



Report To:	Program Planning Committee
From:	Michael MacIsaac Chief of EMS
Date:	June 22, 2011
Re:	EMS 5 Year Staffing Plan

RECOMMENDATION

That the Program Planning Committee accepts and approves this report in conjunction with the previous report on this issue entitled [Future Staffing Levels](#) as a means of establishing an EMS 5 year staffing plan.

PHASE 2 - PLANNING FOR THE FUTURE

Upon receiving feedback on this topic it is instrumental that we evaluate all the statistics possible. Digging deeper into this issue we can ascertain the next steps in minimizing our exposure to on call staffing. It is with this in mind that we look further into this topic and find a plan for future staffing levels.

Further Statistics

This is a further breakdown the priority of call outs.

STATION	2010 PRIORITY TYPE					TOTAL
	1	2	3	4	8	
Gore Bay	1% (1)	0% (0)	13% (17)	42% (57)	44% (59)	134
Mindemoya	9% (11)	0% (0)	26% (32)	35% (44)	31% (40)	127
Massey	1% (1)	0% (0)	11% (12)	54% (62)	35% (41)	116
Gogama	1% (1)	0% (0)	13% (14)	83% (95)	3% (3)	113
Killarney	2% (2)	0% (0)	17% (14)	39% (33)	42% (35)	83
Chapleau	2% (2)	17% (13)	16% (12)	64% (49)	2% (2)	77
Noëlville	5% (2)	0% (0)	14% (7)	56% (29)	26% (13)	52
Folet	3% (1)	27% (10)	7% (2)	42% (15)	20% (7)	36
AVERAGE	3% (3)	5% (3)	14% (14)	52% (48)	25% (25)	92

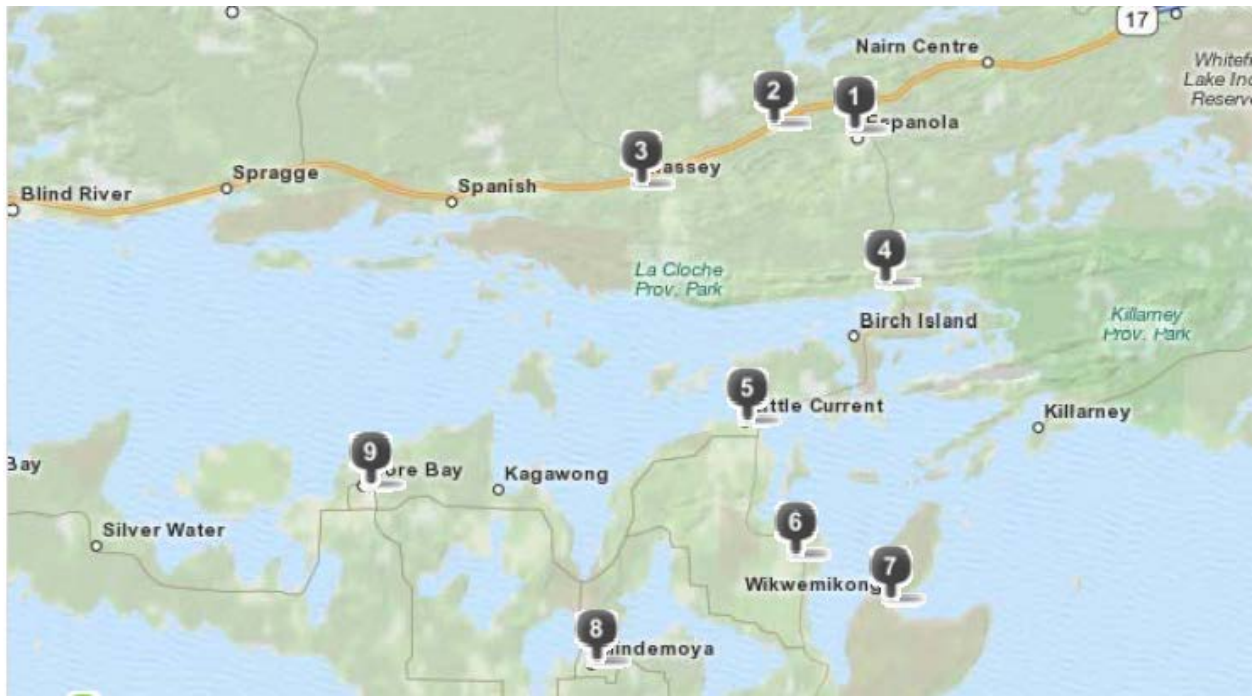
From the above table it is noted that the overwhelming reason for being called out is due to a priority 4 call. The priority 4 call is defined as: Urgent, life threatening. Just as interesting to note is the second most reason for being called out is a priority 8 call. Priority 8 is defined as an emergency standby. It must be noted that priority 3's and 4's require automatic notification while on call.

According to our Deployment Plan we alter the notification of priority 8 emergency standbys. For instance, Massey is the station of choice to provide balanced emergency coverage for Espanola in Webbwood when they are on site. However, when Massey is on call, they become the second option to provide balanced emergency coverage after Little Current which provides priority 8 coverage at Whitefish Falls. A second example would be related to Gore Bay. Gore Bay is the station of choice for balanced emergency coverage for Mindemoya in Spring Bay when they are on site. However when Gore Bay is on call, they move to being the third option after Little Current and Wikwemikong. For Gore Bay to be out on a priority 8 while on call would mean the rest of the service has to either be busy with emergency calls or balancing emergency coverage elsewhere. A final example is the Killarney station which becomes the 3rd and 4th choice respectively for standby for Noëlville and Hagar. You will note that even while being the 3rd and 4th choice, Killarney was utilized 35 times last year for balanced emergency coverage.

The above statistics and examples indicate a system that is starting to burst at the seams in terms of emergency calls and balanced emergency coverage all while trying to balance a mix on on-site vs. on call staffing.

A system wide way to look at this can be explained in the following example.

The Situation: Espanola is performing an emergency transfer from Espanola to Sudbury for a patient who appears to be suffering a stroke. With Espanola being out of the community for a period of time (few hours), balanced emergency coverage is required. The provided emergency coverage for Espanola depends strictly on the day of the week due to on call staffing and subsequent vehicle deployment. Take for example that another emergency call, such as a patient experiencing chest pain, comes in for the areas listed in the table and note the difference in response times between on site and on call. The following map is presented for reference.



Mon., Tue., Wed., Thur. (on call): Little Current will proceed to Whitefish Falls (#4) while Massey stays on call. The resultant response times for our communities are as follows:

Community	Ambulance Coming from	Distance to Call	Time to Call
Espanola	Whitefish Falls	20 km	20 min
Little Current	Whitefish Falls	28 km	26 min
Webbwood	Massey	17 km	15 min (+10 min on call)
Massey	Massey	0 km	+10 min (on call)

Fri., Sat., Sun. (on site): Massey would proceed to Webbwood (#2) and Little Current will remain at base. The resultant response times for our communities are as follows:

Community	Ambulance Coming from	Distance to Call	Time to Call
Espanola	Webbwood	13 km	12 min
Little Current	Little Current	0 km	Immediate (on site)
Webbwood	Webbwood	0 km	Immediate (emerg. standby)
Massey	Webbwood	17 km	15 min

The above example details how having one station on call in a busier area changes the level of responsiveness. The on site staffing such as in Massey on weekends shows an improved response time and greater balance to emergency coverage.

Options

From the above and the previous report on this issue, it becomes obvious that an increase to the levels of staffing is warranted. The question now becomes to what levels, what stations and when. When factoring in call volumes, Health & Safety, Employment Standards, the ability to provide timelier patient care and economics, the following options should be the first considered.

1. Full On Site Staffing

Since Mindemoya, Massey, and Noëlville already operate under a hybrid system, the above mentioned factors were already considered in previous staffing enhancements and the next logical step would be to evaluate those stations for full on site staffing. As we know the hybrid system consists of a mix of on call and on site hours during the week. The following table provides a breakdown of the calls that are being performed by those 3 stations during the hours where they are, for lack of a better term "on site" or "upstaffed".

2010 STATION	PRIORITY TYPE (Fri, Sat, Sun)					Total
	1	2	3	4	8	
Massey	1	0	41	64	164	270
Mindemoya	9	1	34	75	273	392
Noëlville	2	0	9	39	49	99

While we extolled the virtues of the increased staffing levels in Hagar and saw the increase in call volumes, we can evaluate on call utilization vs. on site utilization in these stations. The following table provides this comparison

STATION	Mon, Tues, Wed, Thur.	Fri, Sat, Sun	Difference	% Dif
Massey	120	270	150	125%
Mindemoya	187	392	205	110%
Noëlville	62	99	37	60%

You will note that the utilization of these stations when they are on site is far greater than when they are on call. During 3 days of the week of on site coverage they do far greater amounts of calls than while on call for the other 4 days. This difference in level of utilization is immense.

2. Hybrid Staffing

Currently Massey, Mindemoya, and Noëlville all operate under a hybrid system combining a mix of on site and on call hours. We should look to expand that option to other stations. Staffing along those lines would be most beneficial to the Gore Bay and Chapleau stations. From a pure cost perspective to fully staff Gore Bay and Chapleau would cost \$172,116 and \$180,594 respectively. To staff on a hybrid system would prove to be more economical all the while decreasing our above mentioned liabilities and better providing for the people of those communities.

Looking at the individual statistics for the Gore Bay and Chapleau stations we find a breakdown of call as follows:

STATION	Mon, Tues, Wed, Thur.	Fri, Sat, Sun	Difference	% Dif
Gore Bay	75	72	-3	-4%
Chapleau	53	42	-11	-21%

Looking at the difference we see that the Gore Bay station is performing nearly the same number of calls during the 3 weekend on call nights as during the 4 weekday on call nights. Factoring in the notion that station utilization will increase on weekends once a hybrid system is in place, we should definitely see an increase to the number of calls that the Gore Bay station is performing if they were staffed on site on weekends.

Evaluating the Chapleau station we see that the percentage of calls they perform on weekends is in line with the percentage that they perform during the week. Again though, we could expect to see an increase in call volumes on weekends in Chapleau if the station were staffed on site during any of the on call hours.

3. Increased Hours in 8 hours stations

The final option to be evaluated would involve Gogama, Killarney, and Foleyet. These stations currently operate with 8 hours of on site coverage and 16 hours of on call coverage. An analysis of the time of day call volumes shows that we have on site hours for a majority of the busiest times of the days. The following table details the current staffing hours in comparison to the busiest times of day.

2010 Hour of Day	KILLARNEY		GOGAMA		FOLEYET	
	TOTAL	RANK	TOTAL	RANK	TOTAL	RANK
0:00	4	18	9	10	2	19
1:00	6	15	4	19	0	23
2:00	1	22	2	23	0	24
3:00	2	20	7	17	3	15
4:00	3	19	3	21	2	20
5:00	2	21	2	24	1	21
6:00	1	23	8	14	1	22
7:00	1	24	4	20	18	1
8:00	5	17	8	15	6	8
9:00	13	3	9	11	8	5
10:00	11	5	14	5	8	6
11:00	11	6	16	2	13	2
12:00	11	7	11	7	12	3
13:00	19	1	16	3	12	4
14:00	13	2	10	8	5	11
15:00	11	8	8	16	4	13
16:00	13	4	9	12	6	9
17:00	8	11	5	18	5	12
18:00	8	12	17	1	4	14
19:00	6	16	15	4	7	7
20:00	10	9	10	9	6	10
21:00	9	10	9	13	3	16
22:00	8	13	12	6	3	17
23:00	7	14	3	22	3	18

Although we do have on site hours during a majority of the busiest time of the day, we could consider expanding hours in these stations for a few reasons but first we will look at the financial implication of doing so.

As previously mentioned there are a couple of factors involved in making the decision to consider increase hours in the 8 hours stations. First, we consider that

with a 10 hour shift we will be able to hit more of the busier hours in the day. In actuality, we would be able to hit a large majority of the top 10 busiest hours of the day in all 3 stations with 10 hour on site shifts, providing that we vary the start and end times of the stations.

Secondly, we would be remiss if we didn't mention our operational ability to staff these stations. Currently we do have some trouble staffing these stations with dedicated employees. Very few live within these areas and more than once we have hired a new employee right into a full time position in one of these locations. That means that our full complement of 110 or so current employees, with at least 50 of them being part time, have passed on the opportunity to work full time at one of these stations. When we do get an internal candidate show interest in one of these stations it is usually only for a short period of time to gain seniority and then fall back to the part time ranks at first opportunity. This occurs on a yearly basis. It has been suggested that one reason for this may be the current 2 week scheduling pattern of working 7 days in a row with 2 days off, then 3 days work followed by 2 days off. This schedule was created by the full time employees in Killarney a few years ago and has been the source of much discussion. Also figure in that the employees at these stations work 8 hour shifts with an 80 hour pay as opposed to a standard 84 hours pay in many of our stations and you can see why these stations are considered less than desirable. Others are working more hours and getting greater amounts of consecutive days off. Going with 10 hour shifts would enable a greater balance of time off mixed with time at work. As it stands right now part time employees would rather take their chances on part time work than full time in these locations.

Giving consideration to increasing hours in these stations not only increases the responsiveness of the station with more on site hours, but increases the ability to staff with dedicated employees.

Recommendations

Now that the options have been analyzed it is of great importance to lay out a plan of action that would best serve all of the above. It is with this in mind that a 5 year plan is being recommended. All of the above options present a good level of enhancement however when balancing financial constraint preference must be given in order of need.

There are 7 locations being considered on the 5 year plan for enhancement. They are Mindemoya, Massey, Noëlville, Gore Bay, Gogama, Killarney and Foleyet. Again, these locations were chosen on the basis of doing the most good for the most people. By reviewing call volumes, hours of work, emergency responsiveness, and Health & Safety implications it was felt that these 7 stations are in the most need of seeing staffing level increases.

The costing of these 7 locations is as follows under the following tables.

STATION	2011 Approved Budget	* Actual Costs to Staff 24/7	Additional Costs to go 24/7 based on 2011 Costs	Municipal Share
Noëlville	\$ 770,913	\$ 891,339	\$ 120,426	\$ 60,213
Mindemoya	\$ 721,411	\$ 891,339	\$ 169,928	\$ 84,964
Massey	\$ 706,646	\$ 891,339	\$ 184,693	\$ 92,347

* Actual costs based on 2011 Espanola staffing costs.

STATION	2011 Approved Budget	** Actual Costs to Staff 24/7	Additional Costs to go hybrid based on 2011 Costs	Municipal Share
Gore Bay	\$ 547,107	\$ 706,646	\$ 159,539	\$ 79,769

** Actual costs based on 2011 Massey staffing costs.

STATION	2011 Approved Budget	*** Actual Costs to Staff 10 Hours	Additional Costs to go 10 hour shifts based on 2011 Costs	Municipal Share
Gogama	\$ 408,070	\$ 460,082	\$ 52,013	\$ 26,006
Killarney	\$ 378,749	\$ 430,762	\$ 52,013	\$ 26,006
Foleyet	\$ 378,683	\$ 430,696	\$ 52,013	\$ 26,006

*** Actual costs based on an increase of 2 hours per day times 365 days times 2 paramedics less 2 hours standby cost.

The following listing provides a more thorough breakdown of year by year costs with expected budgetary impact, and details some rationale in making these decisions.

1. July 2012 - Mindemoya & Massey 24/7

The Municipal share cost to bring Mindemoya to full on site staffing is predicted to be \$84,964 for a full year. The Municipal share cost to bring Massey to full on site staffing is predicted to be \$92,347 for a full year. Starting both at the midpoint in the year, amounts to the same as paying for one station's enhancement for a full year. Doing it this way achieves the best possible outcome for 2 separate stations, albeit half a year later.

Total 2012 budgetary impact: \$88,656. (Municipal Share)
 \$42,482 (½ Mindemoya), \$46,174 (½ Massey)

2. Total 2013 budgetary impact: \$88,656. (Municipal Share)

Although no enhancements are being made in 2013, the remainder of the costs for the half year increases in Mindemoya and Massey must be accounted for.

3. July 2014 - Noëlville 24/7 & Gore Bay Hybrid

The Municipal share cost to bring Noëlville to full on site staffing is predicted to be \$60,213 for a full year. The Municipal Share cost to place Gore Bay station into a hybrid style of scheduling, upstaffing weekends (Fri, Sat, Sun) to full on site is \$79,769 for a full year. To start half way through the year would cut the costs in half.

Total 2014 budgetary impact: \$69,992. (Municipal Share)

\$39,885 (½ Gore Bay), \$30,107 (½ Noëlville)

4. Total 2015 budgetary impact: \$69,992. (Municipal Share)

Although no enhancements are being made in 2015, the remainder of the costs for the half year increases in Noëlville and Gore Bay must be accounted for.

5. January 2016 - Gogama, Killarney & Foleyet 10 hour staffing

The Municipal share cost to bring Gogama to 10 hour on site shifts is predicted to be \$26,006 for a full year. The Municipal share cost to bring Killarney to 10 hour on site shifts is predicted to be \$26,006 for a full year. The Municipal share cost to bring Foleyet to 10 hour on site shifts is predicted to be \$26,006 for a full year. In the fifth year of the 5 year plan we only see these enhancements, so in terms of financial consequence it would be appropriate to begin in January.

Total 2016 budgetary impact: \$78,019 (Municipal Share)

NOTE: For the 2011 calendar year, the MOHLTC funding allocation for EMS is \$136,674 greater than budgeted, which in turn will result in a 2011 municipal surplus of \$136,674.

The Board should give consideration to accelerating the proposed 5 year staffing plan in an attempt to stay ahead of the MOHLTC funding lag. Consideration could be given to utilizing the 2011 budget surplus of \$136,674 to accelerate the plan. There are 2 sub options to consider.

I. Start Mindemoya October 2011

Utilizing a portion of the projected EMS surplus of \$136,674 to start funding in the stations where changes would be most felt, we would staff Mindemoya full time on site starting the beginning of the last quarter of this year. The projected cost would be one quarter of the full cost to staff a whole year which works out to \$42,842. Note that the total amount accounts for both portions of the 50/50 funding because the MOHLTC funding has been set for this year. As such we would need to account for both halves.

We would then submit a revised 2011 budget to the MOHLTC showing this increase in staffing for 2011. In doing so we should eliminate part of the MOHLTC one year budgeting lag. This option would have a financial impact as follows:

Total 2011 impact: \$42,842 (Municipal Share)

This additional cost would be funded by using \$42,842 of the projected municipal surplus of \$136,674 due to the increased MOHLTC funding allocation. Balance of surplus would be \$93,832

Total 2012 impact: \$42,842. (Municipal Share)

Based on the plan, Mindemoya would be funded through the 2012 budget effective July 1, 2012. The additional cost for starting Mindemoya in January 2012 instead of July 2012 is \$42,842. This \$42,842 would be funded using the 2011 projected municipal surplus of \$136,674, leaving a balance of \$50,990 as the 2011 municipal surplus.

II. Start Mindemoya January 2012

Based on the plan, Mindemoya would be funded through the 2012 budget effective July 1, 2012. The additional cost for starting Mindemoya in January 2012 instead of July 2012 is \$42,842. This \$42,842 would be funded using the 2011 projected municipal surplus of \$136,674, leaving a balance of \$93,832 as the 2011 municipal surplus.

Total 2012 impact: \$42,843. (Municipal Share)

Conclusion

We need to consider front loading our staffing initiatives in higher call volume areas. Additionally, being aggressive with this staffing solution may have an added benefit in terms of MOH funding.

To assess the order of increased staffing, we must look at call volumes which tell the story in terms of how sick people are and how hard our employees are working. We need to be responsive within our busiest communities with the new response time standard making it ever more important. We also need to be aware of our responsibilities to our employees. We have to be mindful that the increase in call volumes particularly during on call hours can lead to hours of work and Health & Safety implications.

As it stands right now the station not receiving a staffing enhancement within the 5 year plan is Chapleau. On the basis of call volumes, hours of work, H&S implications and balanced emergency coverage this was determined to be the last station on the list as it was the least likely to benefit from increased staffing.

It is important to note that while this report provides for a 5 year plan, as time progresses it is important to re-evaluate our needs. Evaluations into staffing levels as per the DSB Strategic Plan are to be held yearly and it is our intention to evaluate the successes of this plan and make change where necessary. While not falling within the initial 5 year plan, the Chapleau station would be evaluated as the plan progresses. It is also important to renew the plan to always include a 5th year so long as the many factors warrant further enhancement.

Following the recommendations as listed above will have the greatest effect in the areas of greatest need. The final mix of staffing will provide for better response times and less reliance on, on call staffing which is proving to be ineffective with our increase in call volumes.

Staff are recommending that the Program Planning Committee approve this five year staffing plan and ask the Board to approve the 5 year staffing plan in principal. The implementation of the plan would rest with the Finance Committee as it prepares deliberations for the 2012 budget process.