

**SPECIAL MEETING
OF THE CITY COUNCIL OF THE CITY OF
COTTONWOOD SHORES, TEXAS
WORKSHOP
THURSDAY, DECEMBER 7, 2006 AT 5:30 P.M.
CWS CIVIC CENTER
4111 COTTONWOOD DRIVE
COTTONWOOD SHORES, TEXAS**

MINUTES

1. Call to Order by Mayor Breen at 5:36 p.m.
2. Roll Call by City Secretary Capps. He reported the following members present, except for the absence of Councilmember Frank Pfeifer, constituting a quorum: Sylvia Breen, Mayor; Lee Hildebrand, Pro. Tem; Ray Whitis, Councilmember; Shirley Adams, Councilmember; and Keith Patschke, Councilmember.
3. Workshop on Utility Systems Options
 - A. Water—S. D. Kallman, L.P., City Engineer, presented his alternatives (attached to these minutes) for providing Water Treatment Plant Capacity and opinion of probable cost. Architect and Castle Rock developer Marley Porter proposed City Engineer, Utility Director Tim McClain, Councilmember Lee Hildebrand and other developers meet to address a compromise. We currently do *not* have enough LUE's for development. Utility Director McClain reiterated that the present water treatment plant will not make another summer, if we have similar weather conditions as last summer, without an up grade. The issue of raising water rates ten percent to meet LCRA' rate increase and double outside city rates were discussed.
 - B. Wastewater—City Engineer Kallman presented a status of the existing wastewater capacity and summary of findings for wastewater treatment flows per contract with the city of Horseshoe Bay including the LUE demands on the City Wastewater Contract (attached to these minutes). There

was, also, a need to engineer manhole covers to prevent storm water from infiltrating into Horseshoe Bay's Wastewater Treatment Plant. Councilmember Hildebrand was call out from the meeting at 8:00 PM. Grinder Pumps Maintain Agreement with Property Owner's and their responsibility when a malfunction accrues was discussed.

C. Garbage Collection—Councilmember Waitis requested we go out for Request for Proposals for curbside service with provisions for franchise fee, recycling, commercial rates, and freeze senior rates along with consideration for senior and disabled door pick up.

4. Adjournment

Motion by Councilmember Adams, second by Councilmember Patschke that we adjourn (7:56 p.m.).



Sylvia Breen, Mayor

Attest


Larry Joe Capps, City Secretary



S. D. KALLMAN, L.P.
Engineers and Environmental Consultants

December 7, 2006

Mayor Sylvia H. Breen
City of Cottonwood Shores
3808 Cottonwood Drive
Cottonwood Shores, Texas 78657

**RE: CITY OF COTTONWOOD SHORES
ALTERNATIVES FOR PROVIDING WATER TREATMENT PLANT CAPACITY**

Dear Mayor Breen:

As the City Council may be aware, we prepared the cost estimates and funding applications for a 1 MGD water treatment plant for the City of Cottonwood Shores for the Texas Water Development Board's "Drinking Water State Revolving Fund (DWSRF)" Program in 2006 and, again in 2007. The estimated project cost for a 1 MGD water treatment plant in those applications was \$2,020,000. or \$2.02 per "Gallon Per Day (GPD)" of water treatment plant capacity.

Then, more recently, the "used" package water treatment plant option from Payton Construction Company "arose" and the total estimated project cost for that 2 MGD plant and 2 MGD raw water intake improvements was \$4 million or \$2.00 per GPD of water treatment capacity.

We have recently prepared additional preliminary cost estimates for the following membrane filtration technology:

Alternative No. 1

2 MGD Membrane Filtration Water Treatment Plant and 2 MGD Raw Water Intake Improvements, and

Alternative No. 2

1 MGD Membrane Filtration Water Treatment Plant and 2 MGD Raw Water Intake Improvements, with key components sized for future expansion of the plant, to 2 MGD capacity.

Preliminary Cost Estimates for these alternatives are attached to this letter. The following Table 1 summarizes these preliminary estimated costs.

**TABLE 1
PRELIMINARY COST ESTIMATES FOR MEMBRANE FILTRATION PLANTS**

CAPACITY OF IMPROVEMENTS	PRELIMINARY ESTIMATED PROJECT COSTS	COST PER GALLON PER DAY OF TREATMENT CAPACITY
<i>Alternative No. 1</i>		
2 MGD Water Treatment Plant	\$ 3,665,000.	\$1.83
2 MGD Raw Water Intake	\$ 498,000.	
Total Alternative No. 1	\$ 4,163,000.	\$2.08
<i>Alternative No. 2</i>		
1 MGD Water Treatment Plant	\$ 3,000,000.	\$3.00
2 MGD Raw Water Intake	\$ 498,000.	
Total Alternative No. 2	\$ 3,498,000.	\$3.50

If the City chooses to leave it's existing Tonka water treatment plant in operation with a rated capacity of 432,000 GPD, a minimum of \$300,000. will be required to bring the plant back up to that capacity. If the membrane plant's capacity is reduced by 432,000 GPD, a savings in Pall equipment in the amount of around \$150,000. can be realized.

The following data is provided to assist in determining the need for water treatment plant capacity driven by the requests from three (3) new development projects for water service, illustrated by Table 2, as follows.

**TABLE 2
WATER SUPPLY DEMANDS**

PARTY	EXISTING LUE'S	PROPOSED LUE'S	TOTAL LUE'S	PLANT CAPACITY REQUIRED BASED ON TCEQ 0.6 GPM PER LUE	
				GPM	GPD
Sealy-Krumm		900	900	540	777,600
Bella Vista		236	236	142	204,480
Castle Rock		30	30	18	25,920
City of Cottonwood Shores	450	75	525	315	453,600
TOTAL	450	1,241	1,691	1,015	1,461,600
15% Extra Capacity Per TCEQ Prior to Future Plant Expansion (15% x 1,461,600 GPD)				152	219,240
TOTAL WATER TREATMENT PLANT CAPACITY				1,167	1,680,840

From above, for illustration, not including the 15% extra capacity required by TCEQ, the water treatment plant capacity required for only Sealy-Krumm and the City is 1,231,200 GPD. The "Proposed LUE's" for the City is based on 15 LUE's per year over a five year period (15 x 5 = 75 LUE's). If 15% is added per TCEQ, the water treatment plant capacity required for Sealy-Krumm and the City is 1,415,880 GPD.

We hope that the information presented herein is helpful in continuing the planning efforts to serve these new development projects.

Should you have any questions, please call.

Cordially,
S. D. KALLMAN, L.P.
ENGINEERS & ENVIRONMENTAL CONSULTANTS



Steven D. Kallman, P.E., R.P.L.S.
President

cc: Frank Pfeifer, City Councilperson, City of Cottonwood Shores
Ray Whitis, City Councilperson, City of Cottonwood Shores
Shirley Adams, City Councilperson, City of Cottonwood Shores
Lee Hildebrand, City Councilperson, City of Cottonwood Shores
Keith Patschke, City Councilperson, City of Cottonwood Shores
Larry Capps, City Secretary, City of Cottonwood Shores
Jerial Wafer, Financial Officer, City of Cottonwood Shores
Larry Jezek, Project Manager, S. D. Kallman, L.P.



S. D. KALLMAN, L.P.
Engineers and Environmental Consultants

December 7, 2006

Mayor Sylvia H. Breen
City of Cottonwood Shores
3808 Cottonwood Drive
Cottonwood Shores, Texas 78657

**RE: CITY OF COTTONWOOD SHORES
STATUS OF EXISTING WASTEWATER CAPACITY**

Dear Mayor Breen:

From past evaluations provided by S. D. Kallman, L.P. (November 2004) concerning excess capacity remaining in the City's wastewater service contract with the City of Horseshoe Bay (formerly Lake LBJ MUD), we are repeating below, with some modifications, the information from those studies:

**SUMMARY OF FINDINGS FOR WASTEWATER TREATMENT FLOWS PER CONTRACT WITH
THE CITY OF HORSESHOE BAY**

- Annual Average for Year 2003 was 46,707 GPD or 126 GPD/LUE (56,707 ÷ 452 LUE's) or 0.087 GPM/LUE Average. For new development projects, it is likely that 175 GPD/LUE will be generated (70 GPD/Person x 2.5 Persons/LUE).
- At Peak Factor of 3.8, Design Pumping Rate per LUE is 0.33 GPM/LUE (0.087 x 3.8).
- Amount of excess capacity remaining in contract (452 LUE's as of November 2004): 96,000 GPD - 56,707 GPD = 39,293 GPD; New LUE's that can be served: 39,293 GPD ÷ 175 GPD/LUE = **224 LUE's**. Total LUE's that can be served by 96,000 GPD contract: 452 LUE's (existing) + 224 LUE's (new) = **676 LUE's**.
- LUE capacity remaining in the City of Horseshoe Bay contract for new connections if the City of Cottonwood Shores increases it's wastewater service contract by 10,000 PGD to 106,000 GPD. Adjusted excess capacity remaining in proposed amended contract: 106,000 GPD - 56,707 GPD = 49,293 GPD; New LUE's that can be served: 49,293 GPD ÷ 175 GPD/LUE = **281 LUE's**. Total LUE's that can be served by proposed 106,000 GPD contract: 452 LUE's (existing) + 281 LUE's (new) = **733 LUE's**.

From previous data gathered from the new development projects, Table 2 illustrates the future LUE's that may come on line.

**TABLE 2
LUE DEMANDS ON THE CITY'S WASTEWATER CONTRACT**

PARTY	EXISTING LUE'S	PROPOSED LUE'S	TOTAL LUE'S
Sealy-Krumm		¹⁾ 100	¹⁾ 100
Bella Vista		236	236
Castle Rock		30	30
City of Cottonwood Shores	450	75	525
TOTAL	450	441	891
ADJUSTED TOTAL WITHOUT SEALY-KRUMM	450	341	791

¹⁾ 100 LUE's for Sealy-Krumm is for temporary wastewater service.

For wastewater service contract amounts of 96,000 GPD and 106,000 GPD, the total LUE's that can be served are 676 LUE's and 733 LUE's, respectively. From Table 2, the City of Cottonwood Shores will need 791 LUE's of wastewater service over a possible 5 year period, assuming full build-out of Bella Vista and Castle Rock. Based on the wastewater usage projections, and additional 115 LUE's (96,000 GPD contract) or 58 LUE's (proposed amended 106,000 GPD contract) will require wastewater service outside of the existing wastewater service contract. These amounts are based on Zero LUE's for Stealy-Krumm's permanent wastewater service not provided by the City of Cottonwood Shores.

As a point of information, S. D. Kallman submitted a request for funding for a new wastewater treatment plant to TWDB's Clean Water SRF in 2006 and in 2007 for a 100,000 GPD Wastewater Treatment Plant at an estimated project cost of \$2,350,000. This project was based on a lagoon treatment basin with effluent disposal via spray irrigation. It is obvious that the City of Cottonwood Shores is much better off financially contracting with the City of Horseshoe Bay for it's wastewater service, unless significant additional costs are implemented by the City of Horseshoe Bay.

If the City of Cottonwood Shores could contract for another 20,000 GPD added on to 96,000 GPD for a total of 116,000 GPD, it could serve all of the above projects and the City (5 year growth period) without having to build a wastewater treatment plant. An additional 25,000 GPD would be even better.

We hope that the above information is useful in your planning efforts.

Should you have any questions, please call.

Cordially,
S. D. KALLMAN, L.P.
ENGINEERS & ENVIRONMENTAL CONSULTANTS



Steven D. Kallman, P.E., R.P.L.S.
 President

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