THE WINNIPESAUKEE RIVER BASIN PROGRAM

A Success Story in Water Quality Improvement

2007

Above: *The DES Wastewater Treatment Facility at Franklin, with a secondary clarifier tank in the foreground and the administration building in the background.*
On the cover: *Aerial view of the Franklin facility in 2004. Photo by Alan Kjellander.*

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WD-06-48

Introduction

The Winnipesaukee River Basin Program (WRBP) is the state-owned sewer system serving portions of the New Hampshire Lakes Region communities of Center Harbor, Moultonborough, Gilford, Meredith, Laconia, Belmont, Sanbornton, Northfield, Tilton, and Franklin. The WRBP's highly-regarded wastewater collection and treatment facilities, which include a wastewater treatment facility (WWTF) in Franklin and maintenance facility in Laconia, are operated by employees of the state's Department of Environmental Services (DES) on behalf of the communities benefiting from the facilities. A total of nearly $70 million has been spent to construct these facilities and about $2.7 million is spent each year to operate and maintain them. Much has been accomplished by the WRBP over the years. This document will look at why the WRBP was created and how it operates.

Background

The WRBP was established under the provisions of RSA 149-G (now RSA 485-A:45-54) adopted during the special legislative session of 1972. The legislation was the culmination of many years of dedicated effort by business and property owners, environmentalists, and government officials to develop a comprehensive plan to control water pollution in the Lakes Region. Special credit for the initiation of this program goes to the Lakes Region Clean Water Association.

The initial focus of the plan was the steadily declining water quality in Lake Winnisquam, which, since 1962, had required massive applications of copper sulfate to control algae. The cause of the algae blooms was directly related to the inadequately treated wastewater discharges of the City of Laconia and the former Laconia State School. The plan to control pollution was developed in the late 1960s and early 1970s through a study financed by the City of Laconia. It was undertaken under the supervision of the Water Supply and Pollution Control Commission, the predecessor agency to the state's DES, the federal Environmental Protection Agency, and the Winnipesaukee River Basin Study Commission, with representatives from Meredith, Laconia, Gilford, Belmont, Sanbornton, Tilton, Northfield and Franklin. The study focused primarily on the then-existing water quality problems which required immediate solutions, and recommended specific solutions to those problems.

What Water Quality Problems Existed?

Water quality problems in the Lakes Region in the early 1970s were most acute precisely where existing sewage collection system discharges were located. Treatment facilities serving these sewer systems either did not exist—as in the case of Tilton, Northfield

and Franklin's raw discharges to the Winnipesaukee River—or if they did, were woefully in need of upgrading and expansion. The latter was the case with Laconia's and the State School's primary treatment plants, which discharged to Lake Winnisquam, and the Meredith and Center Harbor treatment plants, which discharged—after something less than secondary treatment, and with no significant removal of nutrients—into Meredith Bay and Center Harbor Bay, respectively. The areas of Lake Winnipesaukee receiving inadequately-treated sewage treatment plant effluent were precisely the areas with algae problems in the summer requiring the applications of copper sulfate, although these problems were much less severe than in Lake Winnisquam.

In addition to these problems, it appeared that the dense development on the shoreline of Lake Winnipesaukee in Laconia, Gilford and Meredith and on Lake Winnisquam in Sanbornton, Belmont and Tilton, had outpaced the ability of on-site subsurface systems to accommodate the waste. Similarly, Belmont, which lacked a sewage collection system, was adversely affecting water quality in the Tioga River, a tributary of the Winnipesaukee River.

Recommendations of the Study

The completed Basin Study included a number of detailed recommendations to preserve water quality in the Winnipesaukee River Basin. The primary accomplishment of the study was the creation of a framework by which specific solutions to each of these problems would be developed. This included:

1. Existing and proposed treatment plants should be discouraged from discharging into Lake Winnisquam and Lake Winnipesaukee. Those plants that continued to discharge should provide advanced wastewater treatment to remove the nutrients (primarily phosphate) which cause water quality problems in lakes.

2. Water quality problems in the more developed portions of the Lakes Region—Meredith, Laconia, Gilford, Belmont, Sanbornton, Tilton, Northfield, and Franklin—should be treated as a regional concern, because of the magnitude and concentration of problems.

3. Because no one community in the region had the ability to implement the recommended regional solution, the State should design, construct, own and operate the recommended system on behalf of the communities it served.

Creation of the WRBP

The legislation creating the Winnipesaukee River Basin Program was enthusiastically supported by the communities that would be involved in the system, despite their having to relinquish some local, home rule authority. The program, which was adopted during

Selected Specifications of DES's Franklin Wastewater Treatment Facility

Wastewater Flow (Ave. Daily)	
Design (MGD)	11.5
Current (MGD) (4 year average)	6.2
Total detention time in plant (hrs.)	13.0
Aerated Grit Chambers (2)	
Tank Volume (total gallons)	88,000
Detention time at current average flow (min.)	20
Primary Clarifiers (2)	
Tank Volume (gallons, each)	776,500
Diameter (feet, each)	115
Sidewater Depth (feet)	10
Detention time at current average flow (hrs.)	3.0
Aeration Tanks (4)	
Dimensions (feet, each)	92'x72'x15'
Total Volume (gallons, each)	745,000
Detention time at current average flow (hrs.)	5.8
Secondary Clarifiers (2)	
Tank Volume (gallons, each)	1,009,500
Diameter (feet, each)	115
Sidewater Depth (feet)	13
Detention time at current average flow (hrs.)	3.9
Final Disinfection	
Medium pressure, logic controlled ultraviolet disinfection system with supplemental chlorine tablet system for flows exceeding 11.5 MGD.	
Sludge Thickening Tanks (2)	
Tank Volume (gallons, each)	71,900
Sludge Digesters	
Number of Primary Tanks	2
Number of Secondary Tank	2
Diameter (feet, each)	60
Working volume of primary digesters (gallons)	600,000
Retention period in primary digesters (days)	60

Primary clarifier tank.

The aeration tanks (above and at left) are the main treatment units where air is introduced to the wastewater, enabling the microorganisms to remove the organic content of the wastewater. Wastewater enters the aeration tanks after being processed in the primary clarifier tanks.

Staying on the Cutting Edge

The WRBP has completed installation of a supervisory control and data acquisition (SCADA) system, a microprocessor-based system that replaces the electro-mechanical instrumentation and controls formerly in service. The state-of-the-art SCADA system provides many benefits: fewer visits to the pump stations, no more need to respond on-site to many alarm conditions, automated data collection and report generation, and the ability to automatically or remotely adjust process parameters. The SCADA upgrade in 2000 ensures that the program's control technology remains as up-to-date and as cost-effective as possible.

the special legislative session of 1972, authorized the State, through the Water Supply and Pollution Control Commission, to acquire, plan, construct and operate public sewage disposal facilities within Winnipesaukee River Basin communities, including, but not necessarily limited to Gilford, Meredith, Laconia, Belmont, Sanbornton, Northfield, Tilton, and Franklin. The intent of the legislation was to remove, insofar as practicable, wastewater discharges to lakes in the Winnipesaukee River Basin watershed, and to provide major interceptors along routes where existing development had exceeded the ability of subsurface systems to safely dispose of sewage. The cost of operating and administering the WRBP was to be borne entirely by the participating communities, each sharing in the cost on the basis of actual or anticipated wastewater flows.

What Has Been Accomplished Over the Past Quarter Century?

The sewerage facilities created by the WRBP have resulted in the removal of the City of Laconia's and the Laconia State School's (now the New Hampshire Correctional Facility) discharges from Lake Winnisquam. Lake Winnisquam is once again a clean, transparent water body.

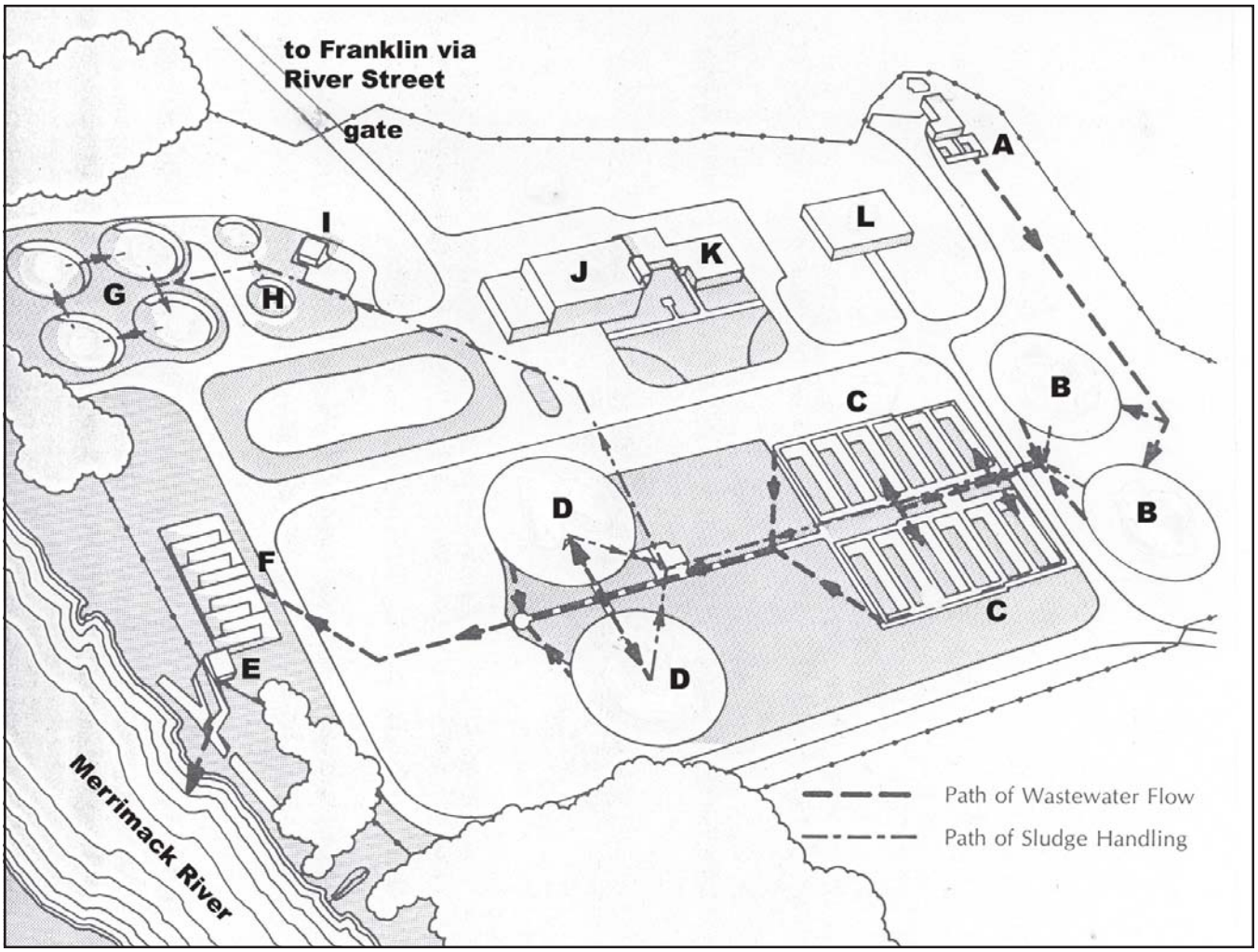
All known municipal wastewater discharges in the City of Franklin and the Towns of Tilton and Northfield have now been diverted from the Winnipesaukee River. In fact, there are no longer any known municipal discharges into the Winnipesaukee River over its entire length.

Estimated Population Served by the Winnipesaukee River Basin Program Regional Sewerage System

TOWN	1990 pop. (Census)	1990 sewer pop. (Medalie 1996)	% Sewered	2000 pop. (Census)	2000 sewer pop. based on 1990 %	Pop. on CWS[1] 2003 SDWIS[2]	Est. pop. on sewered CWS[3]
Belmont	4,026	2,470	61%	6,716	4,120	3,358	3,000
Center Harbor	808	210	26%	1,017	264	200	200
Franklin	8,304	6,270	76%	8,405	6,346	7,000	7,000
Gilford	4,841	2,730	56%	6,803	3,836	4,581	3,900
Laconia	15,575	14,590	94%	16,411	15,373	12,941	15,000
Meredith	4,646	1,680	36%	5,943	2,149	3,776	3,600
Moultonborough	2,206	100	5%	4,484	203	2,605	100
Northfield	4,263	1,830	43%	4,548	1,952	229	2,000
Sanbornton	1,679	190	11%	2,581	292	0	200
Tilton	3,387	1,480	44%	3,477	1,519	3,203	1,500
Totals	49,735	31,550	63%	60,385	38,306	37,893	36,500

[1]Community water system.
[2]Safe Drinking Water Information System.
[3]Based on DES coverage of sewered areas.
Written communication, M. Horn, U.S. Geological Survey, August, 2004

The Winnipesaukee River Basin Program Service Area



Wastewater Flow & Sludge Handling
at the Franklin Wastewater Treatment Facility

(Clockwise from upper right)

A. Headworks – Point of entry for the wastewater to the treatment facility.

B. Primary Clarifiers – Tanks where settleable solids are removed from the wastewater.

C. Aeration Tanks – Main treatment units where air is introduced to the wastewater to enable the microorganisms ("bugs") to remove the organic content of the wastewater.

D. Secondary Clarifiers – Tanks where the residual solids are removed. These solids are the result of microorganism activity in the aeration tanks.

E. Disinfection System – Building where UV light is applied to the wastewater to destroy microorganisms prior to discharge to the Merrimack River. The UV system was completed in 1997. When flows at the plant are very high, the UV system is supplemented by a chlorine system **(F)**, which utilizes chlorine tablets, and a portion of the old chlorine contact tanks. Typically, the supplementary system is needed six to eight times a year.

G. Sludge Digesters – Tanks with floating covers where primary and secondary sludge is digested anaerobically producing methane gas.

H. Sludge Conditioning Tanks – Tanks where sludge is thickened prior to discharge to the digesters.

I. Septage Receiving Area

J. Operations Building

K. Administration Offices

L. Operators' Training Center

(At left) Chlorine contact tanks. When flows at the plant are very high – typically six to eight times a year – the UV system is supplemented by a chlorine system, where the effluent goes through a series of chlorine contact tanks before being discharged to the Merrimack River (at right).

The shoreline area of Lake Winnipesaukee in Laconia and Gilford, an area of localized water quality problems in the 1970s because of inadequate septic systems, has been sewered and the problems have abated. The old Meredith treatment plant has been decommissioned and its flow diverted to the WRBP facility in Franklin. Effluent from the treatment lagoons in Center Harbor/ Moultonborough no longer discharges to Lake Winnipesaukee but instead is pumped to Meredith toward its ultimate destination at the Franklin WWTF. The treatment plant serving Gunstock Recreation Area, which formerly discharged to a small tributary of Lake Winnipesaukee, was decommissioned late in 1993 with the completion of the Gunstock Interceptor, thereby eliminating the last known discharge point of treated sanitary waste to Lake Winnipesaukee. Also, interceptor sewers have been constructed to serve Belmont Village, and a large portion of the densely populated Lake Winnisquam shoreline in Belmont, Tilton, and Sanbornton.

In all, over the past twenty-seven years nearly sixty miles of state-owned interceptor sewers, twelve major pump stations and several smaller ones, and a regional WWTF in Franklin have been constructed at a cost of approximately $70 million. Moreover, many additional miles of municipally-owned sewers have been built which discharge to the state-owned system. These locally-owned sewers have been constructed at times to protect water quality and at other times to stimulate industrial, commercial and residential development. Thus, the availability of the state-owned interceptor system has been beneficial not only for water quality,

The Industrial Pretreatment Program

The WRBP operates an Industrial Pretreatment Program (IPP) that surveys and evaluates all industrial discharges to the sewer system, and requires permits and monitoring for those that pose a hazard. This program helps to ensure that industrial and commercial discharges to the sewer system do not endanger WRBP employees, cause damage to the treatment facility, pump stations or sewer lines, interfere with the microorganisms upon which the treatment process depends, contaminate the plant's biosolids, or adversely affect the water quality of the Merrimack River into which the WWTF discharges.

The IPP uses a four-pronged effort to reduce the occurrence of industrial noncompliance: monitoring, industry education, compliance assistance, and enforcement.

Educational outreach is accomplished by developing a close relationship with industries to inform them of IPP requirements and of relevant pretreatment education courses available for their in-house personnel. The IPP notifies industrial permit holders of changes in federal, state or local laws or regulations, and informs them of pollution prevention/source reduction initiatives being undertaken by the state or federal governments.

An active education program helps keep industries from violating industrial pretreatment rules. Should violations occur, informal enforcement is used to keep minor violations from becoming significant. Should neither of these approaches work, formal enforcement and administrative fines are available to discourage non-compliance.

The WRBP received U.S. EPA's National Second Place Award for Outstanding Pretreatment Program in 1995.

The Laconia Maintenance Facility

Why does a sewer system whose treatment facility is in Franklin locate a maintenance facility in Laconia, nearly twenty miles from the plant? The reason lies in the regional nature of the WRBP, and the number of communities in which it operates facilities. When this extensive system of pumping stations and interceptor sewers is considered, Laconia becomes the approximate geographical center of the system, and the location of the maintenance facility in Laconia makes it easier to dispatch maintenance crews swiftly to all areas.

By keeping a well-trained, professional staff on hand, WRBP maintenance staff are able to perform nearly all the tasks required for the maintenance and repair of the WRBP system. In addition, the WRBP helps with pump rebuilding and pump station electrical repairs for cities and towns that are part of the WRBP family.

To ensure the highest standards of reliability, pump stations are continuously monitored by the SCADA system for operating status (See "Staying on the Cutting Edge," p. 4) and visited regularly by maintenance staff. Sometimes a visit is only for the purposes of groundskeeping; other times it is for performing lubrication or adjustment procedures. Regardless of the reason, staff take the time to check on the station's operation.

From maintaining a WRBP's vehicle fleet to repairing faulty electrical equipment to rebuilding a large sewage pump, the maintenance section has many key responsibilities. With its machining, welding, carpentry, electrical and other areas of expertise, the WRBP maintenance section works hard to keep the extensive system running at its best.

The Laconia maintenance facility.

but for the economy of the region as well.

The WRBP facilities were constructed under the Clean Water Act (CWA), a federal program which has produced a spectacular success: the cleanup of our rivers. As recently as twenty years ago, you could not swim and probably would not want to fish in many of the state's greatest rivers, and now they are all fishable and swimmable. The Franklin facility is only one of 75 municipal WWTFs in New Hampshire constructed over the past three decades with CWA funding, which have eliminated raw or poorly treated sewage discharges into our lakes and rivers and allowed them to become the recreational and economic assets that they should be. Without foresight and government action, they would still be foul and neglected.

Has Everything Been Completed?

The task of protecting the environment will never be finished. Operating this regional system is a continuing job for the twenty-seven DES employees who work for the WRBP, ensuring that the wastewater facilities are well managed so that the region's lakes and rivers remain protected.

While the WRBP system was designed with sufficient capacity to extend its service area well beyond the ten communities currently being served, there are presently no plans to do so. Local sewer extensions within most of the WRBP's member communities are continuing on a schedule based on local needs and desires. That is precisely how the WRBP system was designed to operate, ensuring local responsibility for decisions on where to locate new sewers.

How Does The Franklin WWTF Work?

The wastewater which is collected from member communities is transported to the WWTF at Franklin via the interceptor sewer and pump station system. The flow enters the Headworks building via a five-foot diameter sewer. The flow is measured, then passes

through mechanically-cleaned, coarse screens where gross solids such as rags and sticks are captured and removed from the wastewater. The wastewater then enters aerated grit chambers where air is introduced at a rate that will keep organic materials suspended, but will allow inorganic solids, such as sand and rocks to fall to the bottom of the chamber where they may be removed. The wastewater then flows to primary clarifiers, within which suspended solids settle to the bottom, and grease and floating objects rise to the surface where they are removed from the waste stream. About 60 to 80 percent of the suspended solids are removed in this simple primary process.

Also present in wastewater are dissolved organic materials such as sugars, starches and alcohols—which cannot be removed by gravity settling. Left untreated, these organic materials would cause a potential oxygen deficit in the Merrimack River downstream from the discharge. To remove such material, microscopic organisms (called "bugs") are grown in the secondary portion of the treatment plant. The bugs consume the dissolved organics, and can then be removed by a gravity settling process.

The wastewater in the primary clarifiers overflows and passes into a set of aeration tanks. Added to these tanks is a continuous supply of microorganisms. These bugs feed upon the organic material in the wastewater. To enable these "seed" organisms to grow and consume all their food in the artificial environment of a treatment plant, air is continuously added to the bugs and food mixture, or "mixed liquor."

After aeration, the mixed liquor flows to secondary clarifiers within which the microorganisms settle and are removed. This settled material is called "activated sludge." A portion of the activated sludge is removed and sent to the sludge handling system,

Clarifier tanks remove grease and floating objects from the waste stream by means of skimmers and settled solids with rakes – both visible in this photo of an empty tank.

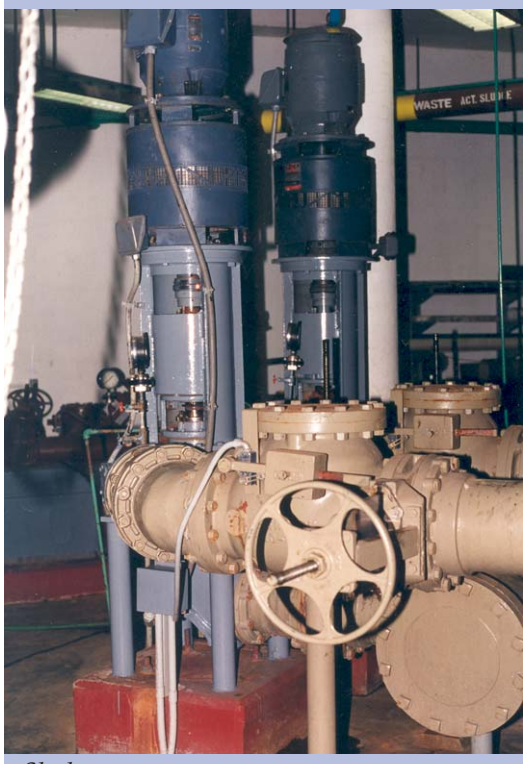
The WRBP Safety Program

The WRBP system operates an aggressive and highly participative safety program for the benefit of its employees. In 1992, a safety manual was completed for the WRBP. A safety committee was formed, comprised of elected members of the WRBP's workforce. Under the direction of the health safety coordinator, the committee is charged with making the WRBP a safer place to work.

The safety committee and safety coordinator are continually working to build and improve the WRBP's safety program. This has included putting into place such safety programs as a confined space entry program, an electrical safety program, a hazardous material handling and communications program, pathogen exposure control program, a hearing protection program, and other safety programs, which are all documented in the updated safety manual.

Another function of the safety program is worker education to promote safer work procedures and a "work safe" attitude. This is accomplished by maintaining an in-house safety training program. Periodic training meetings are held to help answer employee questions regarding safe work practices. Many times training is conducted by staff to engender a participatory spirit in the safety program. These meetings may also include training videos and handouts that employees then file in their safety manual for future reference. By going out into member communities and working with the emergency services that would be involved, precious time can be conserved and mistakes avoided should an accident occur. Emergency services training includes briefings, walk-throughs, and disaster drills.

Various laboratory analyses are conducted on the wastewater – from chemical composition of the inflow to the treated effluent before it's released to the river – ensuring the public's health and safety throughout the process.



Sludge pumps.

but most is returned to the inlet of the aeration tanks as "seed" for the biological process which continues 24 hours a day, every day.

The clarified effluent remaining after the activated sludge has settled overflows the secondary clarifiers. It flows to the ultraviolet (UV) disinfection system where pathogens are reduced (but not eliminated) to a level acceptable for discharge. The effluent which flows to the Merrimack River typically has had 95 percent of the solid material and oxygen-demanding material removed during treatment, and is diluted a minimum of 20 to 1 and more typically 100 or 200 to 1 in the river. The WWTF operates in accordance with effluent limitations established in its National Pollutant Discharge Elimination System permit jointly issued by DES and EPA Region I.

The screenings and grit removed in the Headworks building are disposed of at the regional incinerator in Penacook. The solids removed in the primary clarifiers, and that portion of the solids removed in the secondary clarifiers that is not needed for seeding, are pumped to sludge thickening tanks prior to treatment in the anaerobic digesters.

Provisions have also been made for septage disposal at the WWTF, which, over the course of a year's time, accepts the septic tank contents from approximately 6,000 homes. After degritting, the septic waste is pumped to sludge thickening tanks for co-settling with primary and secondary (activated) sludges. Sludge from these thickening tanks is transferred each day to the primary sludge digestion tanks where biological processes reduce the organic material in the sludge about 50 percent. Unlike the aeration tanks, in which aerobic (oxygen-loving) microorganisms are cultured, the digesters are operated to foster the growth of microorganisms in an anaerobic, or oxygen-free environment. This operation is similar to that of a septic tank. But unlike a septic tank, a digester is heated to 97° F and constantly mixed to encourage continuous decomposition of organics.

During the solids digestion process, methane gas is produced by microbial action. It is collected and stored within the domes of the secondary digesters and used to fuel the boilers which maintain the primary digesters' constant temperature. Methane gas generated in excess of the needs of the heat exchanger is utilized as a supplemental energy source for heating the Operations building, or burned off at the digesters.

Sludge from the primary digesters is transferred each day to the secondary digesters, which function as settling tanks to concentrate the material. It is then pumped to the Operations building for dewatering, which further concentrates the sludge. The remaining residual material, called "biosolids," is used on area farmlands as a cost-effective manure substitute that increases the yield of animal feed-crops, or in soil manufacturing for landfill closure projects.

The WRBP as a Regional Septage Solution

Since its inception in 1979, the WRBP treatment plant has served the septage disposal needs of its member communities. Septage is the liquid and semi-solid material that accumulates in a septic tank, which has to be pumped out every three to five years to protect a leachfield from clogging. Septage is a very odorous, high strength waste that is difficult to treat in a conventional manner. By treating septage as part of the sludge train, the WRBP plant is able to handle substantially more septage than many other WWTFs that dispose of septage at the headworks and treat the material as high strength wastewater.

While the WRBP was established to serve the sewer needs for Lakes Region communities, there has always been the recognition that many households would remain on individual septic systems and would generate septage to be treated at Franklin. In 2006, the WRBP received 6.0 million gallons of septage from over 90 New Hampshire and Vermont towns.

An upgrade of the dewatering equipment is currently underway and involves replacing the filter presses with centrifuges (2007). This $5.6 million upgrade will greatly improve solids processing (including septage solids) capacity.

Along with the ongoing Franklin WWTF improvements, there is a need to address septage capacity on a more regional basis. The Department of Environmental Services is leading a statewide effort to increase septage disposal capacity in-state and to reduce reliance on out-of-state facilities (about 27 percent of New Hampshire septage is hauled to WWTFs in Massachusetts and other states). The Franklin WWTF itself treated about 15 percent of all septage that was disposed of at in-state WWTFs in 2005. With the recent

Freshly painted sludge digester area. This is the area at which primary and secondary sludge is digested anaerobically, producing methane gas.

The Benefits of Biosolids

For nearly 15 years, the biosolids generated from the treatment process of the WRBP treatment facility have been landfilled or spread as fertilizer on farmland located next to the WWTF. In 1996, WRBP entered into a long-term contract with a recycling company that now manages all of its biosolids. The company uses the material for making soil for land reclamation projects and landfill closures, as well as for landspreading onto area farmlands—showing that biosolids can be utilized in several cost-saving products beneficial to many.

Biosolids contain significant quantities of nitrogen, phosphorous, and potassium. Each cubic yard of Franklin biosolids contains about six pounds of plant available nitrogen, 14 pounds of phosphorous, and less than one pound of potassium. At current fertilizer costs, these nutrients are worth about $10 per cubic yard of biosolids. The farmers are not paid for receiving or for applying biosolids; instead they receive the nutrient value of the material and are spared the expense of purchasing fertilizer. In addition to the beneficial nutrients, the organic matter in biosolids greatly improves the tilth of the soil.

Because Franklin's biosolids are anaerobically digested, the nitrogen found in the material has a very slow release into the soil. This characteristic protects the groundwater from the nitrogen pollution that may occur when chemically-based nitrogen fertilizers are land applied. Also, since it stabilizes organics in wastewater sludges, anaerobic digestion has the added benefit of reducing the odors commonly associated with sludge.

Why Visit a Wastewater Treatment Facility?

Anyone who appreciates New Hampshire's beautiful natural resources—anyone who loves swimming, fishing, and boating—will probably find the treatment process a fascinating one. To see for oneself the dramatic transformation of wastewater to clean, clear, water in a short amount of time and space is impressive.

There are many interesting aspects of wastewater treatment operations. For example, one process used at most treatment facilities that invariably intrigues visitors involves the growing of microscopic organisms—treatment plant operators call them "bugs." These bugs eat the dissolved sugars and starches found in sewage, which, if not removed would adversely affect our waterways. The successful cultivation of these bugs is actually a complex and scientific process that most people do not associate with wastewater treatment plants, but which forms the core of the plant's operation. To grow bugs successfully, the little critters need to be given air and food in just the right amounts, especially since the amount of "food" (sewage) coming into the treatment facility cannot be controlled.

Scheduling a Tour

The N.H. Department of Environmental Services' Franklin facility, like most other treatment plants, is periodically open for visitors. Tours are conducted for schools and other interested groups. For more information, please call the Franklin WWTF at 934-2809.

(Above) Septage receiving area at the facility in Franklin. In 2006, the WRBP received 6.0 million gallons of septage from 93 New Hampshire and Vermont towns.

award of an $595,000 EPA grant to the WRBP to evaluate the benefits of regional septage dewatering systems, and potentially construct a pilot facility, the WRBP is poised to serve as a model to meet the septage disposal needs of central New Hampshire for many years to come.

Franklin Wastewater Treatment Plant Presented with 2006 EPA Award of Excellence

In January of 2006, the Winnipesaukee River Basin Program was the recipient of the EPA Region I (New England) Operations and Maintenance (O&M) Excellence Award and received this acknowledgment at the annual meeting of the New England Water Environment Association. The WRBP won the prestigious award for the Large Secondary Plant Category (greater than 10 million gallons per day design wastewater flow). The award was established to recognize the staff of publicly owned wastewater treatment plants for their commitment to improve water quality not only with outstanding operation and maintenance, but also through a combination of continued permit compliance, effective financial management, and on-going operator training. As winner of the regional award, WRBP qualified to compete with the nine other EPA regional winners for the national title.

In September 2006, the WRBP was notified that the WRBP won the National First Place Award in the Large Secondary Plant O&M Excellence category, as part of the annual 2006 U.S. EPA Clean Water Act Recognition Awards selection process. Areas in which the WRBP excelled include: (1) an outstanding compliance record – no discharge (NPDES) violations in nearly three years; (2) outstanding utilization and reliance of SCADA automation to save time, energy, and money; (3) implementation of a comprehensive and high quality equipment maintenance program; (4) development of an effective and proactive process control and field monitoring program; and (5) outstanding residuals management program.