



GRETCHEN WHITMER  
GOVERNOR

STATE OF MICHIGAN  
DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS  
LANSING

ORLENE HAWKS  
DIRECTOR

**AGENDA**  
**MICHIGAN FIRE FIGHTERS TRAINING COUNCIL REGULAR MEETING**

Park Place Hotel  
300 E State Street; Traverse City, MI 49684  
Friday, December 2, 2022  
1:00 pm

- I. Call to Order, Moment of Silence, and Determination of Quorum Chairperson Stokes
- II. Approval of Agenda Chairperson Stokes
- III. Approval of Minutes: October 18, 2022 Regular Meeting Chairperson Stokes
- IV. Communications
- V. State Fire Marshal's Report Fire Marshal Sehlmeyer
- VI. Curriculum Committee Update Councilperson Blomstrom
- VII. Old Business:
  - a. Q Course Applications:
    - 1. Mountain Rescue Workshop **(FMQ22-023)** Michael DeCraene
    - 2. Personal Skills Rescue Workshop **(FMQ22-024)** Michael DeCraene
    - 3. Team Skills Rescue Workshop **(FMQ22-025)** Michael DeCraene
  - b. Computer-based Testing Discussion Continued Fire Marshal Sehlmeyer
- VIII. New Business:
  - a. Proposed 2023 MFFTC Meeting Schedule Chairperson Stokes
  - b. Use of Returned Funding to the MFFTC after January 1, 2023 Fire Marshal Sehlmeyer
  - c. Adding Two (2) New National Fire Academy (NFA) Courses Fire Marshal Sehlmeyer
    - 1. FO633 Youth Firesetter Intervention Specialist Course – 16-hour Course
    - 2. FO634 Youth Firesetter Program Manage Course – 16-hour Course
  - d. Q Course Applications:
    - 1. RIC for the Rural Department **(FMQ22-027)** Brandon Cory
    - 2. Basic Water with Boat Operations **(FMQ22-028)** Councilperson Blomstrom
- IX. Public Comment
- X. Council Comment
- XI. Adjournment

**Next Meeting (Pending Vote at December Meeting):**

February 14, 2023 at 1:30 pm  
Delta Township Fire Department, Station #1 - 811 N. Canal Road, Lansing, MI 48917

**Agenda Items Due:**

5:00 on Tuesday, January 31, 2023



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**MINUTES**  
**MICHIGAN FIRE FIGHTERS TRAINING COUNCIL REGULAR MEETING**

Delta Township Fire Department, Station #1 Training Room  
811 N. Canal Road, Lansing, MI 48917  
Tuesday, October 18, 2022  
1:30 pm

**MEMBERS PRESENT:**

Kevin Beeson, Michigan Townships Association  
Brian Blomstrom, Michigan Fire Service Instructors Association  
Kurt Corradi, Michigan Association of Fire Chiefs  
David Feichtner, Michigan Association of Fire Chiefs  
Kevin Sehlmeier, State Fire Marshal, Ex-officio Member  
Kyle Svoboda, Vice Chairperson, Michigan Fire Inspectors Society  
Joseph Schehr, Michigan Professional Firefighters Union  
Robert Stokes, Chairperson, Nominee of the State Fire Marshal

**MEMBERS ABSENT:**

Steve Richardson, Michigan State Firemen's Association

**BUREAU OF FIRE SERVICES STAFF PRESENT:**

Macie Smith, Department Technician, Fire Fighter Training Division, Recording Secretary  
Hollie Metts, Assistant to the State Fire Marshal  
Dan Hammerberg, Region 1 Training Chief, Fire Fighter Training Division  
Aileen Pettinger, Region 2 Training Chief, Fire Fighter Training Division  
Liam Carroll, Certification Chief, Fire Fighter Training Division  
Jordyn Hanses, Student Assistant

**OTHERS IN ATTENDANCE:**

Jim Stevenson, Warren Fire Department  
Mark Cleveland, Egelston Township Fire Department  
Josh Mosher, Midland Fire Department  
Larry Gamb, Rochester Hills Fire Department  
Jack Johnson, Grand Rapids Fire Department  
Bill Race, Grand Rapids Fire Department  
Rob Ginther, Beverly Hills Department of Public Safety  
Dennis Cotton, Oakland Community College

## **I. CALL TO ORDER AND DETERMINATION OF QUORUM:**

Chairperson Stokes called the regular meeting to order at 1:30 pm. A moment of silence was observed for our fallen firefighters. Roll call was taken by recording secretary, Macie Smith. A quorum was determined present.

Fire Marshal Sehlmeier shared Councilperson Richardson is attending a national training session for line of duty death funerals in Baltimore, Maryland and is unable to attend the council meeting today.

Chairperson Stokes congratulated Councilperson Corradi and Chief Cleveland (who was in the audience) for completing Eastern Michigan University's Staff and Command School. He also stated Councilperson Feichtner did a great job as the MC at the graduation.

## **II. REVIEW AND APPROVAL OF AGENDA:**

### **22-10-01**

A **MOTION** was made by **Councilperson Blomstrom** and seconded by **Councilperson Schehr** to approve the October 18, 2022 regular meeting agenda as presented. **MOTION CARRIED.**

## **III. REVIEW AND APPROVAL OF MINUTES:**

### **22-10-02**

A **MOTION** was made by **Vice Chairperson Svoboda** and seconded by **Councilperson Corradi** to approve the August 9, 2022 regular meeting minutes as presented. **MOTION CARRIED.**

## **IV. COMMUNICATIONS:**

### **Fire Marshal Sehlmeier:**

- a) **Foam Training Rosters:** On October 15, 2022, with assistance from the Michigan Townships Association (MTA), the Bureau of Fire Services (BFS) sent a follow up letter to the township supervisors of departments that have not submitted the required training rosters. (The rosters were due on July 1, 2022.) Since then, the Fire Marshal has received inquiries about the foam training rosters.
- b) **Leadership Change:** The Fire Marshal also received a notice regarding a change in leadership for the Michigan Association of Fire Chiefs. Chief Menifee is now the president. Chief Roberts has retired and is now the past president.

## **V. STATE FIRE MARSHAL'S REPORT:**

- a) **BFS Staffing Updates:** Fire Marshal Sehlmeier took the time to welcome and introduce Jordyn Hanses. A quick overview was given on Jordyn's duties as a student assistant. Jordyn is working with the Fire Marshal and Hollie Metts on tracking foam training rosters, NFIRS compliance, and fire department survey responses.
- b) **Fire Prevention Month Overview:** Governor Whitmer has proclaimed October 2022 Fire Prevention Month in Michigan. The Fire Marshal has been reading to elementary school aged students around the state. To date, eight of the 13 school visits have been completed. Two visits (in Detroit and Southfield) will be rescheduled for later this month.

due to a scheduling conflict (the Fire Marshal's site visit to the warehouse fire in Menominee). Also on Tuesday, October 11, 2022, Fire Marshal Sehlmeier participated in an annual event organized by Captain Cary Thompson to walk Royal Oak students to school with members of the Royal Oak Fire Department. And last, there was a joint press conference held with the National Fire Protection Association, the Phoenix Burn Society, and Domino's Pizza at the Flint Fire Department on Wednesday, October 12, 2022.

- c) **Fatal Fire Update:** To date, there have been a total of 94 deaths in 79 fires statewide. This is a 6% increase year-to-date based on the five-year average from 2017 to 2021. The Fire Marshal added the BFS received \$1 million in funding for FY23. This funding will be used to purchase smoke alarms to be distributed to fire departments around the state.
- d) **FY22 Course Summary:** Fire Marshal Sehlmeier gave an overview of the course summary and clarified the payment process. He explained the State of Michigan pays the county within two weeks (or less) once all course paperwork is received and the course is closed out by the BFS Training Chiefs. Once the money has been received from the State, the counties then pay the instructors. There was additional discussion regarding invoices. Councilperson Blomstrom asked if invoices need to be submitted with other documentation. Region Training Chief Dan Hammerberg advised a copy of the invoice is needed if you are using county funds to buy equipment. If you are not using county funds to purchase equipment, you do not need to submit a copy of the invoice for Michigan Fire Fighters Training Council (MFFTC) courses. Q courses would require an invoice. Chairperson Stokes stressed the importance of closing out all courses properly to ensure a smooth and timely payment process for all involved.
- e) **Fire Officer III:** The BFS hosted the first train-the-trainer on August 22, 2022 and had 47 participants. The next train-the-trainer is scheduled for November 10, 2022. The deadline to apply is October 26, 2022 by 5:00 pm. The first Fire Officer III exam is scheduled on January 4, 2023. Certification Chief Liam Carroll is working on the exam questions and expects them to be ready for the Curriculum Committee's review in approximately 3 weeks.
- f) **Curriculum Committee Update:** A doodle poll was sent to the Curriculum Committee members to schedule a meeting to review the Fire Officer III exam questions. Members of the Curriculum Committee now include:
- Marty Erskine, Representing the Michigan Association of Fire Chiefs
  - Mark Cleveland, Representing the Michigan Association of Fire Chiefs
  - Brian Blomstrom, Representing the Michigan Fire Service Instructor Association
  - Ray Wlosinski, Representing the Michigan Fire Service Instructor Association
  - Lewis Kempf, Representing the Michigan Professional Firefighters Union
  - Ryan Michael Gierman, Representing the Michigan Professional Firefighters Union
  - Terry Blackmer, Representing the Michigan State Firemen's Association
  - Blane Howell, Representing the Michigan State Firemen's Association
  - Lynnae White, Representing the Michigan Fire Inspectors Society
  - Tom Hughes, Representing the Michigan Fire Inspectors Society



- Mike Burke, Representing the Michigan Townships Association
- Sean Canto, Representing the Michigan Municipal League

Councilperson Feichtner inquired about the process for appointing a chairperson for the Curriculum Committee. Fire Marshal Sehlmeier and Councilperson Blomstrom explained that past MFFTC Chairperson, Tim James, had appointed Councilperson Blomstrom to chair the committee.

A **proposed motion** was made by **Councilperson Feichtner** and seconded by **Councilperson Corradi** to elect a chairperson for the Curriculum Committee by vote. Discussion pursued on the Curriculum Committee's chairperson position. Chairperson Stokes directed council to R29.401(e) which discusses the curriculum work group. This rule states the curriculum chairperson is appointed by the chairperson of the council. After discussion and clarification on the rules by Chairperson Stokes, Councilperson Feichtner's **motion was withdrawn**.

The discussion continued as to whether Councilperson Blomstrom would continue to chair the Curriculum Committee and the continuity it brought between the council, the BFS and the work group. Chairperson Stokes asked the council for a vote.

**22-10-03**

A **MOTION** was made by **Vice Chairperson Svoboda** and seconded by **Councilperson Schehr** to have Brian Blomstrom remain as the chair of the Curriculum Committee. **Councilperson Blomstrom abstained. MOTION CARRIED.**

- g) **County Funding for FY23:** Three counties did not turn in their annual training needs survey and therefore, did not receive their county funding for FY23. Once the county surveys are received by the BFS, the funding will be distributed to those counties.
- h) **Overview of Returned Funding from 2017-2022:** A breakdown of the FY22 funding by the county was provided to the council members. Fire Marshal Sehlmeier further explained the following:

<u>Year</u>	<u>Budget</u>	<u>Returned</u>	<u>Money Designations</u>
2017	\$2,000,000.00	\$2,237.40	The funding was given to the BFS for the Fire Marshal to coordinate the distribution of those funds.
2018	\$2,000,000.00	\$24,949.76	The funding was used to purchase training mannequins for the counties.
2019	\$2,300,000.00	\$0.00	First, the council gave out grants and gave the Fire Marshal/BFS the discretion to spend any remaining funds.
2020	\$2,300,000.00	\$317,229.03	COVID did not allow for much to happen, even shutting down some courses.
2021	\$2,300,000.00	\$586.65	Mental health grants were given out to begin the year and then remainder came back to the BFS to spend.

2022	\$2,300,000.00	\$115,587.00	Grants were given out at the beginning of the year. The counties kept the funding, and no funding was given back to the bureau.
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Fire Marshal Sehlmeier asked council to consider the returned funding as council continues to explore options to reallocate returned funding in FY23. The council will discuss further at the December 2, 2022 meeting.

- i) **Firework Safety Fees:** Council had asked Fire Marshal Sehlmeier to bring back information on 2017-2022 Firework Safety Fee collection totals.
  - FY17: \$2 million collected/\$2 million to counties
  - FY18: \$1.6 million collected/\$2 million to counties
  - FY19: \$1.9 million collected/\$2.3 million to counties
  - FY20: \$3.4 million collected/\$2.3 million to counties
  - FY21: 3.6 million collected/\$2.3 million to counties
  - FY22: 3 million collected/\$2.3 million to counties
- j) **Computer-Based Testing Findings:** At the August meeting, council asked Fire Marshal Sehlmeier to research on-line testing for certification exams. So far, he has looked into the following companies: Acadis, Right Track Response Solutions, and Par Test. While he does not have specific quotes from the computer-based testing companies just yet, he estimates the general start-up costs to be approximately \$300,000 with legacy costs running anywhere from a couple hundred thousand per year to up to \$1 million per year. He shared that if computer-based testing were to be adopted he would need to request a budget increase. He also noted a common issue he's found is that with most companies there is a limit to the number of people allowed to test at a given time.
- k) **Fire Training Video:** This is a legislative requirement for all Michigan fire departments to show a 14-minute [video](#) on the health, handling, and proper use of Class B AFFF to their members. Fire departments were asked to complete the required training and submit a training roster to the BFS by July 1, 2022. To date, a total of 538 of the 1,100 Michigan fire departments have turned in training rosters. As mentioned during Communications, a follow-up letter was sent to the townships on October 15, 2022.
- l) **Fire Department Survey:** In addition to the fire training video, the Fire Marshal asks that all fire chiefs complete a short fire department [survey](#). To date, a total of 266 departments have responded. The information will be used to update SMOKE (training database), the Fire Service Directory, and to get a better understanding of the recruiting and retention challenges affecting Michigan fire departments. Fire Marshal and Chairperson Stokes encourage everyone to make sure their profile in SMOKE is accurate with their current email, address, phone number, position, etc.
- m) **NFIRS Non-Reporting Departments:** To date, a total of 134 departments have not reported at all this year.

n) **Legislative Updates:** Fire Marshal Sehlmeier updated council on the following proposed legislation:

- Schools:
  - [House Bill 5561](#): Radio systems in K-12 schools
  - [House Bill 6319](#) – Fire Drills (Fire drills reduced by one, lock down drills increased by one)
  - [House Bill 5701](#) – School Barricade Devices
  - [House Bill 6331](#) – School Construction and Lockdowns
- Tanks:
  - [House Bill 6421](#) – Software/Reporting
  - [Senate Bill 1169](#) – New Tanks
- Fireworks:
  - [House Bill 5333](#) – Fireworks Bonds
  - [Senate Bill 5](#) – Fireworks
  - [Fireworks Package House Bill 4888-4892](#)
  - [House Bill 5063](#) & [Senate Bill 355](#) – Fireworks/Juneteenth
- Residential/Construction:
  - [House Bill 6304](#) – Automatic sprinklers in new builds/multi-family dwellings

o) **Wednesday Wrap-Up Dates/Times:** The next wrap up is scheduled for October 19, 2022 at 4:00 pm and 7:00 pm. There are three wrap up dates in November, which are November 2, 2022 at 4:00 pm, November 16, 2022 at 4:00 pm, and again on November 30, 2022 at 4:00 pm and 7:00 pm.

#### **VI. CURRICULUM COMMITTEE UPDATE:**

Councilperson Blomstrom stated a doodle poll has been sent to the members to find a date and time to review the Fire Officer III exam.

#### **VII. OLD BUSINESS:**

##### **a) Q Course Applications**

Fire Ground Communications/Opposing Fields of View (**FMQ22-015**)

Instructor: Justin Holmes / Phone: 616-788-9436

People Before Water (**FMQ22-018**)

Instructors: Justin Holmes / Phone: 616-788-9436

**22-10-04**

A **MOTION** was made by **Councilperson Corradi** and seconded by **Councilperson Blomstrom** to **approve** Q Course applications **FMQ22-015** and **FMQ22-018**.

**MOTION CARRIED.**

b) **Computer-Based Testing:** Covered during the State Fire Marshal's report.

#### **VIII. NEW BUSINESS:**

a) **NFA Incident Command for Highrise Operations Train-the-Trainer:** Fire Marshal Sehlmeier clarified that in the past, this was actually a council approved National Fire Academy (NFA) course that had been sunsetted due to the "A" series not being updated. Now, the Fire Marshal is asking to add this course back into an approved

MFFTC NFA offering with a “B” code as the next updated edition of this course. The code for this new course would be L09B. Chairperson Stokes shared the NFA Incident Command for Highrise Operations course was given in Detroit and was found to be very beneficial. There was a lot of interest both in Detroit and from regional partners outside of Detroit that attended the course.

**22-10-05**

A **MOTION** was made by **Fire Marshal Sehlmeier** and seconded by **Vice Chairperson Svoboda** to **add NFA Incident Command for Highrise Operations (L09B) back into the curriculum** at the BFS through the MFFTC. **MOTION CARRIED.**

Next, Fire Marshal Sehlmeier discussed who could teach the updated L09B course that was adopted. In the past, anyone who taught L09A had attended a train-the-trainer that ran back in 2003. Under the current rules, Instructor II instructors can teach anything they have taken, so if they took this course then they could also teach the course. If an individual was an Instructor I certified before November 3, 2021 and has taken **NFA Incident Command for Highrise Operations**, they can also teach the course.

**b) Q Course Applications:**

Company Officer Academy (**FMQ22-021**)

Instructor: James Stevenson / Phone: 586-202-1987

**22-10-06**

A **MOTION** was made by **Councilperson Schehr** and seconded by **Vice Chairperson Svoboda** to **approve Q Course application FMQ22-021. MOTION CARRIED.**

OCC Live Fire Search and Rescue (**FMQ22-022**)

Instructors: Philip Hall / Phone: 248-379-4906

**22-10-07**

A **MOTION** was made by **Vice Chairperson Svoboda** and seconded by **Councilperson Corradi** to **approve Q Course applications FMQ22-022. MOTION CARRIED.**

Mountain Rescue Workshop (**FMQ22-023**)

Instructor: Michael DeCraene / Phone: 313-363-1377

Personal Skills Rescue Workshop (**FMQ22-024**)

Instructors: Michael DeCraene / Phone: 313-363-1377

Team Skills Rescue Workshop (**FMQ22-025**)

Instructor: Michael DeCraene / Phone: 313-363-1377

**22-10-08**

A **MOTION** was made by **Councilperson Feichtner** and seconded by **Councilperson Blomstrom** to **table Q Course applications FMQ22-023, FMQ22-024, and FMQ22-025 until the next meeting** on December 2, 2022 due to no course syllabuses. **MOTION CARRIED.**

Responding to Gasoline Tanker Emergencies (**FMQ22-026**)

Instructor: James Stevenson / Phone: 586-202-1987

**22-10-09**

A **MOTION** was made by **Councilperson Blomstrom** and seconded by **Councilperson Corradi** to **approve Q Course application FMQ22-026. MOTION CARRIED.**

**IX. PUBLIC COMMENT:**

None

**X. COUNCIL COMMENT:**

**Councilperson Blomstrom** recommends everyone confirm their reservation with the Park Place Hotel in Traverse City for the MFSIA Conference. He added additional room blocks have been made available for anyone interested in attending.

**Fire Marshal Sehmeyer** noted the start time of the next meeting is 1:00 pm to align with the conference schedule, not 1:30 pm.

**Chairperson Stokes** reminded all council members and members of the public that agenda items for the December 2, 2022 regular meeting are due by November 18, 2022 at 5:00 pm.

**XI. ADJOURNMENT:**

**22-10-10**

A **MOTION** was made by **Councilperson Feichtner** and seconded by **Councilperson Schehr** to **adjourn** the meeting. **MOTION CARRIED.** The meeting adjourned at 3:31 pm.

**APPROVED:**



# "Q" COURSE APPLICATION

Michigan Department of Licensing & Regulatory Affairs  
Bureau of Fire Services, Fire Fighter Training Division  
P.O. Box 30700 Lansing, MI 48909  
Email: [LARA-BFS-SMOKE@MICHIGAN.GOV](mailto:LARA-BFS-SMOKE@MICHIGAN.GOV)

FMQ22-023

To add a seminar/course to be listed in SMOKE submit this form to the following email address: [LARA-BFS-SMOKE@MICHIGAN.GOV](mailto:LARA-BFS-SMOKE@MICHIGAN.GOV) for review. The request will be reviewed and forwarded to the Michigan Fire Fighter Training Council (MFFTC) for curriculum review at the next scheduled MFFTC meeting (all requests must be made at least 15 days prior to the next regularly scheduled meeting).


## SECTION I

<b>Name of Applicant:</b> Michael DeCraene		<b>SMOKE PIN:</b> 597114	<b>Date:</b> 06-14-2022
<b>Host Fire Department:</b> St. Clair Shores		<b>County:</b> Macomb	
<b>Applicant Street Address:</b> 843 Walnut Glen Ct.			
<b>City:</b> Oakland Twp.	<b>State:</b> MI	<b>Zip Code:</b> 48363	<b>Email:</b> mpdecraene@gmail.com
<b>Applicant Phone Number:</b> 313-363-1377		<b>Alternate Number:</b>	

## SECTION II

<b>Seminar/Course Name:</b> Mountain Rescue Workshop		
<b>Instructor(s):</b> Michael DeCraene	<b>Instructor Phone Number:</b> 313-363-1377	
<b>Instructor Email:</b> mpdecraene@gmail.com	<b>Flyer Attached:</b> <input checked="" type="checkbox"/>	
<b>Course Description:</b> (Include course syllabus and detailed course expenses-you may attach additional pages if needed) The Mountain Rescue Workshop is a minimalist approach to mountain rescue procedures and teaches the access, stabilization and extrication of patients involved in mid-face free or aid climbing accidents, especially those where the accident site is only accessed from below. There is a heavy emphasis on advanced knotcraft (several boutique bowlines) in this workshop. The student will learn how to design and build system anchors from bolts, pitons and active and passive rock climbing camming devices. Strong emphasis is also placed on wilderness improvised techniques where heavier equipment is not usable.		
<b>Applicable NFPA Standard(s):</b> NFPA 1006, NFPA 1670, NFPA 1983, NFPA 1500, NFPA 2500, NFPA 1858, Part 74		
<b>Class Capacity:</b> 12	<b>Total Hours of Training:</b> 70	<b>Amount Requested:</b> \$20,000

## SECTION III

<b>Applicant Signature:</b> 	<b>Date:</b> 9.9.22	
<b>BFS USE ONLY</b>		
<b>Date Approved by MFFTC:</b>	<b>"Q" Course Number Assigned:</b>	<b>Date Course Catalog Updated:</b>



# Michigan MRW INFO Sheet



## Mountain Rescue Workshop See Current RTR Open Schedule for Dates

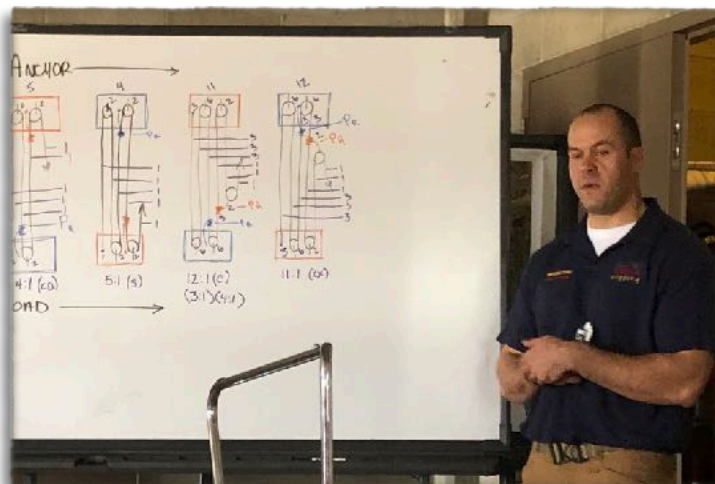
Grand Ledge, Auburn Hills, MI

Instructor: Michael DeCraene

*“An Excursion into the Vertical Realm” with Instructors Michael DeCraene*

Ropes That Rescue is always proud to announce the MOUNTAIN RESCUE WORKSHOP in Michigan. See [RTR Schedule](#) for start date. SAR volunteers from AZ get a 50% discount. This program starts out with lecture inside at Auburn Hills, MI and moves into on rope time at Grand Ledge which is the perfect venue for this program.

The MRW fulfill the 90% solution on most rope rescues within wilderness locations. It is designed for the serious search and rescue practitioner wishing to improve their personal rigging skill and capability. This workshop is sometimes mistakenly perceived as a beginning program due to the personal nature of many of the evolutions. In fact, it is for those that never seem to get enough on rope experience or time over the edge. The MRW begins with valuable, yet simple definitions for belays, self belays, conditional belays and conditional self belays and how these differ in their engineering.



It goes into important orientation on personally carried gear such as ascenders and descenders, self belay devices, Purcell prusiks, the ever useful AZTEK and other items essential to safety in the vertical realm and then moves into practical and fun-filled days where multiple one-on-one rope stations keep the practitioner busy throughout the day. Students in the MRW practice their skills and learn to work together as a team in successful retrieval of this patient in a non-threatening environment. These are found in the Seven Minimalist Rescue Archetypes (7MRA) that lay a groundwork for understanding how solo versus semi-solo rescues vary in their risk to the rescuer. The MRW goes well into often overlooked personal skills that are taken for granted on most rescue teams.



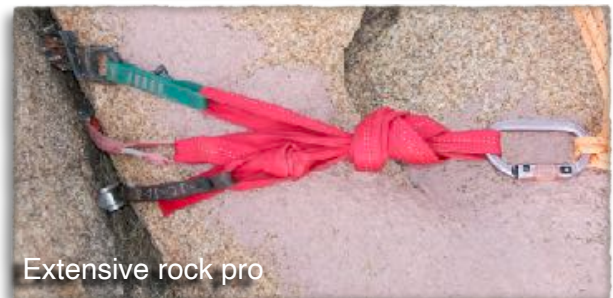
There is also considerable time spent on rope learning to climb/descend rope by multiple methods (even improvised if you drop your friction appliance). Passing knots, deviations, rebelay, rope to rope transfers, aid climbing and problem solving are all part of the MRW. Proficiency through repetition to mastery are encouraged. There is a very very strong emphasis on advanced knotcraft in this workshop! Students are tested throughout the program for proficiency and the ability to tie under pressure. All in fun, of course!

## MRW KEY POINTS -

- Strong emphasis on personal mountain rescue skills
- Rope coiling methods-Rope management
- Improvisation and minimalism "What do you do if the gadget does not show up?"
- Knotcraft to the extreme (There is a strong emphasis on knot skills)
- Introduction to pulley systems
- Beginning litter work in high angle evacuations (practice at "attending")
- "V" strap (pike and pivot) litter evacuations
- Cocoon stretcher with canyoning lines
- Rope problems needing strong personal skill base
- True belays/self belays/conditional belays and conditional self belays
- Self rescue techniques / Buddy rescue techniques
- Complete AZTEK kit orientation for personal and team operations:
  - Single and double part hasty rappels
  - Belays and self belays
  - Dynamic fixed and traveling brakes
  - Dynamic directionals
  - Personal travel restrict and fall protection
- Complete Seven Minimalist Rescue Archetypes
- Solo rescuer pick off ("gecko" and hanging)
- Semi-solo rescuer pick offs ("gecko" and hanging)
- Lead climbing (optional) and down climbing techniques (continued next page)
- Sound anchoring principles: simple through advanced system anchors
- One on one rescues (solo):
  1. Pitch Head Rescue (rescue of one below hanging by rescuer on top)
  2. Pitch Toe Rescue (rescue of one from base of cliff to top by rescuer hauling)
  3. Counterbalance Method of rescue (if time allows)
- Much more....



Cocoon litter stretcher with canyoning line



Extensive rock pro



Focused floating anchors





## MOUNTAIN RESCUE WORKSHOP 2022 SYLLABUS

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General discussion on this RTR Workshop-

The Mountain Rescue Workshop (Acronym: MRW) is a minimalist approach to mountain rescue procedures and teaches the access, stabilization and extrication of patients involved in mid-face free or vertical aid climbing accidents, especially those where the accident site is only accessed from below. There is a heavy emphasis on advanced knotcraft in this workshop. The student will learn how to design and build system anchors from bolts, pitons (if applicable) and active and passive rock climbing camming devices. Strong emphasis is also placed on wilderness improvised techniques where specialized or heavier equipment has no place. Use of whipped and frapped wood frames as high directionals is encouraged, but also the use of the Rock Exotica Arizona Vortex (developed in Sedona, AZ by RTR) is also sometimes a focus of this workshop if desired by the students. In the 2022 Alaska MRW, the students were predominantly all mountain SAR members and they wanted to only use wood frames which was encouraged. Other MRW classes wanted diversity because the timber is more scarce. It depends on the location (venues) of the MRW.

This workshop is designed for the serious mountain environment rope rescue practitioner wishing to improve their personal and team rigging skill. The MRW goes well into often overlooked personal top down skills involving solo (one rescuer) and semi-solo (two rescuer) victim evacuations employing the rescuer's personal AZTEK kit. Also, the workshop explores the use of improvised low edge techniques for very difficult litter evolutions as well as artificial high directionals in the remote wilderness location. Gin poles, A frames and sideways (SA) frames are common from wood or metal. Also, advanced anchoring with "bombproof", substantial and marginal (contributory) anchors are used on rigging pods, bipods and sometime tripods (see photos).

Students in the MRW practice their skills and learn to work together as a team in successful retrieval of this patient in a non-threatening environment. These are found in the Seven Minimalist Rescue Archetypes (7 MRA) that lay a groundwork for understanding how top down solo versus semi-solo rescues vary in their risk to the rescuer. The MRW goes well into often overlooked personal skills that are taken for granted on most rescue teams. There is also considerable time spent on rope learning to climb/descend rope by multiple methods (even improvised if you drop your friction appliance). Passing knots, deviations, rebelay, rope to rope transfers, aid climbing and problem solving are all part of the PSRW. Proficiency through repetition to mastery are encouraged. There is a very very strong emphasis on advanced knotcraft in this workshop! Students are tested throughout the program for proficiency and the ability to tie under pressure. All in fun, of course!

In addition to the top down 7 MRA the more recent MRW (as in the 2022 Juneau, Alaska and the earlier New York "Gunks" climbing area MRW) we also sometimes go into the very demanding bottom-up solo rescue techniques. These involve the well-known "pitch head solo rescue", the more severe, lesser known "pitch toe solo rescue" and the "counterbalance solo rescue" techniques. All of them are performed with an AZTEK, hand tied Purcell prusiks and all of them challenge the students to be self sufficient in the mountains. The inclusion of these bottom up techniques are dependent on long days and extreme physical stamina. In some MRW, we are not always able to include these for time reasons. Indeed, some of the students in recent classes preferred to tackle these bottom up techniques before some of the top down ones which are better known.

In one notable 2012 MRW, the crux of the MRW was where students free climb (or ascend) using the bight-carry technique to position a high directional above the victim on a wall. Students free climbed the famous "Queen Victoria Spire" (5:8) on the Mitten Ridge in Sedona to pull off this difficult task. In this way, a heavy and cumbersome rescue adjunct (litter, etc.) can be brought to the victim high on a wall, under them, and then lowered downward (techniques used in tower rescues). Students also learn the classic differences belays, conditional belays and conditional self belays. In the superb rock of the Granite Dells of Prescott, the MRW involves more personal movement on stone and personal rigging skill. Lots of climbing and lots of fun!

Bottom line: EVERY Mountain Rescue Workshop is different according to the needs of the students.

## The MRW covers: (as time allows)

NOTE: This workshop's scope varies according to the student's desires and needs. Not all the below can be accomplished in certain MRW

- Personal safety/ the infamous “buddy check” and team safety
- Knotcraft (extensive knots, bends and hitches)
- Mountain harness organization (where to store everything)
- Personal skills for self rescue, solo and semi-solo rescue
- Rope management and proper coiling to carry on back/front
- Tying Purcell prusiks from one 33' (10M) length of 6mm accessory cord:
  - Long leg Purcell with webbing foot stirrup
  - Short leg Purcell with webbing foot stirrup
  - Chest Purcell
- Complete orientation on the first 8 uses of the AZTEK: (Use of the MadRock Safeguard®)
  1. Travel restrict - edge restraint - single part
  2. Travel restrict - edge restraint - double part
  3. Self belay
  4. True belay
  5. Single part rappel
  6. Double part rappel
  7. Ascending/descending on double part (#6)
  8. Use of the seat of fours (SO4) for lowering and raising
- Manual and auto stop friction appliances
- Anchoring:
  1. Point anchors (natural and artificial)
  2. Multi-point anchors: (including critical analysis)
    1. 2x1 (or more) fixed anchors
    2. 2x1 (or more) distributing anchors
  3. Focused and focused floating anchors
  4. Pre-tensioned back tie and opposition front tie anchors
- Anchoring devices:
  1. Rock protection: Active and passive protection
  2. Pitons (as time permits)
  3. Bolts (permanent and removable) (as time permits)
- Belaying techniques: (Manually operated or auto-stop)
  1. Improvised body belays
  2. Sticht principle devices (ATCs, belay plates, etc.)
  3. Hitch belays (Münter and prusik)
  4. Auto stop belay devices (Petzl GriGri® etc.)
- Friction appliances: Auto stop and other
  1. Fixed brakes (static and dynamic fixed brakes)
  2. Traveling brakes
- Introduction to pulley systems (partial lecture)
- Multiple methods of descending on rope
- Top down solo rescue: Complete Seven Minimalist Rescue Archetypes (7MRA)
  1. Top rescue of casualty hanging on rope below (dynamic fixed brake with AZTEK)
  2. Gecko person with no harness - Solo rescuer traveling brake pick off with diaper harness (or other)
  3. Multiple gecko persons with no harnesses - Solo rescuer on traveling brake with mid rope fixed brake pick off with diaper harness (or other)
  4. Solo rescuer pick off using AZTEK on traveling brake (hanging casualty)
  5. Semi-solo rescuer (rescuer lowered from top on end of rope) pick off ("gecko" and hanging) using AZTEK
  6. Semi solo rescue using AZTEK on top attached to top end of rope. Rescuer descends on traveling brake to casualty. Attaches. The top brakeman does raise on both.
  7. Semi solo rescue using AZTEK on top attached to fixed brake. Rescuer is lowered by top brakeman to casualty. Attaches. The top brakeman does raise on both.

- Bottom up solo one-on-one rescues: (if enough time)
  - Pitch head rescue (breaking into lines on top with AZTEK and bringing casualty up from bottom)
  - Pitch toe rescue (descending to bottom and attaching to casualty with AZTEK and ascending with them to top) Inch worm technique.
  - Counter balance rescue (if time permits)(Using your own weight to advance someone up a cliff or drop)
- Lead climbing (optional)
- Stretcher handling on vertical high angle
- Whipping and frapping of wood frames (optional)
- AZ Vortex frames (optional)
- H-pole technique (Human high directional - optional)
- Mid face litter scoops
- Improvised cocoon stretcher from accessory cord (optional)
- “V” strap litter technique (pike and pivot)

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## D A Y S C H E D U L E

NOTE: Flexible agenda based on weather and a typical 10 hour day

### DAY 1 — INSIDE CLASSROOM

1. Logistics. Intro by host agency (if any).
2. Introductions: Instructor(s) and student introductions complete with background and medical/rescue training. General discussion on scope of workshop. Where should the course head? Is there any particular procedure that someone in the course wishes to address?
3. Thorne Group VIDEO 1A: *“Introduction to Rope Rescue”*
4. Safety considerations: Student safety during the week and environmental concerns; what to wear, insidious weather problems, etc. Discussion of emergency action plan. Students to sign additional *“Participation Agreement, Release and Assumption of Risk”* document in the instructors presence after discussion with all students
5. Knotcraft: General discussions of knots, bends and hitches; differences, nomenclature, applications, etc. Practice all of them in classroom. Break the ice! (Note: students SHOULD know basic knots prior to class.) Show slide show *“KNOTCRAFT with Reed and Sequoia”*.
6. MRW Student Manual: Discussion on contents.
7. Slide show: *“Introduction to Rope Rescue”*
  - Background of RTR Instructor(s)
  - What is “rigging” and then again, “CLEAN rigging?”
  - Differences between The Incident and Training
  - The Critical Analysis Paradigm
  - The need for two ropes - The Critical Point Test (CPT)
  - The Knowledge & Skill Matrix - If appropriate
  - The 4 Belay Archetypes: Discussion and lecture on various belays: personal and system belays. Comparison of a) belays in general, b) self belays, c) conditional belays, d) and conditional self belays.
8. Critical point test/Whistle test
9. Two-point Philosophy: Discussion and lecture on the back-up, redundant, parallel system. How it applies to a) individual rescuers, and b) rescue systems. Differences between disciplines: mountaineering vs. rescue work; military vs. rescue work; caving vs. rescue work, etc.
10. Thorne Group VIDEO 1B: *“Belaying the One Person Load” (may be next day as time permits)*

### DAY 2 — INSIDE CLASSROOM - OUTSIDE (not at elevation)

1. Knotcraft practice (second day)
2. Anchoring methods lecture using marginal anchors in wilderness. Rock protection.

3. System belays: Tandem Prusik Belay (TPB) for wilderness mountain SAR participants.
4. Complete orientation on the first 8 uses of the AZTEK:
  1. Travel restrict - edge restraint - single part
  2. Travel restrict - edge restraint - double part
  3. Self belay
  4. True belay
  5. Single part rappel
  6. Double part rappel
  7. Ascending/descending on double part (#6)
  8. Use of the seat of fours (SOF) for lowering and raising
5. Friction appliances: The use of twisting and non-twisting friction devices. Manually operated and self locking auto stop friction devices. Pros & cons of each kind. Thorough discussion on the system and personal brake appliances. Larger MPD®, Maestro® and Clutch® are discouraged for personal or team use. Too heavy for the mountains. However, students may still use if they wish.
6. Anchoring: The differences between 1) “bombproof”, 2) substantial, and 3) marginal anchors. Lecture on the clear delineation of:
  1. Marginal anchors (Am)
  2. Substantial anchors (As)
  3. “Bombproof” anchors (Ab)
  4. Substantial focused anchors (Asf)
  5. Bombproof focused anchors (Abf)
  6. Substantial focused floating anchors (Asff)
  7. Bombproof focused floating anchors (Abff)
7. Use of focused floating anchors using from 1 or more pre-tensioned back ties + opposition:
  1. Rigging plates (no compression members)
  2. Rigging pods (one compression member)
7. Discussion of the all important “buddy check” before heading into any exposure
8. Discussion on fall factor
9. Head too field to begin the on rope training

### **DAY 3 — INSIDE CLASSROOM + OUTSIDE (at elevation)**

1. Knotcraft practice (third day)
2. Continue on rope training:
  - Backup device handling (keep high to reduce fall factor)
  - Ascending:
    1. Full ascent (chest and handled ascenders)
    2. Half and half (half handled ascender and descender)
    3. Half and half (half handled ascender with pulley and descender)
    4. Purcell prusiks (short leg Purcell as backup)
  - Descending:
    1. Auto stop descender
    2. Manually operated device descent
    3. Münter hitch
  - Dogging off appliances and leg wraps

### **DAY 4 — IN FIELD**

1. Continue Day 3 practicals
2. Simple top down casualty rescues from structure/ledge (some are optional)
  - Rescue of casualty supported on structure/ledge - Traveling brake rigged on casualty - use 2:1 MA to lift casualty off then place on lap of rescuer to lower to ground
  - Rescue of casualty supported on structure/ledge - Traveling brake rigged on fixed rope above casualty with AZTEK SO4s - lift and lower brake to level and add rescuer
3. Possible beginning of Seven Minimalist Rescue Archetypes (7MRA) early (see day 5)

## **DAY 5 — IN FIELD**

1. Continue Day 4 practicals
2. Top down solo rescue: Complete Seven Minimalist Rescue Archetypes (7MRA)
  1. Top rescue of casualty hanging on rope below (dynamic fixed brake with AZTEK)
  2. Gecko person with no harness - Solo rescuer traveling brake pick off with diaper harness (or other)
  3. Multiple gecko persons with no harnesses - Solo rescuer on traveling brake with mid rope fixed brake pick off with diaper harness (or other)
  4. Solo rescuer pick off using AZTEK on traveling brake (hanging casualty)
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  7. Semi solo rescue using AZTEK on top attached to fixed brake. Rescuer is lowered by top brakeman to casualty. Attaches. The top brakeman does raise on both.

## **DAY 6 — IN FIELD**

1. Continue Day 5 Practicals
2. Litter work:
  - V strap (Pike and Pivot)
  - Wood frame high directionals (SA-frame and A-frame)
  - Easel A-frame with AZ Vortex
  - Gin pole (AZVortex)
  - Gin pole (Wood: Jury masthead hitch)
3. Focused floating rigging pods
  - Wood monopod (with Jury masthead hitch)
  - AZ Vortex AZORP®
4. Cocoon stretcher from rope (optional)

## **DAY 7 — IN FIELD — LATER DISMISSAL**

(field time first half of day---latter half inspecting gear and rope, gear sorting, debriefing)

1. Continue Day 6 practicals
2. Bottom up solo rescue practice: (these take considerable time to orchestrate) (as time permits)
  1. Pitch head solo rescue (using AZTEK)
  2. Pitch tow solo rescue (using AZTEK)
  3. Counterbalance solo rescue (using Purcells and AZTEK)
3. Break it down: Student debriefing/discussion on where we go from here. Critique of course. Sorting of everyone's gear and equipment. Hand out Certificates of Completion. Comments from each student. Dismissal.

END of MRW Syllabus



# "Q" COURSE APPLICATION

Michigan Department of Licensing & Regulatory Affairs  
Bureau of Fire Services, Fire Fighter Training Division  
P.O. Box 30700 Lansing, MI 48909  
Email: [LARA-BFS-SMOKE@MICHIGAN.GOV](mailto:LARA-BFS-SMOKE@MICHIGAN.GOV)

FMQ22-024

To add a seminar/course to be listed in SMOKE submit this form to the following email address: [LARA-BFS-SMOKE@MICHIGAN.GOV](mailto:LARA-BFS-SMOKE@MICHIGAN.GOV) for review. The request will be reviewed and forwarded to the Michigan Fire Fighter Training Council (MFFTC) for curriculum review at the next scheduled MFFTC meeting (all requests must be made at least 15 days prior to the next regularly scheduled meeting).

## SECTION I

<b>Name of Applicant:</b> Michael DeCraene		<b>SMOKE PIN:</b> 597114	<b>Date:</b> 06-14-2022
<b>Host Fire Department:</b> St. Clair Shores		<b>County:</b> Macomb	
<b>Applicant Street Address:</b> 843 Walnut Glen Ct.			
<b>City:</b> Oakland Twp.	<b>State:</b> MI	<b>Zip Code:</b> 48363	<b>Email:</b> mpdecraene@gmail.com
<b>Applicant Phone Number:</b> 313-363-1377		<b>Alternate Number:</b>	

## SECTION II

<b>Seminar/Course Name:</b> Personal Skills Rescue Workshop		
<b>Instructor(s):</b> Michael DeCraene	<b>Instructor Phone Number:</b> 313-363-1377	
<b>Instructor Email:</b> mpdecraene@gmail.com	<b>Flyer Attached:</b> <input checked="" type="checkbox"/>	
<b>Course Description:</b> (Include course syllabus and detailed course expenses-you may attach additional pages if needed) The Personal Skills Rescue Workshop is considered by many past students as our most enjoyable, interactive and physically demanding course. There is no shortage of "on-rope" time at this workshop! The PSRW, and the Team Skills Rescue Workshop are the courses which fulfill the 90% solution on most rope rescues within industry and wilderness locations. It is designed for the serious rope rescue practitioner wishing to improve their personal rigging skill and capability. Students in the PSRW practice their skills and learn to work together as a team in successful retrieval of patients in a non-threatening environment. The PSRW goes well into often overlooked personal skills that are taken for		
<b>Applicable NFPA Standard(s):</b> NFPA 1006, NFPA 1670, NFPA 1983, NFPA 1500, NFPA 2500, NFPA 1858, Part 74		
<b>Class Capacity:</b> 12	<b>Total Hours of Training:</b> 70	<b>Amount Requested:</b> \$20,000

## SECTION III

<b>Applicant Signature:</b> 	<b>Date:</b> 9.9.22
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## BFS USE ONLY

<b>Date Approved by MFFTC:</b>	<b>"Q" Course Number Assigned:</b>	<b>Date Course Catalog Updated:</b>
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# Michigan PSRW INFO Sheet



## Personal Skills Rescue Workshop See Current RTR Open Schedule for Dates

Grand Ledge, Auburn Hills, MI

Instructor: Michael DeCraene

*"An Excursion into the Vertical Realm"  
with Instructors Michael DeCraene*

Seven full days of on rope climbing, rescue and rope access skills where you will come away with confidence in your ability in personal rigging.

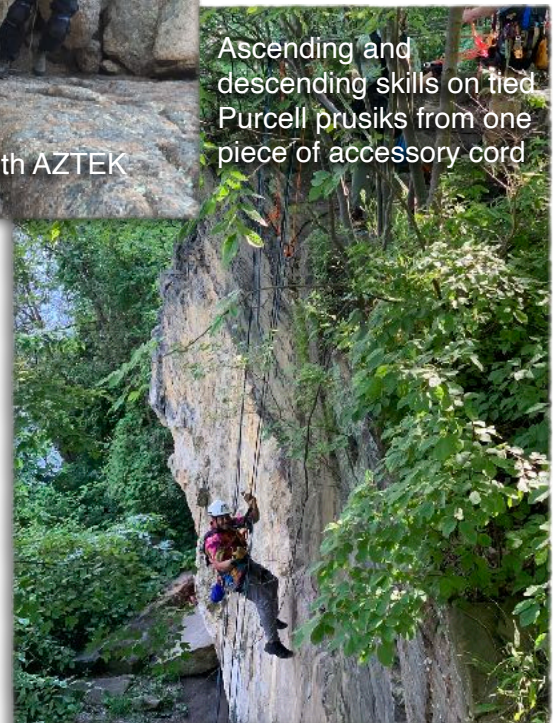
The Personal Skills Rescue Workshop is considered by many past students as our most enjoyable, interactive and physically demanding. There is no shortage of "on-rope" time at this workshop! The PSRW, and the Team Skills Rescue Workshop are the courses which fulfill the 90% solution on most rope rescues within industry and wilderness locations. It is designed for the serious rope rescue practitioner wishing to improve their personal rigging skill and capability. This workshop is sometimes mistakenly perceived as a beginning program due to the personal nature of many of the evolutions. In fact, it is for those that never seem to get enough on rope experience or time over the edge. The PSRW begins with valuable, yet simple definitions for belays, self belays, conditional belays and conditional self belays and how these differ in their engineering. It goes into important orientation on personally carried gear such as ascenders and descenders, self belay devices, Purcell prusiks, the all valuable AZTEK kit and other items essential to safety in the vertical realm and then moves into practical and fun-filled days where multiple one-on-one rope stations keep the practitioner busy throughout the day. Students in the PSRW practice their skills and learn to work together as a team in successful retrieval of this patient in a non-threatening environment. These are found in the Seven Minimalist Rescue Archetypes (7MRA) that lay a groundwork for understanding how solo versus semi-solo rescues vary in their risk to the rescuer. The PSRW goes well into often overlooked personal skills that are taken for granted on most rescue teams. There is also considerable time spent on rope learning to climb/descend rope by multiple methods (even improvised if you drop your friction appliance). Passing knots, deviations, rebelays, rope to rope transfers, aid climbing and problem solving are all part of the PSRW. Proficiency through repetition to mastery are encouraged. There is a very very strong emphasis on advanced knotcraft in this workshop! Students are tested throughout the program for proficiency and the ability to tie under pressure. All in fun, of course!



Pitch Toe solo rescue with AZTEK



Minimalist Rescue Archetype #4



Ascending and descending skills on tied Purcell prusiks from one piece of accessory cord



**PROGRAM LIAISON:** (INFO, Location / Meeting Place / and Logistics)

Michael DeCraene (RTR Instructor) Email: michael@ropes-that-rescue.com  
Phone: (313) 363-1377 Please, only during regular business hours.

**PSRW KEY POINTS -**

**TOP-DOWN RESCUE:**

Students in the PSRW practice their personal rescue skills and learn to work together as a semi-team (one or two rescuers) in successful retrieval of this patient in a non-threatening environment. These are found in the predominantly top-down Seven Minimalist Rescue Archetypes (7 MRA) that lay a groundwork for understanding how solo versus semi-solo rescues vary in their risk to the rescuer. Top-down rescue is easier as it relies on friction which is helpful at times. The PSRW goes well into often overlooked personal skills that are taken for granted on most rescue teams. The 7 MRA are therefore well suited for industrial and wilderness rescue team members. Some of these skills are repeated in the Mountain Rescue Workshop as well. Example being the Juneau, Alaska MRW in 2022.

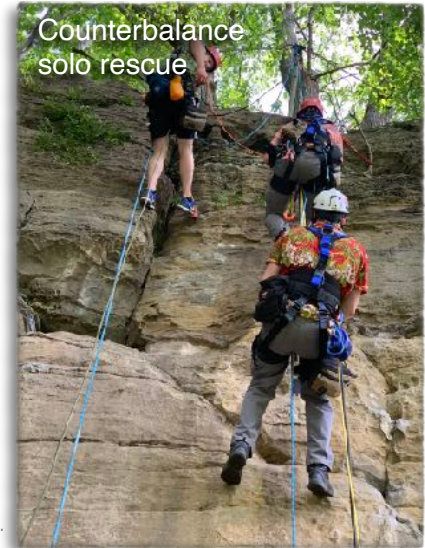
**BOTTOM-UP RESCUE:**

There are three differing bottom-up rescue techniques that we offer to PSRW students. They are a bit esoteric, but they are valuable "personal" skills which most past students seem to especially appreciate. They totally rely, once again, on the AZTEK kit and also the hand tied Purcell prusiks (tied from one 10 meter piece of 6mm supple accessory cord). Also, unlike the top-down rescue techniques of the 7 MRA, here you are fighting friction. Therefore these are more difficult and require perseverance. Again, some of these skills are repeated in the Mountain Rescue Workshop as well. Example being the Juneau, Alaska MRW in 2022.

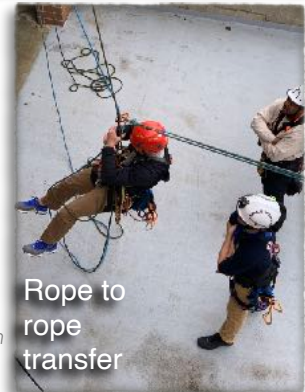
1) **PITCH HEAD RESCUE:** RTR took the well-known rope access "pitch head rescue" where the rescuer at the TOP or "head" of the pitch breaks into the line the victim is hanging on with their AZTEK set of fours, and establishes a progress capture in that line to bring the victim to the top of the pitch. They must also monitor the belay line up as well so the victim is on two solid points for the raising. If the victim is down 50', the rescue will need to do this several times with the AZTEK until the victim reaches the top.

2) **PITCH TOE RESCUE:** RTR Lead Instructor, Keith Thorne came up with the name for the "pitch toe rescue". It is the grand finale of the PSRW and the student really feels a sense of accomplishment when they finally complete it. The rescue (victim and rescuer) starts at the bottom, or "toe" of the pitch. The rescuer ascends the rope either in full ascent (Croll and handled ascender), or in half and half mode (half ascender and half descender with or without added pulley on handled ascender — which we jokingly call the "fat boy" technique) stretching out their AZTEK SO4s as they go with the orange ratchet engaged only. So, they are able to ascend upwards of about 12' as that is all a SO4s will allow. The orange AZTEK pulley is attached to the top of the handled ascender. The blue AZTEK pulley goes to the victim. To ascend and not fight the prusik ratchet you must first pull all available rope through the top orange ratchet and let it dangle or pile it on the victims lap below. Once up the first 12', attach second handled ascender (you can steal the one from the victim) to fair lead of AZTEK and use foot stirrup to pump away with leg, lifting victim up to your new position. The belay is managed also by the rescuer. Once victim is at your location secure them, and repeat the process until you are at the top with victim in tow. It is a good workout.

3) **COUNTERBALANCE RESCUE:** The "counterbalance" is an optional, however fun, personal skillset in the PSRW. It is really in between the pitch head and the pitch toe solo rescuer techniques. Once again you start with the rescuer at the anchor on top and the victim whatever distance below you hanging on rope. Rescuer uses both of their personal Purcell prusiks here in various configurations to transfer the anchored loaded line to the victim to their own rescue system. This involves the rescuer using their own mass hanging below a progress capture pulley to "counterbalance" the victim up as they go down. Rescuer must also manage belay for victim. Again, I don't see this being a skill that students must complete for the PSRW at this time. However, things do change as the PSRW grows in difficulty. Basically, the Personal Skills Rescue Workshop is a full-on solo & semi solo rescuer extravaganza. There is no framing, no litter work, no offsets, and no lecture other than to set forth the top down and bottom up scenario. Just the student on rope as a victim or on rope performing a rescue by their self.



Counterbalance solo rescue



Rope to rope transfer



Building rigging pods for working over edge



Extensive rock pro





## PERSONAL SKILLS RESCUE WORKSHOP 2022 SYLLABUS

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General discussion on this RTR Workshop-

The Personal Skills Rescue Workshop (Acronym: PSRW) is considered by many past students as our most enjoyable, interactive and physically demanding. There is no shortage of "on-rope" time at this workshop! The PSRW, and the Team Skills Rescue Workshop are the courses which fulfill the 90% solution on most rope rescues within industry and wilderness locations. It is designed for the serious rope rescue practitioner wishing to improve their personal rigging skill and capability. This workshop is sometimes mistakenly perceived as a beginning program due to the personal nature of many of the evolutions. In fact, it is for those that never seem to get enough on rope experience or time over the edge. The PSRW begins with valuable, yet simple definitions for *belays*, *self belays*, *conditional belays* and *conditional self belays* and how these differ in their engineering. It goes into important orientation on personally carried gear such as ascenders and descenders, belay and self belay devices, Purcell prusiks, the all valuable AZTEK kit and other items essential to safety in the vertical realm and then moves into practical and fun-filled days where multiple one-on-one rope stations keep the practitioner busy throughout the day. We have many return students to this program!

There is also considerable time spent on rope learning to climb/descend rope by multiple methods (even improvised if you drop your friction appliance). Passing knots, deviations, re-anchors, rope to rope transfers, aid climbing and problem solving are all part of the PSRW. Proficiency through repetition to mastery are encouraged. There is a very very strong emphasis on advanced knotcraft in this workshop.

NOTE: For those wishing to get additional specific training on rope access and perhaps eventual certification through the Society of Professional Rope Access Technicians (SPRAT.org) we recommend taking an RTR [Rope Access Skills Workshop 1 or 2](#). See [open enrollment schedule](#) for date and location.

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line up as well so the victim is on two solid points for the raising. If the victim is down 50', the rescue will need to do this several times with the AZTEK until the victim reaches the top.

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## The PSRW covers: (as time allows)

- Personal safety/ the infamous "buddy check" and team safety
- Knotcraft (extensive knots, bends and hitches)
- Harness organization (where to store everything)
- Personal skills for self rescue, solo and semi-solo rescue
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  4. True belay
  5. Single part rappel
  6. Double part rappel
  7. Ascending/descending on double part (#6)
  8. Use of the seat of fours (SO4) for lowering and raising
- Manual and auto stop friction appliances
- Anchoring:
  1. Point anchors (natural and artificial)

2. Multi-point anchors: (including critical analysis)
    1. 2x1 (or more) fixed anchors
    2. 2x1 (or more) distributing anchors
  3. Focused and focused floating anchors
  4. Pre-tensioned back tie and opposition front tie anchors
- Anchoring devices:
    1. Rock protection: Active and passive protection
    2. Pitons (as time permits)
    3. Bolts (permanent and removable) (as time permits)
  - Belaying techniques: (Manually operated or auto-stop)
    1. Improvised body belays
    2. Sticht principle devices (ATCs, belay plates, etc.)
    3. Hitch belays (Münter and prusik)
    4. Auto stop belay devices (Petzl GriGri® etc.)
  - Friction appliances: Auto stop and other
    1. Fixed brakes (static and dynamic fixed brakes)
    2. Traveling brakes
  - Introduction to pulley systems (partial lecture)
  - Multiple methods of descending on rope
    1. Münter, double Münter and Super Münter hitch rappels
    2. Carabiner brakes (with non-locking carabiners)
    3. Body rappels (*Dulfersitz* with appropriate clothing/padding)
  - Multiple methods of ascending on handled ascenders
  - Passing mid line knots/bends on ascent and descent
  - Rope-to-rope transfers on ascent and descent
  - Passing re-anchors on ascent and descent
  - Passing standard deviations against wall on ascent and descent
  - Passing "flying" deviations (no wall) on ascent and descent
  - Horizontal aid climbing (if available)
  - True belays and self belays
  - Self rescue techniques / Buddy rescue techniques
  - Top down solo rescue: Complete Seven Minimalist Rescue Archetypes (7MRA)
    1. Top rescue of casualty hanging on rope below (dynamic fixed brake with AZTEK)
    2. Gecko person with no harness - Solo rescuer traveling brake pick off with diaper harness (or other)
    3. Multiple gecko persons with no harnesses - Solo rescuer on traveling brake with mid rope fixed brake pick off with diaper harness (or other)
    4. Solo rescuer pick off using AZTEK on traveling brake (hanging casualty)
    5. Semi-solo rescuer (rescuer lowered from top on end of rope) pick off ("gecko" and hanging) using AZTEK
    6. Semi solo rescue using AZTEK on top attached to top end of rope. Rescuer descends on traveling brake to casualty. Attaches. The top brakeman does raise on both.
    7. Semi solo rescue using AZTEK on top attached to fixed brake. Rescuer is lowered by top brakeman to casualty. Attaches. The top brakeman does raise on both.
  - Bottom up solo one-on-one rescues:
    - Pitch head rescue (breaking into lines on top with AZTEK and bringing casualty up from bottom)
    - Pitch toe rescue (descending to bottom and attaching to casualty with AZTEK and ascending with them to top) Inch worm technique.
    - Counter balance rescue (if time permits)(Using your own weight to advance someone up a cliff or drop)
  - Lead climbing (optional)
  - Down climbing techniques
  - Rigging plates and pods/bipods/tripods using AZ Vortex, focused floating anchors made "bombproof" for over edge rope work

# DAY SCHEDULE

NOTE: Flexible agenda based on weather and a typical 10 hour day

## DAY 1 — INSIDE CLASSROOM

1. Logistics. Intro by host agency (if any).
2. Introductions: Instructor(s) and student introductions complete with background and medical/rescue training. General discussion on scope of workshop. Where should the course head? Is there any particular procedure that someone in the course wishes to address?
3. Thorne Group VIDEO 1A: *"Introduction to Rope Rescue"*
4. Safety considerations: Student safety during the week and environmental concerns; what to wear, insidious weather problems, etc. Discussion of emergency action plan. Students to sign additional *"Participation Agreement, Release and Assumption of Risk"* document in the instructors presence after discussion with all students
5. Knotcraft: General discussions of knots, bends and hitches; differences, nomenclature, applications, etc. Practice all of them in classroom. Break the ice! (Note: students SHOULD know basic knots prior to class.) Show slide show *"KNOTCRAFT with Reed and Sequoia"*.
6. PSRW Student Manual: Discussion on contents.
7. Slide show: *"Introduction to Rope Rescue"*
  - Background of RTR Instructor(s)
  - What is "rigging" and then again, "CLEAN rigging?"
  - Differences between The Incident and Training
  - The Critical Analysis Paradigm
  - The need for two ropes - The Critical Point Test (CPT)
  - The Knowledge & Skill Matrix - If appropriate
  - The 4 Belay Archetypes: Discussion and lecture on various belays: personal and system belays. Comparison of a) belays in general, b) self belays, c) conditional belays, d) and conditional self belays.
8. Critical point test/Whistle test
9. Two-point Philosophy: Discussion and lecture on the back-up, redundant, parallel system. How it applies to a) individual rescuers, and b) rescue systems. Differences between disciplines: mountaineering vs. rescue work; military vs. rescue work; caving vs. rescue work, etc.
10. Thorne Group VIDEO 1B: *"Belaying the One Person Load"* (may be next day as time permits)

## DAY 2 — INSIDE CLASSROOM - OUTSIDE (not at elevation)

1. Knotcraft practice (second day)
2. Anchoring methods lecture using marginal anchors in wilderness. Rock protection.
3. System belays: Tandem Prusik Belay (TPB) for wilderness mountain SAR participants.
4. Complete orientation on the first 8 uses of the AZTEK:
  1. Travel restrict - edge restraint - single part
  2. Travel restrict - edge restraint - double part
  3. Self belay
  4. True belay
  5. Single part rappel
  6. Double part rappel
  7. Ascending/descending on double part (#6)
  8. Use of the seat of fours (SOF) for lowering and raising
5. Friction appliances: The use of twisting and non-twisting friction devices. Manually operated and self locking auto stop friction devices. Pros & cons of each kind. Thorough discussion on the system and personal brake appliances. Larger MPD®, Maestro® and Clutch® are discouraged for personal use.
6. Anchoring: The differences between 1) "bombproof", 2) substantial, and 3) marginal anchors. Lecture on the clear delineation of:
  1. Marginal anchors (Am)

2. Substantial anchors (As)
  3. "Bombproof" anchors (Ab)
  4. Substantial focused anchors (Asf)
  5. Bombproof focused anchors (Abf)
  6. Substantial focused floating anchors (Asff)
  7. Bombproof focused floating anchors (Abff)
7. Use of focused floating anchors using from 1 or more pre-tensioned back ties + opposition:
    1. Rigging plates (no compression members)
    2. Rigging pods (one compression member)
  7. Discussion of the all important "buddy check" before heading into any exposure
  8. Discussion on fall factor
  9. Head too field to begin the on rope training
  10. Discussion on toothed cams and smooth descenders regarding points of contact
  11. Instructor demonstration

### **DAY 3 — INSIDE CLASSROOM + OUTSIDE (at elevation)**

1. Knotcraft practice (third day)
2. Continue on rope training:
  - Backup device handling (keep high to reduce fall factor)
  - Ascending:
    1. Full ascent (chest and handled ascenders)
    2. Half and half (half handled ascender and descender)
    3. Half and half (half handled ascender with pulley and descender)
    4. Purcell prusiks (short leg Purcell as backup)
  - Descending:
    1. Auto stop descender
    2. Manually operated device descent
    3. Münter hitch
  - Change from ascent to descent
  - Passing knots and bends mid rope
  - Dropped fiction appliance at elevation (improv)
  - Passing re-anchors on ascent and descent
  - Passing deviations on ascent and descent (against wall)
  - Passing 'flying' deviations on ascent and descent (no wall)
  - Rope to rope transfers
  - Changing ropes
  - Entangled ropes
  - Dogging off appliances and leg wraps

### **DAY 4 — IN FIELD**

1. Continue Day 3 practicals
2. Simple top down casualty rescues from structure/ledge (some are optional)
  - Rescue of casualty supported on structure/ledge - Traveling brake rigged on casualty - use 2:1 MA to lift casualty off then place on lap of rescuer to lower to ground
  - Rescue of casualty supported on structure/ledge - Traveling brake rigged on fixed rope above casualty with AZTEK SO4s - lift and lower brake to level and add rescuer

### **DAY 5 — IN FIELD**

1. Continue Day 4 practicals
2. Top down solo rescue: Complete Seven Minimalist Rescue Archetypes (7MRA)
  1. Top rescue of casualty hanging on rope below (dynamic fixed brake with AZTEK)
  2. Gecko person with no harness - Solo rescuer traveling brake pick off with diaper harness (or other)
  3. Multiple gecko persons with no harnesses - Solo rescuer on traveling brake with mid rope fixed brake pick off with diaper harness (or other)

4. Solo rescuer pick off using AZTEK on traveling brake (hanging casualty)
  5. Semi-solo rescuer (rescuer lowered from top on end of rope) pick off ("gecko" and hanging) using AZTEK
  6. Semi solo rescue using AZTEK on top attached to top end of rope. Rescuer descends on traveling brake to casualty. Attaches. The top brakeman does raise on both.
  7. Semi solo rescue using AZTEK on top attached to fixed brake. Rescuer is lowered by top brakeman to casualty. Attaches. The top brakeman does raise on both.
3. Simple top down casualty on rope rescues: (some are optional)
    - Rescue of casualty on descent - climb from below
    - Rescue of casualty on descent - descend from above
    - Rescue of casualty on ascent - climb from below (use AZTEK)
    - Rescue of casualty on ascent - descend from above (use AZTEK)

#### **DAY 6 — IN FIELD**

1. Continue Day 5 practicals
2. Bottom up solo rescue practice: (these take considerable time to orchestrate)
  1. Pitch head solo rescue (using AZTEK)
  2. Pitch tow solo rescue (using AZTEK)
  3. Counterbalance solo rescue (using Purcells and AZTEK)

#### **DAY 7 — IN FIELD — LATER DISMISSAL**

(field time first half of day--latter half inspecting gear and rope, gear sorting, debriefing)

1. Continue Day 6 practicals
2. Bottom up solo rescue practice: (these take considerable time to orchestrate)
  1. Pitch head solo rescue (using AZTEK)
  2. Pitch tow solo rescue (using AZTEK)
  3. Counterbalance solo rescue (using Purcells and AZTEK)
3. Break it down: Student debriefing/discussion on where we go from here. Critique of course. Sorting of everyone's gear and equipment. Hand out Certificates of Completion. Comments from each student. Dismissal.

END of PSRW Syllabus



# "Q" COURSE APPLICATION

FMQ22-025

Michigan Department of Licensing & Regulatory Affairs  
Bureau of Fire Services, Fire Fighter Training Division  
P.O. Box 30700 Lansing, MI 48909  
Email: [LARA-BFS-SMOKE@MICHIGAN.GOV](mailto:LARA-BFS-SMOKE@MICHIGAN.GOV)

To add a seminar/course to be listed in SMOKE submit this form to the following email address: [LARA-BFS-SMOKE@MICHIGAN.GOV](mailto:LARA-BFS-SMOKE@MICHIGAN.GOV) for review. The request will be reviewed and forwarded to the Michigan Fire Fighter Training Council (MFFTC) for curriculum review at the next scheduled MFFTC meeting (all requests must be made at least 15 days prior to the next regularly scheduled meeting).

## SECTION I

<b>Name of Applicant:</b> Michael DeCraene		<b>SMOKE PIN:</b> 597114	<b>Date:</b> 06-14-2022
<b>Host Fire Department:</b> St. Clair Shores		<b>County:</b> Macomb	
<b>Applicant Street Address:</b> 843 Walnut Glen Ct.			
<b>City:</b> Oakland Twp.	<b>State:</b> MI	<b>Zip Code:</b> 48363	<b>Email:</b> mpdecraene@gmail.com
<b>Applicant Phone Number:</b> 313-363-1377		<b>Alternate Number:</b>	

## SECTION II

<b>Seminar/Course Name:</b> Team Skills Rescue Workshop		
<b>Instructor(s):</b> Michael DeCraene	<b>Instructor Phone Number:</b> 313-363-1377	
<b>Instructor Email:</b> mpdecraene@gmail.com		
<b>Flyer Attached:</b> <input checked="" type="checkbox"/>		
<b>Course Description:</b> (Include course syllabus and detailed course expenses-you may attach additional pages if needed) The Team Skills Rescue Workshop is ideal for industrial and wilderness rescue teams and is designed to begin where the Personal Skills Rescue Workshop leaves off and carry on into more demanding rescue practices and team-building skills. Lectures on intermediate physics and how it relates to rope rigging are common throughout the duration of this seminar. Emphasis is places on "why" we do something, rather than "how". Students, as a team unit, learn how to build seemingly complex arrangements for reaching, treating and extricating a patient from the vertical high angle environment. The TSRW is not by any means a beginning rope rescue program. It is a serious venture		
<b>Applicable NFPA Standard(s):</b> NFPA 1006, NFPA 1670, NFPA 1983, NFPA 1500, NFPA 2500, NFPA 1858, Part 74		
<b>Class Capacity:</b> 12	<b>Total Hours of Training:</b> 70	<b>Amount Requested:</b> \$20,000

## SECTION III

<b>Applicant Signature:</b> 	<b>Date:</b> 9.9.22
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## BFS USE ONLY

<b>Date Approved by MFFTC:</b>	<b>"Q" Course Number Assigned:</b>	<b>Date Course Catalog Updated:</b>
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# Michigan TSRW INFO Sheet

## Team Skills Rescue Workshop See Current RTR Open Schedule for Dates

Grand Ledge, Auburn Hills, MI

Instructor: Michael DeCraene

### About the TSRW Program:

The Team Skills Rescue Workshop is ideal for industrial and wilderness rescue teams and is designed to begin where the Personal Skills Rescue Workshop leaves off and carry on into more demanding rescue practices and team-building skills. This, and the PSRW, are the workshops which fulfill the "90% solution" on most rope rescues within industry and wilderness locations. Lectures on intermediate physics and how it relates to rope rigging are common throughout the duration of this workshop. Emphasis is placed on "why" we do something, rather than "how". Students, as a team unit, learn how to build seemingly complex arrangements for reaching, treating and extricating a patient from the vertical high or steep angle environment whether in industrial locations or in the wilderness.

The Team Skills Rescue Workshop focuses on these main areas:

#### Anchoring:

This would include so called "bombproof", substantial and marginal (contributory) anchors and anchor systems. It also covers anchor plates, rigging pods, bipods and tripods (AZ VORTEX if applicable). In some TSRW, rock protection is thoroughly practiced within the program (if applicable).

#### Physics:

"Barn floor physics" (as opposed to "loft" physics) lessons on anchor loading and directional loading are done in the classroom on the whiteboard. A favorite part of the TSRW for many as it brings home the importance of understanding force (compression and tension). These lectures reinforce the upcoming lectures on artificial high directionals with relevant discussions on component force vectors and resultant force vectors

#### Pulley Systems:

Pulley system understanding is key to understanding what is happening in our rope systems. We delve into class 1, 2 and 3 pulleys, working and non working systems, simple, compound and complex pulley systems. We also cover the Arizona Progression of 7, a series of learn-by-rote pulley systems for the general rescue practitioner. Also, these systems produce differing loading on our anchors so attention is paid to tension units as well

#### High Directionals: (AZ VORTEX or other)

This includes, in most TSRW, the use of the Arizona Vortex (frame) as a tripod, bipod and monopod at the edge and for anchors back from the edge (see "Anchors" above). Extensive lectures on the basic setups for this appliance found in the User Manual. Extensive guying section for frames with the use of non-working pulley systems.

#### High Angle Offsets:

The TSRW includes an extensive lecture and practical section on alternatives to highlines in the form of "offsets". Ropes That Rescue has become known for its projection of these offsets as an alternative to training intensive highlines in the past 25 years. Offsets employ standard high angle techniques that most rescuers already know and so are more forgiving in the training curve than more elaborate systems. These offsets are: 1) Tag Line, 2) Guiding Line, 3) Tracking Line, 4) Skate Block, 5) Deflection Line, 6) Two Rope.





### TSRW Key Points:

Over 200 page manual with reproduction of part of the lectures and slide shows (available in color for extra charge)

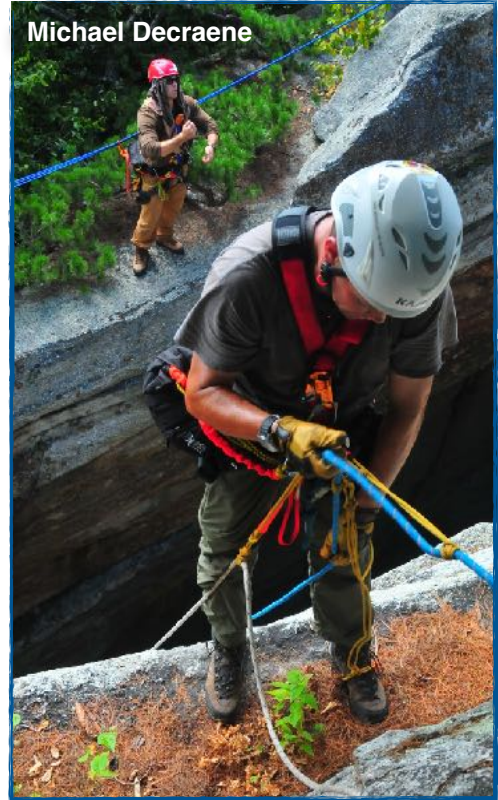
- Technical evacuations using litter: High angle and steep angle
- Strong emphasis on team-oriented skills
- Knot craft and mastery of rigging - learning to lash and secure things
- Intermediate pulley systems (simple through complex)
- Physics of rope rescue
- Two tensioned rope systems analysis (Steep angle evacs)
- Frames: Arizona Vortex® (as options)
  - Gin pole monopods - Rigging pods
  - A-frames
  - Sideways A-frames - Lazy leg SA frames
  - Easel A-frames
    - Arizona "Doortex" - Jamb poles
- Directionals and anchor angle force calculations
- Batwing compound pulley systems - AZ progression of 7
- Complete AZTEK kit orientation for team operations:
  - Personal travel restrict and fall protection
  - Single and double part hasty rappels
  - Belays and self belays
  - Dynamic fixed brakes, directionals, butt blocks, etc.
  - Dynamic directionals
  - Personal travel restrict and fall protection
- Mid face attendant-based and team-based litter scoops
- Team-based pick offs
- Belays, self belays, conditional belays and conditional self belays
- Sound anchoring principles: intermediate through advanced systems anchors, beach head anchors, etc.
  - Focused and focused-floating anchors using opposition anchors
  - Low edge mitigation - no high directional
  - Hot and cold changeovers using the CMC MPD®
  - Non-highline solutions to rescue scenarios
  - Offsets for the high angle evacuation:
    - Deflected offsets
    - Tracking line offsets (with belay and self belay elements)
    - Skate block offsets (with belay and self belay elements)
    - Two rope offsets

Lecture on safety factor and safety margin and "bracketing" rope strength  
Much, much more...

RTR programs are student-driven in what is covered. In seven short days (even though we are doing 10 to 12 hour days) we cannot cover it all. Students are encouraged to come forth with ideas given our available venues early in the class to help delineate the direction the program takes.

### Required Equipment:

Also, make sure you have the [REQUIRED EQUIPMENT](#) for this program! The AZTEK is a must for this training. Other items can be substituted. Contact us if you have any questions about equipment.





## TEAM SKILLS RESCUE WORKSHOP 2012 SYLLABUS

### General discussion on the TSRW-

The Team Skills Rescue Workshop (TSRW) is an instructor-level program meant to foster serious inquiry into the field of rope rescue with emphasis on testing and critical thought concerning methods and procedures in use around the world. Therefore, the course is not primarily for beginners in the field, but rather for those who have already established rigging protocols, and would require an active interaction between the multiple disciplines sure to be present. Students are encouraged to exchange ideas in this flexible setting. It is through the sharing of ideas that we will all learn from and become better, more efficient rope practitioners.

In this context, the instructor(s) will remain open to new ideas but will be conducting the class in a manner which will focus program direction. "Specialized" equipment, while interesting and sometimes time-saving, will be looked upon as *peripheral*, whereas basic skills knowledge will remain *central* to the course's objectives. The RTR philosophy holds that it is these basic skills which allow the rescuer to problem-solve and improvise in difficult situations, and are key to the development of any rescue instructor. It could certainly be said that people involved with rescue work today know much of **what** they believe, but not **why** they believe it. This workshop is specifically for those who wish to know the "why" behind a given methodology or procedure. Much of the classroom time is devoted to just such an inquiry which we believe arms the instructor with answers to questions your students will certainly ask. It has been said that "Knowledge is light in the rucksack and not easily left at home." The TSRW, with its top-down approach implementing extensive artificial high directional usage, will fulfill the "90% solution" on most rope rescues within industrial and wilderness locations. Lectures on intermediate physics and how it relates to rope rigging are common throughout the duration of this workshop. As a team unit, practitioners learn how to build seemingly complex arrangements for reaching, treating and extricating a patient from the vertical high angle environment. All the while, emphasis is placed on building everything from the basic materials most teams will have along: rope, carabiners, pulleys, accessory cord, webbing and know how.

The TSRW includes an extensive lecture and practical section on alternatives to highlines in the form of "high angle offsets". Ropes That Rescue has become known for its projection of these offsets as an alternative to training intensive highlines in the past decade. Offsets employ standard high angle techniques that most rescuers already know and so are more forgiving in the training curve than more elaborate systems.

The TSRW is a serious venture and complete immersion into rescue systems that can sometimes be overwhelming to some less experienced practitioners. The program is taught in English.

**The TSRW covers:** (as time allows)

- Knotcraft
- Physics relative to rope rescue (and rigging)
- Critical analysis
- Anchoring:
  1. Point anchors
  2. 2x1 fixed anchors or more
  3. Focused and focused floating anchors
  4. Backtie and opposition front tie anchors
  
- Directionals: Fixed and Dynamic
- Belaying: Tandem prusik belay and other
- Friction appliances: Auto stop and other
  1. Fixed brakes (static and dynamic fixed brakes)
  2. Traveling brakes
- Use of the AZTEK kit (personal and system end set-of-fours)
- Pulley systems: (class 1, 2 and 3 pulleys in rescue)
  1. Non-working (backties, front ties and guying)
  2. Working (simple, compound and complex)
  3. Rapid response (above water, hazardous locals, etc)
  4. Bolt on versus in-line series pulley systems
  5. “Arizona Progression of Seven”
- Artificial high directionals (Arizona Vortex)
  1. Tripods (easel A frames, standard tripods)
  2. Bipods
    - A frames
    - SA frames
      1. Guyed only SA frames
      2. Lazy leg SA frames
  3. Monopods (gin pole)<sup>1</sup>
- Changeovers (cold and hot)
- Litter work (including mid face litter scoops)
- High Angle Offsets:
  1. Tag lines
  2. Guiding lines
  3. Tracking lines
  4. Skate blocks
  5. Deflection lines
  6. Rope to rope (pendulum)

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<sup>1</sup> Gin poles covered only if time allows

# DAY SCHEDULE

NOTE: Flexible agenda based on weather and a typical 10 hour day

## DAY 1 --- INSIDE CLASSROOM

1. Logistics. Intro by host agency.
2. Introductions: Instructor(s) and student introductions complete with background and medical/rescue training. General discussion on scope of workshop. Where should the course head? Is there any particular procedure that someone in the course wishes to address?
3. Safety considerations: Student safety during the week and environmental concerns; what to wear, insidious weather problems, etc. Discussion of emergency action plan
4. Knotcraft: General discussions of knots, bends and hitches; differences, nomenclature, applications, etc. Practice all of them in classroom. Break the ice! (Note: students SHOULD know basic knots prior to class.)
5. TSRW Student Manual: Discussion on contents.
6. Slide show: *"Introduction to Rope Rescue"*
7. 4 Belay Archetypes: Discussion and lecture on various belays: personal and system belays. Comparison of a) belays in general, b) self belays, c) conditional belays, d) and conditional self belays.
8. Critical point test/Whistle test
9. Understanding the laws of physics. Lecture on white board: *"Barn Floor Physics"*
10. Loads: climbing loads, rescue loads and extreme rescue loads - their differences and considerations in systems building.
11. Two-point Philosophy: Discussion and lecture on the back-up, redundant ,parallel system. How it applies to a) individual rescuers, and b) rescue systems. Differences between disciplines: mountaineering vs. rescue work; military vs. rescue work; caving vs. rescue work, etc.

## DAY 2--- INSIDE CLASSROOM + OUTSIDE (not at elevation)

1. Pulley systems: A comprehensive lecture and slide presentation on simple, compound and complex pulley systems. Discussion on applications for rescue work. Appropriateness of certain pulley systems based on manpower, pulling area, pulling space, limits in equipment, etc.; self-minding and manned ratchets; ganged and in-line pulley systems; even versus odd mechanical advantage; ideal , practical and actual.
2. Force vectors: Lecture on actual forces on rescue system anchors, anchor systems and directionals. How to figure force in the field. Resultant force vectors, component force vectors.
3. Directional anchors: Actual forces on the directional using force vector analysis. Dynamic directionals and dynamic butt blocks.
4. Anchoring methods: Pros and cons of various methods used around the country. Discussion and debate. Presewn anchor straps and why they're to be avoided (in certain applications). Artificial anchors vs. natural anchors. Lecture: *"The Seven Deadly Sins of Manufactured Anchors"*.
5. System belays: Tandem Prusik Belay (TPB). Complete orientation on the safe use and operation of the TPB for a lowering and a raising operation. Discussion and comparison of hard versus soft ascenders for rescue loads. Recent 2005 testing on the rescue load belay issue.

6. Friction appliances: The use of twisting and non-twisting friction devices. Pros & cons of each kind. Thorough discussion on the system and personal brake appliances. Methods of varying friction for climbing to extreme rescue loads.
7. Practical session in parking lot: Build simple, compound and complex pulley systems from notation.
8. Changing from a lowering to a raising: "Hot Changeovers". Leading up to mid-wall litter scoops later in the week. Lower-to-raise-to-lower techniques: Used for team-based rescue techniques where a patient must be taken off their own supporting system before being lowered to the ground.
9. Anchoring: Back ties to marginal anchors: A demonstration of how to strengthen marginal anchors by applying force in the opposite direction. Discussion on differences of standard, marginal, bombproof and focused anchors and anchor systems.

### **DAY 3 --- INSIDE CLASSROOM + OUTSIDE (not at elevation)**

1. Slide show: "*High Directionals---End of the Enigma*": Lecture on physics of high directionals relative to undesired edge forces. Orientation on ARIZONA VORTEX MULTIPOD including anchoring it down, compression and tension elements, anti-guillotine rigging and hobbles.
2. Slide show: "*Are you Really On Belay? --- Part 2*" and lecture on belays in the AHD for edge transitions (up and down)
3. Build in parking lot:
  - All tripods including standard tripod and EA frame (easel A frame)
  - All bipods: A frames and SA frames (sideways A frames). Proper guying on guyed only SA frame; SA frame with "lazy" leg.
  - Monopod (gin pole) if time allows
4. Discussion of "paradoxical motion" (up main line/down belay line) and "similar motion" (down on both main/belay) at the high directional.
5. Elevation of the belay line temporarily at the high directional by using the AZTEK kit.
6. Communications: Lecture on field operations and communications for technical rescue. Definition of all positions, both individual and team. Whistle commands.
7. Preparations for next day in-field exercises

### **DAY 4 --- IN FIELD**

1. Complete orientation on AZTEK kit for edge travel restrict, positioning, self belay, true belay, single part rappel and double part rappel. Also use of AZTEK set-of-fours for attendant on litter and litter rig using separate dedicated AZTEK set-of-fours. Students practice each.
2. High angle litter rigging at elevation: Discussion of perpendicular movement and litter rigging for one attendant; for medical complications; for mid-wall litter scoops (using AZTEK); and for in-line steep angle evacuations.
3. Review of TPB with demonstration in field of proper hand movements.
4. Elevation of belay rope into high directional during edge transition using ASZTEK kit
5. Cold loading of AZ Vortex (attendant without casualty in litter) using paradoxical motion at edge
6. Easel A frame set up at the edge; run operations multiple times; cold change overs at bottom of cliff.

## **DAY 5 --- IN FIELD --- LATE AFTERNOON LECTURE**

1. SA frame set up at the edge; run operations multiple times; hot/cold change overs mid face; litter scoops.
2. Hot loading of AZ Vortex (attendant with casualty in litter) using AZTEK set-of-fours parallel to friction appliance Implement V strap method of bringing a casualty up over a difficult edge without a high directional.
3. Elevation of belay rope into high directional during edge transition using ASZTEK kit
4. Knot passes through friction appliance using AZTEK.
5. Late afternoon: Lecture on "Offsetting the technical Evacuation": Cover:
  - Minor offsets (handheld rope influence)
    1. Tag line
    2. Guiding line
  - Major offsets (system tensioned rope influence)
    3. Tracking line
    4. Skate block
    5. Deflected
    6. Rope to rope (pendulum)

## **DAY 6 --- IN FIELD**

(field time all day) High angle litter evacuations with application of offsets

1. Use Arizona Vortex Multipod® in all applications
2. Implement tracking line major offset into system. Discuss vulnerability of system and how this is just an "away from the wall" technique.
3. Implement skate block major offset into system. Discuss vulnerability of system and how this is best suited for towers or pylons.
4. Implement deflected major offset into system. Discuss ways of not belaying and also belaying this deflection depending on exposure to attendant/casualty.

## **DAY 7 --- IN FIELD ---LATER DISMISSAL**

(field time first half of day---latter half debriefing)

1. Practical: High Angle Two Rope Offset (belayed) across a chasm with litter scoop of patient on opposite wall. This exercise uses every technique learned in the previous six days. Pack up at noon and return to meeting location.
2. Debriefing: Student discussion on where we go from here. Critique of course. Sorting of everyone's gear and equipment. Hand out Certificates of Completion. Comments from each student. Dismissal.



# "Q" COURSE APPLICATION

Michigan Department of Licensing & Regulatory Affairs  
 Bureau of Fire Services, Fire Fighter Training Division  
 P.O. Box 30700 Lansing, MI 48909  
 Email: [LARA-BFS-SMOKE@MICHIGAN.GOV](mailto:LARA-BFS-SMOKE@MICHIGAN.GOV)

## FMQ22-027

To add a seminar/course to be listed in SMOKE submit this form to the following email address: [LARA-BFS-SMOKE@MICHIGAN.GOV](mailto:LARA-BFS-SMOKE@MICHIGAN.GOV) for review. The request will be reviewed and forwarded to the Michigan Fire Fighter Training Council (MFFTC) for curriculum review at the next scheduled MFFTC meeting (all requests must be made at least 15 days prior to the next regularly scheduled meeting).

### SECTION I

<b>Name of Applicant:</b> Brandon Cory		<b>SMOKE PIN:</b>	<b>Date:</b> 11/5/2022
<b>Host Fire Department:</b> Marquette City Fire Department		<b>County:</b> Marquette	
<b>Applicant Street Address:</b> 571 Silver Creek Rd			
<b>City:</b> Marquette	<b>State:</b> MI	<b>Zip Code:</b> 49855	<b>Email:</b> bccory2080@gmail.com
<b>Applicant Phone Number:</b> 906-250-7822		<b>Alternate Number:</b>	

### SECTION II

<b>Seminar/Course Name:</b> RIC for the Rural Department	
<b>Instructor(s):</b> Brandon Cory	<b>Instructor Phone Number:</b> 906-250-7822
<b>Instructor Email:</b> bccory2080@gmail.com	<b>Flyer Attached:</b> <input type="checkbox"/>
<b>Course Description:</b> (Include course syllabus and detailed course expenses-you may attach additional pages if needed) Take a look into how to operate and set up a RIC/RIT in a rural department for either volunteer or full time. Not all areas get to have the ability to have enough units coming right away to a structure fire to have a specific RIC/RIT company. In this class, the presenter will go over the basic ways to set up a RIC/RIT company and what a RIC/RIT company tasks will be on the fireground. The presenter will also discuss his experience during a RIC team activation and LODD that occurred in 2020. He will discuss the incident and what went right (and wrong) during the incident and the lessons learned	
<b>Applicable NFPA Standard(s):</b> 1403	
<b>Class Capacity:</b> 50	<b>Total Hours of Training:</b> 2
<b>Amount Requested:</b>	

### SECTION III

<b>Applicant Signature:</b> 	<b>Date:</b> 11/5/2022
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### BFS USE ONLY

<b>Date Approved by MFFTC:</b>	<b>"Q" Course Number Assigned:</b>	<b>Date Course Catalog Updated:</b>
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# "Q" COURSE APPLICATION

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## FMQ22-028

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### SECTION I

<b>Name of Applicant:</b>		<b>SMOKE PIN:</b>	<b>Date:</b>
<b>Host Fire Department:</b>		<b>County:</b>	
<b>Applicant Street Address:</b>			
<b>City:</b>	<b>State:</b>	<b>Zip Code:</b>	<b>Email:</b>
<b>Applicant Phone Number:</b>		<b>Alternate Number:</b>	

### SECTION II

<b>Seminar/Course Name:</b>	
<b>Instructor(s):</b>	<b>Instructor Phone Number:</b>
<b>Instructor Email:</b>	<b>Flyer Attached:</b> <input type="checkbox"/>
<b>Course Description:</b> (Include course syllabus and detailed course expenses-you may attach additional pages if needed)	
<b>Applicable NFPA Standard(s):</b>	

<b>Class Capacity:</b>	<b>Total Hours of Training:</b>	<b>Amount Requested:</b>
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### SECTION III

<b>Applicant Signature:</b>	<b>Date:</b>
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### BFS USE ONLY

<b>Date Approved by MFFTC:</b>	<b>"Q" Course Number Assigned:</b>	<b>Date Course Catalog Updated:</b>
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## GOALS AND OBJECTIVES OF WATER RESCUE W/BOAT OPS COURSE

1. The student will be able to demonstrate basic water rescue safety knowledge.
2. The student will be able to demonstrate basic knowledge to read a river/flood water situation.
3. The student will be able to demonstrate proper use of rescue throw rope bag.
4. The student will be able to demonstrate rope rigging techniques including anchor/stabilization lines, snag lines and boat tethered rigging lines.
5. The student will be able to demonstrate proper and safe operations of a motorize boat.

### OBJECTIVES

The student will be able to demonstrate basic water rescue safety knowledge.

- Lakes/Rivers
- Floodwaters
- Pools and Spas

The student will be able to demonstrate basic knowledge to read a river/flood water situation.

- Read the River for Eddy's/Safe havens
  - Read the River for Hydraulics
- Read the River for Upstream and Downstream V's
  - Learn and respect the force of the water

The student will be able to demonstrate proper use of rescue throw rope bag.

- Proper Techniques for throwing rescue rope in lakes
- Proper Techniques for throwing rescue rope in rivers and flood/swift water situation.

The students will be able to demonstrate self rescue skills.

- Proper techniques in receiving a throw rope
- Proper techniques for maneuvering downstream in rivers and flood/Swiftwater situations.
  - H.E.L.P. Heat Escape Lessoning Position

The student will be able to demonstrate rope rigging techniques including anchor/stabilization lines, snag lines and boat tethered rescue lines.

- Proper techniques for rigging an anchor/stabilization line across a river.
- Proper techniques for utilization a snag line to free a Victim of an obstacle.
- Proper techniques for setting up a boat tethered rescue line system with dual direction tag line control.



Michigan Rescue Concepts, LLC

Water/Ice Rescue Training & Equipment Sales

## BASIC WATER RESCUE W/ BOAT OPS COURSE OUTLINE

This course meets the standards of NFPA 1670 & 1006 for Water Rescue

Module 1 – Goals and Objectives of Course

Module 2 – Overview of Water Rescue

Module 3 – Rescuer Safety

Module 4 – Pre-Planning and Knowing Your Areas of Hazard

Module 5 – Pools and Spas

Module 6 – Media, Witnesses, Family, and the Rescuer

Module 7 – Mutual Aid

Module 8 – Patient/Victim Management

Module 9 – ASAPS

Module 10 – Hypothermic - Yes or No

Module 11 – Trauma

Module 12 –Victim Retrieval-Shore Based

Module 13 –Victim Retrieval –Boat Based

Module 14 – Equipment – What do we need?

Module 15 – Keep it Ready!

586-784-9320 Email: [teri@michiganrescueconcepts.com](mailto:teri@michiganrescueconcepts.com)