

**TOWN OF OLD ORCHARD BEACH  
TOWN COUNCIL WORKSHOP  
Wednesday, April 27, 2011  
TOWN HALL CHAMBERS  
7:00 p.m.**

**A Town Council Workshop of the Old Orchard Beach Town Council was held on Thursday, April 7, 2011 at 7:00 p.m. Chair Quinn opened the meeting at 7:10 p.m. The issues to be discussion include: Engineering Report Review, Waste Water Treatment Department; 20161 – Waste Water Treatment Department; any other budgets that were unable to be discussed at the last Budget Workshop.**

**The following were in attendance:**

**Chair Bob Quinn  
Councilor Robin Dayton  
Councilor Sharri MacDonald  
Town Manager Jack Turcotte  
Superintendent Chris White  
Finance Director Jill Eastman  
Roger Bedard of Wright Pierce  
Edward Leonard of Wright Pierce  
Lindsey Brough of Wright Pierce  
Larry Littlefield – Finance Committee  
Reza Namin – Finance Committee  
Neal Weinstein – Finance Committee**

**Absent: Vice Chair Michael Tousignant  
Councilor Shawn O'Neill**

**Roger Bedard, Edward Leonard and Lindsey Brough of Wright Pierce were in attendance this evening to make a presentation which includes the recent history and background of this engineering report which was presented to the Town Council in 2009 and again this evening.**

**An Executive Summary included in the report is provided here for the interest of the discussion which proceeded during the evening and then augmented by the power point presentation of the Wright Pierce Engineering Team.**

**The Town has upgraded the Waste Water Facility in numerous phases since it was first constructed in the early 1960- 1972; 1985; 1994, 2000; and 2006. The Town hired Wright Pierce in the summer of 2008 to perform a comprehensive facilities evaluation. Each Councilor has been given a draft Facilities Plan, dated July of 2009.**

## Executive Summary of Report (Wright Pierce)

### **Introduction**

The Town of Old Orchard Beach owns and operates wastewater collection and treatment facilities that service the Town's year-round residents, as well as the seasonal population during the summer months. All the wastewater flow is pumped to the treatment facility via nine pump stations. The wastewater treatment facility (WWTF) also receives septage from commercial establishments and is treated through the solids handling processes. The WWTF is a diffused aeration activated sludge facility with disinfection. Excess sludge from the treatment process is stored/digested, dewatered (by a single belt filter press) and disposed of by contract agreement with New England Organics (composting). The plant was originally constructed in the early 1960's and many additions and improvements have been performed since then. The WWTF discharges treated effluent through an ocean outfall located in Saco Bay, a Class SB surface water. The effluent discharge must meet standards set forth in state and federal water quality legislation. These standards establish minimum effluent discharge requirements which must be satisfied at all times. In accordance with Section 402 of the Clean Water Act, the plant's effluent quality requirements are contained in a National Pollutant Discharge Elimination System (NPDES) permit which is issued to the Town by the Maine Department of Environmental Protection (MEPDES). The Town's current MEPDES permit was issued in April 2005 and will expire in April 2015.

### Pump Station Evaluation

The Town completed a pump station evaluation entitled "Draft Pump Station Evaluation", prepared by Wright Pierce and dated September 2005 (hereinafter referred to as the "2005 Pump Station Evaluation.") The purpose of that report was to perform a comprehensive evaluation of the nine pump stations in the Town's wastewater collection system in order to assess the short-term and long-term needs of the pump stations. The 2005 Pump Station Evaluation provided a projection of the future flows to each pump station, based on build-out of potential future development areas identified in meetings with Town personnel, and recommended upgrade projects and the associated cost estimates. The report recommended (among other upgrades) that the Town develop a long-term plan to construct new grit removal facilities at the WWTF to meet the facilities long-term needs. Since removal of grit from the primary clarifier influent channel had been a workable short-term solution for the WWTF, it was recommended that grit removal continue in that fashion on a short-term basis while the Town developed a funding plan for the long-term solution. In this report, the long-term solution for grit removal is addressed.

### 2006 Wastewater Facilities Capital Improvement Plan

The Town completed the document entitled "Wastewater Treatment Facility Capital Improvements Plan," prepared by Wright-Pierce and dated August 2006 (hereinafter referred to as the "2006 Wastewater Facility Capital Improvement Plan.") This report reviewed the condition, limitations, and remaining life of key components at the WWTF. The evaluation of the existing facilities involved a review of past reports, review of record drawings, review of operating data, analysis of each unit process, discussions with the Town's staff, and site visits by

various Wright-Pierce technical disciplines. For each issue identified a recommendation along with a reasonable time frame for which to implement the recommendation and a planning level cost estimate for the recommendation was developed. Some of the notable recommendations from the Capital Improvement Plan included replacing the primary clarification equipment; replacing the sludge hypochlorite bulk storage tanks and piping; provide a redundant sludge dewatering unit and replacing the sludge transfer pumps. The recommendations identified in the 2006 Wastewater Facilities Capital Improvements Plan were reviewed and remaining recommendations were carried forward to this report.

### Purpose and Scope

This report is intended to document and assess the benefits/impacts of recently completed, on-going and planned wastewater infrastructure projects at the WWTF, define current and project future wastewater flows and loadings, estimate the capacity of the existing wastewater infrastructure to convey current and projected flows, estimate the capacity of the WWTF in terms of both present and future treatment requirements, identify the types of infrastructure improvements necessary to meet present and future needs, and estimate the costs and impacts to the Town of necessary improvements. This report will synthesize the recommended components of the 2005 Pump Station Evaluation and the 2006 Wastewater Facilities Capital Improvements Plan. In order to reduce the number of cross-references to various other documents, the report given incorporated many aspects of the 2006 Wastewater Facilities Capital Improvement Plan. This report also includes key aspects of the 2005 Pump Station Evaluation and other relevant items.

### Conclusions

Based on the work completed as part of this project, the following conclusions are provided:

The existing secondary treatment facility achieves very good performance results and the facility is currently well within its design rating. That said, the equipment installed as part of the 1985 Upgrade is now 25 years old and is approaching the end of its useful life. Similarly, the equipment installed as part of the 1995-1996 Upgrade is now 13 to 14 years old. There are a number of major systems that need comprehensive upgrade in the near term because they are inoperable (grit removal), not existing (screening), reduced reliability (sludge dewatering), aged beyond design life (Halfway Pump Station, West Grand Pump Station, portions of activated sludge, etc.) or need to be addressed due to space constraints and code requirements (Control Building, electrical service and distribution, etc.) Accordingly, facility upgrade will be required in order to maintain reliable and efficient operations and treatment for the planning period (2030).

The existing MEPDES permit will expire in April 2015. This permit will be reissued at that time and no modifications to the permit are anticipated. However, as described in Section 2, Maine Department of Environmental Protection is evaluating nitrogen loading in Casco Bay over the next five to seven years. Eventually DEP will review nitrogen loadings in Saco Bay. If Old Orchard Beach receives a total nitrogen limit, WWTF upgrades would be required. These requirements/upgrades would not be expected prior to 2020-2025, but have been included herein as a part of a future phase (as described in Section 4).

**Future sewer flow projections were prepared based on input from Town Wastewater Department and Planning Department staff. These sewer flow projections are described in Section 2. The future sewer flow projections described herein do not exceed the current WWTF design capacity.**

**Sewer components of the eastern/northern portion of the collection system are at or just beyond their rated design capacities. Sewer growth on the outer extent of the collection system will result in collection system capacity limitations prior to treatment capacity limitations. Growth in these areas should be carefully reviewed prior to approving applications.**

**Infiltration flows appear relatively high during spring periods as well as during any heavy precipitation event. Inflow also appears to be relatively high during heavy precipitation events. The collection system response to precipitation indicates that infiltration and delayed inflow are the predominant sources; however, given that the Town's collection system was formerly a combined sewer system, it is quite possible that there are catch basins and roof leaders which remain connected. There is also the potential that infiltration/inflow (I/I) is coming from private property (e.g. sewer cleanouts being used as area drains for surface water, etc.) It is in the Town's best interests to minimize the introduction of extraneous waters into the sewer system. Funding and implementing an infiltration/inflow study is recommended.**

**Odor issues and concerns at the plant have been greatly reduced in recent years, therefore additional capital investment to prevent odor generation and release does not appear to be warranted at this time.**

**The Old Orchard Beach staff consists of 7 ½ people who are responsible for the wastewater collection and treatment system operations. It is suggested that the Town add one full-time employee and estimate a portion of the new staff workload to investigate (via energy audits) and implement energy savings and process optimization measures.**

### **Recommended Plan**

**Given the varying ages of the existing equipment systems at the WWTF and the collection system pumping stations, as well as the expectation that the Town's MEPDES permit will be reissued without modifications, the recommended plan for Old Orchard Beach is a multi-phase implementation plan. The major components of each phase are summarized below:**

**Phase 1: Implement upgrades at the WWTF, including constructing a new Headwork's Building, Disinfection Building, Administration Building, and Maintenance Garage; performing other upgrades and improvements to the Aeration Tanks and Aeration Systems, Secondary Clarifiers, Chlorine Contact Tan, SCADA System and Electrical Power Distribution. Implement comprehensive upgrades to the Halfway Pump Station and the West Grand Pump Station. Implement the SCADA System for Pump Stations project (2009).**

**Phase 2: Implement upgrades at the WWTF, including comprehensive upgrades of the Primary Treatment system, Process Building, and Sludge Storage Tanks. Implement comprehensive upgrades (or replacements, as applicable) at the Comfort, East Grand, Milliken, Portland Avenue and Ross Road Pump Stations.**

**Phase 3: Implement upgrades at the WWTF, including the Plant Water System, Yard Drain Pump Station, Effluent Pump Station, Secondary Clarifier no. 2, and odor control; expand Activated Sludge System/Aeration System and Chlorine Contact Tank to meet future nitrogen limits. Implement comprehensive upgrades (or replacements, as applicable) at the Dunegrass 2100 and Dunegrass 200 Pump Stations.**

### **Project Costs and Financing**

**Project costs are discussed and project cost financing considerations as well. Currently all capital and operating expenses related to the wastewater collection and treatment facilities are funded with property tax revenues. This will most likely preclude the Town from obtaining grant funding from some of the sources, but it was assumed that the practice would continue for the foreseeable future. The project financing scenario assumes that all capital costs associated with the project will be financed with a CWSRF loan and repaid with property tax revenues and that all operating and maintenance costs will also continue to be paid with property tax revenues. The impacts of the phases are summarized as follows:**

**Phase 1 – the property tax paid by the average single family home is projected to increase from \$3,080 per year to \$3,190 per year;**

**Phase 1 and 2 financing – the property tax paid by the average single family home is projected to increase from \$3,080 to \$3,360 per year;**

**Phase 1, 2 and 3 financing – the property tax paid by the average single family home is projected to increase from \$3,080 to \$3,480 per year.**

**In order to mitigate this impact, it is recommended that the Town pursue State and Tribal Assistance Grants as well as Efficiency Maine and Maine Public Utilities Commission energy rebate grants as described in Section 5. The Town may also wish to pursue Community Development block Grant as well. A number of other grant funding sources are not applicable due to the Town's property taxation as the revenue source. Specifically, the Mine DEP Grant Program and the US Department of Agriculture/Rural Development grant program. The Town may wish to reconsider a sewer use rate system in order to become eligible for these grants.**

### **Project Implementation**

**Review Draft Report with applicable Town Departments and the Town Council. Evaluate whether energy efficiency items will be implemented ahead of the phasing schedule outlined herein in order to capture energy savings and potentially grant monies sooner. Hold Public Hearing on the Draft Report to solicit public input. Appropriate funds for the design and construction of Phase 1 improvement in 2010. Review fuel oil storage volumes on-site and determine whether a Spill Prevention Control and Countermeasure (SPCC) Plan is required. Thresholds are 1,320 gallons of above ground storage (including drums) or 42,000 gallons of underground storage and have a reasonable potential to result in a discharge into navigable waters of the United States. Appropriate funds for an Infiltration/Inflow (I/I) Study in the collection system in 2009-2010. As part of this effort perform sewer flow metering, review direct inflow sources, and perform limited smoke testing. Utilize these evaluations and inspections to develop cost-effective I/I removal items. Develop Private I/I Removal Policy. Consider**

developing a sewer growth policy to address the cost implications of growth. Consider development of a “sewer limit line” (i.e., the maximum extent of current and future sewer service area). Review advantages and disadvantages of implementing a sewer user fee system or a partial user fee system. Review sewer connection fee and potentially a supplemental sewer connection fee for growth areas. Aggressively pursue grant commitments from State and Tribal Assistance Grants (via US congressional representatives). Prepared documentation necessary to secure Efficiency Maine grant funding as a part of the design phases. Monitor DEP’s status and schedule of the Casco Bay nitrogen loading evaluations. Consider adding one additional operations staff within the first year of start-up of the upgraded WWTF. Appropriate funds for the planning, design and construction of Phase 2 and 3 improvements in 2015 and 2020, respectively.

## Presentation by Wright Pierce

### Presentation Overview

Background  
Planning Process  
Needs Assessment  
Conclusions and Recommendations  
Project Costs and Schedule  
Funding and Financing  
Next Steps  
Questions & Discussions

### Wastewater Management

#### Collection

#### Treatment

Operates 24 hours per day

Waste Water Transfer Facility removed 90 to 95 percent of pollutants that they are designed to remove, however, they remove only small amounts of pollutants that they are not designed to remove

Effluent contains organic materials, inorganic materials (e.g., metals) and nutrients (e.g. nitrogen, phosphorus).

#### Disposal

Treated effluent is disposed of into oceans, rivers and/or the land.

### Wastewater Volume

#### Sewer Users

Approximately 75,000 gallons to leach field every year

Approximately 1,000 gallons of septage every three to four years

Septage is brought to a Waste Water Transfer Facility for processing.

### Wastewater Treatment

#### Preliminary

Remove debris, sticks, floatables, grit which causes problems with equipment

**Primary**

Removes 50 percent of the particulate materials

**Secondary**

Removes 90 percent of the organic materials

Removes some nutrients

**Advanced**

Removes substantial nutrients

**Disinfection**

Kills bacteria

**Old Orchard Beach****Population**

Approximately 9,250 year round (actual 2010 census says 8624)

Approximately 70,000 on peak seasonal day use

Existing development is over 90 percent sewerred

**Collection System**

Sewers – 36 miles (approximately 193,000 feet)

Force mains – 4.1 miles (approximately 22,000 feet)

Pump Stations – 9

**WWTF**

Average daily flows – 1,600,000 gallons per day

Peak daily flows – 6,400,000 gallons per day

**Effluent Disposal**

Saco Bay in compliance with current NPDES permits

System "replacement cost" is estimated at over \$100 million.

**Impact of Population Flow**

The graph that was shown demonstrated that we at the present time can handle the flow.

The change in population and development would cause this issue to be addressed seriously and in a timely manner.

**What is a Waste Water Facilities Plan?**

A comprehensive plan to:

Identify water-quality-related needs

Identify and analyze options

Recommend capital improvements and expenses

Recommend management options

## **Identify funding and financing mechanisms**

### **Planning Process**

**Town hired Wright Pierce in summer of 2008 to perform a comprehensive wastewater facilities evaluation.**

#### **Assess Needs**

- Current flows and loadings**
- Growth projections, future flows and loadings**
- Pump Station and WWTF existing conditions**

#### **Evaluate Alternatives**

#### **Develop the Recommended Plan and Costs**

**Wright Pierce submitted a draft Waterwater Facilities Plan to the Town in July of 2009.**

### **Current and Future Flows**

**Current flows (1,600,000 gallons per day) are within existing treatment capacity**

**Future flows were reviewed and “theoretical build out” for a twenty year period**

- Domestic/Commercial Sewer extensions**
- Industrial sewer extension**
- Sewer system infill growth**
- Unsewered growth (septage)**
- Calculated an additional 600,000 gallons per day**

### **Factors Impacting Needs**

**Need to provide reliable, effective and efficient treatment for current flows and loadings and future flows and loadings.**

**Need to maintain levels of treatment for current NPDES permit and future NPDES permit**

**To maintain or reduce operating costs associated with**

- Aeration blowers**
- Sludge processing and disposal**
- Chemical use**
- Electricity, fuel oil, etc.**

### **Needs in Collection System**

**Needs upgrades at various pump stations based on age and sewered growth capacity limitations**

### **Needs at Pump Stations**

**Upgrades of pump control panels, telemetry and electrical service for all (completed 2009 to**



2010)

**Replacement pump stations needed for:**

**Milliken Street Pump Station  
Portland Avenue Pump Station  
Ross Road Pump Station**

**Comprehensive upgrades needed for:**

**Halfway Pump Station**

**Comfort Pump Station  
East Grand Pump Station  
Dunegrass 100 and 200**

### Needs at WWTF

**Town constructed and upgraded the WWTF in numerous phases:**

**1960 –original construction  
1972 – Comprehensive upgrade  
1985 – Comprehensive upgrade  
1994 – stand-a-lone component  
2000 – stand-a-lone component**

**Approximately 70% of the WWTF equipment is 25 years old.**

**Approximately 50% of the Town's electricity budget is from the WWTF**

**Aging and inefficient equipment code issues**

### Needs at WWTF

**WWTF won't meet anticipated future nitrogen limits**

### Alternatives Considered

**Energy Reduction Options**

**Method to meet future NPDES permit**

**Bio solids processing and disposal**

**Odor generation and control**

### Conclusions – Collection

**Sewers are not part of the Wastewater Department and sewer upgrades were not included in this study.**

**Pump stations warrant significant investment in the mid-term and long-term due to capacity and age.**

**The SCADA for Remote Pump Stations project was recently completed (2010) and added reliability to these stations**

**West Grand Pump Station project was recently completed 2010**

**Force mains warrant replacement in the long-term based on capacity and age**

**Sewered growth on the north side of Town will have a disproportionate cost impact due to existing age and capacity of collection system**

**Conclusions – Treatment**

**WWTF is well operated and meets current permit, however, significant portions are aging, inefficient and do not meet current codes and standards**

**WWTF will not meet future permit without significant upgrades.**

**WWTF warrants investments to improve process reliability, operational flexibility and energy efficiency**

**WWTF warrants investments to address some safety and code related items**

**WWTF staffing levels appear reasonable based on “manpower calculations” and comparison to other Maine communities**

**Conclusions – Disposal**

**The existing wastewater disposal system (effluent pump station and ocean outfall) appears adequate for the planning period.**

**Recommendations**

**Implement upgrades to wastewater facilities to improve reliability, efficiency, and safety for the Town. Phased upgrades are suggested to minimize cost impacts to residents.**

**Monitor DEP Nitrogen Standards and rulemaking. Future upgrade will be requested to address anticipated future treatment standards.**

**Perform Infiltration/Inflow Study to reduce extraneous flows to the system.**

**Consider technical and financial cost implications of sewer system expansion to the north.**

**Consider “sewer limit lien” and/or “supplemental sewer connection fees”**

**Consider sewer user fee system to provide a dedicated revenue stream for wastewater needs**

**Project Costs**

**Project Costs:**

	<b>Dollars</b>	<b>Schedule</b>
<b>Phase I</b>	<b>\$10.5 M</b>	<b>2009 to 2012</b>
<b>Phase II</b>	<b>\$14.3 M</b>	<b>2015 to 2018</b>
<b>Phase III</b>	<b>\$ 9.0 M</b>	<b>2020 to 2023</b>
<b>Total</b>	<b>\$33.8 M</b>	

**Annual Operating and Management Budget**

**2010 - \$1,080,000 At the end of Phase III - \$1,200,000**

**None of the above includes the Collection System Sewer Costs.**

**Funding and Financings**

**Loans**

- DEP CWSRF – 20 year loan at 2% below MMBB
- USDA/Rural Development – 20 or 30 year loan
- General Obligation Bonds

**Grants**

- Efficiency Maine Grant
- Community Development Block Grants
- State and Tribal Assistance Grants
- USDA. Rural Development (only with user fee)
- Maine DEP Grant (only with user fee)

**Local Costs**

**Local Property Taxation**

- No changes required
- Simple System
- Precludes eligibility from some grants funding
- Lowest cost system under current situation

**Sewer User Fees**

- Significant changes required
- More complex system
- Costs are incurred proportional to use
- Eligible for State and Federal grant funding
- Lowest cost system after the required capital improvement if grants are secured

**Cost Impact by Phase-Taxation Only**

	Existing	Phase 1	Phase I, II, III
<b>Total Project Cost</b>	<b>\$ 0</b>	<b>\$10,500,000</b>	<b>\$33,700,000</b>
<b>Debt Service</b>	<b>0</b>	<b>642,000</b>	<b>2,061,000</b>
<b>Operating Budget</b>	<b>1,000,000</b>	<b>1,000,000</b>	<b>1,200,000</b>
<b>Existing WW Related Property Tax</b>	<b>180</b>	<b>180</b>	<b>180</b>
<b>Increased in Annual Property Tax</b>	<b>0</b>	<b>110</b>	<b>400</b>
<b>Total WW Related Property Tax</b>	<b>180</b>	<b>390</b>	<b>500</b>
<b>% of MHI on Wastewater</b>	<b>(1%)</b>	<b>1.1%</b>	<b>1.6%</b>

**Cost Impact Total – User Fees**

	Simplified User Fee w/o Grant	Simplified User Fee w/Grant
<b>Total Project Cost</b>	<b>\$33,700,000</b>	<b>\$ 33,700,000</b>
<b>30% USDA/RD Grant</b>	<b>--</b>	<b>10,110,000</b>
<b>Debt Service</b>	<b>2,061,000</b>	<b>1,323,000</b>
<b>Operating Budget</b>	<b>1,200,000</b>	<b>1,200,000</b>
<b>Average Sewer User Fee for Residential Household</b>	<b>635</b>	<b>495</b>
<b>% of MHI on Wastewater</b>	<b>1.7%</b>	<b>1.4%</b>

**Implication of No Action**

**Reduced reliability and level of service to sewer users for collection, pumping stations, treatment and disposal**

**Inflation with impact/increase costs**

**Emergency repairs, if needed, will cost more than planned repairs**

**If failures occur, potential exposure to enforcement or sewer moratorium from DEP**

### **Next Steps**

**Address Town questions and comments on draft report. Provide supplemental material as requested**

**Finalize intended phasing plan, recognizing that each phase typically takes 3-4 years from planning through commissioning**

**When ready and approved by the Town, submit updated draft report to DEP. Address DEP comments in conjunction with the Town**

### **Questions and Discussions**

**The following questions were asked by Council members and responded to by Edward Leonard and Roger Bedard of Wright-Pierce.**

**Discussion by the Council involved the need for expansion, aging infrastructure and environmental awareness which are increasing the need for construction work in existing sewer and wastewater treatment plants. There was discussion on two different levels but there was recognition by everyone that phased projects require thought about each and every phase as recommended by Wright Pierce. The Council agreed that there are three basic concepts to be addressed – operations and maintenance expenses; repairs and replacement expenses; and Capital replacement expenses. Knowing the expected life of equipment is vital. Councilors discussed with Wright Pierce the need to prioritize the phases. The goal of repair and replacement is to ensure that funding has been set aside in a separate account; adequate funds to repair or replace items that are going to wear out over a short period of time (seven years.) The Capital replacement expense, however, is the amount of funding that should be saved each year to replace the multi-use facility at the end of its estimated life. Revenue required is based on the projected annual costs of the facility in each of these three categories. Revenue to support this normally comes from property taxation, user fees, rent or leased payments. In Old Orchard Beach, all this revenue comes from property taxation. There are programs available for borrowing and for grants and although the Federal government has played a significant role in developing water quality regulations and standards for municipal water use, it historically has provided small percentages for funding for construction of water supply and treatment facilities. Several programs do exist and it appears that Congress may be asked more frequently to assist communities. Discussions continued on the need for a sewer user fee and the knowledge that future workshops on this issue are needed. Council had varied views on how to move forward with the recommendations that Wright Pierce had made this evening but there was a sense of urgency that we needed to do something immediately; some sensing delegating funding either by bonding or grant requests to move ahead with Phase I; there were others who felt that keeping current on the upgrading of present equipment was imperative. It is obvious, however, that a steady increase over time in the number of water and wastewater standards and mandates, coupled with the need to replace aging infrastructure, is creating a significant current and**

anticipated future fiscal burden on the Town. Town staff also encouraged continued attention to the three major safety concerns at the Wastewater Facility which includes confined space entry, lockout/tagout and personnel protective equipment. Town staff reminded of the need that there be in the plant the ability to provide air monitoring, proper ventilation, respiratory protection and fall protection. They explained that confined space is one of the most important safety issues related to the waste-water treatment industry and is closely monitored to ensure employees are properly trained to follow the strict guidelines and regulations which are enforced by OSHA. Council discussed and requested that Wright Pierce do a quick revisit of the phasing plan and schedule focusing on safety, reliability and efficiency. Wright Pierce has requested a copy of the Capital Improvement Plan of the Public Works Department for high priority sewer replacement. The Council also suggested that perhaps a revisit to the subject of growth projections.

Before Wright-Pierce left and before the budget presentation which follows, Jerome Begert asked that his comments be placed in the Minutes. "There are two approaches/responses to problems: forever wrestle with its consequences (push the Sisyphus rock); or target the cause itself. Your strategic-plan only focuses on throwing millions of tax dollars at the consequences of sewer-use and totally ignores the source/cause of sewage. Neal Weinstein was headed in the right about the "no" factor. The source of the sewage treatment plant's burden and worst health-risks from out-filtration leakage, are flushing-water toilets. Towns and counties are encouraged and allowed by law to elevate their local building-codes above the average standard. A truly comprehensive strategic-plan is to have our Town's "comprehensive" plan and our code enforcement officer require all new residential and commercial developments (including major renovations) to install electric incinerator-toilets and integrated backup-generators (not flushers.) Over 20-50 years we would thus be eliminating source/cause-flushing and thus we'd eliminate the need to ever again do another hyper-expensive plant-overhaul and we'd never have to suffer the costly-to-taxpayers shell game, called "EDU/sewer-user-fee."

### Budget Consideration for the Wastewater Department

The Wastewater Department is responsible for the maintenance and operation of the pollution control facility and eight remote pump stations. Although there are separate Maintenance and Operations departments, both are required to have working knowledge of each other's general duties. The Maintenance Foreman oversees all maintenance, duties, and is second in charge during the absence of the Superintendent. The Chief Operator oversees all chemical and biological operations. At all times there are two employees on call and ready to respond in case of power outages, equipment failures and rain events. Everyday duties include inspection facility equipment, pump station equipment, scheduling maintenance, laboratory testing and operational adjustments. Other duties consist of operating the solids disposal equipment, coordinating outside contractors, diagnosing electrical and mechanical equipment, scheduling in-house repairs, ongoing training, ordering parts/supplies/material and yard maintenance. Staff faces a number of biological, electrical and mechanical hazards on a daily basis. Training and attention to safety play an important role in everything we do. It should be noted that in comparing wages and benefits as part of the total departmental budget; the labor costs are a much smaller percentage in this department than others.

Although Wastewater treatment in most municipalities tends to be less in the public eye than other departments, it is a service that is provided twenty-four hours a day. There are

tremendous amounts of technology and infrastructure that make up the Wastewater Treatment system. It is a huge investment and it is very important that the public be educated on what it takes to properly operate the facility. There have been tremendous advances in how wastewater is treated and great strides have been made in technology. Newer equipment saves manpower, electricity, and provides a safer working atmosphere for the employees.

The first part of the process uses primary clarifiers to settle out non-organic material that has no benefit to the biological process. The waste stream then enters the biological part of the process called operation. In this process, repopulated microorganisms are supplied with air and cultured in open tanks for the purpose of “breaking down” the organic material. After the aeration the waste stream enters the secondary clarifiers, is much like the first and uses the same principals to settle out organic material coming from the aeration tanks. The last process is the disinfection process, where hypo-chlorite is used to kill the pathogens in the waste stream. All of the non-organic and organic solids are treated using a belt press that “squeezes” as much waste as possible out of the solids. These dried solids are then sent out for disposal by the contracted third party. While not all of the facility processes are automated, some pumps and feed rates are controlled by programmed logic controllers, or PLC’s. This type of technology is now standard for most facilities and wireless control is also becoming more prevalent.

The Old Orchard Beach facility typically treats over 500 million gallons of wastewater and processes over 1,200 tons of solids on an annual basis. The treated water is discharged to the Atlantic Ocean and is subject to Federal and State laws that are put in place to protect our waterways. While the Old Orchard Beach facility is mandated to remove 85% of the pollutants, the facility typically removes better than 90%. The solids produced are processed in to different bio-solids products and used by both farmers and residents alike.

There are sources for grants include the Maine Rural Development (MRD) – these grants are the primary source of Federal assistance for most wastewater projects. The Town is currently not eligible for these grants due to its method of funding its wastewater budget. These grants are also no available to communities with populations over 10,000. The next census may eliminate Old Orchard Beach from the MRD grant eligibility altogether. The amount of the grant also depends on your average sewer user charge and the per capita income of the community. The second Grant Program is the Efficiency Maine (EM) – these grants are for single projects that show significant savings in energy costs. The Department pursued EM grants for the West Grand pump station project but was deemed not eligible. The most promising EM grant and shortest pay back period would be for the replacement of the existing positive displacement blowers. American Recovery and Reinvestment Act (ARRA) – ARRA funds may not longer be available. Maine DE (DEP) – The DEP is not a major source of grants for wastewater projects.

Discussions continued on funding sources. Sewer Connection fees and Sewer Impact Fees – In most municipalities these fees are dedicated to wastewater needs. In past budgets, these funds have been used to cover budget shortfalls and may not be available for wastewater needs. This department has not used any of these funds in years. Sewer User Fees – Most communities charge fees according to usage and/or impact the individuals users have on the wastewater system. Old Orchard Beach charges according to percentage of property taxes (Ad Valorem). The Ad Valorem method was common in the 1970’s when Federal funds were widely available; but they are no longer available and have dried up, and as a result more of the costs were shifted to the community and the Ad Valorem method became less equitable to the individual users.

**Account #20204-50846 – This account is dedicated to individual pieces of equipment or improvement projects that cost \$1,000 or more. At the end of the FY 11 budget year it was estimated that there will be a balance of \$300,000. In any wastewater facility the largest most expensive and the most vital pieces of process equipment cost \$100,000 to \$300,000 and any infrastructure improvements cost substantially more. Therefore this account is not considered large enough to support such investment. Bond Sink Fund – The Town of Old Orchard Beach does not have a fund dedicated to covering future bond costs.**

**There are several projects that are ongoing including the West Grand Pump Station (WG PS) – The WG PS project has been completed on time and within the budgeted amount. Comprehensive Facilities Studies (CFS) – Completed in 2009 and waiting for Town Council direction. The CFS will give us valuable information when planning investment and future operations which were outlined as part of this study. It is our goal to use this study to help the public understand the wastewater process. Having identified areas of potential growth, this study should also be helpful in planning development and the economic impact it has to the individual citizens. Supervisory and Control and Data Acquisition Project (SCADA) – This project was completed in early 2010 and has proven to be an asset to the department. The SCADA system allows staff to access pump station information and control operations from the facility. This has allowed us to preempt potential after-hour call outs and has reduced overtime costs.**

**20161-50106 – Full time Employee Wages: - \$276,500**

**The Department staff consists of three employees each in the Maintenance and Operations Departments. Due to the absence of an employee, the Superintendent and Operator combined resources to fill in the necessary tasks normally performed by the Chief Operator. An extra seasonal employee was hired for the summer months to help alleviate the loss of the Mechanic. Mid way through the FY11 budget year we added an Equipment Operator’s position to assist the Maintenance Department. Recently an employee was informed he is not longer employed by the Town. Another employee is officially employed until March of 2011. Some staffing issues to be considered in the budget process include on call rotation restricts vacation time for staff; possible retirement of Senior Operator; current on call and over time compensation inflates annual wages; current wage scale for department Foreman and Chief Operator is not competitive within the industry; and the current wage scale lags monetary separation between job titles.**

**20161-50108 – Seasonal Employee Wages - \$12,000**

**The absence of two employees caused the FY11 budget overage. Seasonal employees perform grounds keeping tasks and assist in the Maintenance Department during the summer months.**

**20161-50111 – Overtime Wages - \$40,000**

**Two employees are required to perform weekend duty for four to six hours per employee, per weekend and on holidays. Any costs incurred from call outs are also funded from this account.**

**20161-50122 – Standby Wages - \$40,000**

**This account funds the standby pay received for the primary and secondary on call individuals. There are two employees on call at all times. The primary on call employee received seventeen hours per week of straight time and the secondary on call employee receives twelve hours. Standby wages are estimated to be \$35,000 in FY11.**

**20161-50210 – Health Insurance – Employee Share - \$71,650**

**This item, along with other departments, will be revisited by the Council.**

**20161-50230 – Clothing Allowance - \$3,900**

**Again this is a contract issue – each employee allotted to \$550 per year.**

**20161-50251 – Conferences/Training - \$1,500 and 20161-50252 – Travel/Food/Lodging - \$500  
Employees are required to attend eighteen hours of DEP approved classes every two years in order to maintain their wastewater license. The Superintendent has been attending one conference a year.**

**20161-50256 – Dues/Memberships/Licenses - \$500**

**Employees are required to attend eighteen hours of DEP approved classes as indicated above**

**20161-50305 – Laboratory Service - \$10,000**

**This budget line funds non-capita lab equipment, lab supplies and contracted testing services which are used in providing the technical responsibilities of the department.**

**20161-50310 – Service Contracts - \$12,000**

**This budget line funds all the scheduled maintenance for the emergency generators at an annual cost of \$2,500 as well as inspections and/or calibration of the fire extinguishers, backflow devices, effluent outfall and lab equipment. We also use this line for such services as bathroom cleaning, carpet service, internet fees and our annual alarm monitoring fees.**

**20161-50336 – Equipment Rental - \$2,000**

**This budget line funds equipment rental fees incurred when equipment rental is needed. This line varies according to the amount of projects we do in-house and the equipment needed.**

**20161-50340 - Waste Tipping/Disposal - \$110,000**

**This budget line is use to fund sludge disposal costs. They are currently under contract with New England Organics with the contract expiring in August of 2013; annual costs are subject to the amount of solids produced.**

**Revisit: This item is to be revisited. Once the contract is settled it can be analyzed more clearly and more focused on an amount actually needed.**



**20161-50342 – Waste Pumping - \$30,000**

This budget line is dedicated to costs incurred from cleaning pump station wet wells and various tanks around the facility. These wet wells and tanks are cleaned on an average of twice per year. Last year we saw an increase in these fees. A new disposal site has been located that would allow the Town to discharge waste locally. The Town should investigate the possibility of using the Public Works staff and equipment for some of these services.

**20161-50400 – Electricity – 210,000**

This budget line is dedicated to electrical costs incurred from the operation of the Wastewater Facility and Pump Stations. The actual kW charge has been reduced from 0.09 per kWh to 0.0841 per kWh through December 2010. As the year progresses we will be given updates on current pricing and our options for extending the current contract or going out to RFP. Significant electricity savings would be realized if the current positive displacement blowers were to be replaced by a new design. It is expected that the West Grand Pump Station should also achieve savings through more efficient motors. This budget will be affected by the kWh price in 2011.

**20161-50401 – Water -\$5,000**

This account funds water for the plant and the pump stations and Poland Spring Water for staff drinking water. Biddeford Saco Water Company water rates are expected to rise and line is currently over budget.

**201610-50402 – Phones/Cellular/Paging - \$5,000**

This account funds all cell phones, land lines and also the security function.

**20161-50405 – Heating Fuel - \$12,000**

The administration building is the only building that is heated by oil. A buried line that ran underground from one building to another has been eliminated. The remote building now has a dedicated LP monitor. Replacing doors and windows have also helped reduce usage. All of the pump stations and remote buildings are heated by electric heaters. To date 30% of this line has been spent in the FY10 budget.

**20161-50450 – Building Repairs - \$10,000**

This budget line is dedicated to minor repairs and improvements as they become absolutely necessary. The administrative building is in poor shape and in need of extensive repair and abatement. The equipment storage building is also in poor shape and inadequate for their needs. A portion of the older process buildings have been “mothballed,” but continue to incur maintenance costs.

**20161-50452 – Operating Equipment Repair - \$40,000**

**This budget line is dedicated to the replacement or unscheduled repair to process equipment. This includes the purchase of non-capita parts, equipment and material. It also includes charges incurred from outside contractors. Equipment and parts that are over 41,000 are funded from the equipment replacement budget line. The FY10 budget shows a significant decrease in spending.**

**20161-50453 – Vehicle Repair/Tires/Oil – 8,000**

**The budget line is dedicated to the maintenance of three vehicles; a front end loader; and a Mac truck and lawn equipment. The loader and Mac truck were formerly used at the composting process. The line contains enough funds for all scheduled maintenance and replacement of normal wear parts.**

**20161-50500 – Administrative/Office Supplies - \$4,000**

**This account funds all office supplies used by the department including books and periodicals, computer repairs, printer cartridges, etc.**

**20161-50501 – Operating Supplies/Equipment -\$40,000**

**Almost half of this budget line is dedicated to chemical purchases, which Hypo-chlorite costs should see a significant decrease due to a 33% drop in the per gallon price in 2010. This budget line also is used for maintenance supplies, safety/first aid supplies, shop supplies, tools and safety equipment supplies.**

**20161-50510- Vehicle Fuel - \$8,000**

**This budget line is dedicated to fueling all of the vehicles, loader and all emergency generators.**

**20204-50846 – Capital Equipment Repair and Replacement - \$ 0**

**This line is used for purchases over 41,000. At the end of the FY10 year it is expected that unencumbered funds will exceed \$100,000 and be sufficient for FY11. Significant investment has lowered the amount of funds spent and has allowed the department to use these funds for improvement rather than repair. It would be expected that additional funding will be needed for this line in the next budget cycle. Recently the Superintendent discussed the blowers at the Waste Water Facility which are older of the older “positive displacement” type. The newest technology is referred to as “turbo blowers” and offers a significant savings in electricity. Efficiency Maine is also very generous with grants to assist in the purchase. This would be an easy retrofit and with a small amount of engineering money dedicated to comparing brands, applying for grants and specifying the correct models, it could be done for under \$500,000. Also needed would be approximately \$25,000 for electrical/controls integration and \$25,000 for installation. Louise-this was part of CIP – done at 4/21 meeting**

**20164 – Comfort Station - \$7,500**

**50401 – Water - \$1,500 and 50450 –Building Repairs - \$6,000 for a total of \$7,500.**

**Revisit: 20161-50340 - Waste Tipping/Disposal - \$110,000**

**This item is to be revisited. Once the contract is settled it can be analyzed more clearly and more focused on an amount actually needed. Louise I don't know where this came from?**

**The Chair thanked everyone for the efforts put in to the discussions of the evening, recognizing there is a great deal of information to be analyzed and future decisions to be made.**

**The meeting was closed at 10:00 p.m.**

**Respectfully Submitted,**

**V. Louise Reid  
Town Council Secretary**

**I, V. Louise Reid, Secretary to the Town Council of Old Orchard Beach, Maine, do hereby certify that the foregoing document consisting of nineteen (19) pages is a true copy of the original Minutes of the Town Council Workshop of April 27, 2011.**

**Louise Reid**