

ALTERNATIVES FOR LAND CONSOLIDATION CHOICES FOR THE FUTURE

— A WORKING PAPER —
AUGUST, 1977



PREPARED UNDER THE DIRECTION
OF THE STATE LANDS COMMISSION

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SUMMARY

Within the past few years, there has developed a sense of awareness that the State of California must become involved in the planning for and management of its land resources. These efforts have been exemplified by the legislation creating the Coastal Commission and attempts to create State land use planning.

The State of California has itself long been hampered in the management of the State's own land itself. This has resulted from a number of factors created both by actions of the Federal government and the State. Specific problems are enumerated subsequently.

- (1) The original school land grant provided the State with Sections 16 and 36 of each surveyed township except where these sections were already encumbered. This provided the State with a checkerboard pattern of ownership across the State.
- (2) The Federal government has failed to complete the grants to the State, as title to approximately 147,000 acres has not yet been transferred to State ownership.
- (3) The State had sold most of its prime land prior to 1970, leaving a further broken land ownership pattern. This was the typical method of supporting the schools.
- (4) Actions by agencies of the Federal government have tended to encumber further large portions of the land owned by the State.

Evidence indicates management of the present State ownership is impractical. Current management is generally an oversight function whereby Division actions are seldom internal initiatives and are usually response to an outside inquiry. This is understandable since scattered landholdings are unresponsive to management except by the largest landholder in an area, be it public or private.

In order to facilitate a position whereby the State Lands Commission can proceed with orderly management of State land, the Division initiated a program to evaluate the resource potential of the State's land and to present alternatives which reflect a variety of management philosophies. The methodology utilized began with the development of inventories

of BLM land planning units. This was then followed with the development of general resource inventories for the whole State and resource valuations of other Federal lands. Subsequently, alternative management proposals were constructed which reflected the resource valuations.

The assessments of the resource values for Federal land produced interesting results. Relatively, the lands administered by the Bureau of Land Management (BLM) are the dregs compared to other Federal holdings excepting their mineral and energy values. Primary surface values have been allocated to other departments; i.e., forests administered by the Forest Service or the scenic and natural values administered by the National Park Service. Most lands having any agricultural potential have long since passed to private ownership.

The resource base of California can be characterized by six principal resources. These are agricultural soils, geothermal resources, petroleum, timber, recreational resources, and soft rock mineral deposits. Of less importance are hard rock mineral deposits. However, these remain a serious consideration since California has had a long rich history of hard rock mining.

The locations of these resources is of great importance to any management plan which considers the acquisition of lands administered by Federal agencies. Thus, a reasonably accurate inventory has been made to determine the potential value of these resources. Aside from the obvious surface resources (i.e., forests, recreation areas, water resources, and grazing lands), the assessment of other resources were more difficult. However, locations of prime resource areas were delineated and selections were drawn from this analysis.

Four alternatives were considered as viable for the continued administration of State land. Each reflects a different philosophy and each is presented in subsequent paragraphs.

- (1) The State Lands Commission retains the option of maintaining the existing ownership patterns. This option could be altered by acquiring the 147,000 acres as a single large block of land. This alternative conceivably leaves the State in the best mineral position. However, the same problems that exist now would continue.
- (2) The sale of all remaining school lands remains another option. Essentially, no benefits are derived from this proposal and greater problems are created.

- (3) An alternative which considers consolidation of State land into large blocks is for the State to enter into an exchange program with the BLM. This alternative solves the problems previously discussed and consolidates the State's 1.6 million acres into relatively large blocks. This proposal considers only resource values and not the location of these lands. However, attempts have been made to remove State ownership from most of the principal Federal planning areas; i.e., the California Desert Management Area and the Kings Range Wilderness Area.
- (4) The final proposal considered would consolidate the State's ownership outside of the heart of the Desert Planning Area. The proposal recognizes the State's need to manage its own destiny and thus incorporates justification for a Federal land grant along with the exchange proposal. The proposal, if adopted, would increase the State's ownership to between three and five million acres.

FINDINGS AND RECOMMENDATIONS

In the report, a wide range of options are set forth to provide the State with land resources which are manageable and contain sufficient resources to support State programs. The report contains discussion and analysis of the problems that exist with the present situation, the resource evaluations, and some possible solutions to the situation.

From the extensive options developed, the State Lands Division has formulated recommendations to the State Lands Commission.

THE DIVISION RECOMMENDS THAT THE COMMISSION GIVE CONSIDERATION TO:

- (1) Finding that the Federal government failed to grant the State of California an adequate land or resource base when the original grants were made as compared with those received by other comparable states entering the Union at near the same time.
- (2) Consolidating the State's ownership by sponsoring Federal legislation which would exchange interest and grant further the State lands away from the heart of the California Desert Management Area such that the acreage totals equal approximately five million acres.

LAND CONSOLIDATION ALTERNATIVES
WORKING DRAFT

INTRODUCTION

This study, conducted by the Division of State Lands at the direction of the State Lands Commission, analyzes:

- (1) The nature and extent of State interests remaining in the "school lands" which were ceded to the State by the Federal government;
- (2) The amount of "school lands" encumbered by Federal interests (military reservations, etc.) and lands still due the State (in lieu and unsurveyed) from the Federal government; and
- (3) The most effective method to obtain manageable State land parcels, whether by exchange and consolidation, request for an additional land grant, or maintenance of existing ownership.

The study attempts: (1) to evaluate the resource potential of both the land administered by the Federal government, particularly those lands managed by the BLM, and the State; and (2) to propose alternatives which will satisfy the Commission's directive: to determine the most effective methods available to manage the resources on State lands. The study has emphasized State school lands and mineral reservations and BLM land; however, other Federal land (i.e., Forest Service land) is considered.

Included within this study are determinations of: (1) existing ownership patterns; (2) resource values; and (3) the subsequent development of consolidation alternatives, considering both the aforementioned State land and land presently under the jurisdiction of the BLM.

SCOPE OF THE STUDY

This report considers only the vacant State school land acreage (607,000 acres), all 100 percent mineral reservations (529,000 acres) and 1/16th reservation of minerals (187,725 acres) presently administered by the State Lands Commission; 15.5 million acres of public domain lands within California administered by the BLM; and lands administered by other Federal agencies.

While the intent of this report is not to define the resource potential of all the State land, general resource inventories have been made of: (1) vacant State school lands and mineral reservations, and (2) Forest Service land. More specific evaluations have been made of the BLM planning units.

The following management objectives and resource attributes, applied to the above inventories, served as the bases for the conduct and recommendations of this study:

(1) Management Objectives

- (a) Improve ownership patterns
- (b) Centralize management operations

(2) Resource Attributes

- (a) Multiple land uses
- (b) Geothermal potential
- (c) Timber potential
- (d) Hard and soft rock mineral potential
- (e) Range potential
- (f) Watershed potential
- (g) Recreation potential
- (h) Wildlife potential
- (i) Agriculture

Assumptions and Constraints Applicable to the Proposals

Certain assumptions and constraints, which must be applied to any consideration of a land consolidation/exchange program between the State and Federal government, are summarized herein:

- (1) No meaningful consolidation and/or exchange can be accomplished by either party without enabling legislation at both the State and Federal levels. The conventional constraints (i.e., no transfer of mineral rights, Taylor Grazing Act, pretransfer survey requirements, unpatented mining claims, etc.) set out in both State and Federal statutes have long frustrated State efforts to remove existing encumbrances and acquire additional land to which it feels it is entitled.

It is the Division's intent that any consolidation must be achieved without regard to the traditional land exchange selection and indemnity selection procedures. Toward this end, the provisions of the legislation should authorize: (a) the transfer

of State designated school lands and mineral reservations to the Federal government; (b) conveyance of designated Federal lands and mineral rights to the State; (c) an exemption from constraints imposed by existing State and Federal regulations and laws; and (d) an exemption from the provisions of the National Environmental Policy Act (NEPA).

- (2) The State cannot acquire an accurate inventory of minerals and other resources -- both as to type and value -- available on the widely scattered parcels of presently owned school land without costly expenditures for which there is no guarantee of a comparable return.

HISTORICAL PERSPECTIVE

The Land Grant States

Subsequent to the admission of Ohio in 1803, and prior to the admission of California in 1850, all states admitted to the Union received one section (640 acres) of each township (36 sections or 23,040 acres) for the purpose of establishing and supporting schools within each state. In the case of California and each public land state thereafter admitted, until the admission of Utah in 1896, 2 sections (numbers 16 and 36) of every township were given for the benefit of the schools. Oklahoma, admitted to the Union in 1907 as the 46th state, was granted 2 sections (16 and 36) in each township in the unreserved public domain for the benefit of schools. Two additional sections of all Indian lands, when opened to settlement, were granted to the state with the proceeds from the sale of these lands divided among the University of Oklahoma and several other institutions. In Utah (1896), New Mexico (1912), and Arizona (1912), 4 sections, numbers 2, 16, 32, and 36, of each township were granted for this purpose.

Table 1 shows, by states, the common school land grants made to the land grant states and other states entering after 1803.

California Grants

The Treaty of Guadalupe Hidalgo, which was signed on February 2, 1848 with the Republic of Mexico, ceded 338,000,000 acres of land to the United States of America. Included in that total were approximately 100,000,000 acres which comprised the State of California as it was admitted to the Union in 1850. Customarily, the new state was awarded a series of Federal

Table 1

SUMMARY HISTORY OF LAND GRANTS TO STATES FOR COMMON SCHOOLS
UNDER PROVISIONS OF STATE ENABLING ACTS

State	Date of Admission	Grant of One Section	Grant of Two Sections	Grant of Four Sections
Ohio	1803	Section 16		
Louisiana	1812	Section 16		
Indiana	1816	Section 16		
Mississippi	1817	Section 16		
Illinois	1818	Section 16		
Alabama	1819	Section 16		
Maine	1820	Not a public land state		
Missouri	1821	Section 16		
Arkansas	1836	Section 16		
Michigan	1837	Section 16		
Florida	1845	Section 16		
Texas	1845	Not a public land state		
Iowa	1846	Section 16		
Wisconsin	1848	Section 16		
California	1850		Sects. 16 & 36	
Minnesota	1858		Sects. 16 & 36	
Oregon	1859		Sects. 16 & 36	
Kansas	1861		Sects. 16 & 36	
West Virginia	1863	Not a public land state		
Nevada	1864		Sects. 16 & 36*	
Nebraska	1867		Sects. 16 & 36	
Colorado	1876		Sects. 16 & 36	
North Dakota	1889		Sects. 16 & 36	
South Dakota	1889		Sects. 16 & 36	
Montana	1889		Sects. 16 & 36	
Washington	1889		Sects. 16 & 36	
Idaho	1890		Sects. 16 & 36	
Wyoming	1890		Sects. 16 & 36	
Utah	1896			Sects. 2,16,32,36
Oklahoma	1907		Sects. 16 & 36**	
New Mexico	1912			Sects. 2,16,32,36
Arizona	1912			Sects. 2,16,32,36
Alaska	1959	28% of area		
Hawaii	1959	Not a public land state		

*Quantity of land later substituted for in-place grants.

**Oklahoma was granted two additional sections of Indian reservations when opened to settlement to be applied to University, normal schools, an A & M school, and to charitable and penal institutions.

land grants out of public domain for specifically designated purposes.

The largest single grant to California, the School Land Grant, was made in 1853 pursuant to "an act to provide for the survey of the public lands in California, the granting of preemption rights therein, and for other purposes." This act states in part:

"Sec. 6. And be it further enacted, that all the public lands in the State of California, whether surveyed or unsurveyed, with the exception of sections sixteen and thirty-six, which shall be and hereby are granted to the state for the purposes of public schools in each township, and with the exception of lands appropriated under the authority of this act, or reserved by competent authority, and excepting also the lands claimed under any foreign grant or title and the mineral lands...." (Thirty-Second Congress, Sess. II, Ch. 145, 1853) [Emphasis added]

In cases where such sections were mineral in character, incompletely surveyed as to acreage total, or already encumbered or granted, the State was permitted to select other lands "in lieu" of Sections 16 and 36. However, while title to school sections passed to the State upon completion and approval by BLM of a survey of the township, "in lieu" selections could be transferred any time at the discretion of the BLM. Thus, much remains to be transferred. A recent court decision from a Federal court in Utah may remove this encumbrance. However, this decision has been appealed by the Department of the Interior. Other grants which were made to California before and subsequent to the School Land Grant are indicated in Table 2.

The State, pursuant to the authority granted it by the Federal government, sold and transferred these lands on a regular basis to private parties and agencies with resulting revenues used for the support of the schools. In 1970, a moratorium on such sales was declared by the State Lands Commission. The State Lands Commission then undertook a study to inventory and assess the future uses of the remaining State school lands.

The Present Situation

In early 1976, the inventory of such lands was completed. The results of this study are indicated below:

Table 2

CONGRESSIONAL LAND GRANTS TO THE STATE OF CALIFORNIA

	<u>Acreage</u>
1. Grant for Internal Improvements September 4, 1851 (5 Stat. 453)	500,000
2. Grant of Swamp and Overflow Land September 28, 1850 (9 Stat. 519)	2,193,967
3. School Land Grant March 3, 1853 (10 Stat. 244)	5,534,293
4. Grant for Seminary of Learning March 3, 1853 (10 Stat. 244)	46,080
5. Grant for Public Buildings March 3, 1853 (10 Stat. 244)	6,400
6. Grant for Agriculture and Mechanic Arts July 2, 1862 (12 Stat. 503)	<u>150,000</u>
TOTAL	8,427,282

- (1) The State has retained 607,008 acres of school land in fee simple ownership;
- (2) The State has reserved 100% of the minerals on 529,000 acres and 1/16th of the mineral interests on 187,725 acres of land previously transferred. These lands are in addition to the 607,008 acres of fee simple ownership. Most of these lands are scattered and intermingled with other public and private land throughout the State;
- (3) The State has an entitlement to approximately 100,000 acres which have never been surveyed by the Federal government and therefore never formally transferred to State ownership as provided by the "School Land Act";
- (4) Approximately 17,000 acres of Federal land are due the State "in lieu" of previously encumbered Sections 16 and 36, as provided in the original act. An additional 50,000 acres may also be available once a pending dispute with the BLM is resolved.
- (5) Title to 13,500 acres of "school land" has not been cleared and transferred to the State because of improper and still uncorrected BLM surveys.
- (6) Title to 13,300 acres of "school land" is encumbered due to title or legal problems with the Federal government.

The location of school lands (Figure I) at present are not conducive to coordinated management because they are either too widely dispersed or are subject to de facto inclusion within the management framework of other landholders. Approximately 400,000 acres are in San Bernardino, Riverside, and Imperial Counties, interspersed with the lands covered by the Desert Management Plan of the BLM. The remainder is scattered throughout the northern counties as insignificant acreages. This situation has evolved due to the influence of a number of factors: (1) the method of distribution, and (2) the method of sale.

Current management of State land is limited to a "follow the lead approach" whereby Division action is seldom initiated unless responding to some outside inquiry. This practice is understandable since scattered landholdings are only responsive to planning induced by the largest landholder in the area, either public or private. Thus, the scattered and

intermingled "school lands" are becoming increasingly more susceptible to de facto planning. Such actions preclude effective planning and land use activities.

SPECIFIC AND CONTINUING PROBLEMS WITH THE FEDERAL GOVERNMENT

In addition to the significant problems of de facto planning for State land, many other specific and continuing problems result from Federal use or encumbrance of State land. These problems result from both actual use and legal encumbrance of State land. Actual encumbrances result in Federal control over 43 percent of State acreage. These encumbrances are discussed in the subsequent sections.

Failure of the Federal Government to Complete the Grant

Many of the problems with the Federal government initiate with the failure to complete the grant. Approximately 147,000 acres of "in lieu" land, unsurveyed lands, land where title problems exist, and improperly surveyed land are due the State. These are currently entwined in the bureaucracy of the BLM.

Department of Defense

Military encumbrances represent a significant commitment of State-owned "school land" to uses which benefit the State of California little. At present there are 76,646.40 acres of State land either in military bases or unsafe because of previously military uses. These are contained in the following areas:

Mojave "B"	4,215.40 acres
Fort Irwin	21,120.00 acres
Chocolate Mountains	10,700.00 acres
Sierra Ordnance Depot	16,283.54 acres
Undedudded Lands	<u>24,327.46 acres</u>

TOTAL 76,646.40 acres

This area comprises 11 percent of the total remaining school and lieu lands, and represents a loss of the fair rent value of \$277,999 each year. A tabulation of existing rents and fair rents follows:

	<u>Actual Rent</u>	<u>Fair Rent</u>	<u>Fair Market Value</u>
Mojave "B"	\$ 6,380.00	\$ 20,000	\$ 250,000
Fort Irwin	(in litigation)	80,000	1,000,000
Chocolate Mountains	7,668.00	34,000	425,000
Sierra Ordnance Depot	1,953.90	64,000	800,000
Undedudded Lands	<u>0</u>	<u>96,000</u>	<u>1,200,000</u>
TOTAL	\$16,001.90	\$294,000	\$3,675,000

Efforts by the State to sell, exchange, or rent these lands at a fair market value have ended in disappointment, all frustrated by one or more branches of the Federal government. For example, the military has been eager to exchange, while the BLM has been reluctant to approve exchanges since they would not benefit from the exchange and would lose some additional acreage. The military, however, has been unwilling to purchase or pay a fair rental value for these lands, and has even periodically reduced its rental payment. Further, it has shown no impetus to remove safety hazards from lands it has released.

Lands Within National Forests

There are 14,302.07 acres of State-owned "school lands" within national forests. These lands have been set aside by the Commission for more than 25 years in an attempt to get them into Federal ownership. These lands have a value in excess of \$7,000,000. Chapter 973 of the Statutes of 1973 sets up a very cumbersome and costly means of exchanging these lands with private parties who would harvest the timber and convey the land to the Forest Service. It may be that the procedure may never be completed.

National Monuments

There are 21,147 acres of "school lands" within Death Valley and Joshua Tree National Monuments. The estimated fair market value of these are \$800,000. The Commission has cooperated with the Park Service for 25 years attempting to put the lands in park ownership. The Park Service has been very cooperative, but it has no surplus lands and cannot purchase the State lands. The BLM has been unwilling to provide public domain for exchange, and lands exceded by other governmental agencies have never been made available to the Park Service.

Summary of Encumbrances Resulting from Use by Federal Agencies

Problems of the State Lands Commission and the Federal government and impacted areas are summarized as follows:

State-Owned "School Lands" Encumbered by Federal Action

The Military	76,640 acres
National Forests	16,451 acres
National Monuments	21,147 acres

Additional Land to be Transferred to State Ownership

Survey Problems	100,000 acres
Indemnity Problems	17,000-50,000 acres
Improper Surveys	13,500 acres
Title & Legal Problems	<u>13,300 acres</u>

TOTAL 258,038-294,038 acres

Legal Encumbrances to Previous Exchange Attempts

Past efforts to negotiate exchanges have been difficult because of administrative and legal encumbrances. There are many reasons for this, but two specific laws have seriously hindered any transfer of land to states. These are:

(1) Taylor Grazing Act (43 F.R. 2211)

This act authorizes exchanges of lands between the United States and a state, but stipulates that if the selected lands are within a grazing district, the lands offered by the state must be within the same grazing district and must lie in a "reasonably compact body which is so located as not to interfere with the administration or value of the remaining lands in the district for grazing purposes".

(2) Mining Laws of 1872

This law gives prior rights to persons having valid mining claims. While there does not seem to be a legal prohibition on exchanges which would transfer land on which claims have been filed out of Federal ownership, the BLM has traditionally felt a commitment to insure that these claims were investigated and cleared, if possible, before processing an exchange. It has not been infrequent for a few mining claims of doubtful validity to hold up transactions for many years.

(3) In addition to the two specific use encumbrances discussed above, the Federal government has entered into law the Federal Land Policy and Management Act

of 1976 (P.L. 94-579), commonly referred to as the BLM Organic Act. The act establishes criteria and conditions for managing public lands. Included within the law is a provision to establish the California Desert Conservation Area. The BLM is directed to prepare a management plan to protect the resources of the public land within the California Desert by 1981. Included within this area are approximately 407,000 acres of scattered school land and approximately 442,535 acres of mineral reservations which will be subject to the conditions of this plan once it is implemented.

Recent Decisions Affecting the Transfer of Federal Land to the States

Recently, a Federal court in Utah made a significant decision regarding indemnity selections. Essentially, the court found that the processing of the BLM indemnity selections by the states was ministerial, thus removing many of the administrative hindrances. The decision also removed indemnity selections from the encumbrances of Federal laws; i.e., Taylor Grazing Act. The Department of the Interior has appealed this decision.

RESOURCE ANALYSIS

The Division has identified those resources it believes form the principal resource base for the State. These are agricultural soils, geothermal resources, petroleum, timber, recreational resources, and soft rock mineral deposits. Of less importance are hard rock mineral deposits.

Agriculture is California's primary economic resource. According to the "California Statistical Abstract", 1975, California in 1974 ranked number 1, 2, or 3 in the production of 76 out of 99 agriculture commodities, for a total value of \$8.5 billion. This was 9 percent of the United States' total from 2 percent of the Nation's farmland. Thus farmland remains an important economic commodity for the State.

California's forest products are becoming increasingly important and rank among the top 3 in the country, behind Oregon and Washington. The State contains 42.4 million acres of forestland which provide forest products, watershed, and recreational opportunities. Approximately 17.3 million acres are commercial and produce 278 billion board feet of lumber annually.

The State has recently encountered another resource of potential significance, geothermal resources. Presently, in excess of 500 megawatts of electrical generation capacity are available from 11 generating units at The Geysers geothermal area. With the completion of Units 13, 14, and 15, the available capacity will increase to 908 megawatts. The Geysers steam field is estimated to have in excess of 2,000 megawatts of generating capacity. Several other geothermal resource areas other than The Geysers are known to exist. The ultimate capacity of these resources may be in excess of 18,000 megawatts for both electrical and nonelectrical uses.

Petroleum has been a resource available to the State since the late 1800s. Onshore reserves are now declining and presently most of the potential remains on State tide and submerged lands or Federal OCS lands.

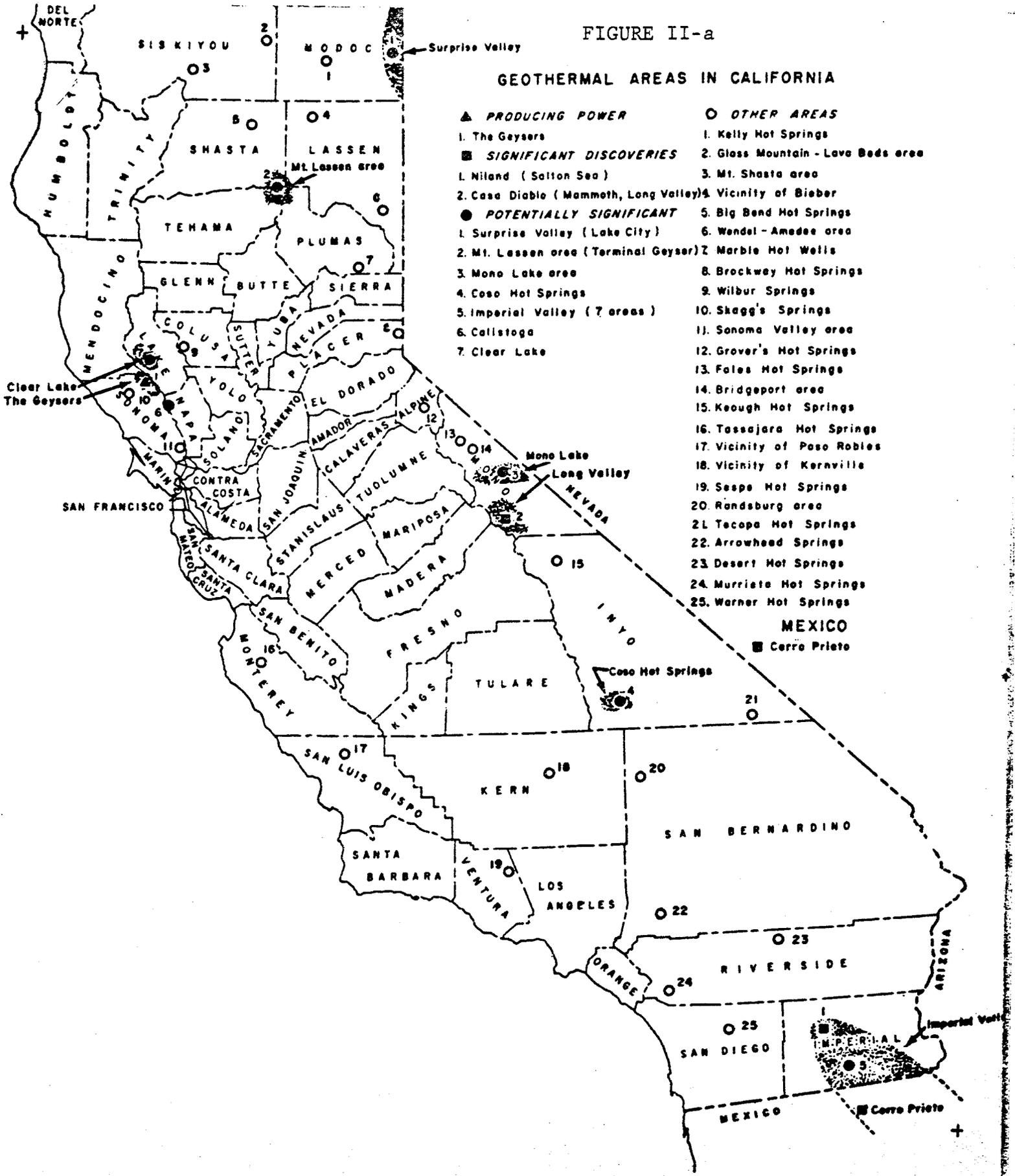
Minerals have been relatively unimportant as an economic resource in the State of California as compared to other states' production or other resources in the State. In 1974, total nonpetroleum mineral values were \$838,000,000. Most significant among these were soft minerals: boron minerals (\$128,820,000), cement (\$209,042,000), clays (\$7,358,000), gypsum (\$6,241,000), lime (\$13,000,000), magnesium compounds from seawater bitterns (\$20,800,000), sand and gravel (\$185,015,000), and talc (\$1,835,000). This does not, however, preclude the discovery of significant deposits of minerals or economic or technological conditions which permit the development of existing State resources.

The lands of the State provide recreational opportunities for the residents of California and others. Forestland provides areas for camping, winter sports, hunting, hiking, and fishing; while the desert areas provide for the various recreational habits of the inhabitants of Southern California metropolitan areas and other localities. Another significant resource area is California's coastline. These recreational opportunities provide significant revenues to local, county governments, and private individuals who provide services to visitors.

The Division has developed a series of overlays showing locations of the various resources discussed in the previous paragraphs and their relationship to land ownership patterns. These are presented in the following figures (Figures II-a to II-f). The maps present only general information and are not meant to be specific location/resource determinations.

FIGURE II-a

GEOTHERMAL AREAS IN CALIFORNIA



- | | |
|---------------------------------------|------------------------------------|
| ▲ PRODUCING POWER | ○ OTHER AREAS |
| 1. The Geysers | 1. Kelly Hot Springs |
| ■ SIGNIFICANT DISCOVERIES | 2. Glass Mountain - Lava Beds area |
| 1. Niland (Salton Sea) | 3. Mt. Shasta area |
| 2. Casa Diablo (Mammoth, Long Valley) | 4. Vicinity of Bieber |
| ● POTENTIALLY SIGNIFICANT | 5. Big Bend Hot Springs |
| 1. Surprise Valley (Lake City) | 6. Wendel - Amedee area |
| 2. Mt. Lassen area (Terminal Geyser) | 7. Marble Hot Wells |
| 3. Mono Lake area | 8. Brockway Hot Springs |
| 4. Coso Hot Springs | 9. Wilbur Springs |
| 5. Imperial Valley (7 areas) | 10. Skagg's Springs |
| 6. Calistoga | 11. Sonoma Valley area |
| 7. Clear Lake | 12. Grover's Hot Springs |
| | 13. Foles Hot Springs |
| | 14. Bridgeport area |
| | 15. Keough Hot Springs |
| | 16. Tassajara Hot Springs |
| | 17. Vicinity of Paso Robles |
| | 18. Vicinity of Kernville |
| | 19. Sespe Hot Springs |
| | 20. Randsburg area |
| | 21. Tecopa Hot Springs |
| | 22. Arrowhead Springs |
| | 23. Desert Hot Springs |
| | 24. Murrieta Hot Springs |
| | 25. Warner Hot Springs |

MEXICO
■ Cerro Prieto

FIGURE II-b



OIL FIELDS

- | | | |
|---|---------------------------------|-----------------------------------|
| 1 La Honda Oil Creek | 25 Elk Hills | 50 South Mountain |
| 2 Moody Gulch | 26 Coles Leves | 51 Placerita |
| 3 Flint Hills, Sargeant | 27 Edison | 52 Aliso Canyon |
| 4 Vallecitos, Cierve | 28 Fruitvale | 53 Conejo |
| 5 Chanley Ranch | 29 Canfield, Ten Sections | 54 Montalva |
| 6 Raisin City, San Joaquin | 30 Paloma | 55 Oxnard |
| 7 Heim | 31 Wheeler Ridge | 56 Salt Lake, Los Angeles |
| 8 Riverdale | 32 Buena Vista Hills | 57 Beverly Hills |
| 9 Coalinga | 33 Midway-Sunset | 58 Inglewood |
| 10 Gujarral Hills | 34 Tejon Hills, Tejon Grapevine | 59 Montebello |
| 11 San Ardo | 35 Russell Ranch, Cuyuma | 60 Playa Del Rey |
| 12 Kettleman | 36 Arroyo Grande | 61 Potrero |
| 13 Pyramid Hills | 37 Santa Maria | 62 Bandini |
| 14 Blackwell's Corner, Alfaritz
Welcome Valley, Devils Den | 38 Casmalia, Orcutt | 63 Whittier |
| 15 Antelope Hills, McDonald | 39 Cat Canyon | 64 El Segundo |
| 16 Lost Hills | 40 Gato Ridge, Zaca Creek | 65 Lawndale, Alondra |
| 17 Rio Bravo | 41 Lampoc | 66 Rosecrans |
| 18 Premier, Kern Front | 42 Gaviota Conception | 67 Coyote, Santa Fe Springs |
| 19 Granite Canyon, Dorsey, | 43 Goleta, Elwood | 68 Olinda, Yorba Linda |
| 20 Round Mountain | 44 Santa Barbara | 69 Redondo |
| 21 Kern River, Kern Bluff, Ant Hill | 45 Summerland | 70 Richfield, Olive |
| 22 Selridge | 46 Rincon | 71 Kraemer, Esperanza |
| 23 Cymrik | 47 Sespe | 72 Wilmington |
| 24 McKittrick, Belgian Antidine | 48 Ramona | 73 Long Beach, Seal Beach |
| | 49 Ventura | 74 Huntington Beach, West Newport |
| | | 75 Dos Cudras |

★ GAS FIELDS

- | | |
|---------------------|--------------------|
| 1 Ord Bend | 11 Suisun Bay |
| 2 Marysville Buttes | 12 McDonald Island |
| 3 Dunnington Hills | 13 Tracy |
| 4 Fairfield Knolls | 14 Vernalis |
| 5 Miller | 15 Chowchilla |
| 6 Maine Prairie | 16 Gill Ranch |
| 7 Thornton | 17 Trico |
| 8 Rio Vista | 18 Semi-tropic |
| 9 Lodi | 19 Suttonwillow |
| 10 Kirby Hill | 20 Johe Ranch |

Source: California Division of Mines and Geology

FIGURE II-c
RECREATION AREAS IN CALIFORNIA

SOURCE: MAYFIELD PUBLISHING COMPANY

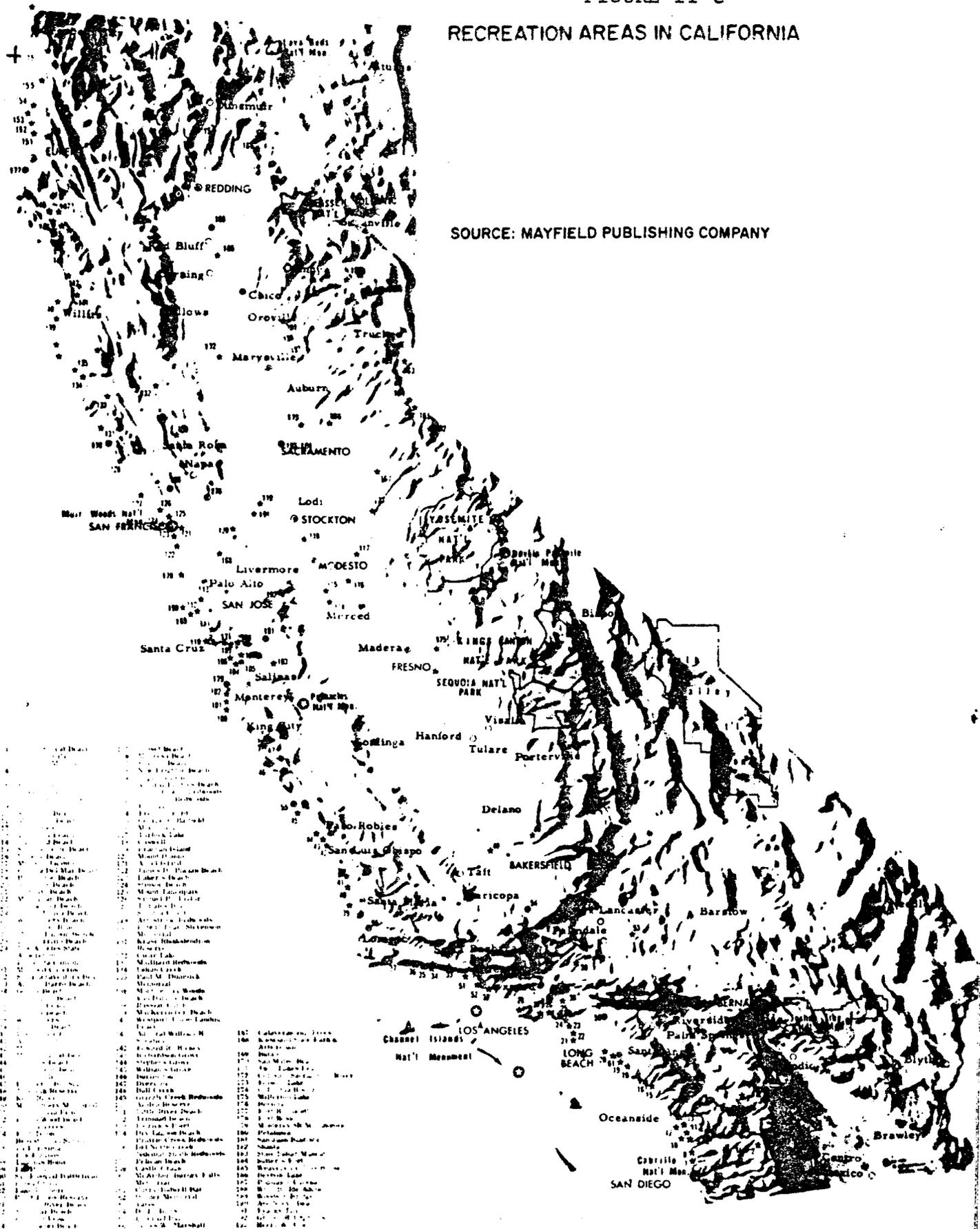


FIGURE II-d
POTENTIAL AGRICULTURE SOILS OF CALIFORNIA

SOURCE: MAYFIELD PUBLISHING COMPANY

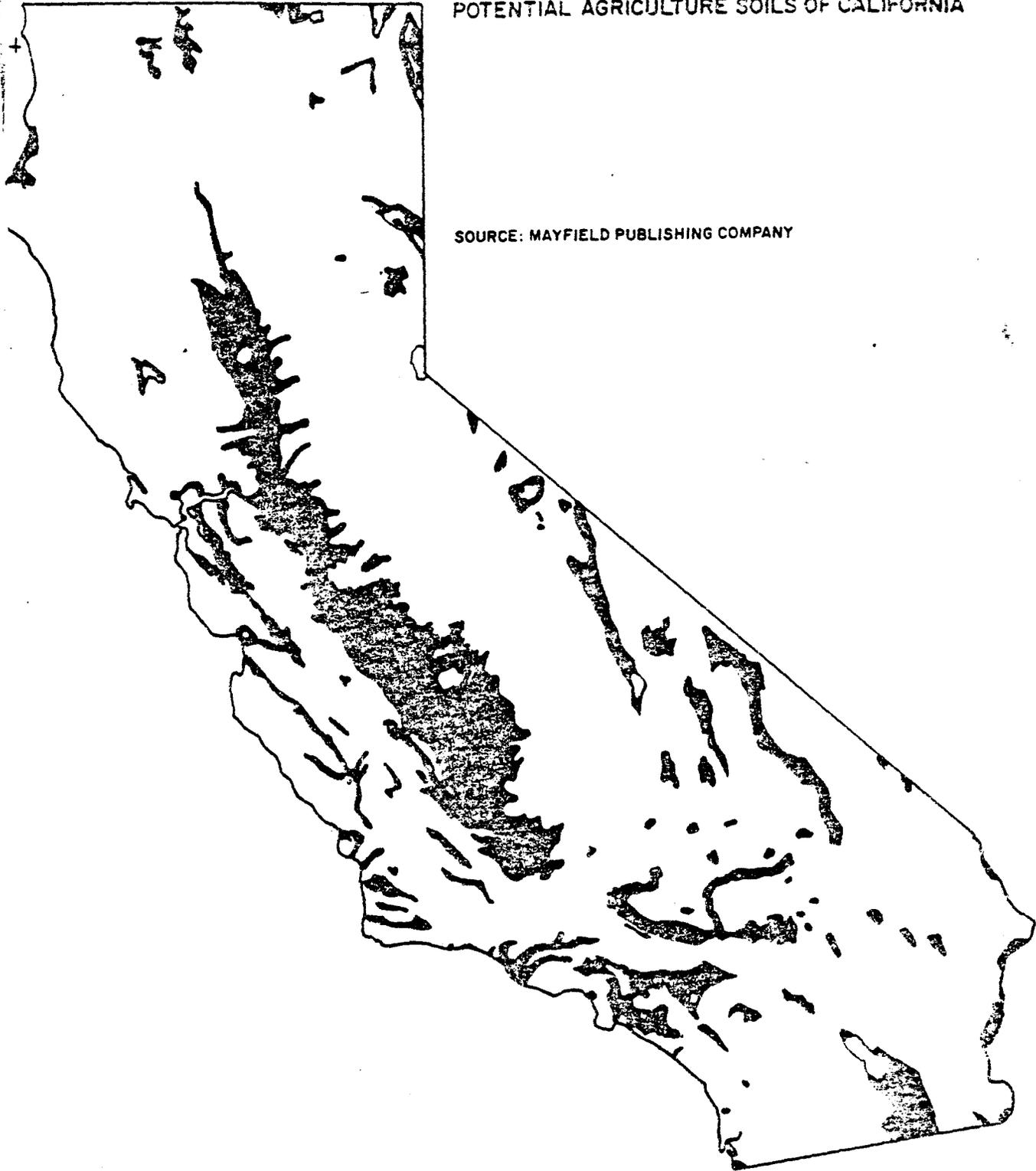


FIGURE II-e

MINERALS

- | | |
|--------------------------------------|----------------------|
| M MAGNESIUM | B BORON |
| ■ MERCURY | ◄ CEMENT PLANTS |
| ☆ STONE | ⊙ CLAY |
| ⊙ GYPSUM | * CRUDE SALT |
| ■ GYPSUM CALCINING PLANTS | D DIATOMACEOUS EARTH |
| NC CHROMIUM AND NICKEL BEARING CLAYS | I IRON ORE |
| P POTASH, SODA ASH | • SAND AND GRAVEL |
| Re RARE EARTHS | ▲ SALT REFINERIES |
| A ALUMINA | T TUNGSTEN |
| | G GOLD |
| | S SILVER |
| | t TALC |

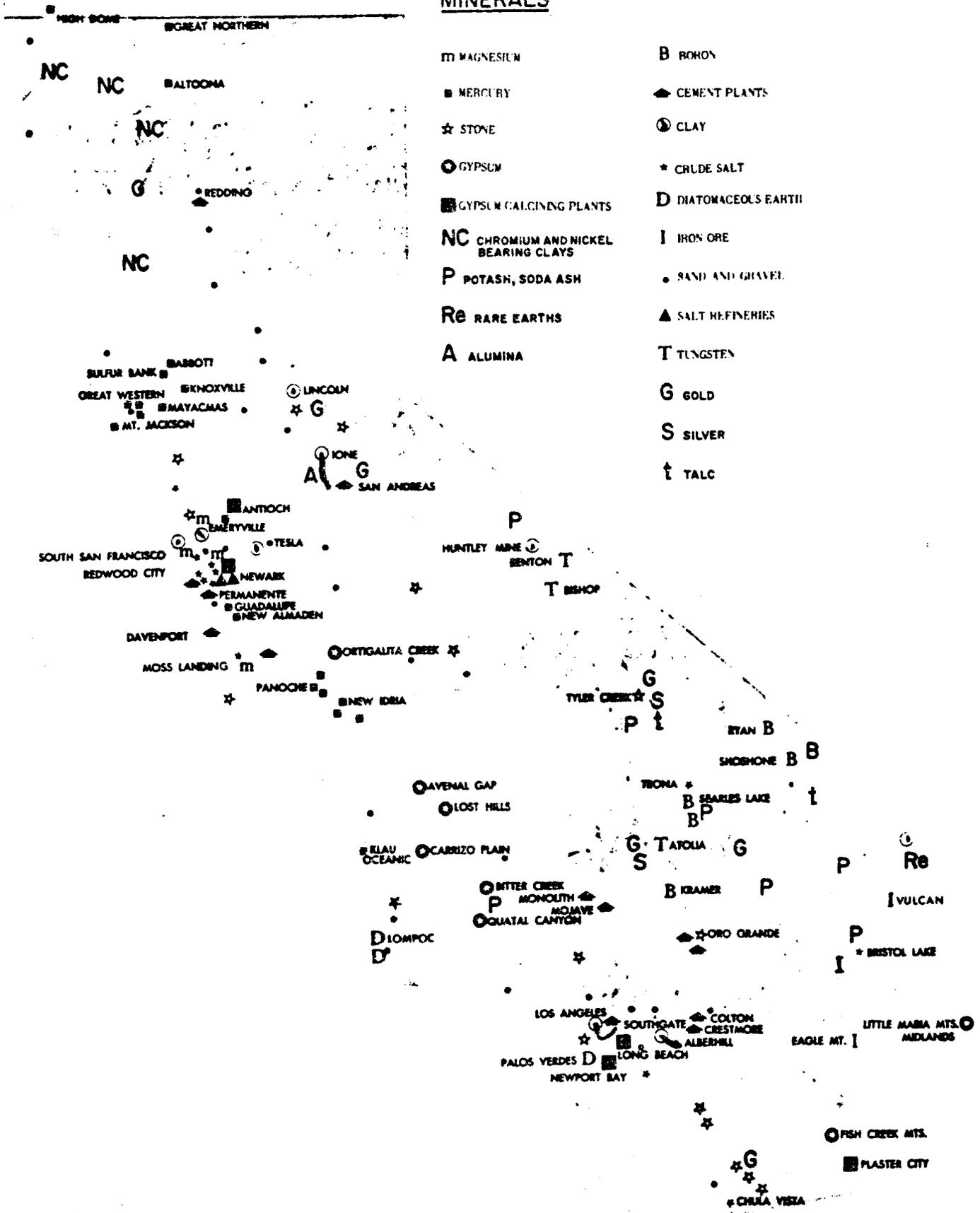
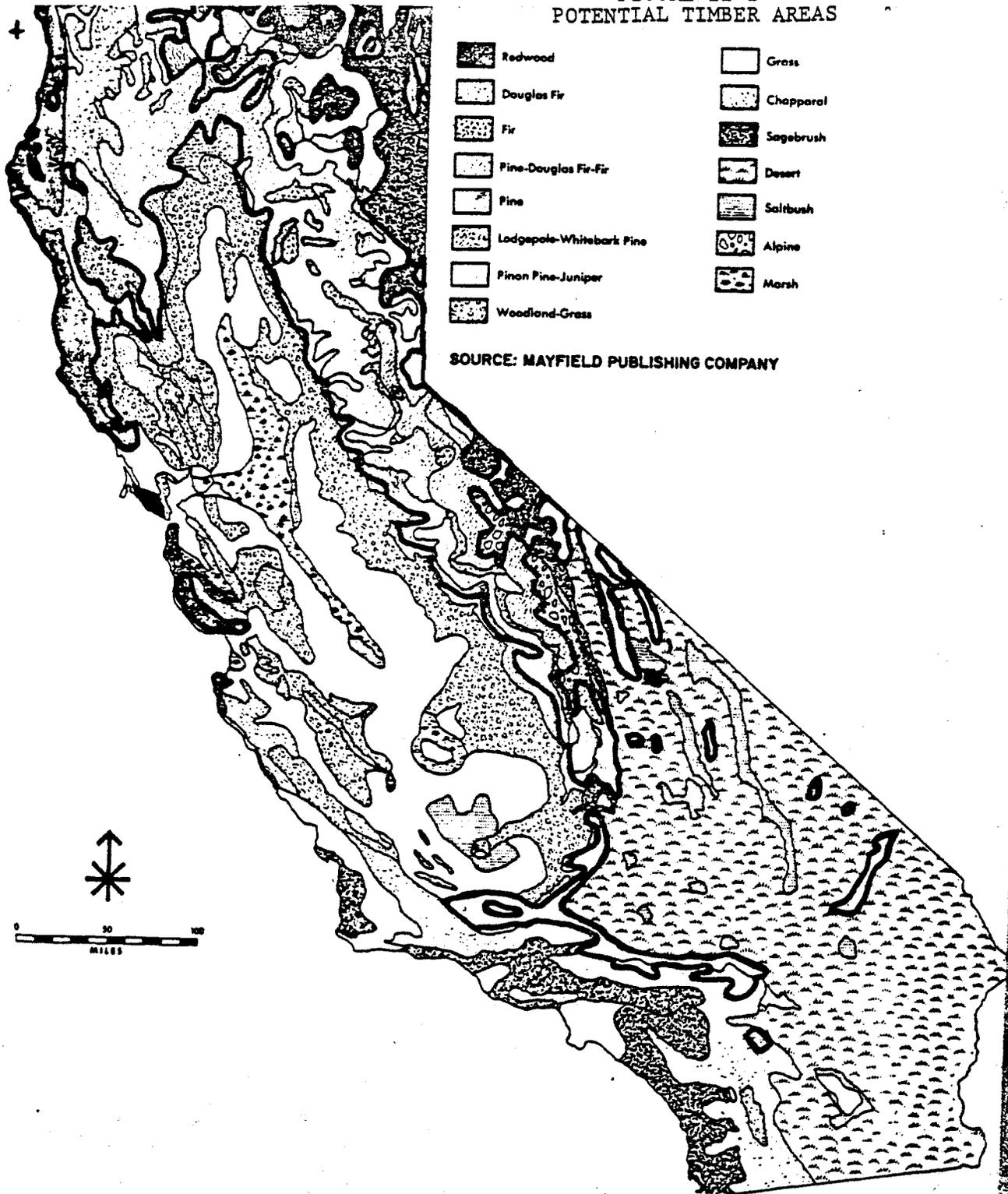


FIGURE II-f
POTENTIAL TIMBER AREAS



ALTERNATIVE METHODS FOR MANAGING STATE-OWNED LANDS

The State Lands Commission retains several options for attaining managed State land: (1) maintain the present ownership; (2) sale of all State land; (3) an exchange with the BLM; or (4) an exchange and request of a grant from Congress. Alternatives 3 and 4 will require legislative action on the Federal level [required by the Organic Act (P.L. 94-579)].

Selection Criteria

In making selections, the Division established certain guidelines to be considered in a land exchange or grant program. These criteria are itemized below:

- (1) Consolidate the State's land into manageable blocks of land; and
- (2) Obtain lands which meet one or both of the following criteria:
 - (a) Having two or more uses; or
 - (b) Having an overriding economic value.

Maintain the Existing Ownership

The Commission retains the option of maintaining the existing situation. This would leave the State's landholdings in their present form, scattered and widely dispersed as presented in Figure III. Tables 3-a through 3-g also indicate the acreage of State land in each BLM planning unit. Modification of this is possible by seeking to consolidate lands due to the State. This would consolidate between 147,000 and 180,000 acres.

The proposal conceivably maintains the State in the best position for maximizing its mineral resources. The scattered ownership pattern gives the State a cross section of California's land. In most instances, it is impossible to consolidate land for mineral potential, unless the mineral resources are known to exist in an area. Further, a small acreage parcel can have as much or more potential than a very large one. Therefore, since an extensive exploration program is neither practical nor economical, a scattered random land pattern statistically improves the chances of mineral resources existing on State land.

This alternative requires no enabling legislation either by the Federal government or the State. The only request the State need pursue is that the Federal government compensate

FIGURE III

CALIFORNIA

Present Ownership Pattern of
State-Owned School Lands

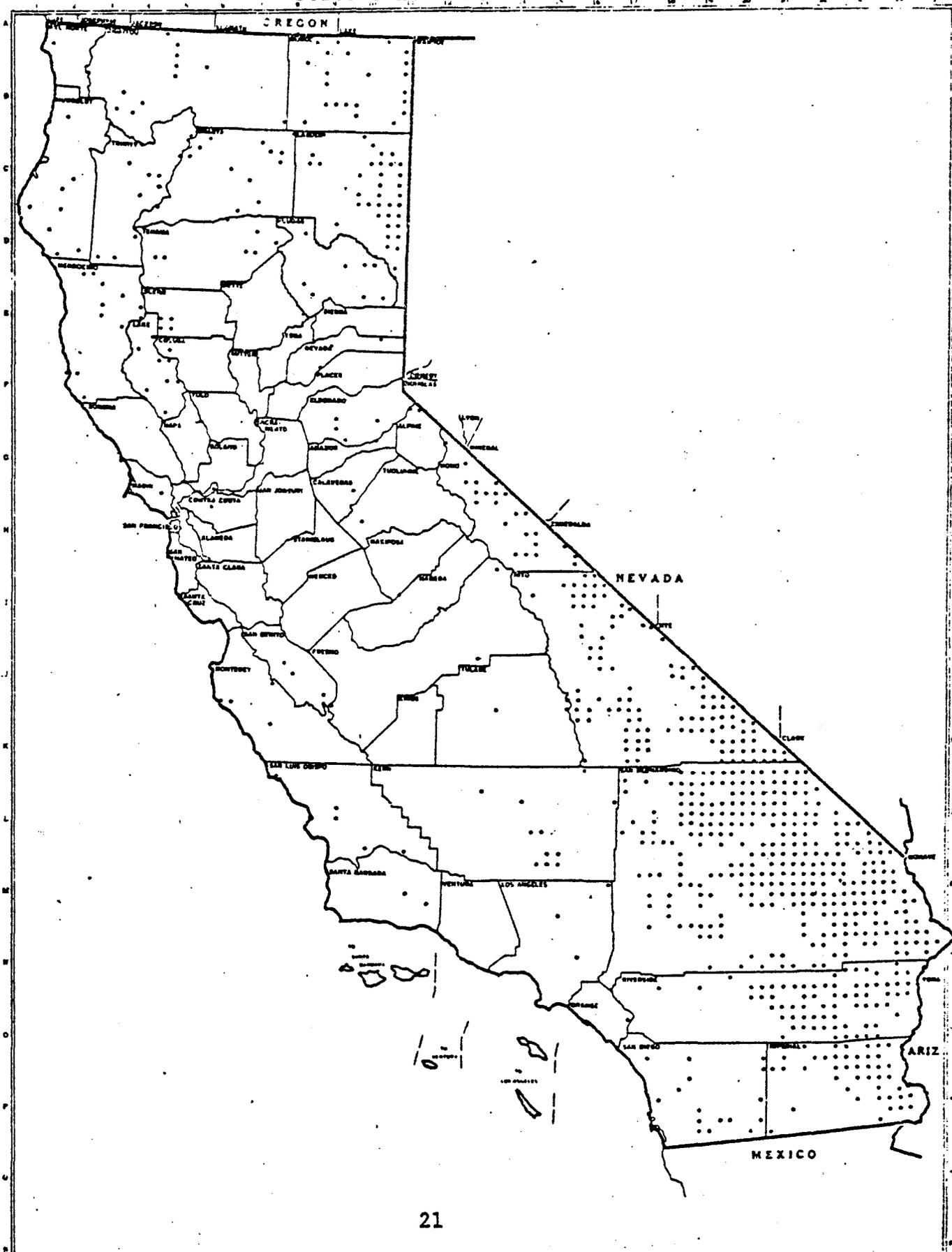


Table 3-a

SCHOOL LANDS WITHIN BLM DISTRICTS

<u>District</u>	<u>School Lands</u>
Riverside	363,690
Bakersfield	104,040
Susanville	52,976
Redding	8,507
Ukiah	6,707
Folsom	<u>4,891</u>
TOTAL	540,811

Table 3-b

SCHOOL LANDS WITHIN BLM PLANNING UNITS

Riverside District

<u>Planning Unit</u>	<u>School Lands</u>
Barstow	15,752
Trona	10,815
Victorville	26,043
Kingston	49,420
Piute	43,403
Turtle Mountains	68,736
Baker	49,495
Coachella	4,119
Imperial	19,702
Chuckwalla	73,345
Hemet	12
Escondido/Border	1,543
Lower Colorado River	<u>1,305</u>
TOTAL	363,690

Table 3-c

SCHOOL LANDS WITHIN BLM PLANNING UNITS

Bakersfield District

<u>Planning Unit</u>	<u>School Lands</u>
Potpourri	1,037
Caliente-Temblor	640
Keweak	320
Cache Peak	800
Lake Isabella	0
Ridgecrest	399
Chimney Peak	0
China Lake	0
Panamint	13,360
Bitterwater	39,334
Saline Valley	21,624
Eureka Valley	18,319
Owens Valley	511
Benton	3,520
Bodie	4,176
TOTAL	104,040

Table 3-d

SCHOOL LANDS WITHIN BLM PLANNING UNITS

Susanville District

<u>Planning Unit</u>	<u>School Lands</u>
Alturas	2,520
Hayden Hill	2,359
Madeline	1,280
Willow Creek	4,724
Honey Lake	22,563
Beckwourth	842
Cal-Neva	14,450
Tuledad	160
Home Camp	645
Massacre	1,729
Cowhead	1,704
TOTAL	52,976

Table 3-e

SCHOOL LANDS WITHIN BLM PLANNING UNITS

Redding District

<u>Planning Unit</u>	<u>School Lands</u>
Mt. Dome	35
Middle Klamath	1,251
Scott Valley	480
Trinity	803
Clear Creek	720
Shasta	430
Cinder Cone	2,560
Feather River	360
Yolla Bolly	<u>1,868</u>
TOTAL	8,507

Table 3-f

SCHOOL LANDS WITHIN BLM PLANNING UNITS

Ukiah District

<u>Planning Unit</u>	<u>School Lands</u>
Kings Range	0
Humboldt	320
Red Mountain	40
East Mendocino	1,600
Cow Mountain	0
East Lake	3,666
Putah Creek	<u>1,081</u>
TOTAL	6,707

Table 3-g

SCHOOL LANDS WITHIN BLM PLANNING UNITS

Folsom District

<u>Planning Unit</u>	<u>School Lands</u>
Placer-El Dorado	237
Nevada-Yuba	0
Markleeville	182
Coleville	0
Tuolumne-Mariposa	750
Amador-Calaveras	0
Fresno-San Benito	2,602
Monterey	<u>1,120</u>
TOTAL	4,891

the State for the land it is due: the unsurveyed lands, the "in lieu" lands, and lands where title and legal problems presently exist between the State and Federal governments. Also, the State may now undertake its own survey of unsurveyed lands according to P.L. 94-579 (the Organic Act).

Certain disadvantages appear as a result of this alternative, as evidenced by the present situation:

- (1) The State would still be subject to "de facto" planning for State land by the largest landowner in the area, and conceivably could never utilize any of its resources.
- (2) State land would still be subject to military and other Federal encumbrances; i.e., State land in national parks, national forests, which presently exist.
- (3) Scattered and dispersed land provide little surface value to the State; it is unmanageable as a cohesive unit, and since it is impractical to provide surveillance for such holdings, it is subject to extensive trespassing and theft of resources.

In order for the State to satisfactorily resolve some of these problems, the State Lands Commission would have to increase its staff considerably and obtain police powers. Additional trespass investigators would be required to constantly survey State school sections. These investigators would need authority to arrest and apprehend trespassers, since local law enforcement agencies have been unwilling or untimely in past efforts to prevent the trespass and theft on State lands.

There appears to be nothing the Commission can do to resolve the problem of surface land management with the existing ownership patterns. The maximum acreage, 640 acres, does not provide sufficient resources usually for the State to economically manage. Thus, surface management would continue to be acquiesced to the largest landowner or administrator in the area. This would tend to infringe on the development of energy and mineral resources on some areas.

Sale of Remaining State Land

The Commission could conceivably return to the sale of State land as a method of discharging its management responsibility. Monies from such a sale could be placed into a one-time fund

where the interest would generate capital for other programs in the State. This is the original approach taken by the State when the original grants were received.

The approach would probably generate a fund of approximately 1 billion dollars, assuming the sale of all remaining State school sections at the value the State has appraised them. If the State were able to invest this money at 8 percent, the return to the State would be approximately 80 million dollars per year. This return is considerably more than that presently generated from State land. Present revenue generated from State school lands is \$126,081. Revenues generated from all State lands was approximately 110 million dollars in Fiscal Year 1975-76. An additional \$225,000 a month was being deposited in a trust account as royalty from the State mineral reservations leased for geothermal development, as of December 1976.

This option has several merits if all the assumptions made were factual. Primarily, it would be necessary for the State to sell all its land for one billion dollars. Thus, the State could receive a considerable amount of return from an interest-bearing account, even if the State were unable to receive an eight percent return.

Additional revenues would also be generated from the lease of the mineral reservations since these cannot be transferred to private ownership. Presently, about \$45,000 a year is generated from mineral and oil and gas leases on school lands and lands where the minerals have been reserved. About 3 million dollars a year is generated from geothermal leases on State mineral reservations.

Several disadvantages result from this proposal. A discussion of these is made below:

- (1) A return of 8 percent is not assured. For a longer period of time, the revenue returned to the State may decrease since historically interest rates have been lower. However, a return of 1 percent would still provide 10 million dollars in revenue.

Another problem results from obtaining revenues from interest-bearing accounts only. Unless all the investments are short term, interest could provide negative gains if the inflation rate exceeds the rate of return. Contrastly, the sale of commodities will generally reflect the rate of inflation.

- (2) The State must retain the mineral rights and can only transfer the surface rights to private parties, as provided in the grant of minerals from the Federal government in the 1920s (PRC 6402). The State would then be required to manage scattered mineral reservations.

This could prove a problem in some areas; however, the State would probably only be able to sell most of its land to the Federal government who would require that the mineral reservations be transferred with the surface. Thus, the State would not receive any revenues once the lands were sold.

- (3) While the selling of State land would seem to allow for the reduction in the number of staff, the size would actually remain nearly at current levels since most of the present workload results from administering waterways, tidelands, and mineral reservations.

Land Exchange Alternative

A practical way for the State to consolidate its landholdings would be with a land exchange. An exchange with the Federal government could either be with the BLM alone or the BLM together with other Federal agencies. The exchange presented here is with the BLM since most of the State land proposed for exchange will transfer to the Federal government and will be managed by the BLM.

In the event that the State wishes to consolidate and exchange its lands with no regard to special BLM or other Federal priority management areas, the State should seek to exchange land with the Federal government on an acre-for-acre basis. The State in this case has an interest or is due land totaling approximately 1,600,000 acres which are available for exchange.

Within the scope of the limitations and the criteria for selection previously discussed, the Division recommends the acquisition of the following BLM lands. (The locations of these lands are shown on Figure IV. In comparison, Figure III shows the previously existing ownership.)

- (1) All the lands within the following planning units:
 - (a) Scott Valley
 - (b) Hayden Hill
 - (c) Trinity
 - (d) East Mendocino
 - (e) Red Mountain

- (f) Placer-El Dorado
- (g) Amador-Calaveras
- (h) Tuolumne-Mariposa

TOTAL - approximately 567,748 acres

- (2) All the lands within the Putah Creek Planning Unit except for those lands lying south of Township 11 North and east of Range 4 West, MDM, totaling approximately 19,860 acres.
- (3) The lands within the Cow Mountain Planning Unit lying within the block formed by Townships 12 and 13 North and Ranges 9, 10 and 11 West, MDM, totaling approximately 4,560 acres.
- (4) The lands within the East Lake Planning Unit lying within the block formed by Townships 13 and 14 North and Ranges 5, 6 and 7 West, MDM, totaling approximately 20,560 acres.
- (5) The lands within the China Lake and Saline Planning Units lying within the block formed by Townships 19, 20, 21, 22 and 23 South and Ranges 37 and 38 East, MDM, totaling approximately 99,200 acres.
- (6) The lands within the Ridgecrest and Trona Planning Units lying within the block formed by Townships 28, 29 and 30 South and Ranges 39, 40, 41 and 42 East, MDM, totaling approximately 234,240 acres.
- (7) The lands within the Benton Planning Unit lying within the block formed by Townships 1, 2, 3 and 4 South and Ranges 26, 27, 28, 29 and 30 East, MDM, totaling approximately 14,720 acres.
- (8) Lands lying within the Kingston and Baker Planning Units totaling approximately 498,640 acres. These lands will be selected with more detailed information.
- (9) The lands within the Cache Peak Planning Unit lying within Townships 30 and 31 South and Range 38 East, MDM, totaling 16,460 acres.

These lands total 1,476,168 acres.

Additionally, the Division would recommend the State retain 241,672.4 acres of mineral reservations and school lands within the Planning Units selected for acquisition. These lands are located within the boundaries of these areas which have been designated for acquisition. The State would, in return, relinquish all interest in other school lands and mineral reservations not included in this consolidation alternative.

Discussions about the various areas (planning units) suggested for acquisition are included in Appendix A.

An advantage of this exchange is that it may be easier to persuade the BLM to accept an exchange formulated on an equity basis. However, the Bureau will probably be reluctant to relinquish their high resource value lands. The State should also prepare to receive some lands which may be encumbered by the 1872 Mining Laws. However, Federal legislation could remove this encumbrance.

This exchange blocks State land into reasonably concise blocks and satisfies the criteria of obtaining land having: (1) two or more uses, or (2) an overriding economic resource. Some of the lands will have high mineral and geothermal potential, while others will have significant forest and other surface use potentials. The land will be dispersed both in Northern and Southern California and will probably require four regional administrative offices.

At the conclusion of the consolidation program, the Division recognizes there will be a need to undertake resource evaluations of the new State acquisitions. In order to accomplish this task, the Division would need to increase staff levels for the resource inventory program and regional management offices. As an alternative to increased staffing for the resources inventory program, the Division might suggest legislation which mandates the Division of Mines and Geology to perform resource evaluations of these lands, or the Division to cooperate with the University and College System in performing resource evaluations by students and faculty. However, neither of these alternatives might prove satisfactory.

Land Grant Alternative

The State of California has reasonable grounds for requesting an additional land grant from the Federal government. A grant could be accomplished in conjunction with a land exchange or entirely unto itself. In a grant, the State should not be restricted in its selection of Federal land. The State should consider all Federal land equally and attempt to maximize its resources where possible.

Justification for a Land Grant

Amount of Land Received

A comparison of enabling statehood land grants is indicative of inequalities in the grants made to California. While the enabling act had the appearance of liberality in granting public lands for the support of the common schools and for other purposes, a close scrutiny of these grants made to California in comparison to those admitted before and after California belies this appearance. Actually, the Western states admitted between 1850 and 1890, inclusive, were penalized.

The Department of the Interior's public land statistics for 1976 give the total land area for California as 100,206,720 acres, of which the Federal government owns 45,277,776 acres or 45.184 percent. Comparatively, Table 4 gives the percentage of Federal land within the State and the percent of public domain land granted to the State.

Notice that prior to 1850, the Federal government granted most of the public domain land within the state to the state, maintaining little land in Federal ownership. For example, Wisconsin was admitted in 1848 and was granted 10,179,804 acres of the public domain land, while the Federal government retained 10,138.4 acres. In 1850 with the admission of California, the first Western state to be admitted, the Federal government retained 43 percent and granted the State 9 percent of the public domain land. This practice continued with all the Western land states until 1896. Comparatively, Midwestern and Southern states admitted between 1850 and 1896 were granted most of the public domain land, while the Federal government retained between 0 and 3 percent of the land in the state.

In 1896, the Federal government started granting Western states admitted more of the public domain land. For example, the States of Utah, New Mexico, and Arizona received grants equaling between 14 and 16 percent of the public domain land. Alaska, admitted in 1959, received 29 percent of the public domain land in grants. However, in these states, the Federal government still retained 33 or more percent of the public domain land.

Table 4

SUMMARY OF PERCENTAGE OF LANDS
GRANTED TO THE STATES
AND RETAINED BY THE FEDERAL GOVERNMENT

<u>State</u>	<u>Year Entered Union</u>	<u>% of State and Acreage of Public Domain Land Retained by the Federal Government</u>		<u>% of State and Acreage of Public Domain Land Granted to the State</u>	
Ohio	1803	0%	220	10%	2,758,862
Louisiana	1812	0%	24,842.2	40%	11,441,261
Indiana	1816	0%	432.0	17%	4,040,518
Mississippi	1817	0%	2,363.1	20%	6,097,997
Illinois	1818	0%	437.2	17%	6,234,655
Alabama	1819	.08%	29,291.6	15%	5,006,883
Maine	1820	0%	0	1%	210,000
Missouri	1821	0%	2,647.3	17%	7,417,022
Arkansas	1836	3%	1,072,199.6	36%	11,936,834
Michigan	1837	0%	296,612.1	33%	12,142,846
Florida	1845	1%	370,914.1	70%	24,214,366
Texas	1845	0%	0	11%	180,000
Iowa	1846	0%	340.8	22%	8,061,262
Wisconsin	1848	0%	10,138.4	29%	10,179,804
California	1850	43%	42,779,081.2	9%	8,825,108
Minnesota	1858	2%	1,258,011.1	32%	16,422,051
Oregon	1859	50%	30,996,404.6	11%	7,032,847
Kansas	1861	0%	26,341.0	15%	7,794,669
West Virginia	1863	0%	0	1%	150,000
Nevada	1864	86%	60,615,797.0	4%	2,725,666
Nebraska	1867	0%	244,555.5	7%	3,458,711
Colorado	1876	34%	22,899,710.2	7%	4,471,604
North Dakota	1889	.5%	209,122.5	7%	3,163,552
South Dakota	1889	3%	1,600,313.3	7%	3,435,373
Montana	1889	27%	25,189,793.9	6%	5,963,338
Washington	1889	26%	11,138,273.1	7%	3,044,471
Idaho	1890	62%	32,928,354.7	8%	4,254,448
Wyoming	1890	47%	29,233,242.2	7%	4,342,520
Utah	1896	65%	34,312,310.6	14%	7,501,737
Oklahoma	1907	.3%	150,444.1	7%	3,095,760
New Mexico	1912	31%	24,263,994.7	16%	12,794,718
Arizona	1912	42%	30,831,388.1	14%	10,534,753
Alaska	1959	96%	352,388,733.7	29%	104,569,251
Hawaii	1959	0%	0	0%	0

SOURCE: BLM Public Land Statistics, 1976

Even within the State itself, the State received less land from the Federal government than other private entities. The State received total grants amounting to 8,822,398 acres. In comparison, the railroads received approximately 12,000,000 acres in granted land and the Homestead Act granted another 12,500,000 acres to private individuals. Even official grants to private individuals were equal to the approximately 8 million acres the State received. These grants are exclusive of the Mexican and Spanish land grants which were held valid at the time of California's admission to the Union.

Quality of the Land Received

Another obvious inequity in the grants of land lies in the general category of the quality of the land. Although the amount of land received by California was almost three times that received by the State of Ohio, a considerable portion of this land was located in the desert, swampy areas, and inaccessible regions considered worthless at that time. However, the land received by the State of Ohio was quite uniformly of outstanding value, providing significant usefulness to that state.

Another similar example is the State of Wisconsin, admitted in 1848. Wisconsin received 10,179,804 acres of land equivalent in quality to that received by Ohio. On the other hand, the State of California received 8,822,398 acres of land, much of which was of little value at the time of admission and only the worst of that remains in State ownership today.

Extent of Federal Land Holdings in California

The property holdings of the Federal government in California amount to 45,072,089.7 acres or 45 percent of the land area. This land is divided among the Federal agencies presented in Table 5.

Much of this land is currently used by the Federal government to provide revenue. Other land serves little purpose. However, Federal agencies pay no taxes on the land whether revenue is received or not even though their employees use the services and resources provided by the State and local governments. The Federal government does, in return, provide "in lieu" taxes to the states in which their land lies. This amounts to 50 percent of all revenues received from leases or royalties from land in that state (P.L. 94-579).

Table 5

Agricultural Research Service	564.5 acres
Forest Service	20,073,050.9
Soil Conservation Service	107.1
Atomic Energy Commission	7,732.8
NOAA	61.9
Maritime Administration	2.3
Federal Communications Commission	143.1
General Services Administration	2,485.2
Office of Education	12.4
Health Service and Mental Health Admin.	36.4
Social Security Administration	8.8
HUD	2.7
Fish and Wildlife Service	66,532.1
Geologic Survey	10.3
Bureau of Indian Affairs	261.2
Bureau of Land Management	15,584,862.6
National Park Service	4,214,195.3
Bureau of Reclamation	1,117,134.9
Immigration and Naturalization Service	47.3
Bureau of Prisons	257.2
Manpower Administration	.4
NASA	685.8
U.S. Postal Service	148.9
Coast Guard	3,486.3
Federal Aviation Administration	973.6
Bureau of the Mint	3.9
U.S. Information Service	1,760.8
Veterans Administration	1,228.2
Air Force	417,874.0
Army	1,010,289.0
Navy	2,406,112.2
Corps of Engineers	<u>108,007.6</u>
TOTAL ACREAGE	45,072,089.7 acres

SOURCE: BLM Public Land Statistics, 1976

Extent of Federal Control Over the Resources Within California

Since the Federal government administers 45 percent of California's land area, they also control a large portion of the resources. However, the percentage of the resources controlled is proportionally higher than the land area controlled. For example, the State's public timber resource lies primarily within the National Forests, which also include the largest portion of the State's recreational resource. Areas delineated as geothermal resource areas and mineral areas occur primarily on the 15 million acres administered by the BLM. Aside from agricultural lands and onshore oil and gas fields, the other resources lie primarily on the Federal land. Even the resource oil and gas is largely controlled by the Federal government. The largest onshore field in California, Elk Hills, is administered by the Navy. The frontier areas off the coast are almost totally administered by the Federal government, aside from a three-mile wide strip owned by the State.

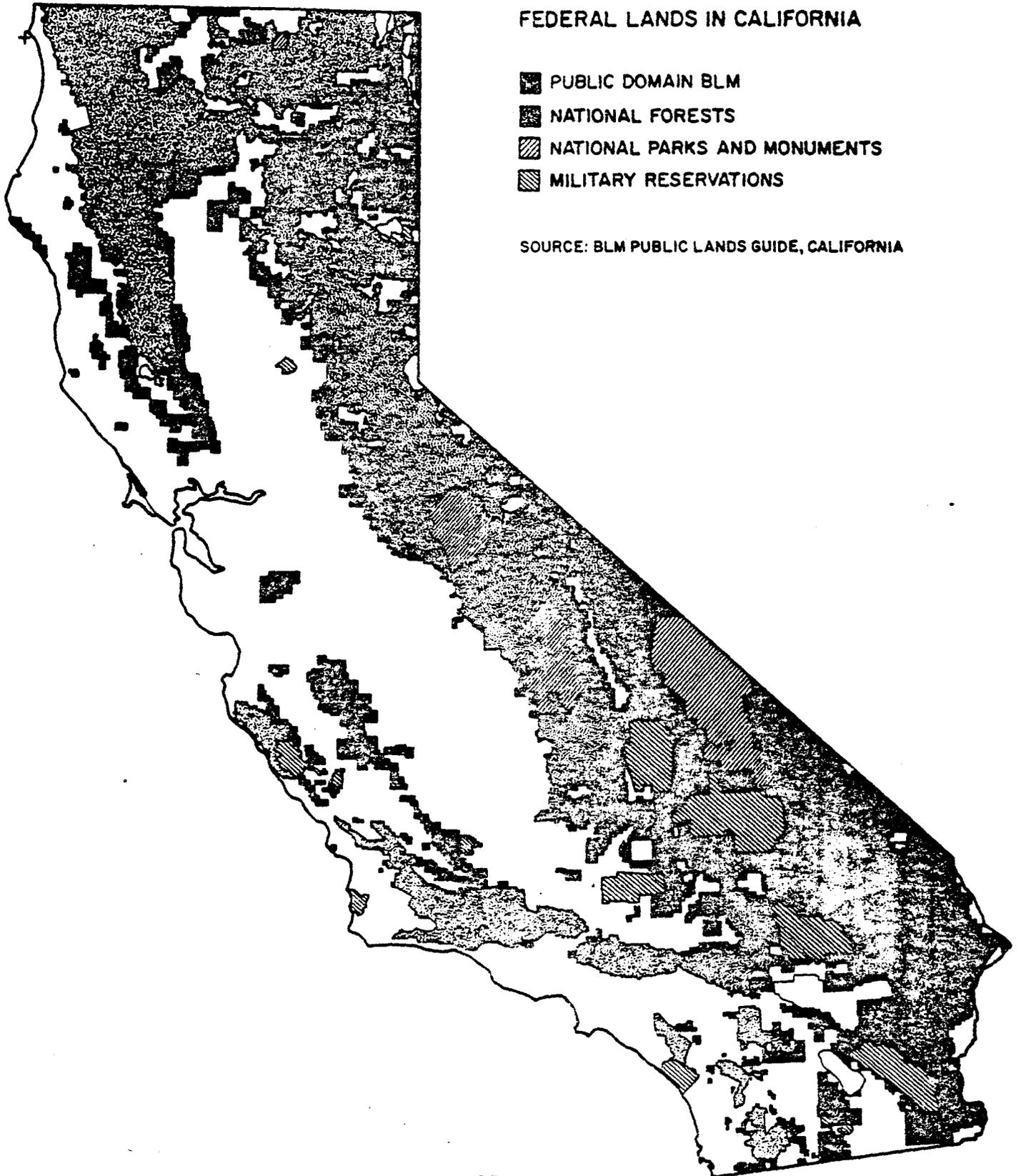
Figures V-a through V-g indicate the relationship of Federal ownership to the location of resources which the Division has recognized as important to the State economy.

The ownership of these resources by the Federal government causes significant problems for the State in planning its programs. For example: (1) the Bureau of Reclamation controls the discharge of water into the Delta creating problems for the State in maintaining the water quality in the Delta; (2) Federal control over geothermal lands and their policy of inhibiting the development of this resource aggravates the State's need to import larger and larger quantities of oil and gas in order to meet its electrical and energy needs; and (3) by accelerating their leasing of the OCS for oil and gas development, the Federal government forces California into accepting accelerated industrial development which it is unable to accommodate as rapidly as the Federal government would like.

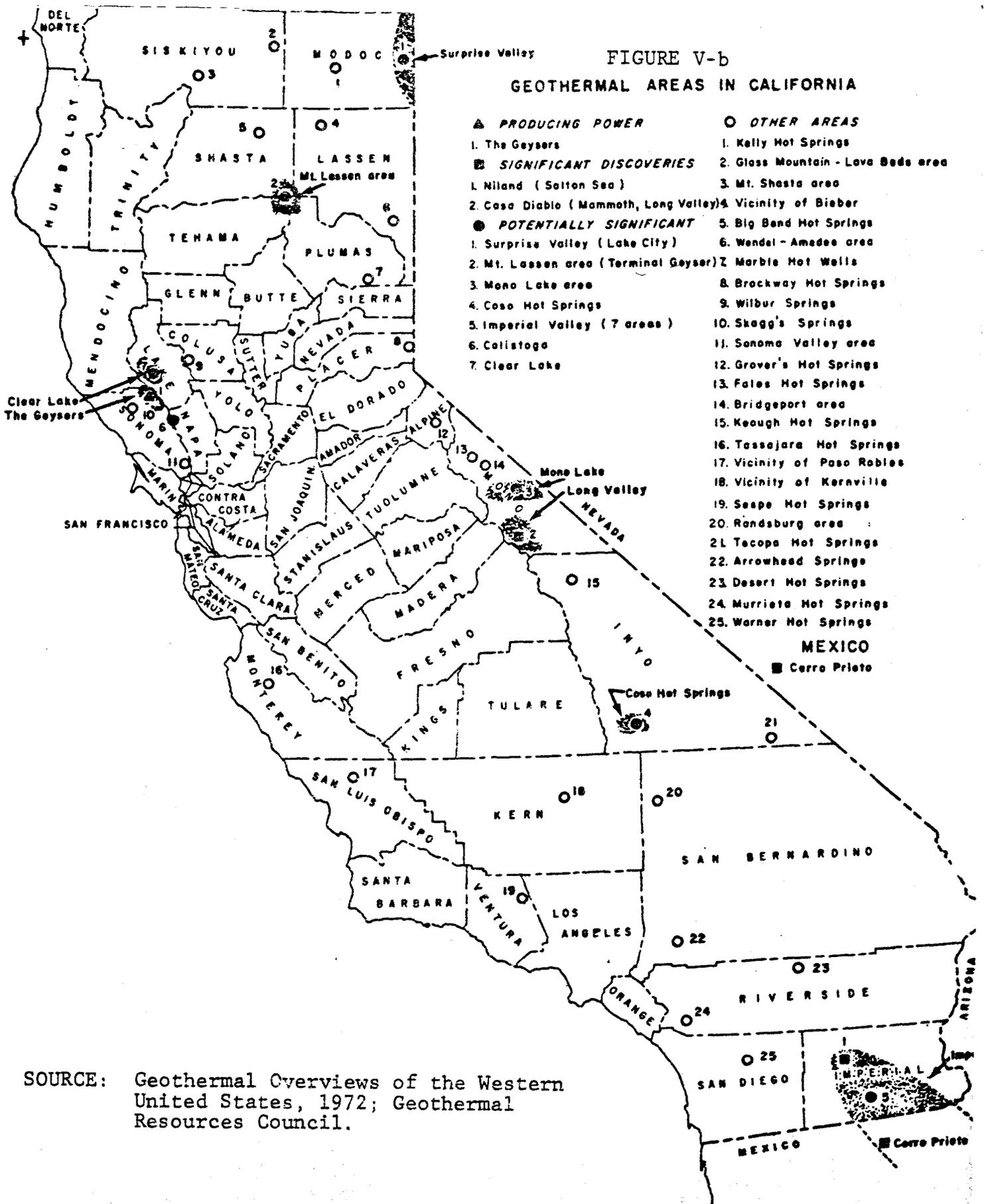
Land Grant Proposal

As evidenced by the preceding data, California remains justified in soliciting further lands from the Federal government. Reasonableness would indicate that the State should have parity with other grants made to parties within the State. Thus an additional four

FIGURE V-a
FEDERAL LANDS IN CALIFORNIA



SOURCE: BLM PUBLIC LANDS GUIDE, CALIFORNIA



SOURCE: Geothermal Overviews of the Western United States, 1972; Geothermal Resources Council.

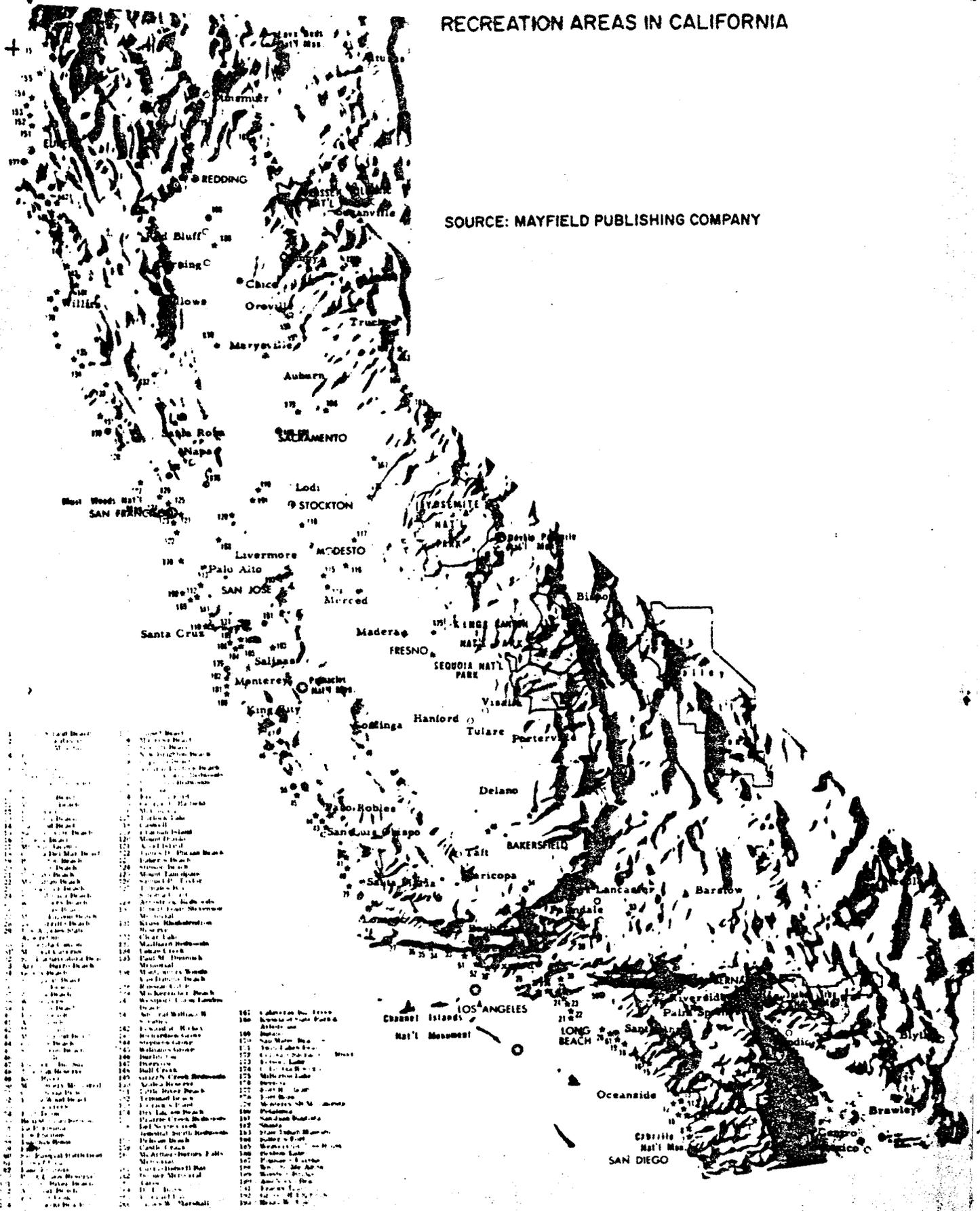
FIGURE V-c



Source: California Division of Mines and Geolc

FIGURE V-d
RECREATION AREAS IN CALIFORNIA

SOURCE: MAYFIELD PUBLISHING COMPANY



- | | | |
|-------------------|----------------------|-----------------------|
| 1. Alameda Beach | 101. San Juan Island | 191. San Juan Islands |
| 2. Alameda Beach | 102. San Juan Island | 192. San Juan Islands |
| 3. Alameda Beach | 103. San Juan Island | 193. San Juan Islands |
| 4. Alameda Beach | 104. San Juan Island | 194. San Juan Islands |
| 5. Alameda Beach | 105. San Juan Island | 195. San Juan Islands |
| 6. Alameda Beach | 106. San Juan Island | 196. San Juan Islands |
| 7. Alameda Beach | 107. San Juan Island | 197. San Juan Islands |
| 8. Alameda Beach | 108. San Juan Island | 198. San Juan Islands |
| 9. Alameda Beach | 109. San Juan Island | 199. San Juan Islands |
| 10. Alameda Beach | 110. San Juan Island | 200. San Juan Islands |

FIGURE V-e
POTENTIAL AGRICULTURE SOILS OF CALIFORNIA

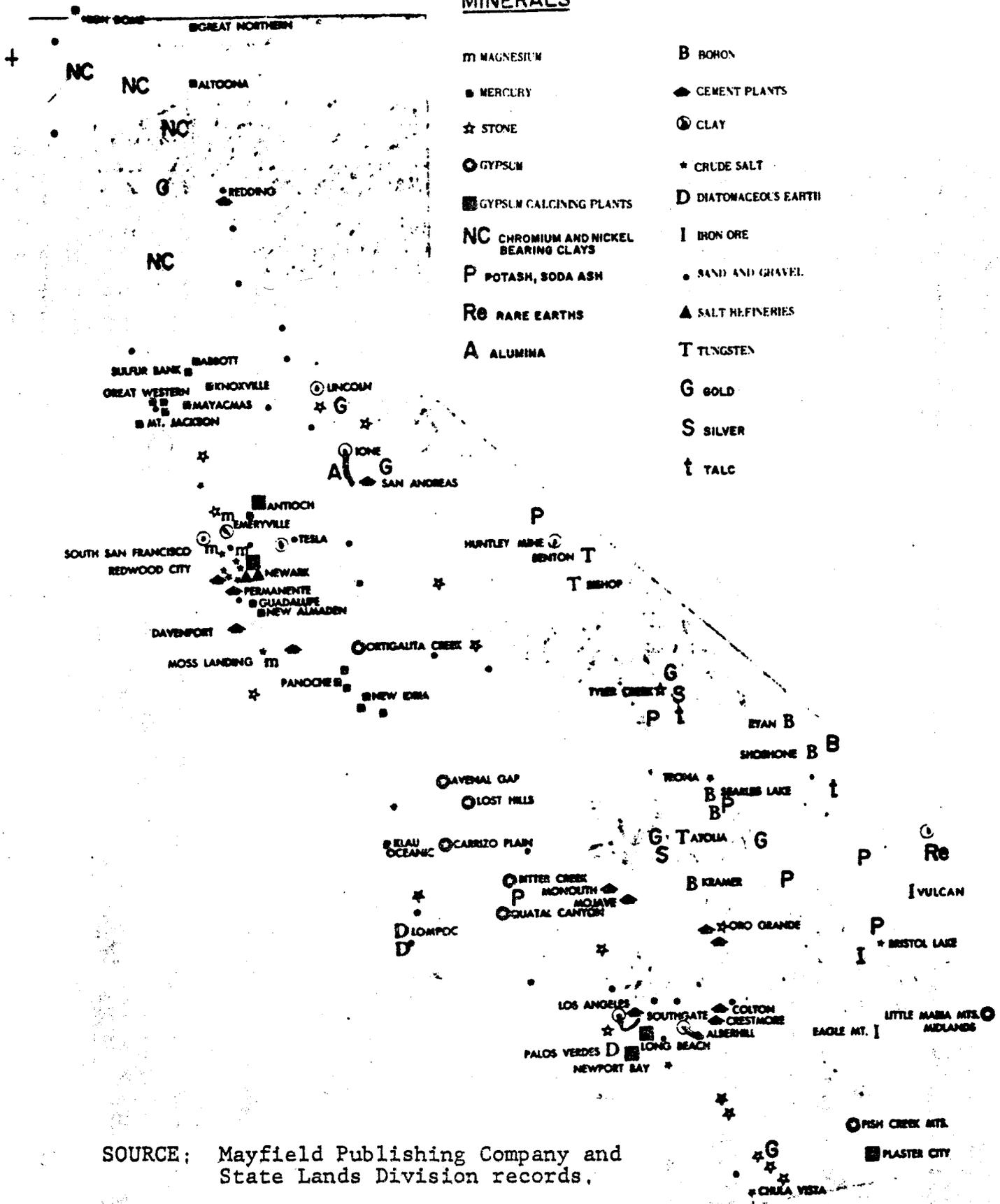
SOURCE: MAYFIELD PUBLISHING COMPANY



FIGURE V-f

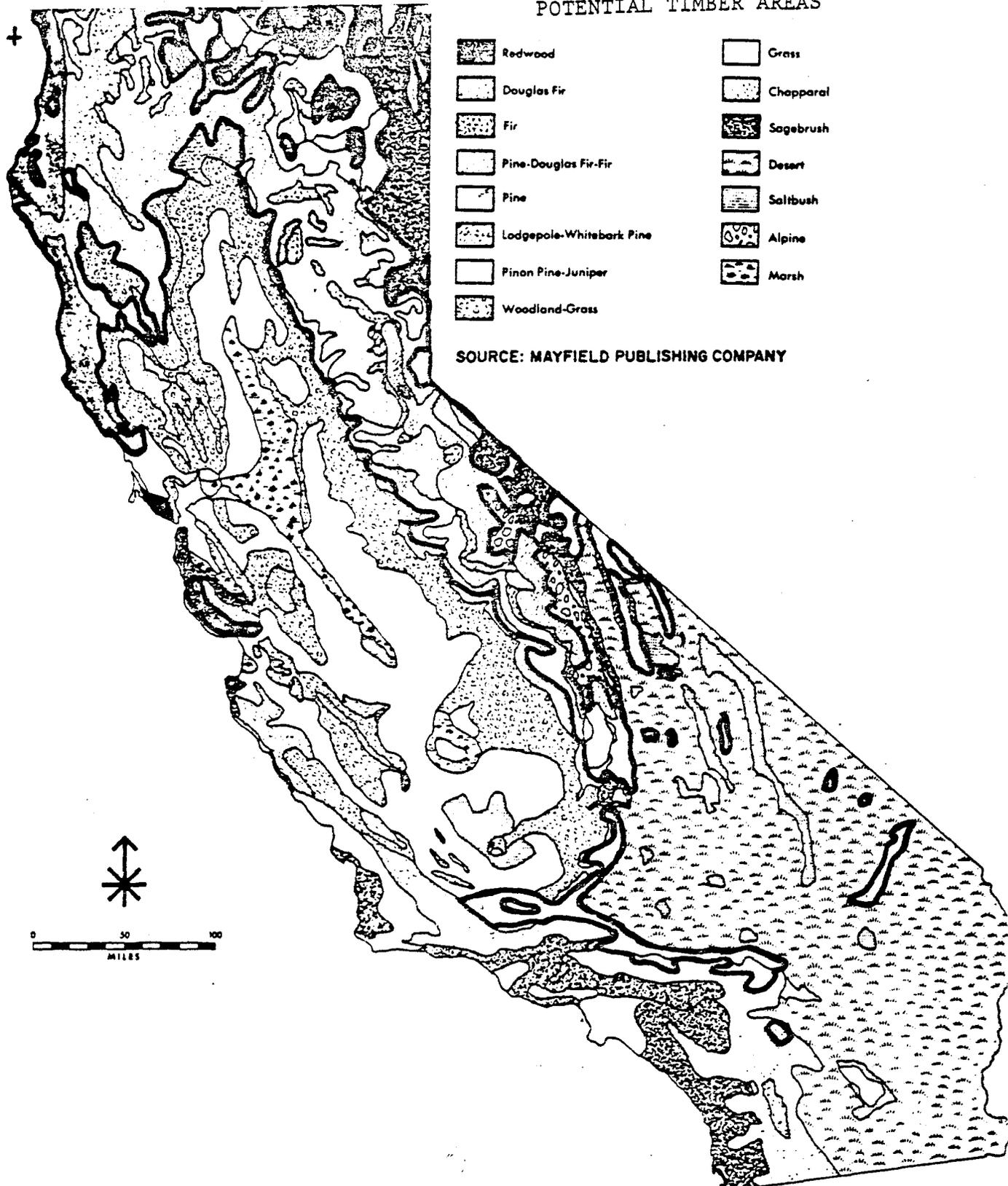
MINEKALS

- | | |
|--------------------------------------|----------------------|
| M MAGNESIUM | B BORON |
| • MERCURY | ◀ CEMENT PLANTS |
| ☆ STONE | ⊙ CLAY |
| ⊙ GYPSUM | * CRUDE SALT |
| ■ GYPSUM CALCINING PLANTS | D DIATOMACEOUS EARTH |
| NC CHROMIUM AND NICKEL BEARING CLAYS | I IRON ORE |
| P POTASH, SODA ASH | • SAND AND GRAVEL |
| Re RARE EARTHS | ▲ SALT REFINERIES |
| A ALUMINA | T TUNGSTEN |
| | G GOLD |
| | S SILVER |
| | t TALC |



SOURCE: Mayfield Publishing Company and State Lands Division records.

FIGURE V-g
POTENTIAL TIMBER AREAS



- | | |
|--|--|
|  Redwood |  Grass |
|  Douglas Fir |  Chapparral |
|  Fir |  Sagebrush |
|  Pine-Douglas Fir-Fir |  Desert |
|  Pine |  Saltbush |
|  Lodgepole-Whitebark Pine |  Alpine |
|  Pinon Pine-Juniper |  Marsh |
|  Woodland-Grass | |

SOURCE: MAYFIELD PUBLISHING COMPANY

million acre grant should be expected to achieve parity with what the railroad or homestead grants provided.

To achieve parity of grants with those received by other Western states, California should have received 14 to 16 percent of the public land. Thus, an additional grant of 5 to 8 million acres would equate California's grant to that received by similar Western states such as New Mexico or Utah.

Similarly, California could reasonably request that they be granted land more equal to the grants received by other states entering the Union at the time California was admitted. Wisconsin, admitted in 1848, two years prior to California's admission, was granted 29 percent of the public domain land or 10,179,804 acres. Further, Federal ownership in Wisconsin is 5 percent. For California to be commensurate with this grant, it should have been granted 28,436,455 acres or an additional 20,000,000 acres. A reduction of Federal ownership to 5 percent or so would leave the State or others with an additional 40,000,000 acres.

The Division believes that California should be fairly compensated for past inequities. In order for the State to control and manage its own destiny, a reduction in the amount of Federal ownership of land is necessary. Thus, an exchange with the Federal government should incorporate within it a proposal by which the State receives an additional 3 to 5 million acres of land which it designates. The Commission in return would transfer to the Federal government all the State's rights in school lands and mineral reservations outside the boundaries of those areas selected for acquisition.

The lands selected for acquisition by grant are discussed in the subsequent paragraphs, according to the resource desired. No regard has been made to which agency of the Federal government administers these lands. Accordingly, the lands selected represent a mixture of Forest Service lands, BLM lands, and Defense Department lands. Every attempt has been made to remove State interest from the heart of the California Desert Management Area and other Federal priority management areas, while still maintaining an adequate resource base for California.

Lands With Geothermal Potential

Coso Hot Springs K.G.R.A. (Known Geothermal Resources Area)

BLM Lands - The lands lying within the block formed by Townships 19, 20, 21, 22 and 23 South; Ranges 37, 37-1/2, and 38 East, MDB&M, totaling approximately 99,200 acres.

Department of Defense Lands - The lands lying within the China Lake Naval Weapons Center, in a block formed by Townships 19, 20, 21 and 22 South; Ranges 38 and 39 East, MDB&M, totaling approximately 184,320 acres.

Geysers K.G.R.A.

BLM Lands - All the lands within the Putah Creek Planning Unit except for those lands lying south of Township 11 North and east of Range 4 West, MDM; the lands within the Cow Mountain Planning Unit lying within the block formed by Townships 12 and 13 North and Ranges 9, 10 and 11 West, MDM; and the lands within the East Lake Planning Unit lying within the block formed by Townships 13 and 14 North and Ranges 5, 6 and 7 West, MDM, totaling approximately 44,980 acres.

Mono-Long Valley K.G.R.A.

BLM Lands - The lands within the Benton Planning Unit lying within the block formed by Townships 1, 2, 3 and 4 South and Ranges 26, 27, 28, 29 and 30 East, MDM, totaling approximately 14,720 acres.

Forest Service Lands - The lands lying within Townships 1, 2, 3 and 4 South; Ranges 26, 27 and 28 East, MDB&M, totaling approximately 196,840 acres.

Lands With Mineral Potential

BLM Lands - The lands lying within the Cache Peak Planning Unit lying within Townships 30 and 31 South, Range 38 East, MDB&M, totaling approximately 16,640 acres.

Forest Service Lands

1. Plumas and Lassen National Forests

The lands lying within the area formed by:

Township 25 North; Ranges 7, 8, 9, 10, 11, 12 East
Township 26 North; Ranges 7, 8, 9, 10, 11, 12 East
Township 27 North; Ranges 10, 11, 12 East
Township 28 North; Ranges 10, 11, 12 East
Township 29 North; Ranges 10, 11, 12 East; MDB&M

Totaling approximately 362,970 acres

1. Trinity National Forest

The lands lying within the area formed by:

Township 2 North; Ranges 9, 10, 11 West
Township 1 North; Ranges 9, 10, 11, 12 West
Township 1 South; Ranges 9, 10, 11 West
Township 2 South; Ranges 9, 10 West; HBM

Totaling approximately 169,000 acres

Lands Having Forest and Recreation

Forest Service Lands - The lands lying within the block formed by Townships 17, 18 and 19 North; Ranges 14, 15 and 16 East, MDB&M, totaling approximately 76,160 acres.

The lands lying in Township 17 South, Range 31 East, MDB&M, totaling approximately 15,360 acres.

BLM Lands

1. Trinity Planning Unit	48,700 acres
2. Scott Valley Planning Unit	73,851
3. Hayden Hill Planning Unit	94,321
4. East Mendocino Planning Unit	80,363
5. Red Mountain Planning Unit	40,915
6. Placer-El Dorado Planning Unit	<u>68,682</u>

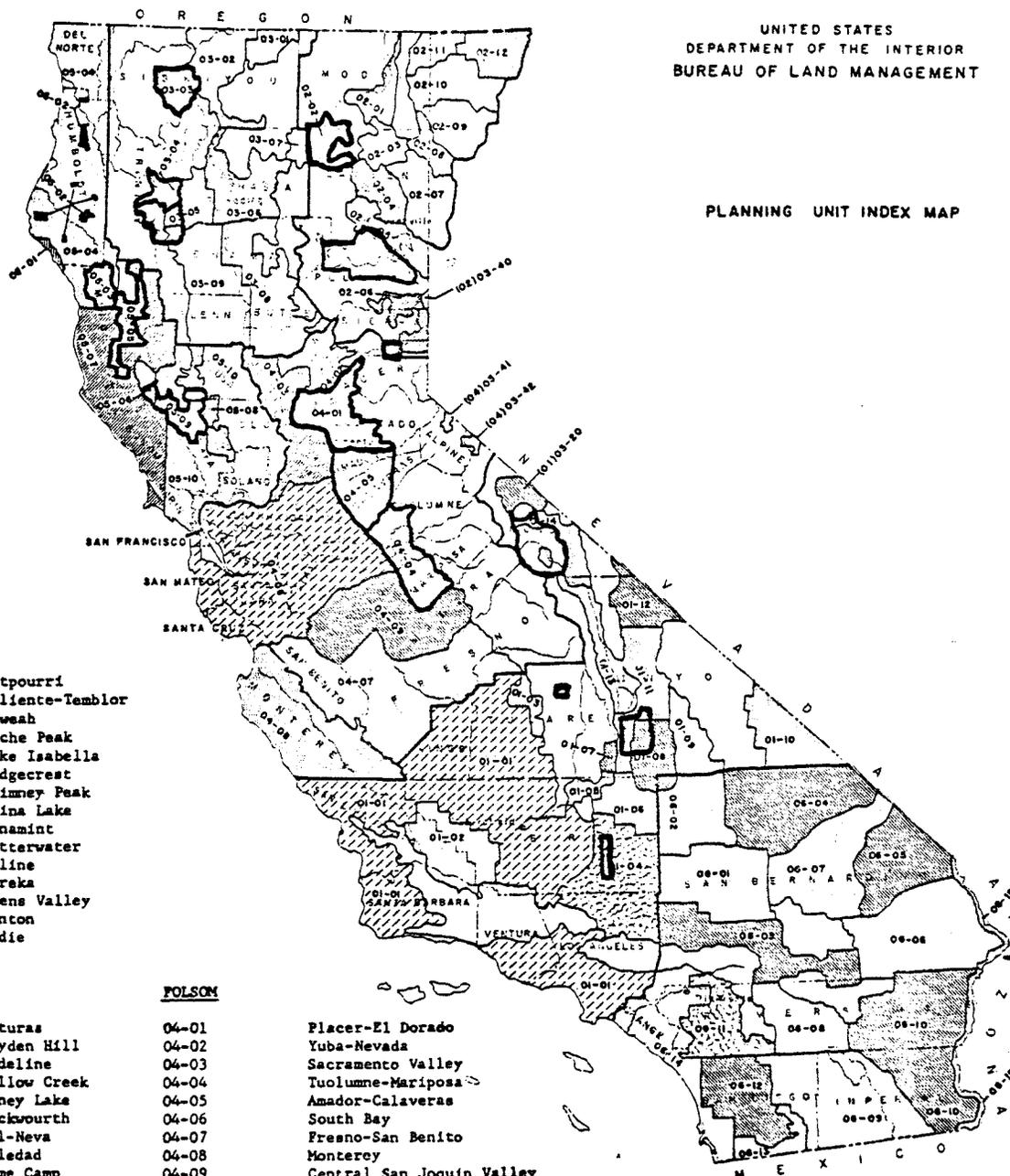
TOTAL 406, 832 acres

Figure 6 shows the land grant recommendation.

**FIGURE VI
LAND GRANT RECOMMENDATION**

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

PLANNING UNIT INDEX MAP



BACERSFIELD

- | | |
|------------|------------------|
| 01-01 | Potpourri |
| 01-02 | Caliente-Temblor |
| 01-03 | Kaweah |
| 01-04 | Cache Peak |
| 01-05 | Lake Isabella |
| 01-06 | Ridgecrest |
| 01-07 | Chimney Peak |
| 01-08 | China Lake |
| 01-09 | Panamint |
| 01-10 | Bitterwater |
| 01-11 | Saline |
| 01-12 | Eureka |
| 01-13 | Owens Valley |
| 01-14 | Benton |
| (01) 03-20 | Bodie |

SUSANVILLE

- | | |
|------------|--------------|
| 02-01 | Alturas |
| 02-02 | Hayden Hill |
| 02-03 | Madeline |
| 02-04 | Willow Creek |
| 02-05 | Honey Lake |
| 02-06 | Beckwourth |
| 02-07 | Cal-Neva |
| 02-08 | Tuledad |
| 02-09 | Home Camp |
| 02-10 | Massacre |
| 02-11 | Cowhead |
| 02-12 | Sheldon |
| (02) 03-40 | Long Valley |

REDDING

- | | |
|-------|----------------|
| 03-01 | Mt. Done |
| 03-02 | Middle Klamath |
| 03-03 | Scott Valley |
| 03-04 | Trinity |
| 03-05 | Clear Creek |
| 03-06 | Shasta |
| 03-07 | Cinder Cone |
| 03-08 | Faucher River |
| 03-09 | Yolli Bolly |

FOLSOM

- | | |
|------------|----------------------------|
| 04-01 | Placer-El Dorado |
| 04-02 | Yuba-Nevada |
| 04-03 | Sacramento Valley |
| 04-04 | Tuolumne-Mariposa |
| 04-05 | Amador-Calaveras |
| 04-06 | South Bay |
| 04-07 | Fresno-San Benito |
| 04-08 | Monterey |
| 04-09 | Central San Joaquin Valley |
| (04) 03-41 | Markleeville |
| (04) 03-42 | Coleville |

UKIAH

- | | |
|-------|----------------|
| 05-01 | King Range |
| 05-02 | Humboldt |
| 05-03 | Red Mountain |
| 05-04 | Mad River |
| 05-05 | East Mendocino |
| 05-06 | Cow Mountain |
| 05-07 | Russian River |
| 05-08 | East Lake |
| 05-09 | Putah Creek |
| 05-10 | Vallejo |

RIVERSIDE

- | | |
|-------|----------------------|
| 06-01 | Barstow |
| 06-02 | Trona |
| 06-03 | Victorville |
| 06-04 | Kingston |
| 06-05 | Piute |
| 06-06 | Turtle Mountain |
| 06-07 | Baker |
| 06-08 | Coachella |
| 06-09 | Imperial |
| 06-10 | Chuckwalla |
| 06-11 | Hemet |
| 06-12 | Escondido |
| 06-13 | Border |
| 06-14 | Coastal |
| 06-15 | Lower Colorado River |

APPENDIX A

RESOURCE INVENTORIES
LAND EXCHANGE ALTERNATIVE

REDDING BLM DISTRICT
Scott Valley Planning Unit

The Scott Valley Planning Unit is located in the west central portion of Siskiyou County and is traversed by the Scott River from south to north. The total acreage for the unit amounts to 419,000 acres. The BLM administers 73,851 acres, or 18%. There are no significant State Lands holdings in the unit.

RESOURCES

Minerals

The unit has had a significant mining industry in the past. However, current labor cost and commodity prices inhibit any development of or exploration for deposits existing there. The California Division of Mines and Geology has identified several minerals as either having been mined or located in this planning unit. These are platinum, silver, lead, zinc, coal, iron, gold, copper, barite, chromite, mica, nickel, and asbestos.

Geothermal

The geothermal potential of the unit is unknown.

Timber

There are an estimated 8,198 acres of Ponderosa Pine, White Fir, and Douglas Fir timber, representing a total merchantable volume estimated to be 66.7 MMBF, and a

calculated annual cut of 513 MBF. The annual cut was calculated on 120 year rotation plus 10 years for regeneration. Assuming the above annual cut and current stumpage values, an annual income of \$30,000-40,000 on a sustained yield basis could be realized.

Livestock Grazing

The entire BLM property is suitable for grazing and has a carrying capacity of 1,641 AUMs. The estimated annual income is \$1,800.

Recreation

BLM lands offer cultural features and an abundance of wildlife observations, scenery, hunting, and fishing. Recreational use is moderate.

SUSANVILLE BLM DISTRICT
Hayden Hill Planning Unit

This unit is situated in northwest Lassen and southwest Modoc Counties with a total area of 345,000 acres. The BLM administered lands account for 27% of the total area, or 94,321 acres. There are no significant State land holdings within the unit.

RESOURCES

Grazing

The BLM has 12,493 acres under grazing leases. The carrying capacity is estimated at 9,445 AUMs, which an annual income is estimated to be \$10,000.

Minerals

The unit is considered to have some geothermal potential, though unknown.

Timber

BLM lands are estimated to have 2,135 acres of White Fir and Incense Cedar timber with a total volume of 10.6 MMBF. The allowable cut has been estimated at 1 MMBF per year. At today's values, an estimated annual income for the unit on a sustained yield basis amounting to \$45,000-55,000 could be produced.

Recreation

The unit provides an abundance of hunting, geological features, fishing, hiking, camping, and cultural features. Recreation use is moderate.

REDDING BLM DISTRICT

Trinity Planning Unit

The Trinity Planning Unit is situated in Trinity County within close proximity of the Towns of Weaverville, Douglas City, and Hayfork. The unit totals 535,000 acres, of which 80.3% or 430,000 acres are federally owned; Forest Service -- 381,300 acres and the BLM -- 48,700 acres. The Bureau has withdrawn 3,768 acres within this unit.

RESOURCES

Minerals

The entire area near Weaverville was mined heavily for gold in earlier years. There are currently many mining claims but, due to the high cost of mining, staff knows of no active operations except for sand and gravel extractions. There is one coal lease in the N $\frac{1}{2}$ of NW $\frac{1}{4}$, Section 32, T 32 N, R 9 W. The area has been recognized by the California Division of Mines and Geology as having been mined in the past and having potential for platinum, silver, zinc, zirconium and hafnium, lead, coal, gold, copper, asbestos, barite, chromite, nickel, and molybdenum.

Geothermal

The unit has no known geothermal potential.

Timber

Of the 48,700 acres of BLM lands in the unit, it is estimated that 22,860 acres support an estimated 225.8 million board feet of Ponderosa and Sugar Pine, Douglas Fir, and True Fir. This volume is based on the current inventory and does not show the increase in volume that would have taken place by additional growth since 1965.

BLM's Estimate of Possible Sustainable Harvest Level

Acreage:	23,000 acres
Average Site Index:	102
Theoretically Attainable Production From Yield Tables:	402 bd. ft./ac./yr.
Achievable Production in a Practical Sense: (60-70% of 402)	240-280 bd. ft./ac./yr.
Reasonable Possible Sustained Yield Level 6MM/Yr. (+ 15%)	

BLM estimates that due to high losses they are experiencing in their old growth and the productive potential of these stands under intensive management, the minimum cut should be at least 2,600 MBF in each year and average 6,000 MBF/yr. over a 3-to-5 year period for the next 10 years.

On a sustained yield, and at current stumpage values, it is estimated that the maximum allowable cut could generate an annual income of \$420,000 to \$540,000.

Recreation

The Weaverville area is very popular for recreational activities such as fishing, hunting, camping, gold panning, hiking, sightseeing, and abandoned mine explorations. Also there are small-scale gold dredging activities on the Trinity River and its tributaries. The area is well known for its fine deer hunting, steelhead, trout fishing, and all types of water-related activities.

BLM lands control the access to many miles of the Trinity River and its tributaries and afford opportunities on Clair Engle Lake. There are two BLM maintained public campgrounds. One is located at Douglas City, the other at Junction City. The recreation potential is rated high.

Livestock Grazing

Livestock production is a minor industry in this unit. There are currently 3,936 acres under grazing lease on BLM land. These lands have a carrying capacity of 70 AUMs. The lease area is concentrated in the south central portion of the unit. There is estimated to be 5,056 acres of potential BLM grazing land in the unit, having a carrying capacity of 288 AUMs.

UKIAH BLM DISTRICT
East Mendocino Planning Unit

The East Mendocino Unit lies within the Coastal Range of Northern California and extends from approximately 3 miles south and west of Ukiah to Little Butte, which is located 5.5 miles north of the Mendocino/Trinity County line. Most of the east boundary adjoins the Mendocino National Forest and the west boundary is an irregular line which falls near Mina, Covelo, Dos Rios, and Willits.

The unit totals 376,800 acres. Twenty-two percent, or 80,363 acres, of this land is BLM administered, much of which is scattered large blocks of land. Approximately 3,200 acres have been withdrawn by the BLM in support of potential reservoir sites. There are no significant State Lands holdings within the unit.

RESOURCES

Grazing

There are approximately 26,000 acres of BLM land leased for grazing, providing 3,219 AUMs of forage. This generates an annual revenue of \$3,219. There are 6,500 acres of good quality grassland in the unit. Approximately 4,900 acres of this land are not under lease at this time due to limited demand.

Timber

Approximately one-quarter of this unit has productive Douglas Fir and Ponderosa Pine forestland. A total of 20,530 acres have been identified as having a potential for intensive forest management.

There is an estimated 323 MMBF and an estimated annual allowable cut of 5 MMBF. At current stumpage prices, this resource represents a value range of 25 million dollars to 29 million dollars. With the allowable cut at 5 MMBF, an estimated annual income of \$400,000 could be generated from timber sales.

Mineral

The unit has produced small but commercial quantities of minerals, including manganese, chromite, asbestos, magnesite, copper, limestone, dolomite, and jade of gem quality. None of these have been mined in significant amounts on BLM lands.

Geothermal

Recently BLM lands have been blanketed with lease applications for geothermal resources.

Wildlife

Due to lack of public access, native ecosystems and relationships are virtually undisturbed on BLM land. There

are many species of wildlife in the unit, including black bear, blacktail deer, fischer, bald and golden eagel.

Recreation

Over most of the unit, recreation use is not feasible due to physical restraints. A few areas are usable via water routes, logging roads, and occasional surfaced roads. There are hunting and off-road vehicle touring, and general sightseeing on most all of the unit. Recreational use on the unit is low.

UKIAH BLM DISTRICT

Red Mountain Planning Unit

The Red Mountain Planning Unit contains approximately 350 square miles and is situated in the northwestern portion of California. The unit is bordered by the Eel River on the east and the South Fork of the Eel River on the west.

Of the 227,306 acres in the unit, 18% is BLM administered. The Bureau has withdrawn 4,073 acres within the unit. Private lands account for 77% of the unit, while other public lands account for 5%. The Eel River is State owned, but there is only one small parcel of BLM land adjacent to the River. There is one 40-acre school land parcel in the unit.

RESOURCES

Timber

The unit is estimated to have 192 MMBF of merchantable Ponderosa Pine and Douglas Fir timber on 19,000 acres. The annual allowable cut has been estimated at 3 MMBF. This represents a potential income range from the unit to be from \$210,000 to \$270,000 per year.

Grazing

There are no grazing leases at present on the unit. The portions of the unit that are suitable for grazing are estimated to have a carrying capacity of 803 AUMs.

Minerals

The U. S. Geological Survey indicates that Sections 1-3, 10-14, 23-25, and 36, T 24 N, R 17 W, MDM, may be valuable for oil and gas.

Geothermal

There are no known areas within this unit.

Wildlife

Deer are the predominate wildlife species; followed by bear, wild pigs, and a private herd of 50 buffalo.

Recreation

Although hunting has been the most popular form of recreation on this unit, off-road vehicle use is becoming increasingly popular. Recreational use of the unit is moderate.

FOLSOM BLM DISTRICT

Placer-El Dorado Planning Unit

This unit is located along the west slope and foothill area of the Sierra Nevada Mountains in El Dorado and Placer Counties. It extends from the Placer-Nevada County line in the north to the Middle Fork of the Cosumnes River in the south, and eastward from the City of Auburn to the Forest Service boundaries of the Tahoe and El Dorado National Forests.

The unit has a total area of 2,008,000 acres. There are 68,682 acres of scattered BLM administered lands in the unit, representing approximately 3% of the unit's total acreage. State school lands within the unit total 236.88 acres.

RESOURCES

Minerals

Since gold was discovered in Coloma, millions of dollars in gold have been taken from this unit. In the past 20 years or so, gold mining has been static; however, a recent strike in the Placerville area has revived this industry. Currently, limestone is the most important mineral commodity in the unit.

Additionally, the unit has potential for iron, magnesium compounds, mica, platinum, silver, clay, sulfur, zirconium and hafnium, coal, gem stones, talc, copper, asbestos, chromite, nickel, speciality sands, and molybdenum.

Geothermal

The unit has no known geothermal potential.

Livestock Forage

There are approximately 3,700 acres leased for grazing which have an estimated carrying capacity of 612 AUMs. The grazing leases are estimated to provide approximately \$700 annually to the BLM unit.

Timber

There is an estimated 142,281,000 board feet of timber on approximately 14,000 acres. Of the timber species, Ponderosa Pine represents 66% of the volume, Douglas Fir 25%, Sugar Pine 4%, and Incense Cedar 5%.

Recreation

The unit provides plenty of scenery, wildlife (hunting and fishing), cultural and historical sites, historical trails, many geological features, and reservoirs for water sports. Recreational use is intense on the unit.

FOLSOM BLM DISTRICT

Tuolumne-Mariposa Planning Unit

This unit is situated primarily in Mariposa and Tuolumne Counties and extends from Ownes Reservoir in the south to the Stanislaus National Forest boundary on the north and east. The west boundary of the unit is the common county boundary to Stanislaus and Merced Counties.

There are 2,387,000 acres total in the unit; of this acreage, 5% or 120,000 acres are administered by the BLM. There are no significant State Lands holdings within the unit.

RESOURCES

Minerals

The principal minerals are sand and gravel, decorative stone, gold, silver, and copper. Of these minerals, decorative stone brings the greatest revenue from the unit (source - BLM). The BLM lists 1,300 mining claims throughout the entire unit. Other potential minerals are bismuth, barite, asbestos, gem stones, coal, limestone, beryllium, aluminum, zinc, sulfur, magnesium compounds, mica, uranium, molybdenum, and chromite.

Geothermal

The unit has no known geothermal potential.

Livestock Grazing

There are 86,594 acres of BLM lands under grazing leases with an estimated carrying capacity of 17,415 AUMs. This is estimated to provide \$18,000 per year revenue from livestock grazing.

Recreation

Primary recreational attractions for the unit are rivers, clean air, and open space. The unit provides hunting, fishing, camping, hiking, sightseeing, and water sports such as boating, waterskiing, and skin diving. There is intense recreational use on the unit.

Timber

There are no manageable timber stands on the BLM lands.

FOLSOM BLM DISTRICT

Amador-Calaveras Planning Unit

This unit is situated in Amador and Calaveras Counties and extends from the Stanislaus River in the south to the El Dorado-Amador County line to the north, from Sacramento and Stanislaus County lines on the west to the El Dorado line and Stanislaus National Forest boundary on the east.

There are 1,036,800 acres in the unit with 37,148 acres administered by the BLM. This represents only 4% of the total lands within the unit. Additionally, there are 172,624 acres of Forest Service lands in the unit. There is no significant State land ownership within the unit.

RESOURCES

Minerals

This unit has potential for many minerals as identified by the Division of Mines and Geology. These are nickel, speciality sands, molybdenum, uranium, cobalt, clay, magnesium compounds, platinum, quartz crystals, silver, zinc, zirconium and hafnium, aluminum, limestone, coal, iron, gold, gem stones, copper, and asbestos. Presently, limestone for cement and decorative stone is the principal mined commodity.

Geothermal

There is no known geothermal potential in this unit.

Livestock Grazing

There are 17,933 acres under grazing leases with an estimated carrying capacity of 2,481 AUMs. This provides an annual income amounting to approximately \$2,500.

Timber

There are an estimated 13,585 acres of commercial forestland on the BLM properties, which are estimated to support a volume of 151.7 MMBF of timber. The BLM district did not provide any data regarding the allowable cut on this timber, but it is estimated that 2.5 million feet of annual allowable cut would be a reasonable sustained yield volume. At current stumpage prices, this could provide the district with an annual revenue of \$175,000 to \$200,000 per year.

Recreation

This unit contains many streams that offer fishing. There is hunting in the area, along with hiking, camping, picnicking, rock hounding, and off-road vehicle travel. There have been many recreational sights developed by other agencies for the purposes of camping and picnicking. Recreational use is intense on the unit.

UKIAH BLM DISTRICT
Putah Creek Planning Unit

This unit is situated in six counties, from Mendocino County south and east to Solano County.

The planning unit contains approximately 46,700 acres of land administered by the BLM. There is a total of 347,563 acres in the unit. There are over 100 separate BLM tracts ranging in size from about 3 acres to 4,000 acres.

There is little State school land within the unit; however, there are several parcels in which the State has retained mineral rights. The State has recommended acquisition of these parcels primarily for their geothermal potential.

RESOURCES

Minerals

The unit has produced commercial quantities of mercury, asbestos, pumice, chromite, magnesite, silver, gold, manganese, copper, cobalt, and diatomite. Only mercury and asbestos have been produced in significant quantities. The unit also has potential for sulfur, phosphates, and magnesium compounds.

Geothermal

The unit has high geothermal potential. Recent lease of public land by the BLM has generated significant income. Approximately 5.5 million dollars was received by BLM for geothermal rights on selected parcels of BLM land near The

Geysers. About 30,000 acres of public land in the unit are covered by applications to lease geothermal resources.

Grazing

Approximately 15,000 acres of BLM land are under grazing leases with an overall capacity of 17 acres per AUM. This unit provides annual income of \$880 from its grazing leases.

Forestry

There are 550 acres of Douglas Fir and Ponderosa Pine growing on the public land. All forestlands were classified as nonproductive because of their small and widely scattered stands.

Recreation

Since much of the access to BLM lands is controlled by the surrounding private lands (approximately 90%), very little recreational activity occurs on BLM lands. The principal recreational resource is hunting.

Wildlife

Deer and quail are very common. Among the less common species are the bald eagle, peregrine falcon, and spotted owl.

UKIAH BLM DISTRICT

Cow Mountain Planning Unit

This unit has a total land area of 135,400 acres. It extends from just below Hopland to the south to just north of Highway 20 to the north. It is bounded on the west by Highway 101 and on the east by generally the Lake and Mendocino County lines.

The BLM lands account for 60,000 acres of the unit which are generally blocked together and surrounded by private land. There is a very limited public access to the BLM lands. There is no State land ownership in the unit. There are several small parcels of State mineral interest in and contiguous to the south end of the unit.

The areas selected for acquisition were chosen for their geothermal potential.

RESOURCES

Minerals

There is no mining activity within the unit; however, minerals that have been claimed are: manganese, chromite, nickel, asbestos, and copper. The unit has potential for pumice as well.

Geothermal

The unit has high geothermal potential. The Geysers K.G.R.A. extends into the southern part of the unit and the

Witter Hot Springs K.G.R.A. into the northern sections of the unit.

Timber

The district has 1,181 acres of productive forestland containing Douglas Fir and Pine timber. The estimated volume is 7.1 MMBF. The BLM lands are so completely surrounded by private lands that the timber acreage is difficult to manage.

Water

The unit has an average annual rainfall of 40 inches. Annual surface water is estimated at 186,512 ac./ft.

Recreation

Because of its proximity to a large population center, this unit has considerable value as a recreation resource. Due to the high game population, hunting exceeds the other forms of recreation. Recent years have seen as high as 45,000 recreational visits. The overall recreational use on the unit is intense.

UKIAH BLM DISTRICT
East Lake Planning Unit

This unit extends from Lake Berryessa to the south to the Glenn-Colusa County line to the north. It extends as far east as Highway 16 and as far west as Clear Lake.

The BLM administered lands account for 51% of the total acreage of 294,000 acres for the unit. There are no significant State land holdings in the unit.

The lands selected were chosen for their geothermal potential.

RESOURCES

Minerals

There are 50 known valid claims in the unit. Locatable minerals are chromite, asbestos, mercury, sand and gravel, pumice, and gem stones.

Geothermal

The unit has high-to-good geothermal potential based on its juxtaposition to The Geysers K.G.R.A.

BAKERSFIELD BLM DISTRICT

China Lake & Saline Planning Units

These units are located east of the Owens Valley and include Coso Hot Springs, which lies mostly within the China Lake Naval Weapons Center. The lands identified for acquisition were selected for their potential geothermal and mineral resources. There are 18 sections of BLM land within the Coso Hot Springs K.G.R.A., 1 section of State school lands within the K.G.R.A., and a section and a half of reserved minerals.

RESOURCES

Minerals

The vacant lands within this unit have significant mineral potential. Significantly, the Darwin Mining District is included in this unit. The Division of Mines and Geology has identified the area as having potential for pumice, silver, zinc, lead, tin, iron, gold, sulfur, mercury, and uranium.

Geothermal

This unit has a very high geothermal potential. The Coso Hot Springs K.G.R.A. is considered one of the hottest geothermal systems in California. (The U.S.G.S. has recognized it as having the best potential of any geothermal area in the Western United States.)

RIVERSIDE BLM DISTRICT

Trona & Ridgecrest Planning Units

The Trona Planning Unit is located in northwesterly San Bernardino County and abuts Kern County on the west and Inyo County on the north. China Lake Naval Weapons Center is adjacent to the northwesterly boundary with Randsburg Test Range abutting on the northeast.

The Ridgecrest Planning Unit, located in northeasterly Kern County, abuts the Sequoia National Forest on the west and the China Lake Naval Weapons Center on the northeast.

BLM controls 463,255 acres of the 606,915 acres within the Trona unit. Southern Pacific Land Company owns 17,920 . acres with the Division of State Lands controlling 10,815 acres. The remaining 114,925 acres are in private ownership.

The majority of the Ridgecrest Planning Unit is public domain land administered by BLM. The Division of State Lands administers 399 acres in the Ridgecrest unit and there are 6 sections in which the State has minerals reserved.

RESOURCES

Grazing

Approximately 50% of BLM lands are currently under lease. However, revenue from grazing activities is not considered major. The area averages 117 acres per AUM. Lack of water and competition from wildlife are limiting factors. All

grazing activities are sheep operations with the exception of one. Water for these grazing operations is imported.

Minerals

Mining is the economic base of the unit. Potash, sodium, tungsten, gold, silver, trona, sand and gravel, feldspar, perlite, uranium, coal, salt, borax, mercury, and other minerals are found in these units.

Water

The majority of the domestic water is imported from Indian Wells Valley which is located westerly of the unit. There are a few isolated wells and springs near Cuddeback and Harper Lakes.

Wildlife

The 300 species found in this unit are typical to the desert community. There are no rare or endangered species. Areas in and near the Lava Mountains are noted for their wildlife habitat, particularly the Desert Tortoise.

Recreation

Off-road vehicle use and mineral collecting are the dominant recreational uses of these areas. Important scenic areas are Trona Pinnacles, consisting of 19,600 acres, and the Lava Mountains which will be preserved for their natural qualities.

Geothermal

Most of the unit has significant geothermal potential. The Randsburg K.G.R.A. is proposed for lease in early 1977. The existence of this resource is the primary reason for selecting this area.

BAKERSFIELD BLM DISTRICT

Benton Planning Unit

This unit contains 361,527 acres and is located in Mono and Inyo Counties. BLM controls 302,080 acres and the Division of State Lands 3,520. The remaining 55,927 acres are in private ownership.

RESOURCES

Minerals

Pumic, Bishop tuff, gold, silver, lead, and copper constitute the major minerals in the unit. Mineral activity consists mainly of annual assessment work only. Of the 65 mines and prospects, 18 are producers. The unit has been recognized as having potential for kyanite and andalusite (Al_xSiO_x), pumice, and pyrophyllite.

Geothermal

Mono-Long Valley near Crowley and Mono Lakes is a Known G.R.A. Currently, there are two geothermal leases covering 4,710 acres. No bids were received by BLM at their second auction on January 22, 1974 for a tract near Mono Lake. However, the geothermal potential for this unit is high, particularly in the Casa Diablo area.

Grazing

An estimated 278,324 acres in the unit are under lease to 20 operators with a capacity of 16,195 AUMs. Individual

lease areas range from 600 to 41,620 acres. Approximately 27% of the Mojave sheep trail lies within the unit. Twelve permits for 5,671 head or 881 AUMs have been issued for trail use.

Water

All BLM lands have been withdrawn for watershed protection. Surface water is limited but adequate for grazing.

Wildlife

The area contains Bighorn Sheep, mule deer and mountain lions. Fish Slough has been withdrawn for protection of the "Desert Pupfish".

Recreation

The major recreational use is fishing, primarily limited to Crowley Lake. There are numerous campgrounds surrounding the unit on U.S.F.S. lands with BLM maintaining one campground containing 47 sites. This unit is rated high as to scenic value.

RIVERSIDE BLM DISTRICT

Baker Planning Unit

This unit, located easterly of Barstow, is adjacent to I-15 on the north, the Nevada State line on the east, and the Marine Corps Training Center on the south. U.S. Highway 40 passes through the southern portion of the unit with the major north/south road being Kelbaker.

Of the 1,602,199 acres within the unit, 78.8% or 1,261,939 acres are controlled by the BLM. The Southern Pacific Land Company is the second major landowner with 180,560 acres. State school lands consist of 49,495 acres with the remaining 110,205 acres being in private ownership.

RESOURCES

Grazing

Approximately 80% of the easterly one-half of the unit is under grazing lease with only 25,000+ acres leased in the westerly one-half. Data on the number of operators, range improvements, or AUMs is not available.

Minerals

Mining is considered the major commercial activity in this area. Approximately 18,000 acres in the unit have known mineral resources, while much of the acreage has potential mineral resources. Presently, the lava beds located near the northeast boundary are currently under lease, and there

is a heavy concentration of unpatented mining claims in the northeasterly portion. Mining claims in the remainder of the unit are believed to be moderate; however, the number and location are unknown. This unit is ranked high for both soft and hard minerals.

Water

Surface water supply is almost nonexistent. However, the area is believed to have significant groundwater supplies.

Wildlife

There are no known endangered or rare species within this unit. However, certain high desert regions have significant wildlife habitat values.

Recreation

This unit contains some historic value in the northeasterly portion. A 4,560-acre parcel southerly of Baker has been withdrawn for significant biological, ecological, and historical values. The entire area is heavily used by off-road vehicles for both play and competitive recreation.

Geothermal

The geothermal potential for most of the unit is unknown. Two KGRAs exist near the southern boundary at Pisqah Crater and Amboy.

RIVERSIDE BLM DISTRICT

Kingston Planning Unit

The Kingston Planning Unit is located in northeastern San Bernardino County. It is bounded on the north by Inyo County, on the east by the State of Nevada, on the south by Interstate 15 and Death Valley, and on the west by Camp Irwin. A small portion of the northwesterly finger of this parcel is surrounded on three sides by Camp Irwin and Death Valley National Park Monument.

The unit contains approximately 1,200,000 acres with about 90% under BLM control. State school lands comprise 49,420 acres and are scattered throughout the unit. Southern Pacific Land Company owns 8,960 acres with the remaining 36,128 acres in private ownership.

RESOURCES

Grazing

Approximately 25,000 acres are currently under lease. The majority of the leased area is in the westerly portion and grazing operations are considered marginal.

Minerals

Significant acreage of this unit has mineral potential. However, presently there are no large-scale mining operations. The unit is ranked as having high potential for soft and metallic minerals. The Clark Mountain and Halloren Springs

areas are noted for being two of the most extensive mineral-rich areas in California.

Wildlife

Other than bighorn sheep, wildlife in this unit consists of normal desert species.

Recreation

There are four developed campsites on lands administered by BLM. Approximately 40,000 acres are currently used for off-road vehicle play. Approximately 11,000 acres contain significant natural features and will be withdrawn.

Geothermal

The unit generally has no known geothermal potential. However, the area near the northeastern corner may have some potential.

BAKERSFIELD BLM DISTRICT
Cache Peak Planning Unit

This unit is located northerly of Mojave in eastern Kern County. California City encompasses the southeasterly portion.

It appears that the majority of the area is under private ownership. BLM parcels appear to be scattered with the heaviest concentrations in the westerly portion. Three State school land parcels, comprising a total of 800 acres, are located in the westerly one-half. There are 66 sections within the unit which have mineral reservations in favor of the State.

RESOURCES

Minerals

This unit has significant mineral potential, particularly for borates (ulexite, colemanite, and others), uranium, tungsten, and salt. Minerals provide the prime impetus for selecting this area.

Geothermal

The geothermal potential of this unit is unknown. However, the unit is sufficiently close to the Randsburg K.G.R.A. to consider this a potential resource.