

Lower San Pitch: Mike Silva's Supplemental Notes on Assessments
Methodology for Assessment Calculations
Redone for 2010:

Note: In 2009 the minimum assessment was set at \$10 by the water users at the Lower San Pitch annual meeting. Be careful when reviewing this: 2008 data provides assessment for 2009 billing. 2009 Data provides assessment for 2010 billing..., 2010 water data provides assessment numbers for the 2011 billing:

Lower San Pitch River (29) Assessment Method: Assess the water users based upon the acreage they own. This was J Larsen's Orig Statement however it is actually AF the account uses: The minimum Assessment: \$10.00

Following accounts remain as Fixed amounts:

Acct. 101205 (CUWCD) fixed at \$5300.00.		
Accts. 101203 (Gunnison Irrigation Co.)	0 Primary,	1 Secondary
Accts. 101204 (Gunnison Irrigation Co.)	13 Primary,	1 Secondary
Accts. 101238 (Russel Yardley).	0 Primary,	49 Secondary

Below are Mikes Notes for use of the Spreadsheet for the remaining calculations

Acct 101205, (29.16): Central Utah Water Conservancy District:

Is billed a fixed amount of direct assessment of \$5300 per year.

When the Assessment amount is entered into the Assessment Database, the system automatically calculates the split between Primary and Secondary assessment amounts for you. However these numbers should be checked and reviewed by the Distribution Engineer each year, as follows:

To calculate the primary and secondary assessment amounts: (Stays same for 2010)

- Take the assessment for the year: for 2009 it was \$17,600 and subtract \$5300: to get \$12,300.
- Take this result 12,300 and divide by 2: $12,300/2 = 6150^*$,
- Then add the CUWCD amount back in to get the primary assessment
- $6150 + 5300 = 11,450$ ← **This is the Primary Assessment**

To calculate the Secondary Assessment:

- Take the total assessment and subtract the Primary assessment to get the secondary Asmt.
 $17,600 - 11,450 = 6150$. ← **This is the Sec Assessment**
- *Note that the Secondary assessment is half the primary without the \$5300 added.

Note the assessment amount remained the same for the 2010, 2011 assessments so no changes to the above calculation was needed

The remaining figures are entered as primary and secondary units in AF amounts

Gunnison Irrigation Co. accounts

There are two fixed amount Gunnison accounts on the roster (as mentioned earlier)

Acct 101203 29.15: One showing 13 primary and 1 secondary, Stays the same each year

Acct 101204 29.14: The other showing 0 primary and 1 AF secondary, Stays the same each year

Not sure where these numbers come from, indications are they stay fixed or are billed the minimum assessment each year. For 2008 Dave Beck says that Gunnison irrigation total is 46,994 AF in 2009 it is 47,224. All of the water to Gun. Fayette canal was 12 mile water which flowed too high to use in the Highland or the Oldfield canals, thus ran down to Fayette.

Acct 101234: 29.4: Gunnison Irrigation Company:

Gunnison irrigation amounts: if the total amount accounts for the amount sent to Gunnison-Fayette canal (**5,668 for 2008 and 6,713 for 2009**) has been deducted from Gunnison irrigation.

Then Gunnison Irrigation company Is always billed on a fixed amt of AF : 14,023.00 (14,023 AF Primary always stays the same) and a number around 30,974 (AF Secondary) is the one that changes I determined the Secondary AF value changes yearly based on water readings shown on the Spreadsheet, (under Twelve Mile to H-land) so I modified it reflect diversion amounts, adjusting the Readings as follows:

2008: 30974
2009: 36138
2010: 35410

Comis Report has the diversion amounts from the Calendar year data

This provides data to add and get the Gunnison Diversion Amount:

	2008	2009	2010
Pettyville	23244	24358	22382
12Mile to Highland	13466	12338	12034
Oldfield	6856	7100	6694
9 mile	3428	3428?	3428?
Gunnison Total:	46,994 AF	47,224	44,539

? indicates I am not sure where this 9 mile figure comes from so for 2009, 2010, I used the 2008 value of 3428, I think this may be the reservoir capacity???

101222: Harold Hansen is separate from Gunnison irrigation. He receives an amount after Mayfield is measured and before Gunnison is measured. There was a note about Harold Hanson being part of Gunnison Irrigation; we still charge him and his account standard amounts of:

85 primary and 11 secondary.

Acct: 101235 (29.5): San Pitch River Drainage District (DD)

Usually records about 15,000 AF of diversion rights. Look at the Net to Drainage District section at the bottom, use the figure on the lower right of the page for the current year.

For the DD, note that the measurement method is not very accurate. Typically they over divert and waste water (ice and evap/flooding) Better measurement should be established. In the meantime, the Diversion limit should be checked and then limited to the 15,000 AF limit, then no longer allowed to divert water. For this reason, the DD numbers typically hover around or over the 15,000 AF amount.

For 2008 this amount was 15,884 AF

For 2009 this amount was 15000?* used 15890 AF

*AF was not on spread sheet DBeck this value was near the same at 15,890.

For 2010 amount was 15736 AF

Acct 6: Gunnison Fayette Canal Co (GF) (Sherwin Sorensen)

Spoke with Sherwin Sorensen, (GF bill has gone from \$864 in '09 to \$1860 in '10) the diversion amounts used to calculate along with the methodology shown below are inaccurate since the "Below Old Field" canal amounts **are not all going** to Gunnison Fayette. Some of these amounts are actually flow to the Lower Sevier River.

Perhaps the best method is to Calculate the appropriate amount:

take the high water flow, CFS per day allowed, 40 CFS during the high water months, reduce to 25 when the high flows diminish and taper to 0 by mid summer:

CFS x 1.9835 = Total AF per day, Then sum all days to get Total AF per month.

Considering when there is high water available during the Irrigation Season.

The Lower San Pitch water commissioner does not track the G-F canal amounts. However the G-F water master does, and has records. Typically these amounts are 25 CFS for the month of March (3/1 to 3/31) although G-F can draw up to 40 if available (40 is the limit). Then if high water is available from the San Pitch then they can draw an amount available till Nov 15 the end of the irrigation season. There are no diversions for G-F in Jan, Feb or from Nov 15-Dec. (winter months) An adjusted table shown below would be a typical year for GF considering when high water is available in the early summer. {I am not sure why there is a separation between Primary and secondary amounts other than if its real flow vs high flow.}

Example on How to calculate Gunnison Fayette Canal Co. Primary and Secondary diversion amounts.

Example 2010 Diversion Data:

2010	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Sec	0	0									357	0	357
Pri			2460	2380	1534	1345	0	0	0	740			8458
Average CFS flow			40	40	25	25	0	0	0	12	12 for ½ month		

-----**The old calculation method that is being replaced is below in italics:**-----

G-F Has high water before March up to 25 cfs secondary units –determine time.

Indications are that the canal wont hold more than 40 CFS, However flows records show amounts up to 70 CFS.

Easiest way is to look at the Distribution System Daily Records, Usually last page of the report for: "Lower San Pitch River, Below Old Field Canal", The AF totals for each month are already calculated for you on the last row.

I am assuming that the Irrigation "on" season water (March to October) is primary, and off season water (Nov- Feb) is secondary. Add each month together to get the year's total in AF, keeping the On (Pri) and Off (Sec)season water separate to get figures for primary and secondary amounts.

Example on How to calculate Gunnison Fayette Canal Co. Primary and Secondary diversion amounts, Using 2008 Diversion Data:

2008	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Sec	676.4	632.7									926.3	983.8	3219.2
Pri			755.7	0	307.4	1344.8	0	0	0	0			2407.9
											Grand	Total=	5626

Using 2009 Diversion Data:

2009	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Sec	737.9	833.1									952.1	983.8	3506.9
Pri			749.8	0	3084.3*	8360.3*	0	0	0	737.9			12932.3
											Grand	Total	6713

**Note that the high numbers shown in May and June is what ran, that was high water run off that went down to the Gunnison. Still not sure how these numbers add up to get the 6713???*

Using 2010 Diversion Data:

2009	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Sec	773.6	793.4									1071.1	1081.	3719.1
Pri			777.5	23.8	0	10895.2*	0	0	0	190.4			11186.9
											Grand	Total	6925

*Note that the high numbers shown in May and June is what ran, that was high water run off that went down to the Gunnison. Still not sure how these numbers add up to get the 6925 (about)???

2011 UPDATE: for a few years running we haven't been able to get this amount correct, usually resulting in an overbilling to GF. According to Sherwin Sorensen, the amount of 16,576 and 15,736 is too high since most of the high water goes past GF. On 12/21 in talking with Shwrwin the diversion amount should be fixed to not exceed a total of 7702.29.

Therefore the amount of Secondary water during the winter months should be subtracted from 7702.29. AS follows 7702.29(fixed) - 3719.1(Sec)=3983.1(Pri)

Need help from the WC to sort this out....

Acct 101237 (29.8): Mayfield Irrigation Company:

- Told by the WC the AF units are 42% of the 12 mile Total Diversion:
 For 2009: 34576 x .42 = 14,522
 For 2010: 33996 x .42 = 14,278 used 9522
 For 2011: 34166 x .42 = 14,350 used 9438

However the units used the last couple of years are around 9500 a direct number from the las line under Mayfield, again not sure why and need help from WC to understand this.

Acct 101238 (29.9): Yardley , Russell G. (is part of Gunnison)

Has a fixed AF of 79 AF primary and 49 of secondary stays the same each year

Acct 101202 (29.10): Palisade Lake Water User Association: 2008:

- Palisade number is the total shown under SM Canal (SM stands for Sterling Manti) The are allowed up to 1/2 of the 6 mile water, however they are limited by amount of storage in the Palisade Resvr so they cant take all of it.

2008 it was 10,376
2009 it was 11608
2010 it was 9416
2011

- Therefore AF units usually less than the 50% of 6 mile water they are allowed look under 6 mile:

For 2008 this # was 26,237 /2= 13,119 AF but Palisade only diverted 10,376 AF
For 2009 this # was 27,474 /2= 13,737 AF but Palisade only diverted 11,608 AF
For 2010 this # was 25312/2 = 12656 AF but Palisade only diverted 9416 AF
So Best to use the Ster-Mant Number shown on the WC spreadsheet

Price Diversion & Associated Accounts

A number of accounts are associated with the "Price Diversion".

? This AF number comes from an estimate since there is no good way to measure the price diversion. the far left side of the Summary table. Ask Dave and Garth how do we get this number???

Until this is measured the amount shown will not change Account numbers and names with the decimal percentage portion of each account was prepared according to a page found in the assessment notes. A spread sheet was developed that calculates the primary units for each account once you insert the Price Diversion AF units in the yellow box at the top. (See xl spreadsheet) at: G:

Distribution\LowerSanPitch\Assessment\Price Ephraim Olsen calc

Price Diversion

Flow up to 10 CFS for
 452 acres2260 AF Water Use limit according to Cox Decree Pg 132

Price
Diversion

AF Units--> 2260

Use as Primary Units on Assessment roll

<u>Account #</u>	<u>Name</u>	<u>% Share</u>	<u>Result in AF</u>	<u>Primary Units</u>	<u>Secondary Units</u>
29-1A	Christensen, Don	0.0352	79.55	70.51	9.05
29-1B	Christensen, Rich	0.1523	344.20	305.07	39.15
29-1C	Reed, Thomas	0.0044	9.94	8.81	1.13
29-1D	Lamb, Ron	0.007	15.82	14.02	1.80
29-1E	Lamb, Scott	0.0528	119.33	105.76	13.57
29-1F	Larsen, Price	0.1188	268.49	237.96	30.54
29-1G	Rees, TJ	0.0062	14.01	12.42	1.59
29-1H	Rees, Roger	0.0062	14.01	12.42	1.59
29-1I	Lamb, Scott	0.0062	14.01	12.42	1.59
29-1J	Unk owner inactive	0.0088	19.89	17.63	2.26
29-1K	Larsen, Price	0.0352	79.55	70.51	9.05
29-2A	Bailey Bros	0.2324	525.22	465.51	59.74
29-2B	Thompson, Kay	0.2147	485.22	430.06	55.19
29-2C	Sorensen, Ken B	0.0264	59.66	52.88	6.79
29-2D	Thompson, Kay	0.0211	47.69	42.26	5.42
29-2E	Thompson, Kay	0.0264	59.66	52.88	6.79
29-2G	Hansen, Harold	0.0423	95.60	84.73	10.87
29-2H	Larsen- Ronde	0.0035	7.91	7.01	0.90
Total should equal 1--					
	>	0.9999	2251.86	2002.86	257.05 2259.91

Ephraim-Olsen Ditch Accounts:

A number of accounts are associated with the “Ephraim Olsen Ditch” In 2009 and a few years prior the Ephraim Olsen Ditch was not measured. Although the flows are not always at the Water right, we Currently we use flow of 17 CFS during the irrigation season to arrive at this number. In 2009 we will be investigating a measuring point for obtaining data.

Below are the Account numbers and names with the percentage portion that calculates the primary units for each account, just insert the AF units in the yellow box in the spreadsheet: This is the bottom portion of the same spreadsheet on the previous page: Was 6215 in 2008, changed to 7594 for 2009, in 2010 is was 5031.

G: Distribution\LowerSanPitch\Assessment\Price Ephraim Olsen calc

Ephraim Olsen Ditch						
Flow up to 17 CFS for 1243 Acres 6215 AF Water Use limit according to Cox Decree Pg 165-166						
Ephraim Olsen Ditch	AF Units-->	7594	Use as Primary Units on Assessment roll			
Account #	Name	% Share	Result in AF	Primary AF	Secondary AF	
29-3A	Larsen- Price	0.2165	1345.55	1131.61	214.01	
29-3B	Larsen- Price	0.3417	2123.67	1786.00	337.77	
29-3C	Olsen, J Ivan	0.0689	428.21	360.13	68.11	
29-3D	Olsen, Perry	0.0465	289.00	243.05	45.97	
29-3E	Olsen, J Ivan	0.0537	333.75	280.68	53.08	
29-3F	Larsen, Ronde	0.0403	250.46	210.64	39.84	
29-3G	Mackelprang, Lee	0.1333	828.46	696.73	131.77	
29-3H	Olsen, J Ivan	0.042	261.03	219.53	41.52	
29-3I	Larsen, Karl	0.0358	222.50	187.12	35.39	
29-3J	Larsen- Price	0.0215	133.62	112.38	21.25	
Total should equal		1-->	1.0002	6216.24	5227.86	988.696216.55

Master Spreadsheet for Lower San Pitch: *This is the sheet you work off of to enter the Assessment AF numbers into the Assessment program. Just be sure to use the latest XL spreadsheet not the one below. New numbers inserted here and actual corrections were made on spreadsheet*

This spread sheet has been developed to Demonstrate what figures are needed from the commissioner to complete the entry of the assessment numbers. As a rough guess compare entry figures against the "Should Be" numbers for approximations on entry accuracy, with respect to both primary and secondary units in AF. Note Yellow boxes indicate numbers needed from the commissioner, beside the Price and EphriamOlsen numbers on previous pages.

Account Summary for Preparing Assessment Numbers & Billing in AF Units

Account #	Should Be Primary	AF Amount Primary	Should Be Secondary	Seq	Account Number	Billing Entity
2A				1	101217	BAILEY BROTHERS FARM
16		Fixed-->	\$5,300	2	101205	CENTRAL UTAH WATER CONSERVANCY DISTRICT
1A				3	101206	CHRISTENSEN, DON
1B				4	101207	CHRISTENSEN, RICHARD
6		NA	16576	5	101236	GUNNISON FAYETTE CANAL CO
15			1	6	101204	GUNNISON IRRIGATION CO
14			1	7	101203	GUNNISON IRRIGATION COMPANY
4	14023	14023	36138	8	101234	GUNNISON IRRIGATION COMPANY
2G				9	101222	HANSEN, HAROLD
1D				10	101209	LAMB, RON
1E				11	101210	LAMB, SCOTT D
1I				12	101214	LAMB, SCOTT D
3I				13	101232	LARSEN, KARL P.
2H				14	101223	LARSEN, RONDE R
3F				15	101229	LARSEN, RONDE R
1F				16	101211	LARSEN-PRICE LIVESTOCK LLC
1K				17	101216	LARSEN-PRICE LIVESTOCK LLC
3A				18	101224	LARSEN-PRICE LIVESTOCK LLC
3B				19	101225	LARSEN-PRICE LIVESTOCK LLC
3J				20	101233	LARSEN-PRICE LIVESTOCK LLC
8		9522	NA	21	101237	MAYFIELD IRRIGATION COMPANY
3G				22	101230	MCELPRANG, LEE
3C				23	101226	OLSEN, JAY IVAN
3E				24	101228	OLSEN, JAY IVAN
3H				25	101231	OLSEN, JAY IVAN
3D				26	101227	OLSEN, PERRY
10		11608	NA	27	101202	PALISADE LAKE WATER USERS ASSOC
1H				28	101213	REES, ROGER
1G				29	101212	REES, T J
5	15000	15890	NA	30	101235	SAN PITCH RIVER DRAINAGE DISTRICT
2C				31	101219	SORENSEN, KENNETH B
1C				32	101208	THOMAS, REED
2B				33	101218	THOMSON, KAY
2D				34	101220	THOMSON, KAY
2E				35	101221	THOMSON, KAY
9			49	36	101238	YARDLEY, RUSSELL G

	Comis Numbers
	Price Ephrm Olsen Page
	Price Ephrm Olsen Page

Notes from phone conversation with Dave Beck. On March 12, 2009

Gunnison-Fayette:

Gets only high water from San Pitch, this water borrows Sevier Water, instead of going into Yuba lake it goes to GF canal higher up, this number is reported to Jim Walker for lower Sevier accounting. The number on the WC summary page is on the lower right part of the chart, in 2009 this number was 5668 AF. I had a thought that this might be separated into Primary and Secondary water numbers to equate to on and off season water but apparently this number is always a loan from water that should have been in the Yuba lake that the G-F took out higher in the system from the san pitch, instead of diverting it from Sevier River system. For 2008 Dave Beck says that Gunnison irrigation total is 49,994 AF. All of the water to Gun. Fayette canal was 12 mile water which flowed too high to use in the Highland or the Oldfield canals, thus ran down to Fayette. So the net difference in the numbers is 3000 and that amount went to Gunnison Fayette

9 mile combines below Gunnison Reservoir reading, the Highland includes both the 9 mile reading and the 12 mile reading. PV (Pettyville) has 9 mile reading in it also

Flows into the **Gunnison Resvr** include Old Field, Highland, 12 mile, PV(has 9mile in it)
For 2009 this was $37056+6856=43,912AF$

Mayfield is $\frac{1}{2}$ of the 12 mile reading, it is a primary water right from the 12 mile column

Pettyville + Highland reading = Highland, for 2008 the numbers were $23,000+13,466$,
or 2009 these were 23244

Yardley + Steve Freschntotc(Sp?)

Sterling number is 10,376

Gunnison Reservoir is 16,838

On **Ephraim Olsen Ditch** there is no reading, water comes out of the mountain, if it is not used it disappears in the riverbed alluvium and goes into GW recharge, eventually ending up in flowing wells and springs that feed Gunnison Reservoir. There was some discussion that the E-O Ditch can only carry 17 CFS during irrigation season, so to get the E-O number 17 CFS X irrigation season days, just need to track start and end times. This is already done on the Associated Spreadsheet. I contacted Jay Ivan Olsen (March 16, 2009 (435) 283-4376) he says that Ephraim Olsen uses 17 CFS max and allows any over that amount to go down, if there is any, most of the time there isn't 17 CFS so he would like to have measurement and only get charged for what E-O uses. (Need a Measuring Device). Not much chance of getting the E-O to form a company unless they were forced to by the state. He also says there is no measurement device to get the Price Diversion number but there should be.

For comparable information on E-O, we can consider using the Willow creek number which is usually about the same or comparable. We will look at this in 2009 on establishing measurement.

Price Diversion, comes in below cottonwood, there is no good measuring point, therefore the Price Diversion should be the same as the reading for Cottonwood (for 2009 that number was 20,130. The actual number may be the 20,130 and add Willow creek 6234 to get 26,364AF. J. Ivan Olsen, he understands how to split the Price diversion and the Ephraim- Olsen numbers. To keep the numbers comparable this should probably be the 6234 or 6215 AF number which should be used for the Price number as a fixed number until measurement is established. We will look at this in 2009 to get measurement there. We looked at this and it too flat for measuring, continue to estimate.

Willow Creek & Cottonwood creek:

$6200= Willow\ Creek + 20,130= 26250$, this Willow Creek reading should always be around 6200 or 6215