

f1b2b Central Valley water develop-t

Notes from texts of Bulls. 21

Wtr. devmt.  
cycle

Formation of new irrigation districts reached peak, in ~~1915~~ n°s of i.d.s, in 1920, with 17. Ran pretty steadily, other than that, 5-7, per year, from 1915-27, except 1926. If the 1920 peak were not there, there would still be a slight peaking tendency 1919-21. Bull 21-b pl2

Interesting how public bodies tend to assume public obligations in greatest numbers just before a crash.

Better do this after History course all worked out.

**SCANNED  
AS  
FOUND**

# Door Opened On Trinity River Project

The Federal Bureau of Reclamation invited public irrigation, power and water agencies today to submit proposals for constructing power facilities at the \$200,000,000 Trinity river project.

The move came after several Northern California congressmen criticized the bureau for an announcement that it would give careful consideration to a bid from Pacific Gas & Electric Co. for construction of the power plant.

Regional Reclamation Director Clyde H. Spencer said he has extended the invitation to irrigation and municipal utility districts, water users associations and other private and public agencies.

## MILLION APPROPRIATED

The Interior Department, Spencer said, will consider bona fide proposals to "construct power facilities of the Trinity river diversion and to pay for use of the falling water to be developed by the project."

Congress has already appropriated \$1,000,000 for preliminary work on the Trinity project. Eventually the big power and water plan calls for a major storage reservoir on the Trinity river plus a system of tunnels and dams to carry the water into the Sacramento river, where it will join the Central Valley Project's water system.

Original plans called for a Federally built hydroelectric plant and power transmission facilities.

## PARTNERSHIP POLICY

But the present Administration, acting on its "partnership" policy, indicated some time ago that if a private firm wanted to build and operate the power plant, the Government would consider selling the "falling water" in order to stay out of the power business itself.

The PG&E made its proposal early this year, contending that the Government would obtain a total of \$171,000,000 in additional revenues from water payments and tax income if a private company built the power facilities.

# CHANGE QUOT

**DOW JONES**  
**FRIDAY, SEPTEMBER 11, 1931**

|                   | Open   | High   |
|-------------------|--------|--------|
| 30 Industrials .. | 468.04 | 469.68 |
| 20 Railroads ...  | 154.94 | 155.62 |
| 15 Utilities ...  | 63.42  | 63.56  |
| 65 Stocks ....    | 165.92 | 166.51 |
| 40 Bonds .....    |        |        |

| Day's Sales | Prev. Day | Week   |
|-------------|-----------|--------|
| 2,140,000   | 2,560,000 | 2,543, |

## THE TEN N. Y. STOCK

| Sales  | Stocks      | Close                          | N.Ch.                           |
|--------|-------------|--------------------------------|---------------------------------|
| 48,500 | Penn Tex    | 18 <sup>5</sup> / <sub>8</sub> | — <sup>1</sup> / <sub>8</sub>   |
| 37,500 | Gen Mt wi   | 47 <sup>3</sup> / <sub>4</sub> | — <sup>5</sup> / <sub>8</sub>   |
| 30,000 | Tex Glf Pd  | 38 <sup>7</sup> / <sub>8</sub> | + <sup>3</sup> / <sub>4</sub>   |
| 29,400 | Textron ... | 22 <sup>3</sup> / <sub>8</sub> | + <sup>3</sup> / <sub>8</sub>   |
| 28,700 | Chrysler .. | 97 <sup>3</sup> / <sub>4</sub> | + 1 <sup>1</sup> / <sub>4</sub> |

| Sls | Stock          | High                            | Low                            | Close                          | N.ch.                         |
|-----|----------------|---------------------------------|--------------------------------|--------------------------------|-------------------------------|
| 6   | Hallibrtn 1.80 | 57                              | 56 <sup>1</sup> / <sub>2</sub> | 57                             |                               |
| 1   | HammrP 1.30    | 32 <sup>7</sup> / <sub>8</sub>  | 32 <sup>7</sup> / <sub>8</sub> | 32 <sup>7</sup> / <sub>8</sub> | — <sup>1</sup> / <sub>8</sub> |
| 1   | HarbWlk 2.50   | 46 <sup>1</sup> / <sub>2</sub>  | 46 <sup>1</sup> / <sub>2</sub> | 46 <sup>1</sup> / <sub>2</sub> | — <sup>1</sup> / <sub>4</sub> |
| 2   | HarrisSy 1.50  | 34 <sup>1</sup> / <sub>4</sub>  | 33 <sup>7</sup> / <sub>8</sub> | 34 <sup>1</sup> / <sub>4</sub> | — <sup>1</sup> / <sub>8</sub> |
| 252 | HarrisStl 1.80 | 32                              | 31 <sup>1</sup> / <sub>2</sub> | 32                             |                               |
| 2   | HartS&M 1.60   | 32 <sup>3</sup> / <sub>4</sub>  | 32 <sup>3</sup> / <sub>8</sub> | 32 <sup>3</sup> / <sub>4</sub> |                               |
| 2   | HatCorp .25e   | 6 <sup>5</sup> / <sub>8</sub>   | 6 <sup>5</sup> / <sub>8</sub>  | 6 <sup>5</sup> / <sub>8</sub>  |                               |
| 19  | HavInd .65g    | 23 <sup>3</sup> / <sub>4</sub>  | 23 <sup>1</sup> / <sub>4</sub> | 23 <sup>3</sup> / <sub>4</sub> | + <sup>5</sup> / <sub>8</sub> |
| 8   | HayesInd 1.20  | 17 <sup>1</sup> / <sub>8</sub>  | 17                             | 17                             |                               |
| 12  | HayesMf .45g   | 7 <sup>3</sup> / <sub>8</sub>   | 7 <sup>1</sup> / <sub>4</sub>  | 7 <sup>1</sup> / <sub>4</sub>  | — <sup>1</sup> / <sub>8</sub> |
| 3   | HazAtG 1.20    | 22 <sup>3</sup> / <sub>4</sub>  | 22 <sup>5</sup> / <sub>8</sub> | 22 <sup>5</sup> / <sub>8</sub> |                               |
| 4   | HechtCo 1.75g  | 35                              | 34 <sup>1</sup> / <sub>2</sub> | 34 <sup>1</sup> / <sub>2</sub> | — <sup>1</sup> / <sub>2</sub> |
| 1   | Heinz 1.80     | 58                              | 58                             | 58                             | — 2                           |
| 7   | Helme 1.60     | 24                              | 23 <sup>3</sup> / <sub>4</sub> | 23 <sup>3</sup> / <sub>4</sub> | — <sup>1</sup> / <sub>4</sub> |
| 10  | dopf 1.75 as   | 37 <sup>1</sup> / <sub>8</sub>  | 37 <sup>1</sup> / <sub>8</sub> | 37 <sup>1</sup> / <sub>8</sub> |                               |
| 2   | HerculMot .80  | 18 <sup>3</sup> / <sub>8</sub>  | 18 <sup>1</sup> / <sub>8</sub> | 18 <sup>1</sup> / <sub>8</sub> | — <sup>3</sup> / <sub>8</sub> |
| 15  | HercPdr 1.80g  | 117 <sup>1</sup> / <sub>2</sub> | 114                            | 114                            | — 4                           |
| 3   | HershChoc 2    | 46                              | 46                             | 46                             | + <sup>3</sup> / <sub>4</sub> |
| 20  | Hertz 1.60     | 56                              | 54 <sup>1</sup> / <sub>4</sub> | 54 <sup>1</sup> / <sub>4</sub> | — <sup>7</sup> / <sub>8</sub> |
| 12  | do wi          | 27 <sup>7</sup> / <sub>8</sub>  | 27 <sup>1</sup> / <sub>2</sub> | 27 <sup>1</sup> / <sub>2</sub> | — <sup>1</sup> / <sub>2</sub> |
| 2   | FlwRobins 2    | 38 <sup>1</sup> / <sub>4</sub>  | 38 <sup>1</sup> / <sub>4</sub> | 38 <sup>1</sup> / <sub>4</sub> | + <sup>1</sup> / <sub>2</sub> |
| 27  | HeydenCh .50   | 18 <sup>1</sup> / <sub>8</sub>  | 17 <sup>1</sup> / <sub>2</sub> | 18                             | + <sup>1</sup> / <sub>4</sub> |
| 20  | docvp4.37 as   | 95 <sup>1</sup> / <sub>8</sub>  | 95                             | 95                             |                               |
| 7   | HiltonHo 2     | 47                              | 46 <sup>1</sup> / <sub>2</sub> | 47                             | + <sup>1</sup> / <sub>4</sub> |
| 6   | HoffElect 1    | 22 <sup>1</sup> / <sub>8</sub>  | 22                             | 22 <sup>1</sup> / <sub>8</sub> | + <sup>1</sup> / <sub>8</sub> |
| 4   | HollandF 1     | 13 <sup>3</sup> / <sub>8</sub>  | 13 <sup>1</sup> / <sub>4</sub> | 13 <sup>1</sup> / <sub>4</sub> |                               |
| 2   | Hollander      | 7                               | 7                              | 7                              | — <sup>1</sup> / <sub>8</sub> |
| 7   | HollySg 1.20b  | 21 <sup>1</sup> / <sub>4</sub>  | 21                             | 21 <sup>1</sup> / <sub>8</sub> | + <sup>1</sup> / <sub>8</sub> |
| 3   | dopf 1.50      | 31 <sup>5</sup> / <sub>8</sub>  | 31 <sup>1</sup> / <sub>8</sub> | 31 <sup>5</sup> / <sub>8</sub> | + <sup>3</sup> / <sub>8</sub> |
| 15  | Homstk 1.60a   | 36                              | 35 <sup>1</sup> / <sub>2</sub> | 35 <sup>1</sup> / <sub>2</sub> | — <sup>1</sup> / <sub>2</sub> |
| 5   | HonoluOil 2g   | 85 <sup>1</sup> / <sub>2</sub>  | 84                             | 85 <sup>1</sup> / <sub>2</sub> | — <sup>1</sup> / <sub>2</sub> |
| 29  | HookerEl 1     | 37 <sup>1</sup> / <sub>2</sub>  | 35 <sup>1</sup> / <sub>2</sub> | 35 <sup>1</sup> / <sub>2</sub> | — <sup>3</sup> / <sub>4</sub> |
| 5   | HoudHer .37    | 15 <sup>1</sup> / <sub>4</sub>  | 15                             | 15                             | — <sup>1</sup> / <sub>4</sub> |
| 1   | dopf 2.25      | 38                              | 38                             | 38                             | — <sup>1</sup> / <sub>2</sub> |
| 4   | RouseFin 1.20  | 28 <sup>3</sup> / <sub>4</sub>  | 28 <sup>3</sup> / <sub>8</sub> | 28 <sup>1</sup> / <sub>2</sub> | — <sup>1</sup> / <sub>4</sub> |
| 320 | dort           | 7/32                            | 7/32                           | 7/32                           |                               |
| 20  | dopf 3.75 as   | 97                              | 95 <sup>1</sup> / <sub>2</sub> | 95 <sup>1</sup> / <sub>2</sub> | + <sup>1</sup> / <sub>2</sub> |
| 7   | HstL&P 1.20b   | 41 <sup>1</sup> / <sub>4</sub>  | 40 <sup>3</sup> / <sub>4</sub> | 41                             | + <sup>1</sup> / <sub>4</sub> |
| 6   | HoustOil 2a    | 124 <sup>1</sup> / <sub>8</sub> | 124                            | 124                            | — <sup>3</sup> / <sub>4</sub> |
| 2   | HowardsS 1.50  | 19 <sup>5</sup> / <sub>8</sub>  | 19 <sup>1</sup> / <sub>2</sub> | 19 <sup>1</sup> / <sub>2</sub> | — <sup>1</sup> / <sub>2</sub> |
| 32  | HoweSnd .45g   | 22 <sup>1</sup> / <sub>2</sub>  | 22                             | 22 <sup>1</sup> / <sub>2</sub> | + <sup>3</sup> / <sub>8</sub> |
| 8   | Hud&Man        | 2 <sup>1</sup> / <sub>8</sub>   | 2 <sup>1</sup> / <sub>8</sub>  | 2 <sup>1</sup> / <sub>8</sub>  | + <sup>1</sup> / <sub>8</sub> |
| 13  | HudBayM 4      | 67                              | 66 <sup>3</sup> / <sub>8</sub> | 66 <sup>1</sup> / <sub>2</sub> | — <sup>7</sup> / <sub>8</sub> |
| 1   | HuntFds .60b   | 28 <sup>1</sup> / <sub>2</sub>  | 28 <sup>1</sup> / <sub>2</sub> | 28 <sup>1</sup> / <sub>2</sub> |                               |
| 35  | HuppCp         | 7 <sup>3</sup> / <sub>8</sub>   | 7 <sup>1</sup> / <sub>8</sub>  | 7 <sup>3</sup> / <sub>8</sub>  |                               |
| 2   | HussRefr 1.60  | 35 <sup>5</sup> / <sub>8</sub>  | 35 <sup>1</sup> / <sub>2</sub> | 35 <sup>5</sup> / <sub>8</sub> | — <sup>1</sup> / <sub>4</sub> |

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|     |                |                                 |                                 |                                 |                                 |
|-----|----------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| 8   | IdahoPw .27h   | 28                              | 27 <sup>5</sup> / <sub>8</sub>  | 28 <sup>5</sup> / <sub>8</sub>  | — <sup>1</sup> / <sub>8</sub>   |
| 19  | IllCent 2.25g  | 63 <sup>1</sup> / <sub>4</sub>  | 62 <sup>1</sup> / <sub>4</sub>  | 63 <sup>1</sup> / <sub>4</sub>  | + <sup>1</sup> / <sub>4</sub>   |
| 6   | IllPw 2.60     | 55                              | 54 <sup>1</sup> / <sub>4</sub>  | 54 <sup>1</sup> / <sub>2</sub>  | — <sup>1</sup> / <sub>4</sub>   |
| 3   | IllTermRR      | 15 <sup>3</sup> / <sub>8</sub>  | 15 <sup>1</sup> / <sub>4</sub>  | 15 <sup>1</sup> / <sub>4</sub>  | — <sup>1</sup> / <sub>8</sub>   |
| 3   | IndP&L 1.40    | 29 <sup>1</sup> / <sub>2</sub>  | 29 <sup>1</sup> / <sub>4</sub>  | 29 <sup>1</sup> / <sub>4</sub>  | — <sup>1</sup> / <sub>4</sub>   |
| 6   | IndEldeMex     | 10 <sup>5</sup> / <sub>8</sub>  | 10 <sup>1</sup> / <sub>2</sub>  | 10 <sup>5</sup> / <sub>8</sub>  |                                 |
| 8   | IndustRay 3    | 53 <sup>3</sup> / <sub>4</sub>  | 53                              | 53 <sup>1</sup> / <sub>2</sub>  | + <sup>3</sup> / <sub>4</sub>   |
| 8   | IngRand 1.60g  | 56 <sup>3</sup> / <sub>4</sub>  | 56                              | 56 <sup>1</sup> / <sub>4</sub>  | — 1 <sup>1</sup> / <sub>2</sub> |
| 19  | InlandStl 4    | 85                              | 83                              | 84 <sup>1</sup> / <sub>2</sub>  | — 1 <sup>1</sup> / <sub>4</sub> |
| 14  | InspirCop 3g   | 59 <sup>3</sup> / <sub>8</sub>  | 58 <sup>3</sup> / <sub>4</sub>  | 59                              | + <sup>1</sup> / <sub>2</sub>   |
| 6   | Interch 1.75g  | 50 <sup>1</sup> / <sub>2</sub>  | 50 <sup>1</sup> / <sub>4</sub>  | 50 <sup>1</sup> / <sub>4</sub>  | — <sup>3</sup> / <sub>4</sub>   |
| 15  | InterlkIr .90g | 29 <sup>7</sup> / <sub>8</sub>  | 29 <sup>1</sup> / <sub>4</sub>  | 29 <sup>3</sup> / <sub>4</sub>  | + <sup>1</sup> / <sub>8</sub>   |
| 7   | IntBusMch 4b   | 400                             | 396                             | 397                             | — 3                             |
| 54  | IntHarv 2      | 37 <sup>7</sup> / <sub>8</sub>  | 37 <sup>1</sup> / <sub>2</sub>  | 37 <sup>3</sup> / <sub>4</sub>  | — <sup>1</sup> / <sub>8</sub>   |
| 80  | dopf 7 as      | 168 <sup>1</sup> / <sub>2</sub> | 167 <sup>1</sup> / <sub>2</sub> | 168 <sup>1</sup> / <sub>2</sub> |                                 |
| 20  | IntMiner 1.60  | 32                              | 31 <sup>1</sup> / <sub>4</sub>  | 31 <sup>3</sup> / <sub>4</sub>  |                                 |
| 38  | IntMin .20e    | 4 <sup>7</sup> / <sub>8</sub>   | 4 <sup>5</sup> / <sub>8</sub>   | 4 <sup>5</sup> / <sub>8</sub>   | — <sup>1</sup> / <sub>8</sub>   |
| 27  | IntNick .60    | 81 <sup>1</sup> / <sub>8</sub>  | 80 <sup>1</sup> / <sub>2</sub>  | 80 <sup>1</sup> / <sub>2</sub>  | — 1 <sup>1</sup> / <sub>4</sub> |
| 50  | dopf 7 a       | 136 <sup>1</sup> / <sub>2</sub> | 136 <sup>1</sup> / <sub>2</sub> | 136 <sup>1</sup> / <sub>2</sub> |                                 |
| 10  | IntPack .60    | 14 <sup>3</sup> / <sub>8</sub>  | 14                              | 14                              | — <sup>1</sup> / <sub>8</sub>   |
| 21  | IntPaper 3b    | 109 <sup>1</sup> / <sub>2</sub> | 108 <sup>1</sup> / <sub>4</sub> | 108 <sup>3</sup> / <sub>4</sub> | — 1 <sup>1</sup> / <sub>4</sub> |
| 2   | dopf 4         | 102 <sup>1</sup> / <sub>2</sub> | 102 <sup>1</sup> / <sub>2</sub> | 102 <sup>1</sup> / <sub>2</sub> | — <sup>1</sup> / <sub>2</sub>   |
| 1   | IntRyCam       | 14 <sup>1</sup> / <sub>4</sub>  | 14 <sup>1</sup> / <sub>4</sub>  | 14 <sup>1</sup> / <sub>4</sub>  | — <sup>1</sup> / <sub>8</sub>   |
| 10  | dopf 3.75kas   | 94 <sup>7</sup> / <sub>8</sub>  | 94 <sup>7</sup> / <sub>8</sub>  | 94 <sup>7</sup> / <sub>8</sub>  | — <sup>1</sup> / <sub>8</sub>   |
| 1   | IntSalt 3g     | 100                             | 100                             | 100                             |                                 |
| 2   | IntShoe 2.40   | 45 <sup>1</sup> / <sub>2</sub>  | 45 <sup>1</sup> / <sub>2</sub>  | 45 <sup>1</sup> / <sub>2</sub>  |                                 |
| 4   | IntSilver 4    | 70                              | 69 <sup>1</sup> / <sub>2</sub>  | 70                              | — <sup>1</sup> / <sub>4</sub>   |
| 2   | dopf 1.75      | 38                              | 38                              | 38                              | — <sup>1</sup> / <sub>2</sub>   |
| 165 | IntTl&Tl 1.40  | 28 <sup>1</sup> / <sub>4</sub>  | 27 <sup>5</sup> / <sub>8</sub>  | 27 <sup>5</sup> / <sub>8</sub>  | — <sup>3</sup> / <sub>4</sub>   |
| 1   | IntUtil 1.60   | 39 <sup>7</sup> / <sub>8</sub>  | 39 <sup>7</sup> / <sub>8</sub>  | 39 <sup>7</sup> / <sub>8</sub>  | + <sup>1</sup> / <sub>2</sub>   |
| 3   | InterDStr 2.50 | 36 <sup>3</sup> / <sub>4</sub>  | 36 <sup>1</sup> / <sub>2</sub>  | 36 <sup>3</sup> / <sub>4</sub>  | — <sup>3</sup> / <sub>4</sub>   |
| 3   | InterPw .74    | 14 <sup>7</sup> / <sub>8</sub>  | 14 <sup>3</sup> / <sub>4</sub>  | 14 <sup>3</sup> / <sub>4</sub>  |                                 |
| 2   | Intertyp 1.40b | 45 <sup>3</sup> / <sub>4</sub>  | 45 <sup>1</sup> / <sub>2</sub>  | 45 <sup>1</sup> / <sub>2</sub>  | + <sup>1</sup> / <sub>4</sub>   |
| 1   | IowaIllG 1.80  | 33 <sup>5</sup> / <sub>8</sub>  | 33 <sup>5</sup> / <sub>8</sub>  | 33 <sup>5</sup> / <sub>8</sub>  | — <sup>5</sup> / <sub>8</sub>   |
| 3   | IowaP&L 1.40   | 28                              | 27 <sup>7</sup> / <sub>8</sub>  | 27 <sup>7</sup> / <sub>8</sub>  | — <sup>1</sup> / <sub>8</sub>   |
| 9   | IslCrkCoal 1w  | 27                              | 26 <sup>1</sup> / <sub>2</sub>  | 26 <sup>3</sup> / <sub>4</sub>  | — <sup>1</sup> / <sub>4</sub>   |

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|----|---------------|--------------------------------|--------------------------------|--------------------------------|-------------------------------|
| 11 | Jacobs        | 10 <sup>1</sup> / <sub>4</sub> | 10                             | 10 <sup>1</sup> / <sub>4</sub> | — <sup>1</sup> / <sub>8</sub> |
| 3  | JaegerMch 2   | 33                             | 32 <sup>3</sup> / <sub>4</sub> | 33                             | + <sup>1</sup> / <sub>4</sub> |
| 20 | JCP&Lpf 4 as  | 93 <sup>3</sup> / <sub>4</sub> | 93 <sup>1</sup> / <sub>2</sub> | 93 <sup>3</sup> / <sub>4</sub> |                               |
| 13 | JewelTea 2    | 54                             | 53 <sup>1</sup> / <sub>4</sub> | 54                             | + <sup>1</sup> / <sub>4</sub> |
| 12 | JohnMan 3a    | 83 <sup>3</sup> / <sub>4</sub> | 82 <sup>3</sup> / <sub>4</sub> | 83 <sup>1</sup> / <sub>4</sub> | + <sup>1</sup> / <sub>4</sub> |
| 6  | Jhn&Jhl. 40a  | 71 <sup>3</sup> / <sub>4</sub> | 71                             | 71                             | — 1                           |
| 93 | Jones&L 1.62g | 49 <sup>7</sup> / <sub>8</sub> | 49                             | 49 <sup>3</sup> / <sub>4</sub> | + <sup>1</sup> / <sub>8</sub> |

# Attempt To Sabotage Los Angeles' Water Supply

By LES CLAYPOOL

Information uncovered in Sacramento indicates that a group of super-wealthy absentee landowners in western Merced County are trying to sabotage Southern California's future water supply in an effort to hog it for themselves.

These landowners, some of whom own as much as 30,000 acres and are financed by large banking interests, are specifically trying to prevent the state from developing what is known as the Feather River project.

Part of their scheme is to convince the public that the Feather River project is a pet scheme of a gang of millionaires who are out to sabotage the 160-acre limit for water supply in the U.S. Reclamation districts of the central valleys. They are also saying that the FRP is a design to saddle water costs on a lot of poor people who can't afford the high rates it will cost.

Heading up the entire battery of opposition is John (Jack) O'Neill, wealthy land owner with headquarters in Fresno. O'Neill is anxious for the federal government to build the San Luis reservoir in western Merced county free of cost to the landowners. The landowners expect to grab most of the water that would come into the area from the Delta-Mendota canal from the Sacramento river. If they could cinch that they would be willing for the federal government or the state government to build the Oroville dam on the Feather river.

O'Neill feels that this would satisfy the Oroville people and the Yuba City-Marysville people who have suffered so much in floods. The catch is that if the federal government builds the San Luis reservoir not one drop of water from it would ever come south of the Tehachapi mountains and it is in southern California that the greatest hardship will come if we don't get a new source of water within 15 to 20 years. That's why the southern Californians want the Feather river developed as part of a state plan which has just been held wholly feasible by a large firm of private engineers, the Bechtel Corp. of San Francisco.

The federal government, through the reclamation service, has said we get no water if the government buys and builds the San Luis reservoir. It has said that it will not permit the San Luis project to be integrated into the

state plan beyond serving the needs of the immediate area with a trickle perhaps into Kern county.

The opposition to the FRP is telling people that the Feather river plan would upset the 160 acre limit which applies to the use of water in the Valleys. This has been found to be untrue. It has nothing to do with the 160 acre limit which has already been amended in some places, and under certain conditions. The Feather river project would bring new water to new areas and it would not touch or change in any way the Federal plan now in operation.

They also are saying that it would cost more than two billion dollars to build the FRP and that this would be saddled onto the little people. The highest estimate made by engineers for the cost is \$1,500,000,000 to be repaid in 30 years. This sum is \$200,000,000 less than the state's budget for 1956-57—one year—which is now in the legislature—a budget you and I will have to pay. Most of the bond issue for the FRP would be paid for by land owners, water districts and others using the water just as Southern California paid for water from the Colorado river through the Metropolitan Water District and much as we now pay for water which we bring down from the Owens river.

Fortunately for Southern California most of the Democrats in the legislature are not fooled by the propaganda. State Sen. Richard Richards, for example, understands it and favors the FRP. So does Assemblyman William A. Munnell, D., 51st district.

The Feather River project has no big money behind it. The only money it has come from political subdivisions such as Los Angeles, Riverside county and a few others and most of that money has been spent. These subdivisions put up the money because they need more water and believe this is the only way to get it.

The Republicans have taken over the opposition to the Feather River Project almost 100 per cent. The Jack O'Neill interests have hired two lobbyists for this special session to replace Garland who took a political job. One of the

lobbyists is the son of Walter Little, the big railroad lobbyist and both of the lobbyists formerly worked for U.S. Sen. Thomas H. Kuchel.

One Republican who refuses to go along in the deal is Mayor Norris Poulson of Los Angeles. On Monday night Poulson gave a dinner in Sacramento the Los Angeles delegation and urged them to get on the ball for water for Southern California.

## Fed. Judge Asked To Rule On Police Search

Federal Judge Ernest A. Tolin this week took under submission arguments by attorneys for Eric Levy that his Constitutional rights were violated in an illegal search and seizure by seven Los Angeles policemen.

The suit was filed by the American Civil Liberties Union and prepared by attorney Paul M. Posner from A. L. Wirin's office. It seeks \$3000 in damages and complains that police entered Levy's room at 147 Ocean Park Blvd., L.A., last Jan. 31 without a search warrant and, against his protests, searched his room, papers and personal effects.

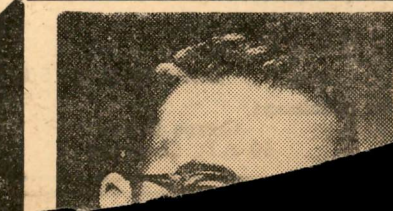
Levy was in police custody and handcuffed during the search, the suit charges. It named policemen Donald W. Grant, Edward J. Berger and five "John Does" as defendants.

The question before Judge Tolin is whether the case falls under federal jurisdiction. Attorney Posner argued that the 14th Amendment to the Constitution (forbidding the state to deprive citizens of due process of law) and the 14th Amendment protection against unreasonable searches and seizures are involved.

Retirement payments under the Federal Old-Age and Survivors Insurance program are not subject to Federal income tax.

## Weiss Fight

Teacher  
week  
tion  
G



YOU

## ISRAEL

(Continued from Page 1)

weapons  
marine,

reprisal that will offer the Arabs the excuse of making their big attack while calling Israel the aggressor.

\* \* \*

It is crazy topsy-turvy edifice of policy we seem to be building. We say we are against aggressors. Yet when the Arabs boast of their coming feat of pushing Israel into the sea our ears and eyes are shut.

We say that whoever makes an ally of the Communists cannot be a friend of ours. Yet Egypt and Syria have been given massive Communist arms and are still getting them, and are counting on more—and we do woo them ardently.

We say that appeasement of Communists and their allies can never work. Yet we have been sending Israel's enemies planes and tanks on the quiet—shamefaced at the knowledge of what we are doing—even while they are being armed by our mortal enemy.

We say we want to hold the balance even between Arabs and Israelis, so that a war will not break out. Yet the achievement of the real balance that could prevent a war—a balance of arms between Arabs and Israelis—is one from which we flinch.

We say that we are in search of real democracies anywhere that will adhere to our side and fight communism effectively. Yet when one is built, after centuries of wrath and decades of martyrdom, we stand ready to let it be pushed into the sea.

\* \* \*

O Lords of the earth, Captains of armies, Secretaries of affairs foreign and domestic, Congressmen and Senators, high Presidents and Premiers and Potentates: This is a call to your consciences as guardians of the national interest and of the human spirit, and as conservers of peace.

There is no question of "domestic" or "election" pressures. The grim fact is that Israel may be attacked before any election here has a chance to take place. There is no question of whether we are Catholics or Protestants or Jews, Republicans or Democrats, Negro or white. We have a common interest as Americans and as humans, and we stand to suffer a common penalty for inaction.

Time is running out, and the night is coming on.

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## LERNER

(Continued from Page 1)

## ★ Stephen L

Some of our readers have asked for books on art appearing. For their attention to a series of lectures, 20th CENTURY, being given by Langsner and Clifford Nelson. We 665 N. La Cienega for details and

Two fine new books on the subject are HOKUSAI, J. Hillier, Phaidon, and JULIO GONZALEZ, Museum of Modern Art. Both these artists had a lot to do with the way our world looks today. Hokusai, a Japanese artist who signed himself Old-Man-Mad-About-Drawing, in this beautiful book by Phaidon,



is shown to us in all his styles, periods, prints, many in full color, many in the best detail we have yet seen of his work. A very good book. Julio Gonzalez is a Spanish friend of

Longstreet Picasso's who invented, more or less, welded-blacksmith-sculpture; the first to make old iron, bronze and a welding tool into a new way of looking at things. He was very good, most of his followers very lousy. This book is the first done on him and his work. Today I think he would have been a hero. He died unknown and poor. What he started is today in the hands of lesser followers—a dismal mistake.

For a fine sample of this man at his best, this small book is a peep into a world odd, wonderful and just a little daffy. Gonzalez and Henry Moore remain exciting, for they had talent.

Three novels of the new crop are well worth reading. THE WICKED VILLAGE, Gabrielle Chevallier, Simon & Schuster, \$3.95, is a light, gay, rather soiled novel about high jinks in a French village where wine-making, money-grubbing and sex are the native industries. The author has a fine hand, a good sense of character, and if this is your kind of novel, you're in for some delightful reading. Not for the readers of Mrs. Lindberg.

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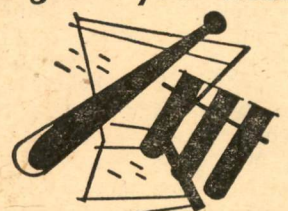
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## Political alignment

### State govt

- a. For cheap water, clean power, pvt xmsn, state water law

PGE (they want no power)

Large land holders, farm

(Assoc. Firms) (They can't ally w. PGE until gov't in. Before that, con. many interests)

Large urban prop. taxpayers

### Fed govt.

- b. For cheap power, public xmsn, cleaner water, 160 a law, water as p.u.

Small firms (160 a law and make big subsidiaries; also cough up some water)

Church groups

B.R. (until '52)

C.F.O.

Power consumers

Grady trying to gum up works: e-n firms; & compet's Cal. firms. P.G.E. (low water tables mean hi. pumping costs)

Unique in 2 respects

- No one wants pvt. op'n. Issue is state v fed.
- Fed is involved, even tho intransigent.

## Jobs for eng'rs.

vs. H. dam

- ~~1. ~~Long~~ Long time to build, & maybe fill. Maybe obsolete then.~~
- ~~2. ~~Maybe~~ Maybe dam won't contribute to floods~~
- ~~3. ~~Eng'rs~~ Eng'rs understated cost. & as is, costs plenty~~
- ~~4. ~~Domestic~~ Domestic dams not built yet~~
- ~~5. ~~Gov't~~ Gov't dept too hi, shd keep out of dams.~~
- ~~6. ~~Bureaucrats~~ Bureaucrats not motivated by \$, maybe by love of power, maybe by Pro. Army Eng'rs are empire bldg, monument bldg.~~
- ~~7. ~~Proponents~~ Proponents circulate misleading prop. about irrg'n benefits.~~
- ~~8. ~~Hell's Canyon~~ Hell's Canyon is foot in door for Socialism, CVA, absentee dictatorship.~~

CVP.

(How many \$ will hi l low dams  
cost?)

Many ask, why not states handle river basin dev-ment?  
answer, interstate. But more to it than that. Here is  
project all in one state, still Fed.

Was to be state. Marshall Plan. State asked Fed to take  
over - hands & knees & begged

1 main reason: <sup>at first:</sup> fuel.

But now many other issues have developed.

1st, what is C.V.P.?

Colossal, multi-purpose water resource development project.

Irrig-n

Power

Navig-n

Flood Control

Salinity Control

Recreation

Map of main trunk system; ~~mention further proposals~~

That's what CVP is on the landscape, in fact. But is still  
another CVP on drawing boards, & in minds of many BR eng. &  
ec.sts.

Vast network of canals, all connected to a grand-trunk system  
running n & s along Sierra foothills. Various rivers, various flows.  
Shuttle water to pts. of greatest need. = mgmt princ.: last drop of water  
brings some return <sup>every-</sup> where.

B.R. water pooling proposal very intriguing to ex-st, bes  
reps the best use that can be made of waters.

Creates replica of free mkt, for water

Now, in response to P differentials of few \$, trucks  
rumble ---

But water, non xprble, imaginary line. So some areas  
~~dry~~ wither's away in drought, but it next, over-irrig-n, to  
estab. "rt. of use".

Wells, 10 ft. vs 300 ft. (not for oil)

## End outline

### NC water problems

Describe CVP as is (dream CVP comes under water law)  
Eng. problems solved. Real problems <sup>begin. Like post irrig. dept.</sup> <sup>White water is life, abundance, power</sup>  
Wonderful. Everybody happy? Fight's over ben. & costs - old custom

Issues have come to a head in diff. way than Hell's Canyon.  
On surface, is not public vs. priv. All agree, now, is multi-purpose, & property public. (tho PGE fought vs. quitters in every dam) (& kept them out of Pine Flat) Issues ~~is~~ focus in govt of state vs. Fed.; (or, strong vs. weak Fed. control)

Is not to say issues are simple. Are many. But disputants have lined up in 2 opposing camps.

1st, see what issues are

—  
—  
—  
—  
—

Who are allied? (& why)

==      ==

all waters, figuratively flowing into one common pool, like a free  
mkt. & allocated from it to diff. uses most ec.

Seems like a fine project, bring's great benefits to state,  
why not everybody happy? You know people better - can  
stand a lot of things . . . . ., but can't stand prosperity.

Who gets gravy? Who pays? Who gets gravy?

### Issues raised

1. Water as <sup>p.u.</sup> ~~water law~~ or as prt. hold'g. Pool'g vs Bulkman'g. Fed vs state
2. Water to ~~own~~ 160 a. only, or any acreage?
3. Cheap water & dear power, or v.v.
4. Can Cal. outlaw power export.
5. Fed & munic. vs P&E distr. of power
6. I.D. vs prt. dist of water; slow settlement vs fast
7. BR vs. Engineers

link —

State water law - scratch it anywhere, hurts everywhere.

Here's Cal. <sup>at last</sup> the land of Golden riches, the life of ease, <sup>mid</sup> redwood trees, & irrig-n ditches  
& live & bleed, & Japanese, & Native Sons of Golden West.

Fraud, on dreams about water. (This may be why water bag's so popular among a  
Water is life, wealth, prosperity. Sons of Pioneers.  
<sup>certain</sup> ~~for college types~~)

Ec. 455. Assignments.

I. Subject. ~~Ag~~ land settlement.

1. Teele, R.P., Ec. of Land Recl., ch. 7
2. Huffman, ch. 5 & 8
3. de Roos, ch. 7, 160 acre lim.

II. Subject: Integrated use

1. Huffman, ch. 9
2. Review Ely & W., ch. 8

This PM — 3. U.S. Census, farm size.

III Subject: River Basin Development.

1. de Roos, Robt., "The CVP."

2. NAM. 333.9  
N213

(re justifying subsidy — in B-C analysis)

ch. 1 Summary

ch. 7 160 acre lim.

ch. 8 9c Contract

ch. 9-10 Power Politics — PGE

ch. 11 "Who pays for what"

{ NAM on water — subsidy justified  
for ag, when ind. higher MP

Nordholm.

Late 19th, rain > J.V. ave. > 20th. Grain flourished.

Also Coast range hort. w/o irr.

Missions located by wtr, for irr.

150-'70, diversion w/o storage, into pasture, wild.

Artesian wells.

'70s, larger coop. irr. works, Kings R., Kameah. Fresno scrapers.

1887, Wright Act

'20s, storage begins. On streams w/o storage, pump wells.

'90s, gas engine devs for pumps.

1900, electricity moves in.

By '20, need for State wtr plan. Drought, late '20s.

1888, Cal. lead U.S. in wheat. 3m acres. Today, minor.

~~Letter~~ 7. Adams

p. 33 Rate of furn. I.D.s., ~~it~~ tapers off toward 1914, booms in war, peaks in '20, tapers off to '27.

First Wright Act I.D.s. disappointed bondholders fully. 1897, new, tougher I.D. Act. Not used until 1909, 55¢ & Oakdale.

{ So it was w.w. 1 that boomed Cal. I.D.s., more than anything before.

1911 I.D.s.: Imperial, ~~San~~ San Ysidro

'14 : Anderson Ct. road.

Boom after '14 also reflected Panama Canal opening.

U.S. Bonds, w.w. 1, popularized bond buying in genl.

Hist. of irr. impmt bcs & thus its estab.

Pvt. enterprises failed. 1870 - 1910? or so?

Long grow'g season helps make irr. ec.

First, irr. makes drainage problem; then shortage.

1880, 30-40 small canals drain'g from Kern R., incl. some large ones like Calloway. At early stage, was clear gr. of who was to irrt, large firms or assoc-ns of small.

No where is struggle of large & small so clear. And nowhere have small made selves so potent - via I.D., MWC.

LA goes to Owens V, 1905

.. .. Colo 1929-41 Colo compact, ~~1929~~  
128, Boulder Canyon Proj. Act, U.S. ratifies Colo. Compact.

U.S. wained rip rts, approps got wth. when land sold, rips jr. to approps. Miners were first ones.

Before 1909, I.D.s had to tax genl prop? N.B. 1909, when moved toward lvt, begins big formation of many I.D.s.

Action & reaction.. { Lux v. Haggis, 1886, produces Wright, 1887 - & cts. interp. rip rts weakly for time  
Herminghaus, 1927, .. amendt, 1928 }

Reactionary ~~ss.~~ court  
leads to <sup>expensive</sup> legal legn.

Toward middle or  
end of boom, each case

{ 1909, MBL vs. Madera Canal & Irrig Co., pro rip.  
1909, lvt amendt.  
1913, Wta Comm-n Act. Rip. rts. unused 10 yrs open to appropn. (But '35, TID v. LSID, ct. refused to ~~apply~~ apply?)  
121, Herminghaus; also LSID  
128, Reasonable use amendt.

1888, M & L owns 1 m. acer. Then Miller buys out Lue's heirs. Keeps  
expands to his death, 1916.

M & L opposed cos. 1.D.s.

193 depression hard on Mod 1D

Mod. goes to alf. before hort.

123, Don Pedro finished

New King's R. Watermaster

~~Chas.~~

Clarena H. Smith

Report of the State Engineer to the Legislature of Cal, Session of 1880  
Part I. 1880

p13 Irrigation is an art, but practitioners have not advanced it. Use wastefully. Water that might irrigate 600-800 acres is in other circumstances of use, adjacent, good for only 20.

p14 re appropriators, "But he is never required to prove up his claim, to show that he has complied with the law by diligently prosecuting those works necessary to make good faith, and by using the water; much less is there any recognized rule as to what constitutes due diligence; and still less is there any recognition as to what is an economical use of the water."

Part IV Irrigation.

p33 Kern R has larger watershed than any stream s of Feather, but not so much runoff, because southerly. (but great potential, in case of southerly rains, I should think, or cloud seeding, etc.)

p35 Is no other stream in State with so many canals heading off it as the Kern. Low banks, and rapid slope of land away from stream, made it easy. Result is too many canals. Small, wasteful, unintegrated. "Had the difficulties of diverting water at points through the valley been greater, a few large canals, with capacity sufficiently large to serve the whole irrigable area, would have been constructed . . .". Now there are great channel losses, in canals, and also in river, because so many canals head downstream.

p36 Tule R., likewise, recommends 2-3 large canals with high heads, avoid channel losses, which are very high.

p51-53: Cache Crk, with Clear Lake as reservoir, a natural. Lack of snow storage makes more irregular flows, but Clear Lake somewhat compensates for that.

"The waters of Cache Creek have been used for irrigation in an unsystematic way for nearly a quarter of a century, but the works are still in as crude a condition as if the whole matter was yet an experiment of doubtful ~~value~~ utility or value." *since 1855* Brush and gravel diversion demand, replaced annually. Leaky ditches. etc.

(Emphasize: it is by these crude practises that water rights were historically established. Get quotes)

"It is certain, however, that the duty of water attained is very small, for the practice of irrigating without proper preparation of the ground is observed almost everywhere; and but little attention is paid to guidance of the water and saving the surplus."

(Hall uses "duty" of water to mean the land irrigated by the water -- just the opposite from present usage. Did someone get confused along the way?) (p. 62, he says is used either way)

pp. 64-65 Examples from Spain, where the Jucar Canal in Valencia is restricted by law to a few villages, which therefore exercise no economy of water, grow rice (and use poor land no doubt, tho here is a benefit from consolidation, balance this carefully)

Jucar Canal irrigates 35 acres with each sf-yr. Granada, other extreme, irrigate 244 acres with same.-- with old works. Generally, new works do better than old.

(And generally, it is known that new works do better than old in all fields. Hence folly of freezing waters according to ancient patterns -- many of which were not good even in their day.)

p68 South of France, great water waste. Departemente Bouches du Rhone, 62" deep, six mos.

"Wilson shows very clearly that this low duty is caused by the abuse of water privileges, made possible by the existence of the old water rights acquired many years ago, which give individual landowners the control of so much more water than they require that no care is taken to economize it, and great quantities are wasted." Citing George Wilson.

Wilson again: "The old canals cannot be administered in a manner fully to develop their resources, in consequence of the conflicting interests of the various owners or persons interested in them, by virtue of the onerous concessions of former days." Exact source not specified. p68.

Another problem is that many takers get water free or cheap, because they took this in return for a rt of way or something; so that there is inadequate revenue to maintain the canals.

p69 ~~Carpone~~ Craponne Canal, e.g., projector ruined self bcs landed proprietors held him up for rts of way, he had to give them much free water.

Piedmont and Lombardy, Italy, ". . . the right to water was acquired thru royal concessions by the owners of large estates during the troubled times of the past, and it has since been found impossible to regulate the use and prevent waste of the precious element where such privileges are held."

p69 English engineers, familiar with more economical use of water in India, are critical of N. Italy waste.

p70 Utah, much shorter growing season, hence need less water/acre than Calif. (Thus Calif can use its ditches larger part of year, justify larger expenditures, etc. From this it would seem to follow that as you move south in Calif., large expenditures are in order)

p73 Finds Calif. practise less ec of wtr than any older country (even tho within those older countries, it is the newer works that economize on water more). This based on a field survey of Calif., and study of engineering reports from older countries, including India.

p74 Calif farmer irrigates seldom, but then copiously. Four feet at a time, Kern R. (!!) And in general, "The Calif irrigator would consider it impossible to accomplish an irrigation with less than one to two feet . ."

French irrigators, by contrast, apply water much more frequently, and in smaller amounts. (So an optimal distribution network would be smaller, to permit of more frequent irrigations. If the farmer is only willing to spend more time and trouble irrigating, can save on both water and distribution cost. -- except that at some point it would waste water on the individual farm to have very slow trickle. But consider this when constructing demand systems, etc.)

pl01 Remarks here, as several times before, that dry lands require considerably more water the first few years than later -- presumably because the water table rises, the moisture holding capacity rises, etc. This may be something to consider in opening new lands.

60

pl05 Overappropriation. Kings R e.g. ~~83~~ claims in Fresno Co, plus 23 in Tulare Co, total 83 claims on Kings R, aggregating 24,000 sf. About 2½ times flow of stream. (Even in 1880, when stream hardly used!)

pl07 9 principal ~~8~~(sic) canals drawing from Kings R claims aggreg. 6595 sf, but canal capacity aggregs. 1870. All but one of the claims are quite add.

Several more e.g.s.

pl08 of 83 filings on Kings R, only 42 are expressed so as to admit of interpretation into definite sums, even approximately. "Several of them set up a claim to all of the water in the river."

pl09, there is no recognized standard of measurement

pl12 Losses thru scattered points of use. 3 e.g.s, Fresno and Kings R. Canal; Fresno Canal; Centerville and Kingsburg Canal. Took in enough water ~~to~~ to irrigate lands they served 18' deep. "The very small duty which the water did accomplish, is due largely to the fact that it is so widely distributed; the loss in transit from the river is immense.

"If the country thru which the ditches pass was irrigated and cultivated, the loss would not be nearly so great."

pl13 Several instances of 3-5 small canals, parallel, where one moderate sized one would do the job much cheaper. Increases channel losses.

pl15-16 Use of water for cattle, and watering range, lowlands, SJR south around Tulare L to Buena Vista, extravagantly wasteful. "This is a picture of irrigation of the most crude order. It can well be understood that claims to water used in irrigation of this kind are in existence, and may grow up as time goes on without regulation in such matters."

(Where lands require very much water for flushing, good argument for not irrigating those lands at all)

Hall Report 1880, p4

pl17 ll<sup>th</sup> criticism of current irrigation practise: "In the location of irrigation works the necessity for drainage has frequently been overlooked." (Maybe this is the cause of much drainage problems today?)

(Poor drainage also aggravates compaction problem)

Criticizes use of natural depressions as canal routes. Canals should follow fidges and high land, so water can drain thru. When apply it to low lands, high lands get wetted from the side and underneath, and low lands for some reason don't drain properly -- he's a little vague on this.

But I think anent Los Banos area, CCID, clear case of applying water where there is severe drainage problem. And in general, tendency to avoid higher lands in early projects, because more expensive to serve, so low-lands with drainage problems get the water.

pl22 Cannot define irrigable areas finally now, have much to learn; also, "the consumption of water during the first years of irrigation is enormous, as compared to what is necessary to effect this irrigation in old, settled districts."

pl21 Looks forward to a CV pop of 1m, to properly develop irrigation. Based on standards of pop density in oder irrigated lands.

pl22 Foresees gradual emergence of system -- doesn't jump right to an "ultimate" water plan.

pl23 "The cost of works of irrigation proper should be borne solely by the property directly benefited by their construction." vs State aid.

Summary and conclusions. Verbatim. Attached.

p124 (H)--Great harm has been done to the best interests of California, by obstructing the development of her agricultural resources through a defective water right system.

The acquirement of a privilege to appropriate water for purposes of irrigation, which is really not a right in any sense until the water is diverted and used (and then not an absolute one), is of no great practical value to the farmer without capital, or to a community of farmers without thorough organization, except that he or they be permitted to construct such cheap and flimsy works as for the time being will serve the demands.

Yet such has been the essence of the system in California, and the result is seen in the unfortunate condition of things heretofore mentioned, as the most important facts relative to the appropriation and use of water for irrigation; which state of facts abundantly proves that the water right system is defective, and its working has hindered the development of the agricultural resources of the State.

(J)--The water right system of the past and present is resulting in the monopoly and waste of water.

The appropriation law, framed with the intention, no doubt, of placing the water within the reach of all, leaving it open to public use, or putting it in the hands of local authorities to be given away on demand, without restriction or regulation, has resulted generally in benefiting those only who were able to profit by the advantages offered.

In the Report of the United States Board of Commissioners on the Irrigation of the San Joaquin, Tulare, and Sacramento Valleys of California, published in 1874, where we find the fundamental principles that should govern in the treatment of the irrigation question by State and governmental authority ably set forth and intelligently discussed, this axiomatic fact is stated:

In seasons when there is a great surplus of water there can be no objection to a more liberal use of it, but it seems to us indispensable that the State should lay down a general rule. There ought to be an established allotment, which may vary in different districts. The cultivators who come first ought not to be allowed to appropriate more water than they require, because, if they do, those who come after will not be able to procure a fair supply.

p125 If the ultimate result has not already been secured, it certainly will be in the future. Those who will have the right to use water will not share it on reasonable terms with those who have not that right; and unless there is State regulation of the distribution of the supply from the streams, and State restriction as to amount which may be used under the various circumstances, the water will not be brought to near its maximum duty, and the State will be the largest sufferer. For her Courts will be crowded with litigants over water claims, and a large area of land in the aggregate, which might support a thriving population and pay a large revenue, will remain dry and unproductive, while those which are watered will not have settled values. There can be no denying this tendency of affairs even now, and the experience in all older countries should convince us that we have nothing better to expect, unless the right on the part of the State to supervise the distribution of water from the streams is asserted and acted upon at an early day, before matters have gone too far to be easily placed upon a sound basis.

p125 (K)—The working of a proper water right system will solve the problems of irrigation.

The establishment of a proper water right system will do more to bring about a solution of the three great problems of irrigation heretofore mentioned (see Introduction, page 7), than all else which can be accomplished at this time. Such a system would have for its immediate object the prevention of waste of water from any cause, the adjusting of the extent of water privilege to the areas of land to be irrigated, and the granting of privileges to irrigate more land as the water supply is developed, according to such regulations as will insure the conservation of the waters. Thus, with proper administration, the first and second problems will be solved.

#### Solution of the third problem

Any large body of fairly good land adapted to irrigation, within the valleys of California, to which is attached a good and sufficient water right, under a system which pledges the good faith of the State to see that it is respected, not dragged into Court for adjudication as to its legitimacy or priority over some other claim, is in itself a sufficient basis of credit upon which to obtain the capital for its development by irrigation when brought into proper organization. When this state of things obtains, then will the third problem be solved.

#### The solution of a fourth great problem

Irrigators to be skilled in the highest degree, and enabled to profit most by the use of a minimum quantity of water, must be in a great measure permanent residents upon the lands which they work, and by experience in their own particular fields learn how to work them to advantage. Hired labor, and consequently all labor on large land holdings in California, can never attain to great skill in irrigation, because it is that of a transient population unused to the soil, the slopes, the appliances, and works of the fields in which it is called upon to manage the water.

We can only expect to have communities of real irrigators under a water right system, which protects the smallest cultivator in his rights to a fair portion of the water. Thus we can only hope to see the solution of the fourth great problem of irrigation, under the working of a water right law administered by the State.

### PRESENT CONDITION OF IRRIGATION AFFAIRS

#### A business like water right law needed

From what has now been said it should be apparent that the first step towards the solution of the problems of irrigation must be the provisions of some more businesslike system, whereunder the distribution of the water from the stock on hand—the streams in their different stages—shall be accomplished according to the legitimate interests had therein, to be used in irrigation under regulations that will insure, as far as possible, against waste.

pl27 Hall's program:

a. The control of the streams and the waters in them should rest with the State, and the distribution of the water supply to the works of irrigation or to the irrigation districts should be conducted according to State schedules and regulations.

b. Rights or privileges to use water for irrigation should hereafter be attached to the lands to be irrigated, gauged to the quantities necessary to effect the irrigations, should be classified and graded.

c. The distribution of water from the works to the lands should rest entirely with the irrigators . . . but all works should be maintained in a condition to prevent waste of water, and to this extent should be subject to State inspection and regulation.

d. The cost of works of irrigation should be borne wholly by the lands to be irrigated in each instance.

. . .

f. Existing water privileges generally should not be interfered with further than necessary to prevent the waste of water from badly constructed canals and insufficient preparation of lands to receive irrigation.

g. In the definition of rights, irrigation should be declared a higher use of water ~~when conducted by~~ when conducted by or under an organization directly and specifically recognized by the State as an irrigation district.

h. All water rights or privileges should be subject to condemnation, only for some higher use as recognized in each instance by the State.

i. The rights of riparian owners should be recognized as preferred privileges to water for stock and domestic purposes.

j. Sources of water supply for cities should be exempt from condemnation for irrigation purposes.

k. The streams of the State should be classified, and those navigable, or directly tributary to others which are navigable, should be the objects of special State regulations, as to the quantity of water which may be abstracted during any season for irrigation.

Hall 1880 Report p8

p62 Another virtue of Kern R is it draws from higher mts of state, snow melts later, maintains natural flow thru July.

p62 ff, long description of Kern R. irrigation. It was quite well developed in 1880. There were 30-40 canals drawing directly from river. Including Stine, Calloway, Goose Lake, ~~Kern Island~~ Kern Island, Buena V.

p99 Notes that Chines gardeners use particularly large depths of water -- even tho they pay for it.

None of canals use any measurement of water, except Kern Island Irrig-g canal co., only one from which water is sold pl07

pll3 More than 3/4 land on Kern Island, and elsewhere, owned by Haggin, Tevis, and Carr. They are rapidly completing, and/or projecting, comprehensive system of canals. pll4 "Their operations in the way of agricultural improvements are conducted on a scale that has no parallel in California, so far as my observation has extended. Their works are planned with intelligence and constructed with unusual economy - a rare thing in California irrigation works thus far."

They proceed with experimental farms, first, to test soils. Then build canals and rent to tenants, supply water free. Announce intention to sell off lands when canals finished.

This section on Kern Co is report of James D. Schuyler, Assistant Engineer. Appendix B

General Impression of Hall's work: extremely prolix, repeating major program, which is quite simple and obvious -- and inadequate.