



ANNUAL STAFF REPORT
ON THE MANAGEMENT OF STATE SCHOOL LANDS **FISCAL YEAR 2016-17**





Note to the Reader

School Lands were granted to the State of California on March 3, 1853 by an Act of Congress (Ch. 145, 10 Stat. 244) to support public schools. These lands consisted of the 16th and 36th sections of land in each township, save lands reserved for other public purposes, lands previously conveyed, e.g., rancho lands, sovereign lands, and swamp or overflowed lands, and lands known to be mineral in character. A supplementary act in 1927 expanded the grant to include minerals (Ch. 57, 44 Stat. 1026). No federal patents to the State were required under the grant. Title to the lands was vested in the State upon approval of the U.S. Township Survey Plats.

Indemnity School Lands (also known as Lieu Lands) – When a Section 16 or Section 36 was not granted to California because of an exception, the State was given the opportunity to select replacement lands from the United States (Ch. 81 19 Stat. 267). Each transaction involved several steps. First, the State filed a list with the federal government describing the lands lost, which were known as base lands. Second, the State filed a list with the federal government describing other federal lands selected in place of the base lands. When the federal government approved replacement lands, it issued the State a Clear List. California's rights to the base lands were relinquished back to the federal government and title to the selected lands became vested in the State. The Clear List was the document of conveyance; the federal government issued no patents.

For this Annual Report, the term *school lands* is used to describe lands obtained under the Act of 1853 and indemnity school lands acquired through the Clear List application process.

The State Lands Commission has jurisdiction over approximately 458,843 of fee-owned school lands. This estimate of acreage is based on the best available mapping software, survey records, and other information contained in the Commission's files. However, many of these parcels have never actually been surveyed on the ground, so this total is only an estimate, and no guarantee is made as to its accuracy.

The **Annual Staff Report on the Management of State School Lands** is prepared pursuant to Public Resources Code § 6477, which requires the State Lands Commission to report annually to the Legislature and the Governor on the management of school and lieu lands. The report covers the fiscal year from July 1, 2016 through June 30, 2017.

CALIFORNIA STATE LANDS COMMISSION

ANNUAL STAFF REPORT

ON THE MANAGEMENT OF STATE SCHOOL LANDS

FISCAL YEAR 2016-17

SUBMITTED TO:

- **HONORABLE EDMUND G. BROWN JR., GOVERNOR**
- **THE CALIFORNIA STATE LEGISLATURE AND**
- **THE STATE TEACHERS' RETIREMENT SYSTEM**



CALIFORNIA STATE LANDS COMMISSION

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BETTY T. YEE, STATE CONTROLLER

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Photo Credits

Front cover top: Calpine's Calistoga Unit 19. Photo by John Grice, courtesy of Calpine Corporation
Page 2: Calpine's Big Geysers Unit 13. Photo by John Grice, courtesy of Calpine Corporation
Page 3 top: Calpine's Eagle Rock Unit 11. Photo by John Grice, courtesy of Calpine Corporation

INTRODUCTION AND EXECUTIVE SUMMARY

The California State Lands Commission manages approximately 458,843 acres of school lands held in fee ownership by the State of California and the reserved mineral interests on approximately 790,000 acres of school lands where the surface estate was sold. These interests are what remain of the 5.5 million acres granted by Congress in 1853. The State sold most of the original school lands during the first 130 years of statehood.

Management of the Commission's School Lands Program is divided between the Mineral Resources Management Division (MRMD) and the Land Management Division (LMD). The MRMD is responsible for geothermal, solid minerals, and oil and gas leasing on school lands and for geothermal resource development, mining activities, and oil and gas development. The LMD is responsible for managing surface activities on school lands.

School lands were placed into a statutory trust in 1984 when the Legislature enacted the School Land Bank Act (Act) and created the School Land Bank Fund. The Commission is the trustee of the Fund. Sections 8700 through 8723 of the Public Resources Code establish management guidelines for school lands. The Act states that school lands and attendant interests are to be proactively managed and enhanced to provide an economic base in support of public schools. The Act requires the Commission to take all action necessary to fully develop school lands, indemnity interests, and attendant mineral interests into a permanent and productive resource base. Public Resources Code § 8701 contains findings and declarations that emphasize developing school lands into a permanent and productive resource base and underscore that all transactions, including exchanges, sales, and acquisitions, should be implemented for revenue-generating purposes.

Public Resources Code § 6217.7 requires that the Commission deposit all net revenues, monies, and remittances from the sale of school lands into the State Treasury to the credit of the School Land Bank Fund. Public Resources Code § 6217.5 requires, with one exception, that all net revenues, monies, and remittances from school and lieu lands (i.e., royalties, rents, and interest generated from promissory notes) are deposited into the State Treasury to the credit of the Teachers' Retirement Fund, which benefits the State Teachers' Retirement System (STRS).

The Commission's priorities in administering the School Lands Program are to maximize revenues from school lands and reserved mineral interests to benefit STRS and to protect the assets of the School Land Bank Fund.

Net revenue transferred to the STRS fund during the fiscal year 2016-17 was \$5,392,243.65, an increase of 14.8 percent compared to the fiscal year 2015-16. The increase was primarily attributable to two factors. First, gross revenues from the solid minerals program increased by 51.3 percent, mainly because production from Hanson Aggregates, which had been idle since 2009, increased. Second, overall expenses declined 12.3 percent, mostly because of reduced staff expenses on non-reimbursable activities, such as land exchanges with the federal government.

The School Land Bank Fund's fiscal year-end balance was \$69,362,280.34. The \$59,000,000 loan to the State's General Fund in the fiscal year 2008-09 was repaid, along with \$8,397,704.38 in interest. For a summary of Fund activities, see the table entitled "Financial Summary: Fiscal Year 2016-17" on page 21.

GEOHERMAL, SOLID MINERALS AND OIL & GAS

The Mineral Resources Management Division is responsible for leasing and managing the geothermal, solid minerals, and oil and gas school lands programs. These programs strive to maximize royalty revenues while protecting the environment and achieving the highest standards of public safety. Historically, the majority of annual revenues to STRS from school lands are from mineral production interest. For a summary of this fiscal year revenues, see the table entitled “Summary of Revenue Generated from Geothermal, Solid Minerals, and Oil and Gas Programs – Fiscal Year 2016-17” on page 12.

The Commission’s 2016-2020 Strategic Plan has several actions and target outcomes involving geothermal, solid minerals, oil and gas and other renewable energy resources. These include conducting a thorough mineral and renewable energy resource inventory, actively marketing unleased lands’ potential, and promoting lands for development or exchange. Another key outcome is to manage all resources to effectively and responsibly plan for development and conservation of, and access to, these resources for existing and future generations.

FISCAL YEAR 2016-17 ACTIVITIES

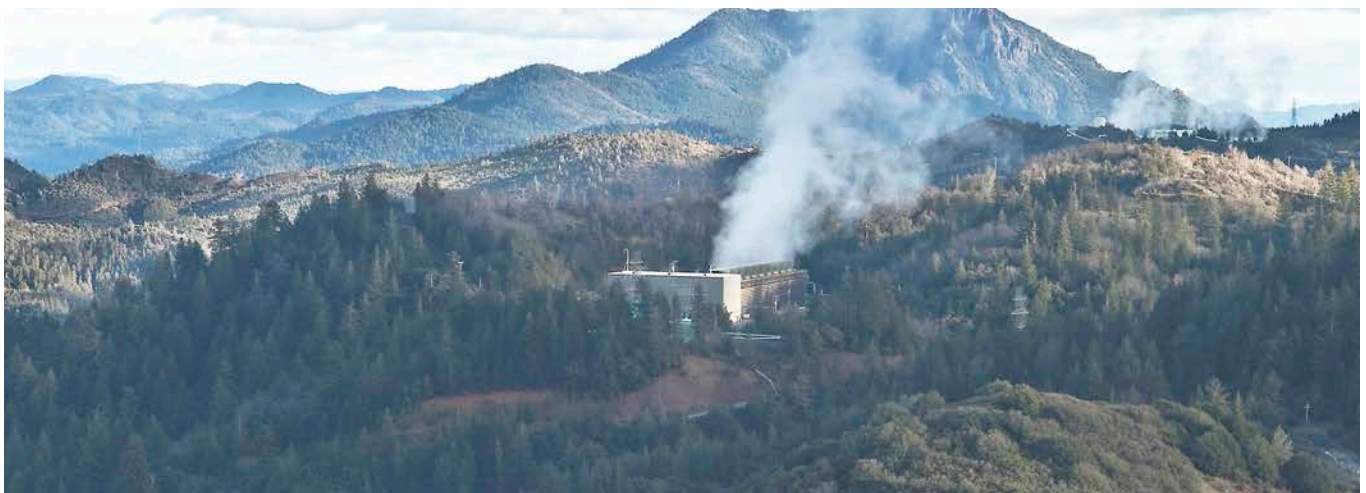
G E O T H E R M A L

Managing geothermal leasing and development on school lands requires staff involvement in several specialized areas. Processing applications and negotiating leases involves input from environmental, planning, and legal staff, and drilling proposals require technical review by engineering staff. Drilling and production operations require documentation by field inspection staff to ensure that

the lessee is complying with drilling plans and lease terms. Staff with expertise in geothermal operations and lease terms must verify production reports, royalty calculations, and payments.

Revenue from the geothermal program is generated from royalties on steam production and electricity generation from State leases

at the Geysers Geothermal Field in Sonoma and Lake Counties. Electricity generated from steam is sold to local utilities. A portion of this revenue is returned to the State based on a predetermined formula. Geothermal royalties totaled \$5,086,929.43 in the fiscal year 2016-2017, a nine percent increase from the prior year. This was attributed to slightly higher electricity prices.



Geothermal Leases at The Geysers

The Geysers, the most extensive geothermal field in the world, has operated commercially for more than a half century. When operating normally, the field generates more than 800 megawatts of electricity annually from approximately 28,000,000 pounds of steam, enough to supply more than 900,000 homes for a year. Steam production has been relatively stable since 1995 as a result of consolidating field operations and increased water injection into the reservoir. The injection water is piped to the field from nearby reclamation plants in Lake County and the City of Santa Rosa in Sonoma County.

The Commission owns a 100 percent mineral interest in 7,247 acres under lease at the Geysers and a 1/16th mineral interest in another 895 acres. Most of these parcels were acquired from the Bureau of Land Management (BLM) as in-lieu lands in the 1940s and through the indemnity selection process in the 1980s. Geysers Power Company LLC and CPN Wild Horse Geothermal LLC, subsidiaries of Calpine Corporation, hold these leases (Lease Nos.

PRC 4596, PRC 4596 "A," PRC 4597, PRC 5206, PRC 6422, PRC 7845, PRC 7179, PRC 8556, PRC 8844 and PRC 8950). Geysers Power Company LLC owns and operates 13 of the 15 electrical-generating units at the Geysers.

The Valley Fire in 2015 had a significant impact on Calpine's operations at the Geysers, but revenue has since returned to pre-fire levels as a result of Calpine's efforts to rebuild damaged power plants.



Geothermal Leasing Applications (Salton Sea Area)

At Truckhaven, the State parcels available for leasing are mixed with private and federal lands managed by the BLM. At a 2014 lease sale, Alternative Energy Resources Inc. was the successful bidder for four sections of BLM lands. They later sold their interest to Ormat Nevada, Inc.

In 2015, ORNI 5 LLC, a subsidiary of Ormat Nevada, Inc., applied for a geophysical permit to conduct a short duration three-dimensional (3D) seismic survey to evaluate



geothermal resources in the Truckhaven area. In the fiscal year 2016-17, staff and stakeholders met periodically to coordinate and discuss survey progress. The California Department of Parks and Recreation requires that biological and cultural surveys are complete before environmental review under the California Environmental Quality Act commences. These need to be complete before the 3D seismic survey is approved.

The surveys started in April 2016, but ORNI put them on hold due to budgetary constraints and other issues.

Also in 2015, ORNI applied for a geothermal lease. Staff deemed the application incomplete pending details of the drilling program. The application was put on hold owing to ORNI's interest in conducting the 3D seismic survey before selecting the drilling locations. In May 2017, due to the setbacks

associated with pursuing the geophysical permit, ORNI informed staff that before conducting the 3D seismic survey, they would submit a proposal to Imperial County to drill up to ten wells in the Truckhaven area. After the biological and cultural surveys near the proposed drill sites are complete, ORNI will apply to Imperial County for a Conditional Use Permit to conduct drilling and pursue the geothermal lease.

Geothermal Prospecting Permits

In October 2015, the Commission approved a 2-year prospecting permit authorizing Deep Rose Development LLC to continue prospecting and to complete road construction on a 640-acre parcel of school land located in Inyo County. Deep Rose plans to drill their first exploratory geothermal well—to determine commerciality of the geothermal resource—within the term of their permit. The parcel is surrounded by the Haiwee Geothermal Lease Area, an assemblage of federal parcels that BLM may offer for lease in the future. Deep Rose has not drilled a well, and their permit will expire on October 31, 2017.

In 2012, the Commission approved a 2-year prospecting permit, No. PRC 8998, to Entiv Organic Energy LLC, authorizing the deepening of a water well on a 520-acre parcel in Siskiyou County. The federal government acquired the surface estate through a condemnation action in the 1940s to enlarge the Lower Klamath National Wildlife Refuge. The mineral interest is reserved to the Commission. In 2001, the U.S. Fish and Wildlife Service drilled a series of shallow wells on the Refuge to locate fresh water for habitat improvement. The drilling revealed that two wells on the State parcel contained hot water (157-192 degrees Fahrenheit).

Also in 2012, Entiv deepened one well to a depth of 1220' to determine if commercial production was viable. In 2014, Entiv informed staff that they had discovered geothermal resources in commercial quantities and would like to exercise their right for a preferential lease. In 2014, Entiv applied for a preferential geothermal lease, although their application is incomplete (Commission File No. W40982). In 2016, Entiv addressed some of the outstanding questions and issues with their application; however, they have not demonstrated the economic viability necessary to obtain a preferential lease.

Geothermal Potential Research on School Lands

Staff's proactive analysis of geothermal potential on school lands has been instrumental in identifying potential geothermal leasing opportunities. In the fiscal year 2015-16, staff reviewed school lands parcels, with varying mineral interest, within or near Known Geothermal Resource Areas. Additional efforts to amend the Commission's GIS inventory of 100 percent reserved mineral interest lands was initiated and are near completion. The inventory is an important and critical step in determining

how the Commission can facilitate developing geothermal resources on state lands.

Staff's continued research into the State's geothermal potential is characterized by a county-level, relatively broad analysis of the surface favorability for conventional geothermal production. Staff also analyzed the deep underground heat gradient suitable for enhanced geothermal systems, which could become more prevalent as the technology and economics of geothermal

projects continue to improve. Introduction of the deeper enhanced geothermal systems potential dataset enabled cross-analysis of this data with other information, such as surface favorability data. Staff compiled a proximity analysis of previously drilled geothermal wells occurring within one mile of state lands and earmarked, in part, to supplement the GIS data with real-world wellhead history. The study of geothermal potential in Imperial County began before the end of the 2016-17 fiscal year.

Renewable Energy Resource Potential Research on School Lands

In addition to focusing on geothermal resource development, staff initiated a study of other renewable resources potential within school land parcels, including solar, wind, and biomass. Staff completed relevant

literature surveys and prepared a list of scientific and economic screening criteria for the development of renewable energy resources. Evaluation for Imperial County is complete, and school land parcels in

that county with the highest potential for renewable resources were identified. The framework for marketing, developing and leasing these potential resources are under consideration.

SOLID MINERALS

In the fiscal year 2016-17, revenue from the solid minerals program totaled \$548,116.18, a 51.3 percent increase from the prior year's revenue of \$362,226.51. The revenue increased because the Hanson Aggregates mineral extraction lease resumed production after being idle since 2009. Additionally, another lessee, Hi-Grade Materials Co.,

slightly increased their aggregate production and royalty revenue.

Staff manages four solid mineral leases on school lands totaling 1,036 acres. One agreement on a 1/16th reserved mineral interest parcel totals 560 acres, and there are six mineral prospecting permits on

school lands totaling 3,058 acres. Of the six, three new permits were added in the fiscal year 2016-17, two to Robert Wetzel, permit Nos. PRC 9385 and PRC 9390, to explore for lithium and other metals, and one to Ronald Martin, permit No. PRC 9378, to explore for precious metals.

Mineral Extraction Leases

Three solid mineral extraction leases are for mining commercial aggregate—primarily sand and gravel. Aggregate production in Southern California is slowly recovering from the 2006 recession. Vulcan Lands ceased mining near the end of the fiscal year 2015-16. The quarry they mined from did not operate in the fiscal year 2016-17 and the processing equipment was moved off-site. A large quantity of aggregate, however, is stockpiled and sold periodically, depending on market demand. Vulcan Lands informed staff that increased competition led to lower prices, making it difficult to acquire new

business. The Vulcan Lands lease serves the market area between Victorville and Barstow, in San Bernardino County. This fiscal year, sales did not exceed Vulcan's minimum annual royalty of \$66,500.



Hi-Grade Materials, Lease No. PRC 8831, which operates a sand and gravel quarry out of Hesperia in San Bernardino County, saw a slight increase in their sales. Hi-Grade Materials paid \$36,503.08 in royalty, an increase of \$14,000 over the prior fiscal year. In 2013, San Bernardino County approved an amendment to Hi-Grade's Mining and Reclamation Plan, which permitted mining the entire 116 acres of leased school lands. This will allow Hi-Grade to continue aggregate mining in San Bernardino County for the next three decades. The Commission recently approved a 10-year lease renewal for Hi-Grade that is effective through June 30, 2023.



Hanson Aggregate's Vigilante Quarry, Lease No. PRC 7301, located in northeast San Diego County, resumed production in April 2016. This lease generated \$360,845.10 in revenue, comprising 66 percent of the total solid mineral revenue. Since Hanson Aggregate's other quarry in the area has been mined out and closed, significant aggregate sales are expected from the Vigilante Quarry because of increased economic activity in the San Diego region.



Since 2014, no gold mining has occurred on the 658-acre Western Mesquite Mines Lease No. PRC 8039 in Imperial County. While the ore portion is mined out, the gold ore that remains on the heap leach pad will be sold for several more years. Through this processing method, the Commission will continue to receive a steadily diminishing income. If gold prices approach \$2,000 per ounce, new mining could occur under an amended mine plan. Otherwise, the Commission may not extend the lease past the 2022 lease term.



Mineral Prospecting Permits

The Commission encourages responsible school lands mineral exploration. The Commission manages six mineral prospecting permits. Mr. Robert Wetzel has four permits. Permit No. PRC 9305 is a school land parcel located northeast of Baker in San Bernardino County that contains the Arrow Gold Mine—a small gold mine last operated in the 1930s. Following favorable assays of surface samples to determine if commercial gold deposits are present, Mr. Wetzel plans to drill on the site.

Mr. Wetzel's other permits, Nos. PRC 9385, PRC 9390, and PRC 9377 are in Inyo County. These were issued to prospect for metallic and non-metallic minerals; specifically, lithium bearing clays. Permit No. PRC 9377 is on 100 percent reserved mineral interest school lands, while the other two permits are on fee lands.

Mr. Ronald Martin has a permit to prospect for gold and other precious metals in Kern County in an area that is known for placer gold. Mr. Martin discovered a small amount of placer gold but has not found gold in commercially producing quantities.

Gerald Baughman has a permit for gold prospecting in a remote area of Mono County north of the old gold mining (ghost) town of Bodie. Mr. Baughman's geological mapping and sampling have revealed promising areas for further precious metal exploration.



Proposed Drill Site

Abandoned Mines on School Lands

Staff continues to actively inventory and remediate abandoned mine features on school lands that may threaten public health and safety, pose dangers to wildlife, and present liability issues to the state. Staff participates in meetings with local, county, state, and federal entities, contractors, environmental organizations, and the public to share information about the physical and chemical hazards and latest remediation techniques used to safeguard abandoned mines.

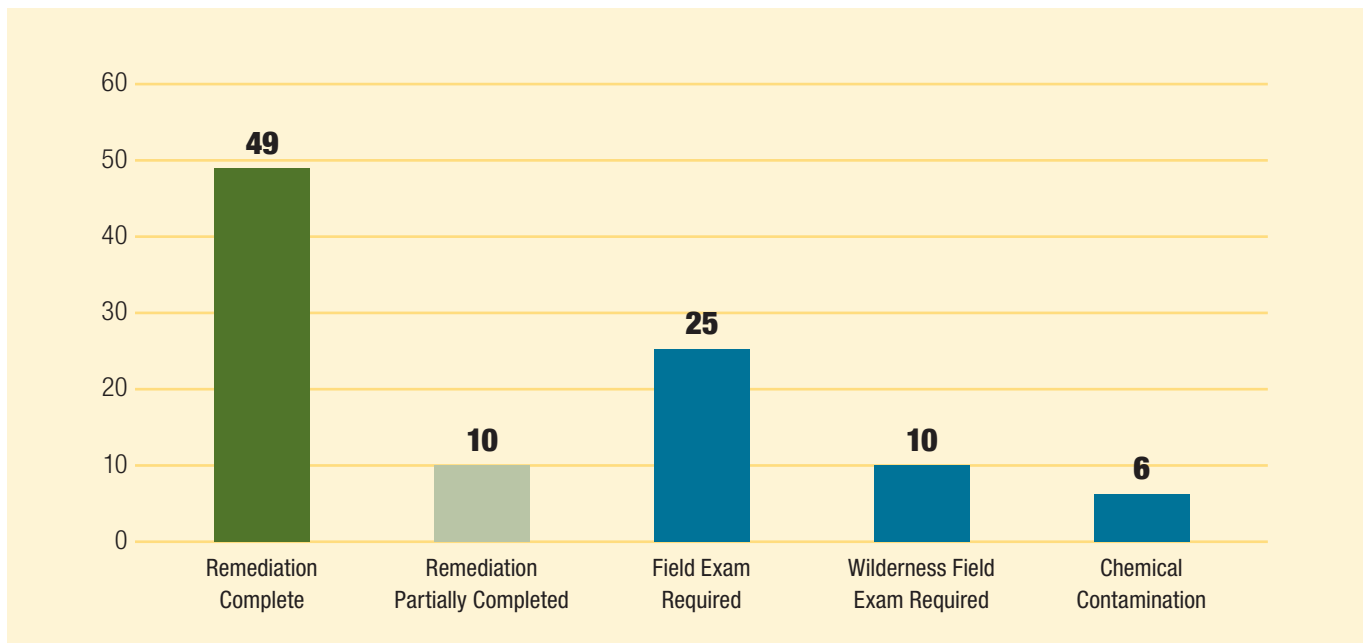
In the fiscal year 2016-2017, staff conducted a series of improvements to existing reclamation, compiled another suitable

list of abandoned mine features slated for remediation during the next fiscal year, constructed fences, and conducted our first high-definition imagery survey of the Calico abandoned mine site using the Commission's drone. Staff installed eight safety fences and 12 abandoned mine lands warning signs at abandoned mine locations throughout the southern part of the state. Some fences are temporary pending more durable remediation while others may be permanent depending on the attributes of the mine feature.

Other mine features were re-inspected for signs of public visitation, wildlife use, and to estimate their risk potential for future

closure. During the previous fiscal year, staff compiled a comprehensive, statewide assessment of all State parcels containing hazardous mine features on school lands. This evaluation, which involved a substantial GIS analysis, revealed that 100 school land parcels had abandoned mine features, not 143 as previously believed. This review relied on a GIS dataset of school lands that showed the state's specific ownership interest within each section. The good news is that of these 100 parcels, nearly half of the mine features have been remediated (see the chart on follow page). Work is underway to assess and remediate the remaining mine features.

Abandoned Mine Lands Summary Fiscal Year 2016-2017



Staff has focused on obtaining the necessary approvals from various stakeholders to remediate five mine sites scheduled for completion during the fiscal year 2017-2018.

These reclamation projects include features at the Mohawk Hill, Clark Mountain Gold, Grande 1-7, Leiser Rey, and the Little Mike mines, all within San Bernardino County.

Staff also engaged in a variety of activities related to the ongoing remediation of hazardous mine features that are described below.

Fiscal Year 2016-2017 Abandoned Mine Lands Accomplishments

August 2016	Inspect cable net closures and install warning signs at Shadow Mountain. Structure stabilization at the Iron Horse Mine. Inspection of Mohawk Hill shaft for possible cupola.
November 2016	Staff installed four fences at mine features in the Cargo Muchacho Mountains in Imperial County and the site of the Tule Wind Project in San Diego County. Mine closures are planned at the Tule Wind project after the construction of a new road for seven wind turbines.
January 2017	Inspection trip to determine the list of the fiscal year 2017-2018 mine remediation.
February 2017	Staff conducted an abandoned mine lands inspection trip of past and future mine remediation for the Executive staff of the Commission and Department of Conservation.
March 2017	Staff installed warning signs and fences at mine features associated with the Trona, Talc City, and two Darwin mine parcels, forming the preliminary list for the next round of closures in Inyo County in fiscal year 2018/2019.
April 2017	Staff conducted a high-definition aerial drone survey of abandoned mine features at the Calico Mine parcel and a volumetric survey of the aggregate in the Ludlow Pit, near Ludlow, CA.
May 2017	Staff installed fences at the Pacific Fluorite and Arrow mines.

New Fence at Trona Mine Shaft



New Fence at Arrow Mine



New Fence at Darwin Shaft and Mill Site



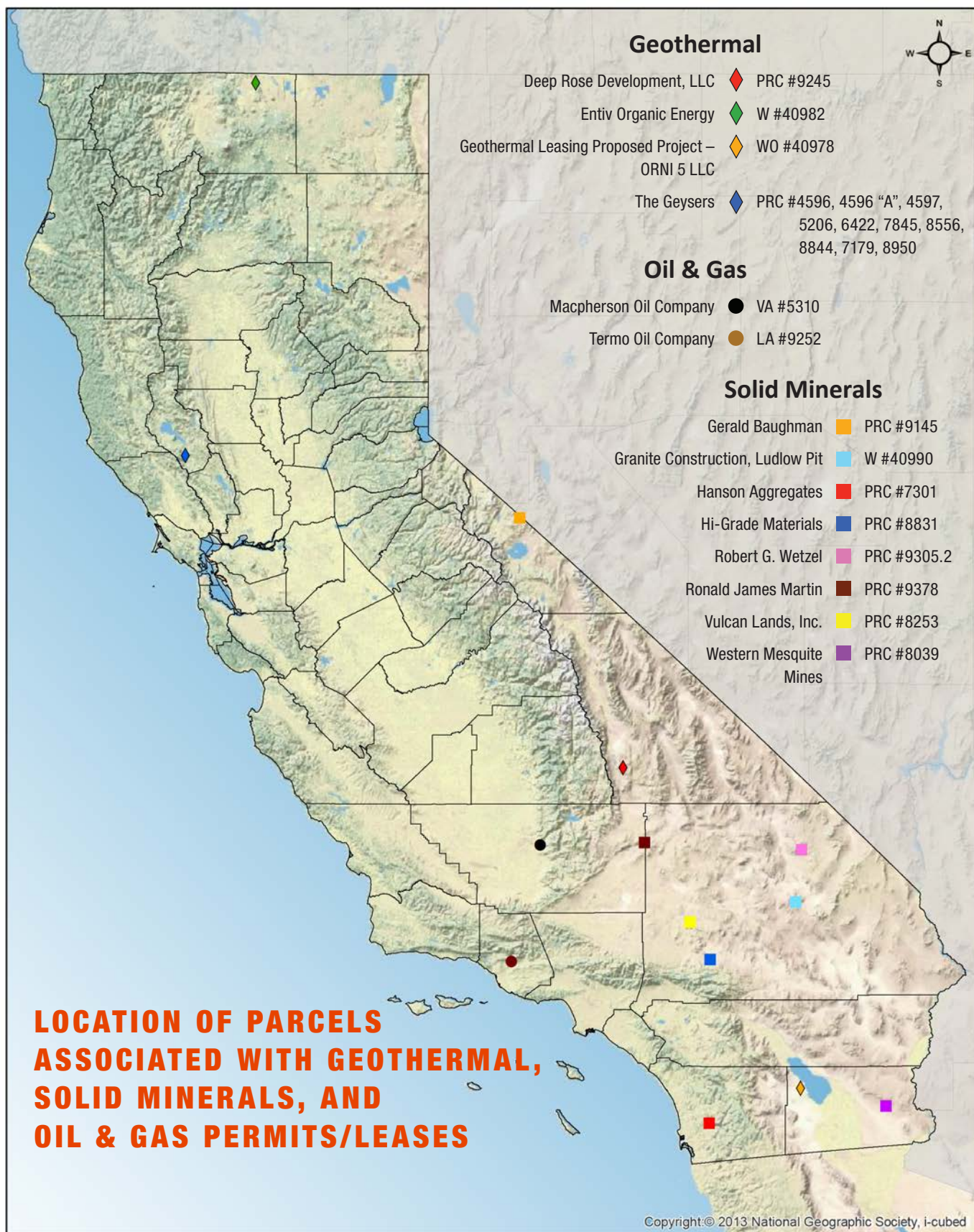
Ludlow Aggregate Pit Drone Survey

OIL and GAS

School lands royalty revenue from oil and gas production totaled \$571,186.22 in the fiscal year 2016-17, which is a 16.5 percent decrease from the prior year. Virtually all of the school lands oil production, \$570,393.10, is from the Round Mountain Parcel. This is a 160-acre parcel described as the southwest quarter of Section 20, Township 28 South, Range 29 East, Mendocino Baseline and Meridian within the Round Mountain field northeast of

Bakersfield in Kern County. Under Chapter 303 of the Statutes of 1921, the state retains a 1/16th mineral interest in the Round Mountain Parcel, which has a designation of VA5310.2. The designation does not possess the typical letters of PRC because the surface estate and 15/16th mineral interest was sold before the Commission was created in 1938. The 15/16th mineral owner has entered into a unit agreement operated by Macpherson Oil Company, and the state

is paid for its 1/16th mineral reservation, which amounts to nearly 0.6% of the unit royalty. Oil production from the unit totaled 2,750,071 barrels, which is a 3.84 percent decrease from the previous fiscal year. The balance of the revenue is from the seven-acre Sulfur Crest parcel in the Ojai Oil Field in Ventura County, which has a designation of LA 9252.2. Similar to Round Mountain, the Sulfur Crest parcel is also a 1/16th mineral reservation retained by the state.



Origination Date: 10/25/2017

Layer Sources: CSLC Boundary Division, CSLC MRM Division, CEC, BLM, USGS

SUMMARY OF REVENUE GENERATED FROM GEOTHERMAL, SOLID MINERALS, AND OIL AND GAS PROGRAMS – FISCAL YEAR 2016-17

Geothermal Royalties

Regular PRC Royalties	\$ 4,590,408.48
Supplemental PRC Royalties.....	\$ 300,543.56
Fractional RMI Royalties	\$ 195,977.39
Deposit to GRDA fund 034	\$ 0.00

Geothermal Total **\$ 5,086,929.43**

Solid Minerals Royalties

Royalties from leases	\$ 548,116.18
Royalties from 1/16th interest parcels	\$ 0.00
Royalties from permits	\$ 0.00

Solid Minerals Total **\$ 548,116.18**

Oil & Gas Royalties

Oil & Gas Total..... **\$ 571,186.22**
(Royalties from 1/16th interest parcels)

TOTAL GROSS REVENUE **\$ 6,206,231.83**



FISCAL YEAR 2017-18 PROJECTIONS

GEOTHERMAL

The Geysers

Staff anticipates that revenue from geothermal leases at the Geysers will be stable in the fiscal year 2017-18, as steam production gently declines, and electricity prices track natural gas costs. Field-wide generation remains lower than historical highs due to the residual impact of the Valley Fire in 2015. Continued scarcity of

capital, preferential federal tax treatment for competing for wind and solar generation, and the relative risk involved with drilling geothermal wells is likely to continue hampering new exploration. In recent months, a small number of well work permit applications have been submitted to sister agencies, suggesting that rig operations

will be limited to maintenance, plug-and-abandonment, and workover activities. Staff will continue to monitor and recommend to the Commission amending and issuing new geothermal leases. Staff encourages new applications and responds to inquiries about geothermal development on an ongoing basis.

Geothermal Applications

Staff expects to process ORNI's negotiated lease application in the Truckhaven area of Imperial County. Staff will continue to participate in meetings with the BLM, the California Department of Parks and

Recreation, and Imperial County to advance the geothermal lease application and develop this potential geothermal resource. Regarding Entiv's geothermal lease application, staff will continue to communicate with the company

about the construction of the new geothermal plant in Oregon, which may help Entiv use new technology to develop a high volume, lower temperature geothermal resource.

Renewable Energy Potential on School Lands

Staff has initiated an effort to develop maps and dashboards showing geothermal potential on all available School Land parcels. Through this effort, staff identified land parcels with the highest potential for future geothermal development in each county, and will market them for prospecting and leasing.

Staff will continue to expand its participation in technical conferences related to renewable energy development with the goal of disseminating information about the State's school lands' renewable energy potential. Current efforts are focused on reviewing publicly available renewable energy resource data developed by scientific, governmental,

and research organizations. Available resources from these entities are used to examine and analyze the suitability of various renewable energy potential on state land parcels throughout California. Staff will, in the future, develop the framework for marketing, bidding, and leasing land parcels with renewable energy potential.

SOLID MINERALS

Mineral Lease Management

Staff conducted, as a requirement for selling the land, a field investigation of the mineral potential of school lands involved in the Spanish Trail Development project. On May 26, 2017, staff received notification that the United States, acting through the Department of the Navy was pursuing condemnation of the State's mineral and fishing rights as part of the Twentynine Palms Marine Corps Air Ground

Combat Center expansion. Staff is working with the Navy to identify what mineral interests the Commission manages and what fishing rights the State retains under the California Constitution. Staff continues to communicate with the Department of the Navy on further clarification of the State's ownership.

The estimated school land revenue for the next fiscal year from solid minerals is

approximately \$600,000. This is based on the resumption of Hanson's Vigilante Quarry mining, Hi-Grade's increase of production, issuance of a new aggregate lease to San Bernardino County at the Ludlow Pit, rising commodity prices, and the continuing ability of aggregate producers to secure competitive contracts.

Mineral Applications

In April 2016, Granite Construction, which mined the Ludlow Pit under expired Lease No. PRC 8272 located near the city of Ludlow in San Bernardino County, sold their surface estate to the County of San Bernardino. The County assigned itself Granite Construction's Conditional Use Permit/Mining and Reclamation Plan. The County applied for a new mineral extraction lease to mine aggregate for public use, such as road maintenance and storm repairs. The

application is incomplete pending receipt of the approximate estimate deposit.

In April 2017, Fort Cady California Corporation applied for a mineral prospecting permit to prospect for calcium borates. The project area includes 269 acres of reserved mineral interest lands located in the SE4 of the NW4, the S2 of the NE4, and the SW4 of Section 36, T8N, R5E, SBM, east of Barstow in San Bernardino County. Staff requested more

information regarding their proposed geophysical activities. The application is incomplete.



Abandoned Mine Lands

Staff will continue participating in abandoned mine meetings to share information about abandoned mines on school lands. Staff will continue its collaboration with the Division of Mine Reclamation to determine suitable candidates for contract remediation work in the next fiscal year. Staff will also continue to

inventory and assess previously uninspected abandoned mine features on school lands, and create a list of prospective future mine closures. Fences and warning signs will be installed as an interim or permanent solution based on the circumstances of each unique mine site. Staff will continue to re-inspect

mines that have received signage, fencing, bat gates, cupolas, backfills, or other protective measures to ensure their continued protection against the forces of nature and possible vandalism.

OIL and GAS

Although commodities have historically displayed higher price volatility than other asset classes, staff anticipates that the fiscal year 2017-18 revenue from the two school

lands oil and gas parcels (VA 5310 and LA 9252) will recover from its marginal decrease this year.

SURFACE MANAGEMENT

The Land Management Division is responsible for overseeing surface activities on school lands. Surface activities include land exchanges, the sale of school lands parcels to public or private entities, land acquisitions to enhance the resource base, and administering leases for purposes such as renewable energy production, agriculture, grazing, and rights-of-way for roads, oil and gas pipelines, and electrical transmission lines. The objectives are to generate revenue to benefit STRS, assure the ongoing viability of the State's resources, protect the assets of the trust, enhance local economic development, and protect the environment.

General surface leasing involves processing new applications, re-issuing expiring leases, processing lease assignments and amendments, conducting rent reviews, terminating old leases, and conducting other surface management activities. The majority of the 458,843± acres of school lands are isolated landlocked parcels, many of which are non-revenue generating desert lands and lands inside national parks or federal wilderness areas.

FISCAL YEAR 2016-17 ACTIVITIES

STATE TEACHERS' RETIREMENT SYSTEM FUND REVENUES

Surface Rental Income and Revenues

Revenues deposited into the STRS fund from approximately 88 revenue-generating surface leases in the fiscal year 2016-17 totaled \$397,748.42, an increase of 4.2 percent from the fiscal year 2015-16. Surface rent rates are usually tied directly to land values,

which are slowly improving. Surface leases typically require rent reviews every five years, and these revisions reflect the higher land values. The Commission also issued several new right-of-way leases, as well as the first renewable energy lease.

SCHOOL LAND BANK FUND – LOAN TO THE GENERAL FUND, REVENUES, EXPENSES AND ACQUISITIONS

Loan to the General Fund

In the fiscal year 2008-09, the Legislature requisitioned \$59,000,000 from the School Land Bank Fund to help balance the state budget. This loan to the General Fund was

part of the 2008 Budget Act (Chapter 2, Statutes of 2009, Third Extraordinary Session). The loan was repaid in June 2016 along with \$8,397,704.38 in accrued interest.

Bureau of Land Management CDPA Land Exchange (Commission File No. AD 556)

On October 31, 1994, the California Desert Protection Act (CDPA) was signed into law by the President of the United States (Public Law 103-433). The CDPA designated 3.6 million acres in Southern California as wilderness to be administered primarily by the BLM, and designated an additional four million acres in southern California for inclusion in the national park system. The purpose of the CDPA is to preserve areas in the California desert to protect their natural, cultural, scenic, and historical values, and to provide for public enjoyment. A total of 442 parcels (approximately 251,000 acres)

of fee-owned school lands and more than 100 parcels encumbered by the State's reservation of mineral interests were initially identified as within the CDPA boundaries.

Section 707 of the CDPA authorizes exchanging school lands within CDPA-designated areas for federal lands located elsewhere. The Commission is compensated for the exchange of its fee and mineral interests on a value-for-value basis, as determined by fair market appraisals. To date, five CDPA land exchange transactions are complete, resulting in the transfer of

more than 66,000 acres of school lands to the BLM and deposits totaling more than \$14.7 million into the School Land Bank Fund.

Work on a sixth CDPA land exchange involving 69 parcels of school lands totaling approximately 38,434 acres has stalled due to an adverse report from the federal Government Accountability Office, which concluded that the BLM had not adequately maintained their accounts. For more information on this exchange, please see page 20.

Chasterus Foundation Land Sale (Commission File No. SA 5771)

This sale, which closed in September 2016, involved 30 acres of school lands in Imperial

County and generated \$25,500 for the School Land Bank Fund.

Accrued Interest on the School Land Bank Fund

A total of \$13,232.67 in interest was generated by the Surplus Money Investment Account to the School Land Bank Fund

during the fiscal year 2016-17. Interest accruals increased slightly from the previous year due to a higher Fund balance.

Expenses Charged to the School Land Bank Fund

Expenses during the fiscal year 2016-17 totaled \$693,289.10. Of this amount, \$445,136.02 was charged to the Renewable Energy Program, and \$167,618.08 was

charged to the Abandoned Mine Remediation Program. The remainder was charged to statewide administrative services.

Acquisition of Land in Barstow/Proposed Sale to Barstow Spanish Trail, LLC

In October 2013, staff learned that the BLM was preparing to declare certain federal lands in Barstow as surplus and available for disposition. The lands totaled approximately 43.75 gross acres, of which about 41.25 acres are located at the intersection of Interstate 15 and L Street and included in the proposed *Spanish Trail Specific Plan*, a joint commercial development between the city and private developers.

Under the terms of the CDPA, the Commission has first right of refusal on all lands declared surplus within the area covered by the CDPA, and has the right to file an indemnity lands application with the BLM to acquire the

surplus lands if it chooses. Because of the high potential commercial value of these lands, staff filed an indemnity application with the BLM in May 2015. In exchange for the BLM lands, the application submitted the rights to 320 acres of base lands¹ in Imperial County.

After appraisals of the base lands and surplus federal lands were completed and Phase I environmental reports were obtained, staff presented the proposed acquisition to the Commission for approval in August 2015. The acquisition was approved and the federal Clear List, which vests ownership to the state, was recorded in April 2016. The lands

acquired for the School Land Bank Fund had an appraised market value of \$2,025,000 in 2015.

In April 2017, an application to purchase these lands, together with two other school land parcels in the immediate vicinity, was received from Barstow Spanish Trail, LLC. The application included lands totaling 63.3 gross acres. After receiving an independent appraisal on the properties, staff negotiated a sales agreement with the applicant at a purchase price of \$4,538,200. The Commission approved the sale at its August 17, 2017 meeting. Staff anticipates closing late in 2017.

¹ The term “base lands” refers to the debt in real property still owed to the State under the original Act of 1853 and subsequent legislation. (For more information on the indemnity selection process, please see **“Note to the Reader”** prior to the Table of Contents at the beginning of this report.) In the case of this indemnity selection, the base lands used accrued to the State due to a loss from a fractional township. In effect, the only thing given up by the Commission was a property right, and not actual physical real estate.

SUMMARY OF REVENUE GENERATED FROM SURFACE MANAGEMENT PROGRAM — FISCAL YEAR 2016-17

Surface Rentals

Surface Rentals	\$	397,748.42
Timber Sales	\$	0.00
TOTAL GROSS REVENUE GENERATED TO STRS FUND	\$	397,748.42

SUMMARY OF SCHOOL LAND BANK FUND FISCAL YEAR 2016-17

REVENUES

Chasterus Foundation (Commission file No. SA 5771)	\$	25,500.00
Interest from Loan to General Fund	\$	8,397,704.38
Interest Income (SMIA)	\$	13,232.67

GROSS REVENUE GENERATED TO SCHOOL

LAND BANK FUND	\$	8,436,437.05
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EXPENSES

Statewide Administrative Assessments (ProRata)	\$	-79,535.00
Statewide Administrative Assessments (Fi\$Cal)	\$	-947.42.00
Statewide Assessments (21st Century Settlement)	\$	-52.58
Program 10 & Program 20 - Renewable Energy	\$	-445,136.02
Program 10 – Abandoned Mine Closure Program	\$	-167,618.08

TOTAL EXPENSES	\$	-693,289.10
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NET REVENUE GENERATED TO SCHOOL

LAND BANK FUND	\$	7,743,147.95
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FISCAL YEAR 2017-18 PLANNED ACTIVITIES

POTENTIAL STATE TEACHERS' RETIREMENT SYSTEM FUND REVENUES

Surface Rentals Income

Staff estimates that revenues from surface use leases on school lands parcels during the fiscal year 2017-18 will increase over the

prior year due to rent revisions, adjustment to existing leases, and the commencement of at least one significant renewable energy lease.

Timber Harvests

There is potential for income from timber salvage and sanitation operations in the fiscal year 2017-18. These operations are

conducted periodically due to losses from natural causes such as fire, high winds, insect infestation, and diseases. Because

of the irregular nature of these operations, the amount of additional income from these sources is difficult to predict.

Renewable Energy Projects

With the increase in public awareness and concern about climate change, rising energy prices, and the state's landmark renewable energy goals, staff expects more interest in the long-term leasing of school lands for renewable energy projects. Some projects may involve using wind as an energy source and may require the installation and operation of wind turbines to generate electricity. Other renewable energy projects proposed on school lands may involve solar technology, such as photovoltaic cells and solar-concentrating systems.

WIND

Staff will continue working on Pacific Wind Development's Tule Wind project in eastern San Diego County. The Commission approved the lease in October 2016 and construction is expected to begin in 2018. The lessee will be required to close two abandoned mines on the state's parcel once the access road to the property is constructed. Operations are expected to begin in late 2019 or early 2020.

SOLAR

Staff will continue processing three applications for solar energy leases that together would cover approximately 3,148 acres of school lands. The proposed projects, Aurora Solar, Windhub Solar B, and EDF Renewable Development will require environmental review under the California Environmental Quality Act. Aurora Solar and Windhub Solar B are proceeding with preliminary surveys under the preparation of Environmental Impact Reports. The application from EDF Renewable Development is incomplete, and staff is awaiting further information on the project. If these three solar projects are completed as proposed, they will have a total capacity of up to 240 megawatts.

POTENTIAL SCHOOL LAND BANK FUND REVENUES AND ACTIVITIES

Applications for the projects discussed below are under consideration and staff anticipates

processing them in the fiscal year 2017-18. Staff also expects applicants to submit

new requests for land exchanges and sales throughout the year.

CDPA/BLM Land Exchange (Commission File No. AD 556)

Prior CDPA land exchanges between the Commission and the BLM resulted in an unequal balance between the values of the lands exchanged. Currently, the Commission owes the BLM lands worth \$2,154,675. The BLM has available, through the General Services Administration, \$7,938,432.71 from surplus federal land sales designated for CDPA land purchases from the Commission. Staff continues to work with BLM on a new proposed "Ledger Balancing Land Exchange"

whereby the Commission will transfer school lands of approximately \$10,149,600 in value to the BLM and National Park Service to eliminate the outstanding balance and complete the exchange. As part of the transaction, the National Park Service submitted a payment of \$56,492.29. This transaction, however, is stalled because the Government Accountability Office issued an opinion in December 2010 questioning BLM's authority to use funds from the sale

of surplus federal property to complete exchanges with the Commission. The legal basis for using funds from the sale of surplus federal property to complete the exchanges with the Commission remains unresolved. While the Commission hopes to complete this transaction during the fiscal year 2017-18, it remains uncertain when the legal dispute will be resolved. When finalized as proposed, staff anticipates depositing \$7,994,925 into the School Land Bank Fund.

Barstow Spanish Trail, LLC (Commission File No. SA 5772)

Staff will continue working toward the successful closing of this sale of 63.3 gross acres in Barstow. The Commission approved the sale in August 2017 and escrow was

opened in September. Staff processed the paperwork to issue the patent and is awaiting its approval by the Attorney General's office and signature by the Governor. This sale will

generate \$4,538,200 for the School Land Bank Fund.

Salvation Mountain, Inc. Land Sale (Commission File No. SA 5769) and Slab City Community Group Inc. Land Sale (Commission File No. SA 5768)

Among the 1,200± parcels of land held under the School Land Bank Fund is a 640-acre parcel near the Salton Sea in Imperial County that is commonly known as "Slab City." Formerly under the jurisdiction of the Commission, this parcel was condemned by the federal government and was developed and used for military purposes as part of Camp Dunlap. When Camp Dunlap was deemed no longer useful for defense purposes, the Department of Defense cleared the site, and the entire parcel was quitclaimed back to the Commission in

1961. However, numerous concrete building foundations were left in the ground. Over the years, the property gradually became a destination for tourists, seasonal campers, and transients and had a long history of environmental, legal and social issues, including unauthorized occupancy and illegal dumping.

Included in the southwest quarter of the section is a popular tourist attraction known as Salvation Mountain, which was constructed over a period of many years out

of hay bales, stucco, and paint by a resident named Leonard Knight. Since Mr. Knight passed away in early 2014, his monument has been preserved and maintained by the Salvation Mountain, Inc., a nonprofit corporation. Staff is processing a purchase application from Salvation Mountain, Inc. for the southwest quarter. Slab City Community Group Inc., a group of residents, has applied to purchase the remainder of the section. Staff will continue to work on these applications during the coming year.

FINANCIAL SUMMARY: FISCAL YEAR 2016-17

STRS FUND REVENUES AND EXPENSES

Revenues

Surface (LMD)	\$	397,748.42
Geothermal (MRMD)	\$	5,086,929.43
Solid Minerals (MRMD)	\$	548,116.18
Oil and Gas (MRMD)	\$	571,186.22
TOTAL REVENUES	\$	6,603,980.25

Expenses

Land Management	\$	481,945.54
Geothermal	\$	483,265.06
Solid Minerals	\$	313,026.55
Oil and Gas	\$	0.00
Ownership Determination	\$	15,660.94
GROSS EXPENSES	\$	1,293,898.09
Less: Reimbursement Recovery	\$	<82,161.49>
TOTAL EXPENSES	\$	1,211,736.60
NET REVENUE TO STRS	\$	5,392,243.65

SCHOOL LAND BANK FUND

Balance as of July 1, 2016	\$	2,619,132.39
Revenue from Land Sales	\$	25,500.00
SMIF Interest Earned Fiscal Year 2016-17	\$	13,232.67
General Fund Loan Repayment	\$	59,000,000.00
Interest from Loan to General Fund	\$	8,397,704.38
Less: Expenses	\$	<693,289.10>
BALANCE OF FUND AS OF JUNE 30, 2017	\$	69,362,280.34



ADDENDUM

Status of School Land Consolidation Efforts in the California Desert — Fiscal Year 2016-17

Introduction and Purpose

In September 2011, the Commission's Executive Officer executed a memorandum of understanding with the Renewable Energy Action Team (REAT)² expressing the agencies' intent to coordinate and cooperate on development of the Desert Renewable Energy Conservation Plan (DRECP) in the Mojave and the Colorado Desert regions. The goal of the DRECP is to provide for effective protection and conservation of desert ecosystems while allowing for the appropriate development of renewable energy projects. In addition to the REAT agencies and the Commission, the planning process involves the California Public Utilities Commission, California Department of Parks and Recreation, National Parks Service, and the Department of Defense, as well as interested stakeholders including cities, counties, tribal interests, industry and utilities, and non-governmental environmental organizations.

Assembly Bill 982 (Skinner), Chapter 485, Statutes of 2011, builds on this ongoing cooperative relationship. Chapter 485 requires Commission staff to report on its school land consolidation efforts in the California desert,³ including the status of DRECP and progress made on a Phase 1 exchange proposal.

Background

The majority of school lands under the jurisdiction of the Commission in the California desert are fragmented and isolated, and the size of the individual parcels is insufficient for the development of renewable energy projects. Significant portions of these parcels are located within national parks, preserves, monuments, and forests. Although these lands retain significant conservation value, their location and physical characteristics limit development potential. Chapter 485 seeks to help resolve this by requiring the Commission to work cooperatively with the Department of the Interior, through the BLM, to consolidate the Commission's landholdings in the desert so renewable energy development would be more feasible.

The Commission's objective in participating in the development of the DRECP is to ensure that DRECP goals for renewable energy and environmental protection are accomplished in a manner that is consistent with and advances the statutory and fiduciary responsibilities for management of school lands in the California desert area.

Under Chapter 485, the Commission and BLM California entered into a memorandum of agreement (MOA) which formalized the working relationship between the agencies and provided a process for cooperation to prioritize, enter into, and complete one or more mutually beneficial land exchanges. The MOA also set forth the objectives and commitments of the Commission and the BLM, including information sharing, minerals evaluation and appraisal, streamlining of the land exchange process, and commitments to prioritize completion of exchanges. In July 2015, BLM and Commission staffs reached consensus on the Phase 1 exchange proposal framework that consists of approximately 5,600 acres of BLM-owned lands, and approximately 61,000 acres of school lands, based on estimated comparative land values for the identified parcels. The BLM lands include parcels with a high potential for large-scale renewable energy development, including an area with an operating solar facility, and the school lands consist of scattered inholdings located within currently designated BLM wilderness, as well as lands proposed for national conservation landscape designations under the DRECP Land Use Plan Amendment (LUPA). The State parcels are also prioritized according to mineral resource evaluations, with parcels of no or low mineral potential being the highest priority for exchange. Depending on the outcome of the land and mineral appraisals on the parcels listed in the exchange proposal, the Commission and BLM may need to adjust the exchange parcel lists to equalize the exchange value, before completing the transaction.

Status of the Phase 1 Exchange Efforts

The BLM completed its review and approval process for the DRECP LUPA in late 2016. A description of the proposed Phase 1 land exchange is contained in the final LUPA as Appendix F and includes a feasibility summary, proposed timetable and cost summary, and a list of the parcels included in the proposal. Because the land exchange(s) described in the LUPA and Chapter 485 are between the Commission and BLM directly, the deferral of the state-level DRECP approval does not affect the ability of the Commission and BLM staffs to pursue completion of the Phase 1 exchange.

At the end of 2016, then-Interior Secretary Sally Jewell and Governor Jerry Brown executed a Memorandum of Understanding (MOU) regarding renewable energy in California. The MOU directed the state and the Department of the Interior to continue to maintain the REAT, place priority on processing applications for renewable energy development in areas that are consistent with the DRECP, and complete the Phase 1 land exchange proposal by December 31, 2018. Actions that BLM and Commission staffs expected to complete to meet this deadline included preparing the feasibility package for submittal to BLM headquarters in Washington, DC, which consists of an agreement to initiate an exchange, notice of exchange proposal, inspection and title reports (e.g., hazmat, certificate of inspection and possession), and environmental review documents under NEPA and the California Environmental Quality Act.

Staff made several attempts to meet with BLM staff throughout the first six months of 2017; however, BLM staff were unable to allocate time to the effort, citing a “shift” in priorities under the new federal administration. In September 2017, BLM staff notified Commission staff that all land transactions were “on hold” and their Washington, DC leadership would not consider them. While staff is disappointed that the Phase 1 land exchange proposal appears to be stalled, it believes the federal parcels identified during the effort may still be considered for acquisition using another mechanism, such as through the indemnity selection process. Staff will continue to research these alternatives.

² The REAT was established pursuant to a memorandum of understanding among the California Energy Commission, the California Department of Fish and Wildlife, the U.S. Department of Interior Bureau of Land Management, and the U.S. Fish and Wildlife Service, dated November 17, 2008.

³ The “California desert” in this report means the California Desert Conservation Area as described in Section 1781(c) of Title 43 of the United States Code.