including additional unincorporated areas in the program, and could provide for the repayment of those costs from any assessments approved for the newly included areas."

Determining Projected Assessment Revenues and Estimating Charges

A: ; APN books are the unit of area that make up the zones of benefit, and some in the proposed zones are split between Supervisorial Districts, the Districts will be irrelevant in this analysis.

- Obtain the number of parcels for each Assessor's use code within each ABN book
- Apply our proportional fee structure incorporating the special levy profile similar to that used in Zones of Benefit 2 and 4 to the chargeable parcels to determine the number of units
- Divide the number of units in a proposed zone into the cost required to service that zone to get the unit charge

Note: In an annexation process the structure would be modified to include charges for public parcels (as required for new and increased assessments).

For this evaluation, the first-year and second year costs of a VCS, materials and equipment, estimated at \$109,000 and \$87,000 respectively, was divided by the number of estimated chargeable parcels for each zone to give the average charge per parcel:

- City of Santa Cruz zone of benefit: \$7.27 first year, \$5.80 second year
- Unincorporated zone of benefit: \$8.05 first year, \$6.42 second year

If two zones were to join the District, the first-year and second year costs of a VCS, extra-help employee, materials and equipment, estimated at \$136,000 and \$114,500 respectively, is divided by the number of estimated chargeable parcels for both evaluated zones to give the estimated average charge:

- City of Santa Cruz zone of benefit
+ Unincorporated zone of benefit: \$4.76 first year, \$4.01 second year

0015

Determining Property-Owner Support

The number of calls per area measured by the call index is a good indicator of resident's perception of a problem, but would property owners be willing to pay for mosquito service?

PC St-proposition 2 18 annexations are required to be approved by a majority of property owners through the return of mailed ballots counted on a weighted basis of the assessment charged. The time and expense for this pass/fail procedure necessitates that areas that are proposed because they produce call volume and meet biological criteria must also be areas most likely to vote for approval.

One method used to determine public support in the recent formation of the Placer County Mosquito Abatement District, also Marin-Sonoma and Inyo Counties' mosquito assessment is a **public opinion survey** conducted by a marketing firm using statistical sampling of property owners by telephone. This analysis of a geographic area asks owners what they would pay a year for mosquito control and was within two percentage points of the eventual mail-out ballot vote in Placer. For a phone survey of 400-500 calls, the cost was estimated at \$16,000 to \$20,000.

Another technique, an **advisory vote** employs a questionnaire and informational mailing to every prospective chargeable parcel and is estimated to cost from \$1.55-\$1.85 per parcel, not significantly different than the cost of a ballot mail-out.

If additional zones were funded by an assessment rather than by a share of ad valorem property taxes, the cost of the ballot mail-out procedure, including consultant, engineering, printing and mailing, postage, tabulating and administration is estimated to be \$40,000 to \$50,000, not including the aforementioned opinion poll. This one-time cost of between \$1.75 and \$2.70 per parcel could be added to the servicing charges and paid over the first few years.

A projection of the District's current budget, using estimated salary and cost increases, indicates that expenditures may outpace revenues from our existing zones of benefit by FY 2003-04. The District may need to conduct mail-out procedures for property owner approval for an assessment increase. Additional areas could be included in this ballot procedure, possibly at reduced cost.

Summary and Conclusion

As mentioned, mosquito control is most effective when it is conducted on an area-wide and year-round basis, and most economical when it has a broad parcel tax base. However, public health and biological rationale notwithstanding, the final criteria for annexation decisions is really whether or not there is enough property-owner support for new fees.

Call volume is probably not truly representative of property owner support, as it includes renters and others less directly benefitted by services. Therefore, to ascertain the desire of the property owners for mosquito control in the proposed zones, a public opinion survey of property-owners, using a statistical sample and conducted by phone, is one means of determining whether there is enough support in a particular area for annexation. An advisory vote, as described above, could be employed in lieu of a phone survey. In either case, a mail-out ballot

0016

would follow, if the survey or advisory questionnaire showed convincingly that a ballot vote had a high probability of success.

Because a phone survey, advisory questionnaire or mail-out ballot were beyond the scope of this study, we instead compared calls (referred to as "Service Requests" in **Table 3**) from residents, which we have been tracking since 1995, from areas within and without the two current active zones of benefit. What we see is this: comparatively speaking, there is little difference, as a proportion of calls to the number of parcels, between the mid-county and City of Santa Cruz areas evaluated in this study and active Zones of Benefit 2 and 4.

Another alternative for assessing public support for annexation would be to wait until the District must go to the property owners in Zones 2 and 4 with a ballot measure to increase fees an amount necessary to bring revenue up to a level that would meet the anticipated increased costs to operate the program, probably in 2003 or 2004. At that time, we believe it would be more practical and cost effective to include a proposal to annex and levy fees in areas not currently served by the District.

Based on our findings, we believe there is insufficient data to support a conclusion at this time that the public would support an annexation vote in the two areas studied for this report.

Attachments