DIV 154 IN ACTION: MABAS USED TO FIGHT SHIP FIRE
BY TIM DIETMAN, CHIEF, STURGEON BAY FIRE DEPARTMENT & PRESIDENT, MABAS DIVISION 154

I was the first on scene, coming down my road towards the water. I could see the graving dock area. When I was about 3 blocks away, I reported heavy large black smoke coming from the stern of the ALPENA in the graving dock. For me as command I had many concerns - was the vessel stable in its cradle with this incident; what does the excessive heat do to not only my firefighters but also the structure of the vessel; and what type of work was being done while the ship was in the yard?

Bay Ship (Fincantieri Bay Shipbuilding Company) is one of the largest employers in Sturgeon Bay and in Door County. They normally peak in employment during the winter as the Great Lakes fleet comes in for repairs and annual upgrades, maintenance and certifications. Not only do they provide repair and fleet layover services they also built many of the current Great Lake vessel and currently build many new Oil tanker/barges.

On Friday evening, December 11, 2015 at 5:43pm, a fire on board the vessel ALPENA in the graving dock was reported.

“This vessel was built in 1942 and had lead paint and asbestos all over”

With the initial call, the Sturgeon Bay Fire Department automatically paged in a General alarm, which get us all 29 firefighters. Within minutes we had 2 Chiefs, 2 engines, 1 heavy squad, 1 aerial, 2 tenders, 2 brush trucks, and our Dive truck with a secondary cascade (air tank) system.

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This issue of MABAS-Wisconsin in Action begins the 7th year of the newsletter. How far we have come in these few years as an organization. This tremendously successful growth has not come without its challenges. Linking our organizational needs across the broad spectrum of divisions with our core competencies and management systems has continually evolved to address the needs of our collective stakeholders.

We have sustained this continuous, stable, measured growth because of the strategic planning outcomes that have guided our decision making.

Strategic planning is a method through which an organization defines and benchmarks its future based on an assessment of its current situation. This results in the best possible use of available resources to achieve the greatest returns.

We practice an anticipatory approach to development, by first examining the mandates that drive the organization’s mission and then by probing the strengths and weaknesses, both internal and external to the organization, we are able to prioritize the issues that we must resolve. Through this process MABAS Wisconsin can get a clear sense of direction for future growth.

In other words, strategic planning is the identification of a desired long-range outcome and the development of a sequence of actions to achieve it, based on analysis of the organization’s resources and its environment. In a sense, strategic planning is much like the incident action planning process that we use for the development of an IAP for the fireground.

The steps to this process simply involve reviewing where we are now and then determining where we want to go; this is our vision. We then determine what our obstacles might be for the achievement of our vision along with the identified resources that support our mission. We develop our strategies and tactics, which are really our goals and objectives with a measurement process to determine whether or not we will be successful.

MABAS Wisconsin began the strategic planning process when it was a young organization, which has proved to be instrumental for our measured and consistent growth. Despite the early unstable nature of the revenue sources and the dire need to be serve the diverse communities in the state, the early planners set a foundation for MABAS-WI that has allowed for growth and success.

The current strategic issues that MABAS-WI faces are summarized in the bullet points below and are addressed in our current strategic plan that expires in 2018. Through a gap analysis, each of these items are considered and then objectives are written and assigned to various organizational groups to solve through their efforts.

- Long term financial security.
- Maintain and enhance strategic partnerships and stakeholder relationships.
- Build out and adapt systems, processes, equipment, policies and guidelines with oversight and training to maximize the effectiveness of the WFSERP.
- Provide ongoing training for legacy, developing and emerging division.
- Train fireground management models and principles that addresses the functions of command and risk management principles universally utilized across all divisions.
- Work with the WSFCA to promote and build mutual internal and external organizational commitment as well as leadership for all stakeholder groups through training and outreach.

My closing thought is that planning had paid incredible benefits for MABAS Wisconsin and many municipal organizations. For those Chiefs who say, “I don’t have time to plan!”, the reality is that “Managing is planning; not to plan is not to manage”. We cannot lead an organization that has not first been managed, management provides the foundation, systems, and stability that we need to lead. I believe that for too many years, managers have spent a great deal of time running around their departments figuratively putting out fires.

Our experience tells us though that organizational fires bring unwanted political attention, that can be incredibly detrimental to the department. We would be better served if we entered into a fire prevention mode, i.e. strategic planning creating a more effective and efficient organization.

We invite you to participate in the 6th Annual MABAS Wisconsin Command & Dispatch Conference. The event is scheduled for August 4th through August 6th at the Holiday Inn & Conference Center, 1001 Amber Avenue in Stevens Point.

To Receive MABAS Emails, visit the list server site, enter your email address & name and click “subscribe”:

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2016 Command & Dispatch Conference

Pre Conference Offerings:
- ICS 300 Level Training
- ICS 400 Level Training
- Next Generations 911 Training

Keynote Topic:
- The Trials & Tribulations of Social Media

General Sessions:
- Sturgeon Bay Ship Fire
- The future of MABAS Communications

Break-out sessions:
- MABAS Track
- Dispatch Track
- EMS Track
- Fireground Management Track

Special Sessions:
- Introduction to Wildland Firefighting
- Rescue Task Forces

For registration information, visit http://www.mabaswisconsin.org
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Once on scene I immediately had representatives from the vessel and Bay Ship at my side. Upon boarding, I talked with the crew and updated all units there was a fire in the engine room and aft area (towards the rear of the ship).

We were so fortunate to have extremely mild conditions. It was above freezing with light winds and no precipitation - could not have asked for a better night. Despite the darkness (sunset was at 4:17pm), the yard has a lot of lighting and we had no issue, except below deck.

The vessel was in dry dock (out of the water) and the area around was very clear of any other buildings or exposures. The only possible exposures would have been the cleaning of the tanks and type of work being done while laid up.

We were able to drive right to the vessel and have 100% access to any and all parts of the vessel. Once we figured out where we were going we found there were 4 points of egress, but only 2-3 could be used for this incident.

What is a Graving Dock?

A graving dock is a type of dry dock in a narrow basin that a large vessel can maneuver into. Once keel blocks, bilge blocks, and hull supports are in place, the water then is drained out exposing the entire vessel.

In cases where the surrounding ground cannot maintain the supports (such as the tropics), a floating dry dock can be used which is an oversized structure with water filled chambers. Once the vessel is cradled within the floating dry dock, the chambers are drained causing the dry dock to float higher in the water, lifting and exposing the vessel within it. A floating dry dock can be portable while a graving dock is built into the basin.

When our crews entered and I heard where they were going, I knew I was going to need manpower given the extreme heat and distance they would have to go to reach the area of the fire. I had MABAS Division 154 toneout MABAS Box Card 7-1-1 to the 2nd alarm, for Squads only, very early into the incident.

I went to the 3rd alarm for squads at 6:53pm. I paged for squads only (no other resources) knowing I was going to get the manpower, air packs, tools, and cascade needed. In my own mistake, I never backfilled our station. I did have the crews that came tell me later they had us covered with the equipment we needed.

The Sturgeon Bay Fire Department does training with Bay Ship and have always felt we had a good grip on what we could handle. For this one, we needed help from other departments and those firefighters had no clue what they were in for.

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Many of them came out after 10 minutes and said “give me a house fire any day over this!” I don’t think any of them thought of the “structure” being made of steel and what type of heat they were about to experience.

Most firefighters don’t understand the big issues with onboard ship fires and what can happen. We are all use to rushing into a burning home, finding the fire and spraying water on it. We all know putting wet stuff on the red stuff makes things better - it cools and extinguishes (typically house fire temperatures are 700-900 degrees depending on contents and such). On a ship, imagine setting your oven to 1000 degrees then crawling in. You may be able to extinguish the fire but unless you can withstand the extreme heat and are able to cool the steel, the fire reignites.

Most everything is steel - the deck, bulkheads and dividers - along with combustible contents that are high heat, high fire items (fuel, oil, rubber etc.). In a home fire the wood decays and ultimately completely falls apart and cools. On the vessel, the steel conducts the heat and holds it for very long periods of time.

When we spray water in a house fire it cools instantly, but on the vessel it takes a lot to cool and most firefighters can’t stay in that one spot long enough to complete the cooling process.

It took us many times going in as we had to cool the deck and bulkheads as we approached the fires. Steel melts between 2600-2800 degrees depending on type. The deck was red hot, but not bubbling (other than the paint on the exterior). As the fires grew, heat transferred through the decks and walls, starting fires in the other previously non affected areas. We have had onboard ship fires in the past that were relatively small in size yet found melted gear in lockers on the other side of a half-inch steel wall.

In this incident, the fire was in many different areas of the steering gear room, electrical control room, hazmat locker area and common engine room. On fire were rubber hoses in different sizes, oily rags, electric controls, oil tanks, oxygen and acetylene bottles, wiring and everything else in that area.

Besides the high heat, there was a different type of nasty exposure. This vessel was built in 1942 and had lead paint and asbestos all over.

We also had to make sure all power was fully disconnected on shore, not just tripped. There are large diesel fuel tanks and gallons upon gallons of oils and solvents all over the entire vessel. We also found a small, aft storage compartment, accessible from the stern only, that had bags of charcoal, propane tanks and 5 gallon jugs of different chemicals that were all starting to slowly react.

At one point very early in the incident I was on the top deck on the stern with two from Bay Ship (the safety officer and one of the Yard superintendents) when there was a very large explosion and the boat actually felt as if it rocked. My immediate questions were the safety of the guys inside and out.

I was told they have the shafts suspended by nylon straps and they think one could have let loose. Later I found out it was a very large acetylene tank that fell over and took off like a torpedo right past 2 of my guys in the engine room area it had missed them by only a couple feet.
When Bay Ship (Bay Shipbuilding Company) brings the vessel into the graving dock, they position it as low into the graving dock as possible. For the ship incident, firefighters had to climb a flight of stairs up to deck level, then across the main deck to the entry point, where they went down a hallway to the stairs to the mezzanine level. That stairway was about 20+ stairs down.

The engine room is another 15+ stairs down from there. The fire was at the mezzanine level which is between the engine room and main deck. While we have not been able to actually identify the initial fire location, I would believe the point of origin, based on the consumed contents, would have been a 12’x6’x10’ space and it quickly spread from there to the other areas.

Bay Ship has multiple hydrants in their yard and we have many surrounding the outer perimeter of the yard. We are also very fortunate to have Bay Ship assist us in transporting equipment on board. For fires, Bay Ship automatically assigns a crane and an operator and four riggers to us. Two riggers are on the ground and two on board. The crane has a very large man basket for hauling firefighters and any related equipment.

Our aerial is always one of the first trucks out after the engine. We use our aerial as often as possible if we need to supply water to a vessel, bridge, or anywhere we would normally have to hump hose. The ladder was at deck level in case it was needed but we had a direct egress path off the vessel and we had the crane with large man basket.

We use our aerial as the water supply to the deck. We spin off the nozzle and attach a 2 ½” wye (splits into two 2 ½” connections) to the pipe (modern aerial ladders have a built-in piped high capacity water line). This allows us to get a secured water supply to any deck within our 105’ aerial ladder reach. When the vessels come in for winter work, they can lay up as far out as three abreast making our access very difficult.

For those who have never been on a vessel, they are horizontal sky scrapers, you have to go up 3-5 flights to get to an entry point below main deck, then proceed through an interior area to more stairs taking you to the main deck, then across the vessel to another gangway to the next vessel, I think you can see this can be very exhausting and time consuming.

The two 2 ½” hose lines from the aerial were wye’d off on board to 1 ¾” hand lines. So we had four hand lines that were for extinguishment.

Ventilation was a real challenge. On this vessel they have a large sky light on the top deck which has two covers that could be brought up to allow smoke and heat to vent. Due to the location and entry points, alternatives were needed. We did have a large vent fan at our point of entry, but it was minimally effective.

With house fires, one can grab a vent saw and make vent cuts anywhere and any size. As far as the vessel goes, unless you have a torch and know what can be cut and where, you are pretty much out of luck. There are many pockets in these vessels and the upper deck support has large beams so the smoke and heat can and does get trapped very easy.

Once we were to the point of packing up and getting out, we also had to make sure that no firefighter or piece of equipment went home contaminated. The vessel was built in 1942 and had large amounts of lead paint and asbestos.

Bay Ship provides all firefighters with large plastic bags for gear, smaller bags for personal clothing, soap and cleaning supplies for gear, and showers.

It was quite the picture seeing everyone leaving in white Tyvek suits when we cleared the scene at 1:19am, more than 7 ½ hours after the initial call.
This was our second ship fire in 6 months. We typically have one a year but this was the worst to date. It was the first time the Sturgeon Bay Fire Department went to a MABAS Box.

Door County has only been a part of MABAS for over a year. The Division has used the cards at different times, maybe not when needed, but in a learning curve.

I am a firm believer that in the instance of the Alpena ship fire, MABAS has proven to be a life saver.

As Incident Commander, there is no way I could have remembered who I had coming and from where, or who could even provide the resources I needed to mitigate the incident.

I would have to say I could have gotten help there but MABAS has proven to be the easiest for a commander in an incident like this.

MABAS definitely provided safety to our firefighters and protection to the shipyard.

There are always things that don’t go as planned. One of the biggest things was thinking about the decon for 85 firefighters and their equipment.

We also found our county Medics and the rehab needed a little attention. But overall, I can’t be happier - all of the guys and gals under my command in a large incident like this went home safely in one piece.

We did have to send 2 firefighters to the hospital for dehydration and exhaustion but they all were released very quickly.

Training is always our biggest push, get into those unknown areas and don’t overlook the big obvious targets in your area. We watch these vessels come in and out all year long and never think of some of the largest hazards we can face are passing right by us.

We did have HUGE radio interference issues on these vessels as they are all steel and transmitting on any type of repeated channel is virtually impossible once you have entered the interior area or below any deck. We did use our fire ground channels which did help but we had to be positioned properly in order for everything to work properly.
**DIVISION 106 IN ACTION**  
**BY LAKE COUNTRY FIRE & RESCUE DEPUTY CHIEF MATT FENNIG**

At 10:40am, Thursday **December 17, 2015**, a fire was reported at N43 W32885 Rasmus Road in the Village of Nashotah, in Western Waukesha County. **Lake Country Fire & Rescue** responded and crews encountered a large, wind driven fire in an 8-family Condo.

**MABAS Division 106 Box 45-32** was used to summon the additional resources needed to extinguish the fire.

(Above left & above right photos by Todd Ponath, Lake Country Now)
(Below left photo by timsnopek.com)

**How to Contact Us**

Your contributions to the various columns will make this newsletter a success. Let us know about your MABAS response activity at [garyschmidt@wi.rr.com](mailto:garyschmidt@wi.rr.com). In particular, pictures of activity are needed.

If you see MABAS described in your local community news, please let us know at: [garyschmidt@wi.rr.com](mailto:garyschmidt@wi.rr.com)
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MABAS – Wisconsin
Mutual Aid Box Alarm System
Organized 2004

MABAS Wisconsin Regional Coordinators

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