

IN THE SENATE OF THE UNITED STATES.

MAY 28, 1860.—Ordered to be printed.

Mr. JOHNSON, of Arkansas, submitted the following

REPORT.

*The Committee on Public Lands, to whom were referred two resolutions of the Legislature of California, one of the 9th of February, and the other of the 6th of April last, in favor of the establishment of additional land districts in said State, having had the same under consideration, submit the following report:*

That the subject having been referred to the Interior Department, the following reports were received:

*From the Commissioner of the General Land Office.*

“I have the honor to return the communication from the Committee on Public Lands of the Senate, referred by you on the 27th instant, for report, respecting the resolution of the legislature of California, asking the creation of a new land district in that State, and as embracing the views of the department and this office on the subject, beg leave to submit copies of the following communications relating to this question, which it is believed will convey to the committee all the information we have on the subject.

“Letter from this office to Secretary of the Interior, March 13, 1860.

“Letter from same to Hon. J. C. Burch, March 19, 1860.

“Letter from the Secretary of the Interior to Commissioner, March 22, 1860.

“From these it will be seen the views of the department are adverse to the creating of a new district, but favorable to such change of boundaries as will meet the wish of the legislature and the citizens of the district involved in the change.”

That referred to above as the 13th March, 1860, is as follows:

“I have the honor to return herewith a petition from certain settlers in the lower part of the Humboldt land district, California, referred by you to this office, praying a change in the boundaries of said district by extending the line of the San Francisco district up to the dividing line between townships 20 and 21 north, thus detaching about 80 miles from the Humboldt district and attaching it to San Francisco district.

“The statements of the petitioners would seem to show sufficient cause to justify the President in exercising the authority conferred on him by the act of March 29, 1858, (Laws 11, page 262,) and changing the boundaries of the districts in question; and such order from him would also prevent the necessity of creating a new district in this particular section of the State, a petition for which was recently brought before this office and reported unfavorably upon, as will be seen from the inclosed copy of a letter to the Hon. J. C. Burch, dated 8th ultimo.

“At the present time surveys are progressing in this section of the State, and it is presumed that lands will shortly be ready for market. Should the department see no objection, the President’s order can be obtained for this change, and notice issued accordingly.

“The inclosed diagram shows in *yellow* shade the limits of the Humboldt district as at present organized; in *red*, the San Francisco district; and by the *blue* dotted lines the proposed change.”

That referred to above, as of the 22d March, 1860, from the honorable Secretary of the Interior, is as follows:

“Herewith I return the papers which accompanied your letter of the 19th instant, relative to the resolution of the legislature of California in favor of the erection of a new land district in that State.

“I do not think the creation of an additional district now necessary, but to meet the convenience of settlers, I am prepared to recommend to the President a change in the boundaries of the San Francisco and Humboldt districts, which it is hoped will be quite as satisfactory to the people as the creation of an additional one.”

In view, therefore, of the foregoing reports from the Interior Department, and in view also of the fact that the act of 29th March, 1858, volume 11, page 262, empowers the President of the United States “to establish additional land districts, in his discretion, not exceeding *three*, in the State of California, and to fix, from time to time, the boundaries thereof, as the public interest may require,” your committee recommend that the aforesaid resolutions be rejected, as the President has ample authority to do all that is asked.

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IN THE HOUSE OF REPRESENTATIVES, *May 10, 1860.*

*Resolutions of the Legislature of California, asking the establishment of a new land district, with land office, at Red Bluff, in said State.*

*Resolved by the senate, the assembly concurring,* That our senators in Congress be instructed, and our representatives requested, to use their influence to procure, if possible, the establishment of a new land district in the northern part of the Sacramento valley, the office for which to be located at the town of Red Bluff.

*Resolved,* That his excellency the governor be requested to send a

copy of this resolution to each of our senators and representatives in Congress.

PHIL. MOORE,  
*Speaker of the Assembly.*  
I. N. QUINN,  
*President of the Senate.*

Approved April 6, A. D. 1860.

JOHN G. DOWNEY,  
*Governor.*

IN THE SENATE OF THE UNITED STATES, *March* 19, 1860.

*Resolutions of the Legislature of California, in favor of the establishment of a new land district in that State.*

Whereas, the land districts in the State of California, numbered 1 and 3, are oppressive and inconvenient to a large portion of the people living in said land districts, by reason of the distance to the land offices in said districts; and whereas, it is necessary for such persons to pass over almost inaccessible mountains and through hostile tribes of Indians, or to make a circuitous and dangerous trip by sea to said land offices; and whereas, a land district bounded on the north by the fifth standard north, on the east by land districts Nos. 2 and 4, on the south by the waters of the bay of San Francisco, and on the west by the Pacific ocean, is required for the convenience of the people thereof: Now, therefore,

*Be it resolved by the assembly, the senate concurring,* That our senators in Congress be instructed, and our representatives requested, to urge the passage of a law changing the said land districts, so as to form a new land district with the above-described boundaries, or with such changes in the boundaries of said land districts as may meet the wants and convenience of the people thereof, and as shall seem most proper and advantageous.

*Resolved,* That the governor be requested to forward to our senators and representatives in Congress a copy of these resolutions.

PHIL. MOORE,  
*Speaker of the Assembly.*  
J. N. QUINN,  
*President of the Senate.*

Approved February 9, A. D. 1860.

JOHN G. DOWNEY,  
*Governor.*

STATE OF CALIFORNIA,  
*Department of State.*

I, Johnson Price, secretary of state of the State of California, do hereby certify that the annexed is a true, full, and correct copy of the

original resolutions, approved February 9, A. D. 1860, now on file in my office.

Witness my hand, and the great seal of State, at office, in Sacramento, California, the eleventh day of February, A. D. 1860.

[SEAL.] JOHNSON PRICE,

*Secretary of State.*

By E. E. EYRE, *Deputy.*

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GENERAL LAND OFFICE,  
March 29, 1860.

SIR: I have the honor to return the communication from the Committee on Public Lands of the Senate, referred by you on the 27th instant, for report, respecting the resolution of the legislature of California, asking the creation of a new land district in that State, and, as embracing the views of the department and this office on the subject, beg leave to submit copies of the following communications relating to this question, which it is believed will convey to the committee all the information we have on the subject.

Letter from this office to Secretary of the Interior, March 13, 1860.

Letter from same to Hon. J. C. Burch, March 19, 1860.

Letter from Secretary of Interior to Commissioner, March 22, 1860.

From these it will be seen the views of the department are adverse to the creation of a new district, but favorable to such change of boundaries as will meet the wishes of the legislature and the citizens of the districts involved in the change.

With great respect,

JOS. S. WILSON,  
*Commissioner.*

Hon. J. THOMPSON,  
*Secretary of the Interior.*

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DEPARTMENT OF THE INTERIOR,  
Washington, March 30, 1860.

SIR: I have the honor herewith to return the resolution of the legislature of California, (submitted with your letter of the 26th instant,) in favor of the establishment of a new land district in that State.

The inclosed copy of a report of the Commissioner of the General Land Office on the subject, of the 29th instant, and accompanying papers, will fully explain the views of the department, which were called for by your letter.

Very respectfully, your obedient servant,

J. THOMPSON,  
*Secretary.*

Hon. R. W. JOHNSON,  
*Chairman Committee Public Lands, U. S. Senate.*

GENERAL LAND OFFICE,  
March 19, 1860.

SIR: I have the honor to acknowledge the receipt of a copy of a resolution of the legislature of California, in favor of the creation of a new land district in that State, or change of boundaries between districts one and three, (Humboldt and San Francisco,) inclosed in your letter of the 16th instant, with a request that a bill be drawn to meet the wishes of the legislature.

The inclosed bill is drawn according to the terms of your request, yet permit me to add, the proposition submitted to the Secretary in my letter of the 13th instant, (copy inclosed,) with a modification carrying the northern boundary line of the San Francisco district to the fifth standard parallel north, as required by the resolution, will accomplish the same object without the creation of a new district.

The resolution, as required, is herewith returned.

With great respect, your obedient servant,

JOS. S. WILSON,  
*Commissioner.*

Hon. J. C. BURCH,  
*House of Representatives.*

NOTE.—It will be seen from the accompanying copy of a letter of this date from the Secretary of the Interior, to whom the question was submitted, that he does not deem the creation of a new district now necessary, but is prepared to recommend to the President a change in the boundaries of the district, as before suggested, and hopes that will be satisfactory.

Very respectfully,

JOS. S. WILSON,  
*Commissioner.*

MARCH 22, 1860.

DEPARTMENT OF THE INTERIOR,  
March 22, 1860.

SIR: Herewith I return the papers which accompanied your letter of the 19th instant, relative to the resolution of the legislature of California, in favor of the erection of a new land district in that State.

I do not think the creation of an additional district now necessary; but to meet the convenience of settlers, I am prepared to recommend to the President a change in the boundaries of the San Francisco and Humboldt districts; which, it is hoped, will be quite as satisfactory to the people as the creation of an additional one.

Very respectfully, your obedient servant,

J. THOMPSON, *Secretary.*

The COMMISSIONER OF THE GENERAL LAND OFFICE.

GENERAL LAND OFFICE,  
March 13, 1860.

SIR: I have the honor to return herewith a petition from certain settlers in the lower part of the Humboldt land district, California, referred by you to this office, praying a change in the boundaries of said district by extending the northern line of the San Francisco district up to the dividing line between townships 20 and 21 north, thus detaching about 80 miles from the Humboldt district, and attaching it to San Francisco district.

The statement of the petitioners would seem to show sufficient cause to justify the President in exercising the authority conferred on him by the act of March 29, 1858, (Laws 11, p. 262,) and changing the boundaries of the districts in question, and such order from him would also prevent the necessity of creating a new district in this particular section of the State, a petition for which was recently brought before this office and reported unfavorably upon, as will be seen from the inclosed copy of a letter to Hon. J. C. Burch, dated 8th ultimo.

At the present time surveys are progressing in this section of the State, and it is presumed that lands will shortly be ready for market. Should the department see no objection, the President's order can be obtained for this change, and notice issued accordingly.

The inclosed diagram shows in *yellow* shade the limits of the Humboldt district as at present organized; in *red*, the San Francisco district; and by the *blue* dotted line the proposed change.

With great respect, your obedient servant,

JOS. S. WILSON,  
*Commissioner.*

Hon. JACOB THOMPSON,  
*Secretary of the Interior.*



The following table shows the results of the experiments conducted on the effect of temperature on the rate of reaction between hydrogen peroxide and potassium iodide in the presence of ceric sulfate as a catalyst. The reaction is exothermic and the rate of reaction increases with increasing temperature.

| Temperature (°C) | Rate of Reaction (Relative) |
|------------------|-----------------------------|
| 10               | 1.0                         |
| 20               | 1.5                         |
| 30               | 2.5                         |
| 40               | 4.0                         |
| 50               | 7.0                         |
| 60               | 12.0                        |
| 70               | 20.0                        |
| 80               | 35.0                        |
| 90               | 60.0                        |
| 100              | 100.0                       |

From the above table it is seen that the rate of reaction increases very rapidly with increasing temperature. This is due to the fact that the activation energy of the reaction is lowered by the presence of the ceric sulfate catalyst. The rate of reaction is also affected by the concentration of the reactants and the catalyst.

The following table shows the results of the experiments conducted on the effect of concentration on the rate of reaction between hydrogen peroxide and potassium iodide in the presence of ceric sulfate as a catalyst. The reaction is exothermic and the rate of reaction increases with increasing concentration of the reactants.

| Concentration (M) | Rate of Reaction (Relative) |
|-------------------|-----------------------------|
| 0.1               | 1.0                         |
| 0.2               | 2.0                         |
| 0.3               | 3.0                         |
| 0.4               | 4.0                         |
| 0.5               | 5.0                         |
| 0.6               | 6.0                         |
| 0.7               | 7.0                         |
| 0.8               | 8.0                         |
| 0.9               | 9.0                         |
| 1.0               | 10.0                        |

From the above table it is seen that the rate of reaction increases linearly with increasing concentration of the reactants. This is due to the fact that the activation energy of the reaction is lowered by the presence of the ceric sulfate catalyst. The rate of reaction is also affected by the temperature and the concentration of the catalyst.

