

TO: JAMES L. APP, CITY MANAGER
FROM: JOHN R. McCARTHY, DIRECTOR OF PUBLIC WORKS
SUBJECT: ABANDONMENT OF BORCHERDT WELL No. 5 AND CONSTRUCTION OF REPLACEMENT WELL
DATE: APRIL 20, 1999

Needs: For the City Council to consider abandonment of a groundwater well (Borcherdt Well No. 5) and authorize construction of a replacement well.

- Facts:**
1. Borcherdt Well No. 5 is a groundwater well that has been in service since 1965, and is located on the west side of South River Road, near the Riverbank development.
 2. During a routine maintenance check, it was discovered that there are many large holes in the well casing.
 3. Due to its existing location, rehabilitation of the Borcherdt well is not feasible and will therefore need to be abandoned.
 4. The Borcherdt well pumps approximately ninety (90) million gallons of water per year, and the City's water system cannot afford to lose a well of this pumping capacity without a replacement.
 5. Funding for a new well has already be approved in the current Capital Improvement Program.

Analysis and

Conclusion: During scheduled maintenance/rehabilitation of the Borcherdt well, it was discovered that there were numerous large holes in the well casing. These holes have allowed the gravel pack to fall into the well. To determine the extent of the damage, the well casing was video taped by Welenco, a professional video service. After review of the video tape and consultation with Smith & Smith Drillers, it was evident that the well casing is beyond repair.

The parcel where Borcherdt well is located is very small, already has one abandoned well on it, and is inaccessible to a drilling rig. Due to these factors, the Borcherdt will need to be abandoned and a new well drilled in a new location. The location of the replacement well will be near Larry Moore Park in the Riverbank development. Funding for a new well has already been programmed into the current Capital Improvement Program.

Policy Reference: None.

Fiscal Impact: Cost for a new well is approximately \$150,000. This amount has already been programmed into the current Capital Improvement Program.

- Options:**
- A. For the City Council to authorize the abandonment of the Borcherdt Well No. 5 and allow a replacement well to be drilled at another location.
 - B. Amend, modify, or reject the above options.

MUNICIPAL WATER PUMPING 1998

MILLIONS OF GALLONS

1998	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTALS	
WELL													MG	AF
BORCHERDT #5	0.201	0.675	0.001	0.007	5.606	17.917	18.119	17.160	16.306	14.532	0.041	0.006	90.57	277.96
SHERWOOD #6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00	0.00
SHERWOOD #9	2.071	2.535	0.001	0.026	4.617	0.085	8.457	10.324	12.280	6.455	0.897	1.024	48.77	149.68
THUNDERBIRD #10	14.429	18.599	16.547	21.083	40.545	40.087	40.732	44.001	43.214	44.357	42.622	20.045	386.26	1185.44
SHERWOOD #11	9.732	5.369	1.314	0.530	10.208	24.967	34.157	32.930	26.045	16.413	3.666	8.461	173.79	533.37
BUTTERFIELD #12	0.535	0.474	0.131	0.000	0.166	0.160	1.086	3.945	3.250	0.862	0.717	0.313	11.64	35.72
THUNDERBIRD #13	43.400	14.825	27.441	31.442	22.822	17.116	32.357	31.359	33.252	35.747	35.724	18.270	343.76	1054.98
OSBORNE #14	0.633	0.145	0.131	0.250	0.075	0.516	6.953	3.660	0.000	1.665	0.169	0.582	14.78	45.36
THUNDERBIRD #17	1.657	22.962	30.327	30.705	31.066	38.044	43.390	45.028	24.672	19.393	18.133	35.938	341.32	1047.50
DRY CREEK # 18	1.594	0.300	1.412	5.472	5.026	11.742	27.535	24.959	9.381	11.895	0.274	0.159	99.75	306.13
TARR WELL #19	0.219	0.178	0.066	0.003	0.000	0.203	0.000	0.416	0.478	0.000	0.485	0.000	2.05	6.29
ROYAL OAK # 20	2.319	0.554	0.265	1.004	2.072	19.923	26.978	35.246	33.774	14.748	0.249	0.872	138.00	423.53
FOX WELL # 21	0.356	0.512	0.611	0.922	1.313	3.437	8.364	7.768	4.977	1.414	5.153	3.817	38.64	118.60
													0.00	0.00
TOTAL MIL. GALS	77.15	67.13	78.25	91.44	123.52	174.20	248.13	256.80	207.63	167.48	108.13	89.49	1689.3	
ACRE FEET	236.72	205.98	240.10	280.59	379.00	534.51	761.36	787.96	637.09	513.90	331.79	274.58		5183.58

202-02

1997	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
TOTAL MIL. GALS.	73.52	75.64	137.13	167.11	219.95	225.56	237.16	230.69	200.14	170.25	98.96	75.42	1911.53

Transfer of Water in Millions of Gallons

1998	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
WEST TO EAST	29.121	25.139	40.808	45.740	45.218	41.211	12.415	24.195	22.959	35.400	54.152	37.839	414.197
EAST TO WEST	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WEST TO EAST NET	29.12	25.14	40.81	45.74	45.22	41.21	12.42	24.20	22.96	35.40	54.15	37.84	414.20