



MEMORANDUM

TO: Public Works Committee

FROM: Joe C. Wilder, Director of Public Works *JCW*

SUBJECT: Meeting of October 26, 2021

DATE: October 19, 2021

There will be a meeting of the Public Works Committee on Tuesday, October 26, 2021 at 8:00 a.m. **in the conference room located on the second floor of the north end of the County Administration Building at 107 North Kent Street, Suite 200.** The agenda thus far is as follows:

1. Update on solid waste survey.
(Attachment 1)
2. Update on Sunnyside Plaza-Renovation for Voter Registrar.
3. Discuss sinkhole in Crystal Lake/Cherokee Dam – Shawneeland Sanitary District.
4. Update on the Landfill personnel study.
5. Update on the Landfill tire program.
6. Update of Fiscal Year 2023 budget preparation.
7. Update on Public Works projects:
 - a. Crossover Boulevard
 - b. Renaissance Drive, Phase 2
 - c. Landfill MSW cell expansion
 - d. Shawneeland tar and chip project
 - e. Storage building at Stephenson Citizens Convenience Center
 - f. Assistance with development bonds-completion of new roads

- g. Animal Shelter renovation
8. Miscellaneous Reports:
- a. Tonnage Report: Landfill
(Attachment 2)
 - b. Recycling Report
(Attachment 3)
 - c. Animal Shelter Dog Report:
(Attachment 4)
 - d. Animal Shelter Cat Report
(Attachment 5)
 - e. Shawneeland Sanitary District Advisor Committee quarterly meeting minutes
(Attachment 6)

JCW/kco

Attachments: as stated

**COUNTY of FREDERICK**

Department of Public Works

540/665-5643

FAX: 540/678-0682

MEMORANDUM

TO: Public Works Committee

FROM: Gloria M. Puffinburger ^{-gmp}
Solid Waste Manager

RE: FY 2021 Site Usage Survey Results

DATE: September 16, 2021

Last year's Site Usage Survey showed a 11 percent increase in traffic over 2019 at the neighborhood convenience sites, partly due to the impact of the pandemic and a greater number of individuals spending time at home. For 2021, overall traffic counts dropped by six percent while the tonnage of refuse collected remained static.

During August, an annual traffic count at the neighborhood citizens convenience sites showed an average of 76,370 users per month or 916,440 users annually at the ten facilities.

At the Greenwood Road location, usage dropped to 13,506, a level comparable with 2019 figures. The Albin site served 13,555 during August and Stephenson, 11,310 per month. Average five-hour Sunday shifts at the three busiest sites range from 381 to 526 users.

Due to last year's completed relocation and expansion, the Albin facility now offers two compactors for refuse, as does the Stephenson facility. The Greenwood facility operates with a single compactor.

Residential tonnage collected during August 2021 totaled 1,331, nearly equal to the 1,351 tons recorded for August, 2020. As previously noted, 2020 calendar year residential tonnages showed a significant spike.

For a summary of usage at the county's convenience sites during the past three years, please refer to the attached chart.

/gmp

2021 USAGE SURVEY; CITIZENS' CONVENIENCE SITES

<i>Location</i>	<i>2021</i>	<i>Daily Avg</i>	<i>Peak Day</i>	<i>Sun Avg (5 hr)</i>		<i>2019</i>	<i>2020</i>	<i>% change</i>
Greenwood	13,506	482	750	445		13,459	16,321	-21%
Bryarly+	13,555	502	667	526		15,552	14,114	-4%
Middletown	7293	270	317	240		7170	7465	-2%
Stephenson	11,310	489	463	381		10,727	12,167	-7%
DTG	8525	253	376	297		7793	8654	-1%
Shawneeland	7574	281	341	247		6771	7214	-4%
Back Creek	5421	201	239	181		5162	5552	-2%
Round Hill	4964	184	241	164		4409	4903	+1%
Gore	3416	127	153	112		3544	3785	-1%
Star Tannery*	806	35	58	41		661	845	-4%
AUG TOTAL:	76,370					75,993	81,202	
YR AVG:	916,440					902,976	974,240	-6%

survey conducted 8/2021; +mechanical count

*closed two days/wk; open 31 hrs/wk


COUNTY of FREDERICK
Department of Public Works

540/665-5643

FAX: 540/678-0682

MEMORANDUM

TO: Public Works Committee
FROM: Joe C. Wilder, Director of Public Works *JCW*
SUBJECT: Monthly Tonnage Report - Fiscal Year 21/22
DATE: October 6, 2021

The following table shows the tonnage for the current fiscal year. The average monthly tonnage for fiscal years 03/04 through 21/22 is also listed below:

FY 03-04: AVERAGE PER MONTH: 16,348 TONS (UP 1,164 TONS)
FY 04-05: AVERAGE PER MONTH: 17,029 TONS (UP 681 TONS)
FY 05-06: AVERAGE PER MONTH: 17,785 TONS (UP 756 TONS)
FY 06-07: AVERAGE PER MONTH: 16,705 TONS (DOWN 1,080 TONS)
FY 07-08: AVERAGE PER MONTH: 13,904 TONS (DOWN 2,801 TONS)
FY 08-09: AVERAGE PER MONTH: 13,316 TONS (DOWN 588 TONS)
FY 09-10: AVERAGE PER MONTH: 12,219 TONS (DOWN 1,097 TONS)
FY 10-11: AVERAGE PER MONTH: 12,184 TONS (DOWN 35 TONS)
FY 11-12: AVERAGE PER MONTH: 12,013 TONS (DOWN 171 TONS)
FY 12-13: AVERAGE PER MONTH: 12,065 TONS (UP 52 TONS)
FY 13-14: AVERAGE PER MONTH: 12,468 TONS (UP 403 TONS)
FY 14-15: AVERAGE PER MONTH: 13,133 TONS (UP 665 TONS)
FY 15-16: AVERAGE PER MONTH: 13,984 TONS (UP 851 TONS)
FY 16-17: AVERAGE PER MONTH: 14,507 TONS (UP 523 TONS)
FY 17-18: AVERAGE PER MONTH: 15,745 TONS (UP 1,238 TONS)
FY 18-19: AVERAGE PER MONTH: 16,594 TONS (UP 849 TONS)
FY 19-20: AVERAGE PER MONTH: 16,973 TONS (UP 379 TONS)
FY 20-21: AVERAGE PER MONTH: 16,803 TONS (DOWN 170 TONS)
FY 21-22: AVERAGE PER MONTH: 19,545 TONS (UP 2,742 TONS)

MONTH	FY 2018-2019	FY 2019-2020	FY 2020-2021	FY 2021-2022
JULY	17,704	17,956	17,677	17,893
AUGUST	18,543	17,267	16,517	21,437
SEPTEMBER	14,799	17,985	16,789	19,306
OCTOBER	18,158	22,528	20,127	
NOVEMBER	15,404	17,304	15,432	
DECEMBER	14,426	14,362	15,496	
JANUARY	13,973	14,913	14,480	
FEBRUARY	12,764	13,380	12,030	
MARCH	17,079	15,533	18,758	
APRIL	20,313	17,475	18,627	
MAY	19,443	17,010	17,105	
JUNE	16,519	17,968	18,594	

RECYCLING REPORT - FY 21/22

Attachment 3

<u>MONTH</u>	<u>GLASS</u>	<u>PLAST</u>	<u>AL</u> <u>CANS</u>	<u>STEEL</u> <u>CANS</u>	<u>PAPER</u>	<u>OCC</u>	<u>SHOES/TEX</u>	<u>ELEC</u>	<u>SCRAP</u>	<u>TOTAL</u>
JUL	0	40,740		12,520	45,120	123,500	3,500	27,940	286,082	539,402
AUG		12,240		8,320	53,280	104,140	4,340	25,840	248,900	457,060
SEP		27,440		8,740	53,740	107,280	4,840		264,760	466,800
OCT										0
NOV										0
DEC										0
JAN										0
FEB										0
MAR										0
APR										0
MAY										0
JUN										0
TOTAL	0	80,420	0	29,580	152,140	334,920	12,680	53,780	799,742	1,463,262
FY 20-21		283,300	0	154,330	717,120	1,540,682	45,620	362,600	3,123,261	6,226,913
FY 19-20	0	454,859	37,370	108,974	854,350	1,174,530	55,100	391,900	3,209,400	6,286,483
FY 18-19	0	430,963	47,082	96,494	998,815	1,243,232	83,104	467,720	2,909,857	6,277,267
FY 17-18	0	465,080	53,224	94,530	1,066,300	1,080,087	37,260	536,420	2,874,709	6,207,610
FY 16-17	372,600	430,435	41,002	89,976	1,082,737	1,009,153	37,220	495,500	2,687,241	6,245,864
FY 15-16	919,540	428,300	52,077	97,252	1,275,060	974,493	48,820	480,400	2,376,344	6,652,286
FY 14-15	895,600	407,703	40,060	97,515	1,272,660	893,380	49,440	532,283	1,890,729	6,079,370
FY 13-14	904,780	417,090	39,399	99,177	1,281,105	902,701	37,800	611,580	1,639,225	5,932,937
FY 12-13	913,530	410,338	45,086	102,875	1,508,029	878,450	39,700	502,680	1,321,938	5,722,626
FY 11-12	865,380	398,320	43,884	99,846	1,492,826	840,717	37,920	484,600	1,432,678	5,696,171
FY 10-11	949,185	378,452	42,120	98,474	1,404,806	824,873	41,700	467,920	1,220,107	5,427,637
FY 09-10	1,123,671	370,386	42,844	96,666	1,235,624	671,669	21,160	435,680	1,348,398	5,346,098
FY 08-09	762,810	322,928	23,473	55,246	1,708,302	564,957	28,780	404,760	1,097,151	4,968,407
FY 07-08	794,932	284,220	15,783	40,544	1,971,883	545,692	0	498,110	1,172,880	5,324,044
FY 06-07	600,464	200,720	11,834	29,285	1,684,711	441,321	0	382,574	550,070	3,900,979
FY 05-06	558,367	190,611	12,478	28,526	1,523,162			381,469	204,220	2,898,833
FY 04-05	549,527	193,224	11,415	27,525	1,552,111			273,707	25,080	2,632,589
FY 03-04	541,896	174,256	11,437	31,112	1,443,461			156,870	336,230	2,695,262
FY 02-03	413,627	146,770	9,840	23,148	1,381,195			62,840	171,680	2,209,100
FY 01-02	450,280	181,040	10,565	25,553	1,401,206			54,061	58,140	2,180,845
FY 00-01	436,615	198,519	10,367	24,988	1,759,731				9,620	2,439,840
FY 99-00	422,447	177,260	10,177	22,847	1,686,587				44,180	2,363,498
FY 98-99	402,192	184,405	9,564	22,905	1,411,950				48,810	2,079,826
FY 97-98	485,294	136,110	13,307	29,775	1,830,000					2,494,486
FY 96-97	373,106	211,105	23,584	46,625	1,690,000					2,344,420
FY 95-96	511,978	167,486	28,441	44,995	1,553,060					2,305,960
TO DATE	14,247,821	6,009,678	548,737	1,234,855	33,150,206	8,547,406	342,540	6,225,034	17,634,721	87,941,078

DOG REPORT

MONTH	ON HAND AT FIRST OF MONTH	RECEIVED AT KENNEL	BROUGHT IN BY ACO	BITE CASES	BORN AT KENNEL	ADOPTED	RECLAIMED	DISPOSED	DIED AT KENNEL	ESCAPED/STOLEN	CARRIED OVER NEXT MONTH
JULY	29	14	23	1	0	13	25	4	0	0	25
AUG	25	11	31	1	0	6	26	2	0	0	34
SEP	34	27	28	1	0	22	25	1	0	0	42
OCT											
NOV											
DEC											
JAN											
FEB											
MAR											
APR											
MAY											
JUN											
TOTAL	88	52	82	3	0	41	76	7	0	0	101

In the month of September - 90 dogs in and out of kennel. 9 dogs transferred to other agencies.

CAT REPORT

MONTH	ON HAND AT FIRST OF MONTH	RECEIVED AT KENNEL	BROUGHT IN BY ACO	BITE CASES	BORN AT KENNEL	ADOPTED	RECLAIMED	DISPOSED	DIED AT KENNEL	ESCAPED/ STOLEN	CARRIED TO NEXT MONTH
JULY	87	60	24	2	0	33	1	28	0	0	111
AUG	111	34	4	2	4	27	0	27	3	0	98
SEP	98	27	6	1	9	26	0	3	1	0	111
OCT											
NOV											
DEC											
JAN											
FEB											
MAR											
APR											
MAY											
JUN											
TOTAL	296	121	34	5	13	86	1	58	4	0	320

In the month of September - 141 cats in and out of shelter. 0 cat transferred to other agencies.

Shawneeland Sanitary District Advisory Committee - Minutes of August 2, 2021

The meeting was called to order at 7:00pm.

Those in attendance were Ken Baker, Barry Van Meter, Jeff Stevens, Jason Croasdale, George Bishop, Kevin Alderman, Director of Public Works - Joe Wilder, and Michelle Springer. Supervisor Shawn Graber was absent.

Ken called for approval/correction of the November meeting minutes. The minutes passed unanimously.

Manager's Report:

See Attached Manager's Report. **(Attachment A)**

New Business:

Video/Telecommunications:

- Joe Wilder spoke to the Deputy IT Director about the cost of the equipment to record the meetings. He said the cost for the proper equipment would be between \$3,000 and \$5,000. Ken thinks the community would benefit from the purchase of the equipment. A motion was made to get an actual estimate before moving forward with the purchase.

Tar & Chip/Asphalt/Paving:

- Quotes were received for asphalt versus tar & chip. The Public Works Committee made the recommendation to continue the Tar & Chip Program. The quote for the asphalt was for a full crew with equipment.
- Jeff spoke about asphalt with our own crew. That we could buy a small paver, hire a temporary crew, and rent an extra truck. We could get more done. It is not cost effective to grader patch then tar & chip over it. You get years on asphalt before they would need a tar & chip project. He would like to make a motion to postpone the upcoming tar & chip project. The Board has already approved the upcoming tar & chip project when they approved the budget.
- The expectancy life of asphalt is 7-8 years depending upon traffic and weather.
- The SSDAC will readdress for the future budget.

Speedbumps:

- There is a concern of installing speedbumps to stop speeders. There are 2 currently in Shawneeland. Joe spoke about what he had discussed with Supervisor Graber and the Frederick County Sheriff. Speed is a problem but there are not a lot of options. The Sheriff's Department is patrolling. Joe suggested to form a subcommittee to work with Kevin and The Public Works Committee to see what the best option for Shawneeland would be. Barry will head the subcommittee. A couple suggestions were to request the Sheriff's Office to use a speed trailer to see if there is a big problem and that if you know who is speeding to simply talk to them about it. Every option has its advantages and disadvantages.

Public Comments:

- A resident spoke about the speeding. She hopes it doesn't take someone getting killed for something to be done. She had her life threatened when she talked to someone about their speeding.
- A resident spoke about the beach being unsafe and unsanitary. It was said that there is not enough attention to the beach. There is always trash and ruts in the sand. The beach is the reason they moved to Shawneeland. - Jeff responded by saying that when the lake is low the sand needs to be dredged up onto the beach area to regain the depth of the swimming area.
- Many residents do not know this meeting was taking place.
- A resident made a comment that she believes the Tar & Chip works. That when gas goes up and asphalt goes up that the fee will also have to increase. She doesn't want the fees to go up.
- Another resident asked for more attention to be given to the beach. There must be something that can be done to fix the water level issue. Jeff responded by stating that the lake could be fixed but the water would need to be drained. Swimming would be lost for a season.
- It was stated that the lake should not be listed as an amenity if you can't use it. The beach is a selling point for Shawneeland. A petition could be started to show the number of citizens that are wanting the lake to be fixed.
- A suggestion was made to install a pool and do away with the beach.
- The Shawneeland staff does a great job of mowing the common areas. It is taking longer for the mowing to get completed due to being short staffed.
- A resident recommended having an open house to educate citizens about Shawneeland. He would be willing to help set the open house up.

Ken adjourned the meeting at 8:07pm.

FREDERICK COUNTY SANITARY DISTRICT OF SHAWNEELAND MANAGER'S REPORT – AUGUST 2021

Tar & Chip Program:

The Tar & Chip Program was sent to the Finance Department on July 13, 2021. Once a contractor has been awarded the Tar & Chip project, I will post the specifics at the mail houses. The project should begin mid-September and be completed by the end of September. The Tar & Chip program I sent to the Finance Department includes 5.24 miles of trails to be treated. My original program included 5.46 miles. This should save a small amount on the overall budget for this year. A list of roads to receive the tar & chip along with a map are attached.

The staff started prepping the trails to be treated during the month of May. We cut down any low-lying limbs and branches overhanging the road. We reshaped the shoulders and ditches in a few locations. We are continuing to work on those trails as time allows to have them ready for the contractor in September.

You may encounter the tar & chip contractor during the month of September as you travel through the subdivision. Please take caution and pay attention to the signs posted in the work zone.

Lake Cherokee:

The lake level continues to drop an average of an inch a day. We are currently 60" below full pool. This time last year we were at 36" below full pool. One of the reasons for the lake level falling at a faster rate is that the leak has increased. On January 4th of this year the rate of the leak by The Council House was 130 gallons per minute. Currently the leak at this same location is 170 gallons per minute. This is a 40 gallon per minute increase which equates to 57,600 additional gallons per day being lost.

The total amount of water being lost is unknown because we know of 2 other locations that lake water is surfacing with no way to measure the loss. I would guess conservatively that the lake is losing 300 gallons per minute.

Although we have several springs that feed the lake (two of which surface on the beach) and a small stream, it still cannot keep up with the leak. If 300 gallons per minute is being lost, this equates to 432,000 gallons per day. This certainly has a high impact on the beach or lack thereof because of water levels. The staff will continue to monitor the leak on a daily basis.

Red Fox – Geronimo Trails:

The staff grader patched Red Fox and Geronimo Trails in their entirety. These two trails needed a major overhaul. In some spots, both trails were less than 9' wide and vehicles could not safely pass. This has been a long time coming getting these trails where they are today. We started several years ago cutting trees back so we could make shoulders and ditches. Over this time period we removed a couple hundred trees, replaced and upgraded drainage culverts, and

Attachment A

widened shoulders. Asphalt was the last step. We placed 371 tons of asphalt on Geronimo Trail and 367 tons of asphalt on Red Fox Trail. We then added shoulder stone to complete this project. Traffic can now travel much safer on these trails.

Cherokee Lake Beach:

Last year the beach at Lake Cherokee did not open until July 1st due to Covid-19. This year the beach opened on May 27, 2021. The staff started preparing the beach on May 24th. The staff picked up all the sticks, limbs, trash, and whatever else the winter winds deposited there. We hauled and dumped 17 dump truck loads which equates to 136 tons total of sand on the upper portion by the volleyball court. It was then carried down to the rest of the beach with the backhoe and spread out on the entire beach evenly.

We also did our safety checks on the two small shelters, the fence, and picnic tables. We mowed the grounds and weeded around the fence and anything that needed cut. We extended the buoy's an additional 12' this year because of the lake dropping so rapidly. This is as far as we can safely extend because this is the end of the sandy bottom. Beyond this point the bottom is large rock boulders and debris which makes it unsafe for swimming.

We test the water in the swimming area every week for E. Coli. If the levels are higher than 235 colonies per 100 milliliters, we are required to close the beach. The levels are running fairly low with the highest at 75.9 so far.

We continue to pick up the trash two times per week and mow one time a week at the beach. Also, the portable toilets are cleaned by the contractor every week. Throughout the season we also periodically do safety inspections of the fence, shelters, tables, and grounds.

Speed Bumps:

As we all know there is a huge problem with speeding and reckless driving in Shawneeland. Some of the speeds my staff and I witness are excessive. I get calls from citizens regarding speeders from time to time and I explain to them that I can do nothing about the speeders. I direct them to the Frederick County Sheriff's Department. Most are reluctant to call in fear of becoming a target of retaliation.

The subject of speedbumps has come up from time to time, but I do not necessarily believe that speedbumps are the solution entirely. We have used portable speedbumps in the distant past but found them to be very dangerous. The bumps are held in place with spikes which tend to work loose and up toward vehicles. Some of the very low riding vehicles hit the bumps and pull them away from their location leaving the spikes exposed for vehicles to hit.

I think a combination of things would help our speeding issues in Shawneeland. I think a few speedbumps in critical locations could help slow some traffic down, but I think that law enforcement should and would be the biggest deterrent to the problem. As I said I think speed bumps would slow some of the traffic while others would speed across the bumps. I witness this with the two speed bumps we currently have in place. One on Tomahawk Trail at Comanche and one to the entrance of the mail house on Tomahawk Trail. Speed limit signs are

posted in strategical locations on the main trails in Shawneeland and are clearly visible. I am all about safety and keeping the traveling public safe, I do however think we should be careful to put speed bumps in locations just because we receive a complaint. I think much caution and consideration should be taken before any speed bumps are installed.

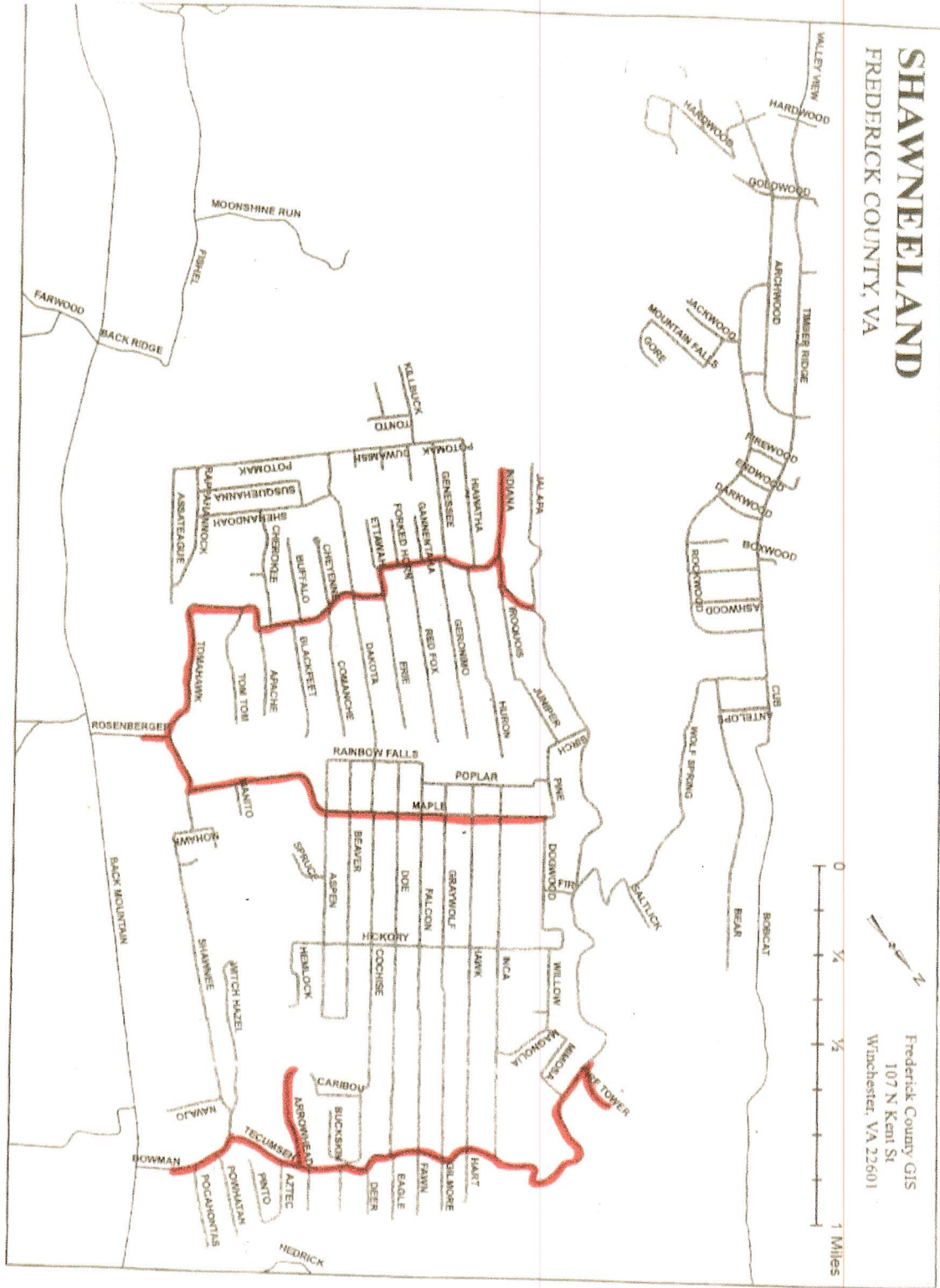
Sickle Bar Mowing:

Every spring usually in May, we begin mowing along the trails with the sickle bar mower. This year has been a little different because we are operating short staffed. We have been short staffed since last July. I as the manager had to make a decision where the focus of the staff we have in order to maintain safety for the travelling public. This unfortunately means that some tasks will suffer. Mowing along the trails being one of those tasks. We have also fallen behind in weed eating and mowing once a week. We have had to forgo mowing a few times this year in order to finish projects that were more important. Myself and my staff are not proud of the fact that we must make these choices. We all have prided ourselves in keeping Shawneeland looking the very best we can and still get our road projects completed. This time of year also brings another type of staffing issue with employees taking vacation leave. We will continue to do the very best we can with the staff we have.

Bleeding Tar & Chip (Dusting):

Bleeding tar & chip occurs when liquid asphalt fills the aggregate voids during very hot weather. The hot temperatures cause the liquid asphalt to expand to the surface of the road (this is known as bleeding). The road surface becomes very shiny and slick. Although this liquid is slick it is also very sticky. As vehicles drive across these area's the liquid will stick to the tires and eventually start to pull the road surface apart. This is a very unsafe condition for traffic to travel on. In order to keep this liquid from causing damage to vehicles or the road surface we dust the roads. This is a process of spreading sand, #9 stone, or stone dust on these areas to prevent any problems. This also a proactive approach to what could become a very big problem. The bleeding problem is not at all unique to Shawneeland. This is a problem nationwide. So, when you are travelling in Shawneeland and see the gray dust kicking up behind the vehicles you will know what it means.

SHAWNIELAND FREDERICK COUNTY, VA



Frederick County GIS
107 N Kent St
Winchester, VA 22601

Attachment A

Trails to Receive Tar & Chip:

	<u>Name of Trail</u>	<u>Length in Feet</u>	<u>Width in Feet</u>	<u>Square Yards</u>
1.	Arrowhead	1,295	14	2,014
2.	Bowman	1,018	22	2,488
3.	Firetower	700	11	855
4.	Indiana	1,298	16	2,308
5.	Maple	5,720	20	12,711
6.	Rosenberger	284	22	694
7.	Tecumseh	7,775	20	17,278
8.	Tomahawk	9,552	20	21,227
	Grand Total	27,642		59,575 sq. yds.
		<u>÷ 5,280</u>		
		5.24 miles		