WINNIPESAUKEE RIVER BASIN PROGRAM

ADVISORY BOARD MEETING AGENDA

April 15, 2021
10:00 am

Due to the COVID-19 crisis and in accordance with Governor Sununu's Emergency Order #12 and Executive Order 2020-04 this meeting is to be conducted electronically.
The public has access to listen to and participate in this meeting by using the following link:

https://us02web.zoom.us/j/86175290966?pwd=a1lyNExodkFkdTVXd1NRclpqMWVyUT09

Meeting and entering the password: 338647
Listen only: Call 1-646-558-8656 and enter Webinar ID: 861 7529 0966
For problems, please call 603-528-6379

1. March 18, 2021 Meeting Minutes for review and approval
2. WRBP Monthly Summary Report – March 2021
3. Citizen Comments for items on the agenda
4. Timeline for the CIP update
5. Governance Guidelines, MOA and possible By-Laws
6. Rate Assessment Update:

   Discussion on plan developed after meeting with 4 southern communities on March 4, 2021.

   Expect an update on the Underwood's proposed changes to the WRBP model before April 15th meeting.
7. Review of the escrow account
8. Replacement Fund
9. Other Business:
   a. Next Advisory Board Meeting Thursday, May 20, 2021
   b. Decision on method to meet.
10. Adjournment

Item #1

Minutes

WINNIPESAUKEE RIVER BASIN PROGRAM

ADVISORY BOARD MEETING MINUTES

March 18, 2021 – Conducted Electronically

Members Present: The meeting was called to order by Wes Anderson (Laconia), chair, at 10:01 am. Sharon McMillin (DES), Tom O'Donovan (DES), Rene Pelletier (DES), Ron White (DAS), Jeanne Beaudin (Belmont), Glen Brown (Northfield), Justin Hanscom (Franklin), Brian Sullivan (Franklin), Ray Korber (Bay District), and Meghan Theriault (Gilford) were present at that time.

Wes announced that due to the ongoing COVID-19 crisis and in accordance with Governor Sununu's Emergency Order No. 12 and Executive Order 2020-04, that the meeting would be conducted electronically, and was being hosted via Laconia's Zoom Video Communications account.

Minutes: Jeanne moved, seconded by Glen, to approve the February 18, 2021 meeting minutes as written. A roll call vote was taken and the motion carried.

Monthly Summary Report: Sharon distributed the *Monthly Summary Report* for February 2021 by email prior to the meeting.

- Energy Efficiency Upgrades – No updates at this time.
- Solids Handling Process Upgrades – Of note, this was a new project on the summary report, although it has been forecasted in the WRBP CIP since 2018. Phased projects included in the Solids Handling Master Plan developed for the WWTP are being identified for completion of the alternatives analyses (10 percent of the design) to move forward to a 30 percent design. Budgetary costs are being developed as the project phases are advanced to the 30 percent design.
- Asset Management (AM)/Collection System Evaluations Incentive – No updates at this time.
- WRBP Infrastructure O&M Responsibilities – No updates at this time.
- Replacement Fund – No updates at this time.
- Governance Work Plan – No updates at this time.
- Rate Assessment Formula – No updates at this time.

Sharon described the first phase of the Solids Handling Process Upgrades project as being driven by a deteriorating biogas system that heats both the digesters and the main building, and that the deterioration has resulted in leaks and safety hazards. Brown & Caldwell (BC) has been working with the WRBP staff to evaluate the heat balance, heat exchangers, additional mixing in the primary digesters, and side-stream thickening.

The Solids Handling Master Plan is available for review and covers more than just this project; since it is a 20-year planning document. When the first phase is better defined the Advisory Board's input will be solicited for the viable alternatives. Ray expressed an interest in looking at the Solids Handling Master Plan so Sharon will send to the members via email.

Wes asked if the money for the design was in the 2020/2021 budget. Sharon explained that pre-applications for SRF loans have already been submitted to cover both the wastewater upgrades and the solids handling engineering and construction, and that they were on the CWSRF priorities list for available funding. Additional funding would go into subsequent fiscal years as the solids handling project was just in the initial stages.

Wes asked if the construction project (as a whole) was included in the CIP. Sharon explained that currently it was prospective only until more definitive figures are developed by the consultant and WRBP project team. Those budgetary amounts should be available for the CIP sub-committee to work with in September or October if it chose to meet. Ray expressed an interest in the CIP sub-committee meeting to update the CIP.

Citizens Comments for Agenda Items: Wes asked if there were any guests from the member communities participating on the call and if they had any questions, comments, or concerns regarding the agenda items. As there were no guests participating, he moved on to the next agenda item.

Governance Guidelines, MOA, and Bylaws Update: Wes announced that there were no updates at this time but the bylaws may be on the agenda next month.

Rate Assessment Formula Update: Wes asked the membership to refer to the PDF copy of the handouts that were distributed by email prior to the meeting, specifically to Item 5. The four southernmost communities met with Underwood on March 4th to review the model. Wes recapped the summary information provided in Item 5 and at the previous meetings.

Unknown flow was the topic at the meeting. It was defined as consisting of: I/ I in the WRBP interceptor from the Winnisquam pump station to the last meter before the WWTP; water consumption from the unmetered areas in the four southern communities; and I/ I in the unmetered areas of those four communities.

For water consumption in the unmetered areas, the four communities considered: Using an average consumption factor based on historical water use that Underwood had developed while performing its I/I studies in Belmont; applying the I/I factors from Belmont's recent study to Northfield, as their systems were similar in age and material; and applying the I/I factors from Franklin's recent study to Tilton. as their systems were similar in age and material.

At the April meeting, it is Wes' goal to review these considerations along with Underwood's suggested changes to the WRBP model and to establish a timeline for moving forward with a decision. Wes asked if there were any issues anyone wished to discuss now.

Jeanne expressed her concern about Johanna's (Tilton's) absence at the last two Advisory Board meetings and at the meeting on March 4th. Jeanne felt it was crucial for Tilton to be part of these conversations. Wes said that he has talked with Johanna, and that she seemed to agree with the concepts discussed during these meetings and confirmed that Tilton did not plan on doing an I/I study. Brian thanked the group for meeting with Underwood on the 4th and felt they had made a lot of progress.

Brian also announced that Franklin and Belmont have signed agreements with Underwood and planned to continue using them throughout this process. He hoped that doing so would give Johanna some of the support that she would need moving forward. Brian will be more involved in the discussions going forward.

Ray requested members look at the strength parameter again since the Bay District lagoons could be considered a pre-treated discharge. Wes noted that it was possible to include strength; however, the formula would require tweaking to include it. He asked Ray if he had suggestions in that regard. Ray suggested the CIP sub-committee to put together a proposal to incorporate strength.

Wes asked, with regard to the timeline, if strength was an immediate concern for Bay District or if Bay District was comfortable addressing it later on. Ray acknowledged that he would like the CIP sub-committee to get together to discuss it sooner than later.

Wes asked Sharon if she would be able to walk them through the consideration of strength as a component of the rate formula. He asked if the industrial-type operations bought their effluent down to a much lower level before releasing into the system. Sharon affirmed that they did. She noted that the WRBP did one study regarding community strength contributions (CBOD, TS, etc.) at different locations within the collection system. Findings did not indicate, outside of one discharge in Belmont, that any of the member communities had any significant differences in strength.

Sharon recommended revisiting the analytical data from the studies and offered to send Ray a copy of results. She also noted that Bay District discharged a significant amount of algae from its lagoon into the collection system, which is inhibitory of WRBP's treatment process, although that is the nature of lagoons. Ice cream shops and breweries also increased the CBOD flows to the WWTP. It may be beneficial for each member community to enforce strong sewer ordinances to control the commercial discharges; as DES controls the industrial discharges. Previous discussions had included a surcharge for strength so members or individual dischargers paid their fair share of treatment costs.

Wes asked if the analytical data was on the WRBP website or if Sharon could provide the data. Sharon noted that it has already been distributed but would send to Ray and Wes prior to Tuesday the 23rd. Jeanne requested the analytical data be updated because it was at least two years old and Belmont had addressed the discrete high strength discharge (ice cream) in Belmont.

Sharon indicated another collection system study could be performed to update the analytical strength data; however, she noted that it would not be possible to do so until after May. A new study may not be deemed necessary or cost-effective given the prior Advisory Board's decision not to include strength. The Advisory Board had voted not to include a strength parameter both because there were no significant differences between the member communities and also because of the potential on-going cost. Updating the analytical data was possible if the Advisory Board wished to consider strength moving forward but she suggested spot-checking as an option.

Wes thought that the available analytical data was helpful enough to develop the concept. Ray concurred. Wes did not believe that updating the analytical data would result in significant changes to the results.

Authority Workgroup Update: Wes announced that the City Manager of Laconia has talked with the decision makers in the other member communities, and it seemed as though Gilford and Meredith were not interested in pursuing a separate state agency.

Meghan explained that it was her understanding that Scott was not interested in pursuing a separate state agency unless there was unanimous support for doing so. Brian confirmed that Franklin, Tilton, and Northfield felt the same way.

Ray noted that some of the member communities still wished to have more control over how the money was spent, and asked if amending the MOU help. Jeanne believed that doing so would not change anything, because it would not change the ownership.

Brian moved, seconded by Glen, to remove this agenda item from the agenda for future meetings. A roll call vote was taken and the motion carried.

Wes asked if the money in the escrow account should be left in the account or reimbursed to members. If it was left in the account, it could assist with the rate assessment formula project. Brian, Ray, Jeanne, and Meghan were in favor of leaving it in the account. Brian indicated that Franklin would not provide additional money into the find but their current balance could assist with the rate formula work.

Replacement Fund: Wes asked, if based upon the discussion earlier about the rate assessment formula, if there was an interest in presenting a proposal to the NH Legislature to modify the replacement fund statutory language before the upcoming legislative session began in September. The effort had been on hold pending a decision to move forward with different governance. The general consensus was to move now forward with proposed changes since members had reached a consensus not to move forward with governance changes; so this discussion item will be on the agenda for the next meeting.

Other Business: Sharon announced that Ken Noyes, the WRBP's Chief Operator, retired last month. He has been with DES for over 27 years and will be greatly missed. There is an Interim Chief Operator at present, and DES has begun the hiring process to replace Ken.

The meeting adjourned at 10:55 am. The next meeting will be held on Thursday, April 15, 2021 at 10:00 am via Laconia's Zoom Video Communications account. The minutes were prepared by Pro-Temp Staffing.

Item #2

WRBP Monthly Summary

Summary Report to the WRBP Advisory Board
March 2021

Projects	Status & Schedule	Budget	Other info
Energy Efficiency Upgrades at WRBP Facilities	In order to qualify for a CWSRF loan and Eversource incentive requirements, the project is proposed to be substantially complete on or about Dec 31, 2020. A task order for engineering support was executed. The aeration blower and 2 RAS pumps were purchased and plans and specifications for WRBP installation have been approved. Blower delivered late December; ***custom pumps delivery delayed until June. Installation work by WRBP staff and contractor(s) is on-going.***	The estimated project budget is $400K with 50% principal forgiveness from the CWSRF and a $100K Eversource incentive making the overall budget $100K and a <1-year simple payback based on estimated electricity savings.	This equipment upgrade was recommended by the energy audit of all WRBP facilities completed in early 2020. Project includes a smaller aeration blower, 2 RAS pumps and staff-installed facility lighting. The AB expressed support of the project at their August and Sept meetings.
Solids Handling Process Upgrades	Phased projects included in the Solids Handling Master Plan developed for the Franklin WWTP are being identified for completion of the alternative analyses (10% design) to move forward to a 30% design.	Budgetary costs are still being developed as the project phases are advanced to the 30% design.	The Solids Handling Process Upgrade Project has been forecast in the WRBP CIP since FY18.

Program Initiatives	Status & Schedule	Budget	Other info
WRBP Infrastructure O&M Responsibilities - Memoranda of Agreement	Belmont, Northfield, DAS, Gilford and Tilton Executed MOAs with DES. MOAs for Bay District, Sanbornton, Meredith, Franklin and Laconia were re-sent in February 2020 and are under review by members.	The AG's office developed language for MOAs to clarify the O&M responsibilities of properties, facilities or components that are indeterminate.	Discussion continues with the 5 members.

Replacement Fund	Replacement fund valuation reset to include pipelines pending in FY20. The pipeline lining repair and plant water repair funded from the replacement fund were completed. Legislation will be required to change the current Replacement Fund reimbursement methodology. DES forwarded the AG's opinion on these proposed statutory changes to the Advisory Board chairman on 1/4/2021.	Legislation to modify the Replacement Fund statue was proposed by Gilford at the meeting in July. Discussions continued regarding the current assessment methodology and proposed revisions.	Laconia and Gilford are reimbursing the Replacement Fund for the Pendleton Forcemain repairs. The changes to the replacement fund reimbursement methodology vote that failed on 5/21/2020 was revisited on July 16 to reflect a preference for 50% reimbursement by all members based on the current percent allocation and 50% collected from only those members using the fund for the expenses.
Governance Work Plan	The work plan to evaluate alternative governance structures for the WRBP was approved at the 10/2/2016 Advisory Board meeting. The legal firm presented their roadmap at the July 2018 meeting; and members approved starting the Phase I efforts. The AG's office documented DES' and DOT's cooperation with the Advisory Board to perform due diligence. DES presented a scope of work for completing some due diligence items on 4/27/2020. DES responded on 6/9/2020 to Laconia's letter dated 5/3/2020.	DES responded to the Gilford letter requesting clarification regarding ownership transfer of assets on 1/25/2017. Laconia escrow agreement will collect funds for the study with an initial budget of $50K in 2018 and $50K in 2019. Additional escrow funds will be collected for the pending due diligence phase using the same formula. Scope and budget for the due diligence phase was presented at the May 2020 meeting. Members voted not to proceed or expend additional funds until public meetings were held with stakeholders, elected officials, and legislators.	The Governance group engaged legal assistance to evaluate next steps to get to a decision point on governance options. DES' 11/8/18 response to the Phase I Roadmap presentation held at DES on 9/28/18 was discussed at the November 2018 meeting. A draft WRBC District Cooperative Agreement table of contents and draft legislation was discussed at the 9/11/19 meeting. The AG's office provided preliminary observations on 1/15/2020. Three members are not in favor of governance changes, six members have voted in favor of proceeding, DAS has abstained.
Rate Assessment Formula	DES' preliminary analysis of the relative contribution of flow, strength and capacity (shared) costs on 5/5/2016. The Advisory Board resolved to have a draft formula by 1/1/2019; workgroup met on 7/25/18 and 8/16/18. Draft Phase I reports were provided to the workgroup and W-P revised the report based on comments. W-P	The full Advisory Board has expressed interest in participating in this discussion with DES regarding a draft rate formula. Updated flow and capacity information prepared by DES was presented to the rate assessment workgroup on 8/16/18. A Flow Metering Rate Allocation study task order was finalized on 1/22/19 for the four southern members where current measured flow data is not accurate enough	DES presented preliminary flow and capacity findings from the 3rd party flow metering evaluations in March 2017and WRBP Franklin WWTP Capacity Status in July 2017. W-P gathered GIS and connection data from the southern 4 communities as part of the study. Members chose not to engage W-P in data collection for the hybrid analyses, but to use

	presented Phase I information at the December 2019 meeting. The 4 southern member communities provided the requested information for the proposed hybrid rate assessment model. On 10/27, Franklin's consultant reviewed their draft efforts with WRBP and Franklin staff. Belmont's I/I report under review and Franklin's pending; ***with discussion at the March and April 2021 meetings.***	for billing. DES provided a draft hybrid model in March 2020; that was discussed at the April 2020 meeting. Franklin and Northfield agreed with the model; Tilton was absent and Belmont is reviewing. At the June 2020 meeting, Laconia presented an alternate model for assessing unmetered flows and allocating I/I to all members equally.	WRBP and member resources. At the May 2020 meeting, Belmont did not agree with the data or method used for their assessment or I/I contributions from the 4 southern communities. Additional information from the 4 southern members is being evaluated by the WRBP and DES with the assistance of Franklin's and Belmont's consultant.

Changes from previous report are shown in bold italics.

Dates to Remember:

1. The next Advisory Board meeting will be postponed to **Thursday April 15, 2021** via conference call at 10am; public venue is the City of Laconia DPW office.

Prepared by: _____
Sharon McMillin - DES, WRBP Administrator

Reviewed and in concurrence: _____
Rene Pelletier - DES, Assistant Director, Water Division

Respectfully submitted on: 4/6/2021

Item # 6

Rate Assessment

Topic: Discussion on the draft rate allocation model based on Belmont and Franklin's consultant's comments

Background:

Items that are highlighted are updates to the report for the March 18, 2021 report.

The objective of the March 4, 2021 meeting with the 4 downstream communities was to determine how to reach consensus with the 4 communities on how to handle the "unknown flow" that was identified in the WRBP model and that was assigned to two of the 4 southern communities.

The basic concept was to first identify the possible sources of the unknown flow.

The unknown flow consists of:

- I and I in the WRBP interceptor from the Winnisquam pump station to the last meter before the treatment plant.
- Water consumption from the unmetered areas in the 4 communities
- I & I in the unmetered areas of the four communities.

The 4 communities, for water consumption in the unmetered areas of the communities, are considering using an average consumption factor based on historical water use that Underwood has found in the many rate studies they have performed.

Also they are planning on:

- Applying the I and I planning factors from Belmont's recent study to Northfield as their systems are similar in age and material.
- Applying the I and I planning factors from Belmont's recent study to Tilton as their systems are similar in age and material. An analysis of the sewer pipe materials in the area of Tilton that is not sewer metered has determined that the pipe is PVC. Thus this area of Tilton more closely resembles Belmont, not Franklin.
- Using an updated version of Underwood's suggested modifications to the WRBP model (To be provided before the April 15th meeting) to share the unknown I and I from the 4 communities among the 4 communities.

The current timeline for finalizing the rate allocation formula follows:

March meeting

- Obtain agreement on the sources of the unknown flow
- Obtain agreement on the concept of how to divide the unknown flow among the four communities

April Meeting

- Review the planning factors proposed for I & I flow in Northfield and Tilton

- Review an update to Underwood's suggested changes to the WRBP model that was provided at the Feb 18th meeting
- Discuss the steps and timeline to obtain a decision from the member communities on the proposed changes to the WRBP model.

May Meeting

- Discuss any issues raised by the member community governing bodies. If the governing body of any member community has an issue with the model please provide comments as soon as you have them. Do not wait for this meeting to raise them.
- Vote to approve the WRBP model with proposed changes if all communities have obtained a decision from their governing bodies by then. (A majority must vote yes to approve the model.)

Bay District has a lagoon that pretreats the sewage from the Bay District. Bay District is considering requesting an adjustment due to the reduction in strength of the Bay District's outflow. Ray Korber is researching history of inflow versus outflow strength to determine if the difference is significant enough to request a reduction. WRBP initial comments on the request follow:

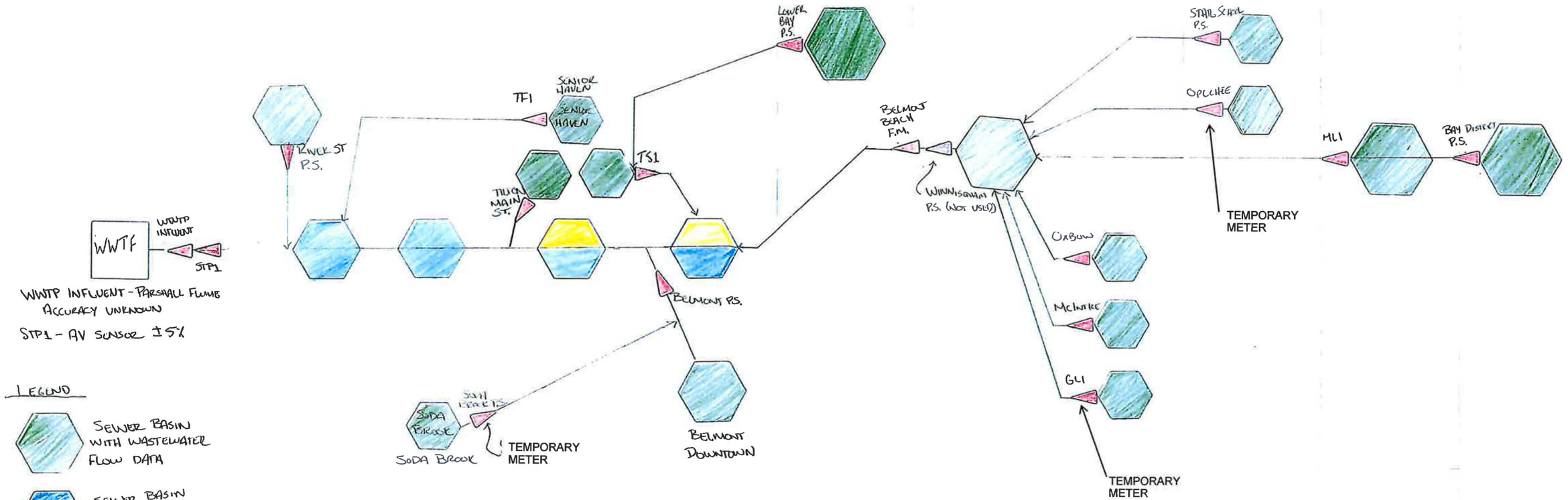
- Initial agreement with Bay District was for continual low flow from the lagoons. Bay District presently sends slugs of sewage depending on capacity at the time.

- The lagoon also send algae to the plant which causes issues with the plants treatment process.

Attachment 1 is a flow diagram of the system.
Attachment 2 is copy of the WRBP 7/7/2020 model.
Attachment 3 is a copy of the Proposed modifications to the WRBP model. (To be provided)
Attachment 4 is for the discussion on how to divide I/I in the interceptor among the member communities

WRBP FLOW SCHEMATIC
AND HYBRID FLOW MODEL INFORMATION
UNDERWOOD ENGINEERS
SEPTEMBER 2020

COMMUNITY	FRANKLIN	NORTHFIELD	TILTON	BELMONT	SANDBORTON	LACONIA	GILFORD	STATE SCHOOL/ NHDOAS	MERIDEN	BAY DISTRICT
FORMULA FOR FLOW ESTIMATION	RIVER ST P.S. + WATER DATA	WATER DATA (IN AQUADUCT + SODA BROOK)	[TILTON MAIN ST. + TF1 + TS1] + WATER DATA + DEMOGRAPHIC DATA	[BELMONT P.S. - SODA BROOK - EPTAM - QUALITY CONTROL] + WATER DATA + DEMOGRAPHIC DATA	LOWER BAY P.S. + TS1	BELMONT BEACH - OXBOW - ML1	OXBOW + MCINTIRE + GL1	STATE SCHOOL P.S. + OPECHEE	ML1 - BAY DISTRICT P.S.	BAY DISTRICT P.S.



WWTP INFLUENT - PARSHALL FLUME
ACCURACY UNKNOWN

STP1 - AV SENSOR ±5%

LEGEND

- SEWER BASIN WITH WASTEWATER FLOW DATA
- SEWER BASIN WITH WATER DATA FOR ALL SEWER CONNECTIONS AND NO SEWER DATA
- SEWER BASIN WITH WATER DATA FOR SOME SEWER CONNECTIONS AND NO SEWER DATA
- SEWER FLOW METER LOCATION

RIVER ST. P.S.
ULTRASONIC DOPPLER ± 1/4 3'.

SODA BROOK
AV SENSOR ±15%

TILTON MAIN ST.
6" PARSHALL ± 3%.

TF1
60° TRAPEZOIDAL FLUME ±10%

TS1
10% PALMER-BOWLUS FLUME ±6%

BELMONT P.S.
MAGMETER ±0.5-1%

LOWER BAY P.S.
MAGMETER ±0.5%-3%

BELMONT BEACH
NOT EVALUATED IN WRP FLOW METER ASSESSMENT

WINNISQUAM P.S.
MAGMETER (3%-10%)

OXBOW
3-INCH PARSHALL ±8%

MCINTIRE
10" PALMER-BOWLUS ±5%

GL1
10" AV SENSOR ±15%

STATE SCHOOL P.S.
CALCULATED - WETWELL DRAWDOWN ± 20%

OPECHEE
10" AV SENSOR ±10%

ML1
36" AV SENSOR ±8%

BAY DISTRICT P.S.
MAGMETER ±0.5%/±3%.

ATTACHMENT #1

WRBP Version 07/07/2020

Sewer Flow Volumes

Metered + Unmetered Flows in 4 Members	Baseline metered sewer flows (4 yr MG total) includes I/I since sewer metered		Water Use Flow (4 yr MG Total)		Subtotal: metered + water use	Demographic Units (4 yr Totals based on current year)		% of total MG for areas using demographics %	MG of remaining WWTP flows based on demographic %	Total Sewer Flows = Metered + Water Use + Demographic (MG)	Total flow % = metered + unmetered w/o I/I factor	current O&M %	Change w/ DES model
Belmont	Belmont PS - Soda Brook - Eptam - Quality Control	150.51											
			4 yrs water use - Sunlake	8.14									
			4 yrs water use - Cates	7.95									
			4 yrs water use - Westview	5.10									
			4 yrs w/ avg as yr 4 water use - Solar	7.11									
			4 yr water use - Court St.	15.38									
						residential	320.06						
						commercial	44.45						
	Totals:	**150.51**		**43.68**	**194.19**		**364.51**	**87%**	**310.67**	**504.85**	**6.43%**	**3.80%**	**2.63%**
Franklin	River St PS	955.63											
			Water Use 2016-2019 4 yr.	**134.23**									
	Totals:	**955.63**		**134.23**	**1089.86**					**1089.86**	**13.89%**	**15.75%**	**-1.86%**
Northfield			T-N Aqueduct Northfield only Water Use + Soda Brook (4 yrs)	**145.50**	**145.50**					**145.50**	**1.85%**	**2.60%**	**-0.75%**
Tilton	Tilton Main + TF1 + TS1	392.84											
			water use 4 yrs. - Pennichuck	3.07									
			water use Lochmere - flat rate	34.16									
			water use T/N Aqueduct	95.13									
						flat rate	55.20						
	Totals:	**392.84**		**132.36**	**525.20**		**55.20**	**13%**	**47.05**	**572.25**	**7.29%**	**4.25%**	**3.04%**
Other communities													
Bay District	Bay District PS	142.42								142.42	**1.82%**	**1.15%**	**0.67%**
Gilford	Oxbow + McIntire + GL1	1128.82								1128.82	**14.39%**	**0.117**	**2.69%**
Laconia	Belmont Beach - Oxbow - ML1 - GL1 - Opechee	3329.93								3329.93	**42.44%**	**49.87%**	**-7.43%**
Meredith	ML1 - Bay District PS	696.72								696.72	**8.88%**	**9.25%**	**-0.37%**
Sanbornton	Lower Bay PS + TS1	117.93								117.93	**1.50%**	**0.68%**	**0.82%**
NHDAS	State School PS + Opechee	117.45								117.45	**1.50%**	**0.95%**	**0.55%**
												100.00%	
	Totals:	**7032.25**		**455.77**	**7488.02**		**419.71**		**357.71**	**7845.73**	**100.00%**		
	% flows accounted for by these methods:	**89.63%**		**5.81%**	**95.44%**				**4.56%**	**100.00%**			

For water use and demographic flows, could add a factor for I/I based on existing I/I studies or pipe age, size and material using available standard design/construction references (significant additional work for each pipe segment and/or collector sewer shed).

Temporary meters used in analysis include GL1, Opeechee and Soda Brook.

Used 135 gpd per unit per Belmont's request - value used for Tilton and Belmont to be consistent.

Added sewershed to Franklin water meter total.

Corrected entry for Belmont - Solar and Court st. water use.

Wes' version: 135 gpd/connection regardless of # bedrooms or baths or residnetial vs commercial*365d/yr*4 yrs

		gal 4 yrs	MG 4 yrs
uses 135gpd for 1065 connections	from Belmont	209,911,500	209.91
used 135 gpd for 64 connections	from Tilton	12,614,400	12.61
		222,525,900	222.53

	MG 4 yrs
	357.71
	222.53
	135.19

	MG 4 yrs
assumes 300gpd/idm	
Belmont	
Tilton I/I per 2015 CMOM idm - entire town	**39.83**
Northfield	
Franklin - from 4 unmetered areas from I/I stidy	**32.78**

Attachment 2

Proposed Hybrid Model for Determining Flow Contributions from unmetered locations in Belmont, Franklin, Tilton and Northfield

Info used in Model:

Franklin	**Water Use data from Franklin DPW** ID all sewer users that DO NOT go through River St. PS - completed 12/17/19 Confirmed all but 1 sewer users are on City water (1 not on water has a sewer flow meter installed) 100% water use = 80% sewer volume/year I/I distributed purely by IDM
Northfield	**Annual Water Use from Tilton-Northfield Aqueduct** 100% water use = 80% sewer volume/year Subtract businesses (currently 2) on Route 140 in Belmont billed by T-N Aqueduct IDM information provided by WRBP was used to estimate a placeholder I/I flow. Community specific I/I information could be used to refine I/I flow estimates.
Belmont	**Water use and/or determine Units from property records for unmetered areas** ID all sewer customers that DO NOT go into Belmont PS (from sewer user list already provided or updated version) *ID what unit entries on this spreadsheet are based on (looks like historic flow based units or similar)* Get water use data for all Belmont sewer customers billed by water companies; 100% water use = 80% sewer volume/year Property records of non-Belmont PS customers (in lieu of water or sewer flow data) ~~Use property records and TR-16 or M&E 5th ed. Or Env-Wq definitions of units * GPD per unit to determine property unit and then total number of units (Env-Wq 704.03).~~ Town of Belmont water data used to estimate water use to be approximately 125 gpd/connection. Use property records and unit flows to estimate water use from unmetered areas without water meters at 125 gpd/connection. Wastewater flows estimated to be 125 gpd *80% = 100 GPD/EDU
Tilton	**Water use and/or determine Units from property records for unmetered areas** ID all sewer users that DO NOT go through TS-1 and TF-1 and Tilton Main St. flow meters *W-P determined that these 3 meters are accurate for billing purposes* Get water use data for all Tilton sewer customers billed by T-N Aqueduct & Lochmere; 100% waste use = 80% sewer volume/year Use property records and unit flows to estimate sanitary wastewater flows from unmetered areas without water meters at 100 gpd/connection. ~~Use property records and TR-16 or M&E 5th ed. Or Env-Wq definitions of units * GPD per unit to determine property unit and then total number of units (Env-Wq 704.03).~~ IDM information provided by WRBP was used to estimate a placeholder I/I flow. Community specific I/I information is needed
	~~**Total all units and assign reference guidance GPD flows for these 2 communities without complete water use info**~~ ~~Normalize units to account for the % total flows being addressed (% changes with rolling average)~~ ~~Assessment % based on metered baseline % + normalized unit % in each community~~

	MG	**MGD**	**%**	
WWTP Influent flows (MG)				
(2015-2018)	7845.73	**5.37**		
sewer metered 4 yr totals	7032.25	**4.82**	89.63%	**Metered flows include I/I since total flows though each metering location or pump stations was metered over at least 4 years.**
unmetered 4 yr total	813.48	**0.56**	**10.37%**	**These unmetered flows were evaluated using the methods above.**
			100.00%	

Attachment 2

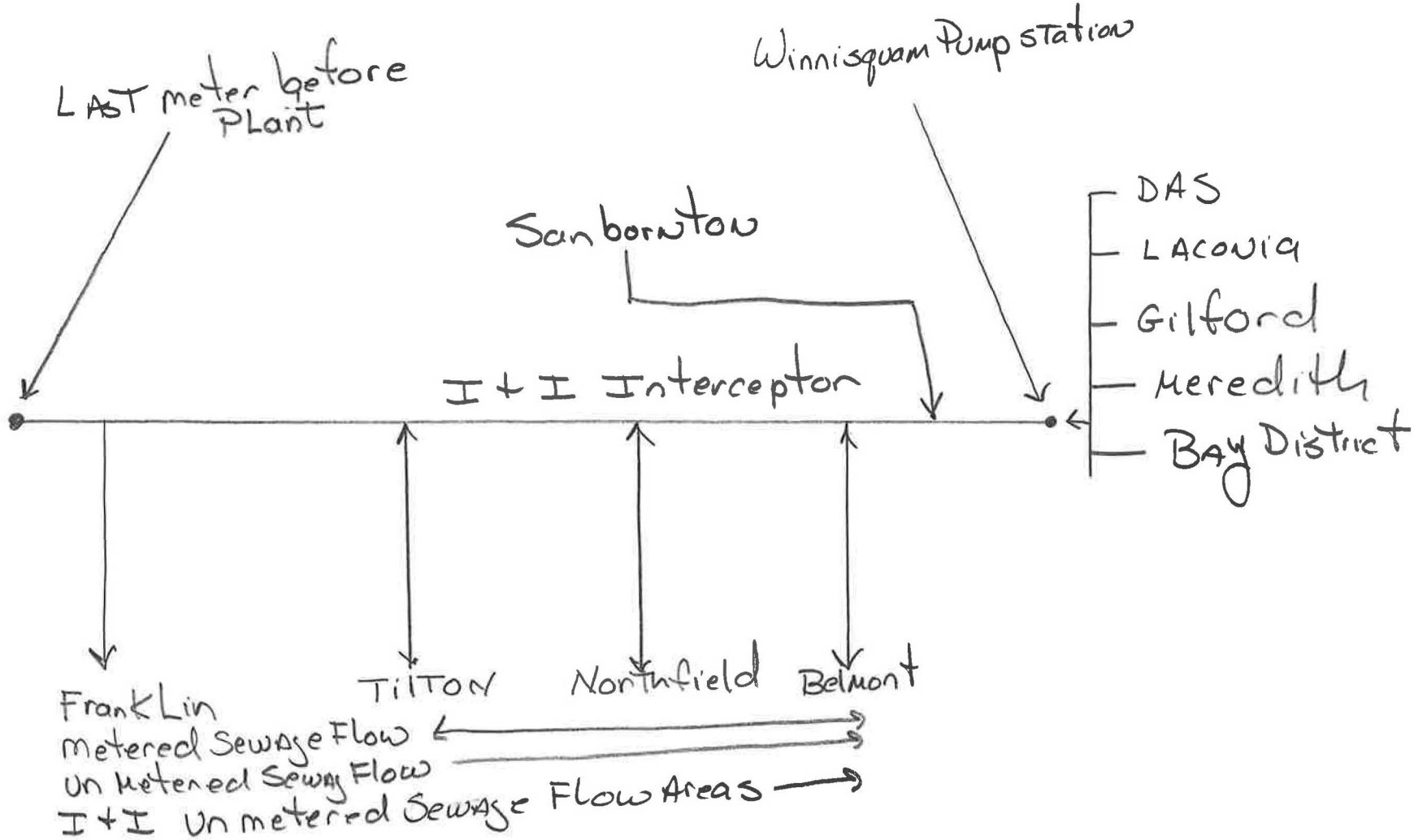
System Flow

Total Flow = Total Metered Flow + I/I interceptor + Flow From unmetered Areas

Must Determine ⇒ I + I in interceptor from Winnisquam Pump Station To Last Meter before Plant

⇒ Flow from unmetered Areas

Flow from Unmetered Areas ⇒ Water consumption + I + I from Unmetered Areas


LAST meter before Plant
Winnisquam Pump station
Sanbornton
I + I Interceptor
DAS
LACONIA
Gilford
Meredith
Bay District
Franklin
Tilton
Northfield
Belmont
Metered Sewage Flow
Un Metered Sewag Flow
I + I Un metered Sewage Flow Areas

Division of I+I in Interceptor

$$X(Y) + A(Y) + B(Y) + C(Y) + D(Y) + E(Y) = Y$$

Y = Unknow flow due To I+I in Interceptor

X = factor for flow Assigned To 5 upstream communities

A = Factor for unknown Flow Assigned To Belmont

B = Factor for unknown Flow Assigned To Sanborntow

C = Factor for unknown Flow Assigned To TiLTow

D = Factor for unknown Flow Assigned To Northfield

E = Factor for unkown Flow Assigned TO Franklin

Item #7

Escrow Account

As of Jan 2, 2021

Rath, Young & Pignatelli Road Map Study

Budget Tracking sheets

Funds Available $ 51,900.00

Invoice #	Date of Invoice		Invoice Amount	Funds remaining
Road Map Development				
Invoice # 1	5/22/2018		$ 2,858.00	$ 49,042.00
Invoice # 2	6/20/2018		$ 6,890.18	$ 42,151.82
Invoice #3	6/30//2018		$ 6,958.00	$ 35,193.82
Invoice #4	8/20/2018		$ 2,656.00	$ 32,537.82
Road Map Phase 1				
Carry Over from Previous Phase				$ 32,537.82
Escrow for this phase				$ 65,000.00
Total Available				$ 97,537.82
Invoice #1-1	20-Sep-18	79111	$ 800.00	$ 96,737.82
Invoice# 1-2	18-Oct-18	79407	$ 896.00	$ 95,841.82
Invoice #1-3	15-Feb-19	80548	$ 924.00	$ 94,917.82
Invoice #1-4	15-Mar-19	80800	$ 759.00	$ 94,158.82
Invoice #1-5	6/10/2019	81583	$ 396.00	$ 93,762.82
Invoice #1-6	7/18/2019	82002	$ 330.00	$ 93,432.82
Invoice #1-7	8/15/2019	82241	$ 66.00	$ 93,366.82
Invoice #1-8	9/17/2019	82524	$ 1,584.00	$ 91,782.82
Invoice 1-9	10/28/2019	82912	$ 396.00	$ 91,386.82

Invoice #	Date of Invoice		Invoice Amount	Funds remaining
Invoice 1-10	5/11/2020	84667	$ 1,224.00	$ 90,162.82
Invoice 1-11	6/19/2020	85172	$ 782.00	$ 89,380.82
Invoice 1-12	9/23/2020	85982	$ 2,550.00	$ 86,830.82
Invoice 1-13	10/23/2020	86266	$ 1,394.00	$ 85,436.82
Invoice 1-14	11/13/2020	86449	$ 525.00	$ 84,911.82
Invoice 1-15	12/15/2020	86722	$ 1,480.00	$ 83,431.82