

Sump Rescuer Handbook

AUG 2026



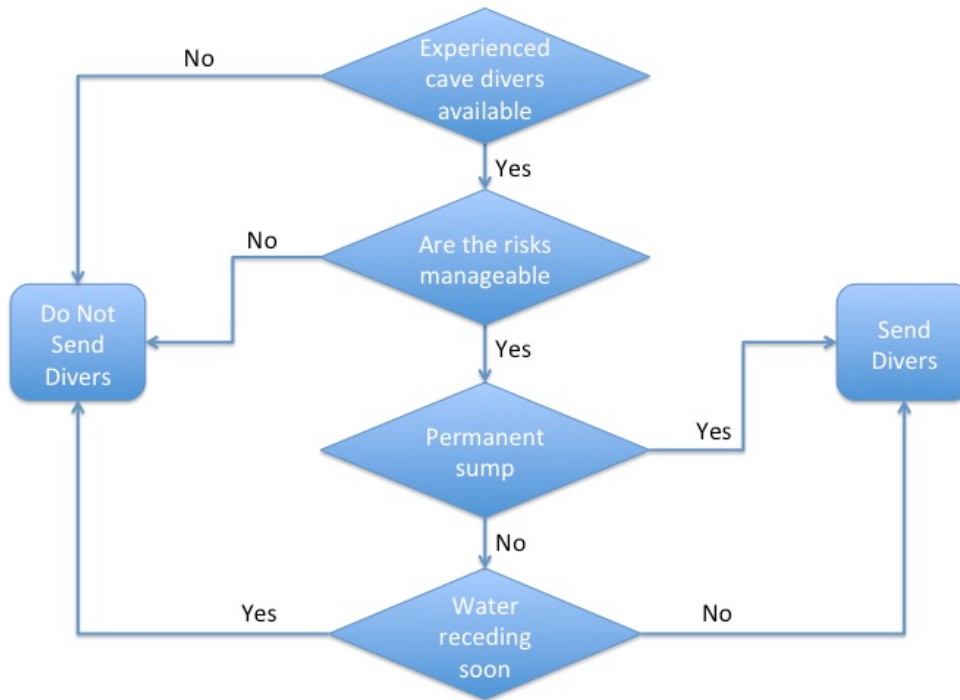
Sump Reconnaissance for Decision Makers

1. What indicators are there that missing people might be beyond the sump?
2. Are the missing people suspected to be behind recently flooded passage or are they sump divers behind a permanent sump?
3. Is the water in the sump rising or dropping, and how quickly?
4. Is the water flowing or relatively still?
5. Does the water appear clear or muddy?
6. What parts of the cave / mine are flooded or impassible?
7. Where are the low parts of the underground area along the way to the sump that may also flood?
8. What does local knowledge say about the cave / mine, known air spaces, flood durations, and historical rescues?
9. What is the potential for debris in the water, or tunnel collapse?
10. For each of the missing persons, what are their known medical considerations, heights, weights, and what is their experience level with caving / mining, swimming, and scuba diving?
11. Where can you get dewatering equipment, what are its capabilities, and how is it powered?

Sump Assessment in Support of Divers

1. What is the weather forecast?
2. What is the water temperature?
3. How much dry area is available near the sump to gear up at, and warm up at later?
4. How far is the sump from the cave / mine entrance?
5. What challenges to moving bulky scuba equipment exist along the path to the sump?
6. Are there any tight areas that divers would have to swim through?
7. How deep is the water? If this is well known cave / mine, how far has the water risen above its normal level? This can be in ranges, e.g. 5 – 10 meters or 30+ meters.
8. How long is the sump? This usually requires a pre-existing map.
9. Is there guideline / cables / rope through the sump?
10. If the sump is the result of recent flooding, what was the passage like when it was dry?
11. What resources are available for filling scuba tanks?
12. What equipment is available to communicate through the sump?
13. Is any special equipment required to be brought through the sump? (gas detectors, tools, rigging, etc)
14. What decontamination procedures will be required?

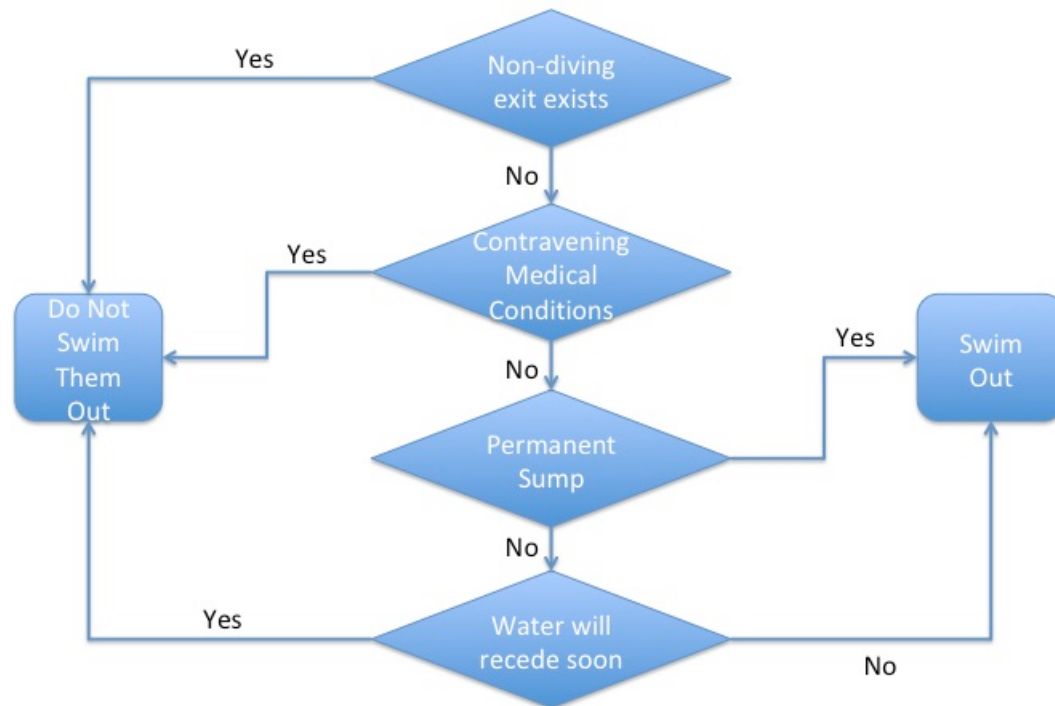
Whether to Send Sump Divers



Beyond-the-Sump Procedures

1. Check the air quality
2. Check for the patients. If not found, then leave a note or marker.
3. Check the patients' mental state
4. Assess the patient's health and treat for hypothermia
5. Make an exit plan
6. If exiting without the patients, then leave something tangible and helpful

Whether to Swim out the Patients



Patient Class for a Swimming Evacuation

1. Attitude / mindset
2. Breathing
3. Buoyancy
4. Ear clearing
5. Propulsion – Finning, towing, pushing
6. Line procedures and positioning
7. Hand signals
8. Emergency procedures – Lost regulator, free flow, lost line, entanglement
9. Sequence of events for the swim
10. Inspection

Sump Rescue Planning Factors

1. Weather
2. Gas planning – RMV 40L / 1.4 cuft per minute
3. Sections of the cave and where to stage equipment and personnel
4. Sump environment – length, contamination, restrictions, line & anchors
5. Patient temperature management
6. Patient medical needs

7. Patient ability to travel underwater – Skill, experience, temperament, injuries
8. Pumping – Rate of sump refill if the pumps die
9. Overall time needed

Dive Briefing Format

1. Situation
 - a. Patient details – Number, health, experience, size, weight, location
 - b. Passage-to-the-sump details – Passage description, porters, kit up area
 - c. Sump details – Depth, length, cross section, current, temperature, visibility, guideline
 - d. Beyond-the-sump details – air quality, passage description, likely patient locations, communications back to the surface
 - e. History of the incident so far
 - f. Weather
 - g. Operations concept
 - h. Simultaneous rescue efforts
2. Mission
 - a. This team's who, what, when, where, why
3. Execution
 - a. Tasks & purposes - Who is responsible for what, and why they're doing it
 - b. Timeline & event triggers
 - c. Risk management
4. Admin & logistics
 - a. Material - Packing list, supplies for beyond the sump, cylinder filling, lead weights, battery charging
 - b. Movement - Packaging gear for movement, porters, caching weights, staging area for getting kitted up
 - c. Medical - Decompression chamber access, oxygen access, bathing & ear care, rest plan
 - d. Maintenance - Decon procedures from dirty water, cleaning mud off hose fittings, save-a-dive kit
5. Command & communications
 - a. Chain of command
 - b. Communication procedures to the sump & through the sump (if possible)