

# MICHIGAN MILITIA CORPS WOLVERINES (MMCW)

## LEVEL 1 ENGINEER SUPPORT

### A CITIZENS GUIDE TO READINESS IN AN ENGINEER SUPPORT POSITION

Behind every successful militia outfit, team, or operation, there invariably must be a support element in place. Whether lugging an extra crate of medical supplies, operating a video camera, or grilling some burgers or brats, these support folks make the difference between a decent training event and an excellent training event. Without such fine support teams, membership would be down, and morale would not be as stellar as it is today.

By no means should support persons be considered "second-line" or anything of the sort. Neither should there be any truly defined line between support crews and line elements. Level One or higher qualified people can (and do) easily step in and perform critical support functions. By the same token, support persons can (and do) step in to regular training and assume leadership roles.

In an actual emergency, it is likely that support functions, such as medical duties, communications, and transport duties, and other fun logistical efforts will be the true measure of militia effectiveness.

#### **Basic Equipment:**

- 1) 4X4 Vehicle.
- 2) Suitable carrying gear to transport personal equipment.
- 3) Sidearm.
- 4) 40 rounds of ammunition for sidearm.
- 5) Water container, one quart minimum.
- 6) FRS Radio.
- 7) Combat knife.
- 8) Flashlight.
- 9) 3 days worth of food.

#### **Gear in Vehicle:**

- 10) Semi-automatic rifle.
- 11) 200 rounds of ammunition for same rifle.

- 12) Cleaning kit for both firearms.
- 13) 550 cord or parachute-cord, at least 250 feet.
- 14) 3 Squad meal kits.
- 15) 3 Cases of water.
- 16) Water purification tablets/filter.
- 17) 4 D-handle or full size shovels.
- 18) 4 2-handed axes.
- 19) 2 sledge hammers.
- 20) 2 Bow-saws.
- 21) 2 hammer with 2 lb. box of framing nails.
- 22) 2 20" blade chainsaws.
- 23) 5 gallons chainsaw fuel.
- 24) AO maps.
- 25) Compass.
- 26) Binoculars.
- 27) Notepad and pencil.
- 28) 40-channel CB radio.
- 29) 500' of duct tape.
- 30) Vehicle maintenance kit.
- 31) 25 chem-lights.
- 32) 10 gallons of gas in gas cans.
- 33) Vehicle winch.
- 34) 3/8" rope, at least 200 feet.
- 35) Barbed wire, at least 1300 feet.

## **Basic Abilities:**

- A) Place 8 out of 10 shots into a 9" target at 100 yards with rifle. You get 3 attempts for this shoot.
- B) Hit 8 out of 10 shots on a 9 inch target at 10 yards with sidearm. You get 3 attempts for this shoot.
- C) Field strip both weapons for cleaning and reassemble.
- D) Be First-Aid and C.P.R. trained.
- E) Qualification is valid for a time period of one year, at which time one must requalify at their current level or advance to the next level.
- F) You have 60 days from the time you start your qualification to complete it. Otherwise you must start over.

## **Detailed look at Level 1 Support Equipment:**

**1. 4X4 VEHICLE.** A Sapper Support Vehicle should be able to transport a four to five man team and gear. SUV's, Pick-up's, etc. If you happen to have a Deuce and a Half, even better.

Vehicles should never have less than a half tank of fuel at any time. Read the owners manual and comply with the maintenance schedule except for oil and lube intervals. Get your oil change and lubrication every 2,000-2,500 miles. Equip your vehicle with first-quality all-weather all-terrain tires and the largest battery you can get (don't need to run out of gas, have your battery die or your engine seize in the middle of an OP.) Consider carrying a small hydraulic floor jack and a large four-way lug wrench along with the usual emergency equipment (flares, spare tire, tire repair kit, flashlight, fire extinguisher, tow strap, jumper cables, tools, compressor).

Team members should be able to enter and exit the vehicle with ease while wearing their gear. Weapons and ammo should be stored in compliance with state laws (until the balloon goes up). Do not over burden your vehicle by exceeding its load capacity; bring what is needed to complete your OP. All other supplies and gear may be left at your base camp.

Vehicle must also have proper communication gear for the OP as well as emergency situations. FRS, CB, HAM or CELL PHONE with optional DC power adapter for the vehicle. A strobe light for emergency location and a portable spotlight (Million candle) for needed occasions.

Parked in the woods, a simple light weight camo net or parachute may be used for concealment.

**2. CARRYING GEAR.** There are many new, high-speed vests and carrying mechanisms available through US Cavalry, or other mail-order companies, but they are all very expensive. Some new, high-tech rigs can run close to, or even over, \$200!! You would be much better off sticking with surplus military gear. If, however, you have your own unique way of carrying gear that works well for you, then stay with that.

There are many configurations of carrying gear at any militia training. Feel free to come and see, or look through the pictures in other units Field Reports to see what the folks are carrying. A lot of rigs are amalgamations of mixed gear from many countries.

If you want ideas or suggestions on how to carry your stuff, please attend any militia training session and ask the people there for assistance. They will be more than willing to offer advice.

It is also important, especially with older gear, to make sure that there are no shiny metal surfaces visible. You can tape or paint over them. Also make sure that any straps are not excessively worn, and that all necessary clips are present and functional.

**3. SIDEARM.** There are many to choose from. This must be in a military-grade caliber (9mm, .45, .40) and you will also need a holster. Handgun/sidearms are not long range weapons. They are for close quarter use or as a back-up.

There are pluses and minuses to the different calibers. For example the 9mm has less hitting power than the .45 but you can usually get bigger magazines for the 9mm which in turn means less reloading of magazines. Again this is a personal choice.

If you are uncertain which to choose, ask your fellow militia men and women. See if they will let you try theirs before you drop a few hundred dollars.

**4. 40 ROUNDS OF AMMUNITION FOR SIDEARM.** These must be in magazines and no loose ammo.

**5. WATER CONTAINER.** This must be a sealable, non-glass container to carry water in. It must be able to carry at least one quart of water. You must be able to carry it "hands-free", so some kind of carrying strap, belt, suspenders, or other means of transporting is necessary. An open pitcher of water will not fulfill this requirement. A military surplus or other type of outdoor type of canteen will be fine. A regular one-quart water bottle will work, if you have some way to carry it. Some people have started out with a plastic pop bottle carried in a shoulder bag, and that is acceptable. In the winter, however, it is much riskier to try to thaw frozen water in a plastic canteen than in a metal one. We have seen too many plastic canteens melt in an effort to thaw frozen water. If you can find a metal canteen to use, especially in the winter, get one.

**6. FRS RADIO.** We all have them, and you should too. The cost of these radios is coming down all the time, and should not be considered prohibitive. The amount you spend on these, depending upon features and options, is up to you. Make sure it has a minimum 10-mile range (more is better). Check/replace your batteries before coming to the field and have extra batteries in your gear.

**7. BAYONET/COMBAT KNIFE.** Knife or bayonet with at least a four inch blade. This is pretty self explanatory. Many militia members carry a small work knife, and a separate combat knife. One even suggests carrying a katana, which is not a bad idea if you are willing to learn how to use it. Knives are tools first, and weapons second. Make sure you have a knife that you are willing to use. Knife fighting is an entirely separate issue, but it is something you should consider looking into. If you have a bayonet that actually fits on your weapon, good. Again, this is something that you should at least get some minimal training with. Contact your local militia people for bayonet training.

**8. FLASHLIGHT.** with red or blue lens cover. Cellophane works as such a lens cover. The smaller and lighter the flashlight, the better. Blue or red lens covers are harder to spot from a distance, and they don't compromise your night-vision. You may also wish to carry a small penlight as a back-up. Always check your flashlight's batteries BEFORE going out to the field, and keep extra batteries in your gear.

**9. 3 DAYS WORTH OF FOOD.** Being that you will be very active you need to adjust your calorie intake to compensate for this.

**10. SEMI-AUTOMATIC RIFLE.** A bolt action rifle does not suffice for this qualification. The calibers accepted for your MBR are the 7.62x39, .223, .308, 5.45x39, and the 30-06 (in that order of preference). By standardizing our ammunition and rifles we become a well oiled machine.

**11. AMMUNITION.** Your ammunition must be for your rifle. It is by far better to buy your ammo in bulk than to buy it a box or two at a time. Perhaps you can go in together with someone that uses the same rounds as you do. This is a common occurrence in the unit. It would be great if you (or your fellow team-mates) could get into reloading, so you could save even more money. We suggest that you keep at least 1000 rounds of ammo at home, as it can become a high-value commodity overnight. Ammo can be ordered from wholesalers, and delivered directly to you,

200 rounds is an absolute minimum carried load. Carrying a bucket of ammo will not work. If your weapon is magazine-fed, you must carry at least enough magazines to carry 200 rounds in. If you do not have a magazine-fed rifle, then keep your rounds on stripper clips. Loading single rounds one at a time can put you at a dire tactical disadvantage plus you don't want to be running around with a bunch of bullet clanking together as you move. You should make every effort to ensure that your ammo is easily accessible for quick and efficient reloading. It is a good idea to bring an ammo can full of your favorite rounds to training.

Armor piercing rounds, tracers, and such: These special purpose rounds are much more expensive than regular ball ammunition. If you can afford some, armor piercing rounds would be a bonus in the event that you are confronted by armor wearing foes (like the bank robbers in Los Angeles). If you are a small unit leader, you may wish to consider tracer rounds to help direct your unit's fire.

Hollow point ammunition is not allowed in armed conflict under the Geneva Convention. It is, however, acceptable for training or hunting. Please be aware that recent policy statements made by The US Department of Defense seem to express the position that in certain instances, hollow point type ammo is acceptable. The Hague protocols seem to apply to armed conflict between regular uniformed armed forces of a nation, and not to anti-terrorist operations.

**12. CLEANING KIT FOR BOTH FIREARMS.** Whether you prefer a bore-snake or rod with patches, you need to be able to clean your gun in the field.

**13. 250 FEET OF 550 CORD (PARACORD).** 550 cord or paracord is one the greatest multi-function items to carry in the field. This can be used to fashion a barricades and traps for vehicles, secure prisoners, fashion booby-traps, secure water crossing bridges, and anything else you can think of. The 250 feet is a minimum. It is available at army surplus stores or through mail order catalogs. Your friendly local militia people may have some as well. Get some.

**14. 3 SQUAD MEAL KITS.** Logistical Wizardry, and a trip to Gordon's Food Service, generates a low-cost meal package for 15 people, which cost a little over \$2 per meal. This will keep for a long time, and in a pinch, can be eaten without cooking.

The historical importance of this goes without saying. Keeping the team nourished in good times and bad is important. Keeping the meals simple and quick to prepare in any conditions is the challenge. What will be covered here are some ideas on what our brothers and sisters at Southeast Michigan Volunteer Militia (SMVM) use.

The boxes used are 13 inches x 13 inches x 13 inches. 1 - 6 lbs. can main course with meat, 1 - 6 lbs. can of vegetables, 1 - 6 lbs. can of diced potatoes and some kind of fruit or fruit cocktail. You can choose what ever you like, just make sure what fits into the box. All canned foods are pre-cooked, this ways, if time does not permit, you can serve the meal cold.

With room left in the box, add 15 disposable food trays, disposable utensils, napkins, salt & pepper, mixing spoons, can opener, matches, and trash bags for clean up. (Everything in this box is disposable; one box is totally self serving). Label box, list weight.

Next, to heat up, you may use a bar-b-que, campfire, Coleman stove or the engine block of your car. Everything you need to serve your team is included. One box serves 15 persons, if each member carried one box in their vehicle plus bottled water, together logistics will be improved. Remember, pick up your trash and properly dispose of it. Never leave a mess.

This also is not to be carried with you on your walk/run. You only need to show it for your qualification.

**15. 3 CASES OF WATER.** These goes with the squad meal kit.

**16. WATER PURIFICATION TABLETS/FILTER.** Whether you get a filter or chemical treatment, such as iodine, water purification is an important component of long-term field operations. Check your iodine tablets, if they are reddish orange (sort of a rust color), then they are no longer good. We have been told that "Polar Pure" crystal purification system works well, as do some of the other portable filter systems. One of the best filter systems is a "KATADYN" water filter. Ceramic filters may work very well, but may also break. In a pinch, you can simply bring your water to a rolling boil for no less than FIVE minutes, preferably longer.

**17. 4 D-HANDLED SHOVELS.** You may carry a couple full size shovels but the D-handled ones are preferred as they reduce chances of blisters. You can use these for digging a fox hole, tank ditches, a hole to do your business in when out in the field and there are no facilities, and many other things.

**18. 4 2-HANDED AXES.** To be used to build a bridge, tower, or an obstacle for vehicles and personnel.

**19. 2 SLEDGE HAMMERS.** For hammering wooden stakes in the ground, breaking up large boulders, flattening ground, etc.

**20. 2 BOW-SAW.** Used for smaller saplings where a chainsaw would be too overkill or too noisy.

**21. 2 HAMMER WITH 2 LB. BOX OF FRAMING NAILS.** To build a look-out tower, obstacle, traps, etc. There are times when nails will work better than rope.

**22. 2 20" BLADE CHAINSAWS.** A minimum 20" blade. Need to keep in good working order.

**23. 5 GALLONS OF CHAINSAW FUEL.** Best if kept in 2 smaller containers vs. one large one.

**24. AO MAP.** This includes both a state and county road map. We will give you one, if we have any on hand. You may wish to insure that your maps are current, by picking one up in a store or at a gas station. You can also get a Michigan state road map for free from [www.michigan.gov](http://www.michigan.gov) (go to the state website for a link under the 'resources' tab). Roads are always being worked on and maps always change. No reason to not have a road map

**25. COMPASS.** Non-electric, with degree markings. The cost on these will vary widely.

**26. BINOCULARS.** You can only see so far with the naked eye. These come in a variety of magnifications so try to get the best magnification you can find, and afford.

**27. NOTEPAD AND PENCIL.** You always find that you wish you had this to write something down. A pencil is preferred over a pen because it is more reliable. Pens dry up, freeze in cold weather, and can burst and make a big mess. Pencils on the other hand work in any temperature, can always be sharpened with a knife, and if it breaks then you now have two pencils.

**28. 40-CHANNEL CB RADIO.** CB radios have a much longer range than the FRS radios and they save on your batteries.

**29. 500' OF DUCT TAPE.** What cant you use duct tape for?

**30. VEHICLE MAINTENANCE KIT.** This will vary depending on your vehicle but you should have extra oil, coolant, transmission fluid, brake fluid, various fuses, zip ties, 4-way, FULL size spare (no "donuts"), electrical tape, etc.

**31. 25 CHEM-LIGHTS.** Light sticks/glow sticks are very versatile, light weight and don't require batteries. Stay away from the blue ones, they don't last as long as most of the others. The best colors are the yellow or white. They are the brightest and offer the most light. These also don't attract as many bugs as other lights do.

**32. 10 GALLONS OF GAS IN GAS CANS.** Metal jerry cans are the best but even the red plastic ones will work, just spray paint them. Again this is a minimum; you can also carry more gas cans if you wish especially if your vehicle has a small tank or is poor on gas mileage.

**33. VEHICLE WINCH.** You can get a winch mounted to the front with a grill guard if you want to go all out or something more simple like a rear hitch mount that is removable and transferable to other vehicles. A minimum tow weight of 5000lbs is required but you can always get bigger.

**34. 3/8" ROPE, AT LEAST 200 FEET.** It is best to have this in one piece of rope. You can always cut if you need to later. It loses durability when you tie it back together. There are too many uses for this to list them all.

**35. BARBED WIRE, AT LEAST 1300 FEET.** Normal spool of barbed wire is 1320 feet long. Keep this in a box or plastic tote so as not to snag or rip anything it comes in contact with while traveling.

**Support Abilities:**

**A. PLACE 8 OUT OF 10 SHOTS INTO A 9" TARGET AT 100 YARDS WITH RIFLE.** From a field expedient position place 8 out of 10 shots into a 9" target at 100 yards. No bench rests will be allowed, and there will be no coaching while you are firing your 10 round string. You will be required to complete this within 5 minutes. You may use a bipod, sleeping pad, rucksack, or whatever, as long as it was carried in your vehicle. You are not required to use anything. If time permits, you will be allowed to sight in prior to actual qualifying.

A total of three attempts will be allowed per training session. Following your first attempt, you are free to request a critique of your shooting. In fact, such critiques are often provided without any request at all.

Hitting a 9" target at 100 yards should be relatively easy. (At higher levels, the target will get smaller.) Almost any militia person will help you accomplish this. If you just show up at any range training, we'll be glad to help. (Some training sessions do not require firearms, so please check first.) The final word on shooting, and you will hear this repeated often, is "practice, practice, practice."

**B. Hit 8 OUT OF 10 SHOTS ON A 9" TARGET AT 10 YARDS WITH SIDEARM.** Place 8 out of 10 shots into a 9" target at 10 yards. No bench rests will be allowed, and there will be no coaching while you are firing your 10 round string. You will be required to complete this within 5 minutes.

A total of three attempts will be allowed per training session. Following your first attempt, you are free to request a critique of your shooting.

**C. FIELD STRIP YOUR WEAPON FOR CLEANING.** Since there are many types of weapons available, this guide cannot possibly cover even a fraction of them.

There are several ways to learn how to break down your rifle. You can learn from the manual that will come with any new rifle. You can learn from instructions published in some other sources, such as certain issues of "Guns & Ammo", and the like. You can also ask someone who is already familiar with that type of firearm. Any gathering of friendly militia people is bound to be brimming over with firearms knowledge, and they will be more than willing to help you. Do not be embarrassed to ask someone for help- the only dumb question is the one that you don't ask.

You will need to break your weapon down so that the bore, bolt, and gas system (if it has one) may be properly cleaned. There will be additional items that it is possible to break down (buffer springs, extractor pins, hand guards, etc.), but for now, this simple field-stripping will suffice.

**YOU WILL ALSO NEED TO PUT YOUR FIREARM BACK TOGETHER.**

In many instances, there will be a special tool or device required to break down a certain piece or aspect of a particular firearm. If you are aware of this, it is very important that you obtain this special tool, preferably when you buy the firearm. Sometimes, however, the requirement of a special tool is a warning that you should not remove that certain part at all, so any time a tool is required, exercise

extreme caution. Consult your manual, or someone who is thoroughly knowledgeable about your weapon before using any "special tools".

**VERY IMPORTANT NOTE: NEVER ATTEMPT TO DO ANYTHING WITH A WEAPON UNLESS YOU UNLOAD AND CLEAR IT FIRST! NEVER, EVER POINT YOUR WEAPON AT ANYONE! ALWAYS BE SAFETY CONSCIOUS!**

**D. BE FIRST-AID AND CPR TRAINED.** This is to make sure we have our bases covered incase of an emergency. You do not have to have a current certification, you just have to have taken a class on it so that you know what to do in an emergency. Many people have been through a class for their job. We hold periodic medic trainings to refresh everyone on what to do in certain situations.