

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

In the Matter of the Petition)
of the City of Fairfield for)
Review of Water Quality Staff)
Determinations, Grants Section)

Order No. WQG 73-27

BY BOARD MEMBER DODSON:

By letter received August 2, 1973, the City of Fairfield (Petitioner) requested the State Water Resources Control Board (State Board) to review a determination by the staff of the Division of Water Quality of the State Board (Staff). The determination which Petitioner attacks involves the conclusion of Staff that the eligible capacity of the proposed treatment works of Petitioner for grant purposes is limited by a population estimate of 62,300 persons in 1984.

A hearing was held on the petition on September 24, 1973.

REGULATORY PROVISIONS

The present controversy revolves around the correct application of Section 2144, Subchapter 7, Chapter 3, Title 23, California Administrative Code, as amended on February 15, 1973, which relates to capacity limits of treatment works which will be eligible for grant assistance.¹

¹Grant regulations of the State Board were completely revised on August 16, 1973, and present capacity limits are set forth in Section 2133, Subchapter 7, Chapter 3, Title 23, California Administrative Code. Section 2133 is not to be retroactively applied to Petitioner's project, and Petitioner correctly contends that 2144, as amended on February 15, 1973, is the controlling regulation. See State Board Order No. WQ 73-17.

Insofar as pertinent, Section 2144 provides as follows:

"2144. Project Capacity. Wastewater treatment projects shall be designed to accommodate normal anticipated growth based upon sound planning, sound demographic projections, environmental and socio-economic factors, and sound engineering and economic principles consistent with applicable land use and population policies. Except as provided in the last paragraph of this section, the eligible project cost shall generally be limited as follows (where "x" means that capacity needed to serve existing development within the proposed service area):

"(a) Treatment plants - the cost of that plant or addition which would not increase "x" beyond the capacity indicated in the following table:

Existing "x"	Total Eligible Capacity Limit
1 mgd or less	3.5 "x"
2 mgd	3.0 "x"
3 mgd	2.5 "x"
4 mgd	2.0 "x"
5 mgd or greater	1.5 "x"

or beyond the capacity projected 10 years from start of construction, whichever is more restrictive, except that appropriately designed headwork facilities to accommodate reasonable forecast expansion shall be considered an eligible project cost component. The 10-year population forecast shall be based on most current Department of Finance and Department of Water Resources population data for each planning basin. Disaggregation to service areas within planning basins will be provided by state board staff and approved by the areawide planning organization designated by the State Office of Planning and Research. Population forecasts for planning basins within critical air areas shall be based on Series E fertility and 0 net in-migration. All other forecasts for the remaining planning basins shall be based on Series D fertility and 150,000 net in-migration.

"Critical air areas are designated by the State Air Resources Board on maps filed with the division.

"Costs of facility capacity in excess of the capacity limitations above although ineligible would be calculated on a pro rata cost basis." (Emphasis supplied).

STAFF DETERMINATION

At the time of staff determinations, it was contemplated that construction of Petitioner's project would commence in 1974. Accordingly, in order to implement Section 2144, it was necessary for Staff to compute the estimated 1984 population within Petitioner's service area. A resume of Staff procedures in making their computations would be beneficial.

Initially, Staff and the Association of Bay Area Governments (ABAG) determined the population within the service area of Petitioner as of April 1, 1970. The calculation was made on the basis of the actual 1970 census information available from the Department of Finance. The process necessarily involved a disaggregation to the actual service area of the Petitioner. In order to make the appropriate disaggregation, Staff had resort to actual 1970 census tracts and enumerations covering the service area of Petitioner. Based upon actual census counts, a determination was made that the April 1970 population within the service area of Petitioner was 37,300 persons.²

Staff then determined the appropriate population growth rate for the actual service area of the Petitioner during the decade of 1970-1980. The appropriate growth rate determined was 2.8 percent per annum.³ Application of this growth rate to the

²The actual April 1970 population within the entire service area of Petitioner was 50,281 persons. However, Travis AFB, a federal facility, is located within the service area. Accordingly, the gross population figure of 50,281 persons was reduced by the Travis AFB population of 12,973 persons. Elimination of the Travis AFB population is appropriate and Petitioner does not contend otherwise.

³The growth rate selected was based upon ABAG's growth rate for the service area of Petitioner, which in turn is based in part on Department of Finance Data. Actually, selection of the appropriate growth rate in this particular case required a process of disaggregation. The service area of Petitioner is located in Solano County.
(continued)

April 1970 population of 37,300 results in a computed population estimate of 41,479 persons in the service area of Petitioner in April of 1974. Extension of this approach for the entire decade results in a computed population estimate of 47,749 persons as of April of 1980.

Staff was then required to select the appropriate population growth rate for the actual service area of Petitioner during the decade of 1980-1990, since Department of Finance data indicate a higher growth rate in this decade than in the prior decade. The appropriate growth rate for the decade of 1980-1990 was determined by Staff to be 7.34 percent per annum.⁴ Application of this growth rate to an estimated April 1980 population of 47,749 persons results in a computed population estimate of 61,777 persons in April of 1984.

Petitioner has previously been advised by Staff that the population projection for 1984 within the service area of the Petitioner is 62,300 persons. Obviously this result differs from the correct figure of 61,777 persons set forth above. Our review of

³(continued) The Series D fertility and 150,000 net in-migration data utilized by the Department of Finance (Staff Exhibit No. 1) indicate a basin growth rate of 1.8 percent for the decade of 1970-1980 in Solano County. In effect, by assigning a growth rate of 2.8 percent to the service area of Petitioner, ABAG determined that the growth rate of the service area of Petitioner would exceed the overall basin growth rate.

⁴This adjusted growth rate is again based on Department of Finance projected growth rates and a disaggregation process by ABAG to the actual service area of Petitioner. The Series D fertility and 150,000 net in-migration data utilized by the Department of Finance (Staff Exhibit No. 1) indicate a basin growth rate of 3.59 percent per annum. The assignment of a growth rate of 7.34 percent to the service area of Petitioner includes a determination that population growth in this service will exceed the growth rate expected in the entire basin.

the matter indicates that the discrepancy results from clerical error on the part of Staff. The error involved obviously favors the Petitioner.

It is the position of Staff that the procedure just outlined is the correct procedure to be followed under Section 2144. In effect, Staff contends that the only appropriate starting point for the necessary population projections is the 1970 census information for the service area involved, followed by determination and application of an appropriate growth rate for this service area.

CONTENTIONS OF PETITIONER

Petitioner generally contends that Section 2144 does not require the approach used by Staff, that the approach of Staff is contrary to the intention of the grant regulations adopted by the State Board, and that the action of Staff in this matter is inconsistent with the fundamental purpose of the grant program.

With respect to its particular project, Petitioner contends that the present population within its service area is already 46,700 persons. (Petitioner's Exhibit Nos. 8, 9, 10, 11 and 12 attached hereto). Petitioner points out the vast difference between its estimate of present population of 46,700 persons and the Staff projection of a population of 41,479 persons in April of 1974. Assuming the correctness of estimate of a present population of 46,700, Petitioner contends that, when its present population "is projected using the D-150 growth rate, the 62,300 population figure (estimated for 1984 by the Division) is reached in 1978, only two

years after the 1976 scheduled date of completion of the facilities."⁵ Petitioner further alleges that the population within its service area will actually increase to approximately 81,500 persons by 1984. (Petitioner's Exhibit No. 14 attached hereto).

Based on the foregoing analysis, Petitioner argues that the Staff approach unfairly limits the fundable capacity of Petitioner's treatment plant and will result in a treatment plant of insufficient capacity to treat the needs to be served by the plant. Petitioner argues that this result is not consistent with the grant program goal of establishment of treatment works reasonably sized to meet the needs of the service area involved.

Petitioner requests the following action by the State Board:

1. The State Board should clarify the intent of Section 2144 to permit Staff to utilize current estimates of population in service areas in lieu of actual population as determined by the 1970 census.
2. Staff should be directed to accept the current population estimate supplied by the Petitioner indicating a present population of 46,700 persons in the service area.
3. In the event that the State Board determines that the Petitioner's population calculations are not sufficiently substantiated, the State Board should ask for and accept an actual census count from an acceptable agency.

⁵There is some discrepancy between the various population figures presented by the Petitioner in that certain figures cited in its petition do not coincide with figures presented at the time of hearing. For example, in its petition, Petitioner cited an alleged present population of 46,942 persons. Petitioner's Exhibit No. 12 which was introduced at the hearing indicates a present population of 46,700 persons. The figures cited above reflect the position of Petitioner at the time of hearing.

4. When the present population in Petitioner's service area is definitively established, Staff should be directed to use current population as a base from which to project 1984 population within Petitioner's service area.

CLARIFICATION OF PETITIONER'S APPROACH

For purposes of clarity we have attached certain of the hearing exhibits introduced by Petitioner. The exhibits are, for the most part, self-explanatory of the approach utilized by Petitioner in calculating its present population.

Some comment on two of the exhibits (Petitioner's Exhibits Nos. 8 and 9) is necessary to understand fully Petitioner's approach. Petitioner's Exhibit No. 8 commences with a population figure for the City of Fairfield of 50,000 persons. This figure comes from a so-called "certified" population estimate supplied by the Department of Finance. As a part of its functions, the Department of Finance "estimated" current populations in various parts of the State, including the City of Fairfield. (See portion of Petitioner's Exhibit No. 7 attached hereto).⁶ The remainder of the calculations utilized by the Petitioner to determine present population in the City of Fairfield needs no explanation.

⁶It should be emphasized that the Department of Finance "certified estimates" are no more than estimates. In this particular case, other evidence introduced at the hearing indicated that the "certified estimates" relied upon by Petitioner for the City of Fairfield and Suisun City were inaccurate. In August of 1973, the Department of Finance itself issued adjusted and revised population estimates. The "estimated" population for the City of Fairfield was reduced from 50,000 persons as of November 1972 to 49,400 persons as of April 1973. Likewise, the "estimated" population of Suisun City was reduced from 3200 persons as of December 1972 to 2,850 persons as of April 1973. (Portion of Staff Exhibit No. 2 attached hereto).

The same type of starting point was used to develop the current population estimate for Suisun City as reflected in Petitioner's Exhibit No. 9.

FINDINGS AND CONCLUSIONS

It appears to us that resolution of the issues presented to us in this matter revolves around enunciation of the correct construction of that portion of Section 2144 which recites:

"The 10-year population forecast shall be based on most current Department of Finance and Department of Water Resources population data for each planning basin."

Three interpretations of this language are possible, and each of the possible interpretations will occasion a different result when applied to the facts of this case. The possible interpretations may be outlined as follows:

1. The language is susceptible to the interpretation that the population projection to be made under Section 2144 shall utilize the actual population figures developed as a part of the 1970 census, and the growth rates determined by the Department of Finance, each of which must be disaggregated to a particular service area. This is the interpretation which Staff has uniformly employed in actual administration of the grant program on the assumption that the words "population data" refer to the actual 1970 census figures and projections of the Department of Finance, unless and until later actual population figures and projections are developed by the Department of Finance. Staff emphasizes that the only accurate figures presently available are those which were developed by the 1970 census.

2. The language is equally susceptible to a construction which would allow use of population "estimates" developed by the Department of Finance. The words "most current ... population data" are certainly broad enough to permit utilization of the population "estimates" involved. In other words, population projections would be based on adjusted 1970 census figures, unless and until more current estimates of population were developed by the Department of Finance, at which time current "estimates" would form the basis for subsequent projections.

3. Petitioner suggests a third interpretation. As Petitioner would read the language involved, it speaks only to a "population forecast". Petitioner contends that the language does not even apply to determination of the base population to which growth factors should be applied. In effect, Petitioner contends that the growth factors determined by the Department of Finance (disaggregated as appropriate) are controlling, but that the base figure to which growth rates are applied should be determined on a case by case basis on the most current data available. In Petitioner's particular case, the Petitioner contends that the population "estimate" which it has developed is an accurate estimate and should be utilized. Petitioner's estimate is based upon partial use of 1970 census figures, partial use of the certain Department of Finance "estimates", and a number of adjusting calculations based upon completed housing units, housing units expected to be completed, estimated number of persons per unit, and adjusted college enrollment figures. In the alternative, Petitioner suggests that an actual census be conducted to determine the actual present population of the service

area and that this population figure be used as a starting point for future projections.

In connection with the contention of Petitioner that its current "estimate" of population is accurate and should be used as a base from which to project future population, there are two comments which we should make. First, Section 2144 refers to "Department of Finance and Department of Water Resources population data." While in a very broad sense Petitioner's estimates can be said to be "based" on Department of Finance and Department of Water Resources data, it would take a very strained construction of Section 2144 to determine that the ultimate estimate arrived at by Petitioner in any way relates to Department of Finance and Department of Water Resources data. Second, we are not impressed with the probable accuracy of Petitioner's estimate. There are too many assumptions of dubious and unsupported value involved. For example, the fact that a building permit has been issued does not necessarily mean that a building is completed, nor does it define the time of completion. The fact that a building is completed does not mean that it is occupied, nor that it will be continuously occupied. We are also highly skeptical of the information related to Solano Community College.

These comments bring into focus a fundamental error in Petitioner's approach. The Department of Finance and Department of Water Resources population data referred to in Section 2144, when that section was adopted, was intended to include the data encompassed in Staff Exhibit No. 1, i.e., the 1970 census figures together with applicable growth rates. This population data does not pretend to predict the actual population of any area at any specific

point of time, other than the points of time specifically referred to in the data. For example, in that portion of Solano County with which we are involved, the data shows a 1970 census population of 138,400 persons, and estimates a 1980 population of 162,000 persons. These figures indicate a growth rate of 17.8 percent during the decade of 1970-1980. If we assume that the decennial growth rate will in fact take place on a uniform annual basis, the decennial growth rate of 17.8 percent equates to approximately 1.8 percent per annum during the decade of 1970-1980. It should be recognized, however, that the Department of Finance and Department of Water Resources data do not in fact predict a uniform annual growth during any particular decade. In reality, the data involved does not indicate that Solano County will grow at 1.8 percent per annum; it only indicates that, during the decade of 1970-1980, Solano County will grow at an overall rate of 17.8 percent.⁷

Of even greater importance to us is the apparent misconception of Petitioner that the primary intent of Section 2144 is to definitively establish the actual population within a service area at the end of the 10-year period which is being considered. This is not the primary intent of Section 2144. As a matter of fact, as

⁷Where the final date for population projection falls within a decennial period, there appears to be no alternative except to assume a uniform growth rate for that decade for calculation purposes. In Petitioner's case, the critical date for population projection falls in 1984. For calculation purposes, there appears to be no alternative other than to take the 1980-1990 growth rate, assume that the decennial growth rate will be uniform, and determine and apply an average annual growth rate for the period from 1980-1984. At the same time, it must be recognized that assumption of uniform annual growth rate is not necessarily reflective of the actual approach of the population data being utilized.

we would be the first to admit, it is impossible to predict accurately the actual population which will in fact be located in a particular area at a point of time ten years from date regardless of the method of projection used. It would be utterly naive to assume that any of the methods of projections utilized or suggested, whether by Staff or by the Petitioner, will accurately indicate the actual population which will be present in Petitioner's service area in the year of 1984.

Simply stated, the real purpose of Section 2144 was to provide a uniform method of allocation of severely limited grant funds among competing municipalities, all of whom ordinarily have projects which are necessary for the protection and enhancement of water quality. Unfortunately, available grant funds are simply not sufficient to provide for funding of all necessary and worthwhile projects at this time. Given the limitation of funds which exists, we see no other alternative then to develop a uniform scale for distribution of available funds so that the maximum number of municipalities may share in the limited funds available on some equitable and reasonable basis. This is the primary function of Section 2144.

We recognize, as we have already indicated, that the Staff approach to population projection will not necessarily predict the actual number of persons in a service area at the end of the 10-year period involved. Neither will Petitioner's approach, whether based on its current "estimates" or on an actual interim census count. The Staff approach has one intrinsic advantage. Its projection does utilize the most reliable statewide information that is presently available, i.e., the actual 1970 census figures and the projected

growth rates developed by the Department of Finance. While this method of population projection may not in fact result in an accurate projection in a particular instance, it is based upon the best information and projections of population which we presently have, and it does provide a uniform statewide basis for allocation of grant funds among grant applicants.

We will add two other comments. As time goes on, it is conceivable that the growth rate of a particular area may so far outstrip the projected increase of population that the existing population already exceeds the population projected for a later date. Under such circumstances, under Section 2144, we would fund at least the capacity of a facility needed to serve existing population, together with headworks necessary to accommodate reasonably forecast expansion. As a somewhat ancillary comment, Section 2144 does not limit the size of the facility which is to be built. It limits the capacity which will be funded by grant, so that all municipalities may equitably share in grant funds. If a municipality believes that it needs a larger capacity to provide for its future needs, it may, and perhaps should, provide for the larger facility from its own funds. Ultimate capacity of the facility remains a question for each municipality to determine.

IT IS HEREBY ORDERED as follows:

1. Staff procedures relative to population projections under Section 2144 are approved, and the Staff determination fixing a total of 62,300 persons within the service area of Petitioner in 1984 is affirmed.

CITY OF FAIRFIELD*
PRESENT POPULATION

<u>DATE</u>	<u>SOURCE</u>	<u>POPULATION</u>
November 1972	Department of Finance (certified) (Less Travis AFB)**	50,000 13,000
		<hr/>
		37,000
November 1972 to March 1973	Completed Housing Units (336 units, 3.39 persons/unit)	1,140
		<hr/>
March 1973		38,140

* Excluding Cordelia Area
** Based on ABAG Data

CITY OF FAIRFIELD
EXHIBIT NO. 8
SEPTEMBER 24, 1973

SUISUN CITY
PRESENT POPULATION

<u>DATE</u>	<u>SOURCE</u>	<u>POPULATION</u>
December 1972	Department of Finance (certified)	3,200
December 1972 to December 1973	Housing Units Expected to be Completed for Which Building Permits Have Been Issued (500 units, 3.39 persons/unit)	1,700
December 1973		4,900

CORDELIA-GREEN VALLEY
PRESENT POPULATION

<u>DATE</u>	<u>SOURCE</u>	<u>POPULATION</u>
April 1970	Census	1,655
April 1970 to May 1973	Completed Housing Units (64 units, 3.39 persons/unit)	217
		<hr/>
May 1973		1,872

CITY OF FAIRFIELD
EXHIBIT NO. 10
SEPTEMBER 24, 1973

SOLANO COMMUNITY COLLEGE
EQUIVALENT PRESENT POPULATION

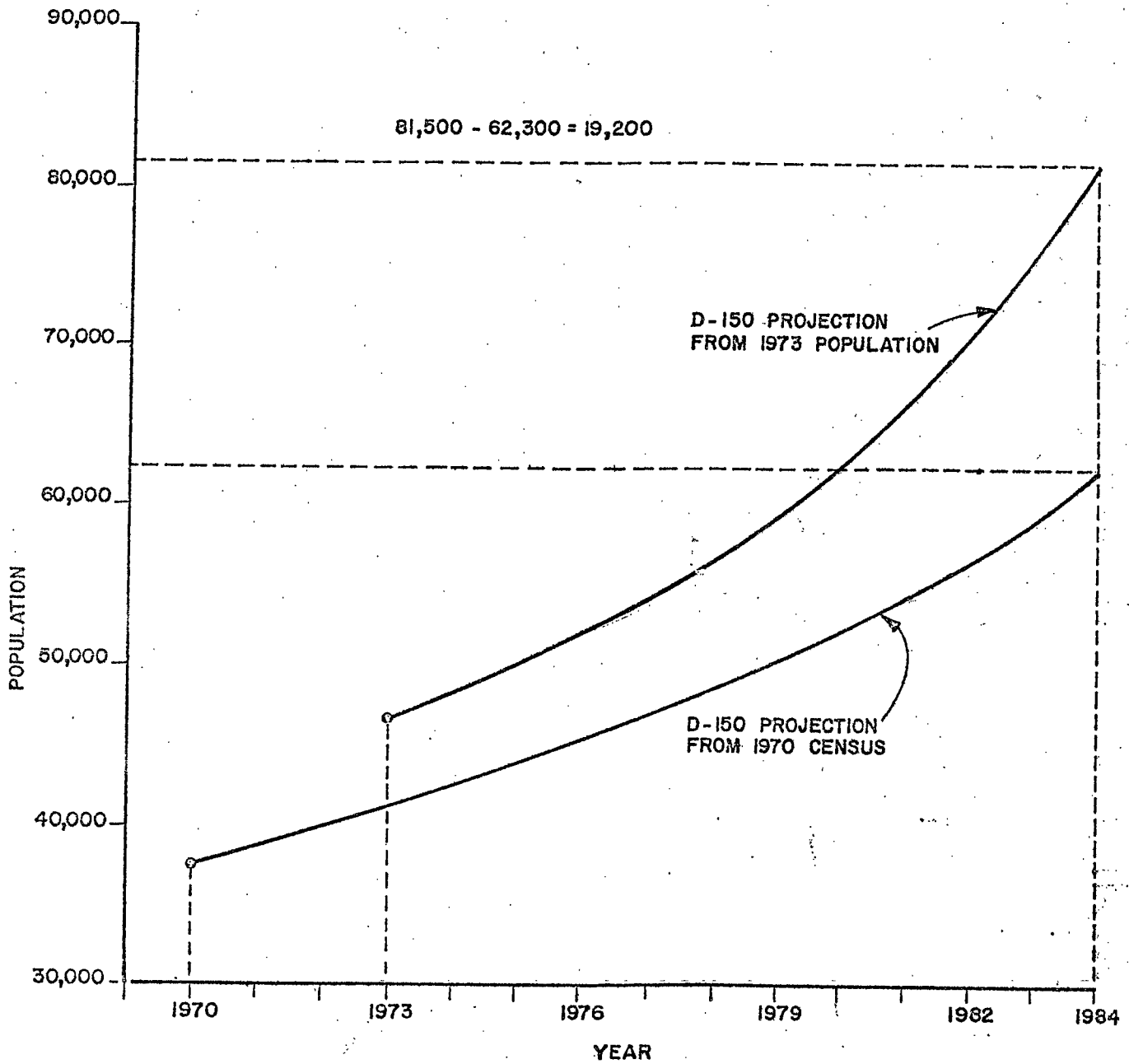
<u>DATE</u>	<u>SOURCE</u>	<u>POPULATION EQUIVALENT</u>
March 1973	Full-Time Enrollment = 7,004	
	<ul style="list-style-type: none"> . 90% of students from outside area . Average of 6 hours on campus ($0.90 \times 6/24 \times 7,004$) 	1,576
	Evening Enrollment = 2,383	
	<ul style="list-style-type: none"> . 90% of students from outside area . Average of 2.4 hours on campus ($0.90 \times 2.4/24 \times 2,383$) 	214
March 1973		<hr/> 1,790

TOTAL FAIRFIELD-SUISUN SERVICE AREA
PRESENT POPULATION

FAIRFIELD	38,140
SUISUN	4,900
CORDELIA-GREEN VALLEY	1,870
SOLANO COMMUNITY COLLEGE	1,790
	<hr/>
TOTAL AREA	46,700

CITY OF FAIRFIELD
EXHIBIT NO. 12
SEPTEMBER 24, 1973

COMPARISON OF POPULATION
PROJECTION OF FAIRFIELD-
SUISUN SERVICE AREA



Memorandum

To : Office of the Controller
Attn: Samuel J. Cord
Room 500, 1227 "O" Street
Sacramento

Date , December 29, 1972

File No.:

From : Department of Finance --Executive Offices

Subject: Population estimate

I hereby certify that according to an estimate
by the Department of Finance, the population of

the City of Fairfield

County of Solano

was 50,000 on November 1, 1972

This certificate is filed in accordance with
the provisions of Section 2107.2, Streets and
Highways Code.

VERNE ORR
Director of Finance

By: Walter P. Holler
Supervising Demographic Analyst

4/1/73

Change (%)

4/1/72

	4/1/73	Change (%)	4/1/72
SISKIYOU	35,100	+ 2.00	34,500
Dorris	870	+ 3.10	840
Dunsmuir	2,340	- 2.38	2,390
Etna	690	no change	690
Fort Jones	520	- 0.77	520
Montague	900	+ 0.23	890
Mount Shasta	2,350	+ 6.19	2,210
Tulelake	860	+ 0.59	850
Weed	3,000	+ 0.24	3,040
Yreka	5,725	+ 1.16	5,650
SOLANO	180,900	+ 0.69	179,500
Benicia	9,100	+ 8.02	8,425
Dixon	4,740	+ 0.28	4,730
Fairfield	49,400	+ 2.01	48,450
Rio Vista	3,260	- 0.09	3,260
Suisun City	2,850	- 2.50	2,920
Vacaville	25,700	+ 7.20	23,900
Vallejo	71,800	- 2.41	73,600
SONOMA	230,700	+ 4.72	221,000
Cloverdale	3,430	+ 1.67	3,370
Cotati	2,500	+ 52.47	1,640
Healdsburg	5,775	+ 1.13	5,700
Petaluma	30,650	+ 3.02	29,750
Rohnert Park	9,725	+ 31.03	7,425
Santa Rosa	60,700	+ 6.78	56,700
Sebastopol	4,340	+ 4.18	4,160
Sonoma	4,790	+ 5.16	4,540
STANISLAUS	207,400	+ 1.76	203,600
Ceres	7,800	+ 3.00	7,575
Modesto	74,500	+ 6.51	69,900
Newman	2,590	+ 0.08	2,590
Oakdale	6,975	+ 2.33	6,800
Patterson	3,870	+ 1.29	3,820
Riverbank	4,200	+ 5.38	3,990
Turlock	15,900	+ 4.20	15,250
Waterford	2,320	- 0.95	2,340

* The SB 90 Annual Change is calculated on the basis of the unrounded total population less the institutional population (that population requiring care and custody.)

2. The petition of Petitioner to utilize current population "estimates" or interim census counts as a basis for population projections under Section 2144 is denied.

Dated: DEC 6 1973

We Concur:

Roy E. Dodson
Roy E. Dodson, Member

W. W. Adams
W. W. Adams, Chairman

Ronald B. Robie
Ronald B. Robie, Vice Chairman

Mrs. Carl H. Auer
Mrs. Carl H. (Jean) Auer, Member

W. Don Maughan
W. Don Maughan, Member