
CHAPTER 6. PUBLIC FACILITIES AND SERVICES

Public services are provided by the City's Public Works Department, Police Department, Fire Department, and School Department, and by four quasi-municipal entities, the Kennebec Water District, the Waterville Sewerage District, the Kennebec Sanitary Treatment District, and the Waterville Public Library. The facilities and services of each is described below.

Day-time Versus Resident Population

It is important to note that public services are provided not only to Waterville residents, but also to persons who commute to Waterville to work or travel to Waterville for shopping, medical and professional appointments, and entertainment and other amenities offered in our service center community. In 1991, Thomas College estimated that the number of persons in Waterville swelled to approximately 27,000 during the day-time. Almost a decade later in 2000, the Census estimated that our day-time population was down to 21,000. Although the second estimate was considerably lower than the earlier number, it still was significantly higher than the year 2000 resident population of 15,605.

PUBLIC WORKS DEPARTMENT

The Public Works Department is staffed by 25 employees who are responsible for multiple functions. They maintain the City's roads and sidewalks, fleet, traffic lights and signs, various buildings, and the City-owned Robert Lafleur Airport, a general aviation airport. In addition, the Department has the enormous job of collecting approximately 5,000 tons of household waste per year as well as seasonal collection of leaves, yard waste, and Christmas trees. Although the Waterville Sewerage District (WSD) maintains catch basins, the Public Works Department must keep covers free of leaves, debris, and ice. Finally, the Department coordinates infrastructure repair with the Kennebec Water District (KWD) and WSD and other utilities.

Public Works Compound

The Public Works Department is headquartered at the Public Works Compound, a 3-acre site located on Wentworth Court off of Main Street, just north of the downtown. The Compound includes six buildings as well as parking areas for vehicles and other equipment. Buildings within the Compound include the administrative office building, a new fleet maintenance building, a salt/sand storage building, a six bay equipment storage building with attached paint/sign maintenance and facility maintenance workshops, a four bay equipment storage building, and an operations and maintenance facility that is utilized by both Public Works and Parks and Recreation personnel.

Fleet

The Public Works Department owns and maintains 60 vehicles and over 100 other pieces of equipment. Major pieces of equipment include twelve heavy duty dump trucks which are used for hauling as well as plowing and sanding, two medium duty dump trucks that are used for

plowing and sanding dead end streets and parking lots, two waste collection (packer) trucks, a roll-off vehicle, two heavy duty loaders (one that is also used to plow snow), one medium duty loader, two street sweepers, one lift truck for maintaining traffic signals and overhead signs, three pickup trucks, a general duty farm tractor used for roadside mowing and clearing snow from fire hydrants, three sidewalk tractors, one skid-steer and four large snow blowers (one is used at the Airport, one is used in the snow dump, and two are used to load trucks). The Fleet Maintenance Division also maintains vehicles and equipment for the Police Department and the Fire Department.

Snow Removal

The Department utilizes 13 plow routes to clear snow from 354 roads or 180 lane miles of public roads. The Department also removes snow from approximately 22 of the City's 40 miles of sidewalks and from municipal and school parking lots, school yards, and the airport.

The first priority after plowing and sanding is to remove snow banks from the downtown area and the Concourse, then to remove snow banks from heavily traveled areas to improve safety. The same personnel who plow streets have to plow sidewalks and remove snow banks. This creates scheduling problems during large storms, because drivers have to be sent home to rest before undertaking sidewalk snow removal and snow hauling.

Public Ways

The Department is responsible for maintaining 180 lane miles of streets (approximately 90 miles of public roads), 40 miles of sidewalks, the Concourse, four municipal parking lots and four school parking lots. The Department conducted a complete road surface survey of the City and used the results to develop a 5-Year Pavement Maintenance plan. [See Table 5-3 in Chapter 5, Transportation.]

Other Maintenance

The Department is responsible for cleaning the City's catch basins, as well as maintaining approximately 5,000 signs, and maintaining street and traffic lights. The 2009 budget for street/traffic lights was \$307,500. The city pays the Waterville Sewerage District approximately \$415,000 for storm water management which includes maintenance of the catch basins.

Solid Waste

The Public Works Department provides curbside collection of solid waste (approximately 16 tons per day) to about 4,100 City households. Curbside collection is provided on a weekly basis to dwellings and apartment buildings with 6 or fewer units. Waste is hauled to a solid waste transfer station administered by the Town of Oakland and is subsequently transported under contract to the Penobscot Energy Recovery Company (PERC) waste-to-energy plant in Orrington.

Recycling

A recycling center, privately-owned and operated by Skills, Inc. and located on Industrial Road, is open to the public Monday through Saturday. According to the latest information from the Maine State Planning Office, in 2010 Waterville had a recycling rate of 24.68%, down from 35.5% in 2002.

Airport

The City is responsible for maintenance of the terminal building, for plowing the airport driveway, parking lot, and runways, and for undertaking various runway improvements. See Chapter 5: Transportation for more information about the airport.

Issues. Issues facing the Public Works Department include the following:

1. Regional Service Delivery. Economies of scale may be achieved by delivering public works services on a regional basis. However, staff levels would probably have to be expanded to accommodate any additional service deliveries on the local level.

2. Pavement Plan. There is a need to continue the pavement management plan so that overall pavement conditions do not continue to deteriorate.

3. Fleet Replacement. There is a need to adopt a fleet and equipment replacement program and include it in a 5-year capital improvement program. There is also a need for a similar effort relative to traffic signs and signals.

4. Sidewalks. The City's 40 miles of sidewalks are not being maintained or upgraded on a regular basis. Moreover, there is no long-range plan to address the question of which streets will have sidewalks on both sides, which streets will have sidewalks on one side, and which streets will have no sidewalks.

POLICE DEPARTMENT

Staff

The Waterville Police Department is headquartered in a 12,000 square-foot facility constructed at 10 Colby Street in 2013. It is staffed by 31 officers, including a Chief, a Deputy Chief, four Detectives, six Sergeants, 18 patrol officers, and a school resource officer. The Department has 12 vehicles which are replaced on a rotating basis. The Department has mutual aid agreements with Fairfield, Oakland, and Winslow.

Budget

The annual budget was \$2.85 million in FY 2009. About 78% of the budget was devoted to personnel costs. Since 1995, the Department has been successful in obtaining a number of federal and state grants totaling over \$1.2 million for advanced technology and equipment, community policing initiatives and enforcement.

Dispatch Services

The City's Waterville Regional Communications Center employs eight Emergency Communications Specialists who provide 24-hour dispatch services to the police departments, fire departments, (including emergency medical services) and public works departments in Waterville, Oakland, Winslow and Clinton, as well as fire and EMS dispatching services for Sidney, Belgrade, Rome, China, and Albion. As such, it is a regional service center for the greater Waterville area, and an excellent example of successful regionalism. In 2009, the Center handled approximately 56,400 calls.

Traffic Accidents

In 2009, the Department responded to 1,118 traffic accidents.

Crime

Waterville had a crime rate of 47.61 per 1,000 population in 2008, according to the Uniform Crime Reporting Program of the Maine State Police. Waterville's crime rate reflects the fact that, although many crimes are committed by people coming into Waterville from surrounding towns, crime statistics are calculated using only the City's population. Crime rates for other communities include: Winslow 25.97; Oakland 20.15; Fairfield 34.49; Augusta 69.51; Auburn 34.0; Lewiston 33.34; and Brunswick 21.25.

The Department utilizes the Kennebec County jail in Augusta for arrests. Arrests in 2008 totaled 2,050 and included arrests for the following crimes:

Homicide	0
Rape	1
Robbery	2
Burglary	14
Larceny/Theft	253
Assault	<u>186</u>
Total	456

Campus Security

The Police Department has full jurisdiction on the campuses of Colby College and Thomas College, although each college also maintains its own security force.

Outreach

The Department operates many public awareness and outreach programs, including the DARE Program through the schools and a reading program in the schools.

Issues and Needs. Major issues and needs facing the Police Department include the following:

1. Regionalism. The Police Department provides regional services through the Dispatch Center.

However, there may be opportunities to combine policing functions with other communities, with a net increase in service and a net savings to participating communities.

2. Staffing. Staffing levels are barely adequate to maintain public safety. The department is staffed at average levels for a similar community its size, however, the challenges of policing in a service center stretch available resources and frequently hamper officers' ability to engage in proactive policing. One concern is that Waterville invests in training its officers at the Criminal Justice Academy, and many of these officers subsequently move on to serve other communities.

3. Parity in Pay. The employees of the Waterville Police Department are paid less than their counterparts in other parts of the State. This disparity results in officers leaving the department to seek employment with agencies offering higher pay and better benefits.

FIRE DEPARTMENT

Staff

The City's Fire Department operates out of Central Fire Station which is located at the major intersection of College Avenue, Main Street, Elm Street, and Center Street. The Department is operated by a full-time staff of 18, including the Fire Chief who also is the chief of the Winslow Fire Department, 3 captains, three emergency medical technicians, 12 fire fighters, and four companies of call personnel headed by a captain and a lieutenant. There are 45 call personnel, including several from surrounding communities, who are paid on an hourly basis. The Waterville Fire Department has mutual aid agreements with Oakland, Fairfield, Winslow, and Sidney.

Equipment

The Department has three major vehicles including two engines and one tower truck. Other vehicles include a utility pick-up truck, a medium-duty rescue truck, one brush unit, one hazardous materials response truck, one Cascade air unit, one rescue boat, two jet-skis, a Kubota, a snowmobile, and a toboggan.

Budget

The current budget for the Fire Department includes \$972,174 for fire-fighting. Hydrant rental, which is funded separately by the City, amounts to about \$200,000/year.

Calls

The Department responds to approximately 1,500 calls per year. Of those, approximately 80% are EMS-related.

Programs

The Fire Department's programs and activities include a fire prevention program through the schools, inspections of businesses and apartments, a technical rescue squad for water rescues, high angle rescue, a hazardous materials response team, and a fire investigation team.

Issues, Needs. Major issues and needs facing the Fire Department include the following:

1. The location of the Waterville and Winslow fire stations directly across the river from each other does not provide the most expeditious response times to the southerly portions of Waterville or Winslow, Oakland, or Sidney, towns with which Waterville has mutual aid agreements. Solutions that have been given some consideration include [moving the Winslow fire department into Waterville's Central Station and] building a new sub-station in Winslow near the end of the Donald Cater Bridge [and moving the Winslow police department into the vacated Winslow fire station on Benton Avenue] or building a sub-station at the airport. A less expensive and less effective possibility would be storing a fire engine and stationing a man at the former fire sub-station on Western Avenue.

WATERVILLE PUBLIC LIBRARY

The Waterville Public Library, located at 73 Elm Street, was first established in 1896 as "The Waterville Free Public Library Association." Between 1896 and 1905, the Library Association's collection was housed in private office buildings. In 1905, the City constructed the Waterville Public Library building at its current location with financial help from Andrew Carnegie. The building was renovated and expanded following a fire in 1960. Second and third expansions were completed in 1976 and 2010.

The Maine Legislature chartered the Waterville Public Library as a public corporation in 1935. It has functioned since that time as a quasi-municipal entity that is governed by a 17-member board of trustees, each of whom serves a staggered four-year term. Board members are nominated by the Mayor and are subject to confirmation by the City Council. The Library is staffed by a full-time director, a cataloger, a children's librarian, a technical service coordinator, one person who serves as head of circulation control and as the adult services advisor, a typist/bookkeeper who also serves as loan coordinator, a janitor, and 11 part-time personnel.

The Library's current collection consists of approximately 96,000 volumes and subscriptions to over 125 periodicals. In 2009, the Library circulated over 155,000 books and other items including magazines, pamphlets, audio-cassettes, and DVDs.

Issues/Needs

1. More Parking. Parking is a problem for library patrons, especially on peak shopping days and when the Farmers' Market is in operation.

2. Outreach. Some potential patrons are unable to use the library, because they lack transportation.

SCHOOLS

The Waterville School Department is part of Kennebec Valley Consolidated Schools, Alternative Organizational Structure (AOS) 92, formed by Waterville, Winslow, and Vassalboro. The proposed AOS budget for the 2010-2011 school year was \$1,667,881, Waterville's share being \$810,307. Special education employees and transportation no longer are shared expenses.

Facilities. The City's school facilities have been well maintained over the years and generally are in good condition. They include the following:

1. George J. Mitchell School. The George J. Mitchell School (Brookside School until 1995) was constructed in 1969 and is located on a 28.1 acre parcel on Drummond Avenue. It serves grades Pre-Kindergarten through three on a City-wide basis.

Educare, a 37,800 square foot early childhood learning center, attached to the Mitchell School, opened in the fall of 2010. It serves approximately 210 children, ages 0 to 5, from throughout the region. Children are primarily from low-income families and most are from Waterville.

2. Albert S. Hall School. The Albert Hall School (formerly the Pleasant Street School), which was constructed in 1922, is located on a 1.3-acre site at the corner of Pleasant Street and School Street. It serves grades 4-5 City-wide.

3. Waterville Junior High. Waterville Junior High is located on a 44-acre parcel on West River Road. The building was constructed in 1978 and serves grades 6 through 8 City-wide.

4. Waterville Senior High School. Waterville Senior High School is located on a 29.5 acre parcel on Brooklyn Avenue and serves grades 9 through 12. The building was constructed in 1962, with major additions in 1966 and 1970 and major renovations completed in 2011 and 2012.

5. The Superintendent's Offices. The Superintendent's offices are located across Messalonskee Avenue from the High School.

The Regional Area Resource Center is located within the Waterville Senior High School and serves the communities of Vassalboro and Winslow, in addition to Waterville.

The Mid-Maine Technical Center serves area vocational students and is attached to the High School.

Alternative Education currently is housed at the Children's Home for Little Wanderers on Silver Street.

Waterville Adult Community Education is housed in the Waterville Senior High School building.

Enrollment

Total school enrollment has declined by 9.4% over the past 12 years. Waterville's school enrollment is expected to continue to decline through the year 2020, based on population estimates and the state-wide trend. State-wide enrollment declined by 12% over the last decade.

Overall, projected enrollments will not exceed the capacity of the system. Waterville will not have to replace any school facilities within the ten-year time frame envisioned by this plan.

TABLE 6-1

WATERVILLE PUBLIC SCHOOLS ENROLLMENT

	Pre-K	K	1-3	4-5	6-8	9-12	Other	Total Enrollment
2000								2,043
2009	20	138	383	262	417	635*	-	1,855*
2010		617	K-3	261	416	599		1,893 + tuition students
2012-13						603		1,850**
2015**								1,800***
2020**								

*Enrollment includes 22 tuition students from Vassalboro.

**Including Educare

***Projection

Source: Superintendent's Office and KVCOG.

State Aid

The State educational subsidy increased almost every year of the first decade of this century. In 2010, however, the subsidy declined and is expected to continue to decline for years to come.

Issues: Major issues and needs facing the School Department include the following:

1. State Aid. The State's declining financial commitment to schools, not only in Waterville but throughout the State, means that an increasingly larger percentage of the school budget will have to be supported by the local property tax.

2. High Turnover. Despite stability in the overall numbers, there is a high turnover of students (30-40%) as families move in and out of the City. This detracts from the learning process.

3. Faculty Sharing. There may be opportunities for sharing faculty members among high schools in the region, resulting in cost savings.

WATER SUPPLY

Kennebec Water District

The Kennebec Water District (KWD) was established in 1899 as a quasi-municipal entity to provide water for domestic use and fire protection to the City of Waterville and the Fairfield Village Corporation and, later, to the communities of Fairfield, Winslow, Benton, and Vassalboro. It also provides water for the Town of Oakland through the Maine Water Company system (formerly AquaMaine).

The District is governed by a 10 member board of elected trustees. Day-to-day operations of the District are directed by a General Manager, who supervises the work of 27 employees. Five employees work out of the water treatment facility in Vassalboro, seven in the business office at 6 Cool Street and the remainder at the Operations and Maintenance and Engineering office on South Street in Waterville.

KWD serves the vast majority of the City's dwelling units. KWD has mains in most city streets and roads with the exception of parts of Louise Avenue and Washington Street and its side streets, and some rural areas such as Webb Road, Trafton Road, Eight Rod Road, Country Way, Stone Ridge Drive, Ashley Terrace, and Mountain Farm Road. KWD has 4,312 residential, 721 commercial, 116 governmental, and 6 industrial customers in Waterville.

Governmental customers include City-owned buildings, the fire department, parks and recreation fields, the National Guard Armory, the post office, Waterville Sewerage District, and school facilities. The vast majority of governmental customers are Waterville Housing Authority units in various locations around the City (including 17 at Forsythe Terrace on Louise Avenue.) In the KWD system, multi-unit buildings can be served either by a master meter or by meters in each individual unit.

As of January 2007, the cost for a residential customer using a typical demand of 2000 cubic feet of water per quarter is \$83.50. There is a minimum charge of \$58.44, which includes 300 cubic feet of water, plus additional consumption at \$1.474 per each hundred cubic feet used.

Source

The District's sole source of supply is China Lake. Water flows from the lake into a 12 million gallon per day capacity filtration facility in Vassalboro, approximately one mile north of the lake. Upon leaving the plant, the finished water travels by gravity through parallel 36 and 24 inch mains approximately 8.7 miles to the primary KWD pumping station on Western Avenue in Waterville.

Currently the daily water demand of the District is 3.5 million gallons, which is well below plant capacity and the estimated “safe yield” of China Lake, 20 million gallons per day in a prolonged drought. To meet the low demand, the District typically only needs to operate its treatment plant and pumping station approximately 8 hours per day.

Filtration Plant

In 1993 the District completed construction of the 12 million gallon per day water filtration plant. The plant was constructed to comply with the federal Safe Drinking Water Act which required that utilities using surface water which did not meet certain quality criteria provide filtration that would bring the water to regulated standards. As a result of engineering investigations prior to the plant construction, the District rejected a move to groundwater wells as it was determined not to be as economical as constructing a plant to treat China Lake water.

Since plant operation began, the District has met all regulated standards. The treatment system consists of coagulation, clarification, and filtration utilizing Tricon Microfloc technology. In addition to its filtration process, the District adjusts pH with sodium hydroxide and adds polyphosphate for corrosion control in its piping system. It disinfects the water using sodium hypochlorite and adds fluoride.

Backwash from the treatment process is sent to on-site settling lagoons and then to a drying bed for dewatering. The dried residuals are trucked to the waste management facility in Norridgewock. The plant operated for 15 years before space limitations necessitated removal of the accumulated dried residuals.

Water Storage

Also required by the Safe Drinking Water Act was an upgrade from the District’s open 40 million gallon reservoir to a closed system. Filtered water from the plant had to be kept contained within pipes and storage facilities to ensure that it did not become contaminated through contact with the environment. In 1991, the District constructed two 6 million gallon concrete storage tanks to replace the open reservoir.

The dam formerly used to contain the open reservoir was partially breached after the new tanks were placed on line. The remaining reservoir pond was allowed to remain as a natural bird and wildlife refuge area. Because runoff pollution into the open reservoir area is no longer an issue for KWD, the surrounding acres are no longer necessary watershed protection. The District is currently offering 170 acres of its 200 acres of reservoir property for sale. Four acres lie in Waterville, with the remainder in the Town of Fairfield.

Transmission and Distribution piping

The total Kennebec Water District water main system consists of over 170 miles of pipe, 633 hydrants, and many facilities including pump stations and storage tanks. The system is responsible for providing water for domestic uses and for public and private fire protection.

Because parts of the system were already in place when KWD came into existence in 1899, there are some portions of the system that are more than 110 years old. Recognizing the need for regular system upgrades, the District maintains an active annual main replacement program. Replacement is prioritized based on several criteria including pipe condition, main break history, water quality, and coordination potential with other municipal street and utility upgrades.

The combination of the size of the pipe grid and pumping capacity provide for a relatively strong public fire protection system of hydrants in the City of Waterville.

Issues, Needs. Major issues and needs facing the Kennebec Water District include the following:

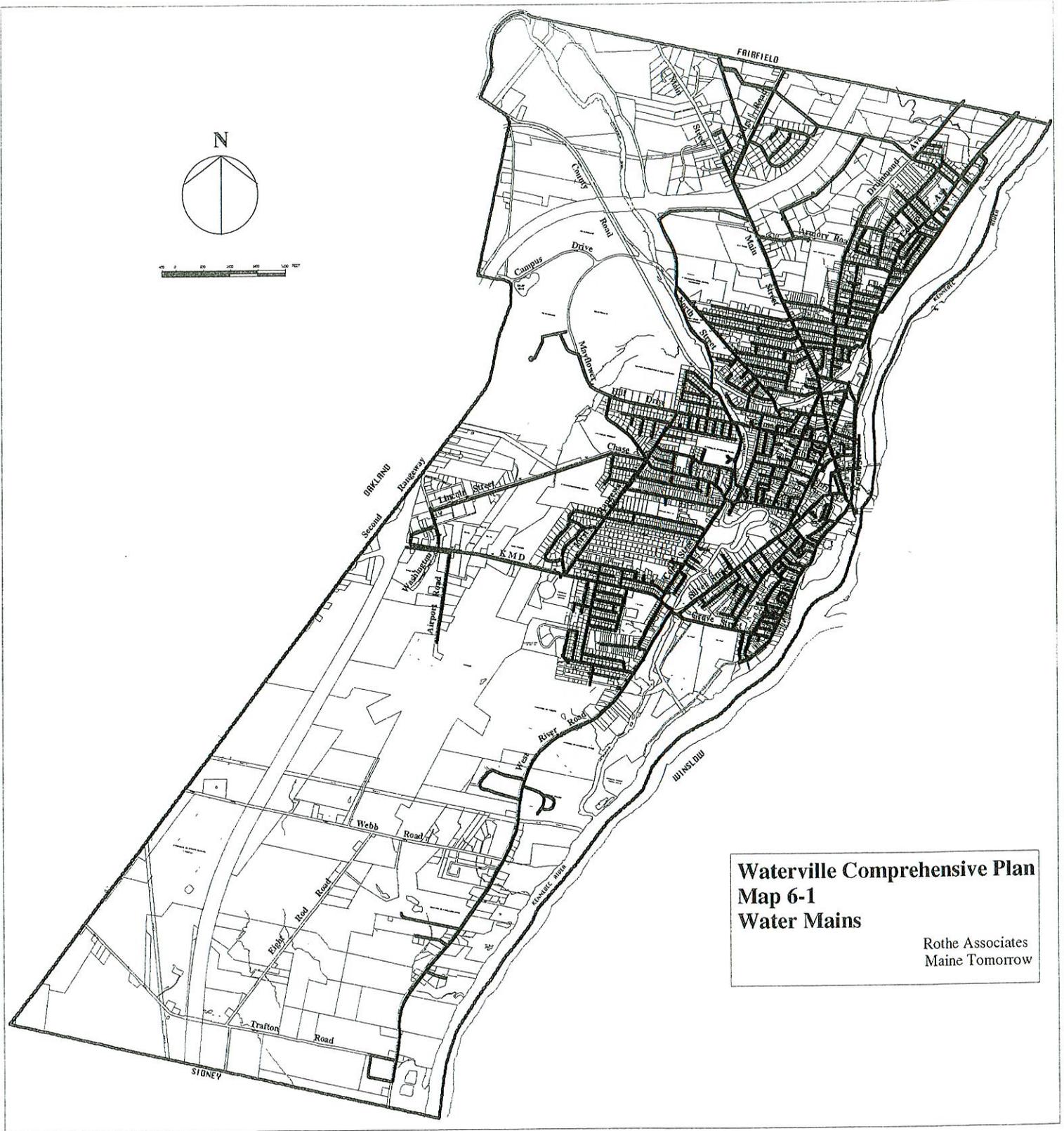
1. Service Limitations. The Kennebec Water District has two service areas in Waterville, its standard zone that serves most of the community and a higher elevation system which includes parts of Waterville west of First Rangeway to the Oakland town line. The higher elevation system has a pumping station on Chase Avenue and a 795,000 gallon storage tank on Shores Road. The District cannot serve additional land areas at elevations over 270 feet without additional pumping and, perhaps, storage systems.

2. Distribution System. KWD plans to continue to address its aging infrastructure by maintaining its current annual main replacement program and seeking additional assistance from programs such as the State Revolving Loan fund and federal grants that might allow an accelerated schedule of replacement. The District currently budgets approximately \$400,000 - \$500,000 annually for main replacements. Replacement of underground water systems can be very expensive and KWD is concerned about being able to replace its system before failures become prevalent.

KWD also is seeking to expand its garage facilities at its operations headquarters on South Street in order to provide adequate protection for its vehicles and equipment.

3. Secondary Water Supply. Because the sole source of supply for the District is China Lake, the District is currently in the process of investigating whether there might be an acceptable alternate source that might be available as a supplemental or emergency source, if something were to happen to the China Lake supply. Investigation is focusing primarily on groundwater supplies in sand and gravel aquifer areas.

4. Operational Efficiencies. KWD also is attempting to limit rate increases by implementing operational efficiencies and is especially interested in potential energy savings. Some KWD facilities are high energy users and the District continually explores opportunities to reduce power and fuel costs. KWD owns and operates a hydroelectric generation facility on Messalonskee Stream in Waterville that provides electricity to run the District's primary pumps and to add revenue through the sale of excess power to the grid.



**Waterville Comprehensive Plan
Map 6-1
Water Mains**

Rothe Associates
Maine Tomorrow

WATERVILLE SEWERAGE DISTRICT

The District

In 1949, the Waterville Sewerage District (WSD) was established as a quasi-municipal entity for the purpose of controlling, managing, and operating all of the sewers serving the people and businesses within Waterville. Today, the District has 4,618 customers in Waterville, including 69% of households.

The District's customers in Waterville are categorized by type as follows:

Category	Number
Domestic	4,092*
Commercial	505*
Industrial	11
Municipal	22
Government	4
Total	4,618

*Three mobile home parks and one apartment complex are included in the commercial category.

In addition, the District accepts flow from FirstPark, a commercial development located in Oakland, and approximately 575 other customers in Oakland.

The District is responsible for constructing and maintaining storm water and sanitary sewers, billing for wastewater collection, and, since 1976, transmission of sewage to the Kennebec Sanitary Treatment District's wastewater treatment plant. The District owns the sanitary sewer lines, the storm drains, and 2,118 catch basins.

The District operates on a budget of about \$2.3 million per year, and is in compliance with all federal and state mandates. The District is operated by a staff of nine, including a superintendent, an engineer, an office manager, a foreman, a billing clerk, and two 2-person crews. The sewer rate is \$2.24/100 cubic feet and a minimum quarterly bill of \$40.25. The average quarterly bill is about \$44.50.

Collection System

The Waterville Sewerage District maintains approximately 103 miles [2009 number] of sanitary sewers within the City, as well as three District-owned pump stations, a number of privately owned pump stations, and about 1,600 manholes. Sewer sizes range from 6 inches to 54 inches.

Prior to 1980, the system consisted of combined storm water and sanitary waste sewers. In addition, there were 26 CSOs (combined sewer overflows), which discharged storm water and raw sewage to various water bodies during periods of heavy rainfall. Since 1982, the District has

eliminated all 26 CSOs, and has upgraded/installed storm and sanitary sewers to such an extent that about 99% of the system now consists of separate storm and sanitary sewers.

Following the separation work, the District replaced or repaired about 1,000 manholes. However, the District continues to undertake some manhole repair/rehabilitation on an annual basis as well as the relining of selected sanitary lines as part of its ongoing inflow/infiltration removal program.

When the Kennebec Sanitary Treatment District's wastewater treatment plant was built, Waterville purchased 43% of the treatment plant's capacity. At that time, sewage flows from the City averaged about 6.1 MGD (million gallons per day). The City's average flow is now about 3.1 MGD, or about 24% of the design capacity of the treatment plant. Oakland uses approximately 0.3 MGD of capacity.

Issues, Needs. Major issues and needs facing the Waterville Sewerage District include the following:

1. Existing Roof/Foundation Drains and Sump Pumps. Existing roof/foundation drains and sump pumps tied into the sanitary sewerage system contribute substantial amounts of surface and ground water to the system, resulting in overflows at the treatment plant during peak flow storm events. In recent years, these overflow events at the treatment plant have been limited to just one or two per year due to actions taken by the WSD and other member communities.

In 1984, WSD began charging fees to all customers having roof drains connected to the sanitary system. The roof drain fee has been reasonably successful over time. Presently, there are approximately 100 roof drain accounts remaining.

In 2009, WSD upgraded its existing flow meters on the Messalunksee Interceptor in order to develop better data concerning peak flow events occurring in that portion of its system.

In 2010, WSD expanded its user fees for illegal connections to include perimeter drains and sump pumps. The fee for existing roof drains was doubled to twice the user rate. The primary intent of these fees continues to be to provide an incentive for customers to remove illegal connections; however, they also help the District to offset the cost of treating unmetered flow.

2. Lack of Easements. During the first part of the last century, portions of the sanitary sewer system were installed on private property without easements.

3. Regionalism. Should WSD contract with Winslow, Fairfield, Benton and Oakland to maintain their sewerage systems? One issue that would have to be addressed is the condition of Fairfield's system, especially the combined sewer overflows. Currently, the Town of Fairfield is using stimulus dollars to fund some separation projects, but additional work will be required.

Although WSD receives all sanitary flows from the Town of Oakland, for the time being, Oakland will maintain operation and maintenance responsibilities for its collection system within Oakland. Although it has no existing CSO's, Oakland's collection system is believed to have a significant infiltration/inflow component.

4. Long-Range Coordination. There is a need for utility providers and City officials to work closely with one another on future development plans involving utilities. WSD continues to maintain a close working relationship with elected municipal officials as required by 38 MRSA 1163 and 1163-A. In the near term, WSD does not envision any extension to its existing sanitary sewer system.

5. Future Upgrading. The District is in the process of upgrading and replacing old sewers that were installed in the 1800s in the older and more densely populated areas of the City. In order to repair these older sewers without extensive traffic disruptions, the District must use expensive repair methods such as installing liners through existing access points.

Waterville is not an MS4 community. As a consequence of separation projects completed in the past, WSD has no CSO's. Nonetheless, WSD is involved with an update with its portion of the CSO Master Plan in conjunction with other member communities of the Kennebec Sanitary Treatment District with projected action items for the next five years. No cumulative impacts from future development are anticipated to adversely affect existing systems.

KENNEBEC SANITARY TREATMENT DISTRICT

The District

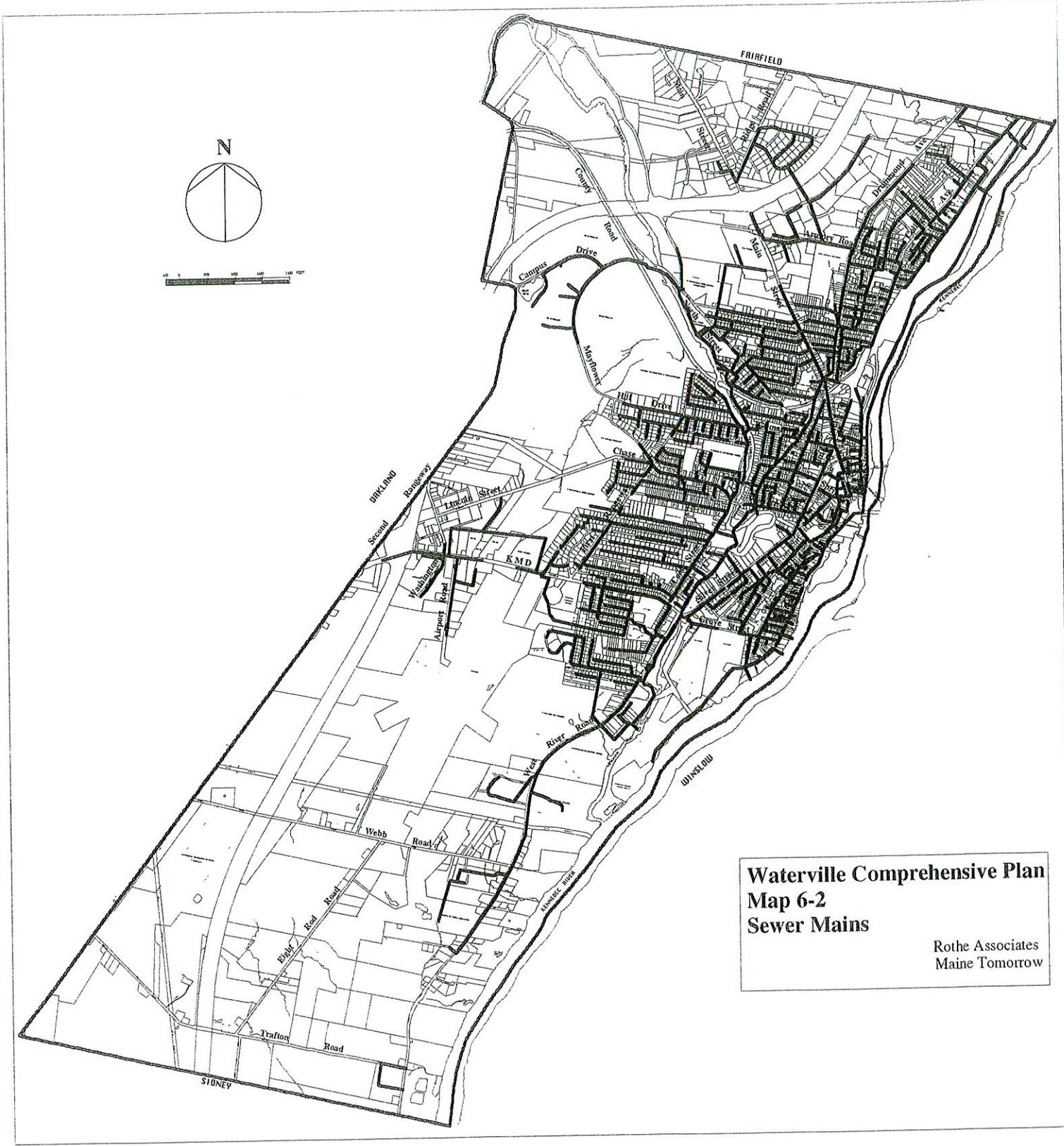
The Kennebec Sanitary Treatment District (KSTD) was established in 1971 as a quasi-municipal entity to provide wastewater treatment to Waterville, Benton, Fairfield, and Winslow, as well as Huhtamaki (formerly Keyes Fiber and later Chinet). As of 2011, a small amount of the sewerage from Oakland is delivered to KSTD for treatment via the Webb Road force main.

KSTD is staffed by 14 employees and overseen by a board of ten trustees with an annual budget of \$3.4 million. KSTD owns and operates the treatment plant and three large sewage pump stations located along a 11.5-mile long interceptor. In addition, by contract, KSTD operates and maintains a large sewage pump station for Winslow and two smaller pump stations for Benton.

Each of the four communities is responsible for connecting and delivering its sewage to a KSTD interceptor. KSTD and each community has a Sewer Use Ordinance. In addition, KSTD is authorized by EPA as an "EPA Pre-Treatment Facility," which requires KSTD to monitor and provide written permits for certain industrial connections.

Treatment Plant

The plant, located on lower Water Street, was completed in 1976. It receives sanitary waste through three major interceptors: the Fairfield-Benton Interceptor, the North Interceptor, and the



Waterville Comprehensive Plan
Map 6-2
Sewer Mains

Rothe Associates
Maine Tomorrow

Abram Brook Interceptor. The system includes three CSOs (combined sewer overflows) which periodically may discharge untreated storm/sanitary flows during heavy storm events. However, CSO events are diminishing.

The treatment plant has a design capacity of 12.7 MGD (million gallons per day) of sewage. The average flow in 2009 was 8.1 MGD, or about 64% of design capacity. The plant, which utilizes the activated sludge treatment process, includes two primary treatment tanks, two aeration tanks, and four clarifiers. The plant generates approximately 9,880 wet-tons of bio-solids per year, which is delivered by truck to a private composting facility.

Treatment Plant Upgrades

KSTD has undertaken major upgrades in the past two decades. In 1998 a \$6,200,000 20-year bond was obtained to complete a facility upgrade. A SCADA control system, replacement pumps, and dewatering equipment were installed. In 2007, a \$987,000, 10-year bond was obtained for new heat recovery ventilators, high efficiency boilers, and a heat pump, which improved heating and ventilation. KSTD has continually maintained the faculties to reduce the need for another expensive upgrade.

Bio-solids Disposal

KSTD's bio-solids are relatively "clean" (in terms of heavy metals) and, since 2005, all Bio-solids from KSTD have been composted at NEO at Hawk Ridge, Unity Plantation. KSTD has an additional 5 years remaining on its composting contract with NEO. Over the past five years, the NEO compost facility has been shut down for only one week, and during that time all solids went to the NEO-owned West Old Town landfill.

KSTD maintains State approval to resort to land application [which KSTD hired NEO to do prior to the current arrangement] or land filling at either the NEO facility in West Old Town or the Waste Management landfill in Norridgewock.

Financial Arrangements

The District's budget is supported by assessing the four communities and Huhtamaki according to a complex formula that takes into account three-year flows, Biological Oxygen Demand (BOD), and Total Suspended Solids (TSS). Flows, as well as BOD and TSS levels, are determined by sampling at strategic locations. The assessments for the 2009 budget are as follows:

Waterville (WSD)	31%	\$1,070,372
Fairfield	9.2%	\$312,681
Winslow	11.4%	\$388,865
Benton	1.3%	\$43,004
Huhtamaki	47.1%	<u>\$1,586,378</u>
		\$3,401,300

Annual audits, allocation documents, budgets, and reports are available at the District office at 401 Water Street. [Telephone: 873-0611. Webb site: KSTD.com]

Septage

KSTD also receives income from treating as many as 9 million gallons of septage per year. Septage is trucked in from the District's member communities as well as from out of District locations.

Issues and Needs. Major issues and needs facing KSTD include the following:

1. Combined Sewer Overflows. The District prepared a CSO master plan which lists various options for dealing with CSOs including:

A. Installing expensive storage facilities to hold excess flows until they can be treated after a storm.

B. Modifying the treatment plant to treat an additional 17 million gallons per day of peak hourly stormwater. KSTD has determined that this could be accomplished at a cost of under \$1,600,000.

C. Reducing flows by eliminating combined sewers in the respective communities. KSTD is working closely with the communities to identify cost effective means of reducing CSOs.

2. Septage Trucks on Water Street. The South End Neighborhood Strategic Plan, created by the South End Neighborhood Association (SENA) in 2007, calls for developing "a traffic management plan in cooperation with KSTD to address truck traffic through the neighborhood". In response, KSTD has limited times for delivery of septage.