

alB5 Mndta-Nwmn incl grs

Write for copy: "Ave. annual discharge of major streams."

Grasslands Water Problem, San Joaquin Valley, Cal.

Hrg, subcom on Int & Reel, of Comm on Int & Ins Aff, HR, 82d C. 1st Sess,

4-17 & 5-3-51.

p. 49, Bokes has "surprised ~~us~~ all of us" how fast "100s of 1000s of acres" have gone under irrig so. of Friant & along Madera, so full dev. of CVP occurred much faster than anyone expected (so? ? wonder.

Due to
hi water
price, hi
taxes?

If so, interest'g contrast vs Col. Bas. Proj., good article)

Result, unantic. water crisis. (p. 70, rpt, was first come first served, & later applicants have been turned down.)

p. 49, BR method of distr. water, sit down w eng of ea. distr., work out its water ee., see what they can develop locally, & allot them the rest. (so CVP water goes where is little local water.) Is much groundwater in grasslands area.

(To work out mkt alloc. of water, must include distr. cost in price, otherwise ~~lose~~ spread water infinitely. But then how keep MC pricing? By chang'g lev to lands ben. by Δ distr. works.)

p. 50 '20s & '30s, M & L sold much SJ grassland, but reserved water rts. (possible? legal? w. riprts, app. to land?) M & L canal, div. from Mendota pool, had rts, & grasslands had flood rts, after users from M & L canal had their "requirements"

Grasslands are alkaline soils, not irrigable, used for pasture & duck clubs, from nat. flood'g. State plan, adopted by state ref. 1933, to swap water at Mendota, store at

Friant, move flood waters to where ^{soil} more productive.

'39. BR got grasslands water rts for \$2.5m (then why swap water from Sacto.?) ^{p'39, the swap is for firm water, the purchase was of flood water.} M & L agreed to protect rts by usg them until storage built.

'44, Friant built, but not distr., so interim contracts w. Grasslands Water Ass Inc.

'50, D-M canal & Tracy pump plant finished, so interim recips notified end of contract. Grassers can pump.

11 districts have made long term contracts to date, 7 negotijg, 1.4m a-f cl. 182 water ~~cont~~ alloc. to them. either under contract or in "final stages", from Friant-K. canal mostly, & Madera.

Also, in D-M service area, 13 distr., .3m a-f. Then Tr. pump's plant. And this is all that is available! (why such a large canal, then?) (future dev. of Am. R, etc, probly, antic.)

Is no more water to alloc. & this yr, short supply, so long termers get all, temp. along Madera canal esp. get the brunt of reduction.

Quote him in article.

✓ ~~Mr.~~ Mr. Engle, chmn, has definite orientation toward sell'g to highest bidder, sounds glibly like good mcn, compromiser, smart. Poulson is ass, Boker is not too sharp.

BR exercises great discretion, uses its judgment, in deciding where water is valuable. Boker evidently made many ultimate decisions. Much gripp'g, natch. So here is also an imperfect system.

M & L sold grasslands, reserved water, so buyers knew they had no water. Then when BR took it & used it, they tried to claim it.

Foothill WD, Factual Rpt. 5-54. Sacto.

W of Newman. No distr. system.

Payment cap. \$115/a. Higher than Davis or Sunflower.

No excess land.

215 days frost free, in a local thermal area.

8 holdings, 90 - 160a.

90% area Cl. 1.

Turns dry fond land into Truck, & ^{a little} alf., they antic.

Foothill WD Factual Rpt p 6, 5-54

Per Acre

Crop	Unit	acre yld	Price per unit	Gross	Prod'n costs	Taxes	Nett Income	Fertilizer	Σ	Payment Capex.
Irrd pasture Grade & Dairy	#B.F.	300	.85	276	169	3.75	9	0		94
alf	ton	7	20.50	143.50	56	1	1	6		69
Tomatoes	ton	15	22.50	337.50	164	1	1	3		157
Beans	cwt	25	7.25	181	52	1	1	3		113
Truck	sk(50#)	600	1.10	660	500	1	1	3		144
Double (pear)	ton	1.5	75.00	112	80	1		.50		32

Dos Palos - Firebaugh - 99.

Around DP, small fms, primitive home-made pioneer-like houses.

Poorer land, says Bates.

So. to Firebaugh, fms get very big. Bates says rice down in this area, to leach salts, then makes good land. But I wonder if pouring on rice w/o doesn't add to drainage problem, in quantity if not quality.

E. from Firebaugh, immed. cross river w/o much flow. Then ~~a~~ land w lots of canal wtr, some standing wtr, & nice green crops. Some of the ditch wtr stinks - maybe Bates meant "putrid" literally.

Then some alkali junk.

Then grapes, lots & lots. To 99.

—
Ba

CCID. Los Banos
CW Bates, Secy-Mgr.

(See San Luis Canal Co, too) (a MWC?)

1. Why form ID?
2. Worst drainage problem in State?
3. Co. of origin problem?
4. Buying wtr now? ^{How much pay?} Why not drain, use that?
5. Rapid Δ land use since ID? How fast?
.80 for wtr? X
2.30 per acre?
6. Canals lined?
7. Consider bringing other canal cos in?
8. Outside lands want in? What terms? E.g. n of Grows Ldg.
9. Nature of opposition to joining ID?
10. Fm sizes? Effect of ID.
11. Were MWC before?
12. DM wtr perc. faster?
13. Oppose FRP? Why?
14. Land values, trends
15. How much pay M&L for wtr rts?

C.W. Bates Los Banos. A very smooth, plausible talker - but tends to color things his way a bit. Thinks everything is trending vs him - pretty good sign of unreasonable extremist.

Formed CCID but not happy w M&L canal opn. M&L had in for rate A, 3d in 10 yrs. And had no incentive to get more late season wtr for them, which needed, nor to op. much to their benefit.

Opposition but M&L had sold out on easy terms, refrained from foreclosing in '30s, even tho going bankrupt themselves. M&L was land-poor, couldn't meet their taxes, '30s. Salvaged much, tho. Still hold 3-4,000a in CCID, $\frac{1}{3}$ San Luis Canal area (& wtr?). Main interests tho are Buena Vista Lake area.

ID negotiated new contract w. BR. Got 35-40% more August wtr.

One of their canals parallels BR, DM, other way. Want get BR to deliver farther n, avoid carry'g w from Mdtu thru drainage problem area & subsidence area (Pacheco). Can't come to terms. BR wants them to lower quality standards required at Mdtu, but DM gets seepage so. Los B; also, BR has max of 3200 sf or so the 4 cos can get jthly any one time, to keep some capae. for others, & they want to lower this by full amt of capae. of outlet, regardless of use.

New contract also let Canal cos stipulate use in monthly blocks, allowing more flexibility

They have demand system in part, & rotation in part. They must have some rotation, to take up slack end of mo.

Bates, 2

They don't pump to drain, but drainage districts do. They don't use the wtr in canals but "putrid". Yet are 80,000 a around fringes that won't in, now use pump wtr alone. They won't let anyone in, any terms. Service area pretty scattered, esp. n-n part. Based on old M&L customers. Excluded lands were "bad lands", wtr was "putrid" — yet these are all being found! — he tends to misstate things + hrs. Wonder if is price differential? Ask elsewhere.

Worried re underground drainage from new districts above them. Fighting to stop new dev, until master drain in. Kaljian is big promoter of San Luis WD, just above CCID — has garage in LB. Bates says he holds big tract, wants sell & get out rich.

Firebaugh MWC has installed expensive tile drains, perhaps prompted by drainage from new districts above.

As get more wtr, put in more wtr consumptive crops, keep needing more.

Most canal losses are seepage, not operational. Lining wd be too costly — service area so scattered.

One canal was originally for barges, coolie labor 19th c.

Bates, 3

Fresno is challenging CCID its now, usg co-of-origin & everything else.
CCID submitted records to hrgs, discounted were too low, now reworking.
Records poorly kept.

Bought M&L all for \$4.2m. Some opposed ID but thought wd
✓ cost \$8-10. But cd give M&L tax free bonds, to yield same income
as from canal. Now pay no co. taxes etc., like MID.
So not a mkt price by long shot. Also, M&L was now a regulated utility, unhappy.
M&L charged per acre, that is why had no incentive improve supply or
opns. Rationed wtr, capricious.

Now msre by "Calro": orifice, head, & time, + tables.
Some gates by guess.

Move into row crops, big wth consumers. Dairy slowly
diminishing. - but pasture A/g, while alf. declines, pasture easier.

Other canal cos hv. diff. problems, hence no integrn.

✓ 50 or so hold 50% land. Also very small hldgs.

Best land is n. LB. - \$1200 - 2,000/acre bare (but ? wonder)
LB c. \$1,000; & Dos Palos 400-500. Best land is for walnuts &
row crops.

Boron is their big problem. 0.5 ppm is max tolerable, & some well
stuff gets up to 2.5. 1.5 might be more typical. Some crops take
it better than others. Walnuts & ~~some~~ beans don't take much.

Bates, 4

CCIN canals ~~to~~ so level, good n. wind slows down net flow a
lot. Runing 400 st, wind pushes 50 st the other way.

Madera - Kernman.

Raisins come in bunches. Madera to SFR, thick; SFR to Kernman, thicker. Kernman - Rotunda none, until Rotunda, thick. Also s. from Rotunda, then stop.

Another group near Raisin, but splattered.

Is this the effect of ID tax? In FID, if land is best for raisins, is all so used, no splattering. Raisin, no tax, no urgency.

7 new R is empty, but Ciudad Azk is full. 6-8-58.

SFR seems less full where 145 crosses than where 152 does. But what comes in below there?

Lots of good land above DM canal, 152. Dry farmed.

Dairy around Los B. Across to 99, is dairy, hay, corn, ctr, alf., very occasional fruit. Lots of water, tho. less as goe. - is this land that "lost" water? Supersaturated

Sta Clara valley, half land w/o trees.

35, 520

5:40

Crows Landing, suddenly
huge ditch full of graving
wtr. Coming into CCID?

Vernalis - El Solys on
e, WSID on w. Vernalis
not much.

New fruit trees coming,
WSID.

Does more certain w
supply encourage this?
Find out how long to kill
tree w/o wtr - ask Shear.

I shd think, in any given yr, risks wld be less w trees than w field crops, bcs latter require more work to start.

But maybe young trees can die from lack of water

Gustine, dairy-cattle center. Nice clean town - about the last one.

Gustine - Los Banos, many brimming canals. Very large - maybe 500 cfs? Like CCC, only earthen.

33. before

W~~R~~ from Las Banos, huge hi earth San Luis wasteway.

Local canals come in from so, & fed by DM, &

wasteway is empty, crosses canals.
74 acres for sale, \$13,500,

c. 5 mi e. of Mendota on

180, s of road. Salty land.

How come so high? Wa?
No buildings or any improvements visible.

E. from Las Bomas on 152,
hit salty land, but never
gets so salty that some
isn't reclaimed, across
road from land covered
w. salt brush.

Write owner. Fresno
BA 9-4154

Volta is hardly observable.

Cromit is absolutely nothing.

Los Banos is vigorous, big
fm machine town.

Big Portuguese ~~Assoc.~~ ^{Assoc.}
across 15th from Daingman's
Assoc.

Salt area is short, soon
come again to wt.

Dos Palos - Firebaugh, much
rice flooding. (I suppose
they cd start this after
they learn is big surplus
wt yr, but then they're
pump'g DM wt 200'

Just e of Mendota
overplowed slough.

5 mi e. of Kerman, by odometer,
salt gives way to irrig
fairly abruptly. 8 Large
hldgs like Bund gied 7m of
United Fm Inc. to small
middle class houses — not
without a fringe of shacks
first.

Few vines at first.

Kerman — so-so.

E. of Patterson, P/D, trees —
cf. El Solys, to n., nothing.

Crows Ldg & so, minority
groups, run down, more frequent.
They go with gravity wtr.

C VP, "Appraisal of Damase by reason of rip. invasion of lands of
Ed. Sec. Co., S.F.V., Cal." Accts, 10-41. Consulting appraisal
Bd B.A. Etcheverry, F.C. Herrmann, Curtis Walker. Code 1240

Ed. Sec. bought ¹⁻³⁻Herringtons Ranch, '38, after S. Cal Ed. lost
decision, for \$811,900, c. \$50/a for 17,223 a. (of which 1718 are
non-rip.) so 15,445 are rip.

SC Ed bought from Ed Sec Co on 2-21-28 (probably shd be -38)
privilege of storing w of river & trunks, for \$523,140.

Lvs \$348,160 for Herringtons, resid. book value.

12-31-28 (38?) Ed Sec. sold more rts to M&L & Chowchilla Fms,
& on 1-19-33 to S.F. & KR Canal Co, Freebaugh CC, San Luis CC, &
Columbia CC.

Appraisal Bd puts value on invasion of \$200,000. Lvs \$160,000
for dry land.

But is very sloppy work.

Herringtons rts were vague. Had no diversion works, but
when river got hi it flooded some of their lands, up to max
41% of them at 17,000 sf & above at Friant. Thru 17 nat.
(a rt like this is obviously hard to quantify) sloughs)

Is a B.R. office of appraisal that might help me.

Matthai, H. F., "a Rpt upon the wtr supply of the Sfr River & the ec.
size of res-r near Friant for Cal CV Wa Plan" 12-34.

BS thesis, approved S.T. Harding.

(Downstream releases from Friant are e.g. of w to wrong place)

Cites Rpt PW Bull 29, Sfr River Basin.

p. 16 Cites Harry Barnes figs., nts on Sfr, (000) afa.

Madera ID 335 ~~mm~~

Rip nts 12

Sfr & Kings R Canal 482

Columbia, S. Louis,
& Finebaugh 218

Fresno Slough 34

E. Side Canal 48

State Game fm 9

Total 1137

These all broken down monthly.

SJR hrs CCID Exhibit. Wtrmaster's Rpt,
Diversion CCID, Col. etc.

	CCID	Columbia	San Luis	Firebaugh	Total
3-55	44,000 at	5900	10,600	5,000	65,130
2-55	4100	-	-	1000	6,331
1-55	-	-	-	-	305
12-54					10,609
11-54					16,000
10-54	22,-	3,116	6,169	3,001	34,552
9-54	43,605	5699	17363	6896	73,563
8-54	80,410	8428	26160	13410	128,408
7-54	83,685	8121	21620	15334	135,366
6-54	78,450	8231	26751	12752	126,190
5-54	74,410	8009	22520	11195	116,134
4-54	62,965	7896	18508	10,052	99,421
<u>Total</u>	494,225	56,-	155,1-	78,6-	812,6-

Acresages: (from map appended to contract in BR)

146,100

6,000

1400

154,100

16,560

41,285

23,675

241,62

Water Per acre:

3.21

3.38

3.29

3.32

(3.38)

~~H. Chas Lee rpt for "Feasibility Rpt for Surface Wtr Supply Fresno Metrop Area", 1-58. Try to get.~~

CCID diversions rptd in Bull 21 run higher - 565,000 at for 1954, 585,000 for 1955. By gravity. They may have sources not included here. And they report only 134,000 acres irrd, '55. Thus present figs understate use per acre.

Cal. Div. Wtr Res., 'Rpt on grasslands wtr problems' (unimed)

Sacto, 7-30-51, by T.B. Waddell, princ. hydraulic eng.

4-20-51, Cal. Sen. memorialized ~~Baker~~ Comm. of Recl. to sell emergency water grasslands S.F.

Grass Lands Wtr Ass. had earlier asked Regional Director, Region 2, BR, for 10,000 a-ft, grasslands w. of SFR.

HR subcomm on in Recl. took up qn 4-17-51, & again 5-3-51. Baker wrote Engle; between mtgs 1 & 2; ltr dated 4-21-51:

30,000 a-ft to wildlife after 10-1-51. But no summer wtr:

a. Enrl drought, shortage everywhere. Wtr shd go "where it can be used most beneficially."

I.D.s. in SFR which "are negotiating" long tm contracts, I have shrt-tm contracts for '51, hv. bn advised to expect $\frac{1}{3}$ " of the supply they contracted for." (a silly way to write a contract, then)

This cut is forcing out land already planted to cotton, etc. (another source of MP of land data?)

b. 4-24, air count of cattle on 98,000 acres grasslands w. of SFR. Not over 6,000 cattle present. - less than 5% no. of cattle in Merced Cty.

10,000 a-ft cd be applied to max. $\frac{1}{4}$ area. Poor soil, so wd. improve grz'g only slightly.

Just move cattle off area earlier than usual. Use supplemental feeding. Is being done in many areas.

c. 2-5% area covered by ponds. Are also well water, return w. from irrig-d lands under MBL canals. Shd provide enough wtr in Salt Slough, Mud Slough, & Los Banos Ck, & elsewhere, for all lands.

Rpt. on Grassland wtr probs, p 2.

So Cal. Sen. asked State Eng. to investigate

History of wtr rts of SJV Grasslands

M & L canals took from SJ R.

Above Mendota Pool, by Gravelly Ford & Aliso Canals, Lone Willow Slough,
& Moumy Canal

at " " " Firebaugh, Main, Outside, & Helm Canals
& Helm Ditch

Below " " " Arroyo & Island Canals

Used water both sides of R. betw Grav. Fd. & mouth of Merced R.

On ~~cropland~~ land planted to crops, & grasslands.

7-27-39, U.S. bought ^{grasslands} wtr. ("Purchase Contract")

It bought the grasslands wtr; & it swapped facts wtr for
cropland wtr ("Exchange Contract")

Was no provision to supply grasslands wtr then.

p. 7 M & L. sit-n:

<u>Wtr. distrib-r</u>	<u>acreage served</u>
1. Gravelly Fd Canal Co.	14,759
2. Aliso Canal	22,170
3. Lone Willow Slough	22,957
4. Sfr & Kings R Canal & Pm. Co. (now Sfr Canal Co.)	34,420
5. San Luis Canal Co.	58,796
	<u>156,102</u>

Grasslands, p 3

p7 1st 3 are n & e of SJR, btwn 1 & 3, — not in Grass Lands Wtr Act.

Last 2 are in gen. Lands btwn Dos Palos & ^{Merced-} Steam. City Line

U.S. paid \$2,450,000 for "all the wtrs of SJR ... in excess of ... (specified flows)". The spec. flows were for croplands, & were waters used by 4, 5, & Firebaugh CCo. & Columbia CC.

p8 Grass LWA stockholders have no claim to SJ wtr. May hv. claim to compensation, not sure.

U.S. paid \$1.9m to M&L, put .5m in escrow to cover future claims of others, if any.

p9 GLWA, Inc., a MWC, inc. 8-2-44. Mostly Merced Cty, all w side. Orig. 104,600 acres. But now members own 50,000, of which their eng. ests 22,000 wd. use wtr.

It is almost congruent w. former 4 & 5 grasslands areas.

p10-11. GLWA is org. to bargain for water from U.S. But BR says an opinion of Solicitor Genl says a MWC cannot contract long term w BR — must hv. tax power.

p11 Of the 22,000 acres to take wtr, 13,000 are duck club lands.

p14 Oct. wtr for ducks to stop after '53. Interim contracts

p15 More wtr fell, so BR revised ests to 60% of requests, on interim contracts. (so on these they op. on fractional basis)

Grasslands p4

p. 21 D-M Canal to open 8-1-51, then Grasslands can buy from it on same terms as anyone.

(So this was just a temporary flurry.)

Jones, Phillip E., Hammon, J.B., and Christiansen, L.B. "Land and Water Utilization in the Westside Grasslands Area of San Joaquin Valley." BR, Reg 2, ~~41~~ 4-1-47

100,000 acres, west side, in Stan, ^{almost entirely} Merc, Madera, Fresno Cties. Extend 40 mi betw Newman and S. Los Palos. Are additional 45,000 acres on east side of SJRiver, not included in study.

Lie within "dry flood plain" SJR, embody series of ponds and channels surrounded by native grasses. Used for grazing and duck ponds.

BR now supplying 2/3 lands w temporary w. W users want firm supply.

Micro relief, shallow swales and low mounds. Duck ponds, easy, build low dike around area, fill with w. Soils are clay and clay loam surface, with mottled clay underneath, with poor to bad drainage. Traver, Orestimba, Orestimba wet phase, and Rossi soils. Check and crack on drying, saturate quickly with water when get it. Moderately alkaline. Irrig w dissolves alkali, produces heavy growth of salt grass, water grass, lippia, and juncus in low places, salt grass and annuals on high spots. Latter two called "dry pasture" locally.

Mounds are most alkaline, swales less so. Around edges of area is some good drainage, little alkali.

Ground w level, 2-10', deters drainage. W very alkaline or brackish, ng for irrig, poor for stock water.

M&L built dam near Mendota, diverted to this area from SJR. Built dikes and levees so excess w from M&L croplands flowed onto this area by wild flooding. In dry yrs, no w came here at all.

Original duck breeding grounds of valley were Tulare L. When Kings R irrigators dried it up, ducks moved to grasslands.

? 20s, M&L sold off, kept w rts.

30,000 a now duck clubs. Rest pasture, beef plus dairy stock. Much duck land leased to cattlemen for 7 mos., and v.v.

Most duck clubs incorp, as "land and/or cattle cos." To avoid paying excise taxes on "club" dues.

Grazing season, April - October, 7 mos. Dairy men graze their young stock or dry cows here, permitting more milk from their cultivated c opland. Thus they get most of their own dairy replacements, plus supplying LA and other areas with milking stock.

Beef ranches use grasslands as supplemental range.

6,000 acres of best Grasslands carry ave. 3 acres/animal unit for 4 mos. With irrig and proper mgmt, cd increase to 2 acres/animal unit for 7 mos.

57,000 acres medium poor land, capacity 30 acres/animal unit 7 mos. Properly mgd and irrig, capac cd increase to 4 acre/ . . .

42,000 acres poorer yet land. The mounds esp bad with alkali, in swale capac is higher, c. 18 acres/ . . In s.w., large areas in Salicornia, 50 acres/ . .

Whole area ave. 17 acres/ . . With no w supply, reduce to 30 acres/ . . With w. supply and good mgmt, could increase half the area to 4 acres/ . .

p9 Larger holdings held by ranchers w other holdings too, operated jointly. Smaller holdings by dairymen, also op jtly w adjacent cropland.

✓ p10 M&L sales, 1920-36, ave \$24/acre w/o w. rights. But not clear, since was understood they would receive "sufferance water" for a time. BR sets "normal" value at \$15 dry, \$30 irrig, but this seems to reflect thinking that wartime inflation is "abnormal".

Fair normal rental rate they call \$2 wet, .75¢ dry, but during war rentals ranged as high as \$4/acre, better areas.

p11 Duck club memberships, rep'g equity in 30-40 acres, sold for \$2500 - 3000, past year. Stockmen lease holdings to sportsmen at \$200 - \$400 per blind, or about \$6/acre, with lessees supplying the blinds.

p13 Duck groups need w in fall, for shooting; cattle need spring and summer. Thus alliance of two groups to get w is uneasy.

p16 Grassland owners focussed nationwide attn on importance to Pacific Flyway. Got Ira Gabrielson, Director Fish and Wildlife, to memo Comm. Bashore wanting 100,000 a-f. Authors grant grasslands are essential link. But note there are no maintained winter or summer water surfaces to serve waterfowl propagation. Flooded duck ponds are just for shooting. Except for a small and inefficiently operated State Wildlife Refuge, and some slough or natural drainage ways.

p17, est annua kill, 1m ducks

✓ p21 BR would have to charge "Municipal and miscellaneous" rates, as in 1939 Act, for duck clubs, as they are not agric.