

Dawn Bartel

From: Brian Helminger <brian.helminger@hvmsd.org>
Sent: Tuesday, January 5, 2021 2:04 PM
To: bruce siebers; Dave Casper; John Sundelius; kcoffey238@gmail.com; Pat Hennessey
Cc: Dawn Bartel
Subject: FW: HOVMSD population growth/forecast
Attachments: 2030 HOVSSA_2040 HOVSSA_pop_HH_Comparison.xlsx

All:

I reached out to ECWRPC just before the new year to inquire about current population in comparison to estimates from prior Sewer Service Area projections. In light of the observed increase in loadings on the plant, I thought this information may shed some light on the increasing loads. They were able to pull together some data along with tables from the current 2040 SSA update effort. I spoke with Todd today to get his thoughts on the data and what he sees when looking at it. There are few things he explained on how the projections are done.

- The number of households is first estimated based on State of WI DOA projections and then multiplied to a number of people per household factor to finally end up with population estimates.
- Table 2a is part of the updated 2040 SSA plan and has not yet been approved by DNR
- Community and population growth is confirmed and correlates with the increase in observed plant loadings
- Todd confirms in the email below that community growth appears to outpace population estimates in the 2030 HOVMSD SSA plan
- No "smoking guns" uncovered that would indicate an unexpected population "explosion" is occurring. Steady consistent development and growth.

I will forward to Donohue for their use as they see fit for the Master Planning Task Order #1 report for February Commission meeting.

Brian Helminger

District Director

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From: Todd Verboomen <TVerboomen@ecwrpc.org>
Sent: Tuesday, January 5, 2021 8:43 AM
To: 'brian.helminger@hvmsd.org' <brian.helminger@hvmsd.org>
Cc: Melissa Kraemer Badtke <mbadtke@ecwrpc.org>; Kevin Englebert <kenglebert@ecwrpc.org>
Subject: RE: HOVMSD population growth/forecast

Good morning Brian,

I have an Excel file attached. I hope that it is easy to follow. The file has two tabs. Each tab (population and Households) have the draft HOV 2040 SSA Plan projections at the top and the tables used for the HOV 2030 SSA Plan on the bottom. I have 2015 and 2020 in red. I believe that comparing these years is the most appropriate.

It does look like the HOV SSA communities are growing faster than what has been projected in the HOV 2030 SSA Plan.

I did not spend much time formatting the data sets. It all makes sense to me, but I made the tables. Shoot me a note if you have any questions and we can set up a time for a call to discuss.

Todd A. Verboomen – Principal Environmental Planner



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From: Melissa Kraemer Badtke

Sent: Tuesday, January 5, 2021 5:05 AM

To: Todd Verboomen <TVerboomen@ecwrpc.org>

Cc: Kevin Englebert <kenglebert@ecwrpc.org>

Subject: FW: HOVMSD population growth/forecast

Hi Todd~

Can you please review the information below and do we have population projections that we are using the Fox Cities SSA Update that the HVMSD could use for this project?

Thanks

Missy

From: Brian Helminger <brian.helminger@hvmsd.org>

Sent: Monday, January 4, 2021 7:31 AM

To: Melissa Kraemer Badtke <mbadtke@ecwrpc.org>

Cc: brian.helminger@hvmsd.org

Subject: HOVMSD population growth/forecast

Good morning Melissa:

I'm writing to follow up on our recent phone conversation.

The District has been tracking the flow and organic loads being received at the treatment plant and have found that we are approaching 90% of plant's rated capacity. The 90% threshold is used by DNR in evaluating treatment plants and their life cycles. The average BOD and Ammonia loads have been increasing in the 4 to 6 percent range year over year and if it continues will drive the District to add costly additional treatment capacity. This is coming when we have still not reached the end of the 20 year planning cycle (and debt service) for the existing treatment facility. During 2020, the

District has hired an engineering firm (Donohue) to study the plant capacity and plant loads in order to begin the master planning process. The hope is that additional capacity can be found or steps taken to reduce the load entering the plant. If the population continues to increase as it appears to be, any reductions in load will be a moot point over the long haul. We track and collect connection fees each time a new sewer connection is made that the District serves with the total on the attached table. We have added probably close to 2300 new connections since the plant was built. Now the reality of this is that our member communities are clearly deemed a very desirable place to live and raise a family and growth is a good problem to have! It's just that continued growth will also come with repercussions for the District and drive our planning. This brings me to the District's request.

Connection Analysis

Year	# of Connections
2007	189
2008	136
2009	135
2010	121
2011	76
2012	74
2013	214
2014	222
2015	196
2016	178
2017	180
2018	194
2019	187
	2102

We have found that the previous design and sizing of the plant were based primarily on population estimates for the 5 member communities that the District serves. Can East Central dust off the population estimates that were used and update them to 2020? It would answer a lot of questions that we are certain to come up against in the next couple years. Questions like are we adding population at the rate that was expected? Are we close to reaching the design population already now? Has there been a bigger population influx than was anticipated? What should the District use moving forward in its future planning? Those are just a few off the top of my head. I was hoping that East Central could provide some valuable insight into what was used and if that is still viable or should the projections change based off

what has and is happening in the member communities. Armed with information, it will help us analyze and plan for the future.

Please discuss with your staff and let me know if you may have the staff time available to update the estimates and assist us in planning for the future.

Thanks.

Brian Helminger

District Director

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Table 2a: ESTIMATED HOV SSA POPULATION, 2010-2040 (CORPORATE AREAS and TOWNSHIPS)

MCD	2010**	2015	2020	2025	2030	2035	2040	Difference 15-'40	Difference '10-'40 w/10% increase
	Census	Projection	Projection	Projection	Projection	Projection	Projection		
C. Kaukauna	15,352	15,856	16,998	17,986	18,901	19,515	19,838	3,982	4,380
V. Combined Locks	3,327	3,504	3,854	4,169	4,474	4,703	4,868	1,364	1,500
V. Kimberly	6,438	6,619	6,992	7,300	7,551	7,718	7,769	1,150	1,265
V. Little Chute	10,370	10,361	10,658	10,864	11,008	10,971	10,795	434	477
Darboy S.D.		12,110	12,524	12,964	13,385	13,736	14,173	2,063	2,269
	35,487	48,450	51,026	53,283	55,319	56,643	57,443	8,993	9,892

*DOA Household Projections 2010-2040 used

** 2010 Census Actual

Table 4-1: Heart of the Valley SSA 2005-2030 Population Projections

Jurisdiction	Census 2000	WDOA 2004	ECWRPC 2005	ECWRPC 2010	ECWRPC 2015	ECWRPC 2020	ECWRPC 2025	ECWRPC 2028 (for F.P.)	ECWRPC 2030	Difference 2005-2028	Difference 2005-2030	2030 Pop. for SSA Purposes	Total Pop. Increase 05-30 (w/inc.)
C. Kaukauna (Calumet pt.)	n/a	n/a	9	59	115	177	245	289	318	280	309	349	340
C. Kaukauna (Outagamie pt.)	12,983	13,926	14,196	15,081	15,975	16,890	17,750	18,247	18,579	4,051	4,383	19,017	4,821
V. Combined Locks	2,422	2,659	2,708	2,862	3,017	3,174	3,320	3,403	3,459	695	751	3,534	826
V. Kimberly	6,146	6,362	6,436	6,576	6,694	6,794	6,846	6,856	6,863	420	427	6,906	470
V. Little Chute	10,476	10,775	10,952	11,467	11,972	12,475	12,922	13,167	13,331	2,215	2,379	13,569	2,617
T. Buchanan (Darboy S.D. port)	5,598	7,835	0	6,420	7,130	7,641	7,641	7,641	7,641	7,641	7,641	8,405	8,405
T. Buchanan (other than Darb)	(5,598)	(1,120)	0	-6,420	-7,130	-7,641	-7,641	-7,641	-7,641	-7,641	-7,641	(8,405)	(8,405)
T. Harrison (Darboy S.D. port)	3,977	5,471	0	6,947	8,169	9,503	10,890	11,746	12,317	11,746	12,317	13,549	13,549
T. Kaukauna	1,116	1,202	1,226	1,306	1,387	1,471	1,550	1,596	1,626	370	400	1,666	440
T. Vandenbroek	1,351	1,317	1,322	1,294	1,256	1,208	1,145	1,101	1,071	-221	-251	1,046	(276)
Total of All MCDs	38,471	48,427	36,849	45,592	48,585	51,692	54,668	56,406	57,564	19,557	20,715	59,636	22,787
Total of HOVSSA ****	36,004	45,908	34,301	42,992	45,942	49,013	51,973	53,710	54,867	19,409	20,566	56,924	22,623
HOVSSA Total +10% of '05	n/a	n/a	46,743	43,861	47,106	50,485	53,740	55,650	56,924	8,907	10,181	n/a	n/a

* Reflects ultimate development of remaining T. Buchanan's area within Darboy Sanitary District by the year 2020, consistent with figures provided by McMahon Associates - October, 2004. 2005 projection based on October 4, 2004 connections

** Assumes that additional growth will occur beyond Darboy S.D. boundary and will be serviced via a new sanitary district or the City of Kaukauna using the 30" Kankapot Creek interceptor sewer. This figure derived by subtracting Darboy S.D. portion from entire Town population.

*** Reflects only Darboy S.D. portion of future T. Harrison growth (69.1% of total town population based on Oct., 2004 sewer connection ratios between Darboy S.D. and T. Harrison as a whole). 2005 projection based on October 4, 2004 connections.

**** Assumes that no sewer development will take place in T. Kaukauna and T. Vandenbroek and therefore they are not included in HOVSSA totals

Source: U.S. Census 2000; EWRPC Projections (10/30/04)

Table 2B: ESTIMATED HOV SSA HOUSEHOLDS, 2010-2040 (CORPORATE AREAS and TOWNSHIPS)

MCD	2010**		2015		2020		2025		2030		2035		2040		Difference 15-'40	Difference '10-'40 w/10% increase
	No. HH	Persons per HH	No. HH	Persons per HH	No. HH	Persons per HH	No. HH	Persons per HH	No. HH	Persons per HH	No. HH	Persons per HH	No. HH	Persons per HH		
C. Kaukauna	6,270	2.45	6,638	2.39	7,232	2.35	7,750	2.32	8,253	2.29	8,637	2.26	8,891	2.23	2,253	2,478
V. Combined Locks	1,232	2.70	1,330	2.63	1,487	2.59	1,629	2.56	1,771	2.53	1,887	2.49	1,978	2.46	648	713
V. Kimberly	2,739	2.35	2,887	2.29	3,099	2.26	3,276	2.23	3,444	2.20	3,558	2.17	3,627	2.14	740	814
V. Little Chute	4,207	2.46	4,309	2.40	4,504	2.37	5,650	2.34	5,775	2.31	4,823	2.27	4,806	2.25	497	547
Darboy SD		2.92	4,264	2.84	4,489	2.79	4,714	2.75	4,939	2.71	5,164	2.66	5,389	2.63	1,125	1,237.5
	14,448		19,428		20,811		23,019		24,182		24,069		24,691		5,263	5,789

*DOA Household Projections 2010-2040 used

** 2010 Census Actual

S.D. Avg. Hook ups/yr = 40; Used 45 (45/yr = 225 every 5 yrs.

Table 4-3: Heart of the Valley SSA - Estimated Households by MCD, 2005 to 2030

Jurisdiction	2000		2005		2010		2015		2020		2025		2028 (for F.P.)		2030		Difference 2004-2028		Difference 2005-2030		2030 HH for SSA Planning*	Total HH Increase 2005 to 2030 (w/increase)
	No. HH	Persons per HH	No. HH	Persons per HH	No. HH	Persons per HH	No. HH	Persons per HH	No. HH	Persons per HH	No. HH	Persons per HH	No. HH	Persons per HH	No. HH	Persons per HH	No. HH	PPH	No. HH	PPH		
C. Kaukauna (Calumet p	n/a	n/a	4	2.53	24	2.49	47	2.45	73	2.42	102	2.40	121	2.38	134	2.37	117	-0.15	130	-0.16	147	143
C. Kaukauna (Outagamie	4,971	2.57	5,516	2.53	5,973	2.49	6,426	2.45	6,885	2.42	7,296	2.40	7,546	2.38	7,712	2.37	2030	-0.15	2,196	-0.16	7,932	2,416
V. Combined Locks	884	2.74	1,002	2.70	1,096	2.61	1,190	2.53	1,286	2.47	1,375	2.41	1,430	2.38	1,466	2.36	428	-0.32	464	-0.34	1,512	510
V. Kimberly	2,507	2.45	2,670	2.41	2,814	2.33	2,945	2.27	3,069	2.21	3,162	2.16	3,214	2.13	3,248	2.11	544	-0.28	578	-0.30	3,306	636
V. Little Chute	3,878	2.68	4,110	2.64	4,409	2.58	4,698	2.53	4,986	2.48	5,234	2.45	5,383	2.43	5,482	2.41	1,273	-0.21	1,372	-0.23	5,619	1,509
T. Harrison (Darboy S.D.)	1,381	2.88	2,013	2.87	2,455	2.83	2,936	2.78	3,456	2.75	4,000	2.72	4,332	2.71	4,554	2.70	2,320	-0.16	2,541	-0.17	4,809	2,796
T. Buchanan (Darboy Sa	1,846	3.13	0	3.10	0	3.05	0	3.01	0	2.97	0	2.95	-	2.94	0	2.93	0	-0.16	0	-0.17	0	-
T. Buchanan (Other than Darboy SD)			0	3.10	0	3.05	0	3.01	0	2.97	0	2.95	-	2.94	0	2.93	0	-0.16	0	-0.17	0	-
T. Kaukauna***	370	3.02	411	2.98	450	2.90	490	2.83	531	2.77	570	2.72	593	2.69	609	2.67	182	-0.29	198	-0.31	629	218
T. Vandenbroek***	460	2.94	452	2.92	455	2.84	453	2.77	447	2.70	434	2.64	424	2.60	417	2.57	-28	-0.32	-35	-0.35	414	(39)
Total of All MCDs / Avg.	16,297	2.80	16,178	2.78	17,676	2.72	19,185	2.66	20,733	2.62	22,173	2.58	23,042	2.56	23,622	2.54	6,865	-0.24	7,444	-0.24	24,367	8,189
Total of HOVSSA / Avg.	15,467	2.74	15,315	2.68	16,771	2.63	18,242	2.57	19,755	2.53	21,169	2.50	22,025	2.48	22,596	2.46	6,710	-0.26	7,281	-0.22	23,325	8,010

* Reflects only Darboy S.D. portion of future growth based on population projection distribution.

** Includes only remaining portion of Darboy Sanitary District consistent with population projection distribution.

*** Assumed that no sewered development will take place in these communities and therefore are not included in HOVSSA totals

Source: U.S. Census 2000; ECWRPC 2004.