



Manitoulin-Sudbury DSB EMS Department

Presentation to:

Municipality of North Eastern Manitoulin and The Islands

April 17, 2014

Manitoulin-Sudbury DSB EMS Department

- ▶ Thank you for this opportunity to present on topics surrounding EMS services in your area
- ▶ Topics of discussion
 1. Introduction to Manitoulin-Sudbury DSB EMS
 2. Services delivered by the EMS Department
 3. The 5-Year Staffing Enhancement Plan
 4. EMS Challenges
 5. Deployment changes of June 2013
 6. Questions?

Key EMS Responsibilities

- ▶ Provide a service that includes all aspects of land ambulance operations including:
 - Personnel, vehicles, and equipment
 - Type of service (on-site versus on-call)
 - Quantity and level of service
- ▶ Responsible for all costs associated with the provision of these services:
 - 50/50 cost share with province on “Approved Costs”
- ▶ Ensure compliance with all governing legislation including numerous standards and regulations which cross through different realms of provincial ministries.

DSB Coverage Area

- Encompasses the Districts of Manitoulin and Sudbury (excluding the City of Greater Sudbury).
- An area of over 45,000 sq. km
- Larger than 115 Countries in the World
- Larger than 9 U.S. States
- 12 EMS Stations
- 4 of which are located on Manitoulin Island



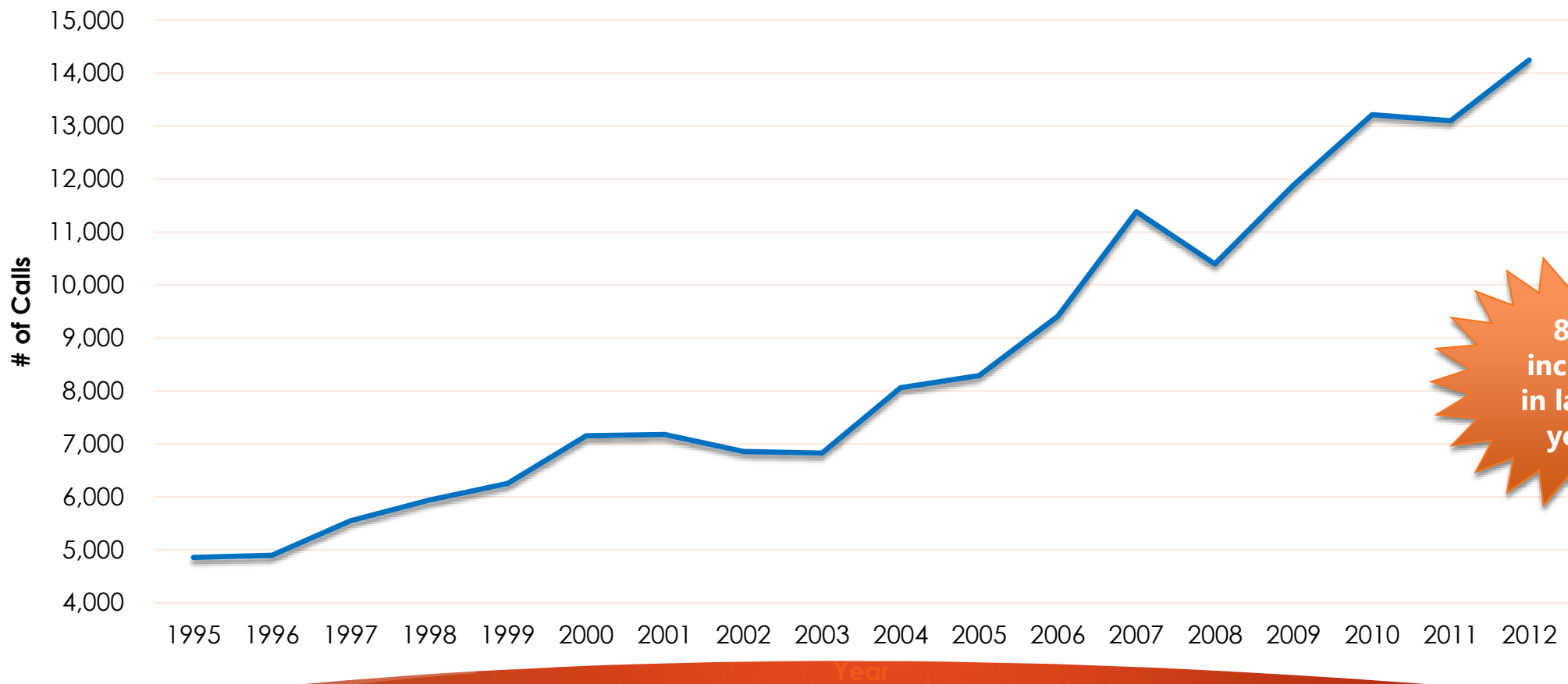
Supportive Systems

- ▶ 4 volunteer Emergency First Response Teams
 - ▶ Cartier, Cockburn Island, French River Delta, & Tehkummah
- ▶ 13 tiered response agreement mostly with Municipal based Fire Services but also with certain Police forces.
- ▶ Maintenance agreements with Municipalities and community organizations to oversee 139 Automatic External Defibrillators throughout our districts

Primary Care Paramedic

- ▶ Manitoulin-Sudbury DSB employs over 125 Primary Care Paramedics
- ▶ A graduate of a community college program consisting of 1,090 hours of combined theory and clinical practice (2 years of college).
- ▶ Hold an MOHLTC EMCA/AEMCA certificate
- ▶ Certified by a Base Hospital to:
 - ▶ administer Glucagon, Gravol, Benedryl, & Epinephrine via injection,
 - ▶ administer Glucose & ASA orally,
 - ▶ administer Nitroglycerin sublingually, and
 - ▶ administer Salbutamol via inhalation.
- ▶ Additionally certified by a Base Hospital Physician to perform semi-automatic external cardiac defibrillation.





Call Volumes

Consistently on the Rise

EMS 5-Year Staffing Plan

- ▶ The EMS 5-Year Staffing Plan aims to review current statistics and call volumes to determine the potential need for enhanced staffing levels to affect a greater good to the citizens in our districts
- ▶ Currently there are 2 basic models of staffing:
 - ▶ 24 hour/7 day a week
 - ▶ on-site/on-call composition
- ▶ In June of 2011 the DSB Board approved in principle the initial 5-Year EMS station staffing plan for the Manitoulin-Sudbury DSB area
- ▶ The first step of the plan was financially approved and in the fall of 2011 Mindemoya went to 24/7 on site coverage
- ▶ The second step of the plan was not approved and the EMS 5-Year Staffing Plan underwent a review
- ▶ In the fall of 2013 the first step of the new plan was approved resulting in both the Massey and Noëlville stations gaining to 20 hours of on site coverage 7 days a week
- ▶ The annual cost of the enhancements proposed in the 5-Year EMS Staffing Plan would require an additional municipal investment of approximately 1% per year

EMS Challenge – Non-Urgent Patient Transportation

- ▶ Under Ontario's regionalized system of healthcare, patients often require diagnostics, treatment, or specialist care not available within the rural hospital setting
- ▶ In the absence of an alternative means of transport Ambulance are utilized taking them outside their communities for lengthy periods of time
- ▶ Southern Ontario has alternative, for profit Medical Transportation Services
- ▶ We have been fortunate over the last year to be participating in a NE-LHIN sponsored pilot project whereby in conjunction with our local hospital partners we have been operating a non-ambulance transportation system for patients requiring transportation between medical facilities
- ▶ Our pilot project is helping to inform a broader consultants report dealing with the issue throughout North Eastern Ontario and the results should be available before summer

EMS Challenge – New Ambulance Response Time Performance Plan

- ▶ 2013 a new response time plan was enacted
- ▶ The plan is an improvement from the archaic former system of measuring against 1996 response times
- ▶ It does now deal with patient acuity as opposed to strict call type as dispatched however it is highly aggressive and more tuned to an urban model of response
- ▶ There are 6 separate criteria under review this new plan but the first 2 deal with the most critical patient
- ▶ The MOH has set the time benchmark (based upon medical knowledge) and DSB is required to set the % of time they will achieve this benchmark

EMS Challenge – New Ambulance Response Time Performance Plan continued

▶ Designated Delivery Agent (DDA) - SUDDEN CARDIAC ARREST

15% of the time, within 6 minutes from the time ambulance dispatch conveys the call information to the paramedic, **Manitoulin-Sudbury DSB** will endeavour to have a responder equipped and ready to use an AED at the location of a patient determined to be in sudden cardiac arrest.

▶ EMS Designated Delivery Agent - CTAS 1

25% of the time, within 8 minutes from the time ambulance dispatch conveys the call information to the paramedic, **Manitoulin-Sudbury DSB** will endeavour to have a PARAMEDIC as defined by the Ambulance Act and duly equipped at the location of a patient determined to be CTAS 1.

Deployment Changes

- ▶ It is important to understand that we provide the ambulances and staff for the Central Ambulance Communications Centres (CACCC's) to deploy
- ▶ The only control we have over our resources is within our Deployment Plan
- ▶ In the fall of 2012 EMS Administration began to look into the concept of "Balanced Emergency Coverage"
- ▶ Historically, every time one ambulance received a call, another ambulance would move to a half-way point to balance the coverage for both communities
- ▶ Doing so aided the community who lost its resource with a shortened response time, but the community who had a resource lost it to a half-way point thus increasing their response time
- ▶ What was the impact of the half-way standby?

Deployment Changes continued

- ▶ A review of 21 months worth of data was performed
- ▶ General Findings
 - ▶ 11,186 times an ambulance went to a half-way point for balanced coverage
 - ▶ 921 times they received a call while performing balanced coverage
 - ▶ 529 times resulted in a favourable response time
 - ▶ 392 times resulted in an unfavourable response time
- ▶ In summary,
 - ▶ 91.8% of the time balanced emergency coverage was inefficient
 - ▶ 3.5% of the time balanced emergency coverage was detrimental

Deployment Changes continued

**Faced with a 95.3% inefficiency,
a change had to be considered.**

Deployment Changes continued

- ▶ Information was brought to the DSB Board through a report
- ▶ Understanding that the balanced coverage approach was inefficient, we looked to ensure that we had resources in areas where the greater call volumes exist
- ▶ Representing nearly 80% of our overall call volumes the six stations in the Manitoulin/LaCloche area were paired into zones; Manitoulin West (Gore Bay/Mindemoya), Manitoulin East (**Little Current**/Wikwemikong), and North Shore (Esplanada/Massey)
- ▶ Standby is implemented within any one of these zones only if the whole zone is without either available resource
- ▶ Additionally, we have a Field Superintendent who is certified and able to respond if needed

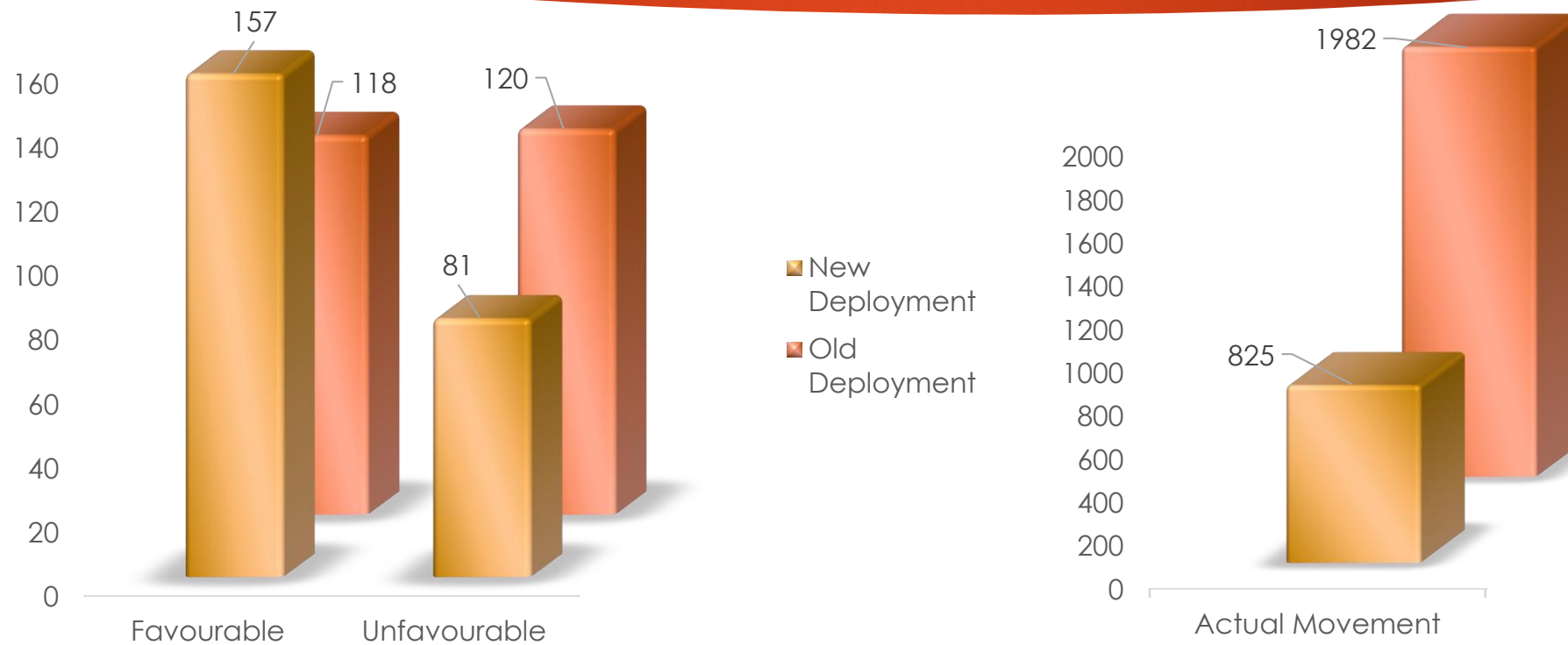
Deployment Changes continued

- ▶ The relevance of the new Response Time Performance Plan cannot be understated on this matter

Former Standby Deployment	Chances of Success		New Non-Standby Deployment	Chances of Success	
	Community sending Ambulance on Standby	Community receiving Ambulance on Standby		Community keeping Ambulance at Station	Community receiving No Standby
SCA > 6 minutes	Never	Never	SCA > 6 minutes	Possible	Never
CTAS 1 > 8 minutes	Never	Never	CTAS 1 > 8 minutes	Most Likely	Never
CTAS 2, 3, 4, 5 > 25 minutes	Possible	Possible	CTAS 2, 3, 4, 5 > 25 minutes	Definite	Never

Station	Total Code 8's	Favourable	Unfavourable	Total Calls on Stby	Plus Minus	% Call on Stby	% Favourable Stby	% Unfavourable Stby
Chapleau	2	0	0	0	0	0.0%	0.0%	0.0%
Foleyet	4	0	0	0	0	0.0%	0.0%	0.0%
Gogama	4	0	0	0	0	0.0%	0.0%	0.0%
Killarney	11	0	0	0	0	0.0%	0.0%	0.0%
Noëlville	167	13	3	16	10	9.6%	7.8%	1.8%
Hagar	236	11	10	21	1	8.9%	4.7%	4.2%
Espanola	213	28	10	38	18	17.8%	13.1%	4.7%
Massey	302	15	15	30	0	9.9%	5.0%	5.0%
Gore Bay	228	18	8	26	10	11.4%	7.9%	3.5%
Mindemoya	377	40	7	47	33	12.5%	10.6%	1.9%
Little Current	439	29	26	55	3	12.5%	6.6%	5.9%
Wikwemikong	20	3	2	5	1	25.0%	15.0%	10.0%
6 Month Total	2003	157	81	238	76	11.9%	7.8%	4.0%
21 Month Total						8.2%	4.7%	3.5%

Deployment Changes continued



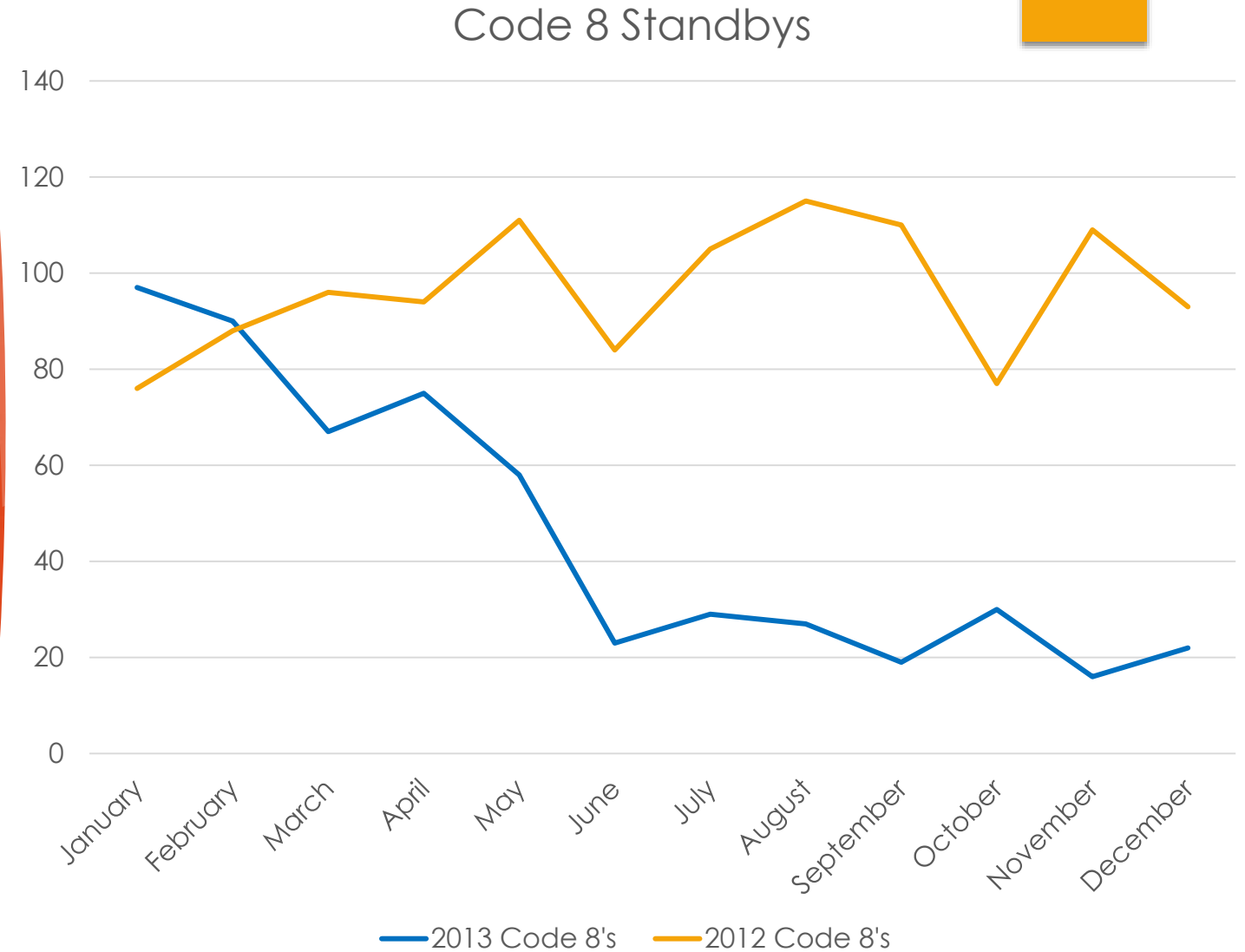
	New Deployment			Old Deployment		
	Favourable	Unfavourable	Actual Movement	Favourable	Unfavourable	Actual Movement
3 month	86	44	375	63	67	1091
6 month	157	81	825	118	120	1982

Little Current Concerns

- ▶ We have been advised of a couple of incidents where there were extended EMS Response Times
- ▶ We cannot comment on location details nor patient details but we do look into every concern that is raised
- ▶ We currently have 2 reviews underway for this area.
- ▶ The way the current plan is arranged if the Little Current Ambulance is preoccupied, the next closest ambulance will respond. Typically, it is Wikwemikong.
- ▶ Must also understand that there is a Field Superintendent based out of Little Current whose regular schedule puts her in the area for 4 days out of the week.
- ▶ Also there is an additional resource available in Mindemoya from Monday to Friday between the hours of 8am and 4pm.

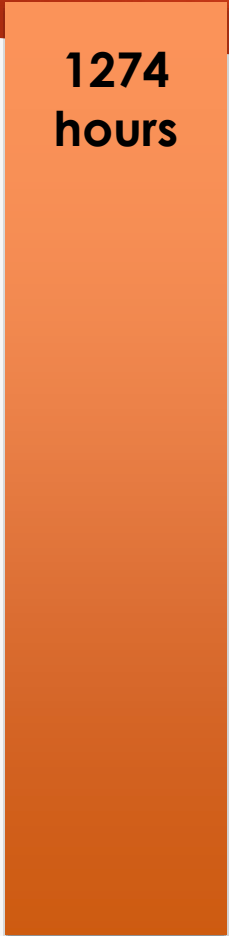
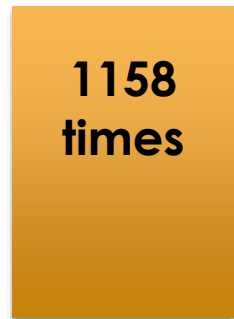
The Effect of Standby on Little Current

- In 2012 there were 1158 code 8 standbys due to balanced emergency coverage (On average on Standby 3 times per day)
- In 2013 that number was 553
- Estimated to be under 300 for 2014 (On average less than once per day on Standby)
- Average time on standby for 2013 was 1 hour 6 minutes

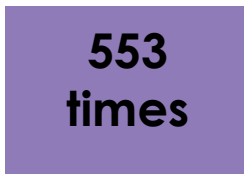


Little Current Coverage Effect by Year

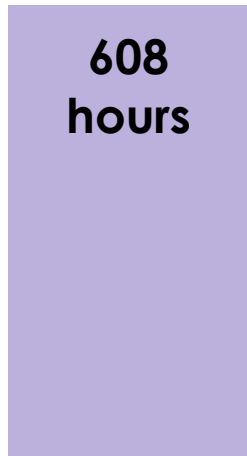
2012



2013



An addition
of **666**
coverage
hours in Little
Current



2014 est.



An addition
of **971**
coverage
hours in Little
Current





QUESTIONS?