

MEMORANDUM

TO: Water Right Files 37-8220, 37-8686 and 37-8831
FROM: Sandra Thiel
DATE: January 26, 2018
SUBJECT: Volume and irrigated acres during and after the development period

The Heatherlands Homeowners Association submitted proof of beneficial use in September 1994. From 1980 through 1994, 72 homes were constructed on lots within the Heatherlands subdivision, and the Townhouse lots. Based on NAIP imagery from 2009 through 2015, I determined that there were 42.5 irrigated acres associated with those lots (see attached spreadsheet). From 1995 through 2014, another 36 lots were developed. There are 16 undeveloped lots remaining between Heatherlands and the townhouses. The 16 lots will be treated the same as the 36 lots that were built after the development period ended.

On May 4, 2017, I met with Jeff Peppersack and Shelley Keen. It was determined that the standard head gate requirement of 3.5 af/acre for 0.5 acres applies to each developed lot where houses were built before proof was filed in 1995. Irrigation for the townhouses covered under domestic right 37-8831 also receive irrigation water under right 37-8220. Right 37-8220 covers 116 and right 37-8831 is for 6 lots for a total of 122 lots. Of the 122, 14 remain undeveloped. *See attached table for a list of the lots and the associated water rights.*

Permit 37-8220

1980 -1995

72 lots built before 1995 * 0.5 acres per lot = 36 acres
36 acres + 2.5 acre common area = 38.5
38.5 * 3.5 head gate requirement = **134.8 af for irrigation**

72 lots * 0.6 af for in-house domestic = 43.2 af for domestic use

1995 Forward

116 lots total – 72 (pre 1995) = 44 lots
44 lots * 1.2 af (in-house and external domestic) = 52.8 af for domestic
43.2 (pre 1995) + 52.8 (post 1995) = **96 af for domestic**

Irrigation Volume: 134.8 af

Domestic Volume: 96 af

Rates Authorized on Permit:

Domestic: 0.50 cfs

Irrigation: 1.21 cfs

Irrigation Rate

72 pre-1995 lots * 0.5 acres = 36 acres

36 + 2.5 common area = 38.5

38.5 * 0.02 per acre = **0.77 cfs for irrigation**

Permit allows 1.21 cfs – 0.77 cfs = 0.44 cfs not required for irrigation use

The remaining 0.44 cfs will be added to the permitted domestic rate of 0.50 cfs for **0.94 cfs**

Subdivision Name	Lot	Block	Year Built	Domestic Use Water Right	Irrigation Use Water Right	Townhouse Status
HEATHERLANDS SUB	54	5	1990	37-8220	37-8220	
HEATHERLANDS SUB	55	5	1981	37-8220	37-8220	
HEATHERLANDS SUB	56	5	1986	37-8220	37-8220	
HEATHERLANDS SUB	57	5	2005	37-8220	37-8220	
HEATHERLANDS SUB	58	5	1986	37-8220	37-8220	
HEATHERLANDS SUB	59A	5	1990	37-8220	37-8220	
HEATHERLANDS SUB	AM 47A	5	1997	37-8220	37-8220	
HEATHERLANDS SUB	AM 48A	5	1980	37-8220	37-8220	
HEATHERLANDS SUB	60	6	1994	37-8220	37-8220	
HEATHERLANDS SUB	61	6	2001	37-8220	37-8220	
HEATHERLANDS SUB	62	6	0	37-8220	37-8220	
HEATHERLANDS SUB	63	6	2001	37-8220	37-8220	
HEATHERLANDS SUB	64	6	0	37-8220	37-8220	
HEATHERLANDS SUB	65	6	2002	37-8220	37-8220	
HEATHERLANDS SUB	66	6	1993	37-8220	37-8220	
HEATHERLANDS SUB	67	6	1983	37-8220	37-8220	
HEATHERLANDS SUB	68	6	1985	37-8220	37-8220	
HEATHERLANDS SUB	69	6	1987	37-8220	37-8220	
HEATHERLANDS SUB	70	6	1992	37-8220	37-8220	
HEATHERLANDS SUB	71	6	1989	37-8220	37-8220	
HEATHERLANDS SUB	72	6	1992	37-8220	37-8220	
HEATHERLANDS SUB	73	6	0	37-8220	37-8220	
HEATHERLANDS SUB	74	6	1987	37-8220	37-8220	
HEATHERLANDS SUB	75	6	1991	37-8220	37-8220	
HEATHERLANDS SUB	76	6	1992	37-8220	37-8220	
HEATHERLANDS SUB	77	6	1994	37-8220	37-8220	
HEATHERLANDS SUB	78	6	1995	37-8220	37-8220	
HEATHERLANDS SUB	79	6	1995	37-8220	37-8220	
HEATHERLANDS SUB	80	6	1991	37-8220	37-8220	
HEATHERLANDS SUB	81	6	2000	37-8220	37-8220	
HEATHERLANDS SUB	82	6	1985	37-8220	37-8220	
HEATHERLANDS SUB	83	6	1992	37-8220	37-8220	
HEATHERLANDS SUB	101	6	2000	37-8220	37-8220	
HEATHERLANDS SUB	102	6	1993	37-8220	37-8220	
HEATHERLANDS SUB	103	6	1990	37-8220	37-8220	
HEATHERLANDS SUB	104	6	1990	37-8220	37-8220	
HEATHERLANDS SUB	84	7	1984	37-8220	37-8220	
HEATHERLANDS SUB	85	7	1990	37-8220	37-8220	
HEATHERLANDS SUB	86	7	2004	37-8220	37-8220	
HEATHERLANDS SUB	87	7	1991	37-8220	37-8220	
HEATHERLANDS SUB	88	7	2014	37-8220	37-8220	
HEATHERLANDS SUB	89	7	1982	37-8220	37-8220	
HEATHERLANDS SUB	90	7	2000	37-8220	37-8220	
HEATHERLANDS SUB	91	7	1988	37-8220	37-8220	
HEATHERLANDS SUB	92	7	1987	37-8220	37-8220	
HEATHERLANDS SUB	93	7	1984	37-8220	37-8220	
HEATHERLANDS SUB	94	7	1991	37-8220	37-8220	
HEATHERLANDS SUB	95	7	2002	37-8220	37-8220	
HEATHERLANDS SUB	96	7	1990	37-8220	37-8220	
HEATHERLANDS SUB	97	7	1994	37-8220	37-8220	
HEATHERLANDS SUB	98	7	1992	37-8220	37-8220	
HEATHERLANDS SUB	99	7	1992	37-8220	37-8220	
HEATHERLANDS SUB	100	7	1990	37-8220	37-8220	
HEATHERLANDS SUB	105	8	0	37-8220	37-8220	
HEATHERLANDS SUB	106	8	1994	37-8220	37-8220	
HEATHERLANDS SUB	107	8	1986	37-8220	37-8220	
HEATHERLANDS SUB	109	8	1992	37-8220	37-8220	Lot not divided, one stub out per Jim Speck's email , only one home constructed
HEATHERLANDS SUB	113	8	2011	37-8220	37-8220	Lot not divided, one stub out per Jim Speck's email , only one home constructed
HEATHERLANDS SUB	114	8	0	37-8220	37-8220	Lot not divided, one stub out per Jim Speck's email , no home constructed
HEATHERLANDS SUB	116	8	0	37-8220	37-8220	

Irrigation rate: 0.77 cfs

Domestic rate: 0.94 cfs

The license won't include a diversion volume for Fire Protection. Consequently, this right won't have a Maximum Diversion Volume.

Permit 37-8686

Permit 37-8686 for the Sundance Subdivision included the condition limiting each lot to ½ acre of irrigation. The Heatherlands homeowners association submitted proof of beneficial use for the Sundance subdivision in November 1996. From 1992 through 1996, 5 houses were built on lots within Sundance. Another four lots were developed between 1997 and 2002. Four undeveloped lots remain. Each lot built during the development period will receive 3.5 af for irrigation. The remaining lots will get 1.2 af each under the domestic portion of the right. There are 4 acres of irrigation on lots developed during or before 1996.

1992 - 1996

3.5 (Head Gate Requirement) * 0.5 (half acre) = 1.75 af

1.75 af * 5 (number of lots) = **8.8 af irrigation**

4 developed lots * 0.6 af = **3.0 af domestic**

1997 - 2002

8 lots 4 built after development period * 1.2 af = 9.6 domestic

3.0 af + 9.6 af = 12.6 af for domestic

Domestic Volume: 12.6 af

Irrigation Volume: 8.8 af

The license won't include a diversion volume for Fire Protection. Consequently, this right won't have a Maximum Diversion Volume.

Irrigation Rate

5 pre-1996 lots * 0.5 acres = 2.5 acres

2.5 acres * 0.03 cfs per acre (less than 5 acres) = **0.07 cfs**

Permitted 0.13 cfs – 0.07 cfs = 0.06 cfs not required for irrigation use

The remaining 0.06 cfs will be added to the permitted domestic rate of 0.17 cfs for **0.23 cfs**

Irrigation rate: 0.07 cfs

Domestic rate: 0.23 cfs

Subdivision Name	Lot	Block	Year Built	Domestic Use Water Right	Irrigation Use Water Right	Townhouse Status
COBIA TOWNHOUSES	SUBLOT 1		2002	37-8220	37-8220	Townhouse constructed
COBIA TOWNHOUSES	SUBLOT 2		2002	37-8831	37-8220	Townhouse constructed
FORT SILVERADO (TOWNHOUSES)	SUBLOT 1		1994	37-8220	37-8220	Townhouse constructed
FORT SILVERADO (TOWNHOUSES)	SUBLOT 2		1994	37-8831	37-8220	Townhouse constructed
H.B.S. TOWNHOUSES	SUBLOT 115A		1996	37-8220	37-8220	Townhouse constructed
H.B.S. TOWNHOUSES	SUBLOT 115B		1996	37-8831	37-8220	Townhouse constructed
MARIPOSA TOWNHOUSES	SUBLOT 1		1991	37-8220	37-8220	Townhouse constructed
MARIPOSA TOWNHOUSES	SUBLOT 2		1991	37-8831	37-8220	Townhouse constructed
PEACEFUL VISTA TOWNHOUSES	SUBLOT 1		1994	37-8220	37-8220	Townhouse constructed
PEACEFUL VISTA TOWNHOUSES	SUBLOT 2		1994	37-8831	37-8220	Townhouse constructed
SHAUN (TOWNHOUSES)	SUBLOT 1		2000	37-8220	37-8220	Townhouse constructed
SHAUN (TOWNHOUSES)	SUBLOT 2		2000	37-8831	37-8220	Townhouse constructed
HEATHERLANDS SUB	2	2	0	37-8220	37-8220	Lot not divided, one stub out per Jim Speck's email , no home constructed
HEATHERLANDS SUB	3	2	1982	37-8220	37-8220	Lot not divided, one stub out per Jim Speck's email , <u>only</u> one home constructed
HEATHERLANDS SUB	5	2	2004	37-8220	37-8220	
HEATHERLANDS SUB	6	2	1988	37-8220	37-8220	
HEATHERLANDS SUB	7	2	0	37-8220	37-8220	
HEATHERLANDS SUB	8	2	1992	37-8220	37-8220	
HEATHERLANDS SUB	9	2	1999	37-8220	37-8220	
HEATHERLANDS SUB	10	2	0	37-8220	37-8220	
HEATHERLANDS SUB	11	2	1990	37-8220	37-8220	
HEATHERLANDS SUB	12	2	1999	37-8220	37-8220	
HEATHERLANDS SUB	13	2	1985	37-8220	37-8220	
HEATHERLANDS SUB	14	2	1986	37-8220	37-8220	
HEATHERLANDS SUB	16	2	0	37-8220	37-8220	
HEATHERLANDS SUB	33	2	1998	37-8220	37-8220	
HEATHERLANDS SUB	34	2	1985	37-8220	37-8220	
HEATHERLANDS SUB	35	2	1989	37-8220	37-8220	
HEATHERLANDS SUB	36	2	1997	37-8220	37-8220	
HEATHERLANDS SUB	37	2	0	37-8220	37-8220	
HEATHERLANDS SUB	38	2	1988	37-8220	37-8220	Lot not divided, one stub out per Jim Speck's email , <u>only</u> one home constructed
HEATHERLANDS SUB	39	2	1989	37-8220	37-8220	
HEATHERLANDS SUB	40	2	0	37-8220	37-8220	
HEATHERLANDS SUB	41	2	1995	37-8220	37-8220	
HEATHERLANDS SUB	42	2	1990	37-8220	37-8220	
HEATHERLANDS SUB	43	2	1985	37-8220	37-8220	
HEATHERLANDS SUB	44	2	2000	37-8220	37-8220	
HEATHERLANDS SUB	AM 15A	2	1990	37-8220	37-8220	
HEATHERLANDS SUB	17	3	1987	37-8220	37-8220	
HEATHERLANDS SUB	18	3	1981	37-8220	37-8220	
HEATHERLANDS SUB	19	3	1981	37-8220	37-8220	
HEATHERLANDS SUB	20	3	0	37-8220	37-8220	Lot not divided, one stub out per Jim Speck's email , no home constructed
HEATHERLANDS SUB	21	3	0	37-8220	37-8220	Lot not divided, one stub out per Jim Speck's email , <u>only</u> one home constructed
HEATHERLANDS SUB	22	3	0	37-8220	37-8220	
HEATHERLANDS SUB	23	3	1996	37-8220	37-8220	
HEATHERLANDS SUB	24	3	1987	37-8220	37-8220	
HEATHERLANDS SUB	25	4	2013	37-8220	37-8220	
HEATHERLANDS SUB	26	4	1991	37-8220	37-8220	
HEATHERLANDS SUB	27	4	1989	37-8220	37-8220	
HEATHERLANDS SUB	28	4	1987	37-8220	37-8220	
HEATHERLANDS SUB	29	4	0	37-8220	37-8220	
HEATHERLANDS SUB	30	4	1997	37-8220	37-8220	
HEATHERLANDS SUB	31	4	1987	37-8220	37-8220	
HEATHERLANDS SUB	32	4	2008	37-8220	37-8220	
HEATHERLANDS SUB	45	5	2000	37-8220	37-8220	
HEATHERLANDS SUB	46	5	2000	37-8220	37-8220	
HEATHERLANDS SUB	49	5	1990	37-8220	37-8220	
HEATHERLANDS SUB	50	5	1991	37-8220	37-8220	
HEATHERLANDS SUB	51	5	1989	37-8220	37-8220	
HEATHERLANDS SUB	52	5	1989	37-8220	37-8220	
HEATHERLANDS SUB	53	5	2003	37-8220	37-8220	