WINNIPESAUKEE RIVER BASIN PROGRAM

ADVISORY BOARD MEETING AGENDA

February 18, 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/82248216304?pwd=dnduRlllYTFVdTdDRFlIMjBGOXNxdz09

Meeting and entering the password: 793624
Listen only: Call 1-646-558-8656 and enter Webinar ID: 822 4821 6304
For problems, please call 603-528-6379

1. January 28, 2021 Meeting Minutes for review and approval
2. WRBP Monthly Summary Report – January 2021
3. Citizen Comments for items on the agenda
4. Governance Guidelines, MOA and possible By-Laws
5. Rate Assessment Update:

   Discussion on Underwood's recommendations from Belmont's I & I report
6. Authority –

   Update on creating a WRBP Commission as a State "agency"

   Review of the escrow account
7. Replacement Fund
8. Other Business:
   a. Next Advisory Board Meeting Thursday March 18, 2021
   b. Decision on method to meet.
9. Adjournment

Item #1

WINNIPESAUKEE RIVER BASIN PROGRAM

ADVISORY BOARD MEETING MINUTES

January 28, 2021 – Conducted Electronically

Members Present: The meeting was called to order by Wes Anderson (Laconia), chair, at 10:03 am. Sharon McMillin (DES), Rene Pelletier (DES), Ron White (DAS), Jeanne Beaudoin (Belmont), Trish Stafford (Sanbornton), Brian Sullivan (Franklin), Meghan Theriault (Gilford), and Phil Warren (Meredith) were present at that time. Ray Korber (Bay District) entered the meeting at 10:06am.

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.

Wes introduced guests: Tom O'Donovan, the Director of DES' Water Division, and Cole Melendy and Thaddeus Webb from Underwood Engineers and thanked them for attending.

Minutes: Brian moved, seconded by Jeanne, to approve the November 19, 2020 meeting minutes as amended since there was no meeting in December. A roll call vote was taken and the motion carried.

Monthly Summary Report: Sharon reviewed the updates included in the *Monthly Summary Report* for December 2020 that was distributed by email prior to the meeting.

- Energy Efficiency Upgrades – The aeration blower and two RAS pumps were purchased and plans and specifications for the WRBP's installation have been approved. The blower was delivered in December and the custom pumps are expected to be delivered in March. Project funding includes CWSRF loan forgiveness of 50% of eligible project costs and an Eversource incentive making the project have a simple payback of less than 1 year.
- Replacement Fund – DES forwarded the AG Office's opinion on the proposed statutory changes to the Advisory Board chairman on January 4, 2021. The opinion indicated that the AG Office did not foresee any legal difficulty with legislatively changing the reimbursement scheme as discussed by the Advisory Board last July.
- Rate Assessment Formula – Belmont received its I/I final report from its consultant as discussed below.

Governance Guidelines, MOA, and By-Laws Update: No update provided.

Rate Assessment Formula Update: Wes asked the members to refer to the handouts that were distributed by email prior to the meeting. Item 5 contains background information and recommendations for the Advisory Board prepared by WES for consideration at its March meeting. Cole and Thad from Underwood Engineers are available at this meeting to answer any questions Advisory Board members may have on preparation for the February and March meetings.

Item 5 contains background information, a flow schematic from Underwood Engineers, a draft hybrid rate allocation model provided by the WRBP, and a draft revision provided by Underwood Engineers to Belmont and Franklin with recommendation for assessments in the unmetered areas in the 4 southern communities.

Wes provided this further summary: The current rate allocation model was likely created in the 1980s, when the WRBP itself was created. Since the 1980s, member community demographics (and inflow) have changed. The sewer flow meters all have an accuracy tolerance, which has made determining rate allocations more difficult, and there were areas with unknown (unmetered) flow rates. The allocation of I/I has also made determining rate assessments based on flow more difficult - particularly in the 4 southern communities.

Belmont just received its I/I final report from its consultant, and Wes has not had an opportunity to review it yet. He suspected that this may be the case for the other Advisory Board members. Sharon confirmed that she had not had time to review the report in detail so couldn't comment on its specifics. A draft I/I report for Franklin has not been issued by Underwood Engineers. Brian indicated that Underwood was still working on the Franklin I/I report and will share it when it's done. Underwood will continue to work with him and Sharon to finalize it.

At the March meeting, Wes hoped to reach a consensus of the Advisory Board members for a revised rate allocation model. The goal is to adopt a rate allocation model that is a reasonable representation of each member communities' use of the system as a whole. The purpose of today's meeting was to disseminate information and to answer any questions the Advisory Board members may have.

Belmont's and Franklin's proposed changes recommend using water consumption data in the four member communities in the areas with unknown (unmetered) flow rates instead of design numbers. Underwood Engineers assumed that sewer use was 80 percent of water consumption. Underwood Engineers estimated sewer flow from Belmont's commercial properties based on the town's sewer unit charge system.

Wes asked if there were any questions or issues that the Advisory Board members wished to discuss. Sharon asked if Belmont's final I/I report was sharable since members indicated they had not yet received it directly. Jeanne noted that the document was a public document; however, not easily shared (i.e. via email) due to its large size. Brian noted that Franklin's report would also be a public document and authorized Underwood Engineers to go ahead and share it when it was ready. Ray suggested Underwood Engineers provide a link to its share site so that the Advisory Board members could look at the report.

Replacement Fund: Wes indicated that Sharon had already provided this update.

Other Business: The meeting adjourned at 11:20 am. The next Advisory Board meeting will be held on Thursday, February 18, 2021 at 10:00 am via Laconia's Zoom Video Communications account.

The minutes were prepared by Pro-Temp Staffing.

Item #2

Summary Report to the WRBP Advisory Board
January 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 expected in March. **Installation work by WRBP staff 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 <3-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.

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 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 expected discussion at the March 2021 meeting.***	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 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.	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 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 February 18, 2020** via conference call at 10am; public venue is the City of Laconia DPW office.

Prepared by: Sharon McMillin
Sharon McMillin - DES, WRBP Administrator

Respectfully submitted on: 2/11/21

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

Item #5

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

Background:

The current rate allocation model dates to the creation of the WRBP in the 1980s which were based on the 1972 Maguire and Associates Basin Study on water quality control for the Winnipesauke River Basin.

The State law on the WRBP rate allocation method states that cost allocation will be based on volume, strength and proportional costs for transportation of raw and treated sewage.

Federal Grants in the 1980s paid most of the costs associated with constructing the regional interceptors and the treatment plant.

Federal Grants are no longer available. They are now low-cost loans. Cost of replacing failing systems is now the responsibility of the systems users.

Since the 1980's member communities' demographics have changed and have experienced growth thus impacting the flow from each communities' system. Water consumption has been reducing as more water efficient fixtures and machines are installed in homes and commercial property.

Some communities may have decreased flows others may have increased flows.

April 21, 2020, WRBP presented a draft of the model based on sewer metering, water metering and design sewer flows from non-metered areas.

July 7, 2020 WRBP presented an updated draft of the model. (Attachment 1).

Belmont and Franklin, as well as other communities were concerned on how the April and July versions of the WRBP draft rate allocation model accounted for unknown flow, and I & I for the 4 southern communities. In particular, the members analysis believed that all of the unknown flow was divided between only 2 municipalities, Belmont and Tilton.

All meters that are presently being used have an accuracy tolerance.

The unknown flow in the system comes from meter measurement tolerances, I & I from the 4 unmetered areas of the systems and I and I in the Interceptor from the Winnisquam Pump Station to the Treatment plant influent meter.

All four southern communities even those with PVC pipes have some amount of I and I in their system.

Belmont and Franklin hired Underwood Engineers to update their I & I studies, to develop a planning factor for I & I in their systems, and both included tasks in their scope of work to review the draft WRBP rate allocation model focusing on their concerns over how the model allocated I & I among the 4 southern communities. Underwood has submitted a draft for review to Belmont and is in the final stages of completing Franklin's draft report.

Tilton has not updated its I & I study.

Review the proposed changes to the model and provide comments by the Feb 18, 2021 meeting in order to do the following at the March 18, 2021 meeting:

- Adopt Belmont's and Franklin's recommendation that the Board use water consumption in unmetered areas instead of design flow from a property.
- Adopted Belmont's and Franklin's concept of using sewer unit charge system to estimate sewer flow in commercial properties in areas that do not have water meters.
- Adopt Belmont's and Franklin's recommendation that the Board should assume that sewer flows should be 80% of water consumption.
- For Tilton, like Belmont use the average household water consumption in the areas with water meters for areas without water meters to determine sewer flow.
- Adopt some method of distributing the unaccounted flow to the member communities.

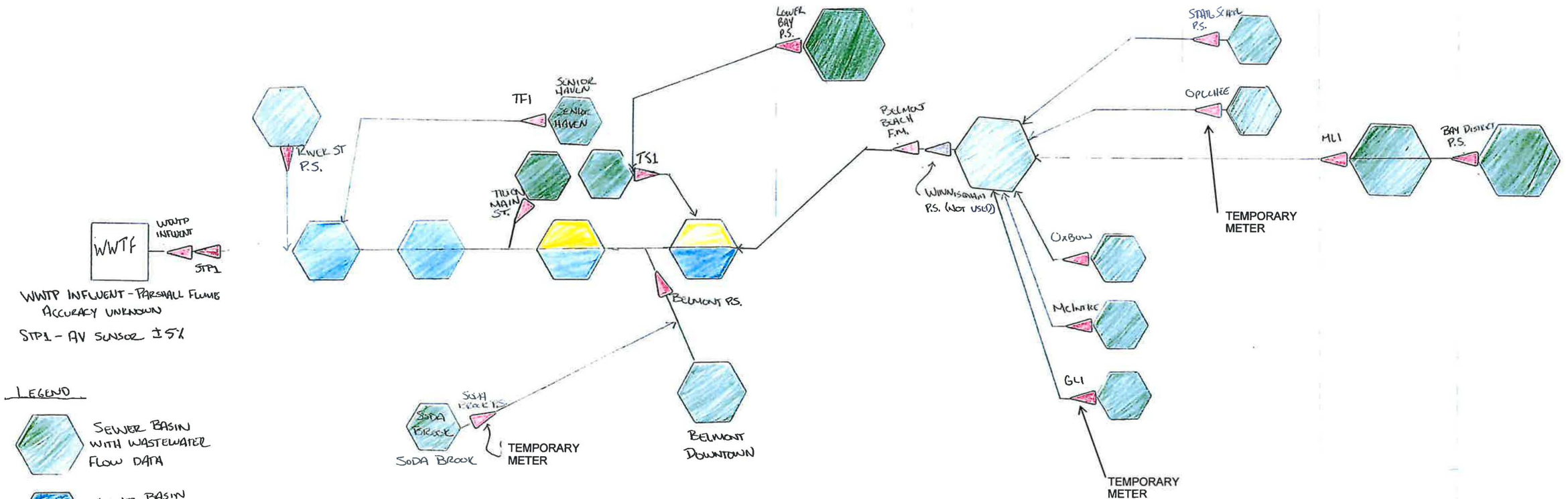
Attachment 1 is a flow diagram of the system.

Attachment 2 is copy of the WRBP 7/7/2020 model.

Attachment 3 is a copy of the Proposed modifications to the WRBP model.

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

COMMUNITY	FRANKLIN	NORTHFIELD	TILTON	BELMONT	SANDBORTON	LACONIA	GILFORD	STATE SCHOOL/ NHDOAS	MERIDETH	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 - MLI	OXBOW + MCINTIRE + GL1	STATE SCHOOL P.S. + OPECHEE	MLI - BAY DISTRICT P.S.	BAY DISTRICT P.S.



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 ±0.5-5%

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%.

MLI
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 resisdnetial 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

Sewer Flow Volumes

	Sewer Metered Areas		Un-Metered Areas							
Metered + Unmetered Flows in 4 Memb	Baseline metered sewer flows (4 yr MG total) includes I/I since sewer metered (Note 1) (2015-2018)		Water Use Flow (4 yr MG Total) 80% Water to Sewer Ratio		Property Data Flow (4 yr Totals based on current year) (Note 2)		Un-assigned Flows distributed as I/I evenly by IDM (4 yr MG Total)		Total Sewer Flows = Metered + Water Use + Demographic (MG) + I/I Estimate	Total Sewer Flows = Metered + Water Use + Demographic (MGD) + I/I Estimate	Total flow % = metered + unmetered + I/I
Belmont	Belmont PS - Soda Brook - Eptam - Quality Control	150.51	4 yrs water use - Sunlake	6.51	residential	91.76	Note 3				
			4 yrs water use - Cates	6.36			Percentage of IDM for				
			4 yrs water use - Westview	4.08	commercial	12.70	unmetered areas of Belmont,	41.4%			
			4 yrs w/ avg as yr 4 water use - Solar	5.69			Franklin, Northfield, and Tilton				
			4 yr water use - Court St.	12.30							
	Totals (4 yr MG total):	**150.51**		**34.94**		**104.46**	Adjusted Community I/I Flow	**127.72**	**417.64**		**5.32%**
	Annual Average (MGD)	***0.103***		***0.024***		***0.072***		***0.087***		***0.286***	
Franklin	River St PS	955.63	**Water Use 2016-2019 4 yr.**	**107.38**			Note 4				
							Percentage of IDM for				
							unmetered areas of Belmont,	25.1%			
							Franklin, Northfield, and Tilton				
	Totals:	**955.63**		**107.38**			Adjusted Community I/I Flow	**77.44**	**1140.45**		**14.54%**
	Annual Average (MGD)	***0.655***		***0.074***				***0.053***		***0.781***	
Northfield			**T-N Aqueduct Northfield only Water Use +**	**116.40**			Note 5				
							Percentage of IDM for				
							unmetered areas of Belmont,	11.3%			
							Franklin, Northfield, and Tilton				
	Totals:			**116.40**			Adjusted Community I/I Flow	**34.86**	**151.26**		**1.93%**
	Annual Average (MGD)			***0.080***				***0.024***		***0.104***	
Tilton	Tilton Main + TF1 + TS1	392.84					Note 6				
			water use 4 yrs. - Pennichuck	3.07	64 @ 100 gpd	9.34	Percentage of IDM for				
			water use Lochmere - flat rate	34.16			unmetered areas of Belmont,	22.2%			
			water use T/N Aqueduct	95.13			Franklin, Northfield, and Tilton				
	Totals:	**392.84**		**132.44**		**9.34**	Adjusted Community I/I Flow	**68.49**	**603.11**		**7.69%**
	Annual Average (MGD)	***0.269***		***0.091***		***0.006***		***0.047***		***0.413***	
Other communities											
Bay District	Bay District PS	142.42							142.42	0.098	**1.82%**
Gilford	Oxbow + McIntire + GL1	1128.82							1128.82	0.773	**14.39%**
Laconia	Belmont Beach - Oxbow - ML1 - GL1 - Opechee	3329.93							3329.93	2.281	**42.44%**
Meredith	ML1 - Bay District PS	696.72							696.72	0.477	**8.88%**
Sanbornton	Lower Bay PS + TS1	117.93							117.93	0.081	**1.50%**
NHDAS	State School PS + Opechee	117.45							117.45	0.080	**1.50%**
	Totals:	**7032.25**		**391.16**		**113.81**		**308.51**	**7845.73**	**5.374**	**100.00%**
	% flows accounted for by these methods compared to WWTF Influent:	**89.63%**		**4.99%**		**1.45%**		**3.93%**	**100.00%**		

Assumptions/Data Sources:

1. Temporary meters (3 months of data) used in analysis include GL1, Opeechee and Soda Brook.
2. Sewer estimates from demographic units for Belmon and Tilton assumes 100 GPD per connection (125 GPD x 80%) for residential users and 50 GPD per connection for seasonal properties. Commercial properties are estimated using the Town of Belmont EDU based billing system and 100 GPD per EDU.
3. Belmont IDM for the Rte. 3 Area (known as sewer subbasins F, G, H, I, J, K, L, M, N, O, and P on the Town of Belmont's sewer maps) is 108.29
4. The IDM for these areas of Franklin is approximately 65.85
5. Northfield was estimated using the total municipal IDMs provided by WRBP (29.46 idm)
6. IDM data provided by WRBP for Tilton gravity sewers in the area designated TN1 (58.19 idm)

I/I Adjustment for unmetered areas

WWTF Influent Flow (4 yr MG total)	7845.73
less sewer metered flow (4 yr MG total)	-7032.25
less water use flow (4 yr MG total)	-391.16
less property data flow (4 yr MG total)	-113.81
Un-assigned flows (4 yr MG total)	308.51

Attachment 3

Item # 6

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