



# Wastewater Facilities Plan



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## EXECUTIVE SUMMARY

In March 2010, the Town contracted with Woodard & Curran to provide an update to its 2003 Wastewater Facilities Plan. The Town has investigated the possibility of developing a wastewater collection and treatment system since the 1970s. Most recently, the Town has been working to understand the extent of nitrate-nitrogen concentrations (among other contaminants indicative of subsurface wastewater disposal) in groundwater in the north Windham area. During the development of this Plan, we took a step-wise approach with continuous communication with Town staff, management and the Council, as well as collaborating with the Portland Water District and the City of Westbrook. The purpose of this effort is to identify a wastewater solution that responds to public health, resource and environmental protection, and community and economic development issues facing the Town.

Once we identified the Sewer Study Area as encompassing North Windham and Windham Center, we were able to divide the Study Area into two phases, and develop a list of alternatives for the management of wastewater. The alternatives considered ranged from 'take no action' to installing a collection system and building a new advanced treatment system within the Town. We subsequently screened the alternatives using a community-vetted set of "screening criteria" to rank the alternative that was the best fit for the Town. The alternative selected is to collect and transport wastewater from the Study Area to the Westbrook-Gorham Regional Water Pollution Control Facility (WGRWPCF) for treatment and disposal. This alternative best met the screening criteria and was endorsed by the Council in a 7-0 vote after a Public Hearing at its May 11, 2010 meeting. The WGRWPCF is owned and operated by the Portland Water District in neighboring Westbrook.

At the direction of the Council, we then completed schematic design of the collection and transport system, and identified options for upgrades to the WGRWPCF to treat the roughly 700,000 gallons per day of wastewater from the first phase of the project. Utilizing the schematic design and the options for upgrades to WGRWPCF, we developed a conceptual cost estimate for the Capital and Operations & Maintenance of the project.

Based upon the assumptions documented within this Plan, we estimate the Phase 1 Capital Cost Estimate for this project is \$67.8M with accuracy of -30% to + 50%, as recommended by Association for Advancement of Cost Engineering International (AACE). We also estimate the annual Operations & Maintenance costs for this project to be \$460,000. These estimates are based upon concept or schematic level planning and will need to be continually refined as the project moves into preliminary design.

This Plan documents the work completed and the assumptions made in its performance. On September 14, 2010 the Town Council voted unanimously to approve this Plan. We appreciate the opportunity to have worked with the Town in the development of this Plan, and the support provided by staff, management, and the Council during its preparation.

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## 1. INTRODUCTION

### 1.1 PROJECT BACKGROUND AND PURPOSE

The Town of Windham has investigated the possibility of developing a wastewater collection and treatment system in North Windham since at least 1971, and at that time, a study was performed for a greater Portland regional sewerage system by the Portland Water District (PWD). Since the conception of a regional sewerage system serving the greater Portland area, significant wastewater planning has taken place without implementation. In August of 2001, Woodard & Curran completed a Wastewater Management Alternatives Study for the Town which identified and established boundaries of a North Windham "study area" and associated flow, identified collection and treatment alternatives, developed a screening matrix, evaluated and identified a "recommended" alternative for further consideration, and prepared project cost estimates and an economic development benefits analysis. In February of 2003, with partial funding from a Maine Department of Environmental Protection (DEP) planning grant, Woodard & Curran completed a Wastewater Facilities Plan for the Town to further assess its selected alternative; collection, transport, and advanced wastewater treatment with subsurface disposal in the North Windham area. That plan involved work to further assess the selected alternative and build community consensus; this included identifying a first phase and expansion area; wastewater flow and load; hydrogeologic assessment (of a disposal site); conceptual design; assessment of impacts (environmental, historic, indirect, and socioeconomic); utility coordination; cost estimating; identification of permits (state and federal); public involvement; and identification of funding sources. Most recently, the Town has been working to understand the extent of nitrate-nitrogen concentrations (among other contaminants indicative of subsurface wastewater disposal) in groundwater in the north Windham area.

As an outcome of past efforts and to respond to community concerns, the Town hired Woodard & Curran to complete this update to the Town's 2003 Wastewater Facilities Plan. The purpose of this Plan is to identify a wastewater solution that responds to public health, resource and environmental protection, and economic and community development issues facing the Town of Windham, currently and looking into the future.

On March 16, 2010 we held a project kickoff meeting with Town staff and management to review the scope and schedule for the project, and to establish communication protocols. On March 17, 2010 we met with Portland Water District staff and management to review the scope and schedule for the project, and to identify the team and goals for collaboration. To keep all engaged stakeholders informed, we have provided Status Reports on a bi-weekly and often weekly basis.

As part of this effort, this Plan has included consideration for wastewater management from the North Windham area of town, and also the Regional School Unit (RSU) #14 campus in Windham Center, and its surrounding areas. This Plan involves developing projected wastewater flow and load, identifying a treatment and disposal alternative to best meet the community's needs, develop a schematic design to a level such that an understanding of approximate project costs could be achieved, and evaluate project financing.

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## 2. STUDY AREA

The first step of this Plan is to update the study area. In 2003, the Facilities Plan sewer study area included the densely developed commercial and residential areas within North Windham. We reviewed the 2003 Wastewater Facilities Plan and prior reports and sought assistance from the Town. We held a Public Meeting on March 22, 2010 to seek input on the study area and on March 23, 2010 we met with the Council in a workshop to review the possible expansion of the study area beyond North Windham.

As a result of public and Council input, the study area was expanded to include other environmentally sensitive areas, growth areas identified in the Town's 2003 Comprehensive Master Plan (hereafter referred to as the Comprehensive Plan), RSU #14 campus, commercial and residential areas within North Windham and Windham Center and future regional connections for St. Joseph's College and the Town of Raymond. The Study Area is delineated in Appendix A - Sewer Study Area, and includes more than 5,800 parcels or lots. The Study Area represents roughly 16.9 square miles.

Currently all users in the study area, except RSU #14, rely on subsurface wastewater disposal systems. RSU #14 currently has its own secondary treatment plant with a discharge into the Pleasant River. The school is licensed under the National Pollutant Discharge Elimination System (NPDES) and the license requires evaluating alternatives to discharging into the Pleasant River every relicensing cycle (every 5 years). RSU #14 is working with the DEP and understands that the DEP would like this point source discharge to be eliminated from the River. For these reasons, RSU #14 is included in the study area.

As introduced in Section 1 of this Plan, the Town has performed groundwater resource evaluations that identify the impact of on-site wastewater disposal on groundwater in the North Windham area. Nitrate-nitrogen concentrations in the groundwater in Windham is shown in Appendix B - 2009 Nitrate-Nitrogen Concentrations in Groundwater Map; residents have expressed concern that nitrogen in the groundwater will have negative environmental and drinking water impacts. Work completed to date evaluating this issue has indicated concentrations trending upward.

For planning purposes and with input from the Town, the study area was divided into two phases for delineating a planned growth approach for the collection system. Flow and load estimates were developed for each phase in consultation with the Town and also include scenario planning for potential future development conditions. Flow and load estimates are further described in Section 3 of this Plan.

### 2.1 PHASE 1

Phase 1 is generally described as the area along the Route 302 corridor from the Enterprise District (near the Raymond line), south to Nash Road. Phase 1 includes the dense commercial area in North Windham and Windham Center along Routes 202 and 302, RSU #14 complex and Town Hall, major arterial roads in the area, as well as the residential neighborhoods around Little Sebago Lake, Pettingill Pond, Tarkill Pond, Mill Pond, and Collins Pond. Phase 1 is delineated by the dark blue boundary on the Study Area Map in Appendix A.

The users in this area include single family homes, commercial/businesses, and the RSU #14 campus. The commercial businesses range in size from small shops to major retail shopping centers. There are nearly 1,700 parcels in this Phase 1 area with 870 parcels zoned Residential (including Farm-Residential), 415 zoned Farm, and 410 zoned Commercial (including the Enterprise District). The Phase 1 area represents roughly 6.3 square miles.

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## 2.2 PHASE 2

Phase 2 is generally described as the residential zones outside the Phase 1 area and bounded by the Windham-Raymond town line to the north, Presumpscot River and Sebago Lake to the west, Nash Road to the south, and Pleasant River to the east. Users in this phase are mainly single family homes; however we have also included St. Joseph's College of Maine in this phase. There are more than 4,100 parcels in the Phase 2 area with 2,860 parcels zoned Residential (including Farm-Residential), 790 zoned Farm, and 490 zoned Commercial. The Phase 2 area represents the remaining roughly 10.6 square miles of the Study Area.

### 3. FLOW AND LOAD ESTIMATE

With the study area defined, efforts were initiated to calculate the flow and loads for the project. The flow and load estimate is used to size the collection system piping and to identify wastewater treatment options. We met with the Town staff on April 16, 2010 to review the flow and load analysis of the study area and define current and future densities. We utilized the Comprehensive Plan to identify current density and future growth projections, and these became the basis of the flow and load analysis for the Town.

We completed a land use and employee forecast to estimate wastewater flow and load from the study area, see Appendix C for further detail and the calculations. We estimated the flow and load for Phase 1 and Phase 2 according to current densities. We also used the future growth projections of the Comprehensive Plan to estimate the potential future build-out of the Study Area. We utilized the Town's Geographical Information System (GIS) data to determine land use areas by phase and calculated flow by applying typical values for each land use area. We assumed 500 gallons per day per acre for the Commercial and Enterprise District and 1000 gallons per day per acre for Industrial Zones; for the Farm and Residential Zone, we used the Comprehensive Plan and 2000 Census data to estimate the number of persons per acre, and assumed 70 gallons per day per person. We understand current "uses" are not entirely consistent with the "zone" and therefore these variations will need to be rectified during future preliminary engineering to refine flows and loads

For planning purposes, we have included consideration for infiltration and inflow (I/I); extraneous flow that enters the collection system from groundwater or storm events that consumes capacity of the collection system. I/I exists in every system and must be accounted for when sizing pipes. I/I from a new collection system will be low initially; however, an I/I allowance was included in the flow estimates to allow for normal aging of the system.

With respect to wastewater load, we anticipate the wastewater from the study area would be typical strength domestic waste. We assumed that Biological Oxygen Demand (BOD), Total Suspended Solids (TSS), and Total Nitrogen (TN) concentrations would be 290 mg/l, 340 mg/l, and 68 mg/l, respectively.

Specific to other flows within the study area and as introduced in Section 2 of this Plan, we have included RSU #14, St. Joseph's College and the Town of Raymond in our consideration. In March 2006 and in conjunction with the renovation and addition to the Windham High School, the Windham School District received a renewal of the Windham Center School Campus' Waste Discharge License; this new License increased the monthly average flow limit to 25,000 gallons per day. We communicated with the plant operator, Mr. Mac Richardson, who provided the most recent 2 years of wastewater flow and load data for RSU #14, and that has been incorporated into this Plan. Similarly, we contacted Facilities Manager Mr. Charles Dawes at St. Joseph's College to understand the flow and load if a connection to a new system was available to the college and have incorporated that into this Plan.

We contacted the Town of Raymond to gauge their interest in connecting to a system in the future. The Town expressed interest, however, was not able to provide a wastewater flow estimate for our consideration. For the purpose of this Plan, we have not allocated flow or load for Raymond, however would encourage revisiting this during a next step of implementation.

As referenced earlier, detailed flow and load model calculations are provided in Appendix C, with all accompanying assumptions and references. The resulting wastewater flow and load from the study area, separated by Phase, is summarized in Table 3-1. We recommend during the next step of implementation, all assumption be verified for characterization of the flow and load for specific areas.

**Table 3-1: Design Flow Summary**

	Windham Projected Flow/Load		
	Phase 1	Phase 2	Future Buildout
Average Daily Flow (MGD) [1]	0.74	1.7	2.6
Maximum Monthly Flow (MGD)	0.89	2.0	3.1
Maximum Daily Flow (MGD)	1.8	3.3	5
Peak Hourly Flow (MGD)	3.0	5	8
Average Daily BOD (lbs/day)	1,680	3,445	5,088
Max Monthly BOD (lbs/day)	1,915	3,928	5,800
Average Daily TSS (lbs/day)	1,970	4,039	5,965
Max Monthly TSS (lbs/day)	2,561	5,251	7,754
Average Daily N (lbs/day)	394	808	1,193
Max Monthly N (lbs/day)	449	921	1,360

[1] Current permitted capacity and committed average daily flow is 4.54 MGD. See Section 6.2 of this Plan for additional detail.

## 4. WASTEWATER TREATMENT ALTERNATIVES

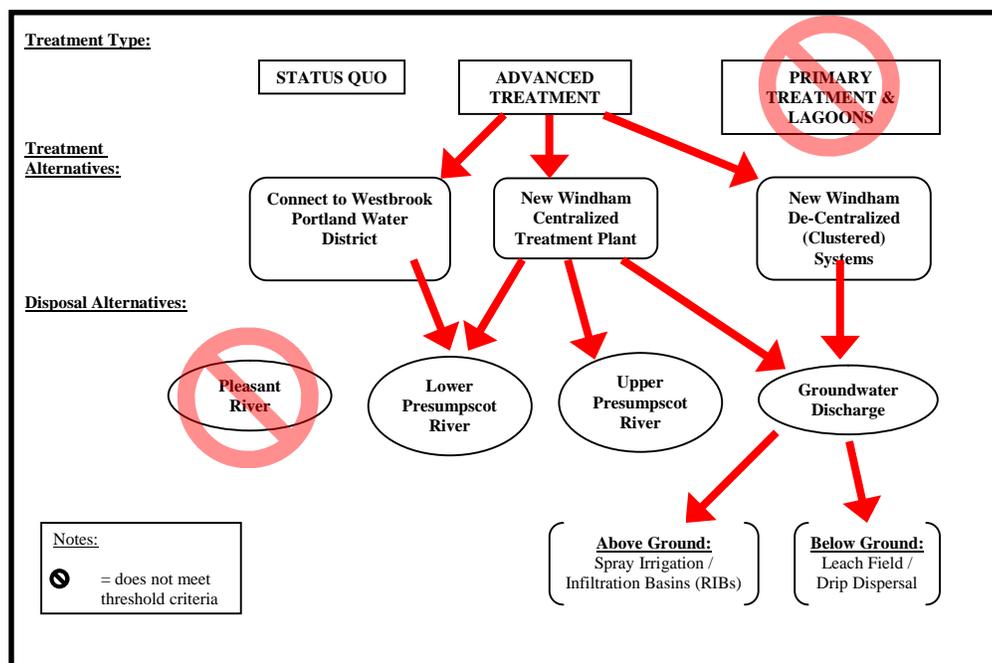
A community wastewater system requires a collection system, treatment facility, and effluent disposal location. A treatment facility can discharge treated wastewater to a river or the ocean, or alternately, to a land application system, ranging from surface applications (such as spray irrigation or Rapid Infiltration Basins), to subsurface applications (such as leach fields). In some cases, it may be possible for a community to regionalize with other communities to manage wastewater, consistent with the organizational structure and charter of the Portland Water District. For this project, we sought to identify viable technologies and options for treating the Town's wastewater. To accomplish this, we used the best information available and made logical assumptions where necessary to find alternatives that make sense for the Town.

One example of these assumptions and a threshold for assessing viability relates to the level of wastewater treatment for a groundwater discharge. Given the concern for nutrient contamination described in Sections 1 and 2 of this Plan, we assumed that nitrogen removal would be necessary prior to any new subsurface disposal system in Windham. Treatment alternatives that did not provide nitrogen removal were not given further consideration. Specifically, primary treatment only and lagoon-type treatment alternatives were not considered in this evaluation. Furthermore, we similarly recognized that any connection to an existing system should consider and make accommodations to not exacerbate any existing combined sewer overflow activities.

### 4.1 ALTERNATIVES

We worked with Town staff to review the alternatives of the 2001 Wastewater Management Alternatives Study and identify additional alternatives for consideration. This evaluation resulted in a total of seven (7) alternatives for discussion and consideration. We held a public meeting on April 15, 2010 to provide an overview and solicit feedback on the alternatives identified. On April 20, 2010 we attended a joint Council and Portland Water District workshop to provide additional opportunity for feedback. To describe these alternatives, we developed a flow chart of the alternatives organized by treatment type, treatment alternative, and disposal alternative; this flow chart is included as Figure 1 below. The following describes in general terms, the alternatives identified.

**Figure 1: Wastewater Treatment and Disposal Alternatives Flow Chart**



#### **4.1.1 Do Nothing (Alternative 1)**

Under this alternative the Town would maintain the status quo and not take any action to provide sewer service to the study area. This alternative does not address the concerns and goals developing the Plan; however, it is generally requisite to an alternatives analysis.

#### **4.1.2 Westbrook-Gorham Regional Water Pollution Control Facility Connection (Alternative 2)**

This alternative would include construction of a new wastewater collection system and transport the collected wastewater to the Portland Water District's existing Westbrook-Gorham Regional Water Pollution Control Facility (WGRWPCF) for treatment and disposal into the Presumpscot River, utilizing the existing outfall. This facility is located in Westbrook and the alternative requires an interceptor (or wastewater transport pipe) to be constructed through the City of Westbrook.

#### **4.1.3 Advanced Treatment with Discharge to Lower Presumpscot (Alternative 3)**

This alternative would include construction of a new wastewater collection system with transport to a new advanced wastewater treatment facility in Windham, construction of a new effluent discharge pipe through Westbrook, and construction of a new outfall in the Lower Presumpscot River. We anticipated the new outfall would be in the area of the existing WGRWPCF outfall and SAPPI's private wastewater treatment facility outfall.

#### **4.1.4 Advanced Treatment with Discharge to Upper Presumpscot (Alternative 4)**

This alternative would include construction of a new wastewater collection system with transport to a new advanced wastewater treatment facility in Windham, construction of a new effluent discharge pipe, and construction of a new outfall in the Upper Presumpscot River in Windham.

#### **4.1.5 Advanced Treatment with Above Ground Discharge (Alternative 5)**

This alternative would include construction of a new wastewater collection system with transport to a new advanced wastewater treatment facility in Windham and construction of an above-ground land application system in North Windham. Above-ground discharge options could include Rapid Infiltration Basins, lagoons, and spray irrigation system.

#### **4.1.6 Advanced Treatment with Below Ground Discharge (Alternative 6)**

This alternative would include construction of a new wastewater collection system with transport to a new advanced wastewater treatment facility in Windham and construction of a below-ground land application system in North Windham. Below-ground discharge options include a subsurface disposal bed (leach field) or drip dispersal system.

#### **4.1.7 Windham Clustered Advanced Treatment and Subsurface Disposal (Alternative 7)**

This alternative would include construction of multiple, decentralized (clustered) wastewater collection systems and advanced wastewater treatment facilities within the study areas. Each clustered collection and treatment system is envisioned to have a below-ground (subsurface) land application system similar to Alternative 6.

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## **4.2 OTHER CONSIDERATIONS**

### **4.2.1 Pleasant River Discharge**

The RSU #14 Wastewater Treatment Facility is licensed and currently discharges into the Pleasant River near the High School. We considered the possibility of a larger discharge into the Pleasant River at this location, coupled with some of the treatment alternatives identified with the alternatives. A larger discharge would require modeling and we anticipate significant public opposition to this discharge. We solicited and received feedback from the Friends of the Presumpscot River, the public, Town Council, and DEP regarding this. Based on our engineering judgment, we are of the opinion that detailed modeling of the river is not necessary to determine that a discharge to the Pleasant River could not meet the future needs of the Town. For these reasons, a discharge to the Pleasant River was not considered with any of the alternatives.

### **4.2.2 Future Presumpscot River Modeling**

Currently, the DEP has a working model of the Presumpscot River for estimating acceptable loading levels from point source discharges. We anticipate that any of the alternatives that consider new or increased discharge into the Presumpscot River may require modeling to determine licensing and effluent limits. The current DEP model is not updated to allow for this to occur concurrent with the development of this Plan. We recommend the modeling be completed during the preliminary engineering phase and become a component of the basis for design. The results of this modeling could impact the extent to which treatment is required, or impact the level of treatment in Alternatives 2, 3 and 4.

## 5. SCREENING OF ALTERNATIVES

With the goal of selecting the best alternative for the Town to manage its wastewater, we developed a screening process to objectively evaluate all the identified alternatives.

### 5.1 SCREENING PROCESS

#### Identification of Screening Criteria

To identify the criteria for screening, we reviewed with the Town the ten (10) criteria used during the 2001 Wastewater Management Alternatives Study. We held a project meeting on April 13, 2010 with Town staff and management and the Portland Water District to review these screening criteria, and seek input to identify additional criteria or remove criteria from the list. As a result of that process, and in addition to the threshold criteria of providing groundwater protection for nitrogen, we identified eleven (11) criteria to utilize in this screening process. The list of criteria follows in no specific order, and a more comprehensive description of each of the criteria is laid out in Table 5-1.

- |                                    |  |
|------------------------------------|--|
| 1. Capital Cost                    | 7. Flexibility/Expandability               |
| 2. Operations and Maintenance Cost | 8. Regional Capabilities                   |
| 3. Permitting                      | 9. Odor, dust, noise, traffic, visual      |
| 4. Funding                         | 10. Land removed from other uses           |
| 5. PWD Acceptance                  | 11. Compliance with the Comprehensive Plan |
| 6. Town/Public Acceptance          |  |

#### Weighting/Prioritization

We held a public meeting on April 15, 2010 to present and obtain feedback on the screening criteria and solicit input on the weight or prioritization of each of the criteria relative to one another. At the April 20, 2010 joint Council and Portland Water District workshop, we provided additional opportunity for feedback on this matter. At each of these meetings, we provided a one-page form with the Screening Criteria for voting (see the form, attached in Appendix D). Upon receipt of votes, we tallied each criterion and normalized to the total number of votes cast to determine relative criteria weighting as a percentage of the whole. The weighted percentage represents what we've interpreted as the community's priority of each criterion, relative to the other.

#### Ranking of Alternatives

On April 21, 2010, we met with Town staff and management to review the results of the community weighting and prioritization of the criteria, and score the alternatives. Prior to scoring, Alternative 1 (Do Nothing) was identified as not meeting the threshold criteria of being able to provide groundwater protection and for that reason was excluded from the screening process. We subsequently reviewed the eleven criteria for each alternative, discussing the alternative's ability to meet each of the criteria. Each alternative was given a score of 1 through 5 for each criterion, with 1 indicating the best fit with a criterion, and 5 indicating the least fit with a criterion. Once all alternatives were scored for all criteria, the score was then multiplied by the weighting and summed to obtain a score for each alternative. The alternative with the lowest overall total score was ranked 1 and identified as the recommended alternative.

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## 5.2 SCREENING RESULTS

On April 27, 2010 we met with the Town Council in a Special Workshop to present the results of our Screening Process work, including identifying Alternative 2-Westbrook-Gorham Regional WWTF Connection as the alternative that scored or ranked as the best fit for the Town. As you will notice when reviewing the score for each criteria of the alternatives, Alternative 2 best meets many of the criteria, as compared to the others. The screening results are summarized in Table 5-2 at the end of this section.

On May 11, 2010, the Town Council held a Public Hearing and voted 7-0 to approve Order 10-085: *To endorse the wastewater collection and treatment alternative identified as Alternative #2 in the "Windham Wastewater Facilities Plan Update, Alternatives Screening Results" dated April 23, 2010 and presented by Woodard & Curran at a special Council workshop on April 27, 2010, said option being for collection and treatment of wastewater at the Portland Water District wastewater treatment facility in Westbrook.*

**Table 5-1: Alternatives Screening Criteria, Definitions, and Comments**

Screening Criteria	Definition of Criteria [Ability of alternative to ...]	Alternative Screening Comments
Capital cost	...meet Town's needs for least total project initial cost.	<ul style="list-style-type: none"> <li>a. Alternatives were ranked according to preliminary cost estimates (estimated in April 2010) and relative to each other; cost estimates may not be reflective of costs estimated as part of this Final Plan.</li> <li>b. The Westbrook alternative would have the least cost due to the economy of scale of regional treatment and increased cost sharing of facilities and operators already in place.</li> <li>c. Clustered systems would have the greatest cost due to low efficiency of having many systems to maintain and a lack of existing knowledge within PWD of clustered systems.</li> </ul>
Operation and maintenance cost	...meet Town's needs for least operation and maintenance cost.	
Permitting	...be permitted by the Department of Environmental Protection	<ul style="list-style-type: none"> <li>a. Westbrook connection was determined to be easiest to permit due to existing permitted outfall and classification (Class C) of the Lower Presumpscot River.</li> <li>b. Increasing discharge to the Upper Presumpscot River requires modeling and may not be feasible due to the high Class B rating of the River and may possibly require a use attainability analysis.</li> <li>c. A discharge to the Upper Presumpscot is not preferred by the DEP and would be less likely to be funded at the state level. All other alternatives were considered equally fundable</li> </ul>
Funding	...leverage funding from regulatory agencies, development agencies, earmarks, etc.	
PWD acceptance	...be accepted by Portland Water District.	<ul style="list-style-type: none"> <li>a. PWD expressed a preference for expanding wastewater treatment services in a manner consistent with current practices. Because a Westbrook connection is an expansion of existing systems it is most preferred by PWD.</li> </ul>
Town/Public acceptance	...accepted by Town representatives and the public.	<ul style="list-style-type: none"> <li>a. A connection to Westbrook is most acceptable to allow the Town to focus its efforts in other areas and not wastewater treatment.</li> <li>b. Clustered systems were least acceptable due to having high cost and wide area of exposure.</li> </ul>

Screening Criteria	Definition of Criteria [Ability of alternative to ...]	Alternative Screening Comments
Flexibility/ expandability	...provide the Town with the flexibility to expand on an as needed basis and in areas of concern now and in the future.	<ul style="list-style-type: none"> <li>a. Clustered systems were determined to be most flexible/expandable due to the localized nature of the smaller treatment systems.</li> <li>b. Westbrook connection was not considered less expandable in terms of treatment; rather there was a concern with respect to political complexity involved with purchasing additional capacity from other users or increasing capacity at the Westbrook plant.</li> <li>c. Windham ownership of a treatment plant would simplify future expansion.</li> <li>d. Increasing discharge to the Upper Presumpscot River requires modeling and is limited due to the high Class B rating of the River and limits expandability.</li> </ul>
Regional capabilities	...provide sewer service to adjacent communities (i.e. St. Josephs College or Raymond).	<ul style="list-style-type: none"> <li>a. Regional capability was determined not to be important with respect to evaluating the alternatives.</li> </ul>
Odor, dust, noise, traffic, visual	...minimize odor, dust, noise, traffic, visual, etc... impacts on community.	<ul style="list-style-type: none"> <li>a. The Westbrook alternative would have limited impact during construction (in Windham) due to all treatment and discharge occurring in Westbrook.</li> <li>b. Clustered systems would have the most public exposure due to having many systems located throughout the community.</li> </ul>
Land removed from other uses	...minimize land that could otherwise be used to benefit the Town/Community in other ways, such as business development, green space, etc.	<ul style="list-style-type: none"> <li>a. A Westbrook connection would not require any land in Windham for treatment or disposal.</li> <li>b. Below ground discharge options ranked higher than treatment and discharge options as there would be more land removed.</li> <li>c. Above ground discharge options like spray irrigation typically require more land than below ground options and ranked higher.</li> <li>d. The clustered systems would likely remove the most land of all the options from the system with wider spread impacts rather than a localized single area.</li> </ul>
Compliance with Comprehensive Plan	...comply with the Town's 2003 Comprehensive Master Plan.	<ul style="list-style-type: none"> <li>a. All alternatives comply with comprehensive plan equally.</li> </ul>

**Table 5-2: Treatment and Disposal Alternatives Screening Results**

			Alternative 2	Alternative 3	Alternative 4	Alternative 5	Alternative 6	Alternative 7
TREATMENT OPTION (AND DISCHARGE OPTION)			Connect to Westbrook	New Windham WWTP	New Windham WWTP	New Windham WWTP	New Windham WWTP	New Windham Clustered Systems
CRITERIA	WEIGHTED PRIORITY (3)	WEIGHTED PERCENTAGE	Lower Presumpscot	Lower Presumpscot	Upper Presumpscot River	Groundwater Discharge, Above Ground	Groundwater Discharge, Below Ground	Groundwater Discharge, Below Ground
Provide groundwater protection for Nitrogen	Threshold	Threshold	YES	YES	YES	YES	YES	YES
Capital cost (2)	18	28%	1 (-15%)	4 (1%)	2 (-10%)	4 (2%)	4 (2%)	5 (21%)
O&M cost	13	20%	1	3	3	4	3	5
Permitting	3	5%	1	2	5	3	2	4
Funding	9	14%	1	1	5	1	1	1
PWD acceptance	2	3%	1	3	3	3	3	5
Town/Public acceptance	9	14%	1	3	5	4	2	5
Flexibility/ expandability	5	8%	3	2	5	2	2	1
Regional capabilities	0	0%						
Odor, dust, noise, traffic	3	5%	1	3	3	4	3	5
Land removed from other uses	1	2%	1	3	3	5	3	3
Compliance with comprehensive plan	1	2%	1	1	1	1	1	1
<b>Weighted Totals:</b>	64	100%	74	182	224	212	173	255
<b>Alternative Rank</b>			<b>1</b>	<b>3</b>	<b>5</b>	<b>4</b>	<b>2</b>	<b>6</b>

(1) Ranking where score 1 BEST meets Criteria, 5 LEAST meets Criteria.

(2) Cost relative to average project cost.

(3) Weighted priority represents the number of "votes" cast for each criterion; votes were cast by members of Public, Council, and Town staff.

## 6. SCHEMATIC DESIGN

Based on the endorsement by the Town Council on May 11, 2010, we initiated schematic design of Alternative 2- Westbrook-Gorham Regional Water Pollution Control Facility Connection. By Charter, the Portland Water District is responsible for the interception and treatment of wastewater from municipal collection systems; PWD owns and operates the WGRWPCF and is thus an integral part of the schematic design process. A copy of the Charter, AN ACT to Codify the Charter of the Portland Water District (Ch. 84, P. & S. L. 1975) is attached to this Plan as a reference, in Appendix E. Schematic design is the first engineering step in completing the design of a project and provides a general overview of the components and scale of the project. The schematic design is used for budgeting the project at the planning level with the understanding that preliminary and final design will refine the budget. The schematic design of the recommended alternative includes collection and transport of the wastewater from the Study Area to the treatment plant, consideration for upgrades at the treatment plant and discharge to the outfall in the Presumpscot River.

### 6.1 COLLECTION AND TRANSPORT TO TREATMENT PLANT

The Town's wastewater collection system will consist of a network of gravity collector sewers, pump stations, and force mains that collect wastewater. Consistent with its Charter, PWD would subsequently intercept and transport the wastewater from the collection system through Westbrook to the treatment facility through large diameter interceptor sewers, pump stations and force mains. For the purpose of this Plan, we have assumed the collection system would be installed within existing Town rights-of-way or on private ways with permission from landowners.

On May 19, 2010, we met with City of Westbrook personnel to review the results of the Screening Process and discuss the need for Windham (and PWD) to transport wastewater through the City of Westbrook to WGRWPCF. Several routes were discussed and ultimately the Town and City agreed that interceptor sewers within the Route 302 corridor would provide the best benefit to each community; Westbrook has shown interest in sewerage a section of Route 302 from Willow Drive to Pride's Corner, and in 2003 commissioned a study to evaluate sewers in the area. At the meeting, there was some discussion relating to a mutually beneficial cost-sharing arrangement which should be explored during subsequent phases of implementation of this project.

The system is laid out using USGS Topographic Maps to utilize the natural topography of the land as much as possible. We have analyzed the Study Area to identify the approximate, but preliminary locations of collector sewers, pump stations, and force mains required under all phases. We anticipate PWD's interception of the wastewater will take place at the pump station proposed near the Route 202 / 302 rotary. The PWD transport system will convey wastewater to their East Bridge Street Pump Station, and on to the WGRWPCF.

While not specifically included in this schematic layout, we understand the desire of the Town Council for the system to consider allowing for septage receiving stations; this would provide non-connected Windham residents to pump their septic tanks furthering the goals of ensuring public health, and resource and environmental protection. Consideration for septage receiving should continue to be discussed during the next phase of implementation of this project.

On July 1, 2010 we met with PWD staff to provide an update on the project and discuss the connection to the East Bridge Pump Station and ultimately the WGRWPCF. PWD staff informed the team that there is currently no additional/available pumping capacity at the East Bridge Pump Station, however upgrading the pump station was "possible". PWD also informed us that the existing force main from the Pump Station has capacity, and existing infrastructure is in "good" condition.

This schematic of the wastewater collection and transport system is depicted in Appendix F, and provides the basis for estimating the cost of the collection system, as well as the cost of transport/interception. During the preliminary design of the collection and transport system, detailed survey will be necessary to advance the design and refine the cost estimate.

## 6.2 WASTEWATER TREATMENT

In seeking to evaluate options for wastewater treatment, we looked at the WGRWPCF permit/license and the level of treatment that may be required as a result of this project, and specifically at nitrogen and phosphorus limits as potential license limited criteria. The WGRWPCF's Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0100846 / Maine Waste Discharge License (WDL) #W001510-5L-D-R Final Permit/License dated December 22, 2006 authorizes PWD to discharge secondary treated waste water to the Presumpscot River with established effluent characteristics and discharge limitations. The WGRWPCF has a monthly average daily flow limit of 4.54 million gallons per day.

In order to identify options for upgrading the WGRWPCF, we analyzed the previous two years of flow and load data obtained from PWD for WGRWPCF. The flow and load estimate associated with the phased construction and the resulting impact on the flow at the WGRWPCF is summarized in Table 6-1. The projected flow and load is cumulative by Phase; for example, flow for Phase 2 includes Phase 1, and Future Build-out includes flow from Phases 1 and 2.

As you will see in Table 6-1, we observed that the WGRWPCF is currently processing an average daily flow of 3.7 million gallons per day (MGD), a maximum monthly average flow of 6.0 MGD, maximum daily flow of 14.2 MGD and a peak hourly flow of 15.9 MGD. The maximum daily and peak hourly flows are indicative of wet weather occurrences within the system.

With respect to the average daily flow at the WGRWPCF, we understand the Town of Gorham has an additional flow allocation of approximately 0.7 MGD that is not being treated at the plant. We recommend the Town explore with the PWD and the Town of Gorham the possibility of securing or reallocation of this capacity.

**Table 6-1: WGRWPCF Projected Increase in Flow and Load**

	Windham Projected Flow/Load			WGRWPCF Current Flow/Load	Projected Combined Flow/Load to WGRWPCF			Increase at WGRWPCF		
	Phase 1	Phase 2	Future Buildout		Phase 1	Phase 2	Future Buildout	Phase 1	Phase 2	Future Buildout
Average Daily Flow (MGD) [1]	0.74	1.7	2.6	3.7	4.5	5.4	6.3	20%	44%	68%
Maximum Monthly Flow (MGD)	0.89	2.0	3.1	6.0	6.9	8.0	9.1	15%	33%	51%
Maximum Daily Flow (MGD)	1.8	3.3	5	14.2	16.0	17.5	19.1	13%	23%	34%
Peak Hourly Flow (MGD)	3.0	5	8	15.9	18.9	21.2	23.8	19%	33%	50%
Average Daily BOD (lbs/day)	1,680	3,445	5,088	5,475	7,155	8,920	10,563	31%	63%	93%
Max Monthly BOD (lbs/day)	1,915	3,928	5,800	9,764	11,680	13,692	15,564	20%	40%	59%
Average Daily TSS (lbs/day)	1,970	4,039	5,965	6,712	8,682	10,752	12,677	29%	60%	89%
Max Monthly TSS (lbs/day)	2,561	5,251	7,754	13,711	16,272	18,962	21,465	19%	38%	57%
Average Daily N (lbs/day)	394	808	1,193							
Max Monthly N (lbs/day)	449	921	1,360							

[1] Current permitted capacity and committed average daily flow is 4.54 MGD. See Section 6.2 of this Plan for additional detail.

From the Sacarappa Falls to tidewater, the Presumpscot River is Class C; the outfall for the WGRWPCF is within this stretch of the river. Maine has had a water classification system since the 1950's; the system establishes water quality goals for the State. The classification system is used to direct the State in the management of its surface waters, protect the quality of those waters for their intended management purposes, and where standards are not achieved, direct the State to enhance the quality to achieve those purposes. The classification standards establish designated uses, related characteristics of those uses, and criteria necessary to protect the uses, and establish specific conditions for certain activities such as the discharge of wastewater. With the removal of the Smelt Hill Dam at the head of tide on the Presumpscot, there are no impounded sections downriver of the outfall. We don't anticipate the river being upgraded in the foreseeable future, however, phosphorus or nitrogen removal could likely be required if the river class of this section were ever upgraded.

The reclassification of waters of the State is governed by 38 MRSA Sections 464(2), 464(2-A) and 464(3). The statute requires the DEP to conduct water quality studies, and the Board of Environmental Protection to hold hearings and propose changes to the water classification system to the Legislature for final approval. This is to be conducted from time to time. The last reclassification resulted in changes enacted in 2009. Windham should monitor the status of DEP and legislative activities, if any, on reclassification efforts.

We similarly sought to understand from the DEP what potential or future effluent limitations could be anticipated for the WGRWPCF; the current permit/license for the WGRWPCF has an allowable pollutant load in pounds per day that the Presumpscot River can assimilate without impacting water quality. The DEP was unable to provide significant guidance on limitations, however we have assumed the DEP would not allow "backsliding" of effluent permit limits. This means the effluent BOD and TSS mass limits (pounds per day) would remain the same under a new permit, even with increases in flow discharged to the river. In order to accommodate this, we assumed while the wastewater flow from Windham would cause an increase in flow, effluent BOD and TSS concentration limits would need to decrease (higher treatment levels) in order to maintain constant effluent mass limits. This is a conservative assumption and we suggest revisiting this as engineering advances.

On June 4, 2010 we made a site visit to the WGRWPCF to observe the existing infrastructure and gather operating data for the plant. We also obtained from PWD and reviewed the February 1979 Record Drawings for the facility. Once the wastewater enters the WGRWPCF, it needs to be treated to license requirements before being discharged to the Presumpscot River. To determine if the WGRWPCF has adequate capacity to treat the flow, we have evaluated the plant for flow and load from Windham.

As a result of our work, we have determined that the WGRWPCF will require upgrades to accommodate the flow and load associated with this project. To assess the impact of this project on the facility, we initially identified four (4) options (independent of one another) for upgrading the WGRWPCF, including the following:

- |                                    |  |
|------------------------------------|--|
| 1 – Upgrade to Existing Aeration   | 3 – Install New Aeration Basin   |
| 2 – Install New Primary Clarifiers | 4 – Install New Secondary Clarifier & Upgrade Existing Aeration System |

On July 1, 2010 we met with PWD staff to review these options and solicit feedback on construction or operational concerns. These options are based upon our best understanding of the facility and professional judgment, and are recommendations for upgrades to meet Windham's flows and loads; we anticipate the need and Windham should plan to work collaboratively with PWD during the next phases of implementation on upgrades to the facility.

Subsequent to our July 1 meeting with PWD and as a result of the size (flow) from the Phase 1 area, Option 1 Upgrade to Existing Aeration was removed from the list as a possible treatment plant upgrade solution; however, it remains as a component of other options.

The options we identified are described here, with the advantages and disadvantages of each summarized in Table 6-2 at the end of this section. The options are intended to be logical step-wise improvements to the existing facility relative to the type and size of existing components. As a result, some of these options provide capacity somewhat greater than specifically required for the flow and load from the related phase of sewer development.

### **6.2.1 Phases 1 and Phase 2 Upgrade**

We analyzed the flow and load of the WGRWPCF and the existing site layout to identify several options for upgrading the WGRWPCF to increase treatment capacity for Windham flow and load. The following options would increase treatment capacity for Phase 1 only. Any combination of two of the following options would provide capacity through Phase 2.

#### *Option 2 - Install New Primary Clarifiers.*

This option includes installing new primary clarifiers in the area identified for future headworks upgrades. PWD is not currently using the grit removal system and screening is currently done at the pump stations. With this option, all flow would be redirected to new primary clarifiers. The primary clarifiers would remove significant BOD load prior to secondary treatment. Additional modifications to sludge handling/dewatering may also be required but have not been included in this option. In addition, this alternative may provide wet-weather blending treatment alternatives that do not currently exist at the facility; there are facilities in Maine are 'blending' wastewater during high flow events (for example Bangor, Augusta, Saco, & PWD's East End Facility) and this is an option that could be explored with the PWD and the DEP as a possible benefit to the WGRWPCF.

Option 3 - Install New Aeration Basin.

This option includes constructing a new aeration basin adjacent to, but independent of the existing aeration basins. This option also includes new mechanical aerators and dissolved oxygen probes for the existing and new tanks to improve oxygen transfer and the ability to monitor dissolved oxygen and adjust treatment accordingly.

Option 4 - Install New Secondary Clarifier and Upgrade Existing Aeration System.

This option includes constructing one new secondary clarifier of similar size to the existing units, as well as removing the existing mechanical aerators and replacing them with new, more efficient aerators to increase the amount of oxygen transferred into the mixed liquor to provide treatment of the additional loading from Windham. The location of the new clarifier was assumed to be located to the south of the existing clarifiers. An allowance was included to purchase additional land.

**6.2.2 Future Build-out Upgrade**

We anticipate that some combination of Options 2 through 4 will be required to provide capacity for Windham through the future build-out scenarios of flow and load identified herein. At this stage, it is difficult to identify the appropriate approach to accommodate future build-out; improvements and upgrades made to accommodate Phase 1 and Phase 2 will provide value to future upgrades. We suggest re-evaluation of the options as build-out of the system continues.

**Table 6-2: WGRWPCF Upgrade Options Summary**

Option	Phase	Advantage	Disadvantage
Construct New Primary Clarifiers	Phases 1 & 2	<ul style="list-style-type: none"> <li>Will improve overall operational flexibility</li> <li>Will allow for future blending of peak flow to accommodate storm events without compromising biological treatment system (pending permit changes)</li> <li>Primary sludge likely will improve dewatering performance</li> <li>Will capture grit upstream of aeration tanks</li> </ul>	<ul style="list-style-type: none"> <li>Need to consider site constraints - may require additional land acquisition</li> <li>Need to consider additional head loss and effect on upstream pump station capacity</li> <li>Will increase potential for odor generation</li> <li>May require modification to sludge processing system (costs not included)</li> <li>May require upgrade of aeration system in existing tanks</li> </ul>
Construct New Aeration Basin	Phases 1 & 2	<ul style="list-style-type: none"> <li>Easily fits within existing WWTP site</li> <li>Will add flexibility for aeration tank maintenance</li> </ul>	<ul style="list-style-type: none"> <li>Does not substantially improve hydraulic capacity of system</li> <li>May also require upgrade of aeration system in existing tanks</li> </ul>
Construct New Secondary Clarifier and Upgrade Existing Aeration Equipment	Phases 1 & 2	<ul style="list-style-type: none"> <li>Will improve hydraulic capacity of secondary system</li> </ul>	<ul style="list-style-type: none"> <li>May require additional land acquisition</li> <li>Will require upgrade of existing aeration system</li> </ul>

## 7. COST ESTIMATE

For planning purposes, we have developed this conceptual capital cost estimate for the schematic design of the project. The estimate is relative to current construction values at the time this report was written. The prices for major equipment and work in these estimates were based on similar projects and recent project bid tabulations. Where necessary, we escalated prices using the Engineering News Record historical cost index. Ancillary items were estimated based on past experience or factors recommended by the Association for Advancement of Cost Engineering International (AACE). Mechanical and equipment installation construction cost estimates were completed using a factored cost estimate approach (Basic Cost Estimating, 3rd Ed. by Humphreys and Wellman, 1996). The cost estimate includes a construction contingency, which is a real cost of items that will be necessary to the project, but which were not specifically identified due to lack of detail in the conceptual or schematic design. The cost estimates may not reflect all cost components associated with the development of the schematic design; this should be used for planning purposes only and updated during the design process. The estimates are considered accurate from minus 30 percent to plus 50 percent (-30% to + 50%), as recommended by AACE.

The cost estimate for sewerage the Phase 1 study areas is described in Table 7-1. This cost estimate includes new collection system and interception/transport to the WGRWPCF, and upgrades at the WGRWPCF. The collection system and interception components of this estimate are broken into greater detail in Appendix G.

**Table 7-1: Capital Cost Estimate**

Item	Subtotal Construction
Collection System	\$37,600,000
Transport to WGRWPCF	\$6,200,000
WGRWPCF Upgrade	\$4,600,000
SUBTOTAL	\$48,400,000
Construction Contingency (20%)	\$9,700,000
Design Engineering, Permitting, and Construction Engineering (20%)	\$9,700,000
TOTAL	\$67,800,000

This estimate is considered accurate from -30% to + 50%, as recommended by AACE

In support of these estimates and specifically relating to the "Transport to WGRWPCF" line item, it is worth noting that we have included costs for upgrading the East Bridge Street Pump Station with an additional pump and appurtenances needed to increase capacity. We have also assumed a new interceptor would be constructed to convey wastewater directly to the existing Westbrook collection system.

Similar to the Capital Cost Estimate, we have estimated the annual operations and maintenance (O&M) costs associated with this project. O&M costs are broken into two categories for this project; (1) collection and transport to the East Bridge Street Pump Station and (2) transport from East Bridge Street Pump Station and treatment at the WGRWPCF. Collection and transport O&M costs are based upon current O&M costs for similar sized communities with similar length collection system piping and number of pump stations. Transport and treatment costs associated with the East Bridge Street Pump Station and WGRWPCF were estimated based on the PWD Comprehensive Annual Budget Report FY 2010 Wastewater Operation Financial Summary of the WGRWPCF, for the Westbrook facility. Applicable pages of the PWD Annual Budget Report are attached in Appendix G for reference. For simplicity, we assumed current PWD budget costs would be similar for Windham in the future, and scalable on a flow basis

(cost per gallon). We have also assumed that Windham would not be allocated costs associated with any remaining or existing debt service for any infrastructure. The annual O&M costs are summarized in Table 7-2.

**Table 7-2: Operations and Maintenance Cost Estimate**

Item	O&M Cost
Collection and Transport	\$ 260,000
Treatment	\$ 200,000
Total O&M	\$ 460,000

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## 8. ASSESSMENT OF ENVIRONMENTAL IMPACTS

We reviewed the schematic design of the recommended alternative with respect to impacts to the natural environment. This is intended to be a broad look at potential impacts requiring further evaluation and mitigation as the project moves forward.

### 8.1 AIR QUALITY

During construction, the production of some dust and transient/construction exhaust pollution will temporarily affect air quality. Dust control measures such as sweeping, watering and applying calcium chloride to the roads will be used to minimize this impact. Odor control at pump stations and interceptors will be evaluated during the design phase and provided as necessary to prevent any nuisance odors. When construction is complete, there should be no permanent air quality impact from the project.

### 8.2 WATER QUALITY

This project will reduce the input of nitrogen into the groundwater due to existing onsite septic systems. By adding a sewer collection system, the Town will be protecting their natural water resources.

The wastewater collected in the study area will be transported to the WGRWPCF for treatment prior to discharging treated effluent into the Presumpscot River. The additional flow from Windham will increase the hydraulic loading to the River; we assumed that all constituent mass loading to the River would remain at current levels. We do not anticipate any environmental effect due to additional hydraulic loading; however during preliminary engineering design the Presumpscot River model to determine if there will be a change in effluent permit limits due to the addition of flow from Windham.

Contamination of surface water and groundwater during the construction of the project is also a concern. Best Management Practices (BMPs) will be enforced throughout the construction of the project and include sedimentation and erosion control, and dewatering procedures to protect surface water from runoff. The construction of the project should not have any impact on groundwater quality.

### 8.3 HISTORICAL/ARCHAEOLOGICAL SITES AND NATIONAL LANDMARKS

The Maine Historic Preservation Commission (MHPC) was contacted as part of the 2003 planning effort to discuss the proposed project and potential impacts on areas of historical interest. The MHPC provided inventory data sheets for archeological sites (historic and prehistoric) and aboveground historic places and structures. This inventory data is inclusive of the expanded study area in this evaluation. A copy of this information is provided in Appendix H. A number of prehistoric archeological sites that have been identified for further study in the Windham area are located along the shores of Sebago Lake, Little Sebago Lake, and the Pleasant and Presumpscot Rivers. The maps provided by the MHPC highlight areas of "high archeological resource potential" for prehistoric sites in Windham. Specifically, Map 3 in the packet indicates that areas surrounding Freeman Hill (including north of Pettingill Pond) have been identified as high-resource potential areas. The MHPC should be contacted during the preliminary engineering phase of this project to identify the exact locations of any archeological sites and to perform a detailed review of any potential impacts on historic sites.

## **8.4 WETLANDS AND ENDANGERED SPECIES**

Pump stations and collection piping are located in areas of relative low elevation to accommodate gravity flow of the wastewater and often are adjacent to environmentally sensitive areas. Stream crossings are likely when sewerage an area as large as this. If the streams are crossed within the roadway, then culverts should protect the stream during construction, however this may not always be viable. During project design the facilities will be sited to avoid any environmentally sensitive areas, such as wetlands or endangered species habitat, to the maximum extent possible. Detailed review of the proposed area by various organizations (such as the Department of Inland Fisheries & Wildlife and the Natural Areas Program) should be completed during the preliminary engineering phase. The Maine Natural Areas Program provided a list of rare or exemplary botanical features documented in the Town; these species were all located within shores of water bodies and should not be directly impacted by this project.

## **8.5 FLOOD PLAINS**

During project design, flood plain areas will need to be identified. The system will be designed to avoid areas that would be susceptible to flooding the collection system. Also, during construction altering or disturbing these flood plains will be avoided as much as possible. No flood mitigation is anticipated.

## **8.6 NOISE**

During the construction phase, there will be temporary unavoidable noises that result from equipment and machinery. The Town may choose to limit the hours of construction to keep the noise from becoming a nuisance to the residents of the town.

## **8.7 ENVIRONMENTAL IMPACT DOCUMENT**

There are three basic environmental determinations that apply to projects proposed to be implemented with assistance from the DEP or SRF program that require an environmental review:

1. a determination to categorically exclude a project from environmental review
2. a finding of no significant impact based upon a formal Environmental Information Document (EID)
3. A determination to provide or not to provide Financial Assistance based upon a record of decision following the preparation of an environmental impact statement (EIS).

The appropriate determination will be based on the criteria identified in the SRF program handbook (June 2010).

We anticipate that this project will not qualify for a categorical exclusion; an EID will likely be required to be prepared for this project if SRF assistance is desired. If necessary, an EID will be prepared in accordance with the DEP and the funding sources. This will provide detailed information about the effects that this project will have on the environment.

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## **9. UTILITY COORDINATION**

We have contacted the utilities which we anticipate have infrastructure in the study area and determined that close collaboration will be necessary with several utilities. This collaboration is necessary during the preliminary engineering and design processes in order to minimize conflict and relocation of existing utilities.

### **9.1 MAINE DEPARTMENT OF TRANSPORTATION**

Maine Department of Transportation has many state aid roads within the study area. Consequently it will be necessary to attain utility location and road open permits for all necessary construction within state aid roads, and coordinate closely with the Department's plans for reconstruction and paving program implementation.

### **9.2 CENTRAL MAINE POWER**

Central Maine Power (CMP) was contacted to discuss the project and identify any major facilities located in the area. CMP does not report any major underground structures in the study area; the area is serviced primarily by overhead utilities hung on CMP utility poles.

### **9.3 TIME WARNER CABLE**

Time Warner Cable was contacted to discuss this project and they indicated that there are cable utilities in the area but did not indicate where. We anticipate overhead and underground fiber optic and telecommunications cabling exists within the study area.

### **9.4 MAINE GAS**

Maine Gas was contacted to discuss this project. Maine Gas is the natural gas provider for this area and has underground utilities in the project area.

### **9.5 TELEPHONE**

Fairpoint Communications is the telephone utility service provider for the Windham area. When contacted, they indicated that Dig Safe should be able to identify all underground utilities. We anticipate overhead and underground fiber optic and telecommunications cabling exists within the study area.

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## 10. PERMITTING

While not inclusive of all permits that will be required to complete the project, the various permits that must be considered for this project are:

- DEP Stormwater Management Law Permit will likely be necessary because the project is within the direct watershed of environmentally sensitive water bodies and the project will likely include 20,000 square-feet of impervious area or 5 acres or more of disturbed area. The impact of this Law is that the DEP will require that the project have erosion control and stormwater treatment measures.
- DEP Natural Resources Protection Act Permit may be necessary for alterations in wetlands.
- Department of Transportation (MDOT) Utility Location Permit will be necessary for installing new facilities (utilities) along a public highway corridor.
- MDOT Highway Opening or Excavation Permit for work in a state or state-aid road.
- Site plan review by the Windham Planning Board in accordance with Land Use Ordinance, Chapter 140.
- Update to the WGRWPCF MEPDES/MaineWDL permit/license.

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## 11. PROJECT FINANCING

### 11.1 SOURCES OF FUNDING

There are a number of alternatives available to pay for the development of the proposed wastewater system. The alternatives fall into three different categories: user based, infrastructure/economic development, and general fund based. Generally, a combination of these categories is used to fund projects such as Windham's.

User based revenue is generated from the use of the sewer system through user fees. User fees are generated from both residential and commercial users. Infrastructure/economic based revenue are generated by grants and low interest loans obtained from the federal or state government agencies that can be used to reduce the debt load associated with the capital requirements of the project. General fund revenue is taxation based, given the universal public benefit and economic and community development components of a wastewater utility.

#### 11.1.1 User Based Revenues

Revenues generated from the use of the sewer systems are the sole means of paying for operation and maintenance of the system, a depreciation account to help pay for repairs and infrastructure replacement once its service life is reached, and debt service incurred to construct the system. Funding agencies try to provide funding such that user fees do not exceed 2-percent of the median household income (MHI) when structuring the funding package for a project.

Based on the 2000 census, the MHI for Windham is approximately \$46,526. Using 2-percent maximum as the basis, the user fee for the wastewater system would be approximately \$931 per year for the average residential user, for each system, before grant monies would be made available. The money these user fees generate depends on the actual number of active system users.

It is important to note that the MHI listed for Windham is for the entire community and may not be indicative of financial status of residents within the proposed project area. A project area specific income survey can be performed to better define the MHI of those within the project area, which may increase or decrease the amount of funding provided by outside sources.

Basing user fees on equivalent users for wastewater ensures that each user pays for the wastewater they generate; businesses that generate more wastewater will pay more in user fees than a household that generates less. This creates a more equitable fee structure. Given that public water may not be available through all parts of the Study Area and therefore water meter readings are not universally available, other means of estimating wastewater usage will be required.

##### 11.1.1.1 Betterments

There are several methods that can be used recover the carrying costs on large municipal projects. Betterments represent one of the methods that a municipality can use. A betterment is a special property tax that is assessed to a property due to the benefit the property receives as a result of a construction project. Betterments are assessed upon the property in proportion to the amount of such benefit. A municipality may formally adopt an order which describes the area to be bettered by the construction project and states the betterments (or special assessment) that will be levied for the improvement(s). There are several methods for estimating betterments.

#### Frontage method (also called fixed uniform rate method)

Assessment costs are divided according to the amount of frontage and/or area the property has on the street or by the way in which the pipeline is constructed. This method assumes that larger properties will contribute more cost to the construction. In the frontage method, more pipeline in abutting the property is equated to a increase in the cost of construction to serve that property and subsequently a larger share of the overall project cost to better the property to the extent other properties are bettered.

#### Uniform unit method

Assessment costs are calculated by dividing the project cost by the total number of “residential units” abutting the project in this manner:

- Each sewer unit is equal to a single-family residence and is called an equivalent dwelling unit (EDU).
- Every property is assessed, including developable vacant parcels.
- A residential unit is defined as the quantity of wastewater flow expected from the unit. This may be based on average water meter data or on assumed flow based on a standard such as the OWTS regulations.
- For multiple-family residential properties, the number of residential units is determined based on a factor and/or multiplier such as the number of bedrooms, total number of rooms, or water use (For example, more than 3 rooms = 1 unit, less than 3 rooms = ½ unit).
- Non-residential properties are assessed based on existing zoning regulations and best use. Residential equivalency can be determined by floor space (4000 s.f. = 1 sewer unit) or total developable area, or by comparing water use to the residential water use basis. For undeveloped properties, determined by likely use, high wastewater demand businesses are considered best use (e.g. restaurants).

### **11.1.1.2 Tax Increment Financing**

Tax increment financing (TIF) is a mechanism used to help communities finance infrastructure improvement projects. A TIF permits a municipality to use some or all of the property taxes that result from an investment project within a designated district to assist in that project's expenses. The municipality may use the taxes to retire bonds issued to finance the project. Windham could potentially utilize the Pipeline TIF or other TIF for this purpose.

### **11.1.2 Infrastructure/Economic Development Revenues**

Grant programs are available from various state and federal agencies such as the Maine Department of Environmental Protection, the Department of Economic and Community Development (DECD), and often through Congressional earmarks for worthy projects. Each funding agency has their own unique requirements but they often collaborate to fund projects. Recent discussions Woodard & Curran has had with funding agencies indicates that Windham is a recognized priority in terms of need and would rank well on a comparative basis with other communities. This does not indicate funding is guaranteed, but it suggests an awareness of the issues and a commitment to eliminating problems currently experienced in Windham on behalf of the agencies.

#### **11.1.2.1 Maine Department of Environmental Protection**

The DEP also offers grant/loan packages for towns to improve their wastewater treatment systems. In addition, loan money is available through the Clean Water State Revolving Loan Fund (SRF) at 2-percent below the market interest rates for terms up to 20-years. Recent changes in the State Revolving Loan Fund program provide for principle forgiveness on up to 50% of the loan. The amount of principle forgiveness is based on specific economic criteria and environmental worthiness. This is a new program for DEP with the first recipients of principle forgiveness planned for late 2010 or early 2011. Grant eligibility is determined by comparing user rates to MHI. A town will be classified as disadvantaged, and therefore grant eligible if rates exceed a certain percentage of the MHI. Applications to the SRF program generally occur twice per year in April and October to coincide with the Maine Municipal Bond Bank (MMBB) schedule of bond sales. MMBB assists the DEP in the administration of the SRF program.

### **11.1.2.2 Department of Economic and Community Development**

Windham, as a community within Cumberland County has been identified since 2007 as an entitlement community and is not eligible to receive Community Development Block Grants (CDBG) funding as administered by the State of Maine Department of Economic and Community Development. Cumberland County however, is a direct recipient of CDBG program funds from the U.S. Department of Housing & Urban Development (HUD) and Windham is eligible for funding through the County. Funds are distributed through the Cumberland County Community Development Office and programs; there is an annual competition and selection process. Applications are generally distributed in November; pre-applications are due in mid-December; with final applications due in early February of each year. Grants are directed toward projects that will encourage or support employment opportunities for low to moderate income people and can therefore be used to benefit business that employ low to moderate income people.

### **11.1.2.3 U.S. EPA STAG**

U.S. EPA's State and Tribal Assistance Grant (STAG) grants are requested by Congress, i.e. Maine delegation, as an allocation to address a specific project within a State. STAG applications are available through the delegation's local offices.

### **11.1.3 General Fund Revenues**

Revenues generated from taxation are typically limited to funding the interceptor portion of the system. The intent would be to distribute the cost among the broader beneficiaries of the project, extending beyond the directly connected users.

## **11.2 FINANCIAL ANALYSIS**

In an effort to assess the potential user fees and other funding needs associated with the Phase 1 project, we have completed a simple financial analysis. This provides an early sense of the long term costs associated with the capital and O&M expenses associated with the project

### **11.2.1 Estimated Cost**

The total estimated cost for Phase 1 is \$67,800,000. This cost estimate includes a new collection system and interception/transport to the WGRWPCF, and upgrades at the WGRWPCF. Annual operations and maintenance (O&M) costs associated with this project and also included in the financial analysis. Annual O&M costs of \$260,000 for collection and transport and annual O&M costs of \$200,000 for treatment at the WGRWPCF.

### **11.2.2 Anticipated Debt Service**

Section 11.1 describes some of the various options that communities have utilized to finance large municipal projects. For the purpose of this financial plan, annual principal and interest payments were calculated with the assumption that Windham will finance the entire \$67,800,000 project at a 5% interest rate over 30 years. Debt terms between 20 and 30 years are fairly normal for financing wastewater projects of this kind. Debt terms, in excess of 20 years, are often used to reduce the burden on ratepayers. The Amortization Schedule for this project is included in Appendix K.

A market rate of 5% was assumed; over the past year W&C has seen municipal market rates range from of 2.2% to 5.8%. A municipal market rate is based upon a community's bond rating, or its ability to repay the debt. A rate of 5%

is used in this study to provide a conservative analysis. It is important to note that changes in interest rates and loan terms can profoundly alter the results (impacts) of a financial analysis.

### 11.2.3 Operations and Maintenance Costs

Annual operations and maintenance costs for collection, transport and treatment are also included in the financial analysis. Costs for each year (2014 through 2043) are escalated each year based on the US Army Corps of Engineers Civil Works Construction Cost Index Summary (Table A-2); this document is available upon request.

### 11.2.4 Revenue Requirements

Revenue requirements are determined by adding existing and anticipated debt service and operations and maintenance costs; Estimated Revenue Requirements are summarized in Table 11-1 in five (5) year increments. Excluding any existing debt service and based upon the financing assumptions made above, it is anticipated that Windham’s revenue requirements will increase from \$155,500 during the assumed three year construction phase of this projects to \$5,150,000 at the end of the 30 year term.

**Table 11-1: Estimated Revenue Requirements**

	Year 1	Year 5	Year 10	Year 15	Year 20	Year 25	Year 30
Estimated Debt Service	\$4,870,487	\$4,908,405	\$4,960,234	\$5,008,873	\$5,058,714	\$5,128,491	\$5,158,395

### 11.2.5 Estimated Annual User Revenues

#### 11.2.5.1 Wastewater Flow Revenue Structure

As an option for estimating annual user revenue for this Plan, the revenue can be determined by multiplying Windham’s current wastewater rate of \$48.84 per 5 HCF by the Phase 1 average daily flow. It is estimated, that the current rate structure could generate approximately \$3,527,188 in annual revenue. The Carrying Costs and Cash Flow spreadsheet included in Appendix K demonstrates that once long term debt service payments are due, the Town will still need to generate between \$1,300,000 to \$1,500,000 in additional annual revenue, or a total of approximately \$33M over the life of the project.

#### 11.2.5.2 Equivalent Dwelling Unit Rate Structure

Another alternative to the wastewater flow revenue structure, the Town could utilize an Equivalent Dwelling Unit (EDU) basis. The EDU rate structure assigns an EDU to each developed or developable property in the project area; each EDU is the equivalent to one single family residence. In order to determine residential equivalency for commercial/non-residential property, total daily volume is divided by the number of residential users. Using the EDU structure described above, Phase 1 includes 5,041 EDUs and as depicted in Table 11-2.

**Table 11-2: Calculation of Equivalent Dwelling Units**

a.	Residential Flow	189,107	Gpd
b.	Number of Residential Users	1,286	(farm/farm residential/light density residential/medium density residential)
c.	Other Flows	552,199	Gpd
d.	Number of Other Users	419	Commercial/Enterprise District
e.	Flow per residential user (a/b)	147	Gpd
f.	Flow per other users (c/d)	1,318	Gpd
g.	Total EDUs (a+c)/e	5,041	

1. From USDA/RD's PER Guide for MA, RI & CT - Calculation of Equivalent Dwelling Units

2. One parcel is equivalent to 1 EDU for Farm, Farm Residential, Light Density Residential and Medium Density Residential zones. This results in an equivalent flow of 147 gpd per EDU. For estimating user revenue, the EDUs of the Commercial and Enterprise District zones were estimated by dividing the flow from these zones by the equivalent residential flow per EDU.

It is estimated, that the EDU rate structure could generate approximately \$4,690,904 in annual revenue. The Carrying Costs and Cash Flow spreadsheet included in Appendix K demonstrates that once long term debt service payments are due, the Town will still need to generate between \$165,000 to \$315,000 in additional annual revenue, or a total of approximately \$6M over the life of the project.

### 11.2.6 Cost Recovery Options

In support of the user funds generated, and in addition to exhausting grant funding sources identified within this Plan, one method of cost recovery for consideration is through the assessment of betterments. Betterments are usually assessed one year after construction is completed to each EDU that has been "bettered" by the project. Betterments may be paid in full by each EDU or may be apportioned for up to 20 years. Interest rates for apportioned betterments are typically 5%, but may vary if optional rates have been established by the Town.

As an example, betterment calculations are included in a table in Appendix K. The betterment is calculated by dividing the total number of EDUs (5,041) by the project costs. Based on the method describe above, each EDU could potentially be assessed a betterment of \$13,449. This revenue source can help offset the revenue shortfall from the Phase 1 project and will only impact those receiving the full benefit of the project.

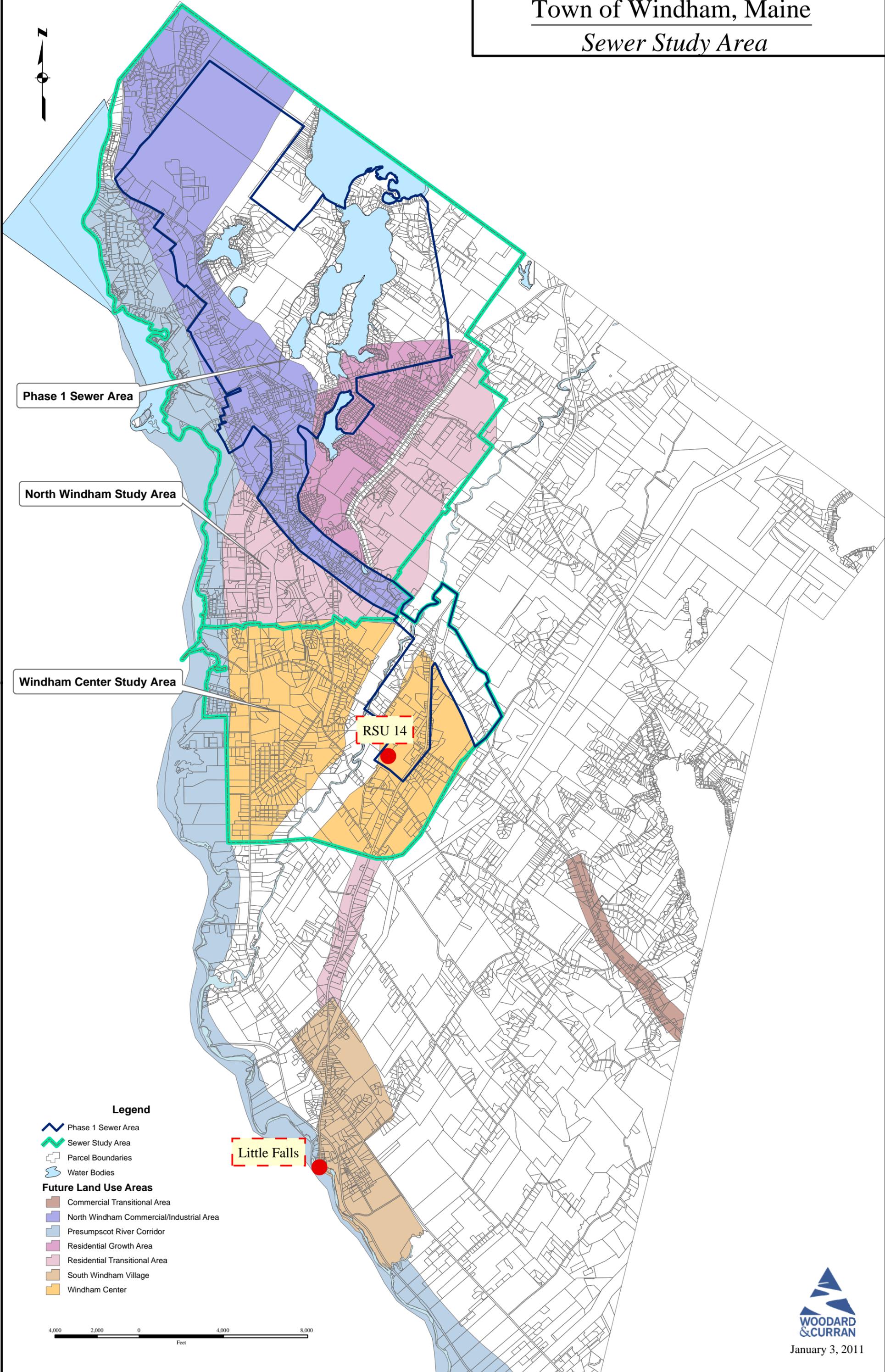
### 11.2.7 Comparison Sewer Rates

As comparison data, we refer to the 2008 Sewer Rate Survey prepared by the Maine Rural Water Association (attached as Appendix I to this Plan). This Survey collected sewer rates for residential customers in more than 125 facilities operated by utility and sanitary districts, and municipalities throughout the State. These facilities were large and small and served as few as 39 residential customers and as many as 17,000. There are also several that provide wastewater services with costs for capital and operating expenses paid by tax revenue and not by user fees. Of those utilizing user fees, the lowest annual residential user cost was roughly \$129 at the Waterville Sewer District and the highest was \$1,352 at the Castine Sewer Department. It is worth noting, \$931, or 2% of Windham MHI described within the Sources of Funding section of this report, would be the second highest reported in the State, below Castine and above North Haven at \$823 per year.

## **APPENDIX A: SEWER STUDY AREA MAP**

# Town of Windham, Maine

## Sewer Study Area



Phase 1 Sewer Area

North Windham Study Area

Windham Center Study Area

RSU 14

Little Falls

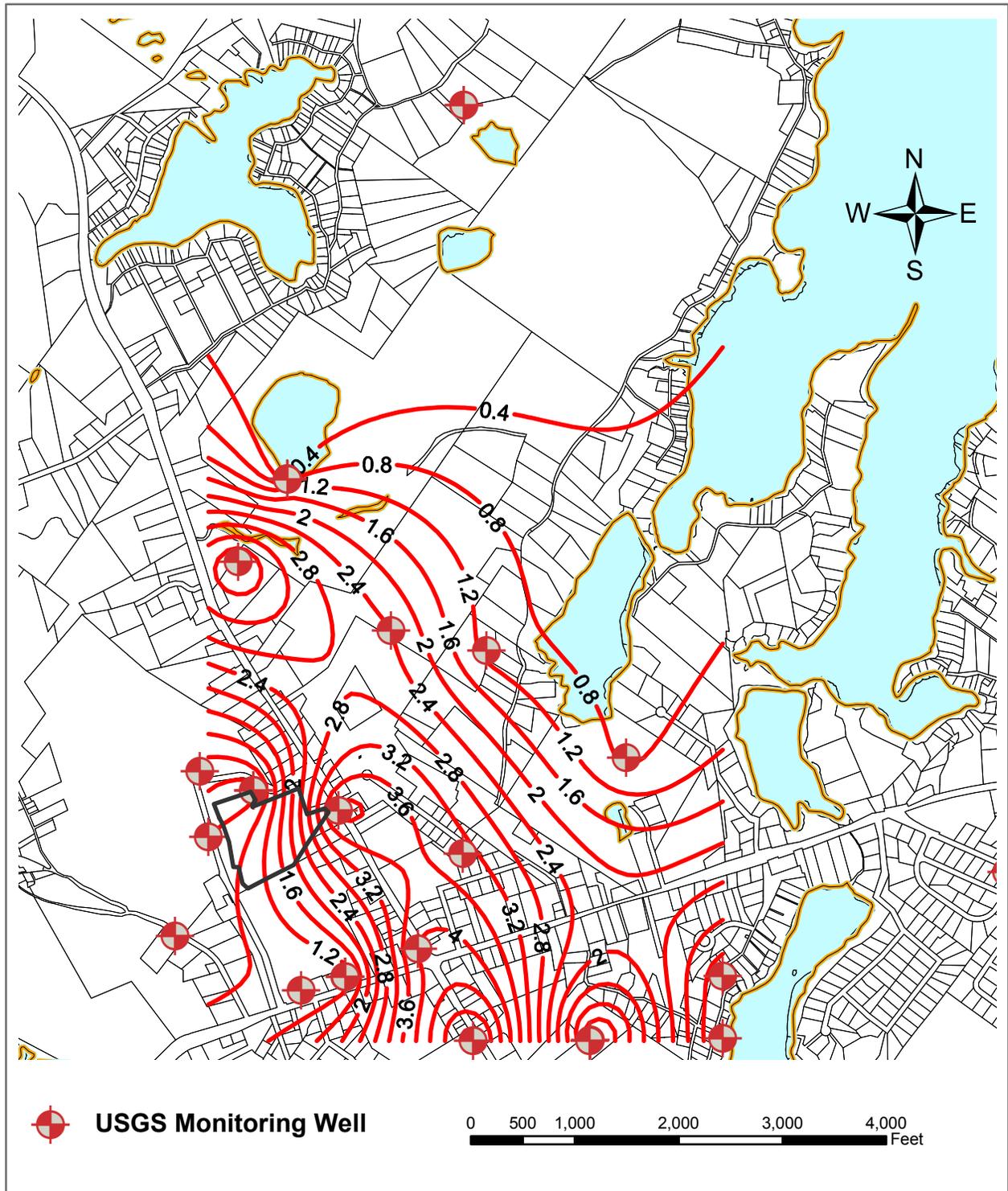
### Legend

- Phase 1 Sewer Area
- Sewer Study Area
- Parcel Boundaries
- Water Bodies
- Future Land Use Areas**
  - Commercial Transitional Area
  - North Windham Commercial/Industrial Area
  - Presumpscot River Corridor
  - Residential Growth Area
  - Residential Transitional Area
  - South Windham Village
  - Windham Center



January 3, 2011

**APPENDIX B: 2009 NITRATE-NITROGEN CONCENTRATIONS IN  
GROUNDWATER MAP**



**Nitrate-nitrogen Concentrations in Groundwater**  
**North Windham Area**  
 Concentrations are in mg/L with 0.4 mg/L contour interval  
 Data collected by USGS Aug-Sept 2007  
 RGG 09106 4-10-09

## APPENDIX C: FLOW AND LOAD ANALYSIS



**COMMITMENT & INTEGRITY  
DRIVE RESULTS**

41 HUTCHINS DRIVE  
PORTLAND, MAINE 04102  
TEL.(207)774-2112

CLIENT Windham  
PROJECT Sewer Study Amendment  
DESIGNED BY KMC DATE 6/30/10  
CHECKED BY DH DATE 6/30/10  
PROJECT NO. 203363.04

Purpose: Estimate flow from future sewered area using Land Use and Population Equivalent forecasts.

Assumptions:

References:

1. The Land Use / Employee forecast method is presented in Gravity Sanitary Sewer Design and Construction Manual of Practice No. FD-5, Water Environment Federation, p41.
2. Maine Subsurface Waste Water Disposal Rules, table 501.2.
3. TR-16
4. Metcalf & Eddy
5. Town of Windham Comprehensive Master Plan, 2003.
6. United States Census Bureau 2000

Step 1. Obtain areas of zones from GIS mapping.

Zone	Total Area Phase 1 & 2 (acres) by Study Area				Future Buildout Area (ac)
	North Windham	Center Windham	Phase 1 Area (ac)	Phase 2 Area (ac)	
Commercial-1	908	0	782	908	908
Commercial-2	217	0	78	217	217
Commercial-3	60	309	276	369	369
Enterprise District	770	0	737	770	770
Industrial	0	0	0	0	0
Farm (F)	2,005	737	822	2,742	2,742
Farm-Residential (FR)	1,779	1,852	808	3,631	3,631
Light Density Residential (RL)	699	0	10	699	699
Medium Density Residential (RM)	1,465	0	524	1,465	1,465
<b>Total:</b>	<b>7,903</b>	<b>2,898</b>	<b>4,036</b>	<b>10,801</b>	<b>10,801</b>

Step 2. Determine Phase 1, 2, & 3 changes in use.

Phase 1 description: use current known development of area outlined in GIS map using comp plan

Phase 2 description: use current known development of area outlined in GIS map using comp plan

Phase 3 description: use maximum possible development of areas in phases 1 and 2 outlined in GIS map and using comp plan

Zone	Total Area from Comp Plan (ac)	Undeveloped Area from Comp Plan (ac) [Ref. 5]	Potential Developable Area from Comp Plan (ac) [Ref. 5]	% Developed Area (calculated)	
				Phases 1 & 2	Future Buildout
Commercial-1	889	122	92	86%	97%
Commercial-2	519	23	17	96%	99%
Commercial-3	758	229	172	70%	92%
Enterprise District*	750	675	563	10%	85%
Industrial	575	298	224	48%	87%
Farm (F)	18,224	6,279	4,709	66%	91%
Farm-Residential (FR)	4,778	1,167	875	76%	94%
Light Density Residential (RL)	1,704	266	200	84%	96%
Medium Density Residential (RM)	615	310	233	50%	87%
Total:	28,812	9,369	7,085		

\*assumed approximately 10% of ED has been developed since comp plan written

Step 3. Land Use by Category Flow Forecast

Note: typical unit flow for commercial zones is 400 to 600 gal/ac-day based on Woodard & Curran historical data for similar communities and is based on actual water usage.

Phase 1 Flow Calculation				
Zone	Area (ac)	Typical Unit Flow (gal/ac-day) [Ref. 4]	Percent Area Developed at Planning Phase	Wastewater Flow (gpd)
Commercial-1	782	500	86%	337,521
Commercial-2	78	500	96%	37,057
Commercial-3	276	500	70%	96,336
Enterprise District	737	500	10%	36,828
Industrial	0	1,000	48%	0
Total:	1,873			507,743

Phase 2 Flow Calculation				
Zone	Area (ac)	Typical Unit Flow (gal/ac-day) [Ref. 4]	Percent Area Developed at Planning Phase	Wastewater Flow (gpd)
Commercial-1	908	500	86%	391,696
Commercial-2	217	500	96%	103,692
Commercial-3	369	500	70%	128,761
Enterprise District	770	500	10%	38,500
Industrial	0	1,000	48%	0
Total:	2,264			662,649

Future Buildout Flow Calculation				
Zone	Area (ac)	Typical Unit Flow (gal/ac-day) [Ref. 4]	Percent Area Developed at Planning Phase	Wastewater Flow (gpd)
Commercial-1	908	500	97%	438,679
Commercial-2	217	500	99%	107,246
Commercial-3	369	500	92%	170,626
Enterprise District	770	500	85%	327,507
Industrial	0	1,000	87%	0
Total:	2,264			1,044,058

Step 4. Population and Equivalent Dwelling Unit (EDU) Flow Forecast

Zone	Current Average Lot Size per Comp Plan (sf) [Ref. 5]	Use	Equivalent Dwelling Units per Lot	EDU/ac
Farm (F)	113,256	single family	1	0.4
Farm-Residential (FR)	56,628	single family	1	0.8
Light Density Residential (RL)	47,916	single family	1	0.9
Medium Density Residential (RM)	34,412	single family	1	1.3

Phase 1 Flow Calculation								
Zone	Use	Area (ac)	EDU/ac	Persons per EDU [Ref. 6]	% Area Developed at Planning Phase	Total Population	Ave. Flow per Person (gpd/person) [Ref. 3]	Wastewater Flow (gpd)
Farm (F)	single family	822	0.4	2.5	66%	518	70	36,249
Farm-Residential (FR)	single family	808	0.8	2.5	76%	1,174	70	82,162
Light Density Residential (RL)	single family	10	0.9	2.5	84%	20	70	1,376
Medium Density Residential (RM)	single family	524	1.3	2.5	50%	822	70	57,523
Total:		2,163				2,533		177,309

Phase 2 Flow Calculation								
Zone	Use	Area (ac)	EDU/ac	Persons per EDU [Ref. 6]	% Area Developed at Planning Phase	Total Population	Ave. Flow per Person (gpd/person) [Ref. 3]	Wastewater Flow (gpd)
Farm (F)	single family	2,742	0.4	2.5	66%	1,728	70	120,969
Farm-Residential (FR)	single family	3,631	0.8	2.5	76%	5,277	70	369,405
Light Density Residential (RL)	single family	699	0.9	2.5	84%	1,341	70	93,845
Medium Density Residential (RM)	single family	1,465	1.3	2.5	50%	2,299	70	160,945
Total:		8,537				10,645		745,164

Future Buildout Flow Calculation								
Zone	Use	Area (ac)	EDU/ac	Persons per EDU [Ref. 6]	% Area Developed at Planning Phase	Total Population	Ave. Flow per Person (gpd/person) [Ref. 3]	Wastewater Flow (gpd)
Farm (F)	single family	2,742	0.4	2.5	91%	2,409	70	168,658
Farm-Residential (FR)	single family	3,631	0.8	2.5	94%	6,556	70	458,917
Light Density Residential (RL)	single family	699	0.9	2.5	96%	1,527	70	106,897
Medium Density Residential (RM)	single family	1,465	1.3	2.5	87%	4,056	70	283,897
Total:		8,537				14,548		1,018,369

Step 5. Summarize flow calculations and estimate peak flow. Also add flow from additional known areas and I/I.

Ratio	Phase 1	Phase 2	Future Buildout	Reference
RATIOS:				
Max Monthly to Average Daily Flow	1.2	1.2	1.2	assumed
Max Daily to Average Daily Flow	2.4	2.0	1.9	TR-16
Peak Hourly to Average Daily Flow	4.0	3.2	3.1	TR-16

Phase	Linear Mi.	I/I of 250 gallons per day per inch-diam per mile	I/I of 500 gallons per day per inch-diam per mile
1	18	45,584	
2	90	224,124	
3	90		448,247

Zone	Flow Calculations (gpd)		
	Phase 1	Phase 2	Future Buildout
Infiltration/Inflow Allowance	45,584	224,124	448,247
<b>Average Daily Flow, Windham</b>	<b>730,636</b>	<b>1,631,936</b>	<b>2,510,674</b>
Maximum Month Flow	876,763	1,958,324	3,012,809
Maximum Daily Flow	1,753,526	3,263,873	4,770,281
Peak Hourly Flow	2,922,543	5,222,196	7,783,090
Peak Hourly Flow (MGD)	2.9	5.2	7.8
Peak Hourly Flow (gpm)	2,030	3,627	5,405
<b>Average Daily Flow, St. Josephs College</b>	<b>0</b>	<b>18,750</b>	<b>28,125</b>
<b>Average Daily Flow, RSU #14 (Windham School)</b>	<b>10,671</b>	<b>0</b>	<b>16,007</b>
<b>Average Daily Flow, Raymond</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>TOTAL Average Daily Flow to Westbrook</b>	<b>741,307</b>	<b>1,650,686</b>	<b>2,554,806</b>
Maximum Month Flow	889,568	1,980,824	3,065,767
Maximum Daily Flow	1,779,136	3,301,373	4,854,131
Peak Hourly Flow	2,965,227	5,282,196	7,919,898
Peak Hourly Flow (MGD)	3.0	5.3	7.9
Peak Hourly Flow (gpm)	2,059	3,668	5,500

per Charles Dawes, SJCME  
per Mac Richardson, WWTP Operator

Step 6. Calculate loading.

Characteristic	Strength	Unit	Reference
BOD	290 mg/L		TR-16
TSS	340 mg/L		TR-16
Total N	68 mg/L		TR-16

Peaking Factors [Ref. 3]	Max Day	Max 3 day	Max 7 day	Max 30 day
BOD	1.8	1.4	1.3	1.14
TSS	2.1	1.8	1.6	1.3

Characteristic	Phase 1	Phase 2	Future Buildout
Average Daily BOD (lbs/day)	1,680	3,445	5,088
Max Monthly BOD (lbs/day)	1,915	3,928	5,800
Average Daily TSS (lbs/day)	1,970	4,039	5,965
Max Monthly TSS (lbs/day)	2,561	5,251	7,754
Average Daily N (lbs/day)	394	808	1,193
Max Monthly N (lbs/day)	449	921	1,360

## **APPENDIX D: SCREENING CRITERIA**

# Town of Windham

## *Sewer Alternatives Evaluation Criteria*



CRITERIA	2001 WEIGHTED PRIORITY	NEW WEIGHTED PRIORITY
Provide groundwater protection for Nitrogen	Threshold	Threshold
Capital cost	7	
O&M cost	7	
Permitting	4	
Funding	1	
PWD acceptance	1	
Public acceptance		
Town acceptance	6	
Flexibility/ expandability	5	
Regional capabilities	1	
Odor, dust, noise, traffic	3	
Land removed from other uses	2	
Compliance with comprehensive plan		
<b>Weighted Totals:</b>		

**APPENDIX E: AN ACT TO CODIFY THE CHARTER OF THE  
PORTLAND WATER DISTRICT (CH. 84, P. & S. L.  
1975)**

**AN ACT to Codify the Charter of the Portland Water District (Ch. 84, P. & S. L. 1975)**

Revised to include amendments: Ch. 623, P. & S.L. 1975  
Ch. 48, P. & S.L. 1977  
Ch. 26, P. & S.L. 1979  
Ch. 10, P. & S.L. 1981  
Ch. 97, P. & S.L. 1988  
Ch. 12, P. & S.L. 1991  
Ch. 89, P. & S.L. 1992  
Ch. 58, P. & S.L. 1994  
Ch. 15, P. & S.L. 1997  
Ch. 7, P. & S.L. 2001  
Ch. 25, P. & S.L. 2001  
Ch. 56, P. & S.L. 2002  
Ch. 18, P. & S.L. 2009

**Section 1**

**Territory**

The territory and people of the Cities of Portland, South Portland and Westbrook and the Towns of Cape Elizabeth, Cumberland, Falmouth, Gorham, Raymond, Scarborough, and Windham constitute the public municipal corporation named the Portland Water District.

**Section 2**

**Authority**

A. The District is authorized to supply the inhabitants of the Cities of Portland, South Portland and Westbrook and the Towns of Cape Elizabeth, Cumberland, Falmouth, Gorham, Raymond, Scarborough, Standish and Windham and said municipalities with pure water for domestic, sanitary and municipal services. The District is further authorized to sell water to the Yarmouth Water District and the North Yarmouth Water District. The District for the purposes of its incorporation is authorized to take, hold, divert, use and distribute water from Sebago Lake, Chaffin Pond, its existing well sites in Cumberland, Windham and the Steep Falls section of Standish in addition to any other available source within its territory.

B. The District is authorized to acquire, construct, maintain, control, operate, manage and provide facilities for the handling on a regional basis of wastewater and sewage consisting of domestic, commercial, municipal and industrial wastes; and for the handling of storm or surface waters entering a combined municipal sewer system, all as collected by the municipalities of the cities of Portland and Westbrook and the Towns of Cape Elizabeth, Cumberland, Falmouth, Gorham, Raymond, Standish and Windham, referred to in this Act as the "participating municipalities," all for the purpose of providing treatment facilities, trunk sewers, interceptor lines, force mains, outfalls, and pumping stations for the transmission and disposal of wastewater and sewage received from municipal collection systems. The authorization to service the

participating municipalities for the purposes herein granted shall be exclusive except for the wastewater and sewage facilities constructed within any participating municipality prior to the adoption of a regional plan by the trustees of the District, which occurred on November 8, 1971, and except for any wastewater and sewage facilities to be constructed within any participating municipality for which proposed construction plans had been approved by the appropriate governmental agencies or bids have been invited or construction contracts have been awarded or municipal financing of such construction has been finally authorized by such participating municipality prior to such date and such private wastewater and sewage facilities as approved by the Board of Environmental Protection.

It shall be the duty of the District to receive the wastewater and sewage from the local collection systems of the participating municipalities at such point or points as the District and the participating municipality shall agree, and it shall remain the duty of each participating municipality to perform the initial collection of wastewater and sewage within such participating municipality and to deliver it to the District at the agreed point or points. As used in this Act the term "wastewater and sewage system" refers to the wastewater and sewage system authorized under the terms of this Act.

In addition to the operation of the wastewater and sewage system, the District is also authorized to contract with persons, firms and corporations, including municipal corporations, upon such terms as may be agreed to manage, operate, construct and maintain wastewater and sewage collection and treatment systems, as well as storm drain facilities and systems, and in addition, to contract with municipal and quasi-municipal corporations to acquire, own and finance municipal collection and treatment systems and storm drain facilities and systems.

C. The District is authorized whenever the trustees of the District deem it necessary for the purpose of maintaining and preserving the purity of Sebago Lake to construct, maintain, operate and provide a wastewater and sewage system for the collection, treatment and disposal of all wastewater and sewage and incidental storm and surface water drainage within the watershed area of Sebago Lake lying within the Towns of Casco, Naples, Raymond, Sebago, Standish and Windham, provided, however, that any treated waste the District discharges into the Presumpscot River shall be discharged at a point below the North Gorham dam, so-called.

### **Section 3**

#### **Authority to Erect**

The District is authorized for the purposes of its incorporation to erect and maintain all dams, reservoirs and other structures necessary and convenient for the supplying of said pure water for domestic, sanitary and municipal purposes. In addition, the District is authorized to receive, hold, transmit, treat, purify, discharge and dispose of all wastewater and sewage collected by the participating municipalities, all in furtherance of the health, welfare, comfort and convenience of the inhabitants of the participating municipality. All incidental powers, rights, and privileges necessary to the accomplishment of the objects herein set forth are granted to the District.

In addition, the District is authorized to take, collect, hold, transmit, treat, purify, discharge and dispose of all wastewater and sewage within the watershed area defined in section 2, paragraph C, and all incidental powers, rights and privileges necessary to the accomplishment of the objects herein set forth are granted to the District. Before the District constructs, maintains or operates any facilities in furtherance of the authority granted pursuant to section 2, paragraph C, within said watershed area, the District shall first obtain the approval of a majority of the legal voters at a referendum, provided that at least 20% of the registered voters who voted at the last gubernatorial election vote at such referendum, of each municipality to be served by such facilities, prior to the initial construction in any such municipality and municipalities. After such approval, the District shall not be required to obtain any additional approval from such inhabitants or their governing body prior to any such construction, maintenance or operation.

#### **Section 4**

##### **Authority to construct and maintain.**

The District is authorized to lay in, along, under and through the streets, roads, ways and highways and tidal waters, lakes, ponds, rivers and water courses in the Cities of Portland, South Portland and Westbrook and the Towns of Cape Elizabeth, Cumberland, Falmouth, Gorham, Raymond, Scarborough, Standish and Windham and across private lands in those cities and towns and to maintain, repair and replace all the pipes, aqueducts, lines, drains, conduits, interceptor lines, trunk sewers, force mains, outfalls, outlets, and fixtures and appurtenances and to construct, operate, maintain and replace the pure water, disposal, treatment and purification facilities and appurtenances as may be necessary and convenient for the District in carrying out the purpose of this Act.

#### **Section 5**

##### **Excavation and repair work; property to be left in good condition**

Whenever the District shall enter, dig up or excavate any street, way or highway, or other land, within the Cities of Portland, South Portland and Westbrook, and the Towns of Cape Elizabeth, Cumberland, Falmouth, Gorham, Scarborough, Standish, Windham, Casco, Naples, Raymond and Sebago, for water or sewer purposes, it shall cause the same to be done with as little obstruction as possible to the public travel, and shall cause the earth and pavement removed by it to be replaced in proper condition without unnecessary delay.

#### **Section 6**

##### **Authority to acquire and hold property; eminent domain**

The District is authorized and empowered to acquire and hold real and personal property necessary or convenient for the purposes of this Act.

The District is authorized and empowered to exercise the right of eminent domain in the cities of Portland, South Portland and Westbrook, and the Towns of Cape Elizabeth, Cumberland,

Falmouth, Gorham, Scarborough, Standish, Windham, Casco, Naples, Raymond and Sebago as hereinafter provided, to acquire and hold for such purposes either by purchase or exercise of its right of eminent domain any land, real estate, easements or interest therein or water rights or interests therein for all of the purposes herein stated.

In exercising any rights of eminent domain that are conferred upon it, the District shall provide for a hearing to determine the necessity of such taking and the damages sustained by the owner of the land or interest in land to be taken. Notice of the time and place of such hearing shall be given by personal service upon the record owner or owners of the land or interest in land to be taken.

If such owner or owners cannot be served personally by due diligence, then such service shall be made by certified mail to the last known address and by publication in a newspaper of general circulation in the municipality in which such land is located once a week for 2 weeks prior to the time appointed for said hearing. The clerk of the District shall keep an accurate record of the proceedings and the determination and decision. If the trustees decide to acquire such land or interest in land, the clerk of the District shall file a notice in the registry of deeds stating that the land or interest in land shall be taken, which notice shall contain an adequate description of the property, the owners thereof, if known, and the amount of damages awarded therefor. Upon the filing of said notice, the title to the land or interest in land shall vest in the District.

If any person sustaining damages by any taking as aforesaid shall not agree with the trustees of said District upon the sum to be paid therefor, either party, within 45 days of the filing of such notice in the registry of deeds, upon petition to the Land Damage Board, may have said damages assessed by them. The expenses of the board in connection with any such determination shall be paid for by the District. The procedure and all subsequent proceedings and the rights of appeal thereon shall be had under the same restrictions, conditions and limitations as are or may be prescribed in the case of damages by lying out of highways.

## **Section 7**

### **Crossing a public utility**

In case of a crossing of any land, interest in land or water right owned by a company operating any public utility, for any of the purposes herein contained, unless written consent is given by such company as to place, manner and conditions of the crossing within 30 days after such consent is requested in writing by the District, the Public Utilities Commission upon petition by the District shall determine the place, manner and conditions of such crossing, and all work on the property of such company shall be done under the supervision and to the satisfaction of such company, or as prescribed by the Public Utilities Commission, but at the expense of the District.

## **Section 8**

### **Authorized to acquire property of municipalities devoted to sewage system**

The District is authorized to acquire, otherwise than by eminent domain, all or part of the wastewater and sewage facilities existing or for which proposed construction plans had been approved all as of November 8, 1971, including but not limited to, pumping stations, treatment plants, interceptor lines, trunk sewers, force mains and outfalls located within the participating municipalities which are appropriate to the wastewater and sewage purposes of the District; and the consideration to be paid shall be agreed upon by the District and such participating municipality acting by and through its municipal officers, without vote of its inhabitants. The consideration shall include the assumption or payment of any outstanding indebtedness incurred by such participating municipality in connection with the property acquired.

The participating municipalities acting by and through their respective municipal officers, without the vote of their inhabitants, are authorized to transfer and convey to the District any property necessary, convenient or useful in furtherance of the wastewater and sewage purposes of the District.

## **Section 9**

### **Authorized to borrow money to issue bonds and notes**

The District, through its trustees and without vote of its inhabitants, is authorized to issue from time to time bonds or notes of the District in connection with accomplishing any of the purposes set forth in this Act, including to finance any necessary expenses and liabilities incurred in acquiring properties, renovating properties, laying pipes, aqueducts, conduits, drains, interceptor lines, trunk sewers, force mains, and outfalls, construction of treatment plants, laboratories and other water and wastewater and sewer facilities; and making renewals, additions, extensions and improvements to finance, any of the regional costs as defined in section 12, to provide funds to assist any participating municipality with respect to its financing costs assessed pursuant to section 13, subsection (B), and to fund the establishment of a reasonable reserve for future payments of debt service.

The bonds or notes must be issued in an amount or amounts as the District, acting through its trustees and without vote of its inhabitants, may determine. The bonds or notes may be issued to mature serially, in annual installments of principal, which need not be equal, the first of which must be payable not later than 3 years from the date of the bonds or notes and the last of which must be payable not later than 40 years from that date. The bonds or notes may also be issued for a term of years not exceeding 40 years or in a combination to mature serially and for a term of years not exceeding 40 years, as the trustees determine, and in the case of such term bonds, or combination of term bonds and serial bonds, the bonds in combination mature or are subject to an annual mandatory sinking fund redemption starting no later than 3 years after the bonds' date of issuance. The bonds may be callable with or without premium and must contain such terms and conditions and be sold in such manner, at public or private sale, with or without provisions for prepayment in advance of maturity, at par, at a discount or at a premium, as the trustees determine.

The trustees may determine or may authorize the treasurer or a committee of 2 or more trustees to determine the selling price and rate or rates of interest to be paid on bonds or notes and, if specifically authorized by the trustees, the rate of interest may vary.

If the trustees vote to issue bonds or notes, the trustees may authorize the issuance, in the name of the District, of temporary notes for a period not to exceed 5 years in anticipation of the money to be received from the sale of such bonds or notes. The time within which the temporary notes must be payable need not be included in determining the period for which bonds or notes may be issued.

For the purpose of paying preliminary expenses with respect to the investigation and planning for a wastewater and sewage system or the improvement of an existing system for the benefit of a participating municipality not served or to be served by an existing system of the District, including without limitation expenses related to or incurred in connection with engineering, design, acquisition of rights of way, legal fees or financing, the District through its trustees and without vote of its inhabitants is authorized to borrow by the issuance of temporary notes, including notes authorized under section 10, for a period of not more than one year and to renew the notes. Notes authorized under the authority of this paragraph must be paid from the proceeds of government grants, funded by bonds or notes issued to finance the particular system or improvement if and when the bonds or notes have been authorized or paid from sums apportioned as financing costs pursuant to section 13 on the municipality or municipalities for whose benefit the proposed system or improvement was intended. Any borrowing under this paragraph must be paid or funded as provided in this Act.

If the system for which such expenses were paid by the District does not become operational prior to such amount being funded, the District shall assess the participating municipality for whose benefit such expenses were incurred for the repayment of such expenses together with any interest attributable thereto. Such assessment shall be payable over a 5-year period in substantially equal installments. The amounts assessed hereunder shall be in addition to any amount otherwise apportioned pursuant to section 13 hereof.

For the purpose of paying expenses of operation, including, without limitation, any principal or interest due or about to become due on any bond or note issued by the District for which funds are not available, the District, through its trustees and without vote of its inhabitants, is authorized to issue from time to time temporary notes of the District in anticipation of revenues or assessments levied or to be levied against the participating municipalities.

The District may refund from time to time in one or in separate series its bonds, notes or other evidences of indebtedness. All water bonds must have inscribed upon their face "Portland Water District" and "Water Bond" and must be executed as the trustees determine. All sewer bonds must have inscribed upon their face "Portland Water District" and "Sewer Bond" and must be executed as the trustees determine. All bonds issued in the exercise of the authorization of section 2, paragraph C, must have inscribed upon their face "Portland Water District" and "Purification" and must be executed as the trustees determine.

All bonds, notes and evidences of indebtedness issued by the District pursuant to this section are legal obligations of the District, which is declared to be a quasi-municipal corporation within the meaning of the Maine Revised Statutes, Title 30-A, section 5701, and all provisions of section 5701 are applicable. All bonds, notes and evidences of indebtedness issued by the District pursuant to this Act are legal investments for savings banks in the State of Maine, and are exempt from Maine income tax.

## **Section 10**

### **Governmental grants and loans**

The District is authorized to enter into agreements with federal, state and local governments or any agency thereof, or any corporation, commission or board authorized by federal, state or local governments to grant or loan money to or otherwise assist in the financing of projects for accomplishing any of the purposes of this Act, and to accept grants and borrow money from any such government, agency, corporation, commission or board as may be necessary or desirable for the purposes of this Act.

In addition to the authority granted in Section 9, the District may borrow by the issuance of temporary notes in anticipation of the receipt of the proceeds of any such grant, provided, however, that said notes shall not be issued for longer than one year but may be renewed by the issuance of other notes until receipt of the grant in anticipation of which such notes are issued and provided further that payments on account of such grant when received shall be held in a separate account and used only to pay such notes to the extent then outstanding.

In addition, the District is authorized to collect from industrial users of the wastewater and sewage services accepting payment either directly or through the participating municipality, that portion of any federal grant amount allocable to the treatment of such users' wastewater and sewage and to maintain said amounts in accordance with the applicable federal statute. The District is also authorized to enter into agreements with municipalities other than the participating municipalities to provide for the payment to the District of the amounts paid or payable to such municipalities pursuant to any federal legislation under which an allocable share of the costs of such municipalities for wastewater and sewage treatment facilities may be recovered from industrial users benefited by the facilities and the District is authorized to pay to municipalities amounts which the District has received pursuant to such legislation.

## **Section 11**

### **Water rates**

All individuals, firms and corporations, whether private, public or municipal, shall pay to the treasurer of said District the rates established by said trustees for the water used by them, but said rates shall be uniform within the territory supplied by the District wherever the installation and maintenance of mains and the cost of service is substantially uniform, but nothing herein shall preclude the District from establishing higher rates where for any reason its costs exceed the average but such higher rates shall be uniform throughout the section where they apply.

Said rates shall be so established as to provide revenue for the water system for the following purposes.

- A. To pay the current expenses of the District.
- B. To provide for the payment of the interest on the indebtedness created or assumed by the District for water purposes.
- C. To provide each year a sum equal to not less than 1% of the entire indebtedness created or assumed by the District other than indebtedness which matures serially or which has mandatory sinking fund payments, for the water system. That sum must be turned into a sinking fund and there kept to provide for the extinguishment of the indebtedness, or, if serial bonds, notes or term bonds with mandatory sinking fund payments are issued for water purposes, to pay the principal of the bonds, notes or term bonds payable in that year. The money set aside for the sinking fund must be devoted to the retirement of the obligations of the District or invested in such securities as savings banks are allowed to hold.

## **Section 12**

### **Determination of annual sewer costs**

The fiscal year of the District for the waste water and sewage operations shall be the calendar year, and the trustees shall, prior to January 15th of each year, determine the total anticipated amount to be raised from the participating municipalities based on the trustees' best estimate to provide for the operation of the wastewater and sewage system for that fiscal year and such amount shall be apportioned as provided in section 13. The amounts so apportioned for each municipality shall forthwith be certified by the trustees to the appropriate municipal officials of each participating municipality. In the event that the amount apportioned and certified as herein provided shall by reason of erroneous estimates or otherwise be insufficient to provide for the operation of the wastewater and sewage system for the remainder of a fiscal year, as shown by the budget or amended budget of the District, any additional amount required for such operation may be apportioned and certified as herein provided and the amounts thereafter paid to the District by the participating municipalities affected may, at the option of the respective municipalities assessed, be adjusted so as to result in the payment over the remainder of the year of the additional amount so certified. No such additional amount shall be certified after October 1st in any year. The assessors of the respective participating municipalities shall without further vote include the amount so certified in those amounts to be raised in the subject calendar year by municipal tax or assessment or in the case of a supplemental certification to the extent if any that the same is not paid from funds otherwise available, in the first levy of municipal tax or assessment thereafter made. The respective city or town treasurers shall pay the amount so certified to the treasurer of the District in substantially equal monthly installments with the first monthly installment to be payable in January after receipt of such certification.

A participating municipality may raise all or a portion of the amounts certified annually by the District through equitable and proportional charges against its inhabitants, corporations and other users of the wastewater and sewage system of the District in each such municipality. The

participating municipalities shall be subject to such rules and regulations imposed or required by law as a condition of receipt of governmental grants and loans, as described in section 10.

The amount anticipated to be raised in a fiscal year and apportioned as provided in this section shall be the total of regional costs, financing costs and operating and maintenance costs less, with respect to regional costs, any funds on hand or in the judgment of the trustees to be received during said year from other than the participating municipalities and available to pay regional costs, and with respect to financing costs and operating and maintenance costs, funds on hand or in the judgment of the Trustees to be received during said year from other than participating municipalities and available to pay financing costs and operating and maintenance costs, as the case may be. As used in this Act, the following terms shall have the following meanings.

A. "Regional costs" shall mean: all regional, organizational and development costs: namely, costs incurred by the District to enable it to provide wastewater and sewage disposal services on a regional basis and all expenses incidental to such costs. Regional costs shall not include any costs related to facilities or services provided by the District, for the benefit of one or more, but less than all, of the participating municipalities. The accounting for regional costs shall be in accordance with generally accepted accounting practices.

B. "Financing costs" shall include:

- (1) Payment of unfunded capital outlay: namely, capital outlay items the cost of which is not to be funded or paid from the proceeds of a government grant or other donation;
- (2) Payment of interest: namely, interest due and payable in such year on indebtedness created or assumed by the District in providing a waste water and sewage system, exclusive of interest on temporary notes in anticipation of assessments;
- (3) Payment of principal: namely, principal due and payable in such year on indebtedness created or assumed by the District in providing a wastewater and sewage system and not to be refunded and for the payment of which indebtedness funds are not in the judgment of the trustees otherwise available; and
- (4) Sinking fund payments; namely, a sum equal to not less than 2% of:
  - (a) that portion of the final installment of principal of any issue of serial sewer bonds or notes or term sewer bonds or notes, with mandatory sinking fund payments, created or assumed by the District in connection with its wastewater and sewage system, that for any such issue exceeds the average annual payment of principal paid or payable in each year excluding the last installment of principal from the calculation of the average annual payment; and

(b) the amount of principal of any term bonds issued without mandatory sinking fund payments assumed or issued by the District for the wastewater and sewage system, which must be turned into a separate sinking fund and there kept together with any earnings on the sinking fund to provide for the extinguishment of that portion of said indebtedness.

The money set aside for the sinking fund must be devoted to the retirement of the obligations of the District resulting from its wastewater and sewage system, and meanwhile may be invested in such securities as savings banks in the state of Maine are now or hereafter allowed to hold.

C. "Operating and Maintenance costs" shall include:

(1) Operating expenses: namely, the current expenses of operating the wastewater and sewage system, and including interest on notes issued in anticipation of assessments;

(2) Deficit: namely, any deficit incurred in the operation of said wastewater and sewage system outstanding at the end of the prior calendar year for the payment of which funds are not, or in the judgment of the trustees will not be, available in the calendar year;

(3) Current expenses: namely, the current expenses of repairing and maintaining the wastewater and sewage system, including renewals and replacements and all other expenses not otherwise specifically provided herein; and

(4) Collection expenses: namely, the expenses of collecting rates, fees and other charges for participating municipalities under contracts authorized under section 14 including any adjustment required to render the budgeted collection expenses in prior years equal to the actual costs for such prior years.

D. The words "assess or assessment" as used in this Act mean, except when the context otherwise requires: the amount apportioned or allocated to a participating municipality that has been certified by the trustees as hereinbefore provided or with respect to which a participating municipality has otherwise been notified hereunder that such amount is to be paid to the District.

If a surplus exists at the end of a calendar year, the surplus must be transferred to a sewer surplus account, which may not exceed 3%, unless otherwise approved by the trustees, of the net book value of the assets of the District attributable to the wastewater and sewage system. The Trustees may add to the sinking fund so much of any excess over the 3% as they determine advisable, and any remainder must be credited against sums otherwise to be assessed upon the participating municipalities on an equitable basis.

## **Section 13**

### **Apportionment of annual costs; annual sewer assessments to municipalities; obligation of municipalities to pay same**

The Trustees shall annually apportion the amount determined under section 12 among the participating municipalities on the following basis:

A. Regional costs:

(1) All the regional costs shall be apportioned among all the participating municipalities, 1/2 according to the ratio of their respective populations to the total population of all the participating municipalities, according to the latest state or federal census, and the remainder according to the ratio of the state valuation of each participating municipality to the total state valuation of all participating municipalities.

B. Apportionment of financing costs:

(1) All financing costs of facilities used or to be used by only one of the participating municipalities must be apportioned to such municipality.

(2) All financing costs of any facility designed to be jointly used must be apportioned by the trustees between or among the participating municipalities for whose benefit the facilities were designed in the ratio of the percentage of use capability of the facility attributed to each participating municipality in the original design of the facility. If in the judgment of the trustees the actual use of this facility by one or more of the participating municipalities will not occur within 24 months of the actual use of the first participating municipality, financing costs must be apportioned under this paragraph to only those participating municipalities whose use or joint use of the facilities is expected to take place within the 24-month period. Except as otherwise provided in this paragraph, when a participating municipality makes first use of a facility that had previously been used by one or more participating municipalities, that participating municipality must also be assessed for its fair share of the financing cost of the jointly used facility that had been previously assessed up to the time of the first use of the facility by the joining municipality. The additional share must be determined by the trustees on the same formula set forth in this paragraph. The trustees shall apportion the additional share and, in addition, if the trustees determine that it is appropriate and reasonable, an annual interest component at a rate to be determined by the trustees to the joining municipality over a period of years equal to the term for which the original bonded indebtedness was issued. The Trustees shall make corresponding annual adjustments in the assessments of the participating municipalities previously using the facility by crediting the amount of the additional share to the participating municipalities in proportion to their respective total payments to the District on

account of the financing costs of the facility made by the participating municipalities up to the time of first use of the facility by the joining municipality.

Any participating municipality has the right to prepay any portion of the original bonded indebtedness allocable to the participating municipality.

C. Apportionment of operating and maintenance costs:

(1) All operating and maintenance costs of facilities used by only one of the participating municipalities shall be apportioned to such municipality.

(2) All operating and maintenance costs of any facility jointly used shall be apportioned by the trustees according to the estimated use of such facility to be made by each participating municipality until such jointly used facility has been in operation for one calendar year. Such apportionment shall be based on the engineering estimates prepared for the trustees of the initial use of such facility by each of the participating municipalities. When any jointly used facility shall have been in operation for a calendar year, the apportionment thereafter shall be based upon the measured flow of wastewater and sewage and, if necessary, estimates or measurements of pollutant loadings, entering such jointly used facility during the previous year from each participating municipality making use of such facility.

Until a participating municipality which makes its first use of a facility, which had previously been used by one or more other participating municipalities, shall have used such facility for a period of a calendar year, the apportionment of its cost for such use shall be calculated by the trustees from engineering estimates prepared for the trustees of the use by such municipality compared with the use during the prior calendar year by the other participating municipalities, and the remaining costs shall be apportioned among the participating municipalities previously using such facility in the manner described in this section.

Any participating municipality claiming to be aggrieved by an assessment shall, within 60 days from receipt of said assessment, commence an action in the Superior Court of Cumberland County requesting the review of said assessment or any part thereof. The Superior Court shall hear and determine the cause and shall be authorized to enter such judgments and orders, including the power to remand for further findings, as it shall deem appropriate.

The court may appoint a committee of one or three disinterested persons who, having been sworn, shall give such notice as designated by the court, shall hear the parties and shall make a report to the court as soon as practicable, whether the assessment of the trustees should be in whole or in part affirmed or reversed, which, being accepted and judgment thereon entered, shall forthwith be certified to the clerk of the District.

A participating municipality requesting review of any assessment shall, nevertheless, remain obligated to pay and shall pay its said assessment in full within the prescribed times. If the court, commission or agency orders an adjustment in said assessment it shall also prescribe the manner and method by which such adjustment shall be made.

## **Section 14**

### **Water use and records; billing agency**

The District at cost, shall provide to any participating municipality upon written request, sufficient water use records to enable the municipality to determine sewer rates and charges and for other municipal purposes.

A participating municipality that has established a schedule of rates, fees and charges for the services furnished or to be furnished by its sewer system any of which are computed at least in part according to the amount of water consumed may, by resolution of its legislative body, request the District to collect the user charges on its behalf.

Upon receipt of a request, the District shall enter into a contract with the participating municipality that provides for the following:

- A. The date when collections under the contract period must begin, which may not be earlier than July 1st nor later than December 31st next succeeding the year in which the request is made, and with respect to the manner in which the contract may be amended and terminated;
- B. That the participating municipality shall during the period of the contract keep in force a schedule of rates, fees and charges sufficient to produce each year funds required to pay the costs apportioned or to be apportioned to the participating municipality for that year pursuant to sections 12 and 13;
- C. That to the extent the District does not maintain such records in the ordinary course of its business, the participating municipality shall provide the District with a list of the users of its sewer system responsible for payment of the rates, fees and charges and keep the same up-to-date;
- D. That the District shall on behalf of the participating municipality collect from the users the amounts due from time to time according to the schedule of rates, fees and charges and keep the sums collected in a separate account;
- E. That the District shall keep its accounts and records showing the sums collected, payments made from the collected sums and charges remaining to be collected up to date at all times and shall provide for an audit of the accounts and records at least annually;

F. That the District may deduct at such times as stated in the contract, which must be at least monthly, that portion of such sums collected that represent the amounts due to the District from the participating municipality pursuant to sections 12 and 13 and pay the balance of funds to the participating municipality, and that to the extent the portions retained by the District fail to equal the portion of District costs then due from the participating municipality, the deficit must be paid to the District by the participating municipality;

G. For a method of resolving disagreements concerning operations under the contract, which may be by arbitration, except that the obligations of each of the parties to the contract with respect to the payment of money to the other must be unconditional and that neither party may withhold payment to the other of funds due under the contract during the pendency of any dispute; and

H. For such other related matters as determined appropriate by the parties to the contract.

A participating municipality with respect to fixing a schedule of rates, fees and other charges for the services furnished or to be furnished by or through its sewer system has such authority as may be granted by its charter, if any, by any private and special laws and by the Maine Revised Statutes, including, without limitation, Title 30-A, chapters 161 and 213, to the extent applicable. Notwithstanding any provision of law to the contrary, a participating municipality may by vote of its legislative body authorize the exercise by the District on behalf of the participating municipality of any or all of the powers granted to the participating municipality to collect such rates and charges from the users of the sewer system of the participating municipality as provided in this Act, however, nothing in this section may be construed to permit the transfer by a participating municipality to the District of the right to make or collect assessments authorized by Title 30-A, chapter 161, subchapter 1, or any private and special law authorizing a participating municipality to make or collect such assessments.

In the event the user of the sewer system of the District or municipality fails within reasonable time to pay the statement of rates, fees or charges submitted by the District to the user, the District has the power to disconnect the water service of the user, notwithstanding any rule or statute to the contrary, as long as the action by the District is accomplished in accordance with the procedures set forth in applicable statutes and rules for the disconnection of utility services.

Nothing in the contract authorized under this section may affect in any way the unconditional obligation of the participating municipality to pay its share of the District's costs apportioned and certified as provided in section 13.

## **Section 15**

### **Allocation of charges between water system and wastewater and sewage system**

The trustees shall maintain records and accounts in such a manner that all costs and charges are clearly defined as between the water system and the wastewater and sewage systems, all in accordance with generally accepted accounting practices and procedures.

## **Section 16**

### **Right to inspect; rules and regulations; injunctive relief**

The officers or agents of the District shall have the right to enter all premises from which any sewer or drain is connected with any part of the system or with any sewage system connecting with the system of the District, at all reasonable hours, for inspection of plumbing and sewage fixtures, to ascertain the quantity and character of sewage discharged and the manner of discharge; and to enforce the provisions of this Act and the rules and regulations prescribed by the trustees of the District.

The trustees shall, for the proper and reasonable operation of the water system and the wastewater and sewage system, adopt reasonable rules and regulations relative to the water system and the wastewater and sewage system, including without limitation, regulations as to the quantity and character of any sewage, drainage or other wastes discharged into any sewage system connecting with the system of the District, but such regulations shall at least meet the minimum standards prescribed by the Department of Environmental Protection and applicable plumbing codes. Rules and regulations adopted by the trustees shall be published, from time to time, in suitable form and distributed to the participating municipalities.

The trustees may require industrial pretreatment of wastes discharged into its sewer system or into any system connecting with its system if the trustees determine such wastes may interfere with or cause damage to its wastewater and sewage system.

In addition to any other remedy, the Superior Court shall have jurisdiction upon a complaint filed by the District to restrain or enjoin any person, firm, corporation or municipality from committing any act which may damage or impair its wastewater and sewage system or which is prohibited by any rule or regulation of the District. It is the intention of the Legislature that the District may seek the injunction set forth in this section without first resorting to any other form of proceedings or procedure as a condition precedent to the granting of such injunction.

Any user of the wastewater system who violates any provision of the laws administered by the District pertaining to pretreatment standards and requirements, including without limitation a violation of the terms or conditions of any rule or regulation of the District pertaining to pretreatment standards and requirements, is subject to a civil penalty payable to the District of not less than \$1,000 nor more than \$2,000 for each day of that violation. The District may recover the civil penalty by civil action in the District Court or Superior Court.

## **Section 17**

### **Property Tax Exempt**

Wherever located, the property, both real and personal, rights and franchises, used in connection with said wastewater and sewage system shall be forever exempt from taxation.

## **Section 18**

### **Board of Trustees**

The affairs of the District are managed by a board of trustees composed of 11 members, 4 of whom are elected by a plurality of the voters of the City of Portland, 2 by a plurality of the voters of the City of South Portland and the Town of Cape Elizabeth, one by a plurality of the voters of the City of Westbrook, one by a plurality of the voters of the Town of Gorham, one by a plurality of the voters of the Town of Raymond and the Town of Windham, one by a plurality of the voters of the Town of Scarborough and one by a plurality of the voters of the Town of Falmouth and the Town of Cumberland.

Trustees are elected for a term of 5 years at elections as described in this paragraph. Trustees elected from the City of Portland, the City of South Portland, the Town of Cape Elizabeth, the City of Westbrook, the Town of Gorham, the Town of Scarborough, the Town of Windham and the Town of Raymond are elected at elections on the first Tuesday after the first Monday of November. The trustee elected from the Town of Cumberland and the Town of Falmouth is elected on a mutually coincident municipal election date in the Town of Cumberland and the Town of Falmouth in June, but, if there is not a mutually coincident municipal election date, then on the 2nd Tuesday of June. Costs for any trustee election held concurrently with a federal, state or municipal election are divided between the municipality and the District. When there is a division of costs, the District is responsible for the costs proportional to the total number of offices and referenda issues voted upon at the election. If an election for a trustee results in a tie vote, the other trustees shall select the person who becomes a trustee.

All nominations of candidates to be elected from the cities of Portland or Westbrook must be made by nomination papers signed in the aggregate for each candidate by not fewer than 100 nor more than 150 qualified voters of such city. All nominations of candidates to be elected from the area consisting of South Portland and Cape Elizabeth must be made by nomination papers signed in the aggregate for each candidate by not fewer than 35 nor more than 50 of the qualified voters of Cape Elizabeth and not fewer than 100 nor more than 150 qualified voters of the City of South Portland. All nominations of candidates to be elected from Gorham or Scarborough must be made by nomination papers signed in the aggregate for each candidate by not fewer than 35 nor more than 50 of the qualified voters of each of the towns. All nominations of candidates to be elected from the area consisting of either Cumberland and Falmouth or Raymond and Windham must be made by nomination papers signed in the aggregate for each candidate by not fewer than 35 nor more than 50 of the voters of each of the towns within that area. Each voter signing a nomination paper shall make the voter's signature in person and add to it the voter's place of residence, and each voter may subscribe to as many nominations as there are trustees to be elected

in the voter's area and no more. Nomination papers must be submitted to each municipal clerk of the municipalities in that area coterminously with the municipal filing date.

Transition: Trustees of the Portland Water District elected prior to the effective date of this Act and serving on the effective date of this Act continue to serve until their successors are elected and take office in accordance with this Act. When the current trustee's term representing the towns of Cape Elizabeth, Gorham and Scarborough expires in 2002, that seat must be filled by a person representing the Town of Gorham only. When the current trustee's term representing the towns of Cape Elizabeth, Gorham and Scarborough expires in 2003, that seat must be filled by a person representing the Town of Scarborough only. When the current trustee's term representing the City of South Portland expires in 2004, that seat must be filled by a person representing the City of South Portland and the Town of Cape Elizabeth. When the current trustee's term representing the City of South Portland expires in 2005, that seat must be filled by a person representing the City of South Portland and the Town of Cape Elizabeth. When the current trustee's term representing the towns of Cumberland, Falmouth, Windham and Raymond expires in 2006, that seat must be filled by a person representing the towns of Falmouth and Cumberland. The current trustee's term representing the towns of Cumberland, Falmouth, Windham and Raymond that expires in 2002 must be filled by a person representing those towns. When that trustee's term expires in 2007, the seat must be filled by a person representing the towns of Windham and Raymond. The trustee elected from the Town of Cumberland, the Town of Falmouth, the Town of Raymond and the Town of Windham in 2002 must be elected on a mutually coincident municipal election date in the Town of Cumberland, the Town of Falmouth and the Town of Windham in June, but, if there is not a mutually coincident municipal election date, then on the 2nd Tuesday of June. The Town of Raymond shall hold a special town meeting to elect the trustees on the same day that the Town of Cumberland, the Town of Falmouth and the Town of Windham hold their coincident municipal elections to elect the trustees from those towns. All nominations of candidates to be elected from the area consisting of Cumberland, Falmouth, Raymond and Windham must be made by nomination papers signed in the aggregate for each candidate by not fewer than 35 nor more than 50 of the voters of each of the towns within that area. Each voter signing a nomination paper shall make the voter's signature in person and add to it the voter's place of residence, and each voter may subscribe to as many nominations as there are trustees to be elected in the voter's area and no more. Nomination papers must be submitted to each municipal clerk of the municipalities in that area coterminously with the municipal filing date.

Immediately thereafter, such clerk shall notify the clerk of the District of the names of the candidates nominated for trustee for the area within which such municipality is located and shall notify the clerk of any other municipality within such area. With such nomination papers there shall be filed the consent in writing of the person or persons nominated agreeing to accept the nomination if nominated, not to withdraw, and if elected at the election to qualify as a trustee.

Each municipality shall prepare, under the direction of its municipal clerk, ballots containing the names of the properly nominated candidates arranged in alphabetical order by last name. It shall contain no other names. At the end of the list of candidates, there shall be left as many blank spaces as there are vacancies to be filled, in which a voter may insert the name of any person for whom he desires to vote. A square shall be printed at the right of the name of each candidate, and 2 squares shall be printed at the right of any question submitted with "yes" above

one and "no" above the other, so that a voter may designate his choice clearly by a cross mark (X) or a check mark (/). Words of explanation such as, "Vote for one" may be printed on the ballot. Before distribution, the ballot shall be folded in marked creases to measure, when folded, from 4 to 5 inches wide and from 6 to 13-1/2 inches long. On the back and outside, when folded, shall be printed "Official Ballot for the Portland Water District," the date of election, and a facsimile of the signature of the clerk of the municipality. In the alternative, the municipality may prepare ballots or, if voting machines are used, ballot labels in accordance with the law governing municipal elections.

The municipal clerks shall present the returns of their respective municipalities to the clerk of the District not later than 5 days after the elections. The trustees shall at the first regular business meeting after the election determine and declare the successful candidates of each area.

If any vacancy arises in the membership of the trustees, it shall be filled by a special election to be called in the city or the town wherein such election is to be held. When any trustee ceases to be a resident of the city or the area of towns from which he was elected, he vacates such trusteeship. All such trustees shall be eligible for reelection, but no person holding state, county or municipal office shall be eligible for election as trustee. For the purposes of this paragraph, a person holding a municipal office is a municipal officer as defined in the Maine Revised Statutes, Title 30-A, section 2001, subsection 10 or a full-time municipal employee who has authority to exercise policymaking or financial responsibility on behalf of the municipality. Each trustee shall receive in full compensation for his services the sum of \$1,200 annually.

## **Section 19**

### **Officers**

The trustees shall elect a president, a vice president, a treasurer and a clerk together with such other officers and agents as they deem necessary for the proper conduct of their affairs. The trustees may establish and from time to time amend such bylaws as are necessary for the proper management of its affairs.

## **Section 20**

### **Payment in lieu of taxes to the Town of Gorham**

The Portland Water District shall pay to the Town of Gorham in lieu of taxes annually the sum of \$2,150, said sum to be payable on or before October 1st of each year to the municipal treasurer of the Town of Gorham.

## **Section 21**

### **Annual Report**

After the close of each fiscal year, the trustees shall cause to be made a detailed report of the District's receipts and expenditures, of its financial and physical condition and of such other

matters as the trustees deem necessary. Such annual report shall be filed with the municipal officers of each municipality to which the District serves water or engages in wastewater and sewage service.

## **Section 22**

### **1913 P&SL, c. 157, Para. 2\* is amended by adding a new paragraph at the end to read:**

During daylight hours from June 15th to September 15th, residents of the Town of Standish shall have the right to cross the land of the Portland Water District bordering Sebago Lake outside the 2-mile limit referred to in and described in the paragraph above, to make reasonable use of the shoreline of said land for swimming and related recreational activities and to utilize parking areas on said lands to be designated by the trustees, provided that the District shall not be liable for damages arising from the use of said lands by such persons. All costs which may be incurred by the District in carrying out the purposes of this paragraph, including but not limited to the construction of sanitary facilities for the use of said residents, shall be the responsibility of the Town of Standish. The District shall not make any expenditure without the prior written approval of the municipal officers of Standish. Rights of access granted herein may be limited to such specific times and locations and by such reasonable regulations as may be determined by agreement between the trustees of the District and the municipal officers of the Town of Standish. The rights granted herein shall be in addition to any existing rights of access for fishing and other purposes and nothing contained herein shall be construed to limit such rights in any way.

---

\*Chapter 157, Para.2: "A person may not have bodily contact with the waters of Sebago Lake within 2 miles of the intakes of the Portland Water District, nor may any person wash linen or other articles of personal apparel in the waters of the lake. . . . . Any person violating the provisions of this section is liable to a fine, payable to the State, of \$500 for a first offense, \$1,000 for a second offense and \$2,500 for each subsequent offense."

## **Section 23**

### **Notes deemed issued**

Temporary notes of the District, the proceeds of which were used to pay preliminary expenses for the investigation and planning for wastewater and sewage systems in participating municipalities not served or to be served by a wastewater and sewage treatment facility existing or under construction on the effective date of this Act, shall be deemed to have been issued under and pursuant to section 9, 4th paragraph, as amended, and any renewals of such temporary notes shall be in accordance with the applicable provisions of said section as amended.

## **Section 24**

### **Renewals of outstanding temporary notes issued for regional costs and preliminary expenses**

Temporary notes of the District, the proceeds of which were used to pay regional costs and preliminary expenses as set forth in section 9, 4th paragraph, as amended, all incurred in connection with the establishment of the District's wastewater and sewage system may, to the

extent not paid from the proceeds of assessments upon the participating municipalities, be renewed as hereinafter in this section provided. In the case of a participating municipality for whose benefit a wastewater and sewage treatment facility is being financed under section 9, such temporary renewal notes may be consolidated with and issued as a part of any issue of notes or bonds being issued under said section 9. Renewal notes authorized by this section shall be issued in accordance with the provisions of Section 9 of the charter so far as apt and shall mature not later than one year from their date and in no event later than December 31, 1982. There shall be a separately designated issue of renewal notes representing the sums allocated or allocable to each participating municipality.

## **Section 25**

### **Preexisting contracts with participating municipality**

The rights of the parties under a contract between the District and a participating municipality in force on the effective date of this Act shall not be adversely affected by this Act.

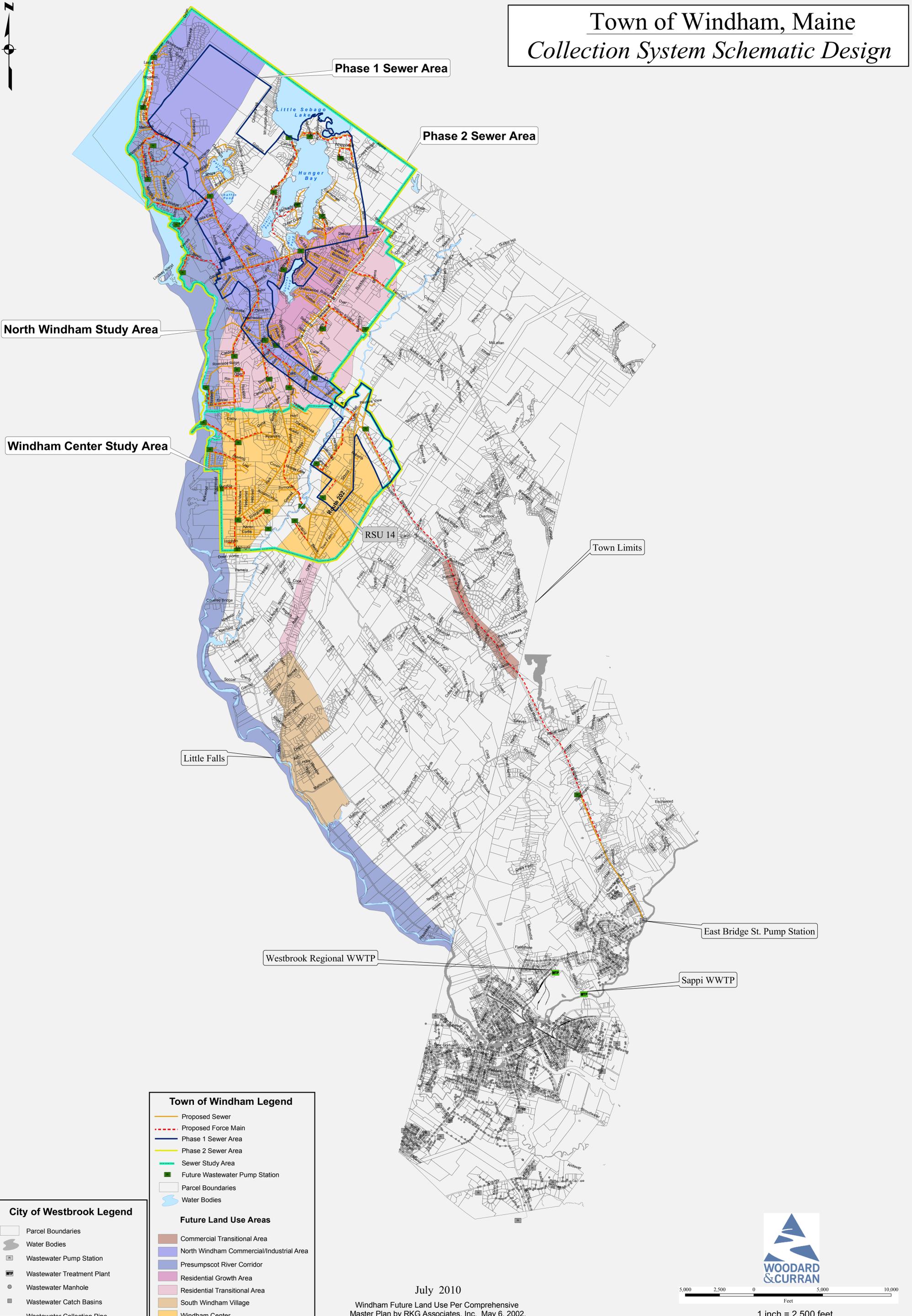
## **Section 26**

### **Provision of administrative services to non-participating municipalities**

The District is authorized to enter into contracts with non-participating municipalities, governmental entities or water and sewer utilities for the purposes of providing administrative services. Services may include but are not limited to billing services, accounting services and other administrative services related to water and sewer operations.

## **APPENDIX F: COLLECTION SYSTEM SCHEMATIC DESIGN**

# Town of Windham, Maine Collection System Schematic Design



North Windham Study Area

Windham Center Study Area

Phase 1 Sewer Area

Phase 2 Sewer Area

RSU 14

Town Limits

Little Falls

Westbrook Regional WWTP

East Bridge St. Pump Station

Sappi WWTP

### Town of Windham Legend

- Proposed Sewer
- - - Proposed Force Main
- Phase 1 Sewer Area
- Phase 2 Sewer Area
- Sewer Study Area
- Future Wastewater Pump Station
- Parcel Boundaries
- Water Bodies

### Future Land Use Areas

- Commercial Transitional Area
- North Windham Commercial/Industrial Area
- Presumpscot River Corridor
- Residential Growth Area
- Residential Transitional Area
- South Windham Village
- Windham Center

### City of Westbrook Legend

- Parcel Boundaries
- Water Bodies
- Wastewater Pump Station
- Wastewater Treatment Plant
- Wastewater Manhole
- Wastewater Catch Basins
- Wastewater Collection Pipe

July 2010

Windham Future Land Use Per Comprehensive Master Plan by RKG Associates, Inc. May 6, 2002.



1 inch = 2,500 feet

**APPENDIX G: COST ESTIMATING AND EXCERPT FROM PWD  
BUDGET REPORT**



**COMMITMENT & INTEGRITY  
DRIVE RESULTS**

41 HUTCHINS DRIVE  
PORTLAND, MAINE 04102  
TEL. (207)774-2112

CLIENT Windham  
PROJECT Sewer Study Amendment  
DESIGNED BY KMC DATE 7/22/10  
CHECKED BY BSS DATE 7/22/10  
PROJECT NO. 203363.04

Purpose: To estimate the total cost of the Phase 1 collection system, transport to Westbrook-Gorham Regional Water Pollution Control Facility (WGRWPCF), and WGRWPCF upgrades.

Assumptions:

1. Linear foot unit costs for Gravity Sewers and Forcemains were obtained from analysis of recent sewer utility projects. Unit costs include construction administration, site restoration, ledge removal, pavement, manholes, etc. Unit costs for pump stations were obtained by analyzing the above referenced jobs.
2. A "Grinder Pump Station" includes a wet well, valve pit, pumps, and controls. A "Medium or Large Pump Station" is able to handle more flow than a "Small Pump Station" and also includes a building and stand-by generator. Large Pump Stations are large enough to pump sewer over considerable distances, such as the stretch of Rt. 302 from Windham to Westbrook.
3. Lineal feet quantities of Gravity Sewers and Forcemain were obtained by rough layout of pipes using the USGS Quad overlayed by the Windham property tax maps as a template. Phase 1 as defined by the project team.
4. Drawing used for sewer collection system quantity take-off is a GIS drawing.

	Unit	Phase 1
Gravity Sewer	LF	159,115 lengths calculated using GIS map
Force Main	LF	50,000 lengths calculated using GIS map

Identification of Unit Cost Items	Unit	Unit Cost
Gravity Sewers	LF	\$175
Forcemains	LF	\$150
Forcemain and gravity common trench	LF	\$325
Small Pump Stations (<75 gpm)	EA	\$150,000
Medium Pump Stations (75-200 gpm)	EA	\$350,000
Large Pump Station (>200 gpm)	EA	\$600,000

Phase 1 Collection System Cost Estimate	Unit	Quantity	Unit Cost	Total Cost
Gravity Sewers	LF	159,115	\$175	\$27,845,125
Forcemains	LF	50,000	\$150	\$7,500,000
Small Pump Stations	EA	4	\$150,000	\$600,000
Medium Pump Stations	EA	3	\$350,000	\$1,050,000
Large Pump Station	EA	1	\$600,000	\$600,000
<b>Subtotal Construction Cost</b>				<b>\$37,595,125</b>



**COMMITMENT & INTEGRITY  
DRIVE RESULTS**

41 HUTCHINS DRIVE  
PORTLAND, MAINE 04102  
TEL. (207)774-2112

CLIENT Windham  
PROJECT Sewer Study Amendment  
DESIGNED BY KMC DATE 7/22/10  
CHECKED BY BSS DATE 7/22/10  
PROJECT NO. 203363.04

Transport to WGRWPCF Cost Estimate	Unit	Quantity	Unit Cost	Total Cost	Windham Cost (5)
Forcemain (1)	LF	28,670	\$150	\$4,300,560	\$4,300,560
Gravity Sewer (2)	LF	7,181	\$325	\$2,333,760	\$1,166,880
Gravity Sewer (3)	LF	2,482	\$175	\$434,280	\$217,140
Gravity Sewer (4)	LF	3,907	\$100	\$390,720	\$195,360
E. Bridge Pump Station Upgrades	LS	1	\$600,000	\$600,000	\$300,000
<b>Subtotal Construction Cost</b>					<b>\$6,179,940</b>

(1) We assumed that the cost of forcemain that is used solely by Windham would be Windham's responsibility, even if located in Westbrook. This line item is for the forcemain from Study Area to the future Prides Corner pump station.

(2) There is a hill after the future Prides Corner pump station and prior to the East Bridge pump station. We assumed that the future Prides Corner pump station would not re-pump all of Windham's wastewater, rather the Prides Corner pump station and Windham pump station would share a common force main from this point until gravity flow can be achieved. Therefore we assumed cost sharing of 50% for joint use piping from Prides Corner to the East Bridge pump station. This line item is for the portion of common trench gravity and pump station to get over the last hill.

(3) This line item is for the new gravity pipe to the existing Westbrook gravity pipe.

(4) This line item is for increasing capacity of Westbrook existing sewer to East Bridge Pump Station using alternative technology.

(5) This column represents the construction costs Windham would be responsible for assuming the 50% cost sharing of jointly used systems.

Summary of Windham Total Project Costs for Phase 1	
Item	Cost
Collection System	\$37,600,000
Transport to WGRWPCF	\$6,200,000
WGRWPCF Upgrade (1)	\$4,600,000
Subtotal Construction Cost	\$48,400,000
Construction Contingency (20%)	\$9,700,000
Design Engineering, Permitting, and Construction Engineering (20%)	\$9,700,000
<b>TOTAL PROJECT COST</b>	<b>\$67,800,000</b>

(1) Cost estimate details for WGRWPCF Upgrade not shown here.

# Portland Water District

Comprehensive Annual  
Budget Report  
Fiscal Year 2010  
Portland, Maine

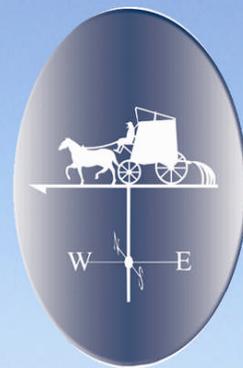


Photo: McNevin

# Portland Water District



**Administrative Office**  
225 Douglass Street  
Portland, ME 04101

## **Board of Trustees**

**David N. Haskell**  
President  
Representing Westbrook

**John E. Brady**  
South Portland  
Cape Elizabeth

**Louise G. Douglas**  
Raymond  
Windham

**Mark C. Duval**  
South Portland  
Cape Elizabeth

**John W. Emerson, Sr**  
Gorham

**Gary W. Libby**  
Portland

Portland

**Gary S. Lorfano**

**William M. Lunt III**  
Cumberland  
Falmouth

**David Margolis-Pineo**  
Portland

**James A. Willey**  
Portland

## **Vacancy - Portland**

---

**Ronald Miller**  
General Manager

**Donna Katsiaficas**  
Corporate Counsel, Board Clerk

**Christopher Crovo**  
Executive Director of Asset Management and Planning

**David Kane**  
Executive Director of Administration, Board Treasurer

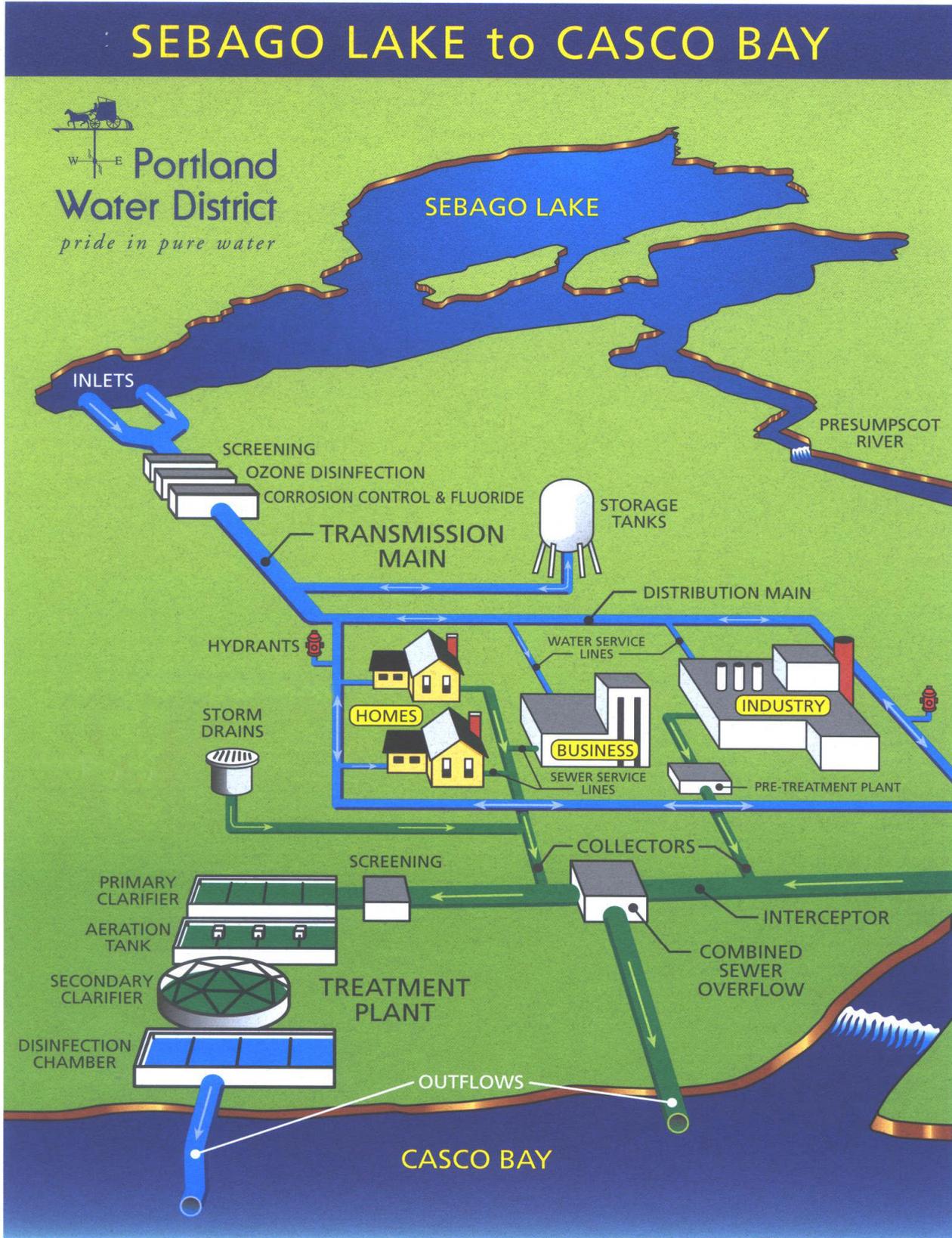
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# Overview of the Water and Wastewater System

The diagram provides a simplified schematic of the District system with common infrastructure terms.





Ronald Miller  
General Manager

## Portland Water District

F R O M   S E B A G O   L A K E   T O   C A S C O   B A Y

October 26, 2009

To the members of the Board of Trustees,

On behalf of the entire Management Team, I'm pleased to submit for your consideration the Portland Water District's Comprehensive Annual Budget Proposal for the fiscal year 2010. The document is designed to present the comprehensive financial framework for all District activities over the next twelve months.

As we reflect on the budget for our upcoming 102<sup>nd</sup> year, we should reflect too on our past accomplishments, present challenges and opportunities, and future aspirations. Our dedicated staff of 178 employees works every day to ensure tap water is delivered to the 200,000 inhabitants of Greater Portland, to provide adequate water for fire protection, and to treat wastewater before returning it to the environment.

### Watershed Protection

Over a hundred years ago, concerned citizens created the District and set aside the lower bay of Sebago Lake as the source of water for Greater Portland. Since that time, the District has spent significant resources to protect the water source by purchasing 2,500 acres of surrounding land and creating a robust watershed protection program. The 2010 budget includes an Environmental Services staff of eight with an operating budget of more than \$900,000 to maintain the excellent water source. Since Sebago is a multi-use lake and water quality is affected by activities in remote parts of the watershed, staff will continue to focus in 2010 on collaborative efforts to encourage lake stewardship.

### Water Treatment

In 1993, the Environmental Protection Agency granted the District a waiver to its rule that generally requires filtration of surface water supplies. The waiver was granted because of our excellent raw water quality and our strong watershed protection program. Although not filtered, our raw water is disinfected by an ozone treatment process. A recently adopted EPA rule mandates that utilities with unfiltered surface water supplies install a second treatment process for additional protection by 2012. In the upcoming year, the District will perform a pilot study of an ultraviolet treatment process at a cost of \$200,000 and will pursue an extension until 2014 for final construction.

### Water Operation

Water is distributed through a system of 1,000 miles of water mains, 3 major pump stations, and 9 storage facilities. Infrastructure age, cold winter temperatures and underground location of many of our assets challenge staff to operate and maintain the system with minimal disruption. A 2003 master plan identified \$175 million of distribution system needs over 20 years. The Board of Trustees has since committed additional resources to replace aging water main infrastructure. That commitment has reduced mains breaks to about 150 per year and has begun to address the coming bubble of mains reaching the end of their useful life.

Preface V



In 2009, the District received \$4.5 million of funding from the American Recovery and Reinvestment Act (ARRA) for distribution system improvements. The ARRA also provided funding for upcoming state and municipal projects, many of which will obligate PWD to relocate or renew our infrastructure with our own funding.

### Wastewater Operations

The District's wastewater staff manages an interceptor system consisting of 90 miles of pipe and 63 pump stations to deliver a combined average of 23 million gallons of wastewater daily to our four treatment facilities. Three of the facilities were constructed in the mid 1970s and have needed significant renovations. Major upgrades have been made recently at our wastewater treatment plants in Portland and Westbrook, and our pump stations at India Street in Portland, Cottage Place and East Bridge in Westbrook, and a number of smaller pump stations throughout our service territory. Continued efforts to renovate aging infrastructure in 2010 will include work at the Northeast pump station in Portland. In addition to addressing aging infrastructure, wastewater staff will support Portland and Westbrook in reducing combined sewer overflows in their communities. The District may be impacted by additional stormwater flows delivered to treatment facilities. In Cape Elizabeth, work will begin in 2010 on a \$2.6 million project to expand plant capacity.

### Support Services

Supporting the Environmental, Water and Wastewater Service departments are the Engineering and Administrative Service departments. Those departments provide engineering, computer system, financial, employee relations and customer services. Current challenges these departments are addressing include:

- **Infrastructure Assets.** PWD has adopted an asset management philosophy and has developed the data systems to support it. In 2010, the data focus will be on digitizing the location of customer associated assets such as water service lines and meters.
- **Customer Service Options.** The District will give customers 24/7 access to a variety of common transactions through telephonic and on-line tools.

---

## **Budget Highlights**

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### **NEW INITIATIVES**

- Pilot ultraviolet treatment of drinking water with planned \$10-15 million full-scale project by 2014.
- Assist member municipalities meet combined sewer overflow requirements through flow monitoring to help optimize CSO investment decisions, and begin planning on how to accept the additional flow at our treatment facilities.

### **CHALLENGES AND ISSUES**

- Volatile economy has impact on operation. A significant portion of budget is impacted by changing commodity and financing costs. Less development limits revenue growth.

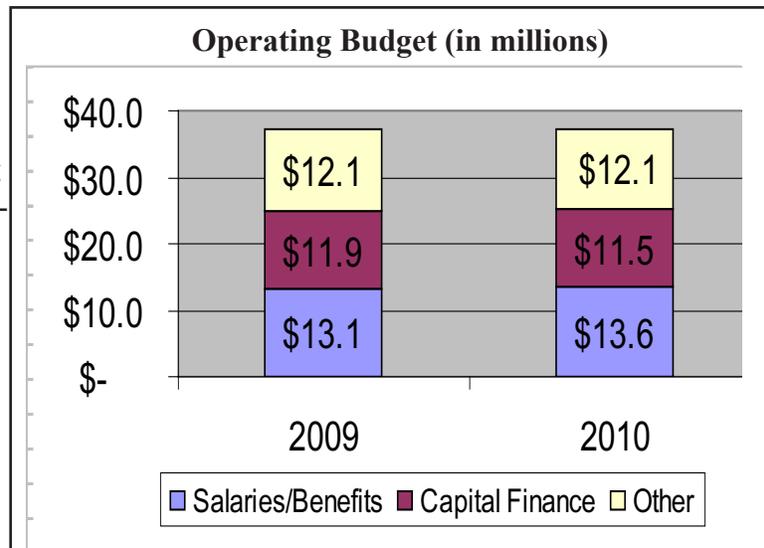
### **BUDGET SUMMARY**

- Total Expenses are \$37.2 million, an increase of \$64,644 or 0.2%
- Total Revenues are \$37.0 million, assumes a 3.5% water rate increase and \$856,764 or 5.6% increase in wastewater assessment
- Capital budget is \$10.5 million. Continues commitments to invest in water mains and wastewater facilities renovations.
- Full-time positions are budgeted at 178. Health insurance and pension benefits increase by \$340,000 or 14%.
- Workforce Planning. In 2010, we will continue to implement technology solutions for knowledge management, continue to invest in staff training, and provide incentives for multi-skill development.

## Financial Overview

These activities are constrained by the financial resources that are available and affordable to our rate payers.

The 2010 budget requests a \$37.2 million operating and \$10.5 capital budget. The operating budget consists of three major expense categories – salaries/benefits (36%), capital finance (31%) and all other materials/services (33%). Salaries/benefits reflects increased health care (\$79,000; 5% higher), pension fund contribution (\$281,000; 45% higher) and a wage adjustment of 1%. Because of the ARRA funding, the 2009 contribution to the water fund capital reserve was reduced by \$500,000. Total other expenses are relatively unchanged from the prior year, but there are significant changes in specific line-items:



- Higher biosolids disposal: wastewater plants have experienced higher amount of solids being delivered causing additional disposal costs.
- Increased contracted services: additional paving costs related to water mains relocation requests from state and local municipalities.
- Increased costs related to monitoring combined sewer overflows. The cities of Westbrook and Portland requested higher levels of CSO flow monitoring support from the District.
- Lower chemicals and energy costs. Declining unit prices and efficiency efforts have resulted in lower costs.

## Customer Impact

Even with a flat budget, a water fund deficit of \$670,000 or 3.5% is projected unless a rate increase is implemented. The proposed budget assumes a 3.5% rate adjustment effective May 1, 2010. The increase is consistent with the Board's intent to adopt small water rate adjustments annually. For a typical customer, the impact is \$10.60 a year or \$0.88 a month.

Assessments to wastewater communities increased by \$849,204 or 5.5%. The increase includes the debt service and related operating costs on capital projects that have been mutually agreed to by the District and municipalities. The assessments, with the exception of Westbrook, are lower than the previously agreed to amounts. In Westbrook, the assessment is \$60,000 or 2% higher primarily due to the decline in septage revenue resulting from limiting summer septage deliveries to address the city's odor concerns.

The 2010 budget guidelines established by the Board of Trustees are met in this budget proposal.

- Operating fund expenses are not increasing greater than inflation,
- Wastewater assessments meet the municipal expectations,
- Full-time positions do not exceed the target, and
- Investment in our infrastructure continues as planned.

Ronald Miller  
General Manager



# Committed To Our Community

Hydrologics promotes water stewardship to over 3,000 students each year.



Portland Water District Board of Trustee President David Haskell presents Alvin Lam with the 2009 DiPietro Memorial Scholarship.



Community groups are encouraged to borrow the new portable water fountain to supply their events with potable water. The fountain is quick and easy to set up and minimizes waste and environmental impacts.

The Sebago Lake Land Reserve, 1,700 acres of watershed land open to the public, continues to see more visitors each year.



PWD's Annual Charity Golf Classic raises \$9,000 for United Way, MaineShare, and Water For People. Together with pledges, PWD and its employees donate over \$25,000 annually to these worthy causes.



**Introduction**

The Portland Water District (PWD) is a quasi-municipality authorized, by its state charter, to provide water service to eleven Greater Portland communities and wastewater treatment and interception services to six of those communities. PWD provides additional wastewater-related services through contracts with the communities. Additional services include sewer billing and collector/storm drain system operations.

Summary of Wastewater Services Provided:

Community	Customers	By Charter:		By Contract:			Billing
		Treatment	Interceptors	Collectors	Storm Drains		
Cape Elizabeth	2,209	Yes	Yes	No	No	Yes	
Cumberland	1,010	No	Yes	Yes	No	Yes	
Falmouth	1,814	No	No	No	No	Yes	
Gorham	1,532	Yes	Yes	Yes	No	Yes	
Portland	16,696	Yes	Yes	No	Peaks Island(only)	Yes	
Scarborough	407	No	No	No	No	Yes	
South Portland	7,619	No	No	No	No	Yes	
Westbrook	4,300	Yes	Yes	No	No	Yes	
Windham	56	Yes	Yes	Yes	No	Yes	

Water service is provided to 52,000 customers. Sebago Lake provides virtually all the water delivered. A network of 1,000 miles of water mains delivers water from Sebago Lake to customers. The system provides fire protection through 4,800 fire hydrants and 2,000 sprinkler systems. Our 178 employees are dedicated to providing quality services and managing \$260 million of assets spread over 140 square miles.

This Budget document describes our operational and financial plans for the upcoming year to meet our chartered responsibilities and our role to protect public health, safety and the environment.

The document is organized into the following sections:

<b>Section:</b>	<b>Content:</b>
Introduction	History and Summary of 2010 Budget
Strategic Plan	Strategic Plan and Other Long-Term Plans
Budget by Fund	Financial/Operational Plans by Fund
Revenue	Water, Wastewater and Other Income
Operating Expenses	Expenses by Categories and Department
Human Resources	Salaries, Benefits and Staffing
Capital Finance	Debt Service and Renewal/Replacement
Capital Expenditures	Summary and Details of Capital Expenditures
Financial Policies	Financial Policies
Appendix	Demographics, Statistics and Glossary

Budget by Fund

**Fund: Wastewater- Westbrook**

**Background**

The Portland Water District’s charter authorizes the District to provide wastewater treatment and interception service to the city. By contract with the city, the district additionally provides utility billing services. Westbrook’s wastewater is treated at the treatment facility located in Westbrook and jointly used by the towns of Windham and Gorham. The city maintains the collection system that transports wastewater from user’s property to the district’s interceptor system.

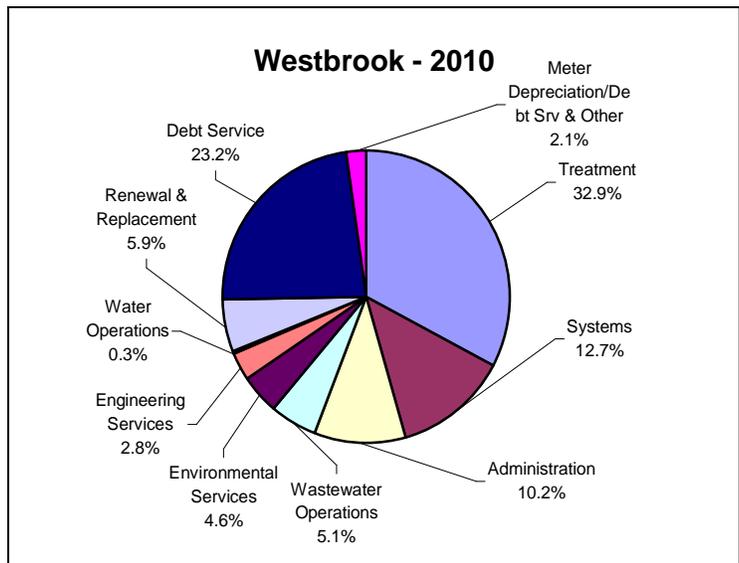
The district estimates the cost to provide the service as documented in the annual budget and assesses the town the estimated cost. The assessment is billed to the city in equal monthly payments. The city determines the system user fees to pay the district’s assessment and any city costs related to the sewer system. By contract with the city, the district includes the sewer user fees, which are based on water consumption, on the monthly water utility bill sent to customers. Sewer user fees collected from users are remitted to the city on a weekly basis.

**2010 Summary**

The proposed 2010 net operating and capital budgets are \$2,533,176 and \$579,333, respectively.

The net operating budget is \$324,206, or 14.8%, higher than the previous year. Items affecting this increase include a rise in operating expense (\$80,193) and debt service (\$65,814) accompanied with drops in other (septage) income (\$108,529) and interest income (\$61,204).

The major capital projects in 2010 include upgrades at the regional wastewater treatment plant that will be financed by \$481,851 in bonds and renewal and replacement funds.



**2010 Detail**

**Revenues**

**Assessment:** The requested assessment of \$2,533,176 is \$520,824 or 25.9 % higher than last year. The city voluntarily remitted an additional \$196,618 in 2009. Taking the voluntary payment into consideration, the city’s assessment increase in 2010 is 14%.

**Other Income:** Income that is primarily Westbrook’s prorated share of septage haulers fees collected at the Westbrook treatment facility. This amount has declined significantly in the budget due to the planned seasonal shutdown of septage receiving due to odor control issues.

**Interest:** The interest earned on funds not expended, including sewer fees collected but not remitted to the municipality. The average interest rates in the 2010 Budget were assumed to be lower than those in the previous budget.

## Budget by Fund

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### **Fund: Wastewater- Westbrook**

Operating expenses consists of the following items:

**Treatment Expense:** Costs related to operations of the treatment facility will rise 8.8%. The facility's costs are higher due to biosolids (due to higher volume) and chemicals (due to higher flow) decreases in 2010. Costs for heating oil dropped significantly due to an almost 50% drop in per unit cost. There will also be higher costs for labor and benefits due to a shift towards more direct charges to facility and away from allocated costs. This is offset by reductions in allocated Wastewater Operations costs (see below). In addition, the percentage of costs assigned to Westbrook from the regional treatment facility grew from 85.7% in 2009 to 86.7% in 2010 due to higher projected flows.

**System Expense:** Costs related to operating and maintaining the pump station and interception system. Costs are projected to increase by 3.4%. The increase in operating expense in this area includes additional flow monitoring requested by the city and higher costs for water and power related to screens recently installed at the wastewater pump stations.

**Administration:** Costs related to billing, customer service, information services, financial services, employee services and general district management. The budget increase in this area is due to rise in the percent of costs allocated to this area; the shift was due to the higher overall costs in this fund.

**Wastewater Operations:** Costs related to managing the operation department. This budget was reduced in 2010 due a shift of budgeted dollars away from allocated cost to more direct charges to treatment.

**Environmental Services:** Costs relating to the operation of the District's laboratory. This cost was relatively unchanged.

**Engineering Services:** Costs related to engineering and instrumentation. The increase in the 2010 Budget was related to the inclusion of facility costs for this area that were omitted from the prior year budget.

**Water Operations:** These costs involve work maintaining and servicing meters. The reduction in this area was the result of a shift in efforts to other areas.

Renewal and Replacement: The annual contribution to a fund to finance smaller capital projects. The requested contribution is \$155,202. The projected balance of the fund at 12/31/10 is \$480,711.

Debt Service: The annual principal and interest payments on bonds issued to finance capital projects. As noted earlier, debt service will increase due to bonding related to headworks/screens work.

Meter Depreciation/Debt Serv & Other: This is the allocation of the fund's portion of depreciation and debt service (primarily meters) charged to both water and wastewater funds.

## Budget by Fund

### Fund: Wastewater- Westbrook

	2008	2009 Actual	2009	2010	2009 vs 2010 Budget	
	Actual	Jan-Jun	Budget	Budget	Diff	Diff %
Assessment Income	1,800,540	1,006,176	2,012,352	2,533,176	520,824	25.9%
Other Income	179,945	34,521	165,086	56,562	(108,524)	-65.7%
Interest	91,818	14,457	100,305	39,096	(61,209)	-61.0%
FEMA Reimbursement	2,718	1,041	0	0	0	n/a
Revenue	2,075,021	1,056,195	2,277,743	2,628,834	351,091	15.4%
Operating Expense	1,621,494	887,126	1,727,695	1,807,888	80,193	4.6%
Renewal & Replacement	155,202	77,601	155,202	155,202	0	0.0%
Debt Service	338,652	247,311	544,644	610,458	65,814	12.1%
Meter Depreciation/Debt Srv & Other	34,690	27,035	46,820	55,286	8,466	18.1%
Expense	2,150,038	1,239,073	2,474,361	2,628,834	154,473	6.2%
Surplus (Deficit)	-75,017	-182,878	-196,618	0		
Surplus Transfer to R&R	0	0	0	-53,110		
Carryforward Surplus (Deficit)	1,014,229	939,212	948,021	750,697		
Period End Surplus (Deficit)	939,212	756,334	751,403	697,587		
<b>Operating Expenses by Category:</b>						
Treatment	801,342	434,814	795,215	865,131	69,916	8.8%
Westbrook Only Systems	160,621	90,150	179,950	175,985	(3,965)	-2.2%
Joint W/G/W Systems	127,302	80,501	143,995	158,847	14,852	10.3%
Total Systems	287,923	170,651	323,945	334,832	10,887	3.4%
Total Direct Expense	1,089,266	605,465	1,119,160	1,199,962	80,802	7.2%
Administration	241,367	124,406	242,844	269,133	26,289	10.8%
Wastewater Operations	148,406	67,238	173,420	135,351	(38,069)	-22.0%
Environmental Services	90,202	61,720	120,903	120,969	66	0.1%
Engineering Services	46,098	23,717	61,162	74,759	13,597	22.2%
Water Operations	6,156	4,580	10,206	7,712	(2,494)	-24.4%
Total Support Expense	532,229	281,661	608,535	607,926	(610)	-0.1%
Total Operating Expense	1,621,494	887,126	1,727,695	1,807,888	80,192	4.6%
<b>Direct Expense Breakout:</b>						
Purchased Power	241,571	135,511	244,481	254,519	10,039	4.1%
Salaries/Wages	257,364	139,583	235,390	243,699	8,309	3.5%
Biosolids Disposal	221,709	119,347	211,262	243,275	32,013	15.2%
Contracted Srvs	80,761	23,202	98,546	110,089	11,543	11.7%
Employee Benefits	98,118	55,420	96,891	107,609	10,718	11.1%
Chemicals	55,591	42,583	71,436	87,199	15,763	22.1%
Materials/Supplies	37,705	21,509	50,111	46,111	(4,000)	-8.0%
Tele/Oth Utilities	29,161	18,245	27,270	40,500	13,230	48.5%
Transportation	33,774	17,345	34,626	31,804	(2,823)	-8.2%
Heat/Fuel Oil	23,562	29,021	41,383	22,879	(18,504)	-44.7%
Insurance	3,923	3,137	3,215	7,633	4,418	137.4%
Other Expense	6,026	562	4,549	4,645	96	2.1%
Total Direct Expense	1,089,266	605,465	1,119,160	1,199,962	80,802	7.2%

## Budget by Fund

### Fund: Wastewater- Westbrook

#### Operation Summary

#### Wastewater Treatment

The wastewater generated in the City of Westbrook is pumped to the Westbrook/Gorham/Windham Regional WWTF on Park Road. Flows from the Little Falls section of Gorham and the Town of Windham, including the Maine Correctional Center, are now being conveyed to this facility. The table below depicts 2008 flows from each contributing community. The chart illustrates capacity used for each community and total plant capacity being used based on a design flow of 4.54 MGD.

Municipality (Design Flow)	2008 Flow *1	% of 2008 Flow	Reserved Capacity	% of Capacity *2
Westbrook (76.4%)	3,537,161 gpd	89.89 %	3,468,560 gpd	102.0 %
Gorham (21%)	346,091 gpd	8.80 %	953,400 gpd	36.3 %
Windham (2.6%)	51,734 gpd	1.31 %	118,040 gpd	43.8 %
Total Plant Flow	3,934,986 gpd	100.00 %	4,540,000 gpd	86.7 %

\*1 - Gorham and Windham Little Falls flow is the average daily flow from 5/1/08 to 12/31/08 that was processed at the Westbrook/Gorham/Windham Regional WWTF.

\*2 - 2008 was an extremely wet year that resulted in Westbrook using more than it's designated design capacity. The charter allows for this temporary use of excess capacity during extreme circumstances.

Various projects designed to upgrade this 30 year old facility are slowly being phased in. Despite the age of the plant, the operational results have been excellent. The following table depicts some of the key parameters that are monitored at the facility.

Parameter	DEP Limit	Facility Average
<b>Biological Oxygen Demand (BOD) (lbs/day) *3</b>	<b>1,137 lbs/day</b>	<b>319 lbs/day</b>
<b>Total Suspended Solids (TSS) (lbs/day) *4</b>	<b>1,137 lbs/day</b>	<b>346 lbs/day</b>
<b>Biosolids Disposed</b>	<b>N/A</b>	<b>373 wet tons/month</b>

\*3 - Measure of organic material

\*4 - Measure of suspended material

#### Wastewater Conveyance – interceptors and pumping stations

Parameter	2008 Estimated	2009 Estimated
<b>Preventive Work Orders</b>	<b>66</b>	<b>60</b>
<b>Corrective Repair Work Orders</b>	<b>28</b>	<b>20</b>
<b>Wet Wells Cleaned</b>	<b>3</b>	<b>3</b>
<b>Debris Removed (tons)</b>	<b>5</b>	<b>2</b>
<b>Dry Weather Overflows</b>	<b>0</b>	<b>0</b>

#### 2009 Other Highlights

- Screen installation at Cottage Place & East Bridge Street pumping stations was completed. Pump stations have not experienced a plugged pump since the February start-up. This has allowed the pump stations to maximize the flow to the treatment plant during wet weather, often as high as 17 million gallons daily.
- Along with the City of Westbrook, submitted an update to the CSO Long-Term Control Plan to MEDEP. Assisted city staff will placement of flow monitors for ongoing I&I and flow studies.
- 5,000' of interceptor line was cleaned as scheduled. Condition assessment of 2,500 feet of sewer lined will be completed in 2009.
- Plant upgrades have continued on systems that include the filtrate pumps, chlorine contact gates and sludge pumps.
- The receipt of septage at the treatment plant was suspended during summer months to eliminate the source of odors.

#### 2010 Work Plan

- Year three condition assessment, for one tenth of the buried pipe, is being planned for 2010. This will involve CCTV inspection and condition rating of approximately 2,500 feet of sewer line.

## Budget by Fund

- Support of the City of Westbrook’s ongoing CSO Long-Term Control Plan will continue.
- Treatment plant upgrades to include automation and process gates will continue.

### Fund:        **Wastewater- Westbrook**

#### Capital Summary

A five-year capital plan is updated each year. The projects are prioritized based on operational needs and financing availability.

Capital project expenditures are financed by issuance of bonds or distribution from the renewal and replacement fund. Wastewater bonds are usually issued through the Maine Municipal Bond Bank and utilize the state revolving loan fund (SRF) for eligible projects, which provides a 2% below market interest rate. The renewal and replacement fund is appropriated \$155,202 from the annual assessment. In 2010, a \$53,110 transfer of operating surplus to the renewal and replacement fund will be made in compliance with the district’s renewal and replacement policy.

The planned projects are listed below:

Westbrook CSO Program – 29: Warren Avenue CSO ADS Flow meter (\$20,000).

Regional Treatment Plant Headworks – 167: Aeration basin flow split (\$262,500), Aeration system automation (\$47,500) and Climber screen replacements (\$200,000). The projects will be financed through a wastewater bond in 2010. Westbrook will pay a prorated share of the costs (\$339,660).

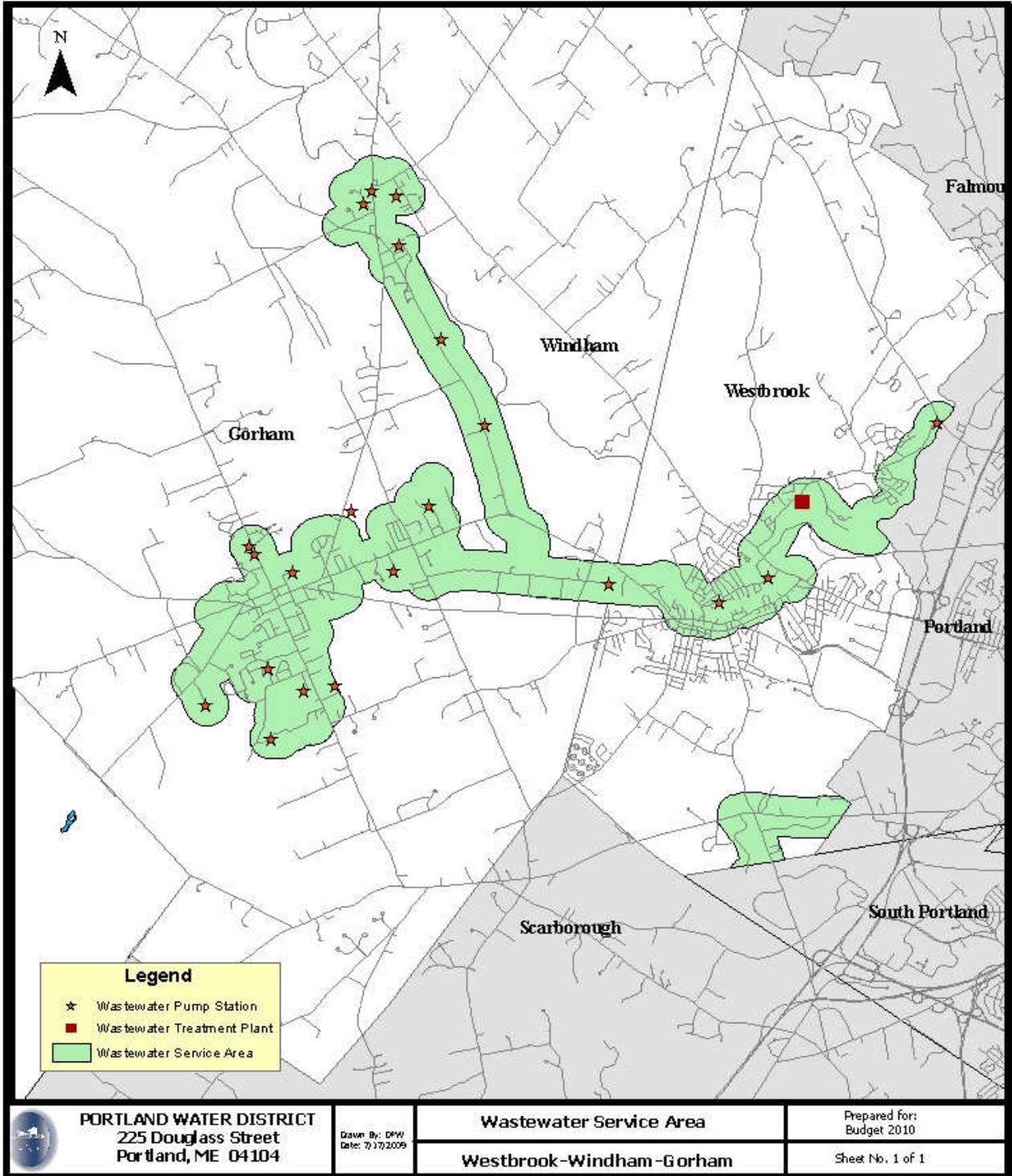
Regional Treatment Plant Repair – 411 / 416: Energy efficiency projects (\$26,000) and equipment failure replacements (\$60,000). The projects will be financed through the renewal and replacement fund. Westbrook will pay a prorated share of the costs (\$68,065).

SCADA payment: Supervisory Control and Data Acquisition (SCADA) equipment was installed in all wastewater facilities in 2003 and financed with a 7 year bond issue. The principal for this bond is paid from the renewal and replacement fund. 2010 is the 7<sup>th</sup> and final yearly installment of this payment process.

<b>Capital Fund:</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
	<b><u>Actual</u></b>	<b><u>Projected</u></b>	<b><u>Budget</u></b>
Beginning of Year Fund Balance	\$684,416	\$622,895	\$368,546
Source of Funds:			
Bond Proceeds - current year	183,360	3,507,195	481,851
Renewal and Replacement Contribution	155,202	155,202	155,202
Bond Discount Credit	1,764	1,508	1,335
Operating Surplus Transfer			53,110
Capital Expenditures:			
Westbrook CSO program - 29		15,000	20,000
Pump Station Projects – 74			
Treatment Plant – Headworks – 167	80,502	3,557,957	339,660
Treatment Plant – Emergency Generator	183,360		
Joint System Projects- 411/416	126,813	335,880	68,065
Mobile Pumping Equipment – 121	1,500		
SCADA Payment	9,672	9,417	9,417
Bond Contingency			142,191
End of Year Fund Balance	<u>\$622,895</u>	<u>\$368,546</u>	<u>\$480,711</u>

Fund: Wastewater- Windham

# Westbrook Windham Gorham Wastewater Service Area



## Operating Expenses

### Wastewater Operations

Wastewater Operation: Westbrook Regional (B4)

Financial Summary:

Expense Type:	2008	June 09	2009	2010	Change 08 to 10		Change 09 to 10		
	<u>Actual</u>	<u>Actual</u>	<u>Budget</u>	<u>Budget</u>	\$	%	\$	%	
Salaries/Wages	258,199	134,029	263,510	235,541	-22,658	-8.8%	-27,970	-10.6%	
Employee Benefits	102,086	54,227	107,021	105,406	3,320	3.3%	-1,615	-1.5%	
Biosolids Disposal	263,495	140,017	245,996	280,594	17,099	6.5%	34,598	14.1%	
Chemicals	63,839	48,769	81,594	98,815	34,976	54.8%	17,221	21.1%	
Contracted Svcs	40,663	12,541	43,020	43,328	2,665	6.6%	308	0.7%	
Heat/Fuel Oil	25,251	31,259	44,000	23,820	-1,431	-5.7%	-20,180	-45.9%	
Insurance	2,331	1,098	2,284	2,353	22	0.9%	69	3.0%	
Materials/Supplies	39,235	12,706	47,934	44,800	5,565	14.2%	-3,134	-6.5%	
Other Expense	6,866	728	6,600	6,650	-216	-3.1%	50	0.8%	
Purchased Power	168,495	87,456	165,945	163,724	-4,771	-2.8%	-2,221	-1.3%	
Tele/Oth Utilities	33,920	13,522	30,520	29,932	-3,988	-11.8%	-588	-1.9%	
Transportation	<u>9,323</u>	<u>3,865</u>	<u>12,366</u>	<u>8,606</u>	<u>-717</u>	<u>-7.7%</u>	<u>-3,760</u>	<u>-30.4%</u>	
	1,013,703	540,216	1,050,791	1,043,569	29,866	2.9%	-7,222	-0.7%	
Programs:									
44 - WW Pumping	772	-	26,836	-	-772	-100.0%	-26,836	-100.0%	
45 - WW Treatment	950,888	504,024	915,118	985,614	34,726	3.7%	70,496	7.7%	
98 - Training	9,288	2,615	14,337	14,808	5,520	59.4%	472	3.3%	
99 - Administration	<u>52,755</u>	<u>33,576</u>	<u>94,501</u>	<u>43,146</u>	<u>-9,608</u>	<u>-18.2%</u>	<u>-51,354</u>	<u>-54.3%</u>	
	1,013,703	540,216	1,050,791	1,043,569	29,866	2.9%	-7,222	-0.7%	
Funds:									
10 - General/Alloc	268	149	0	0	-268	-100.0%	0	n/a	
50 - WW Gen	61,775	36,042	108,837	57,955	-3,820	-6.2%	-50,882	-46.8%	
53 - WW Cumberland	451	0	0	0	-451	-100.0%	0	n/a	
61 - WW Gorham Village	64	0	0	0	-64	-100.0%	0	n/a	
62 - WW Westbrook	258	0	13,418	0	-258	-100.0%	-13,418	-100.0%	
64 - WW Joint Westbrook	937,503	503,751	928,536	985,614	48,111	5.1%	57,078	6.1%	
65 - WW Joint LF	<u>13,385</u>	<u>273</u>	<u>0</u>	<u>0</u>	<u>-13,385</u>	<u>-100.0%</u>	<u>0</u>	<u>n/a</u>	
	1,013,703	540,216	1,050,791	1,043,569	29,866	2.9%	-7,222	-0.7%	
Staffing Trend:									
Full Time Employees	5	5	5	5	0	0.0%	0	0.0%	

## **APPENDIX H: HISTORIC PRESERVATION COMMISSION INVENTORY**



MAINE HISTORIC PRESERVATION COMMISSION  
55 CAPITOL STREET  
65 STATE HOUSE STATION  
AUGUSTA, MAINE  
04333

ANGUS S. KING, JR.  
GOVERNOR

EARLE G. SHETTLEWORTH, JR.  
DIRECTOR

October 1, 2002

Woodard & Curran  
Attn: Paul Rodriquez  
41 Hutchins Drive  
Portland, Maine 04102

re: Historic and Archaeological Resource Information for the Town of Windham

Dear Mr. Rodriquez:

In response to your recent request that the Maine Historic Preservation Commission provide you with inventory data for historic and archaeological resources within the municipal boundaries of Windham, enclosed are three separate forms which summarize the Commission's current level of information.

The forms cover the three classes of resources which are involved: prehistoric archaeological sites, historic archaeological sites, and historic buildings/structures/objects.

Note that each form specifies the name of a Commission specialist for the resource involved. If you should have questions concerning any of these inventory lists, please do not hesitate to call the appropriate contact person.

Sincerely,

  
Earle G. Shettleworth, Jr.  
Director

Enc.



# MAINE HISTORIC PRESERVATION COMMISSION

## Inventory Data for Municipal Growth Management Plans

Resource:  Prehistoric Archaeological Sites: Arthur Spiess  
 Historic Archaeological Sites: Leon Cranmer  
 Historic Buildings/Structures/Objects: Kirk Mohney

Municipality: Windham

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Inventory data as of September, 2002 :

Twenty-three (23) sites known, many located on the shores of Sebago Lake and Sebago Lake Basin.

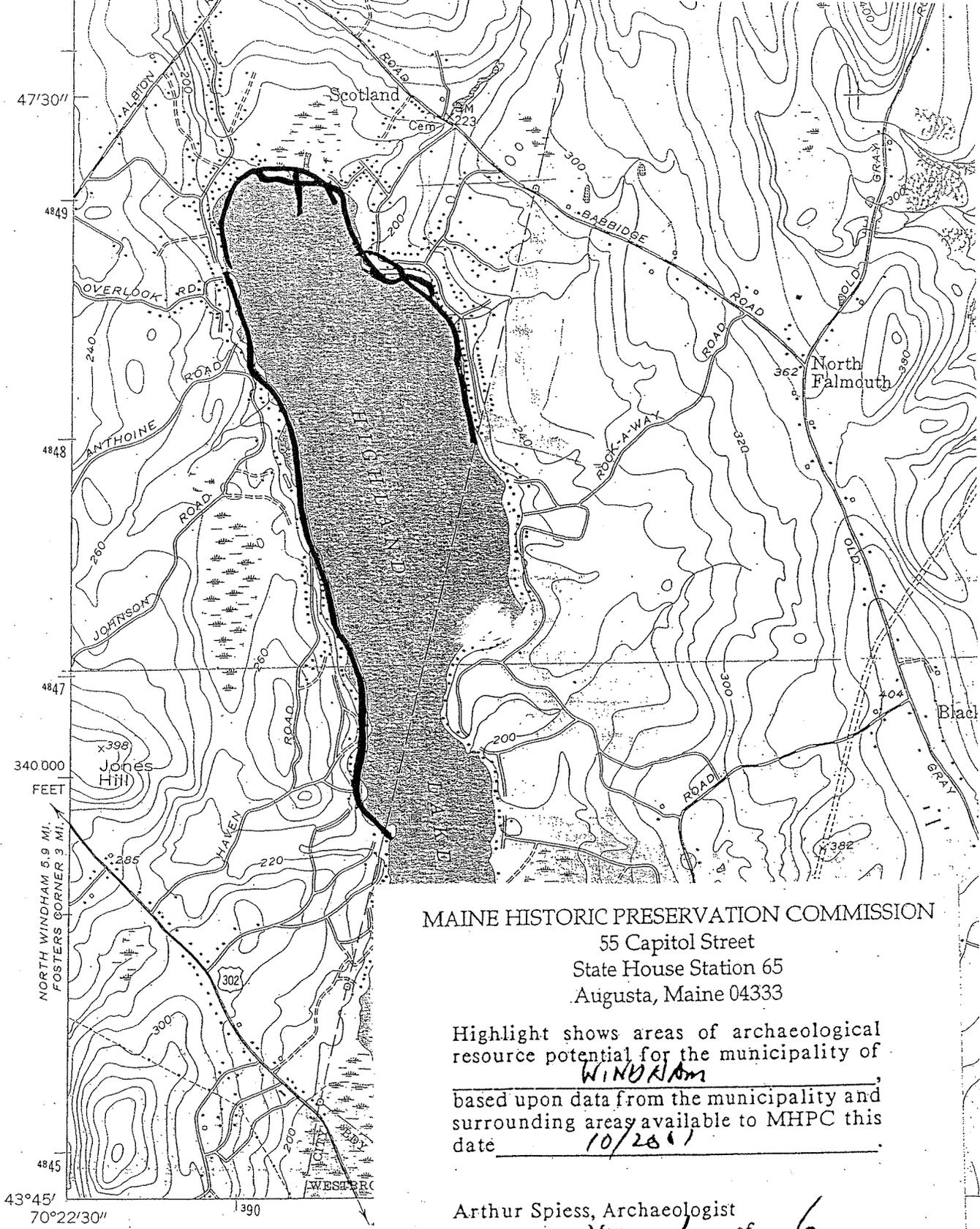
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Needs for further survey, inventory, and analysis:

Presumpscot River and Sebago Lake shores have been surveyed for hydroelectric relicensing. Highland Lake, Little Sebago Lake and Outlet Brook shores need survey.

Pleasant River needs survey.

2468  
L755  
130d



NORTH WINDHAM 5.9 MI.  
FOSTERS CORNER 3 MI.

MAINE HISTORIC PRESERVATION COMMISSION  
55 Capitol Street  
State House Station 65  
Augusta, Maine 04333

Highlight shows areas of archaeological resource potential for the municipality of WINDHAM, based upon data from the municipality and surrounding areas available to MHPC this date 10/28/61.

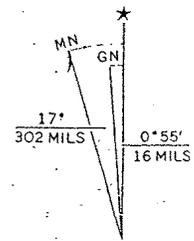
Arthur Spiess, Archaeologist  
Map 1 of 6

(GORHAM)  
6971 III NW

Mapped by the Army Map Service  
Edited and published by the Geological Survey  
Control by USGS, USC&GS, and Maine Geodetic Survey  
Culture and drainage in part compiled from aerial photographs taken 1943. Topography by planetable surveys 1941  
Field check 1944  
Culture revised by the Geological Survey 1957

Polyconic projection: 1927 North American datum  
10,000-foot grid based on Maine coordinate system, west zone  
1000-meter Universal Transverse Mercator grid ticks, zone 19, shown in blue

Unchecked elevations are shown in brown



UTM GRID AND 1970 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

# MAINE HISTORIC PRESERVATION COMMISSION

## Inventory Data for Municipal Growth Management Plans

Resource:    \_\_\_ Prehistoric Archaeological Sites: Arthur Spiess  
              X Historic Archaeological Sites: Leon Cranmer  
              \_\_\_ Historic Buildings/Structures/Objects: Kirk Mohney

Municipality: Windham

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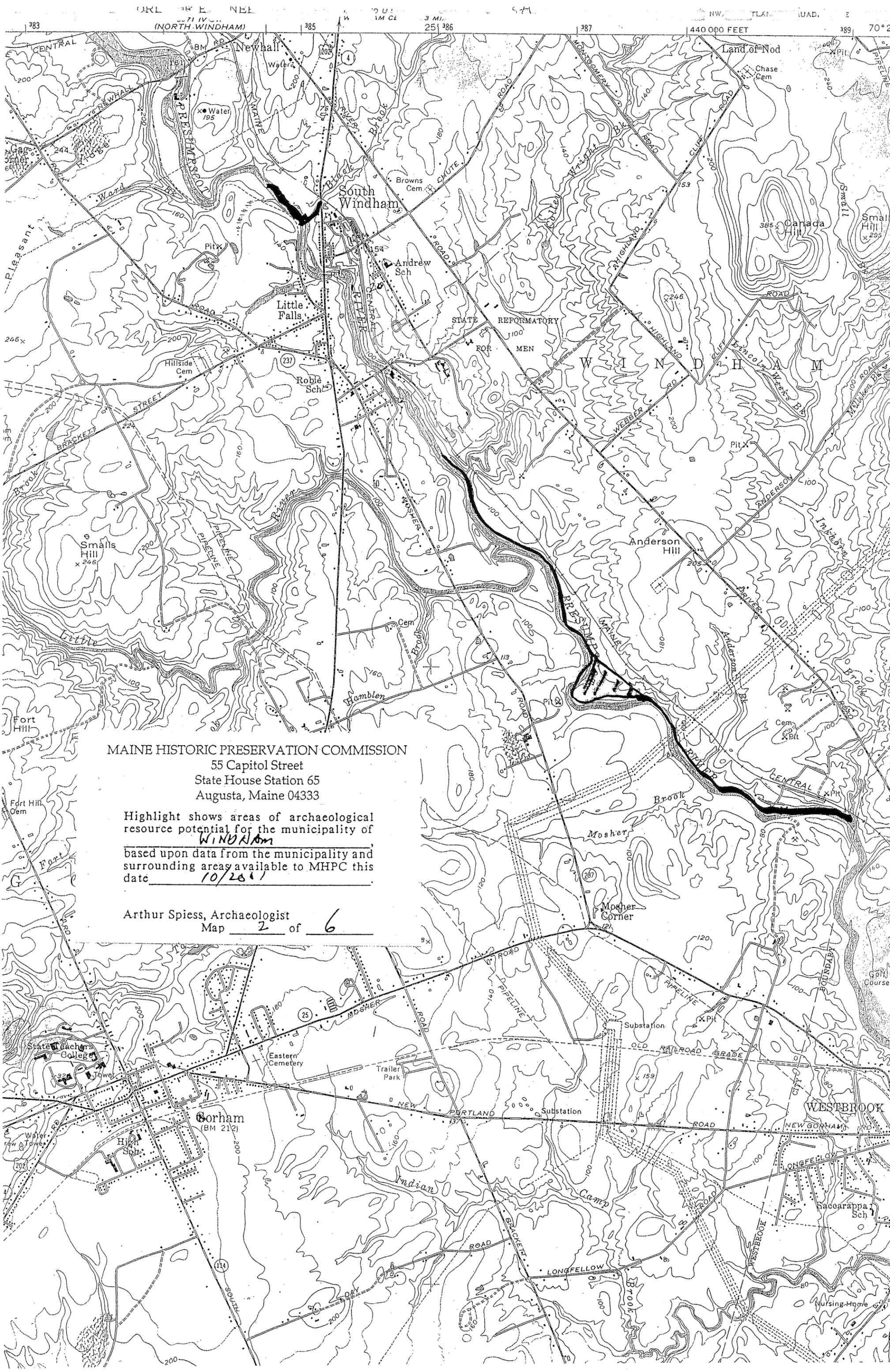
Inventory data as of September 26, 2002 :

ME 483-001 Province Fort, English Stockade Fort  
ME 483-002 Gambo Falls Powder Mill, American Gunpowder Mill  
ME 483-003 Lorenzen Hill, American Domestic/Quarry  
ME 483-004 Great Falls (GR)-I, American School  
ME 483-005 Craig Road-1, American Farmstead  
ME 483-006 Hawks Cemetery, American Cemetery

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Needs for further survey, inventory, and analysis:

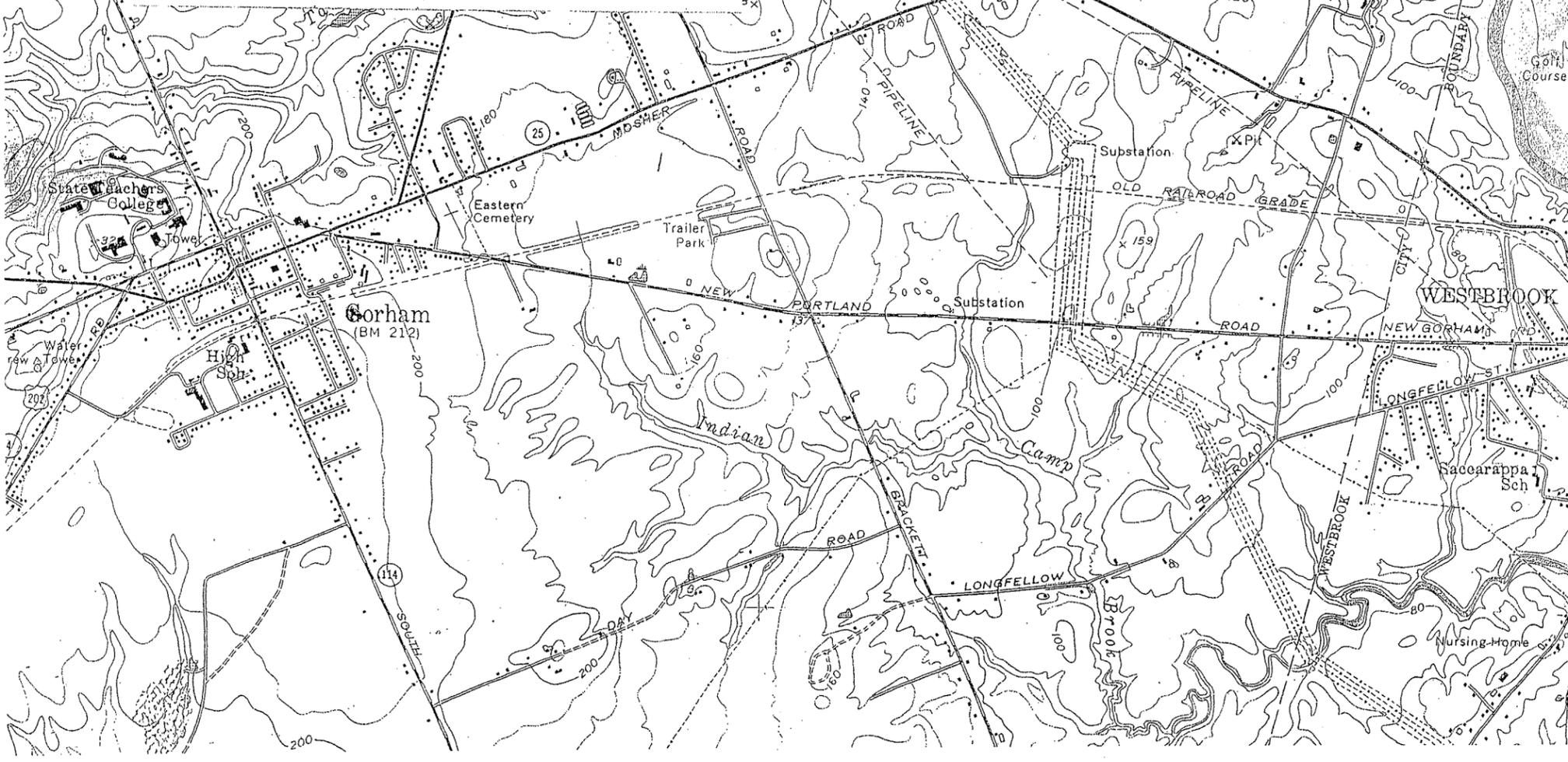
Except for a survey of the gunpowder mill and a survey for a gas pipeline, no other professional survey for historic archaeological sites has been conducted in Windham. Future such fieldwork could focus on the earliest Euro-American settlement, beginning in the late 1730s.



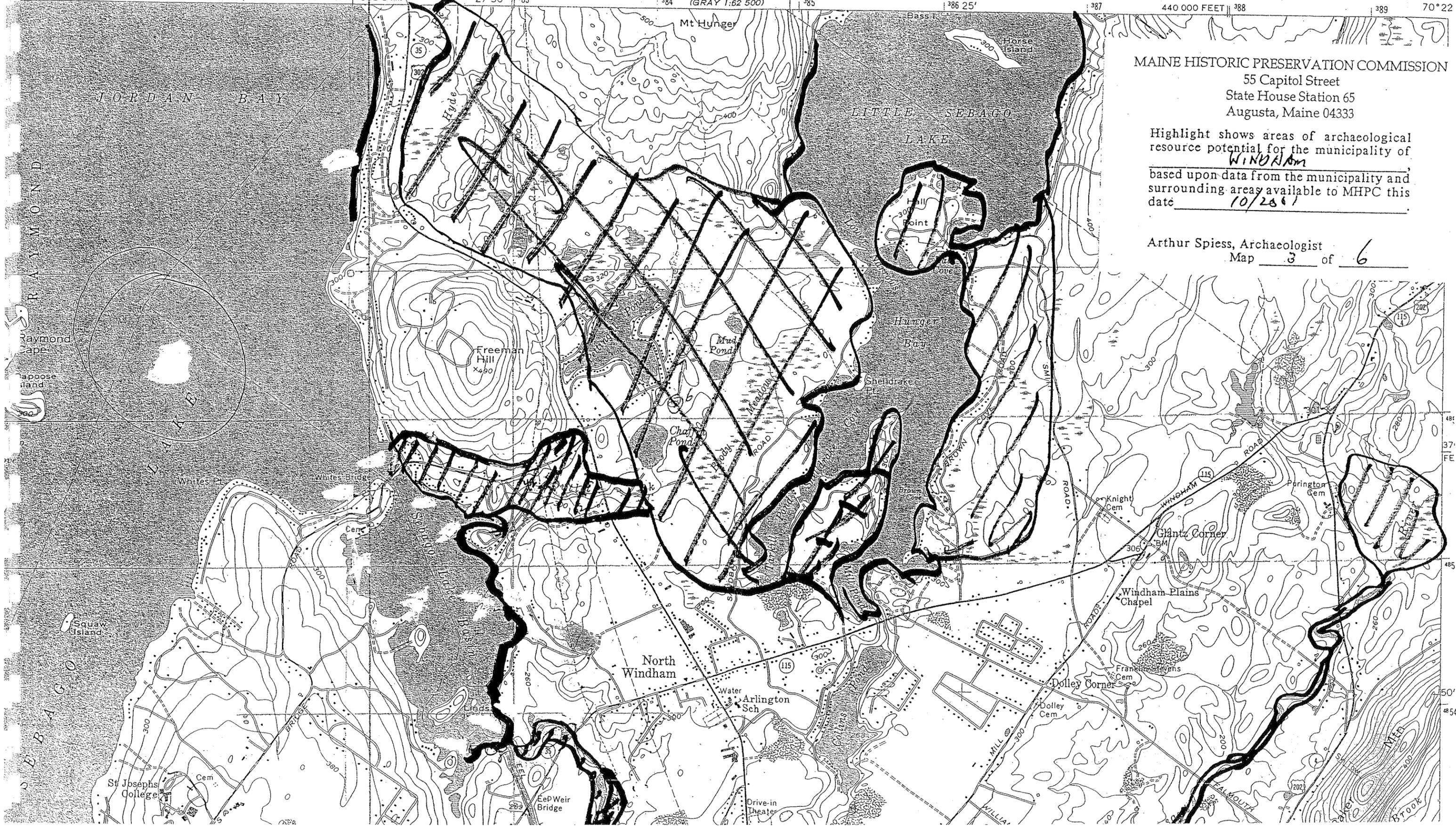
MAINE HISTORIC PRESERVATION COMMISSION  
55 Capitol Street  
State House Station 65  
Augusta, Maine 04333

Highlight shows areas of archaeological resource potential for the municipality of WINDHAM, based upon data from the municipality and surrounding areas available to MHPC this date 10/28/11

Arthur Spiess, Archaeologist  
Map 2 of 6



380000m.E 381 382 383 384 385 386 25' 387 388 389 440 000 FEET 70° 22'



MAINE HISTORIC PRESERVATION COMMISSION  
55 Capitol Street  
State House Station 65  
Augusta, Maine 04333

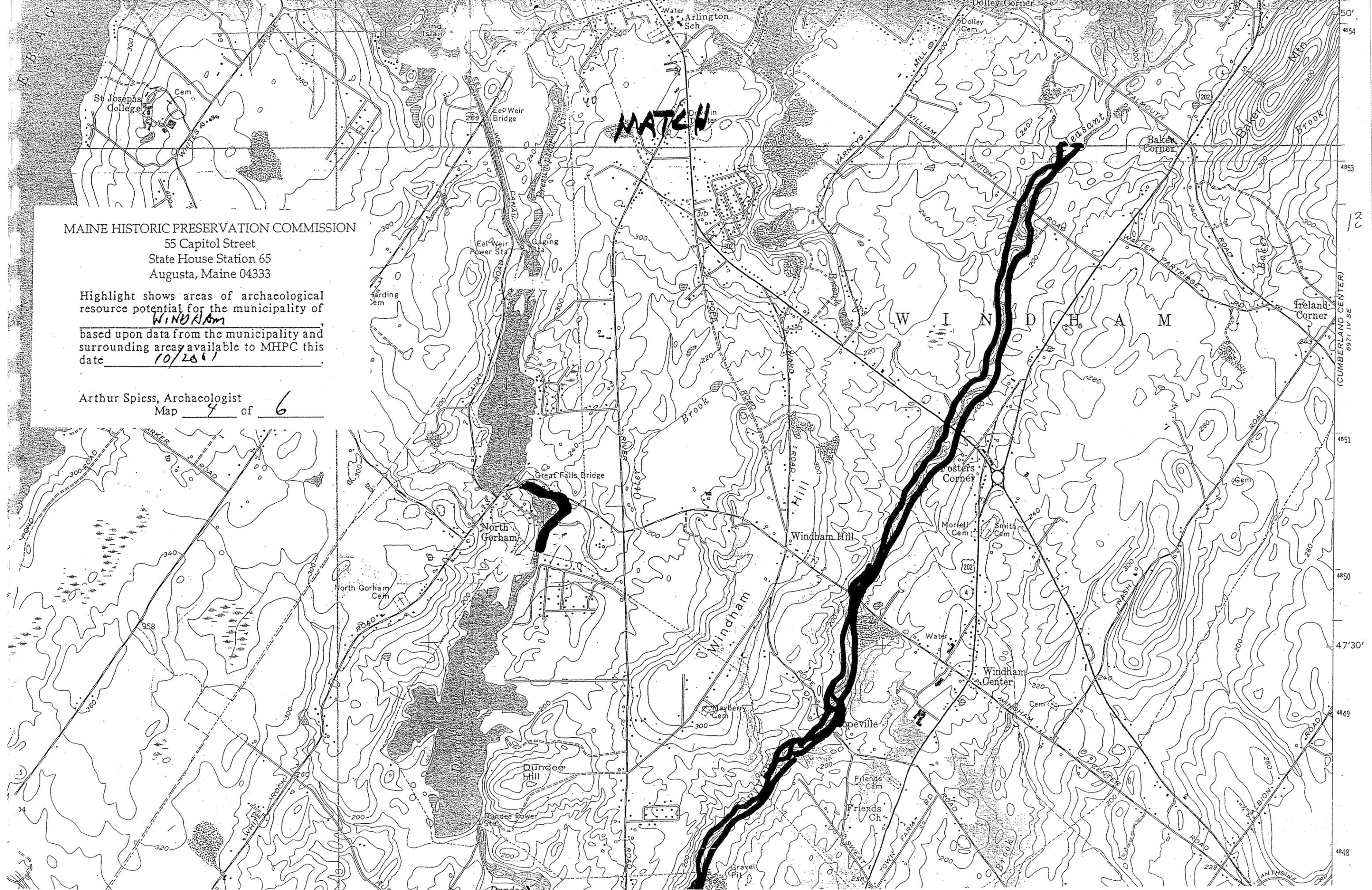
Highlight shows areas of archaeological resource potential for the municipality of WINDHAM  
based upon data from the municipality and surrounding areas available to MHPC this date 10/28/81

Arthur Spiess, Archaeologist  
Map 3 of 6

MAINE HISTORIC PRESERVATION COMMISSION  
55 Capitol Street  
State House Station 65  
Augusta, Maine 04333

Highlight shows areas of archaeological resource potential for the municipality of WINDHAM, based upon data from the municipality and surrounding areas available to MHPC this date 10/28/61.

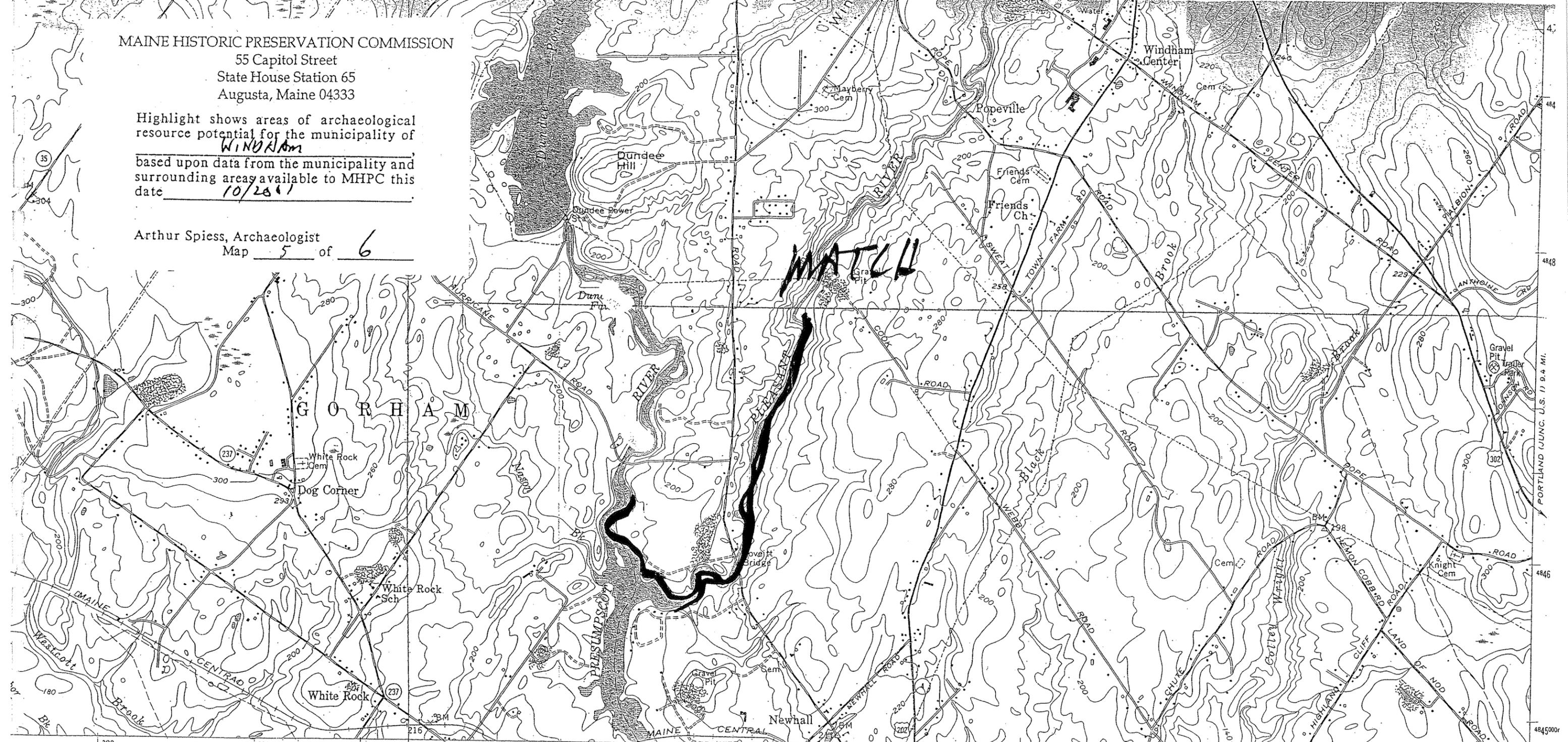
Arthur Spiess, Archaeologist  
Map 4 of 6



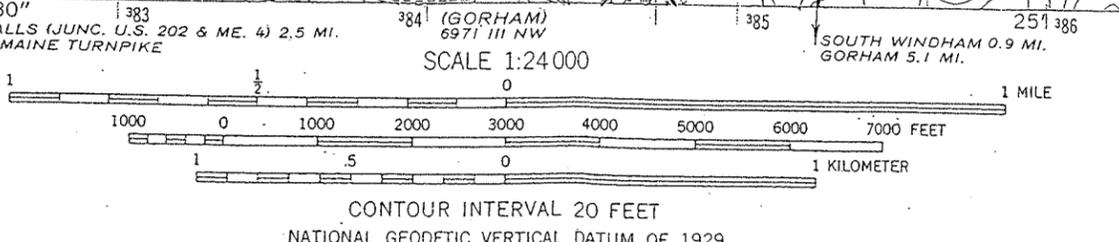
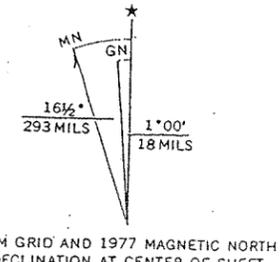
MAINE HISTORIC PRESERVATION COMMISSION  
 55 Capitol Street  
 State House Station 65  
 Augusta, Maine 04333

Highlight shows areas of archaeological resource potential for the municipality of WINDHAM, based upon data from the municipality and surrounding areas available to MHPC this date 10/28/77.

Arthur Spiess, Archaeologist  
 Map 5 of 6



by the Army Map Service  
 and published by the Geological Survey  
 and by USGS and USC&GS  
 and drainage in part compiled from aerial photographs  
 43. Topography from 1:62 500-scale  
 Gray 15 minute quadrangle, surveyed 1941  
 revised by the Geological Survey 1957  
 projection. 1927 North American datum  
 root grid based on Maine coordinate system, west zone  
 meter Universal Transverse Mercator grid ticks,  
 shown in blue  
 shown in purple compiled by the Geological Survey from aerial  
 photos taken 1970 and 1975. This information not field checked.  
 dated 1977



13c

ROAD CLASSIFICATION

Heavy-duty \_\_\_\_\_ Light-duty \_\_\_\_\_  
 Medium-duty \_\_\_\_\_ Unimproved dirt \_\_\_\_\_

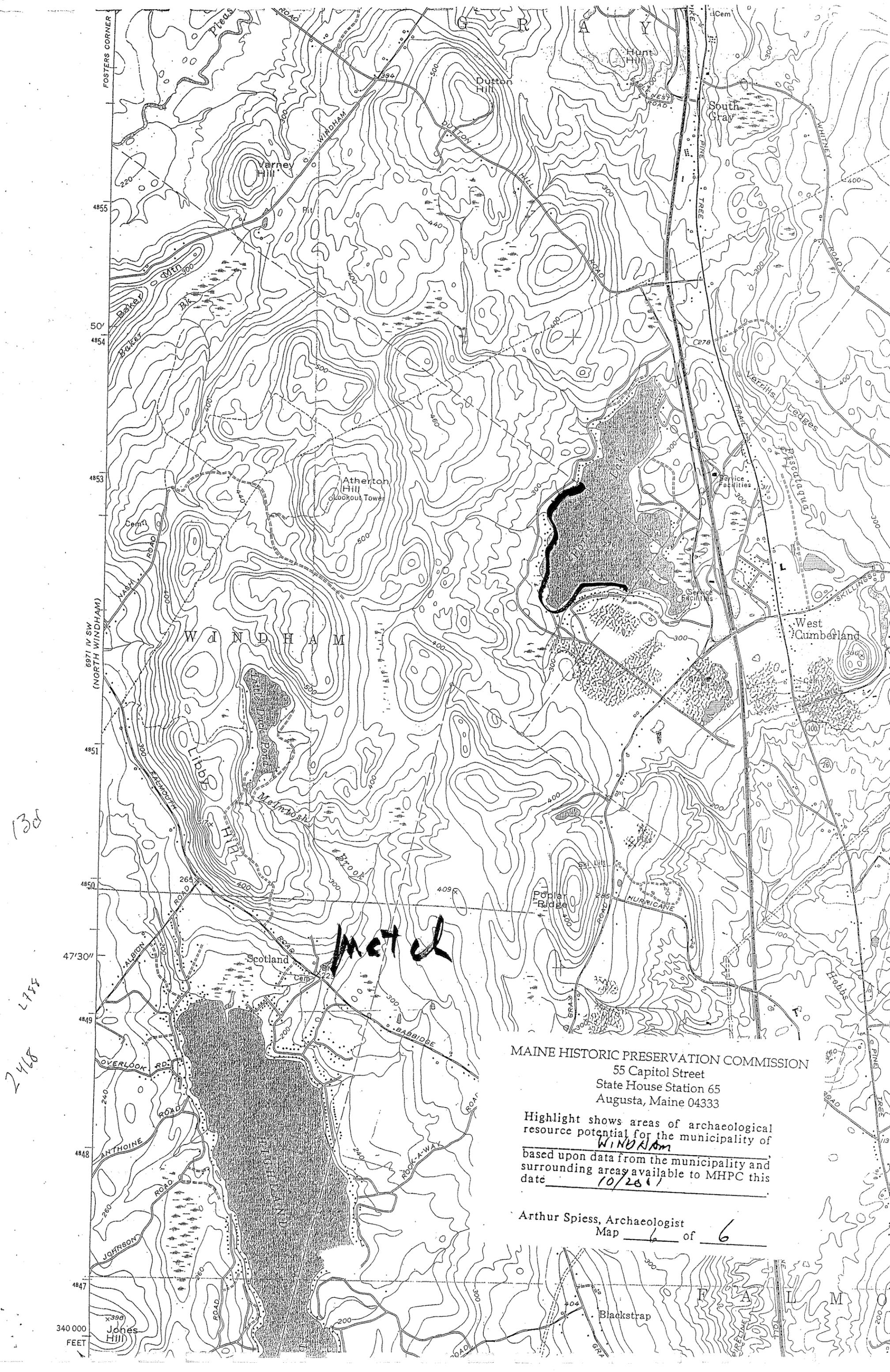
U.S. Route (square symbol) State Route (circle symbol)

NORTH WINDHAM, MAINE  
 SW/4 GRAY 15' QUADRANGLE  
 N4345—W7022.5/7.5

QUADRANGLE LOCATION

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS  
 FOR SALE BY U. S. GEOLOGICAL SURVEY, RESTON, VIRGINIA 22092  
 A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

1957  
 PHOTOREVISED 1970 AND 1977  
 AMS 6971 IV SW—SERIES V811



130  
2468  
1955

metal

MAINE HISTORIC PRESERVATION COMMISSION  
55 Capitol Street  
State House Station 65  
Augusta, Maine 04333

Highlight shows areas of archaeological resource potential for the municipality of WINDHAM based upon data from the municipality and surrounding areas available to MHPC this date 10/28/1

Arthur Spiess, Archaeologist  
Map 6 of 6

340 000  
FEET

# MAINE HISTORIC PRESERVATION COMMISSION

## Inventory Data for Municipal Growth Management Plans

Resource:    \_\_\_ Prehistoric Archaeological Sites: Arthur Spiess  
              \_\_\_ Historic Archaeological Sites: Leon Cranmer  
              X Historic Buildings/Structures/Objects: Kirk Mohney

Municipality: Windham

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Inventory data as of September, 2002 :

Parson Smith House, River Road  
Goold Family House, Windham Center Road  
Maplewood Farm, River Road  
Great Falls Historic District (See Map)

The above-named properties are currently listed in the National Register of Historic Places.

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Needs for further survey, inventory, and analysis:

A comprehensive survey of Windham's historic above-ground resources needs to be conducted in order to identify other properties which may be eligible for nomination to the National Register of Historic Places.

Transmission Line

FF

100'

140'

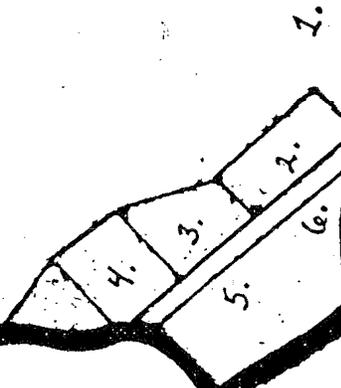
200'

200'

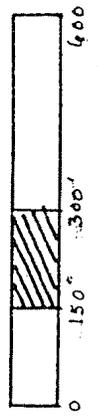
28G-1

BUMPSCOT

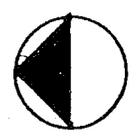
OLD GREAT FALLS RD



GREAT FALLS HISTORIC DISTRICT  
North Gorham Vic., Maine



Scale: 1" = 300'



**APPENDIX I: MAINE RURAL WATER ASSOCIATION 2008 SEWER  
RATE SURVEY**

# 2008

# SEWER RATE SURVEY



Prepared under a program administered  
by the Maine Municipal Bond Bank

14 Maine Street - Box 36  
Brunswick, ME 04011  
Tel. (207) 729-6569 Fax: (207) 725-1497  
E-mail: [mrwa@mainerwa.org](mailto:mrwa@mainerwa.org) Website: [www.mainerwa.org](http://www.mainerwa.org)

# **SECTION 1**

## **General Information**

**Contact Information**

**Type of Treatment**



## General Information

FACILITY	CONTACT	TITLE	PHONE	FAX #	E-MAIL ADDRESS	TREATMENT TYPE
Ashland Water & Sewer District	Cindy Chapman	Treasurer/Administrator	435-2223	435-2223	<a href="mailto:ashlandwater@juno.com">ashlandwater@juno.com</a>	Lagoon - Aerated
Auburn Sewer District	Normand Lamie	Superintendent	784-6469	784-6460	<a href="mailto:nlamie@awsd.org">nlamie@awsd.org</a>	Secondary - Activated Sludge
Town of Baileyville	Luke Luzare	Town Manager	427-3442	427-6200		Treated by Baileyville Utilities District
Bangor WWTP	Bradley Moore	Superintendent	992-4471	947-3537	<a href="mailto:brad.moore@bangormaine.gov">brad.moore@bangormaine.gov</a>	Secondary - Activated Sludge
Bar Harbor Wastewater Division	Robert J. Kane	Superintendent	288-4028	288-5440	<a href="mailto:wwsupt@barharbormaine.gov">wwsupt@barharbormaine.gov</a>	Secondary - Activated Sludge
City of Bath WPCF	Chris Wallace	Superintendent	443-8348	443-8362	<a href="mailto:cwallace@cityofbath.com">cwallace@cityofbath.com</a>	Secondary - Activated Sludge
City of Belfast WWTP	Rickie A. LeSon	Treasurer	338-3370 ext. 11	338-6222	<a href="mailto:treasurer@cityofbelfast.org">treasurer@cityofbelfast.org</a>	Secondary - Activated Sludge
Town of Benton	Mark Brown Julie Morrison	Selectman Clerk	453-7191	453-4428	<a href="mailto:benstaff@roadrunner.com">benstaff@roadrunner.com</a>	Treated by KSTD
Berwick Sewer District	Jay Wheeler	Administrator	698-5740	698-4839	<a href="mailto:bsd_K27jwheeler@verizon.net">bsd_K27jwheeler@verizon.net</a>	Activated Sludge with Nutrient Removal
Bethel WWTP	Robert Gundersen	Supervisor	824-2105	824-0805	<a href="mailto:wwtp@bethelmaine.org">wwtp@bethelmaine.org</a>	Secondary - Activated Sludge
Bingham Sewer Department	Ernest Pooler	Operator	672-4484			Secondary - Activated Sludge
Blue Hill WWTP	David Dietrich	Plant Superintendent	374-9987			Secondary - Activated Sludge
Boothbay Harbor Sewer District	Chris Higgins	Superintendent	633-4663	633-4663	<a href="mailto:rhiggins@gwi.net">rhiggins@gwi.net</a>	Secondary - SBR
City of Brewer WPCF	Kenneth Locke	Director of Environmental Services	989-5417	989-8421	<a href="mailto:klocke@brewerme.org">klocke@brewerme.org</a>	Secondary - Activated Sludge
Town of Brownville WWTF	Sophia L. Wilson	Superintendent	965-2561	965-8768	<a href="mailto:manager@brownville.org">manager@brownville.org</a>	Subsurface Media Filter
Brunswick Sewer District	Deborah A. Nuttelman	Finance Manager	729-0148 ext. 13	729-0149	<a href="mailto:dnuttelman@brunswicksewer.org">dnuttelman@brunswicksewer.org</a>	Secondary - Trickling Filter
Bucksport Wastewater Facility	Roger Raymond	Town Manager	469-7368	469-7369	<a href="mailto:bucksport@acadia.net">bucksport@acadia.net</a>	Primary; Combined Sewer Overflow
City of Calais WWTF	Tammy Ginn	Finance Director	454-2521 ext. 12	454-2757	<a href="mailto:financedirector@calaismaine.org">financedirector@calaismaine.org</a>	Secondary - Activated Sludge
Camden Wastewater Department	Ross Parker	Superintendent	236-7955	236-7960	<a href="mailto:rparker@camdenmaine.gov">rparker@camdenmaine.gov</a>	Secondary - Activated Sludge
Caribou Utilities District	Alan Hitchcock	General Manager	496-0911	496-0921	<a href="mailto:a.hitchcock@verizon.net">a.hitchcock@verizon.net</a>	Lagoon - Aerated

## General Information

FACILITY	CONTACT	TITLE	PHONE	FAX #	E-MAIL ADDRESS	TREATMENT TYPE
Carrabassett Valley Sanitary District	Dave Keith	Superintendent	237-3642	237-3642	<a href="mailto:dskeith@tds.net">dskeith@tds.net</a>	Lagoon - Aerated
Castine Sewer Department	Karen Motycka	Finance Officer	326-4502	326-9465	<a href="mailto:karen@castine.me.us">karen@castine.me.us</a>	Secondary - Activated Sludge
Chick Hill PCF (Town of Rangeley)	Jerome Gueuremont	Superintendent	864-3542		<a href="mailto:wwtphill@megalink.net">wwtphill@megalink.net</a>	Lagoon - Aerated
Clinton Water District	Daphne Paulette	Business Manager	426-8039	426-9455	<a href="mailto:cwd@gwi.net">cwd@gwi.net</a>	Lagoon - Facultative
Corinna Sewer District	Thomas Floyd	Chairman	679-2153	679-2210	<a href="mailto:tfloyd@cianbro.com">tfloyd@cianbro.com</a>	Lagoon - Facultative
Dark Harbor WWTF (Town of Islesboro)	Marnie Diffin	Town Manager	734-2253	734-8394	<a href="mailto:isletown@midcoast.com">isletown@midcoast.com</a>	Secondary - Sand Filter
Dexter Utility District	Randy Webber	Superintendent	924-7367	924-6861	<a href="mailto:dexterwater@roadrunner.com">dexterwater@roadrunner.com</a>	Lagoon - Aerated
Dixfield Water and Sewer Department	Darlene Brann	Administrative Assistant	562-4654	562-4654	<a href="mailto:dixwater@adelphia.net">dixwater@adelphia.net</a>	Treated by Rumford-Mexico
Dover-Foxcroft WWTF	William Littlefield	Superintendent	564-3905	564-3621	<a href="mailto:wastewtr@dover-foxcroft.org">wastewtr@dover-foxcroft.org</a>	Lagoon - Aerated
Eagle Lake Water & Sewer District	Gerry Raymond	Superintendent	444-5441	444-5412	<a href="mailto:elwsd@sjv.net">elwsd@sjv.net</a>	Lagoon - Aerated
East Millinocket WWTF	Frank Stratton	Superintendent	746-3566	746-3550	<a href="mailto:cdeveau@verizon.net">cdeveau@verizon.net</a>	Primary
Town of Enfield	Theresa Thurlow	Town Manager	732-4270	732-5335		Treated by Howland
Town of Fairfield	Sue Inman	Treasurer	453-4282	453-4280	<a href="mailto:sinman@fairfieldme.com">sinman@fairfieldme.com</a>	Treated by KSTD
Town of Falmouth WWTP	Pete Clark	Superintendent	781-4462	781-2052	<a href="mailto:pclark@town.falmouth.me.us">pclark@town.falmouth.me.us</a>	Activated Sludge with Nutrient Removal
Farmington WWTP	Steven S. Moore	Superintendent	778-4712	778-5877	<a href="mailto:fartrefac@peoplepc.com">fartrefac@peoplepc.com</a>	Secondary - Activated Sludge
Fort Fairfield Utilities District	Rodney L. Deschaine	General Manager	472-1391	472-2879	<a href="mailto:rldeschaine@maine.rr.com">rldeschaine@maine.rr.com</a>	Secondary - RBC
Fort Kent Water & Wastewater Dept.	Mark Soucy	Department Head	834-3463	834-2229	<a href="mailto:fkwwdept@nci2.net">fkwwdept@nci2.net</a>	Lagoon - Aerated
Freeport Sewer District	Tom Allen	Superintendent	865-3540	865-6614	<a href="mailto:fsdta@aol.com">fsdta@aol.com</a>	Secondary - Activated Sludge
Frenchville WWTP	Philip G. Levesque	Town Manager	543-7301	543-7322	<a href="mailto:plesvesque285@roadrunner.com">plesvesque285@roadrunner.com</a>	Lagoon - Aerated
Gardiner WWTP	Chuck Applebee	Director	582-1351	588-0119	<a href="mailto:wwtp@gardinermaine.com">wwtp@gardinermaine.com</a>	Secondary - RBC

## General Information

FACILITY	CONTACT	TITLE	PHONE	FAX #	E-MAIL ADDRESS	TREATMENT TYPE
Grand Isle Wastewater Department	Andre R. Gendreau	Operator	895-9506	895-9506	<a href="mailto:andre_h2o@yahoo.com">andre_h2o@yahoo.com</a>	Secondary - Activated Sludge
Great Salt Bay Sanitary District	Mary Bowers	Superintendent	563-5105	563-3262		Lagoon - Aerated
Greater Augusta Utility District	Rebecca Bragg	Billing Clerk	622-3701	622-4539	<a href="mailto:rbragg@augustawater.org">rbragg@augustawater.org</a>	Secondary - Activated Sludge
Guilford Sangerville Sanitary District	Frank Ruksznis	Manager	876-4598	876-4598	<a href="mailto:gssd@verizon.net">gssd@verizon.net</a>	Lagoon - Aerated
Houlton Water Company	John Clark	General Manager	532-2259	532-1213	<a href="mailto:jlc@hwco.org">jlc@hwco.org</a>	Secondary - Activated Sludge
Howland Water and Wastewater Dept.	Brian P. Dawson	Superintendent	732-3767	732-4896	<a href="mailto:howland@midmaine.com">howland@midmaine.com</a>	Lagoon - Facultative
Jackman Utility District	Jay K. McNally	Operator I	668-7686	668-7789	<a href="mailto:judwas@verizon.net">judwas@verizon.net</a>	Lagoon - Facultative
Town of Jay Sewer Department	Mark Holt	Superintendent	645-4246		<a href="mailto:jaysewer@jay-maine.org">jaysewer@jay-maine.org</a>	Activated Sludge with Extended Aeration, or Treated by Livermore Falls
Kennebec Sanitary Treatment District	Tim LeVasseur	Superintendent	873-0611	872-7419	<a href="mailto:tl@kstd.com">tl@kstd.com</a>	Secondary - Activated Sludge
Kennebunk Sewer District	Willis Emmons	District Manager	985-4741	985-4743	<a href="mailto:ksdistrict@gwi.net">ksdistrict@gwi.net</a>	Secondary - RBC
Kennebunkport Sewer Department	Allan Moir	Superintendent	967-2245	967-5372	<a href="mailto:amoir@kennebunkportme.gov">amoir@kennebunkportme.gov</a>	Secondary - Activated Sludge
Kingfield Wastewater System	Michael Durant	Superintendent	265-4637	265-4626		Subsurface Media Filter
Kittery Sewer Department	Steve Tapley	Superintendent	439-4646	439-2799	<a href="mailto:kitterysewsupt@verizon.net">kitterysewsupt@verizon.net</a>	Secondary - SBR
Limerick Sewerage District	Russ Nutting	Trustee	793-2530			Lagoon - Aerated
Limestone Water & Sewer District	Annette Tardy	Office Manager	325-4788	325-4189	<a href="mailto:lwsd@verizon.net">lwsd@verizon.net</a>	Secondary - Activated Sludge
Lincoln Sanitary District	Darold Wooley	Superintendent	794-8244	794-2720	<a href="mailto:lincolnsanitarydistrict@verizon.net">lincolnsanitarydistrict@verizon.net</a>	Secondary - RBC
Lisbon Sewer Department	Ora Madden	Billing Clerk	353-3000 ext.107	353-3007		Secondary - Activated Sludge
Livermore Falls Sewer Department	Kent Mitchell Susan Sapiel	Superintendent Sewer Clerk	897-2338 (office) 897-2339 (plant)	897-9397	<a href="mailto:susan@lfme.org">susan@lfme.org</a>	Secondary - Trickling Filter
Lubec Sewer Department	Randy Campbell	Treasurer	733-2341	733-4737		Primary

## General Information

FACILITY	CONTACT	TITLE	PHONE	FAX #	E-MAIL ADDRESS	TREATMENT TYPE
Machias WWTP	Robert Bialota	Operator	255-3295	255-6492	<a href="mailto:machias.wwtp@verizon.net">machias.wwtp@verizon.net</a>	Secondary - Activated Sludge
Madawaska Pollution Control	Robert Dunbar	Superintendent	728-3608	728-3608	<a href="mailto:biosolid@nci1.net">biosolid@nci1.net</a>	Secondary - Activated Sludge
Manchester Sanitary District	Cliff Fletcher	Secretary/Treasurer	622-3366	623-4787	<a href="mailto:cliff@stephenbarnard.com">cliff@stephenbarnard.com</a>	Treated by Augusta
Mapleton Sewer District	Gilles R. St. Pierre	Superintendent	764-5262	764-5262	<a href="mailto:grstp@ainop.com">grstp@ainop.com</a>	Lagoon - Facultative
Mars Hill Utility District	Steven Milliard	Superintendent	425-2620	425-2304	<a href="mailto:steven.mhud@ainop.com">steven.mhud@ainop.com</a>	Lagoon - Aerated
Mattawamkeag Wastewater Dept.	Lorna Pelkey	Deputy Town Clerk/Bookkeeper	736-2464	736-2545		Lagoon - Aerated
Mechanic Falls Sanitary District	Thomas E. Schultz	Director	345-3077	345-9473	<a href="mailto:mecfallssd@aol.com">mecfallssd@aol.com</a>	Secondary - Activated Sludge
Mexico Sewer District	Anne Young	Secretary, Board of Trustees	364-2061	364-5685		Treated by Rumford-Mexico
Milbridge Sewer Department	Dan Bradstreet	Superintendent	557-7477			Secondary - Sand Filter
Millinocket WWTF	Jim Charette	Chief Operator	723-7040	723-7002	<a href="mailto:millinocket@wastewater.org">millinocket@wastewater.org</a>	Lagoon - Facultative
Milo Water District	Karen Durant	Office Manager	943-2501	943-5221	<a href="mailto:milowater@verizon.net">milowater@verizon.net</a>	Lagoon - Aerated
Monson Utilities District	Julie Anderson	Treasurer	997-3641	997-3785	<a href="mailto:monsontownmgr@verizon.net">monsontownmgr@verizon.net</a>	Subsurface Media Filter
Moosehead Sanitary District	Dan Daigle	Plant Manager	695-3849	695-3647	<a href="mailto:moosandis@yahoo.com">moosandis@yahoo.com</a>	Lagoon - Aerated
Mt. Desert Pollution Control	Jonathan Merchant	Superintendent	276-5738	276-5742	<a href="mailto:wwchiefop@mtdesert.org">wwchiefop@mtdesert.org</a>	Secondary - Activated Sludge
Newport Sanitary District	Daniel Stevens	Superintendent	368-5129	368-5129	<a href="mailto:dannsd@verizon.net">dannsd@verizon.net</a>	Lagoon - Aerated
Norridgewock WWTF	Mitch Cole	Operator	634-4738	634-5285		Secondary - Activated Sludge
North Berwick Sanitary District	Tiffany Moreau	Office Manager	676-4000	676-4000	<a href="mailto:nbsandst@verizon.net">nbsandst@verizon.net</a>	Lagoon - Aerated
North Haven WWTF	Janice Hopkins	Treasurer	867-4433	867-2207	<a href="mailto:nhaven@midcoast.com">nhaven@midcoast.com</a>	Primary
Northport Village Corporation	Richard McElhaney	Superintendent	338-0751	338-0795	<a href="mailto:nvc@prexar.com">nvc@prexar.com</a>	Primary
Town of Norway Wastewater	Shawn Brown	Superintendent	743-5304	743-5307		Lagoon - Aerated

## General Information

FACILITY	CONTACT	TITLE	PHONE	FAX #	E-MAIL ADDRESS	TREATMENT TYPE
Town of Oakland WWTP	Daniel Bolduc	Treatment Plant Operator	465-7198	465-9118	<a href="mailto:dbolduc@oaklandmaine.com">dbolduc@oaklandmaine.com</a>	Activated Sludge with Nutrient Removal
Ogunquit Sewer District	Ellen Bradley	Office Manager	646-2028	646-8783	<a href="mailto:ogunquitsd.me@verizon.net">ogunquitsd.me@verizon.net</a>	Secondary - Activated Sludge
Old Orchard Beach WWTF	Chris White	Superintendent	934-4416	934-7951	<a href="mailto:cwhite@oobmaine.com">cwhite@oobmaine.com</a>	Secondary - Activated Sludge
Old Town PCF	Gary Stetson	Superintendent	827-3970	827-3964	<a href="mailto:garystetson@verizon.net">garystetson@verizon.net</a>	Secondary - RBC
Town of Orono WPCF	Paul Wintle	Superintendent	866-5069	866-5061	<a href="mailto:pwintle@adelphia.net">pwintle@adelphia.net</a>	Secondary - Activated Sludge
Town of Oxford	Becky Lippincott	Finance Clerk	539-4431	539-4228	<a href="mailto:oxfordfinance@roadrunner.com">oxfordfinance@roadrunner.com</a>	Treated by Norway
Paris Utility District	Penny Lowe	Office Manager	743-6251	743-0759	<a href="mailto:parisutility@verizon.net">parisutility@verizon.net</a>	Secondary - Activated Sludge
Passamaquoddy WWTF	Gene Francis	Superintendent	853-4356	853-0774	<a href="mailto:genewfrancis@wabanaki.com">genewfrancis@wabanaki.com</a>	Secondary - Activated Sludge
Patten WWTF	Kevin A. Noyes	Operator	528-2215	528-2055	<a href="mailto:townofpatten@fairpoint.net">townofpatten@fairpoint.net</a>	Lagoon - Facultative
Penobscot Nation PCF @Indian Island	Ralph Nicola	Superintendent	817-7385	827-7609	<a href="mailto:micola@penobscotnation.org">micola@penobscotnation.org</a>	Secondary - Activated Sludge
Town of Pittsfield	Vickie Braley Scott Noble	Office Manager Assistant Superintendent	487-3136	487-3138	<a href="mailto:finance1@pittsfield.org">finance1@pittsfield.org</a>	Lagoon - Facultative
Portland Water District	Mike Greene	Plant/Systems Manager	774-5961	761-8307	<a href="mailto:mgreene@pwd.org">mgreene@pwd.org</a>	Secondary - Activated Sludge
Cape Elizabeth (part of PWD)	Mike Greene	Plant/Systems Manager	774-5961	761-8307	<a href="mailto:mgreene@pwd.org">mgreene@pwd.org</a>	N. Cape Elizabeth Treated at S. Portland
Cumberland (part of PWD)	Mike Greene	Plant/Systems Manager	774-5961	761-8307	<a href="mailto:mgreene@pwd.org">mgreene@pwd.org</a>	Treated by Falmouth
Gorham (part of PWD)	Mike Greene	Plant/Systems Manager	774-5961	761-8307	<a href="mailto:mgreene@pwd.org">mgreene@pwd.org</a>	Treated at Westbrook
City of Portland	Mike Greene	Plant/Systems Manager	774-5961	761-8307	<a href="mailto:mgreene@pwd.org">mgreene@pwd.org</a>	Secondary - Activated Sludge
South Windham (part of PWD)	Mike Greene	Plant/Systems Manager	774-5961	761-8307	<a href="mailto:mgreene@pwd.org">mgreene@pwd.org</a>	Treated at Westbrook
Westbrook (part of PWD)	Mike Greene	Plant/Systems Manager	774-5961	761-8307	<a href="mailto:mgreene@pwd.org">mgreene@pwd.org</a>	Secondary - Activated Sludge
Presque Isle Sewer District	Stephen Freeman	Superintendent	762-5061	764-2501		Activated Sludge with Nutrient Removal
Richmond Utilities District	Michael Broadbent	Superintendent	737-4721	737-2427	<a href="mailto:richutil@prexar.com">richutil@prexar.com</a>	Secondary - Activated Sludge

## General Information

FACILITY	CONTACT	TITLE	PHONE	FAX #	E-MAIL ADDRESS	TREATMENT TYPE
City of Rockland WPCF	Terry Pinto	Director	594-0324	594-0325	<a href="mailto:tpinto@ci.rockland.me.us">tpinto@ci.rockland.me.us</a>	Activated Sludge with Combined Sewer Overflow
Town of Rumford	Carlo Puiia	Tax Collector	364-4576 ext. 216	364-4148	<a href="mailto:cpuiia@rumfordmaine.net">cpuiia@rumfordmaine.net</a>	Treated by Rumford-Mexico
Sabattus Sanitary District	Donna Rioux	Office Manager	375-8008	375-8008	<a href="mailto:ssdb@roadrunner.com">ssdb@roadrunner.com</a>	Secondary - Activated Sludge
City of Saco WWTP	Howard Carter	Deputy Director	282-3564	282-8211	<a href="mailto:hcarter@sacomaine.org">hcarter@sacomaine.org</a>	Activated Sludge with Combined Sewer Overflow
Sanford Sewerage District	Michael Hanson	Superintendent	324-5313	324-5087	<a href="mailto:mhanson@sanfordsewerage.org">mhanson@sanfordsewerage.org</a>	Activated Sludge with Nutrient Removal
Scarborough Sanitary District	Gary S. Lorfano	Superintendent	883-4663	883-7083	<a href="mailto:glorfano@scarsd.org">glorfano@scarsd.org</a>	Secondary - Activated Sludge
Town of Searsport WWTP	James Gillway	Town Manager	548-6372	548-2305	<a href="mailto:searsportmanager@roadrunner.com">searsportmanager@roadrunner.com</a>	Primary
Sinclair Sanitary District	Raymond Thibodeau	Superintendent	543-5000	543-5000		Lagoon - Facultative
Skowhegan WPCP	Brent Dickey	Superintendent	474-6909	474-6922	<a href="mailto:skowpoll@skowhegan.org">skowpoll@skowhegan.org</a>	Secondary - Activated Sludge
South Berwick Sewer District	Bonnie Bishop	Office Manager	384-2760	384-2760	<a href="mailto:sbsdoff@hotmail.com">sbsdoff@hotmail.com</a>	SBR with Nutrient Removal
S. Portland Water Resource Protection	Pat Cloutier	Director	767-7675	767-5697	<a href="mailto:pcloutier@sportland.org">pcloutier@sportland.org</a>	Secondary - Activated Sludge
Southwest Harbor WWTF	Beatrice Grinnell	Billing Clerk	244-5404	244-7918	<a href="mailto:swharbor@roadrunner.com">swharbor@roadrunner.com</a>	Secondary - Activated Sludge
St. Agatha Wastewater Department	Andre Gendreau	Superintendent	543-7417	543-7306	<a href="mailto:ryanpelletier@roadrunner.com">ryanpelletier@roadrunner.com</a>	Secondary - Activated Sludge
Stonington Sanitary District	Gay Atkinson	Operator	367-5161	367-6382	<a href="mailto:sewerqueen-waterwitch@verizon.net">sewerqueen-waterwitch@verizon.net</a>	Primary
Thomaston Pollution Control Dept.	John Fancy	Superintendent	354-2136	354-2137	<a href="mailto:thompcd@midcoast.com">thompcd@midcoast.com</a>	Lagoon - Aerated
Topsham Sewer District	Stuart W. Kay, III	Superintendent	729-3612	319-7263	<a href="mailto:tsdk@yahoo.com">tsdk@yahoo.com</a>	Treated by Brunswick
Veazie Sewer District	Gary Brooks	Superintendent	942-1536	942-1536	<a href="mailto:gbrooks@veaziesewerdistrict.com">gbrooks@veaziesewerdistrict.com</a>	Lagoon - Aerated
Waldoboro Utility District	John Fancy	Superintendent	832-0422	832-0423	<a href="mailto:wud@midcoast.com">wud@midcoast.com</a>	Lagoon - Aerated
Warren Sanitary District	Mike Courtenay	Plant Manager	273-2047	273-2047	<a href="mailto:mlc@midcoast.com">mlc@midcoast.com</a>	Lagoon - Aerated

## General Information

FACILITY	CONTACT	TITLE	PHONE	FAX #	E-MAIL ADDRESS	TREATMENT TYPE
Washburn Water & Sewer Department	Andrea L. Powers	Town Manager	455-8485	455-4319	<a href="mailto:townmanager@washburnmaine.org">townmanager@washburnmaine.org</a>	Lagoon - Aerated
Waterville Sewerage District	David H. Blair	Superintendent	873-5191	877-9911	<a href="mailto:dhblair@watervillesd.com">dhblair@watervillesd.com</a>	Treated by KSTD
Wells Sanitary District	Dennis Thayer	Superintendent	646-5906	646-4020	<a href="mailto:wsd@wellssanitarydistrict.com">wsd@wellssanitarydistrict.com</a>	Secondary - Activated Sludge
Town of Whitneyville	Lori Nehrings	Treasurer	255-4662			Secondary - Sand Filter
Town of Wilton	Linda Bureau	Water/Sewer Billing Clerk	645-2001	645-2001	<a href="mailto:h2o@wiltonmaine.org">h2o@wiltonmaine.org</a>	Secondary - RBC
Town of Winslow	Pam Smiley	Town Clerk	872-2777	872-1999	<a href="mailto:clerk@winslowmaine.org">clerk@winslowmaine.org</a>	Treated by KSTD
Winter Harbor Utilities District	Joseph Stanley	Plant Operator	963-5579			Secondary - Activated Sludge
Winterport Water & Sewer District	Steven Lane	Superintendent	223-5028	223-5028	<a href="mailto:wwsd@verizon.net">wwsd@verizon.net</a>	Primary
Winthrop Utilities District	Rebecca Cumber	Office Manager	377-2712	377-8582	<a href="mailto:winutil@fairpoint.net">winutil@fairpoint.net</a>	Treated by Augusta
Town of Wiscasset Wastewater	Bill Rines	Superintendent	882-8222	882-8228	<a href="mailto:wwtp@wiscasset-me.gov">wwtp@wiscasset-me.gov</a>	Secondary - Activated Sludge
Yarmouth WPCF	Tom Connolly	Superintendent	846-2415		<a href="mailto:tconnolly@yarmouth.me.us">tconnolly@yarmouth.me.us</a>	Secondary - Activated Sludge
York Sewer District	Tim Haskell	Superintendent	363-4232	363-6701	<a href="mailto:tim@yorksewer.org">tim@yorksewer.org</a>	Secondary - Activated Sludge

# **SECTION 2**

## **Rate Information**

**Sorted Alphabetically**

**Organizational Structure**

**Number of Residential Customers**

**Rate Structure**



## Rate Information Sorted Alphabetically

FACILITY	TYPE	RESIDENTIAL CUSTOMERS	DATE OF LAST RATE INCREASE	RATES BASED ON	MINIMUM QUARTERLY CHARGE *	CUBIC FEET COVERED BY MINIMUM	ADDITIONAL QUARTERLY BASE CHARGES*	CHARGE PER CF	ANNUAL USER COST FOR 8000 CF
Ashland Water & Sewer District	Joint District	295	October 1992	Water Use	\$33.75	250		\$0.01550	\$243.50
Auburn Sewer District	Joint District	4,738	April 1, 2006	Water Use	\$42.42	0		\$0.01920	\$323.28
Town of Baileyville <sup>1</sup>	Municipal Sewer	716	July 1, 2008	Water Use; Stepped System by Meter Size	\$12.50	668			\$500.00
Bangor WWTP	Municipal Sewer	8,750	January 1, 2008	Water Use	\$56.64	1,200		\$0.04720	\$377.60
Bar Harbor Wastewater Division (Metered)	Joint Municipal	1,025	July 2007	Water Use	\$35.90	1,000		\$0.03590	\$287.20
Bar Harbor Wastewater Division (Unmetered)	Included in Above		July 2007	Flat Rate	\$77.19	n/a		n/a	\$308.76
City of Bath WPCF	Municipal Sewer	2,920	April 2007	Water Use	\$36.55	667		\$0.05480	\$438.44
City of Belfast WWTF	Municipal Sewer	1,349	January 2007	Water Use	\$95.00	2,000		\$0.04500	\$380.00
Town of Benton	Municipal Sewer	187	2002	Water Use	\$30.00	1,000		\$0.01800	\$192.00
Berwick Sewer District	Sewer District	900	1991	Flat Rates; Units	\$92.50 per Unit	n/a		n/a	\$370.00 per Unit
Bethel WPCF	Municipal Sewer	525	2006	Water Use	\$105.00	1,500		\$0.07000	\$560.00
Bingham Sewer Department	Municipal Sewer	400	2004	Flat Rates; Units	\$55.00 per Unit	n/a		n/a	\$220.00 per Unit
Blue Hill WWTP	Municipal Sewer	145	May 2003	Flat Rates; Units	\$48.00 per Unit \$86.40 per House	n/a		n/a	\$192.00 per Unit/ \$345.60 per House
Boothbay Harbor Sewer District	Sewer District	1,359	January 1, 2008	Water Use	\$60.00	900		\$0.06250	\$500.00
City of Brewer WPCF	Municipal Sewer	2,700	July 1, 2007	Water Use	\$69.00	1,000		\$0.06900	\$552.00
Town of Brownville WWTF	Joint Municipal	400	2000	Flat Rates; Units		n/a	\$19.95 Sewer Debt \$55.50 O&M	n/a	\$301.80 per Unit
Brunswick Sewer District	Sewer District	3,419	April 1, 2008	Water Use	\$33.60	800		\$0.04200	\$336.00
Bucksport Wastewater Facility	Municipal Sewer	711	July 1, 2008	Water Use	\$60.30	1,800		\$0.03350	\$268.00
City of Calais WWTP	Joint Municipal	1,179	July 1, 2007	Water Use	\$92.52	1,200		\$0.07710	\$616.80
Camden Wastewater Department	Municipal Sewer	1,800	July 1, 2008	Water Use	\$34.00	1,000		\$0.03400	\$272.00
Caribou Utilities District	Joint District	1,800	2007	Water Use	\$50.00	900		\$0.02000	\$288.00
Carrabassett Valley Sanitary District	Sanitary District	1,200	1974	Flat Rates; Units	\$71.00	n/a		n/a	\$249.56 per Unit plus \$34.46 per Bedroom
Castine Sewer Department	Joint Municipal	385	October 2007	Water Use	\$46.01	800	\$60.99 Debt Service	\$0.19250	\$1,352.00
Chick Hill PCF (Town of Rangeley)	Municipal Sewer	349	2007	Water Use	\$40.00	0		\$0.06850	\$708.00

\* Amounts for systems that bill other than quarterly have been prorated to allow for quarterly comparisons.

<sup>1</sup> Stepped system based on meter size, billed annually by the gallon. After converting to cubic feet, the first 4,010 billed @\$300; next 2,674 @ .0561/cf; next 4,010 cf @ .0374/cf.

**Rate Information  
Sorted Alphabetically**

FACILITY	TYPE	RESIDENTIAL CUSTOMERS	DATE OF LAST RATE INCREASE	RATES BASED ON	MINIMUM QUARTERLY CHARGE *	CUBIC FEET COVERED BY MINIMUM	ADDITIONAL QUARTERLY BASE CHARGES*	CHARGE PER CF	ANNUAL USER COST FOR 8000 CF
Clinton Water District	Joint District	374	January 1, 2005	Water Use	\$43.40	0		\$0.03340	\$441.20
Corinna Sewer District	Sewer District	340	April 2001	Flat Rates	\$90.00	n/a		n/a	\$360.00
Dark Harbor WWTF (Town of Isleboro)	Municipal Sewer	20	July 1, 2007	Water Use	\$62.50	0		\$0.01190	\$345.20
Dexter Utility District	Joint District	844	April 13, 2005	Water Use	\$36.85	1,038		\$0.03550	\$284.00
Dixfield Water and Sewer Department	Joint Municipal	600	July 2007	Water Use	\$49.83	1,500		\$0.01550	\$230.32
Dover-Foxcroft WWTF <sup>2</sup>	Municipal Sewer	900	2008	Water Use		2,500	\$64.03 Debt Service	\$0.04310	\$600.90
Eagle Lake Water & Sewer District	Joint District	312	2007	Flat Rates	\$91.14	n/a		n/a	\$364.56
East Millinocket WWTF	Joint Municipal	883	May 30, 2006	Water Use	\$55.00	1,200		\$0.02160	\$289.12
Town of Enfield	Municipal Sewer	170	1996	Flat Rates	\$69.00	n/a		n/a	\$276.00
Town of Fairfield	Municipal Sewer	1,100	July 2004	Water Use	\$44.75	1,000		\$0.02600	\$283.00
Town of Falmouth WWTP	Municipal Sewer	2,310	2007	Flat Rates	\$111.81	n/a		n/a	\$447.24
Farmington WWTP	Municipal Sewer	808	January 2008	Water Use	\$35.42	500		\$0.07084	\$566.72
Fort Fairfield Utilities District	Joint District	850	April 1, 1997	Water Use		n/a		\$0.02000	\$160.00
Fort Kent Water & Wastewater Dept.	Joint Department	950	1997	Water Use	\$53.67	1,350		\$0.04000	\$318.68
Freeport Sewer District	Sewer District	606	January 1, 2008	Water Use	\$91.11	1,200		\$0.06310	\$566.36
Frenchville WWTP	Municipal Sewer	181	2005	Flat Rates	\$96.25	n/a		n/a	\$385.00
Gardiner WWTP	Municipal Sewer	1,480	July 1, 2007	Water Use; Units	\$73.82 per Unit	0		\$0.01870	\$444.88 per Unit
Grand Isle Wastewater Department	Joint Municipal	158	July 2001	Flat Rates	\$103.05	n/a		n/a	\$412.20
Great Salt Bay Sanitary District (Metered)	Joint District	700	October 1, 2007	Water Use	\$80.00	1,250		\$0.06400	\$512.00
Great Salt Bay Sanitary District (Unmetered)	Included in Above		October 1, 2007	Flat Rates	\$96.00	n/a		n/a	\$384.00
Greater Augusta Utility District (Metered)	Joint District	2,304	July 1, 2006	Water Use	\$18.85	0	\$16.15 Storm Chg	\$0.03210	\$396.80
Greater Augusta Utility District (Unmetered)	Included in Above		July 1, 2006	Flat Rates	\$85.00	n/a	\$16.15 Storm Chg	n/a	\$404.60
Guilford Sangerville Sanitary District	Sanitary District	550	1995	Water Use	\$6.25	0		\$0.03400	\$297.00
Houlton Water Company	Other: Water, Sewer, and Electric	1,458	April 1, 2005	Water Use	\$54.48	1,200		\$0.04540	\$363.20

\* Amounts for systems that bill other than quarterly have been prorated to allow for quarterly comparisons.

<sup>2</sup> Debt service of \$128.05 covers 5,000 cf of semiannual water use.

## Rate Information Sorted Alphabetically

FACILITY	TYPE	RESIDENTIAL CUSTOMERS	DATE OF LAST RATE INCREASE	RATES BASED ON	MINIMUM QUARTERLY CHARGE *	CUBIC FEET COVERED BY MINIMUM	ADDITIONAL QUARTERLY BASE CHARGES*	CHARGE PER CF	ANNUAL USER COST FOR 8000 CF
Howland Water & Wastewater Dept.	Joint Municipal	365	Unknown	Flat Rates	\$60.00	n/a		n/a	\$240.00
Jackman Utility District	Joint District	400	1990	Water Use; Units	\$37.50	1,200		\$0.02550	\$231.60
Town of Jay Sewer Department <sup>3</sup>	Municipal Sewer	795	July 1, 2008	Flat Rates; Units	\$62.50	n/a		n/a	\$250.00 per Unit
Kennebec Sanitary Treatment District	Sewer District	n/a	n/a	Treats Waterville, Winslow, Fairfield, and Benton	n/a	n/a	n/a	n/a	n/a
Kennebunk Sewer District	Sewer District	2,500	March 1, 2008	Water Use; Units		n/a	\$34.18 Debt Service and \$61.39 Support Systems per Unit	\$0.01920	\$535.88 per Unit
Kennebunkport Sewer Department	Municipal Sewer	1,662	2008	Flat Rates; Units	\$97.00	n/a		n/a	\$388.00 per Unit
Kingfield Wastewater System	Municipal Sewer	181	July 1, 2007	Flat Rates; Units	\$45.48	n/a		n/a	\$181.92 per Unit
Kittery Sewer Department	Municipal Sewer	1,835	July 1, 2003	Water Use	\$40.00	1,500	\$30.25 Debt Service	\$0.03750	\$356.00
Limerick Sewerage District	Sewer District	150	2005	Water Use; Units	\$67.50	1,500		\$0.04500	\$360.00
Limestone Water & Sewer District	Joint District	328	November 1, 2005	Water Use	\$65.00	900		\$0.03410	\$410.08
Lincoln Sanitary District	Sanitary District	1,200	January 1, 2007	Water Use	\$72.24	1,200		\$0.06020	\$481.60
Lisbon Sewer Department	Municipal Sewer	2,430	July 2006	Water Use	\$22.50	500		\$0.04500	\$360.00
Livermore Falls Sewer Department	Municipal Sewer	619	1998	Water Use; Units	\$45.00	0		\$0.02750	\$400.00 per Unit
Lubec Sewer Department	Municipal Sewer	440	June 2008	Water Use	\$47.25	900	\$8.85 Debt Service	\$0.06240	\$499.14
Machias WWTP (Metered) <sup>4</sup>	Municipal Sewer	466	July 1, 2006	Water Use	\$32.25	1,000	\$6.65 Debt Service	\$0.03220	\$284.40
Machias WWTP (Unmetered)	Included in Above		July 1, 2006	Flat Rates	\$68.50	n/a		n/a	\$274.00
Madawaska Pollution Control	Municipal Sewer	1,240	July 1, 2007	Water Use	\$66.00	1,200		\$0.05500	\$440.00
Manchester Sanitary District	Sanitary District	400	2002	Flat Rates	\$80.00	n/a		n/a	\$320.00
Mapleton Sewer District	Sewer District	280	2008	Flat Rates	\$93.75	n/a		n/a	\$375.00
Mars Hill Utility District	Joint District	580	February 2004	Water Use		n/a	\$40.00 Debt Service	\$0.03500	\$440.00
Mattawamkeag Wastewater Dept.	Municipal Sewer	118	2006	Flat Rates	\$72.16	n/a		n/a	\$288.64
Mechanic Falls Sanitary District	Sanitary District	503	October 1, 2007	Water Use; Units	\$31.25 per Unit	0		\$0.03850	\$433.00 per Unit

\* Amounts for systems that bill other than quarterly have been prorated to allow for quarterly comparisons.

<sup>3</sup> 63% of budget from taxation.

<sup>4</sup> \$6.25 billed for each 3,000 cf of water use per quarter

## Rate Information Sorted Alphabetically

FACILITY	TYPE	RESIDENTIAL CUSTOMERS	DATE OF LAST RATE INCREASE	RATES BASED ON	MINIMUM QUARTERLY CHARGE *	CUBIC FEET COVERED BY MINIMUM	ADDITIONAL QUARTERLY BASE CHARGES*	CHARGE PER CF	ANNUAL USER COST FOR 8000 CF
Mexico Sewer District	Sewer District	817	January 1, 2000	Flat Rates; Units	\$43.75 per Unit	n/a		n/a	\$175.00 per Unit
Milbridge Sewer Department	Municipal Sewer	166	October 2006	Water Use	\$62.50	0		\$0.03700	\$546.00
Millinocket WWTF	Municipal Sewer	1,892	October 2007	Water Use	\$42.50	1,500		\$0.02830	\$226.60
Milo Water District	Joint District	650	January 1, 2008	Water Use	\$60.00	0		\$0.02650	\$452.00
Monson Utilities District	Joint District	33	November 2001	Flat Rates; Units	\$68.75 per Unit	n/a		n/a	\$275.00 per Unit
Moosehead Sanitary District	Sanitary District	670	January 2007	Flat Rates; Units	\$51.33 per Unit	n/a		n/a	\$205.32 per Unit
Mt. Desert Pollution Control	Municipal Sewer	2,500	n/a	Taxation	n/a	n/a		n/a	Taxation
Newport Sanitary District	Sanitary District	450	2008	Water Use	\$42.24	1,200	\$19.50 Debt Service	\$0.03520	\$359.60
Norridgewock WWTF	Municipal Sewer	385	1996	Water Use	\$25.00	0		\$0.03750	\$400.00
North Berwick Sanitary District <sup>5</sup>	Sanitary District	350	2005	Water Use	\$59.48	6,100	\$28.00 Debt Service	\$0.03900	\$424.00
North Haven WWTF	Joint Municipal	169	January 1, 2008	Water Use	\$93.60	1,200	\$49.75 Debt Service	\$0.07800	\$823.00
Northport Village Corporation	Joint Village Corporation	234	October 2005	Flat Rates	\$137.25	n/a		n/a	\$549.00
Town of Norway Wastewater	Municipal Sewer	750	2007	Water Use; Units	\$24.15 per Unit	0		\$0.03170	\$350.20 per Unit
Town of Oakland WWTP	Municipal Sewer	Not Available	October 2005	Water Use	\$35.00	0		\$0.04040	\$463.20
Ogunquit Sewer District <sup>6</sup>	Sewer District	1,535	February 2008	Water Use	\$25.00	5,000		\$0.06500	\$720.00
Old Orchard Beach WWTF	Municipal Sewer	6,200	n/a	Taxation	n/a	n/a		n/a	Taxation
Old Town PCF	Municipal Sewer	1,900	October 1, 2003	Water Use	\$71.00	1,200		\$0.05917	\$473.33
Town of Orono WPCF	Municipal Sewer	1,272	July 1, 2007	Water Use	\$43.44	1,200		\$0.03620	\$289.60
Town of Oxford <sup>7</sup>	Municipal Sewer	1	October 2006	Flat Rates; Units	\$102.58 per Unit	n/a		n/a	\$410.32 per Unit
Paris Utility District	Joint District	1,010	January 1, 2007	Water Use; Units	\$94.00 per Unit	1,200		\$0.02960	\$470.72 per Unit
Passamaquoddy WWTF	Other: Joint Tribal	328	n/a	Assessed	n/a	n/a		n/a	Covered by General Fund
Patten WWTF (Metered)	Joint Municipal	46	n/a	Water Use	\$57.00	0		\$0.03100	\$476.00
Patten WWTF (Unmetered)	Included in Above		n/a	Flat Rates	\$110.00	n/a		n/a	\$440.00

\* Amounts for systems that bill other than quarterly have been prorated to allow for quarterly comparisons.

<sup>5</sup> Flat rate of \$349.92 for annual water use up to and including 6,100 cf. For users of over 6,100 cf, each cf of water use is billed. All customers pay debt service.

<sup>6</sup> Annual \$100 minimum charge fixed through 5,000 cf of water use. For each additional 5,000 cf of water use or part thereof, additional \$100 charge is added. Every cf of water use charged at .065/cf. A revised rate structure is being developed, to be effective January 1, 2009.

<sup>7</sup> Has only one residential customer with 39 units.

**Rate Information  
Sorted Alphabetically**

FACILITY	TYPE	RESIDENTIAL CUSTOMERS	DATE OF LAST RATE INCREASE	RATES BASED ON	MINIMUM QUARTERLY CHARGE *	CUBIC FEET COVERED BY MINIMUM	ADDITIONAL QUARTERLY BASE CHARGES*	CHARGE PER CF	ANNUAL USER COST FOR 8000 CF
Penobscot Nation PCF @ Indian Island	Other: Quasi-Municipal, Joint Tribal	250	n/a	General Fund	n/a	n/a		n/a	Covered by General Fund
Town of Pittsfield	Joint Municipal	1,042	September 6, 2006	Water Use		n/a		\$0.02250	\$180.00
Portland Water District	Joint District			Water Use					
Cape Elizabeth (part of PWD)		2,197	July 1, 2007		\$100.50	300		\$0.04380	\$699.84
Cumberland (part of PWD)		978	August 1, 2007		\$79.50	0		\$0.04500	\$678.00
Gorham (part of PWD)		1,546	November 1, 2006		\$41.22	300		\$0.06290	\$592.60
City of Portland		16,701	July 1, 2008		\$22.05	300		\$0.07350	\$588.00
South Windham (part of PWD)		51	August 10, 1992		\$34.50	600		\$0.05000	\$418.00
Westbrook (part of PWD)		4,270	February 1, 2008		\$25.50	300		\$0.03650	\$350.20
Presque Isle Sewer District	Joint District	1,961	November 1, 2006	Water Use; Rates Based on Meter Size	\$18.18	0		\$0.03090	\$319.92
Richmond Utilities District	Joint District	560	July 1, 2006	Water Use	\$73.78	1,135		\$0.05520	\$486.76
City of Rockland WPCF	Municipal Sewer	3,000	2007	Water Use	\$37.06	1,000	\$3.50 Billing Fee	\$0.04420	\$339.00
Town of Rumford	Municipal Sewer	3,435	2008	Flat Rates; Units	\$23.75	n/a		n/a	\$95.00 per Unit
Sabattus Sanitary District	Joint Sanitary District	440	January 1, 2008	Flat Rates	\$110.00	n/a		n/a	\$440.00
City of Saco WWTP	Municipal Sewer	4,322	July 1, 2005	Water Use		n/a		\$0.03600	\$288.00
Sanford Sewerage District	Sewer District	4,700	January 1, 2007	Water Use	\$22.50	0		\$0.06200	\$586.00
Scarborough Sanitary District	Sanitary District	4,200	October 2003	Flat Rates; Units	\$82.50 per Unit	n/a		n/a	\$330.00 per Unit
Town of Searsport WWTP	Municipal Sewer	Not Available	April 2005	Water Use		n/a	\$57.43 Debt Service & O&M	\$0.02250	\$409.72
Sinclair Sanitary District	Sanitary District	187	January 1, 2008	Flat Rates; Units	\$90.00 per Unit	n/a		n/a	\$360.00 per Unit
Skowhegan WPCP	Municipal Sewer	1,500	N/A	Taxation	n/a	n/a		n/a	Taxation
South Berwick Sewer District	Sewer District	1,193	January 1, 2008	Water Use		n/a	\$53.00 Debt Service	\$0.06580	\$738.40
S. Portland Water Resource Protection	Municipal Sewer	7,500	July 1, 2007	Water Use; Units	\$11.34 per Unit	300		\$0.03780	\$302.40 per Unit
Southwest Harbor WWTF	Joint Municipal	569	January 2003	Water Use	\$60.93	900		\$0.06770	\$541.60
St. Agatha Wastewater Department	Municipal Sewer	250	2006	Flat Rates; Units	\$95.00 per Unit	n/a		n/a	\$380.00 per Unit
Stonington Sanitary District	Sanitary District	300	2006	Water Use	\$61.56	1,200	\$21.60 Debt Service \$25.00 Capitol Fund	\$0.05130	\$596.80

\* Amounts for systems that bill other than quarterly have been prorated to allow for quarterly comparisons.

**Rate Information  
Sorted Alphabetically**

FACILITY	TYPE	RESIDENTIAL CUSTOMERS	DATE OF LAST RATE INCREASE	RATES BASED ON	MINIMUM QUARTERLY CHARGE *	CUBIC FEET COVERED BY MINIMUM	ADDITIONAL QUARTERLY BASE CHARGES*	CHARGE PER CF	ANNUAL USER COST FOR 8000 CF
Thomaston Pollution Control Dept.	Municipal Sewer	834	July 1, 2001	Water Use	\$36.00	900		\$0.04000	\$320.00
Topsham Sewer District	Sewer District	1,408	March 2008	Water Use	\$43.00	1,000		\$0.04300	\$344.00
Veazie Sewer District	Sewer District	700	September 5, 2001	Water Use; Units		n/a	\$25.00 Debt Service per Unit	\$0.03470	\$377.60 per Unit
Waldoboro Utility District	Sewer District	350	November 1, 2006	Water Use	\$63.60	800		\$0.07950	\$636.00
Warren Sanitary District	Sanitary District	250	n/a	Flat Rates; Units	\$62.00 per Unit	n/a		n/a	\$248.00 per Unit
Washburn Water & Sewer Department	Joint Municipal	300	2006	Flat Rates	\$97.50	n/a		n/a	\$390.00
Waterville Sewer District	Sewer District	4,575	1994	Water Use	\$28.98	1,800		\$0.01610	\$128.80
Wells Sanitary District <sup>8</sup>	Sanitary District	4,300	April 1, 2005	Water Use; Units	\$19.38 per Unit	4,900	\$19.38 Support Systems \$16.31 Debt Service per Unit	\$0.03100	\$480.64 per Unit
Town of Whitneyville	Municipal Sewer	25	November 1, 2007	Flat Rates	\$75.00	n/a		n/a	\$300.00
Town of Wilton	Joint Municipal	753	Unknown	Water Use	\$64.24	1,000		\$0.01012	\$297.44
Town of Winslow	Municipal Sewer	2,020	July 1, 2007	Water Use	\$31.25	0		\$0.01550	\$249.00
Winter Harbor Utilities District	Sewer District	257	January 1, 2008	Flat Rates	\$129.00	n/a		n/a	\$516.00
Winterport Water & Sewer District	Joint District	304	October 2006	Water Use	\$117.85	1,200		\$0.07550	\$713.00
Winthrop Utilities District	Joint District	1,060	January 1, 2008	Water Use	\$134.23	1,750		\$0.07870	\$615.62
Town of Wiscasset Wastewater	Municipal Sewer	750	April 2006	Water Use	\$58.50	900		\$0.06500	\$520.00
Yarmouth WPCF	Municipal Sewer	7,500	n/a	Taxation	n/a	n/a		n/a	Taxation
York Sewer District <sup>9</sup>	Sewer District	4,329	2007	Water Use; Units		n/a	\$27.06 Debt Service & \$56.20 O&M per Unit	\$0.00840	\$400.24 per Unit

\* Amounts for systems that bill other than quarterly have been prorated to allow for quarterly comparisons.

<sup>8</sup> Annual debt and support system charges are calculated by multiplying amounts listed by a ratio of *cf used/4,900 cf*.

<sup>9</sup> O & M charges fixed through 12,000 cf of water use. Overage is billed using ratio of *cf overage/6,500 cf*.

# **SECTION 3**

## **Rate Information**

**Sorted by Number of Residential Customers**

**Organizational Structure**

**Number of Residential Customers**

**Rate Structure**



## Rate Structure Sorted By Number of Residential Customers

FACILITY	TYPE	RESIDENTIAL CUSTOMERS	DATE OF LAST RATE INCREASE	RATES BASED ON	MINIMUM QUARTERLY CHARGE *	CUBIC FEET COVERED BY MINIMUM	ADDITIONAL QUARTERLY BASE CHARGES*	CHARGE PER CF	ANNUAL USER COST FOR 8000 CF
Town of Oxford <sup>1</sup>	Municipal Sewer	1	October 2006	Flat Rates; Units	\$102.58 per Unit	n/a		n/a	\$410.32 per Unit
Dark Harbor WWTF (Town of Isleboro)	Municipal Sewer	20	July 1, 2007	Water Use	\$62.50	0		\$0.01190	\$345.20
Town of Whitneyville	Municipal Sewer	25	November 1, 2007	Flat Rates	\$75.00	n/a		n/a	\$300.00
Monson Utilities District	Joint District	33	November 2001	Flat Rates; Units	\$68.75 per Unit	n/a		n/a	\$275.00 per Unit
Patten WWTF (Metered)	Joint Municipal	46	n/a	Water Use	\$57.00	0		\$0.03100	\$476.00
Patten WWTF (Unmetered)	Included in Above		n/a	Flat Rates	\$110.00	n/a		n/a	\$440.00
Town of South Windham	Part of Portland WD	51	August 10, 1992	Water Use	\$34.50	600		\$0.05000	\$418.00
Mattawamkeag Wastewater Dept.	Municipal Sewer	118	2006	Flat Rates	\$72.16	n/a		n/a	\$288.64
Blue Hill WWTP	Municipal Sewer	145	May 2003	Flat Rates; Units	\$48.00 per Unit \$86.40 per House	n/a		n/a	\$192.00 per Unit/ \$345.60 per House
Limerick Sewerage District	Sewer District	150	2005	Water Use; Units	\$67.50	1,500		\$0.04500	\$360.00
Grand Isle Wastewater Department	Joint Municipal	158	July 2001	Flat Rates	\$103.05	n/a		n/a	\$412.20
Milbridge Sewer Department	Municipal Sewer	166	October 2006	Water Use	\$62.50	0		\$0.03700	\$546.00
North Haven WWTF	Joint Municipal	169	January 1, 2008	Water Use	\$93.60	1,200	\$49.75 Debt Service	\$0.07800	\$823.00
Town of Enfield	Municipal Sewer	170	1996	Flat Rates	\$69.00	n/a		n/a	\$276.00
Frenchville WWTP	Municipal Sewer	181	2005	Flat Rates	\$96.25	n/a		n/a	\$385.00
Kingfield Wastewater System	Municipal Sewer	181	July 1, 2007	Flat Rates; Units	\$45.48	n/a		n/a	\$181.92 per Unit
Town of Benton	Municipal Sewer	187	2002	Water Use	\$30.00	1,000		\$0.01800	\$192.00
Sinclair Sanitary District	Sanitary District	187	January 1, 2008	Flat Rates; Units	\$90.00 per Unit	n/a		n/a	\$360.00 per Unit
Northport Village Corporation	Joint Village Corporation	234	October 2005	Flat Rates	\$137.25	n/a		n/a	\$549.00
Penobscot Nation PCF @ Indian Island	Other: Quasi-Municipal, Joint Tribal	250	n/a	General Fund	n/a	n/a		n/a	Covered by General Fund
St. Agatha Wastewater Department	Municipal Sewer	250	2006	Flat Rates; Units	\$95.00 per Unit	n/a		n/a	\$380.00 per Unit
Warren Sanitary District	Sanitary District	250	n/a	Flat Rates; Units	\$62.00 per Unit	n/a		n/a	\$248.00 per Unit
Winter Harbor Utilities District	Sewer District	257	January 1, 2008	Flat Rates	\$129.00	n/a		n/a	\$516.00
Mapleton Sewer District	Sewer District	280	2008	Flat Rates	\$93.75	n/a		n/a	\$375.00
Ashland Water & Sewer District	Joint District	295	October 1992	Water Use	\$33.75	250		\$0.01550	\$243.50
Stonington Sanitary District	Sanitary District	300	2006	Water Use	\$61.56	1,200	\$21.60 Debt Service \$25.00 Capitol Fund	\$0.05130	\$596.80

\* Amounts for systems that bill other than quarterly have been prorated to allow for quarterly comparisons.

<sup>1</sup> Has only one residential customer with 39 units.

**Rate Structure**  
**Sorted By Number of Residential Customers**

FACILITY	TYPE	RESIDENTIAL CUSTOMERS	DATE OF LAST RATE INCREASE	RATES BASED ON	MINIMUM QUARTERLY CHARGE *	CUBIC FEET COVERED BY MINIMUM	ADDITIONAL QUARTERLY BASE CHARGES*	CHARGE PER CF	ANNUAL USER COST FOR 8000 CF
Washburn Water & Sewer Department	Joint Municipal	300	2006	Flat Rates	\$97.50	n/a		n/a	\$390.00
Winterport Water & Sewer District	Joint District	304	October 2006	Water Use	\$117.85	1,200		\$0.07550	\$713.00
Eagle Lake Water & Sewer District	Joint District	312	2007	Flat Rates	\$91.14	n/a		n/a	\$364.56
Limestone Water & Sewer District	Joint District	328	November 1, 2005	Water Use	\$65.00	900		\$0.03410	\$410.08
Passamaquoddy WWTF	Other: Joint Tribal	328	n/a	Assessed	n/a	n/a		n/a	Covered by General Fund
Corinna Sewer District	Sewer District	340	April 2001	Flat Rates	\$90.00	n/a		n/a	\$360.00
Chick Hill PCF (Town of Rangeley)	Municipal Sewer	349	2007	Water Use	\$40.00	0		\$0.06850	\$708.00
North Berwick Sanitary District <sup>2</sup>	Sanitary District	350	2005	Water Use	\$59.48	6,100	\$28.00 Debt Service	\$0.03900	\$424.00
Waldoboro Utility District	Sewer District	350	November 1, 2006	Water Use	\$63.60	800		\$0.07950	\$636.00
Howland Water & Wastewater Dept.	Joint Municipal	365	Unknown	Flat Rates	\$60.00	n/a		n/a	\$240.00
Clinton Water District	Joint District	374	January 1, 2005	Water Use	\$43.40	0		\$0.03340	\$441.20
Castine Sewer Department	Joint Municipal	385	October 2007	Water Use	\$46.01	800	\$60.99 Debt Service	\$0.19250	\$1,352.00
Norridgewock WWTF	Municipal Sewer	385	1996	Water Use	\$25.00	0		\$0.03750	\$400.00
Bingham Sewer Department	Municipal Sewer	400	2004	Flat Rates; Units	\$55.00 per Unit	n/a		n/a	\$220.00 per Unit
Town of Brownville WWTF	Joint Municipal	400	2000	Flat Rates; Units		n/a	\$19.95 Sewer Debt \$55.50 O&M	n/a	\$301.80 per Unit
Jackman Utility District	Joint District	400	1990	Water Use; Units	\$37.50	1,200		\$0.02550	\$231.60
Manchester Sanitary District	Sanitary District	400	2002	Flat Rates	\$80.00	n/a		n/a	\$320.00
Lubec Sewer Department	Municipal Sewer	440	June 2008	Water Use	\$47.25	900	\$8.85 Debt Service	\$0.06240	\$499.14
Sabattus Sanitary District	Joint Sanitary District	440	January 1, 2008	Flat Rates	\$110.00	n/a		n/a	\$440.00
Newport Sanitary District	Sanitary District	450	2008	Water Use	\$42.24	1,200	\$19.50 Debt Service	\$0.03520	\$359.60
Machias WWTP (Metered) <sup>3</sup>	Municipal Sewer	466	July 1, 2006	Water Use	\$32.25	1,000	\$6.65 Debt Service	\$0.03220	\$284.40
Machias WWTP (Unmetered)	Included in Above		July 1, 2006	Flat Rates	\$68.50	n/a		n/a	\$274.00
Mechanic Falls Sanitary District	Sanitary District	503	October 1, 2007	Water Use; Units	\$31.25 per Unit	0		\$0.03850	\$433.00 per Unit
Bethel WPCF	Municipal Sewer	525	2006	Water Use	\$105.00	1,500		\$0.07000	\$560.00
Guilford Sangerville Sanitary District	Sanitary District	550	1995	Water Use	\$6.25	0		\$0.03400	\$297.00

\* Amounts for systems that bill other than quarterly have been prorated to allow for quarterly comparisons.

<sup>2</sup> Flat rate of \$349.92 for annual water use up to and including 6,100 cf. For users of over 6,100 cf, each cf of water use is billed. All customers pay debt service.

## Rate Structure Sorted By Number of Residential Customers

FACILITY	TYPE	RESIDENTIAL CUSTOMERS	DATE OF LAST RATE INCREASE	RATES BASED ON	MINIMUM QUARTERLY CHARGE *	CUBIC FEET COVERED BY MINIMUM	ADDITIONAL QUARTERLY BASE CHARGES*	CHARGE PER CF	ANNUAL USER COST FOR 8000 CF
<sup>3</sup> \$6.25 billed for each 3,000 cf of water use per quarter									
Richmond Utilities District	Joint District	560	July 1, 2006	Water Use	\$73.78	1,135		\$0.05520	\$486.76
Southwest Harbor WWTF	Joint Municipal	569	January 2003	Water Use	\$60.93	900		\$0.06770	\$541.60
Mars Hill Utility District	Joint District	580	February 2004	Water Use		n/a	\$40.00 Debt Service	\$0.03500	\$440.00
Dixfield Water and Sewer Department	Joint Municipal	600	July 2007	Water Use	\$49.83	1,500		\$0.01550	\$230.32
Freeport Sewer District	Sewer District	606	January 1, 2008	Water Use	\$91.11	1,200		\$0.06310	\$566.36
Livermore Falls Sewer Department	Municipal Sewer	619	1998	Water Use; Units	\$45.00	0		\$0.02750	\$400.00 per Unit
Milo Water District	Joint District	650	January 1, 2008	Water Use	\$60.00	0		\$0.02650	\$452.00
Moosehead Sanitary District	Sanitary District	670	January 2007	Flat Rates; Units	\$51.33 per Unit	n/a		n/a	\$205.32 per Unit
Great Salt Bay Sanitary District (Metered)	Joint District	700	October 1, 2007	Water Use	\$80.00	1,250		\$0.06400	\$512.00
Great Salt Bay Sanitary District (Unmetered)	Included in Above		October 1, 2007	Flat Rates	\$96.00	n/a		n/a	\$384.00
Veazie Sewer District	Sewer District	700	September 5, 2001	Water Use; Units		n/a	\$25.00 Debt Service per Unit	\$0.03470	\$377.60 per Unit
Bucksport Wastewater Facility	Municipal Sewer	711	July 1, 2008	Water Use	\$60.30	1,800		\$0.03350	\$268.00
Town of Baileyville <sup>4</sup>	Municipal Sewer	716	July 1, 2008	Water Use; Stepped System Based on Meter Size	\$12.50	668			\$500.00
Town of Norway Wastewater	Municipal Sewer	750	2007	Water Use; Units	\$24.15 per Unit	0		\$0.03170	\$350.20 per Unit
Town of Wiscasset Wastewater	Municipal Sewer	750	April 2006	Water Use	\$58.50	900		\$0.06500	\$520.00
Town of Wilton	Joint Municipal	753	Unknown	Water Use	\$64.24	1,000		\$0.01012	\$297.44
Town of Jay Sewer Department <sup>5</sup>	Municipal Sewer	795	July 1, 2008	Flat Rates; Units	\$62.50	n/a		n/a	\$250.00 per Unit
Farmington WWTP	Municipal Sewer	808	January 2008	Water Use	\$35.42	500		\$0.07084	\$566.72
Mexico Sewer District	Sewer District	817	January 1, 2000	Flat Rates; Units	\$43.75 per Unit	n/a		n/a	\$175.00 per Unit
Thomaston Pollution Control Dept.	Municipal Sewer	834	July 1, 2001	Water Use	\$36.00	900		\$0.04000	\$320.00
Dexter Utility District	Joint District	844	April 13, 2005	Water Use	\$36.85	1,038		\$0.03550	\$284.00
Fort Fairfield Utilities District	Joint District	850	April 1, 1997	Water Use		n/a		\$0.02000	\$160.00
East Millinocket WWTF	Joint Municipal	883	May 30, 2006	Water Use	\$55.00	1,200		\$0.02160	\$289.12
Berwick Sewer District	Sewer District	900	1991	Flat Rates; Units	\$92.50 per Unit	n/a		n/a	\$370.00 per Unit

\* Amounts for systems that bill other than quarterly have been prorated to allow for quarterly comparisons.

<sup>4</sup> Stepped system based on meter size, billed annually by the gallon. After converting to cubic feet, the first 4,010 billed @\$300; next 2,674 @ .0561/cf; next 4,010 cf @ .0374/cf.

<sup>5</sup> 63% of budget from taxation.

**Rate Structure**  
**Sorted By Number of Residential Customers**

FACILITY	TYPE	RESIDENTIAL CUSTOMERS	DATE OF LAST RATE INCREASE	RATES BASED ON	MINIMUM QUARTERLY CHARGE *	CUBIC FEET COVERED BY MINIMUM	ADDITIONAL QUARTERLY BASE CHARGES*	CHARGE PER CF	ANNUAL USER COST FOR 8000 CF
Dover-Foxcroft WWTF <sup>6</sup>	Municipal Sewer	900	2008	Water Use		2,500	\$64.03 Debt Service	\$0.04310	\$600.90
Fort Kent Water & Wastewater Dept.	Joint Department	950	1997	Water Use	\$53.67	1,350		\$0.04000	\$318.68
Town of Cumberland	Part of Portland WD	978	August 1, 2007	Water Use	\$79.50			\$0.04500	\$678.00
Paris Utility District	Joint District	1,010	January 1, 2007	Water Use; Units	\$94.00 per Unit	1,200		\$0.02960	\$470.72 per Unit
Bar Harbor Wastewater Division (Metered)	Joint Municipal	1,025	July 2007	Water Use	\$35.90	1,000		\$0.03590	\$287.20
Bar Harbor Wastewater Division (Unmetered)	Included in Above		July 2007	Flat Rate	\$77.19	n/a		n/a	\$308.76
Town of Pittsfield	Joint Municipal	1,042	September 6, 2006	Water Use		n/a		\$0.02250	\$180.00
Winthrop Utilities District	Joint District	1,060	January 1, 2008	Water Use	\$134.23	1,750		\$0.07870	\$615.62
Town of Fairfield	Municipal Sewer	1,100	July 2004	Water Use	\$44.75	1,000		\$0.02600	\$283.00
City of Calais WWTP	Joint Municipal	1,179	July 1, 2007	Water Use	\$92.52	1,200		\$0.07710	\$616.80
South Berwick Sewer District	Sewer District	1,193	January 1, 2008	Water Use		n/a	\$53.00 Debt Service	\$0.06580	\$738.40
Carrabassett Valley Sanitary District	Sanitary District	1,200	1974	Flat Rates; Units	\$71.00	n/a		n/a	\$249.56 per Unit plus \$34.46 per Bedroom
Lincoln Sanitary District	Sanitary District	1,200	January 1, 2007	Water Use	\$72.24	1,200		\$0.06020	\$481.60
Madawaska Pollution Control	Municipal Sewer	1,240	July 1, 2007	Water Use	\$66.00	1,200		\$0.05500	\$440.00
Town of Orono WPCF	Municipal Sewer	1,272	July 1, 2007	Water Use	\$43.44	1,200		\$0.03620	\$289.60
City of Belfast WWTF	Municipal Sewer	1,349	January 2007	Water Use	\$95.00	2,000		\$0.04500	\$380.00
Boothbay Harbor Sewer District	Sewer District	1,359	January 1, 2008	Water Use	\$60.00	900		\$0.06250	\$500.00
Topsham Sewer District	Sewer District	1,408	March 2008	Water Use	\$43.00	1,000		\$0.04300	\$344.00
Houlton Water Company	Other: Water, Sewer, and Electric	1,458	April 1, 2005	Water Use	\$54.48	1,200		\$0.04540	\$363.20
Gardiner WWTP	Municipal Sewer	1,480	July 1, 2007	Water Use; Units	\$73.82 per Unit	0		\$0.01870	\$444.88 per Unit
Skowhegan WPCP	Municipal Sewer	1,500	n/a	Taxation	n/a	n/a		n/a	Taxation
Ogunquit Sewer District <sup>7</sup>	Sewer District	1,535	February 2008	Water Use	\$25.00	5,000		\$0.06500	\$720.00
Town of Gorham	Part of Portland WD	1,546	November 1, 2006	Water Use	\$41.22	300		\$0.06290	\$592.60
Kennebunkport Sewer Department	Municipal Sewer	1,662	2008	Flat Rates; Units	\$97.00	n/a		n/a	\$388.00 per Unit

\* Amounts for systems that bill other than quarterly have been prorated to allow for quarterly comparisons.

<sup>6</sup> Debt service of \$128.05 covers 5,000 cf of semiannual water use.

<sup>7</sup> Annual \$100 minimum charge fixed through 5,000 cf of water use. For each additional 5,000 cf of water use or part thereof, additional \$100 charge is added. Every cf of water use charged at .065/cf. A revised rate

## Rate Structure Sorted By Number of Residential Customers

FACILITY	TYPE	RESIDENTIAL CUSTOMERS	DATE OF LAST RATE INCREASE	RATES BASED ON	MINIMUM QUARTERLY CHARGE *	CUBIC FEET COVERED BY MINIMUM	ADDITIONAL QUARTERLY BASE CHARGES*	CHARGE PER CF	ANNUAL USER COST FOR 8000 CF
structure is being developed, to be effective January 1, 2009.									
Camden Wastewater Department	Municipal Sewer	1,800	July 1, 2008	Water Use	\$34.00	1,000		\$0.03400	\$272.00
Caribou Utilities District	Joint District	1,800	2007	Water Use	\$50.00	900		\$0.02000	\$288.00
Kittery Sewer Department	Municipal Sewer	1,835	July 1, 2003	Water Use	\$40.00	1,500	\$30.25 Debt Service	\$0.03750	\$356.00
Millinocket WWTF	Municipal Sewer	1,892	October 2007	Water Use	\$42.50	1,500		\$0.02830	\$226.60
Old Town PCF	Municipal Sewer	1,900	October 1, 2003	Water Use	\$71.00	1,200		\$0.05917	\$473.33
Presque Isle Sewer District	Joint District	1,961	November 1, 2006	Water Use; Rates Based on Meter Size	\$18.18	0		\$0.03090	\$319.92
Town of Winslow	Municipal Sewer	2,020	July 1, 2007	Water Use	\$31.25	0		\$0.01550	\$249.00
Town of Cape Elizabeth	Part of Portland WD	2,197	July 1, 2007	Water Use	\$100.50	300		\$0.04380	\$699.84
Greater Augusta Utility District (Metered)	Joint District	2,304	July 1, 2006	Water Use	\$18.85	0	\$16.15 Storm Chg	\$0.03210	\$396.80
Greater Augusta Utility District (Unmetered)	Included in Above		July 1, 2006	Flat Rates	\$85.00	n/a	\$16.15 Storm Chg	n/a	\$404.60
Town of Falmouth WWTP	Municipal Sewer	2,310	2007	Flat Rates	\$111.81	n/a		n/a	\$447.24
Lisbon Sewer Department	Municipal Sewer	2,430	July 2006	Water Use	\$22.50	500		\$0.04500	\$360.00
Kennebunk Sewer District	Sewer District	2,500	March 1, 2008	Water Use; Units		n/a	\$34.18 Debt Service and \$61.39 Support Systems	\$0.01920	\$535.88 per Unit
Mt. Desert Pollution Control	Municipal Sewer	2,500	n/a	Taxation	n/a	n/a		n/a	Taxation
City of Brewer WPCF	Municipal Sewer	2,700	July 1, 2007	Water Use	\$69.00	1,000		\$0.06900	\$552.00
City of Bath WPCF	Municipal Sewer	2,920	April 2007	Water Use	\$36.55	667		\$0.05480	\$438.44
City of Rockland WPCF	Municipal Sewer	3,000	2007	Water Use	\$37.06	1,000	\$3.50 Billing Fee	\$0.04420	\$339.00
Brunswick Sewer District	Sewer District	3,419	April 1, 2008	Water Use	\$33.60	800		\$0.04200	\$336.00
Town of Rumford	Municipal Sewer	3,435	2008	Flat Rates; Units	\$23.75	n/a		n/a	\$95.00 per Unit
Scarborough Sanitary District	Sanitary District	4,200	October 2003	Flat Rates; Units	\$82.50 per Unit	n/a		n/a	\$330.00 per Unit
City of Westbrook	Part of Portland WD	4,270	February 1, 2008	Water Use	\$25.50	300		\$0.03650	\$350.20
Wells Sanitary District <sup>8</sup>	Sanitary District	4,300	April 1, 2005	Water Use; Units	\$19.38 per Unit	4,900	\$19.38 Support Systems \$16.31 Debt Service per Unit	\$0.03100	\$480.64 per Unit
City of Saco WWTP	Municipal Sewer	4,322	July 1, 2005	Water Use		n/a		\$0.03600	\$288.00
York Sewer District <sup>9</sup>	Sewer District	4,329	2007	Water Use; Units		n/a	\$27.06 Debt Service & \$56.20 O&M per Unit	\$0.00840	\$400.24 per Unit

\* Amounts for systems that bill other than quarterly have been prorated to allow for quarterly comparisons.

<sup>8</sup> Annual debt and support system charges are calculated by multiplying amounts listed by a ratio of *cf used*/4,900 *cf*.

**Rate Structure**  
**Sorted By Number of Residential Customers**

FACILITY	TYPE	RESIDENTIAL CUSTOMERS	DATE OF LAST RATE INCREASE	RATES BASED ON	MINIMUM QUARTERLY CHARGE *	CUBIC FEET COVERED BY MINIMUM	ADDITIONAL QUARTERLY BASE CHARGES*	CHARGE PER CF	ANNUAL USER COST FOR 8000 CF
<sup>9</sup> O & M charges fixed through 12,000 cf of water use. Overage is billed using ratio of <i>cf overage/6,500 cf</i> .									
Waterville Sewer District	Sewer District	4,575	1994	Water Use	\$28.98	1,800		\$0.01610	\$128.80
Sanford Sewerage District	Sewer District	4,700	January 1, 2007	Water Use	\$22.50	0		\$0.06200	\$586.00
Auburn Sewer District	Joint District	4,738	April 1, 2006	Water Use	\$42.42	0		\$0.01920	\$323.28
Old Orchard Beach WWTF	Municipal Sewer	6,200	n/a	Taxation	n/a	n/a		n/a	Taxation
S. Portland Water Resource Protection	Municipal Sewer	7,500	July 1, 2007	Water Use; Units	\$11.34 per Unit	300		\$0.03780	\$302.40 per Unit
Yarmouth WPCF	Municipal Sewer	7,500	n/a	Taxation	n/a	n/a		n/a	Taxation
Bangor WWTP	Municipal Sewer	8,750	January 1, 2008	Water Use	\$56.64	1,200		\$0.04720	\$377.60
City of Portland	Part of Portland WD	16,701	July 1, 2008	Water Use	\$22.05	300		\$0.07350	\$588.00
Kennebec Sanitary Treatment District	Sewer District	n/a	n/a	Treats Waterville, Winslow, Fairfield, and Benton	n/a	n/a	n/a	n/a	n/a
Town of Oakland WWTP	Municipal Sewer	Not Available	October 2005	Water Use	\$35.00	0		\$0.04040	\$463.20
Town of Searsport WWTP	Municipal Sewer	Not Available	April 2005	Water Use		n/a	\$57.43 Debt Service & O&M	\$0.02250	\$409.72

\* Amounts for systems that bill other than quarterly have been prorated to allow for quarterly comparisons.

# **SECTION 4**

## **Rate Information**

**Sorted by Rate Level - High to Low**

**Organizational Structure**

**Number of Residential Customers**

**Rate Structure**



MAINE RURAL WATER ASSOCIATION

**Rate Structure**  
**Sorted By Rate Level, High to Low**

FACILITY	TYPE	RESIDENTIAL CUSTOMERS	DATE OF LAST RATE INCREASE	RATES BASED ON	MINIMUM QUARTERLY CHARGE *	CUBIC FEET COVERED BY MINIMUM	ADDITIONAL QUARTERLY BASE CHARGES*	CHARGE PER CF	ANNUAL USER COST FOR 8000 CF
Castine Sewer Department	Joint Municipal	385	October 2007	Water Use	\$46.01	800	\$60.99 Debt Service	\$0.19250	\$1,352.00
North Haven WWTF	Joint Municipal	169	January 1, 2008	Water Use	\$93.60	1,200	\$49.75 Debt Service	\$0.07800	\$823.00
South Berwick Sewer District	Sewer District	1,193	January 1, 2008	Water Use	\$0.00	n/a	\$53.00 Debt Service	\$0.06580	\$738.40
Ogunquit Sewer District <sup>1</sup>	Sewer District	1,535	February 2008	Water Use	\$25.00	5,000		\$0.06500	\$720.00
Winterport Water & Sewer District	Joint District	304	October 2006	Water Use	\$117.85	1,200		\$0.07550	\$713.00
Chick Hill PCF (Town of Rangeley)	Municipal Sewer	349	2007	Water Use	\$40.00	0		\$0.06850	\$708.00
Town of Cape Elizabeth	Part of Portland WD	2,197	July 1, 2007	Water Use	\$100.50	300		\$0.04380	\$699.84
Town of Cumberland	Part of Portland WD	978	August 1, 2007	Water Use	\$79.50	0		\$0.04500	\$678.00
Waldoboro Utility District	Sewer District	350	November 1, 2006	Water Use	\$63.60	800		\$0.07950	\$636.00
City of Calais WWTP	Joint Municipal	1,179	July 1, 2007	Water Use	\$92.52	1,200		\$0.07710	\$616.80
Winthrop Utilities District	Joint District	1,060	January 1, 2008	Water Use	\$134.23	1,750		\$0.07870	\$615.62
Dover-Foxcroft WWTF <sup>2</sup>	Municipal Sewer	900	2008	Water Use		2,500	\$64.03 Debt Service	\$0.04310	\$600.90
Stonington Sanitary District	Sanitary District	300	2006	Water Use	\$61.56	1,200	\$21.60 Debt Service \$25.00 Capitol Fund	\$0.05130	\$596.80
Town of Gorham	Part of Portland WD	1,546	November 1, 2006	Water Use	\$41.22	300		\$0.06290	\$592.60
City of Portland	Part of Portland WD	16,701	July 1, 2008	Water Use	\$22.05	300		\$0.07350	\$588.00
Sanford Sewerage District	Sewer District	4,700	January 1, 2007	Water Use	\$22.50	0		\$0.06200	\$586.00
Farmington WWTP	Municipal Sewer	808	January 2008	Water Use	\$35.42	500		\$0.07084	\$566.72
Freeport Sewer District	Sewer District	606	January 1, 2008	Water Use	\$91.11	1,200		\$0.06310	\$566.36
Bethel WPCF	Municipal Sewer	525	2006	Water Use	\$105.00	1,500		\$0.07000	\$560.00
City of Brewer WPCF	Municipal Sewer	2,700	July 1, 2007	Water Use	\$69.00	1,000		\$0.06900	\$552.00
Northport Village Corporation	Joint Village Corporation	234	October 2005	Flat Rates	\$137.25	n/a		n/a	\$549.00
Milbridge Sewer Department	Municipal Sewer	166	October 2006	Water Use	\$62.50	0		\$0.03700	\$546.00
Southwest Harbor WWTF	Joint Municipal	569	January 2003	Water Use	\$60.93	900		\$0.06770	\$541.60
Town of Wiscasset Wastewater	Municipal Sewer	750	April 2006	Water Use	\$58.50	900		\$0.06500	\$520.00

\* Amounts for systems that bill other than quarterly have been prorated to allow for quarterly comparisons.

<sup>1</sup> Annual \$100 minimum charge fixed through 5,000 cf of water use. For each additional 5,000 cf of water use or part thereof, additional \$100 charge is added. Every cf of water use charged at .065/cf. A revised rate structure is being developed, to be effective January 1, 2009.

<sup>2</sup> Debt service of \$128.05 covers 5,000 cf of semiannual water use.

**Rate Structure**  
**Sorted By Rate Level, High to Low**

FACILITY	TYPE	RESIDENTIAL CUSTOMERS	DATE OF LAST RATE INCREASE	RATES BASED ON	MINIMUM QUARTERLY CHARGE *	CUBIC FEET COVERED BY MINIMUM	ADDITIONAL QUARTERLY BASE CHARGES*	CHARGE PER CF	ANNUAL USER COST FOR 8000 CF
Winter Harbor Utilities District	Sewer District	257	January 1, 2008	Flat Rates	\$129.00	n/a		n/a	\$516.00
Great Salt Bay Sanitary District (Metered)	Joint District	700	October 1, 2007	Water Use	\$80.00	1,250		\$0.06400	\$512.00
Town of Baileyville <sup>3</sup>	Municipal Sewer	716	July 1, 2008	Water Use; Stepped System Based on Meter Size	\$12.50	668			\$500.00
Boothbay Harbor Sewer District	Sewer District	1,359	January 1, 2008	Water Use	\$60.00	900		\$0.06250	\$500.00
Lubec Sewer Department	Municipal Sewer	440	June 2008	Water Use	\$47.25	900	\$8.85 Debt Service	\$0.06240	\$499.14
Richmond Utilities District	Joint District	560	July 1, 2006	Water Use	\$73.78	1,135		\$0.05520	\$486.76
Lincoln Sanitary District	Sanitary District	1,200	January 1, 2007	Water Use	\$72.24	1,200		\$0.06020	\$481.60
Patten WWTF (Metered)	Joint Municipal	46	n/a	Water Use	\$57.00	0		\$0.03100	\$476.00
Old Town PCF	Municipal Sewer	1,900	October 1, 2003	Water Use	\$71.00	1,200		\$0.05917	\$473.33
Town of Oakland WWTP	Municipal Sewer	Not Available	October 2005	Water Use	\$35.00	0		\$0.04040	\$463.20
Milo Water District	Joint District	650	January 1, 2008	Water Use	\$60.00	0		\$0.02650	\$452.00
Town of Falmouth WWTP	Municipal Sewer	2,310	2007	Flat Rates	\$111.81	n/a		n/a	\$447.24
Clinton Water District	Joint District	374	January 1, 2005	Water Use	\$43.40	0		\$0.03340	\$441.20
Madawaska Pollution Control	Municipal Sewer	1,240	July 1, 2007	Water Use	\$66.00	1,200		\$0.05500	\$440.00
Mars Hill Utility District	Joint District	580	February 2004	Water Use		n/a	\$40.00 Debt Service	\$0.03500	\$440.00
Patten WWTF (Unmetered)	Joint Municipal	46	n/a	Flat Rates	\$110.00	n/a		n/a	\$440.00
Sabattus Sanitary District	Joint Sanitary District	440	January 1, 2008	Flat Rates	\$110.00	n/a		n/a	\$440.00
City of Bath WPCF	Municipal Sewer	2,920	April 2007	Water Use	\$36.55	667		\$0.05480	\$438.44
North Berwick Sanitary District <sup>4</sup>	Sanitary District	350	2005	Water Use	\$59.48	6,100	\$28.00 Debt Service	\$0.03900	\$424.00
Town of South Windham	Part of Portland WD	51	August 10, 1992	Water Use	\$34.50	600		\$0.05000	\$418.00
Grand Isle Wastewater Department	Joint Municipal	158	July 2001	Flat Rates	\$103.05	n/a		n/a	\$412.20
Limestone Water & Sewer District	Joint District	328	November 1, 2005	Water Use	\$65.00	900		\$0.03410	\$410.08
Town of Searsport WWTP	Municipal Sewer	Not Available	April 2005	Water Use		n/a	\$57.43 Debt Service & O&M	\$0.02250	\$409.72

\* Amounts for systems that bill other than quarterly have been prorated to allow for quarterly comparisons.

<sup>3</sup> Stepped system based on meter size, billed annually by the gallon. After converting to cubic feet, the first 4,010 billed @\$300; next 2,674 @ .0561/cf; next 4,010 cf @ .0374/cf.

<sup>4</sup> Flat rate of \$349.92 for annual water use up to and including 6,100 cf. For users of over 6,100 cf, each cf of water use is billed. All customers pay debt service.

**Rate Structure  
Sorted By Rate Level, High to Low**

FACILITY	TYPE	RESIDENTIAL CUSTOMERS	DATE OF LAST RATE INCREASE	RATES BASED ON	MINIMUM QUARTERLY CHARGE *	CUBIC FEET COVERED BY MINIMUM	ADDITIONAL QUARTERLY BASE CHARGES*	CHARGE PER CF	ANNUAL USER COST FOR 8000 CF
Greater Augusta Utility District (Unmetered)	Joint District	2,304	July 1, 2006	Flat Rates	\$85.00	n/a	\$16.15 Storm Chg	n/a	\$404.60
Norridgewock WWTF	Municipal Sewer	385	1996	Water Use	\$25.00	0		\$0.03750	\$400.00
Greater Augusta Utility District (Metered)	Joint District	2,304	July 1, 2006	Water Use	\$18.85	0	\$16.15 Storm Chg	\$0.03210	\$396.80
Washburn Water & Sewer Department	Joint Municipal	300	2006	Flat Rates	\$97.50	n/a		n/a	\$390.00
Frenchville WWTP	Municipal Sewer	181	2005	Flat Rates	\$96.25	n/a		n/a	\$385.00
Great Salt Bay Sanitary District (Unmetered)	Joint District	700	October 1, 2007	Flat Rates	\$96.00	n/a		n/a	\$384.00
City of Belfast WWTF	Municipal Sewer	1,349	January 2007	Water Use	\$95.00	2,000		\$0.04500	\$380.00
Bangor WWTP	Municipal Sewer	8,750	January 1, 2008	Water Use	\$56.64	1,200		\$0.04720	\$377.60
Mapleton Sewer District	Sewer District	280	2008	Flat Rates	\$93.75	n/a		n/a	\$375.00
Eagle Lake Water & Sewer District	Joint District	312	2007	Flat Rates	\$91.14	n/a		n/a	\$364.56
Houlton Water Company	Other: Water, Sewer, and Electric	1,458	April 1, 2005	Water Use	\$54.48	1,200		\$0.04540	\$363.20
Corinna Sewer District	Sewer District	340	April 2001	Flat Rates	\$90.00	n/a		n/a	\$360.00
Limerick Sewerage District	Sewer District	150	2005	Water Use; Units	\$67.50	1,500		\$0.04500	\$360.00
Lisbon Sewer Department	Municipal Sewer	2,430	July 2006	Water Use	\$22.50	500		\$0.04500	\$360.00
Newport Sanitary District	Sanitary District	450	2008	Water Use	\$42.24	1,200	\$19.50 Debt Service	\$0.03520	\$359.60
Kittery Sewer Department	Municipal Sewer	1,835	July 1, 2003	Water Use	\$40.00	1,500	\$30.25 Debt Service	\$0.03750	\$356.00
Town of Westbrook	Part of Portland WD	4,270	February 1, 2008		\$25.50	300		\$0.03650	\$350.20
Dark Harbor WWTF (Town of Isleboro)	Municipal Sewer	20	July 1, 2007	Water Use	\$62.50	0		\$0.01190	\$345.20
Topsham Sewer District	Sewer District	1,408	March 2008	Water Use	\$43.00	1,000		\$0.04300	\$344.00
City of Rockland WPCF	Municipal Sewer	3,000	2007	Water Use	\$37.06	1,000	\$3.50 Billing Fee	\$0.04420	\$339.00
Brunswick Sewer District	Sewer District	3,419	April 1, 2008	Water Use	\$33.60	800		\$0.04200	\$336.00
Auburn Sewer District	Joint District	4,738	April 1, 2006	Water Use	\$42.42	0		\$0.01920	\$323.28
Manchester Sanitary District	Sanitary District	400	2002	Flat Rates	\$80.00	n/a		n/a	\$320.00
Thomaston Pollution Control Dept.	Municipal Sewer	834	July 1, 2001	Water Use	\$36.00	900		\$0.04000	\$320.00
Presque Isle Sewer District	Joint District	1,961	November 1, 2006	Water Use; Rates Based on Meter Size	\$18.18	0		\$0.03090	\$319.92

\* Amounts for systems that bill other than quarterly have been prorated to allow for quarterly comparisons.

**Rate Structure  
Sorted By Rate Level, High to Low**

FACILITY	TYPE	RESIDENTIAL CUSTOMERS	DATE OF LAST RATE INCREASE	RATES BASED ON	MINIMUM QUARTERLY CHARGE *	CUBIC FEET COVERED BY MINIMUM	ADDITIONAL QUARTERLY BASE CHARGES*	CHARGE PER CF	ANNUAL USER COST FOR 8000 CF
Fort Kent Water & Wastewater Dept.	Joint Department	950	1997	Water Use	\$53.67	1,350		\$0.04000	\$318.68
Bar Harbor Wastewater Division (Unmetered)	Joint Municipal	1,025	July 2007	Flat Rate	\$77.19	n/a		n/a	\$308.76
Town of Whitneyville	Municipal Sewer	25	November 1, 2007	Flat Rates	\$75.00	n/a		n/a	\$300.00
Town of Wilton	Joint Municipal	753	Unknown	Water Use	\$64.24	1,000		\$0.01012	\$297.44
Guilford Sangerville Sanitary District	Sanitary District	550	1995	Water Use	\$6.25	0		\$0.03400	\$297.00
Town of Orono WPCF	Municipal Sewer	1,272	July 1, 2007	Water Use	\$43.44	1,200		\$0.03620	\$289.60
East Millinocket WWTF	Joint Municipal	883	May 30, 2006	Water Use	\$55.00	1,200		\$0.02160	\$289.12
Mattawamkeag Wastewater Dept.	Municipal Sewer	118	2006	Flat Rates	\$72.16	n/a		n/a	\$288.64
Caribou Utilities District	Joint District	1,800	2007	Water Use	\$50.00	900		\$0.02000	\$288.00
City of Saco WWTP	Municipal Sewer	4,322	July 1, 2005	Water Use		n/a		\$0.03600	\$288.00
Bar Harbor Wastewater Division (Metered)	Joint Municipal	1,025	July 2007	Water Use	\$35.90	1,000		\$0.03590	\$287.20
Machias WWTP (Metered) <sup>5</sup>	Municipal Sewer	466	July 1, 2006	Water Use	\$32.25	1,000	\$6.65 Debt Service	\$0.03220	\$284.40
Dexter Utility District	Joint District	844	April 13, 2005	Water Use	\$36.85	1,038		\$0.03550	\$284.00
Town of Fairfield	Municipal Sewer	1,100	July 2004	Water Use	\$44.75	1,000		\$0.02600	\$283.00
Town of Enfield	Municipal Sewer	170	1996	Flat Rates	\$69.00	n/a		n/a	\$276.00
Machias WWTP (Unmetered)	Municipal Sewer	466	July 1, 2006	Flat Rates	\$68.50	n/a		n/a	\$274.00
Camden Wastewater Department	Municipal Sewer	1,800	July 1, 2008	Water Use	\$34.00	1,000		\$0.03400	\$272.00
Bucksport Wastewater Facility	Municipal Sewer	711	July 1, 2008	Water Use	\$60.30	1,800		\$0.03350	\$268.00
Town of Winslow	Municipal Sewer	2,020	July 1, 2007	Water Use	\$31.25	0		\$0.01550	\$249.00
Ashland Water & Sewer District	Joint District	295	October 1992	Water Use	\$33.75	250		\$0.01550	\$243.50
Howland Water & Wastewater Dept.	Joint Municipal	365	Unknown	Flat Rates	\$60.00	n/a		n/a	\$240.00
Jackman Utility District	Joint District	400	1990	Water Use; Units	\$37.50	1,200		\$0.02550	\$231.60
Dixfield Water and Sewer Department	Joint Municipal	600	July 2007	Water Use	\$49.83	1,500		\$0.01550	\$230.32
Millinocket WWTF	Municipal Sewer	1,892	October 2007	Water Use	\$42.50	1,500		\$0.02830	\$226.60
Town of Benton	Municipal Sewer	187	2002	Water Use	\$30.00	1,000		\$0.01800	\$192.00

\* Amounts for systems that bill other than quarterly have been prorated to allow for quarterly comparisons.

## Rate Structure Sorted By Rate Level, High to Low

FACILITY	TYPE	RESIDENTIAL CUSTOMERS	DATE OF LAST RATE INCREASE	RATES BASED ON	MINIMUM QUARTERLY CHARGE *	CUBIC FEET COVERED BY MINIMUM	ADDITIONAL QUARTERLY BASE CHARGES*	CHARGE PER CF	ANNUAL USER COST FOR 8000 CF
<sup>5</sup> \$6.25 billed for each 3,000 cf of water use per quarter									
Town of Pittsfield	Joint Municipal	1,042	September 6, 2006	Water Use		n/a		\$0.02250	\$180.00
Fort Fairfield Utilities District	Joint District	850	April 1, 1997	Water Use		n/a		\$0.02000	\$160.00
Waterville Sewer District	Sewer District	4,575	1994	Water Use	\$28.98	1,800		\$0.01610	\$128.80
<b>See Below for Systems with Unit Billing and Systems Without Rates</b>									
Kennebunk Sewer District	Sewer District	2,500	March 1, 2008	Water Use; Units		n/a	\$34.18 Debt Service and \$61.39 Support Systems	\$0.01920	\$535.88 per Unit
Wells Sanitary District <sup>6</sup>	Sanitary District	4,300	April 1, 2005	Water Use; Units	\$19.38 per Unit	4,900	\$19.38 Support Systems \$16.31 Debt Service per	\$0.03100	\$480.64 per Unit
Paris Utility District	Joint District	1,010	January 1, 2007	Water Use; Units	\$94.00 per Unit	1,200		\$0.02960	\$470.72 per Unit
Gardiner WWTP	Municipal Sewer	1,480	July 1, 2007	Water Use; Units	\$73.82 per Unit	0		\$0.01870	\$444.88 per Unit
Mechanic Falls Sanitary District	Sanitary District	503	October 1, 2007	Water Use; Units	\$31.25 per Unit	0		\$0.03850	\$433.00 per Unit
Town of Oxford <sup>7</sup>	Municipal Sewer	1	October 2006	Flat Rates; Units	\$102.58 per Unit	n/a		n/a	\$410.32 per Unit
York Sewer District <sup>8</sup>	Sewer District	4,329	2007	Water Use; Units		n/a	\$27.06 Debt Service & \$56.20 O&M per Unit	\$0.00840	\$400.24 per Unit
Livermore Falls Sewer Department	Municipal Sewer	619	1998	Water Use; Units	\$45.00	0		\$0.02750	\$400.00 per Unit
Kennebunkport Sewer Department	Municipal Sewer	1,662	2008	Flat Rates; Units	\$97.00	n/a		n/a	\$388.00 per Unit
St. Agatha Wastewater Department	Municipal Sewer	250	2006	Flat Rates; Units	\$95.00 per Unit	n/a		n/a	\$380.00 per Unit
Veazie Sewer District	Sewer District	700	September 5, 2001	Water Use; Units		n/a	\$25.00 Debt Service per Unit	\$0.03470	\$377.60 per Unit
Berwick Sewer District	Sewer District	900	1991	Flat Rates; Units	\$92.50 per Unit	n/a		n/a	\$370.00 per Unit
Sinclair Sanitary District	Sanitary District	187	January 1, 2008	Flat Rates; Units	\$90.00 per Unit	n/a		n/a	\$360.00 per Unit
Town of Norway Wastewater	Municipal Sewer	750	2007	Water Use; Units	\$24.15 per Unit	0		\$0.03170	\$350.20 per Unit
Scarborough Sanitary District	Sanitary District	4,200	October 2003	Flat Rates; Units	\$82.50 per Unit	n/a		n/a	\$330.00 per Unit
S. Portland Water Resource Protection	Municipal Sewer	7,500	July 1, 2007	Water Use; Units	\$11.34 per Unit	300		\$0.03780	\$302.40 per Unit
Town of Brownville WWTF	Joint Municipal	400	2000	Flat Rates; Units		n/a	\$19.95 Sewer Debt \$55.50 O&M	n/a	\$301.80 per Unit
Monson Utilities District	Joint District	33	November 2001	Flat Rates; Units	\$68.75 per Unit	n/a		n/a	\$275.00 per Unit

\* Amounts for systems that bill other than quarterly have been prorated to allow for quarterly comparisons.

<sup>6</sup> Annual debt and support system charges are calculated by multiplying amounts listed by a ratio of *cf used/4,900 cf*.

<sup>7</sup> Has only one residential customer with 39 units.

<sup>8</sup> O & M charges fixed through 12,000 cf of water use. Overage is billed using ratio of *cf overage/6,500 cf*.

**Rate Structure  
Sorted By Rate Level, High to Low**

FACILITY	TYPE	RESIDENTIAL CUSTOMERS	DATE OF LAST RATE INCREASE	RATES BASED ON	MINIMUM QUARTERLY CHARGE *	CUBIC FEET COVERED BY MINIMUM	ADDITIONAL QUARTERLY BASE CHARGES*	CHARGE PER CF	ANNUAL USER COST FOR 8000 CF
Town of Jay Sewer Department <sup>9</sup>	Municipal Sewer	795	July 1, 2008	Flat Rates; Units	\$62.50	n/a		n/a	\$250.00 per Unit
Carrabassett Valley Sanitary District	Sanitary District	1,200	1974	Flat Rates; Units	\$71.00	n/a		n/a	\$249.56 per Unit plus \$34.46 per Bedroom
Warren Sanitary District	Sanitary District	250	n/a	Flat Rates; Units	\$62.00 per Unit	n/a		n/a	\$248.00 per Unit
Bingham Sewer Department	Municipal Sewer	400	2004	Flat Rates; Units	\$55.00 per Unit	n/a		n/a	\$220.00 per Unit
Moosehead Sanitary District	Sanitary District	670	January 2007	Flat Rates; Units	\$51.33 per Unit	n/a		n/a	\$205.32 per Unit
Blue Hill WWTP	Municipal Sewer	145	May 2003	Flat Rates; Units	\$48.00 per Unit \$86.40 per House	n/a		n/a	\$192.00 per Unit/ \$345.60 per House
Kingfield Wastewater System	Municipal Sewer	181	July 1, 2007	Flat Rates; Units	\$45.48	n/a		n/a	\$181.92 per Unit
Mexico Sewer District	Sewer District	817	January 1, 2000	Flat Rates; Units	\$43.75 per Unit	n/a		n/a	\$175.00 per Unit
Town of Rumford	Municipal Sewer	3,435	2008	Flat Rates; Units	\$23.75	n/a		n/a	\$95.00 per Unit
Passamaquoddy WWTF	Other: Joint Tribal	328	n/a	Assessed	n/a	n/a		n/a	Covered by General Fund
Penobscot Nation PCF @ Indian Island	Other: Quasi-Municipal, Joint Tribal	250	n/a	General Fund	n/a	n/a		n/a	Covered by General Fund
Kennebec Sanitary Treatment District	Sewer District	n/a	n/a	Treats Waterville, Winslow, Fairfield, and Benton	n/a	n/a	n/a	n/a	n/a
Mt. Desert Pollution Control	Municipal Sewer	2,500	n/a	Taxation	n/a	n/a		n/a	Taxation
Old Orchard Beach WWTF	Municipal Sewer	6,200	n/a	Taxation	n/a	n/a		n/a	Taxation
Skowhegan WPCP	Municipal Sewer	1,500	n/a	Taxation	n/a	n/a		n/a	Taxation
Yarmouth WPCF	Municipal Sewer	7,500	n/a	Taxation	n/a	n/a		n/a	Taxation

\* Amounts for systems that bill other than quarterly have been prorated to allow for quarterly comparisons.

<sup>9</sup> 63% of budget from taxation.

## **APPENDIX J: PORTLAND WATER DISTRICT SCHEDULE OF RATES**



## Schedule of Rates

Updated 07/01/10

### Water Rates

[Member Water Rates](#)  
[Non-Member Water Rates](#)

### Wastewater Rates

## Water Rates

**Water Rates for Members:**  
 Effective date: May 1, 2010

SEARCH:



### YOUR ACCOUNT

#### Manage Your Account

- Account Information-coming
- Pay Online
- Account Changes
- Service Request

#### Customer Service

- Ways to Pay
- Rates
- Sample Bill
- Claims

#### Consumer Information

- Terms of Your Account
- Terms and Conditions
- Rights and Responsibilities
- Cross Connections
- Consumer Advice
- Read Your Meter
- Your Bill Explained
- Submeter
- Frozen Pipes
- Water Efficiency

#### FAQ

### (1) Monthly Rates: Minimum Charges:

Meter Size	Min. Charge	Allow. CU FT	Seasonal Rates		
			Surface Mains	Deep Mains	Allow. CU FT
5/8*	\$8.01	100	\$233.67	\$198.48	3,600
3/4	9.44	100	288.07	252.88	6,300
1	12.27	100	342.47	307.28	9,000
1 1/2	19.49	100	523.80	488.61	18,000
2	28.07	100	741.40	706.21	28,800
3	50.93	100	1,321.67	1,286.48	57,600
4	76.65	100	1,974.48	1,939.29	90,000
6	148.09	100	3,787.83	3,752.64	180,000
8	233.82	100	5,963.86	5,928.67	288,000
10	338.55	100	11,766.93	11,731.74	576,000
12	448.15	100	18,294.64	18,259.45	900,000
Low Income	2.02	100			

\* Standard residential meter

### (2) Monthly Rates: Above Minimum Charge:

For the first	100 cubic feet	included in minimum charge
For the next	2,900 cubic feet	2.02 per 100 cubic feet
For the next	7,000 cubic feet	1.59 per 100 cubic feet
For the next	40,000 cubic feet	1.39 per 100 cubic feet
In excess of	50,000 cubic feet	0.80 per 100 cubic feet

### Seasonal Rates:

See meter size for the allowance included in the minimum charge.

Excess up to	90,000 cubic feet	2.02 per 100 cubic feet
In excess of	90,000 cubic feet	1.39 per 100 cubic feet

Portland Water District | 225 Douglass Street | PO Box 3553 | Portland, ME 04104-3553

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[Your Privacy Is Important To Us](#)

**Example:** Portland household using a residential meter - 5/8 - and 500 cubic feet of water for one month. Charge for **(Step 1)** first 100 cubic feet is \$8.01 plus **(Step 2)** \$8.08 (4 x \$2.02) for 400 additional cubic feet equals \$16.09.

### Estimated Water Charge Based on Typical Usage

Number of People	Typical Usage Gallons = HCF	Rate
1	1,800 = 2	\$10.03
2	3,600 = 5	16.09
3	5,400 = 7	20.13
4	7,200 = 10	26.19
5	9,000 = 12	30.23
6	10,800 = 14	34.27
7	12,600 = 17	40.33
8	14,400 = 19	44.37
9	16,200 = 22	50.43

*\* Typical monthly consumption and charges. Residential users with 5/8 meter. Based upon daily usage of 60 gallons per person. Rounded to nearest hcf. HCF = hundred cubic feet. 748 gallons = 1 hcf.*

### Water Rates for Non Members: Effective date: May 1, 2010

#### (1) Monthly Rates: Minimum Charges:

Meter Size	Min. Charge	Allow. CU FT	Seasonal Rates		
			Surface Mains	Deep Mains	Allow. CU FT
5/8	\$9.21	100	\$268.72	\$228.25	3,600
3/4	10.85	100	331.27	290.80	6,300
1	14.11	100	393.84	353.37	9,000
1 1/2	22.41	100	602.37	561.90	18,000
2	32.27	100	852.61	812.14	28,800
3	58.56	100	1,519.93	1,479.46	57,600
4	88.14	100	2,270.66	2,230.19	90,000
6	170.30	100	4,356.01	4,315.54	180,000
8	268.89	100	6,858.44	6,817.97	288,000
10	389.33	100	13,531.57	13,491.10	576,000
12	515.37	100	21,038.84	20,998.37	900,000
Low Income	2.32	100			

#### (2) Monthly Rates: Above Minimum Charge:

For the first	100 cubic feet	included in minimum charge
For the next	2,900 cubic feet	2.32 per 100 cubic feet
For the next	7,000 cubic feet	1.83 per 100 cubic feet
For the next	40,000 cubic feet	1.61 per 100 cubic feet
In excess of	50,000 cubic feet	0.92 per 100 cubic feet

**Seasonal Rates:**

**See meter size for the allowance included in the minimum charge**

Excess up to	90,000 cubic feet	2.32 per 100 cubic feet
In excess of	90,000cubic feet	1.60 per 100 cubic feet

**Example:** Standish household using a residential meter - 5/8 - and 400 cubic feet of water for one month. Charge for **(Step 1)** first 100 cubic feet is \$9.21 plus **(Step 2)** \$6.96 (3 x \$2.32) for 300 additional cubic feet equals \$16.17.

**Estimated Water Charge Based on Typical Usage**

Number of People	Typical Usage Gallons = HCF	Rate
1	1,800 = 2	\$11.53
2	3,600 = 5	18.49
3	5,400 = 7	23.13
4	7,200 = 10	30.09
5	9,000 = 12	34.73
6	10,800 = 14	39.37
7	12,600 = 17	46.33
8	14,400 = 19	50.97
9	16,200 = 22	57.93

*\* Typical monthly consumption and charges. Residential users with 5/8 meter. Based upon daily usage of 60 gallons per person. Rounded to nearest hcf. HCF = hundred cubic feet. 748 gallons = 1 hcf.*

**Private Fire Service**

For each private fire service connected to the District system, there shall be paid to the District an annual fire protection charge as follows:

Size of Connection	Annual Charge Members	Annual Charge Non Members
2	\$37.32	\$42.92
3	83.47	95.99
4	149.04	171.40
6	356.01	409.40
8	596.18	685.59
10	931.59	1071.34
12	1,341.41	1,542.62
16	2,384.71	2,742.43

In cases where fire protection systems are supplied with water through metered connections, the quantity of water used for emergency extinguishment of fires will be estimated upon notification and deducted from the quantity registered by the meter before billing.

---

**Wastewater Rates**

**MIN HCF MIN CHARGE**

**ADDITIONAL HCF**

PORTLAND	1	7.87	7.87
CUMBERLAND	0	32.00	4.70
SO PORTLAND	1	4.18	4.18
CAPE ELIZABETH	1	34.84	4.56
WESTBROOK	1	9.50	4.50
GORHAM	1	13.74	6.29
WINDHAM	5	48.84	3.24
FALMOUTH	-	37.27	0
-	-	37.27	*commercial >17 fixtures = \$1.76
-	-	37.27	*multi-unit 37.27 per every living unit
34.95 per 15 pupils			

HCF = Hundred Cubic Feet

**Example:** Portland household used 500 cubic feet in one month. \$7.87 for the first 100 cubic feet plus \$30.56 for 400 (7.87x 4) cubic feet equals \$39.35 For more examples, see the charts below.

\*A yearly adjustment may be made for amounts in excess of 10 HCF per month. An additional charge of \$2.35/HCF in excess of 10 HCF per month will be billed, if the calculated amount is higher.

**Estimated On Typical Wastewater Usage**

		Effective Dates	02/01/10	07/01/10	07/01/10
# OF PEOPLE	GALLONS = HCF	WESTBROOK	SOUTH PORTLAND	PORTLAND	
	1,880 = 2	14.00	8.36	15.74	
2	3,600 = 5	27.50	20.90	39.35	
3	5,400 = 7	36.50	29.26	55.09	
4	7,200 = 10	50.00	41.80	78.70	
5	9,000 = 12	59.00	50.16	94.44	
6	10,800 = 14	68.00	58.52	110.18	
7	12,600 = 17	81.50	71.06	133.79	
8	14,400 = 19	90.50	79.42	149.53	
9	16,200 = 22	104.00	91.96	173.14	

		Effective Dates:	08/10/09	01/01/09	04/01/09	11/01/06
# OF PEOPLE	GALLONS = HCF	CUMBERLAND	CAPE ELIZABETH	WINDHAM	GORHAM	
1	1,800= 2	41.40	39.40	48.84	20.03	
2	3,600= 5	55.50	53.08	48.84	38.90	
3	5,400= 7	64.90	62.20	55.32	51.48	
4	7,200= 10	79.00	75.88	65.04	70.35	
5	9,000= 12	88.40	85.00	71.52	82.93	
6	10,800= 14	97.80	94.12	78.00	95.51	
7	12,600= 17	111.90	107.80	87.72	114.38	
8	14,400= 19	121.30	116.92	94.20	126.96	
9	16,200= 22	135.40	130.60	103.92	145.83	

For additional information on wastewater rates and billing, please call the District's Customer Service Hotline @ 761-8310 or [e-mail us](mailto:us). Because sewer services are often a collaboration between the Portland Water District and your local city or town, you can contact PWD or the person below who represents your community for more information on your wastewater charges and service:

Howard Downs, Portland	874-8829
Pam Bosarge, Cumberland	829-2207
Pam McCarthy, South Portland	767-7675
Mike McGovern, Cape Elizabeth	799-5251

Eric Dudley, Westbrook	854-9105
David Twomey, Gorham	839-5039
Kate Johnson, Gorham	222-1612
Anthony Plante, Windham	892-1907
Diane Moore, Falmouth	781-4462

## **APPENDIX K: PROJECT FINANCING CALCULATIONS**

Windham, ME  
Phase 1  
Estimated Debt Service Schedule

Interest Rate      5.00%  
Principal          \$67,800,000      PROJECT COST ESTIMATES  
Term                30

EQUAL PAYMENTS

Annual Payment = \$4,410,487.30

	Remaining Principal	Interest Payment	Principal Payment	Annual Payment
1	\$67,800,000.00	\$3,390,000.00	\$1,020,487.30	\$4,410,487.30
2	\$66,779,512.70	\$3,338,975.64	\$1,071,511.66	\$4,410,487.30
3	\$65,708,001.04	\$3,285,400.05	\$1,125,087.25	\$4,410,487.30
4	\$64,582,913.79	\$3,229,145.69	\$1,181,341.61	\$4,410,487.30
5	\$63,401,572.18	\$3,170,078.61	\$1,240,408.69	\$4,410,487.30
6	\$62,161,163.49	\$3,108,058.17	\$1,302,429.12	\$4,410,487.30
7	\$60,858,734.37	\$3,042,936.72	\$1,367,550.58	\$4,410,487.30
8	\$59,491,183.79	\$2,974,559.19	\$1,435,928.11	\$4,410,487.30
9	\$58,055,255.68	\$2,902,762.78	\$1,507,724.51	\$4,410,487.30
10	\$56,547,531.17	\$2,827,376.56	\$1,583,110.74	\$4,410,487.30
11	\$54,964,420.43	\$2,748,221.02	\$1,662,266.28	\$4,410,487.30
12	\$53,302,154.15	\$2,665,107.71	\$1,745,379.59	\$4,410,487.30
13	\$51,556,774.56	\$2,577,838.73	\$1,832,648.57	\$4,410,487.30
14	\$49,724,125.99	\$2,486,206.30	\$1,924,281.00	\$4,410,487.30
15	\$47,799,844.99	\$2,389,992.25	\$2,020,495.05	\$4,410,487.30
16	\$45,779,349.94	\$2,288,967.50	\$2,121,519.80	\$4,410,487.30
17	\$43,657,830.14	\$2,182,891.51	\$2,227,595.79	\$4,410,487.30
18	\$41,430,234.35	\$2,071,511.72	\$2,338,975.58	\$4,410,487.30
19	\$39,091,258.77	\$1,954,562.94	\$2,455,924.36	\$4,410,487.30
20	\$36,635,334.41	\$1,831,766.72	\$2,578,720.58	\$4,410,487.30
21	\$34,056,613.83	\$1,702,830.69	\$2,707,656.61	\$4,410,487.30
22	\$31,348,957.22	\$1,567,447.86	\$2,843,039.44	\$4,410,487.30
23	\$28,505,917.78	\$1,425,295.89	\$2,985,191.41	\$4,410,487.30
24	\$25,520,726.37	\$1,276,036.32	\$3,134,450.98	\$4,410,487.30
25	\$22,386,275.39	\$1,119,313.77	\$3,291,173.53	\$4,410,487.30
26	\$19,095,101.86	\$954,755.09	\$3,455,732.21	\$4,410,487.30
27	\$15,639,369.66	\$781,968.48	\$3,628,518.82	\$4,410,487.30
28	\$12,010,850.84	\$600,542.54	\$3,809,944.76	\$4,410,487.30
29	\$8,200,906.09	\$410,045.30	\$4,000,441.99	\$4,410,487.30
30	\$4,200,464.09	\$210,023.20	\$4,200,464.09	\$4,410,487.30
		\$64,514,618.95	\$67,800,000.00	\$132,314,618.95

**Town of Windham , ME**  
**Carrying Costs and Cash Flow (based on Wastewater Flow Revenue)\***  
**Wastewater Facilities Plan**

	Activity Description	Year	Construction			1	2	3	4	5
			2011	2012	2013	2014	2015	2016	2017	2018
<b>Interim Costs</b>										
Construction Phase Cash Flow	Design & Construction Phase Engineering		\$ 3,233,333	\$ 3,233,333	\$ 3,233,333					
	Construction		\$ 19,366,667	\$ 19,366,667	\$ 19,366,667					
	<b>Total Interim Costs</b>		<b>\$ 22,600,000</b>	<b>\$ 22,600,000</b>	<b>\$ 22,600,000</b>					
<b>Carrying Costs</b>										
Fees	Loan Origination Fee - \$1,000		\$ 10,000							
Short Term Debt Service (BAN)	Short Term Debt Service on Interim Costs - Assume 3 Year BAN @ 4.5%		\$ 145,500	\$ 291,000	\$ 436,500					
Debt Service - Construction Costs	Payments on Principal and Interest - Assume 5% (see Amortization Schedule)					\$ 4,410,487	\$ 4,410,487	\$ 4,410,487	\$ 4,410,487	\$ 4,410,487
PWD Wastewater Treatment O&M	Operations and Maintenance Expenditures					\$ 200,000	\$ 203,999	\$ 208,082	\$ 212,242	\$ 216,486
Windham Collection/Transport O&M	Operations and Maintenance Expenditures					\$ 260,000	\$ 265,199	\$ 270,506	\$ 275,915	\$ 281,432
	<b>Total Carrying Costs</b>		<b>\$ 155,500</b>	<b>\$ 291,000</b>	<b>\$ 436,500</b>	<b>\$ 4,870,487</b>	<b>\$ 4,879,686</b>	<b>\$ 4,889,075</b>	<b>\$ 4,898,645</b>	<b>\$ 4,908,405</b>
<b>Revenue</b>										
Wastewater Flow Revenue	Annual revenue based upon current wastewater rates <sup>1</sup>		\$ 3,527,188	\$ 3,530,715	\$ 3,534,246	\$ 3,537,780	\$ 3,541,318	\$ 3,544,859	\$ 3,548,404	\$ 3,551,953
	<b>Total Revenue</b>		<b>\$ 3,527,188</b>	<b>\$ 3,530,715</b>	<b>\$ 3,534,246</b>	<b>\$ 3,537,780</b>	<b>\$ 3,541,318</b>	<b>\$ 3,544,859</b>	<b>\$ 3,548,404</b>	<b>\$ 3,551,953</b>

2011 Carrying Costs	2012 Carrying Costs	2013 Carrying Costs	2014 Carrying Costs	2015 Carrying Costs	2016 Carrying Costs	2017 Carrying Costs	2018 Carrying Costs
\$155,500	\$291,000	\$436,500	\$4,870,487	\$4,879,686	\$4,889,075	\$4,898,645	\$4,908,405
2011 Revenue	2012 Revenue	2013 Revenue	2014 Revenue	2015 Revenue	2016 Revenue	2017 Revenue	2018 Revenue
\$3,527,188	\$3,530,715	\$3,534,246	\$3,537,780	\$3,541,318	\$3,544,859	\$3,548,404	\$3,551,953
Surplus/ Shortfall							
\$3,371,688	\$3,239,715	\$3,097,746	(\$1,332,707)	(\$1,338,368)	(\$1,344,216)	(\$1,350,240)	(\$1,356,452)

1 - user fees escalated @1% per year

\*the cost estimates included in this Financial Plan are for planning purposes only and do not reflect all cost components.

**Town of Windham , ME**  
**Carrying Costs and Cash Flow (based on Wastewater Flow Revenue)\***  
**Wastewater Facilities Plan**

6	7	8	9	10	11	12	13	14	15	16	17	18	19
2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
\$ 4,410,487	\$ 4,410,487	\$ 4,410,487	\$ 4,410,487	\$ 4,410,487	\$ 4,410,487	\$ 4,410,487	\$ 4,410,487	\$ 4,410,487	\$ 4,410,487	\$ 4,410,487	\$ 4,410,487	\$ 4,410,487	\$ 4,410,487
\$ 220,815	\$ 225,233	\$ 229,739	\$ 234,333	\$ 239,020	\$ 243,801	\$ 248,674	\$ 252,282	\$ 255,834	\$ 260,168	\$ 264,502	\$ 268,836	\$ 273,170	\$ 277,504
\$ 287,060	\$ 292,803	\$ 298,661	\$ 304,633	\$ 310,726	\$ 316,941	\$ 323,277	\$ 327,966	\$ 332,584	\$ 338,218	\$ 343,852	\$ 349,486	\$ 355,121	\$ 360,755
\$ 4,918,363	\$ 4,928,523	\$ 4,938,887	\$ 4,949,453	\$ 4,960,234	\$ 4,971,229	\$ 4,982,439	\$ 4,990,735	\$ 4,998,905	\$ 5,008,873	\$ 5,018,841	\$ 5,028,809	\$ 5,038,777	\$ 5,048,746
\$ 3,555,505	\$ 3,559,060	\$ 3,562,619	\$ 3,566,182	\$ 3,569,748	\$ 3,573,318	\$ 3,576,891	\$ 3,580,468	\$ 3,584,048	\$ 3,587,633	\$ 3,591,220	\$ 3,594,811	\$ 3,598,406	\$ 3,602,005
\$ 3,555,505	\$ 3,559,060	\$ 3,562,619	\$ 3,566,182	\$ 3,569,748	\$ 3,573,318	\$ 3,576,891	\$ 3,580,468	\$ 3,584,048	\$ 3,587,633	\$ 3,591,220	\$ 3,594,811	\$ 3,598,406	\$ 3,602,005

2019 Carrying Costs	2020 Carrying Costs	2021 Carrying Costs	2022 Carrying Costs	2023 Carrying Costs	2024 Carrying Costs	2025 Carrying Costs	2026 Carrying Costs	2027 Carrying Costs	2028 Carrying Costs	2029 Carrying Costs	2030 Carrying Costs	2031 Carrying Costs	2032 Carrying Costs
\$4,918,363	\$4,928,523	\$4,938,887	\$4,949,453	\$4,960,234	\$4,971,229	\$4,982,439	\$4,990,735	\$4,998,905	\$5,008,873	\$5,018,841	\$5,028,809	\$5,038,777	\$5,048,746
2019 Revenue	2020 Revenue	2021 Revenue	2022 Revenue	2023 Revenue	2024 Revenue	2025 Revenue	2026 Revenue	2027 Revenue	2028 Revenue	2029 Revenue	2030 Revenue	2031 Revenue	2032 Revenue
\$3,555,505	\$3,559,060	\$3,562,619	\$3,566,182	\$3,569,748	\$3,573,318	\$3,576,891	\$3,580,468	\$3,584,048	\$3,587,633	\$3,591,220	\$3,594,811	\$3,598,406	\$3,602,005
Surplus/Shortfall													
(\$1,362,858)	(\$1,369,463)	(\$1,376,268)	(\$1,383,271)	(\$1,390,486)	(\$1,397,911)	(\$1,405,547)	(\$1,410,267)	(\$1,414,856)	(\$1,421,241)	(\$1,427,621)	(\$1,433,998)	(\$1,440,371)	(\$1,446,741)

**Town of Windham , ME**  
**Carrying Costs and Cash Flow (based on Wastewater Flow Revenue)\***  
**Wastewater Facilities Plan**

20 2033	21 2034	22 2035	23 2036	24 2037	25 2038	26 2039	27 2040	28 2041	29 2042	30 2043	Total
											\$ 9,699,999
											\$ 58,100,000
											\$ -
											\$ -
											\$ -
\$ 4,410,487	\$ 4,410,487	\$ 4,410,487	\$ 4,410,487	\$ 4,410,487	\$ 4,410,487	\$ 4,410,487	\$ 4,410,487	\$ 4,410,487	\$ 4,410,487	\$ 4,410,487	\$ 132,314,619
\$ 281,838	\$ 286,172	\$ 290,506	\$ 294,839	\$ 299,173	\$ 303,507	\$ 307,841	\$ 312,175	\$ 316,509	\$ 320,843	\$ 325,177	\$ 7,873,301
\$ 366,389	\$ 372,023	\$ 377,657	\$ 383,291	\$ 388,925	\$ 394,560	\$ 400,194	\$ 405,828	\$ 411,462	\$ 417,096	\$ 422,730	\$ 10,235,291
\$ 5,058,714	\$ 5,068,682	\$ 5,078,650	\$ 5,088,618	\$ 5,098,586	\$ 5,108,554	\$ 5,118,523	\$ 5,128,491	\$ 5,138,459	\$ 5,148,427	\$ 5,158,395	\$ 151,306,210
\$ 3,605,607	\$ 3,609,212	\$ 3,612,821	\$ 3,616,434	\$ 3,620,051	\$ 3,623,671	\$ 3,627,294	\$ 3,630,922	\$ 3,634,553	\$ 3,638,187	\$ 3,641,825	\$ 107,686,807
\$ 3,605,607	\$ 3,609,212	\$ 3,612,821	\$ 3,616,434	\$ 3,620,051	\$ 3,623,671	\$ 3,627,294	\$ 3,630,922	\$ 3,634,553	\$ 3,638,187	\$ 3,641,825	\$ 107,686,807

2033 Carrying Costs	2034 Carrying Costs	2035 Carrying Costs	2036 Carrying Costs	2037 Carrying Costs	2038 Carrying Costs	2039 Carrying Costs	2040 Carrying Costs	2041 Carrying Costs	2042 Carrying Costs	2043 Carrying Costs	Total Project Carrying Costs
\$5,058,714	\$5,068,682	\$5,078,650	\$5,088,618	\$5,098,586	\$5,108,554	\$5,118,523	\$5,128,491	\$5,138,459	\$5,148,427	\$5,158,395	\$151,306,210
2033 Revenue	2034 Revenue	2035 Revenue	2036 Revenue	2037 Revenue	2038 Revenue	2039 Revenue	2040 Revenue	2041 Revenue	2042 Revenue	2043 Revenue	Total Project Revenue
\$3,605,607	\$3,609,212	\$3,612,821	\$3,616,434	\$3,620,051	\$3,623,671	\$3,627,294	\$3,630,922	\$3,634,553	\$3,638,187	\$3,641,825	\$118,278,957
Surplus/Shortfall	Total Project Surplus/Shortfall										
(\$1,453,107)	(\$1,459,470)	(\$1,465,829)	(\$1,472,184)	(\$1,478,536)	(\$1,484,884)	(\$1,491,228)	(\$1,497,569)	(\$1,503,906)	(\$1,510,240)	(\$1,516,570)	-\$33,027,254

**Town of Windham , ME**  
**Carrying Costs and Cash Flow (based on EDU Rate Revenue)\***  
**Wastewater Facilities Plan**

	Activity Description	Year	Construction			1	2	3	4	5
			2011	2012	2013	2014	2015	2016	2017	2018
<b>Interim Costs</b>										
Construction Phase Cash Flow	Design & Construction Phase Engineering		\$ 3,233,333	\$ 3,233,333	\$ 3,233,333					
	Construction		\$ 19,366,667	\$ 19,366,667	\$ 19,366,667					
	<b>Total Interim Costs</b>		<b>\$ 22,600,000</b>	<b>\$ 22,600,000</b>	<b>\$ 22,600,000</b>					
<b>Carrying Costs</b>										
Fees	Loan Origination Fee - \$1,000		\$ 10,000							
Short Term Debt Service (BAN)	Short Term Debt Service on Interim Costs - Assume 3 Year BAN @ 4.5%		\$ 145,500	\$ 291,000	\$ 436,500					
Debt Service - Construction Costs	Payments on Principal and Interest - Assume 5% (see Amortization Schedule)					\$ 4,410,487	\$ 4,410,487	\$ 4,410,487	\$ 4,410,487	\$ 4,410,487
PWD Wastewater Treatment O&M	Operations and Maintenance Expenditures					\$ 200,000	\$ 203,999	\$ 208,082	\$ 212,242	\$ 216,486
Windham Collection/Transport O&M	Operations and Maintenance Expenditures					\$ 260,000	\$ 265,199	\$ 270,506	\$ 275,915	\$ 281,432
	<b>Total Carrying Costs</b>		<b>\$ 155,500</b>	<b>\$ 291,000</b>	<b>\$ 436,500</b>	<b>\$ 4,870,487</b>	<b>\$ 4,879,686</b>	<b>\$ 4,889,075</b>	<b>\$ 4,898,645</b>	<b>\$ 4,908,405</b>
<b>Revenue</b>										
EDU Rate Revenue	Annual revenue based upon \$931 per EDU <sup>1</sup>		\$ 4,690,904	\$ 4,695,595	\$ 4,700,291	\$ 4,704,991	\$ 4,709,696	\$ 4,714,406	\$ 4,719,120	\$ 4,723,839
	<b>Total Revenue</b>		<b>\$ 4,690,904</b>	<b>\$ 4,695,595</b>	<b>\$ 4,700,291</b>	<b>\$ 4,704,991</b>	<b>\$ 4,709,696</b>	<b>\$ 4,714,406</b>	<b>\$ 4,719,120</b>	<b>\$ 4,723,839</b>

2011 Carrying Costs	2012 Carrying Costs	2013 Carrying Costs	2014 Carrying Costs	2015 Carrying Costs	2016 Carrying Costs	2017 Carrying Costs	2018 Carrying Costs
\$155,500	\$291,000	\$436,500	\$4,870,487	\$4,879,686	\$4,889,075	\$4,898,645	\$4,908,405
2011 Revenue	2012 Revenue	2013 Revenue	2014 Revenue	2015 Revenue	2016 Revenue	2017 Revenue	2018 Revenue
\$4,690,904	\$4,695,595	\$4,700,291	\$4,704,991	\$4,709,696	\$4,714,406	\$4,719,120	\$4,723,839
Surplus/ Shortfall							
\$4,535,405	\$4,404,595	\$4,263,791	(\$165,496)	(\$169,989)	(\$174,669)	(\$179,524)	(\$184,566)

1 - user fees escalated @1% per year

\*the cost estimates included in this Financial Plan are for planning purposes only and do not reflect all cost components.

**Town of Windham , ME**  
**Carrying Costs and Cash Flow (based on EDU Rate Revenue)\***  
**Wastewater Facilities Plan**

6	7	8	9	10	11	12	13	14	15	16	17	18	19
2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
\$ 4,410,487	\$ 4,410,487	\$ 4,410,487	\$ 4,410,487	\$ 4,410,487	\$ 4,410,487	\$ 4,410,487	\$ 4,410,487	\$ 4,410,487	\$ 4,410,487	\$ 4,410,487	\$ 4,410,487	\$ 4,410,487	\$ 4,410,487
\$ 220,815	\$ 225,233	\$ 229,739	\$ 234,333	\$ 239,020	\$ 243,801	\$ 248,674	\$ 252,282	\$ 255,834	\$ 260,168	\$ 264,502	\$ 268,836	\$ 273,170	\$ 277,504
\$ 287,060	\$ 292,803	\$ 298,661	\$ 304,633	\$ 310,726	\$ 316,941	\$ 323,277	\$ 327,966	\$ 332,584	\$ 338,218	\$ 343,852	\$ 349,486	\$ 355,121	\$ 360,755
<b>\$ 4,918,363</b>	<b>\$ 4,928,523</b>	<b>\$ 4,938,887</b>	<b>\$ 4,949,453</b>	<b>\$ 4,960,234</b>	<b>\$ 4,971,229</b>	<b>\$ 4,982,439</b>	<b>\$ 4,990,735</b>	<b>\$ 4,998,905</b>	<b>\$ 5,008,873</b>	<b>\$ 5,018,841</b>	<b>\$ 5,028,809</b>	<b>\$ 5,038,777</b>	<b>\$ 5,048,746</b>
\$ 4,728,563	\$ 4,733,292	\$ 4,738,025	\$ 4,742,763	\$ 4,747,506	\$ 4,752,253	\$ 4,757,006	\$ 4,761,763	\$ 4,766,525	\$ 4,771,291	\$ 4,776,062	\$ 4,780,838	\$ 4,785,619	\$ 4,790,405
<b>\$ 4,728,563</b>	<b>\$ 4,733,292</b>	<b>\$ 4,738,025</b>	<b>\$ 4,742,763</b>	<b>\$ 4,747,506</b>	<b>\$ 4,752,253</b>	<b>\$ 4,757,006</b>	<b>\$ 4,761,763</b>	<b>\$ 4,766,525</b>	<b>\$ 4,771,291</b>	<b>\$ 4,776,062</b>	<b>\$ 4,780,838</b>	<b>\$ 4,785,619</b>	<b>\$ 4,790,405</b>

2019 Carrying Costs	2020 Carrying Costs	2021 Carrying Costs	2022 Carrying Costs	2023 Carrying Costs	2024 Carrying Costs	2025 Carrying Costs	2026 Carrying Costs	2027 Carrying Costs	2028 Carrying Costs	2029 Carrying Costs	2030 Carrying Costs	2031 Carrying Costs	2032 Carrying Costs
\$4,918,363	\$4,928,523	\$4,938,887	\$4,949,453	\$4,960,234	\$4,971,229	\$4,982,439	\$4,990,735	\$4,998,905	\$5,008,873	\$5,018,841	\$5,028,809	\$5,038,777	\$5,048,746
2019 Revenue	2020 Revenue	2021 Revenue	2022 Revenue	2023 Revenue	2024 Revenue	2025 Revenue	2026 Revenue	2027 Revenue	2028 Revenue	2029 Revenue	2030 Revenue	2031 Revenue	2032 Revenue
\$4,728,563	\$4,733,292	\$4,738,025	\$4,742,763	\$4,747,506	\$4,752,253	\$4,757,006	\$4,761,763	\$4,766,525	\$4,771,291	\$4,776,062	\$4,780,838	\$4,785,619	\$4,790,405
Surplus/Shortfall													
(\$189,800)	(\$195,232)	(\$200,862)	(\$206,690)	(\$212,728)	(\$218,975)	(\$225,433)	(\$228,972)	(\$232,380)	(\$237,582)	(\$242,779)	(\$247,971)	(\$253,158)	(\$258,341)

**Town of Windham , ME**  
**Carrying Costs and Cash Flow (based on EDU Rate Revenue)\***  
**Wastewater Facilities Plan**

20	21	22	23	24	25	26	27	28	29	30	Total
2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	
											\$ 9,699,999
											\$ 58,100,000
											\$ -
											\$ -
											\$ -
\$ 4,410,487	\$ 4,410,487	\$ 4,410,487	\$ 4,410,487	\$ 4,410,487	\$ 4,410,487	\$ 4,410,487	\$ 4,410,487	\$ 4,410,487	\$ 4,410,487	\$ 4,410,487	\$ 132,314,619
\$ 281,838	\$ 286,172	\$ 290,506	\$ 294,839	\$ 299,173	\$ 303,507	\$ 307,841	\$ 312,175	\$ 316,509	\$ 320,843	\$ 325,177	\$ 7,873,301
\$ 366,389	\$ 372,023	\$ 377,657	\$ 383,291	\$ 388,925	\$ 394,560	\$ 400,194	\$ 405,828	\$ 411,462	\$ 417,096	\$ 422,730	\$ 10,235,291
<b>\$ 5,058,714</b>	<b>\$ 5,068,682</b>	<b>\$ 5,078,650</b>	<b>\$ 5,088,618</b>	<b>\$ 5,098,586</b>	<b>\$ 5,108,554</b>	<b>\$ 5,118,523</b>	<b>\$ 5,128,491</b>	<b>\$ 5,138,459</b>	<b>\$ 5,148,427</b>	<b>\$ 5,158,395</b>	<b>\$ 151,306,210</b>
\$ 4,795,195	\$ 4,799,990	\$ 4,804,790	\$ 4,809,595	\$ 4,814,405	\$ 4,819,219	\$ 4,824,038	\$ 4,828,862	\$ 4,833,691	\$ 4,838,525	\$ 4,843,364	\$ 143,215,642
<b>\$ 4,795,195</b>	<b>\$ 4,799,990</b>	<b>\$ 4,804,790</b>	<b>\$ 4,809,595</b>	<b>\$ 4,814,405</b>	<b>\$ 4,819,219</b>	<b>\$ 4,824,038</b>	<b>\$ 4,828,862</b>	<b>\$ 4,833,691</b>	<b>\$ 4,838,525</b>	<b>\$ 4,843,364</b>	<b>\$ 143,215,642</b>

2033 Carrying Costs	2034 Carrying Costs	2035 Carrying Costs	2036 Carrying Costs	2037 Carrying Costs	2038 Carrying Costs	2039 Carrying Costs	2040 Carrying Costs	2041 Carrying Costs	2042 Carrying Costs	2043 Carrying Costs	Total Project Carrying Costs
\$5,058,714	\$5,068,682	\$5,078,650	\$5,088,618	\$5,098,586	\$5,108,554	\$5,118,523	\$5,128,491	\$5,138,459	\$5,148,427	\$5,158,395	\$151,306,210
2033 Revenue	2034 Revenue	2035 Revenue	2036 Revenue	2037 Revenue	2038 Revenue	2039 Revenue	2040 Revenue	2041 Revenue	2042 Revenue	2043 Revenue	Total Project Revenue
\$4,795,195	\$4,799,990	\$4,804,790	\$4,809,595	\$4,814,405	\$4,819,219	\$4,824,038	\$4,828,862	\$4,833,691	\$4,838,525	\$4,843,364	\$157,302,432
Surplus/ Shortfall	Total Project Surplus/ Shortfall										
(\$263,518)	(\$268,691)	(\$273,860)	(\$279,023)	(\$284,181)	(\$289,335)	(\$294,484)	(\$299,628)	(\$304,767)	(\$309,902)	(\$315,031)	\$5,996,222

**Windham, ME  
Phase 1  
Betterment Calculations - Assume 20 year payment Option @ 5%**

\$	67,800,000	Total Project Cost	
\$	13,449	Betterment	
		EDUs	5041 Total EDU's*

Per EDU			Payment Total
\$	672	1st Payment	\$ 3,390,000
\$	672	p	
\$	639	i	
<hr/>			
\$	1,311	2nd payment	\$ 6,610,500
\$	672	p	
\$	605	i	
<hr/>			
\$	1,278	3rd payment	\$ 6,441,000
\$	672	p	
\$	572	i	
<hr/>			
\$	1,244	4th Payment	\$ 6,271,500
\$	672	p	
\$	538	i	
<hr/>			
\$	1,210	5th Payment	\$ 6,102,000
\$	672	p	
\$	504	i	
<hr/>			
\$	1,177	6th Payment	\$ 5,932,500
\$	672	p	
\$	471	i	
<hr/>			
\$	1,143	7th payment	\$ 5,763,000
\$	672	p	
\$	437	i	
<hr/>			
\$	1,110	8th payment	\$ 5,593,500
\$	672	p	
\$	403	i	
<hr/>			
\$	1,076	9th payment	\$ 5,424,000
\$	672	p	
\$	370	i	
<hr/>			
\$	1,042	10th payment	\$ 5,254,500
\$	672	p	
\$	336	i	
<hr/>			

\$	1,009	11th Payment	\$	5,085,000
\$	672	p		
\$	303	i		
<hr/>				
\$	975	12th payment	\$	4,915,500
\$	672	p		
\$	269	i		
<hr/>				
\$	941	13th payment	\$	4,746,000
\$	672	p		
\$	235	i		
<hr/>				
\$	908	14th Payment	\$	4,576,500
\$	672	p		
\$	202	i		
<hr/>				
\$	874	15th Payment	\$	4,407,000
\$	672	p		
\$	168	i		
<hr/>				
\$	841	16th Payment	\$	4,237,500
\$	672	p		
\$	134	i		
<hr/>				
\$	807	17th payment	\$	4,068,000
\$	672	p		
\$	101	i		
<hr/>				
\$	773	18th payment	\$	3,898,500
\$	672	p		
\$	67	i		
<hr/>				
\$	740	19th payment	\$	3,729,000
\$	672	p		
\$	34	i		
<hr/>				
\$	706	20th payment	\$	3,559,500
			\$	100,005,000

**Total Per EDU**

\$	13,449	<b>Total Principal</b>
\$	6,388	<b>Total Interest</b>
<hr/>		
\$	19,838	

**Payment Total**

\$	67,800,000	<b>Total Principal</b>
\$	32,205,000	<b>Total Interest</b>
<hr/>		
\$	100,005,000	

\*EDU Calculation from USDA/RD's PER Guide for MA, RI & CT - Calculation of Equivalent Dwelling Units

