

Meeting for the Lake Washington Club Sewer Project:

ATTENDANCE: Jerry Martin, Roger Martin, John Sines, Phil Postlewait, Jim Cox, Richard Hayhurst, Rocky McConnell, Ed Robinson, Rick Roberts, Judy Boston, Gary Brode, John Penczak, Craig Richards

Meeting was held during the regular board meeting of the Lubeck Public Service District at 7:00 PM on January 14, 2010. Chairman, Jerry Martin opened the meeting and turned it over to the District Manager, James Cox. Mr. Cox explained that the meeting was a requirement of the WV Department of Environmental Protection and then went on to give some background of the project. It is approximately 19,600 LF of gravity sewer, 1,600 LF of force main, 2 pump stations, 1 grinder station, manholes, cleanouts, service laterals and other related items. It is funded by a 70% grant from the ARRA in the amount of \$2,702,000 and has a 0%, 40 year loan from the SRF in the amount of \$1,158,000 for a total project cost of \$3,860,000. This project will be repaid by the residents of the Lake Washington Club area by the inclusion of a \$21.50 surcharge per month addition to each bill rendered. It is expected to serve 53 new customers initially. A previous meeting was held with the residents of the Lake Washington Club in early October 2009 to explain the project to them and get any concerns that they might have. That meeting went very well and was well attended by the residents. Rick Roberts from E. L. Robinson explained that we had a map showing where the lines were going and what was to be picked up by the project. There being no questions, this portion of the meeting was completed. Rick Roberts provided the District and visitors with a handout that is attached hereto that talked about the project.

LUBECK PSD – PUBLIC MEETING

The Lubeck Public Service District's Existing wastewater system consists of a 1.5 MGD oxidation ditch treatment plant, eleven (11) major pump stations, approximately 247,507 feet of 30-inch and smaller diameter gravity sewer line, 23,054 feet of 18-inch and smaller diameter force main, manholes, cleanouts, individual customer services and other related items. The system currently serves approximately 2,232 customers in the communities of Lubeck, Lake Washington Road, Riverhill, Blennerhassett Heights, Dupont Road, Larkmead Road, Washington Bottom, New England Ridge and surrounding areas of Wood County. The District also owns and operates an existing treatment system including a lagoon which serves approximately 45 residential customers in the Hyview Terrace area.

The 81 potential residential (324 persons) and small commercial customers to be served by the proposed Lake Washington/Vaughts Run Sanitary Sewer Extension Project do not currently have access to a public wastewater system. Residents utilize private on-site septic/aeration systems or discharge directly into Lake Washington or area streams. The Dupont Employees Recreational Club is the only large usage customer to be added by this project. Usage averages approximately 16,700 gallons per day (includes a pool). In the Hyview Terrace area, sewage is discharged into a lagoon. Reportedly, the lagoon is not operating as designed. The current sewerage disposal methods in the area are a potential health threat and negatively contribute to the water quality of Lake Washington and area streams.

The proposed project consists of the construction of approximately 18,600 feet of 10-inch and smaller diameter gravity sewer pipe, 3,100 feet of 2-inch and smaller diameter forcemain, 122 manholes, two major pumping stations, two grinder pumping stations, cleanouts, service laterals and other related appurtenances. The project also includes the abandonment and reclamation of an existing sewage plant/lagoon treatment system which currently serves approximately 45 residential customers in the Hyview Terrace area. Treatment will be provided by the District's existing wastewater treatment plant. Construction and project costs are estimated at \$3,469,400 and \$3,860,000, respectively.

Approximately 81 new customers in the Lake Washington and Vaughts Run areas will be served by the sanitary sewer system initially. Sewerage from approximately 45 existing customers in the Hyview Terrace area will also be redirected into the system when the existing package plant/lagoon is taken out of service as part of this project. District water usage records indicate that the average daily flow from the Dupont Employees Recreational Club will be approximately 6,095,000 gallons per year or approximately 16,700 GPD. Accordingly, the average daily flow into the system can be calculated as follows:

Lake Washington - 81 customers x 70 gpd/person x 4 persons/customer	= 22,700 GPD
Hyview Terrace - 45 customers x 70 gpd/person x 4 persons/customer	= 12,600 GPD
Dupont Employees Recreational Club	= <u>16,700 GPD</u>
Sub Total	= 52,000 GPD
Peaking Factor (52,000 x 4.0)	= 208,000 GPD
I/I for Current Proposed System*	= 6,000 GPD
Total	= 214,000 GPD

*I/I 4" @ 200 gal/inch diameter mile = $200 \times 4 \times 1,700' / 5,280' = 260$ GPD

I/I 6" @ 200 gal/inch diameter mile = $200 \times 6 \times 1,200' / 5,280' = 280$ GPD

I/I 8" @ 200 gal/inch diameter mile = $200 \times 8 \times 7,100' / 5,280' = 2,150$ GPD

I/I 10" @ 200 gal/inch diameter mile = $200 \times 10 \times 8,600' / 5,280' = 3,260$ GPD

Total I/I = 5,950 Say, 6,000 GPD

WASTEWATER TREATMENT PLANT CAPACITY

The highest average monthly flow recorded at the wastewater treatment plant for the period of April, 2008 through March, 2009 was **0.571 MGD** in December, 2008 (See Appendix C). The highest peak monthly flow recorded at the wastewater treatment plant for the period of April, 2008 through March, 2009 was **1.369 MGD** in December, 2008 (See Appendix C). WV/NPDES Permit No. WV0032590, issued on September 28, 2007 (See Appendix D) authorized the District to operate and maintain a 1.5 MGD wastewater treatment plant. Using a peaking factor of 3.0, the plant should be able to hydraulically handle peak flows of up to 4.5 MGD. As stated above, the average daily flow from the project area is 52,000 GPD, or 0.052 MGD. Adding the highest average monthly flow to the average daily flow results in an after project average daily flow of **0.623 MGD**. This is well below the design capacity of the treatment plant. From above, the peak daily flow is 214,000 GPD, or 0.214 MGD. Adding this to the highest peak flow

of 1.369 MGD yields an after project peak flow of **1.583 MGD** which is well below the maximum peak flow the treatment plant is sized to hydraulically handle. It is therefore concluded that the existing treatment plant has adequate capacity to serve the project area.

WASTEWATER PUMP STATION CAPACITY

Flow from the project area will go through the West Pump Station which has a rated capacity of 4.35 MGD. As calculated above the after project peak flow from the entire system will be 1.583 MGD. Clearly, the West Pump Station has adequate excess capacity to handle the added flow from the project area.

**LUBECK PUBLIC SERVICE DISTRICT
LAKE WASHINGTON/VAUGHTS RUN SANITARY SEWER EXTENSION PROJECT
ENGINEER'S PROJECT COST ESTIMATE**

<u>ITEM</u>	<u>AMOUNT</u>
Estimated Construction Cost	\$3,154,000.00
Construction Contingency (10%)	\$315,400.00
Engineering-Design	\$102,000.00
Engineering-Construction	\$24,000.00
Engineering-Special	\$12,000.00
Construction Inspection	\$120,000.00
Project Legal Services	\$5,000.00
PSC Legal Services	\$8,000.00
Property Acquisition Legal Administration	\$15,000.00
Sites & Other Lands	\$5,000.00
Permits	\$20,000.00
Capitalized Interest	\$10,000.00
Bond Counsel Services	\$0.00
Accounting Services	\$25,000.00
Project Contingency (10%)	\$8,000.00
	<u>\$36,600.00</u>
Total Estimated Project Cost	\$3,860,000.00