

K-9 101 for Search Management

By Charles E. (Chuck) Melvin

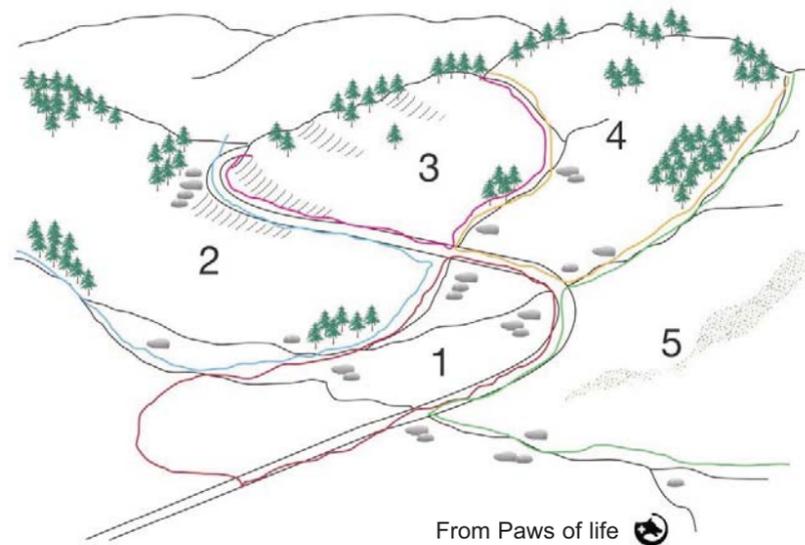
Team Commander
K9 Search & Rescue Inc.
Dolores, Colorado

Canine search and rescue is a technical arena frequently misunderstood by search management, and by its very nature, fraught with malfeasance. Yet a well trained search dog and handler can and have done what appear to the untrained eye to be a miracle. This article will address the basic information an overhead team needs to evaluate the potential value, possible deployment, and evaluation of canine performance on a mission. Canines are just another tool available to search management, contrary to the opinion of some handlers. Dogs are not an appropriate resource for all missions. Trained properly and deployed correctly, dogs and handlers can serve a useful purpose that cannot be accomplished with any other current resource readily available. The U.S. Supreme Court has ruled that a narcotics scenting dog must be successful in 62% of the trials, and the US Department of Defense has stated that canines are the most effective improvised explosive device detection tool in the arsenal. The apparent conflict here simply relays that dogs are not always successful but are a tool to be used when appropriate.

Search managers must be aware there are fraudulent handlers lurking in the canine world. Many will self-deploy to missions, often with documentation in hand, such as a scrap book and letters of recommendation which may be forged, may have unrealistic claims of ability and success, may plant evidence to find, and may ask exorbitant fees for their

services. The overhead team should be very suspicious of these and similar behaviors, and do a complete background evaluation before allowing these imposters to deploy, especially if hired by the missing subject's family.

Canines indicate information to their handlers in different ways, based on training. For example, US Federal Emergency Management Agency dogs are trained to bark at the strongest scent. Off lead dogs often return to the handler with a trained final indication and lead the handler back to the source.



Some handlers have trained their search dogs to bark and hold, meaning that if the subject moves the dog will bite to hold the missing person in place. Overhead teams need to be aware of this liability and make an informed decision about using this resource. Some handlers question the bark alert in searches involving children, dementia patients, and armed hunters.

Even the term "dog team" lacks a standard definition within the search canine world. FEMA defines a dog team as a dog and handler, whereas the traditional American Rescue Dog Association definition of a team was three dogs, handlers and support search people. The logistics team calling for resources needs to ask what the requested dog team will actually provide.

The overhead team must decide when to request canine resources. In general, earlier in the first operation period is most effective. There is less contamination and the scent is strongest, giving the dog the best opportunity to be successful. If management has questions or concerns, they should contact the canine resource at any time, day or night, and discuss the Incident Action Plan with them. A professional canine team feels relief with a stand down and will never object to being turned around in route. The overhead team must also decide when to deploy canines. In general, canines are most effective early evening through the night and into early morning, given a safe search environment. The heat of the day is the least

effective time to work dogs, based on scent theory. The more dense air of night increases the chances of detection aurally (Godfrey-Smith, 2004) and canines have excellent night vision, increasing the POD. Dog Teams can generally work in inclement weather, limited by the handler's equipment and experience. High winds and high temperatures lower

POD's for air scent dogs with heavy rain having the same effect on trailing dogs. Light rain increases the POS for all human detection dogs. Other searchers should not rule out the use of canine resources in a search area. Well trained and experienced canine teams will work through contamination but at a slower rate than uncontaminated areas. Scent discriminating dogs using a valid scent article are most effective in contaminated areas, ruling out the scent of all other humans. Most air scent dog handlers will avoid the subject's family members and try to work up wind to others in their sector when possible.

Scent articles are always a benefit to SAR dogs; although a non-scent discriminating air scent team won't use them. As a generality, handlers will prefer collect their own and have the equipment to do so, since each dog should have one. If circumstances prevent the handlers from gathering their own samples, either zip lock plastic or paper evidence bags are acceptable, but garbage bags are not. The article should be picked up so that it is not touched by the unprotected hand; non scented gloves, the bag inside out and rolled over the article or clean tongs are acceptable. If only one article is available, more can be quickly made from it, provided it is not contaminated by prior use. Cloth in contact with the missing person's body is best, shoes are likely the least preferred. Car seats, steering wheels and other similar devices can be used if nothing better is available.

There are three basic types of canine resources available to search management. Each offers unique talents and deployment issues. The air scent (area search) dog will likely work off lead if the environment is safe to do so. It will work with the head held high and will cross the winds until scent is found. It doesn't require a PLK, and will find any human scent in the sector unless it is trained to scent discriminate. It can and will find articles having human scent on them. This type of dog can clear up to 80 acres per hour and may replace up to 50 human searchers under ideal conditions. It

can work areas of dense brush and works especially well if the subject is hiding or stuck and at night (Godfrey-Smith, 2004). "A reliable" area search dog can find the newly deceased on the surface, so if you are unsure if your missing person is alive or dead it is the properly trained area dog that you need (Salisbury, 2009). A "reliable" area dog is needed if you are searching active large carnivore country as the subject could very well be disarticulated, dismembered or buried (and would also be fresh) (Gilmore, 2009). These dogs will require about the same operational period breaks, etc. as the human searchers in the same area. Its best task might be a larger area that can be sectored into segments with an air scent dog assigned to each.

Allowing the handler or canine strike team leader to determine how to best work the assigned area may be most productive and free management of that task. Area search dogs can work land, still and moving water, snow, disaster, urban, and human remains as examples of appropriate deployment.

The trailing dog will probably work on lead. It will scent discriminate and hold its head mid range, casting back and forth across the track and cutting the corners. It will find articles along the trail, but needs a PLK or can cast for the track. These dogs can work contaminated areas. Their greatest value is generally determining the direction of travel. They can work well with man trackers since they don't run the track directly.

The tracking dog will also work on lead. It will scent discriminate and hold its nose close to the ground. It requires a scent article and PLK or track, but can work heavily contaminated areas to establish a direction of travel. A well trained tracking dog can determine the direction of travel in less than 2 meters of tracks. It may work more slowly than other types of SAR dogs. Human remains detection dogs (formerly cadaver dogs) tend to be air scent dogs trained specifically for human remains. Any area search dog should indicate on a recently

Example of land search using sectors; El Salto, NM



Example of moving water search



Example of article found by a trailing dog



Example of shore line search (Costa Rica)

Example of still water search from a boat



Example of article find in snow

Example of passive final indication from an HRD dog



deceased person IF they have been exposed to human remains in training. Specific HRD dogs will not indicate on a living person but will on small samples of human tissue. Historic HRD dogs specialize in finding older remains.

Some dog teams cross train their dogs on live find and HRD. While this is controversial in the dog world, it can be done, understanding that these dogs may not be as effective as a specialist. It may be a logical choice for management in areas with limited resources available. Some areas have reflex tasks assigned to dog teams when they arrive at staging; others do not so a summary for land search will be presented for management's consideration.

First response tracking or trailing dogs would be given access to a scent article and the PLK with the task of determining the direction of travel, assisted by the man tracking teams. The air scent teams, especially if they are scent discriminate, could be assigned to hasty searches, perhaps with a ground team behind, depending on the wind and available resources. Given air scent teams, in addition to those tasked with hasty search, a search of the highest probability area drainages or ridge tops, depending on winds, might be a good assignment.

Early operational periods might use tracking/trailing dogs to determine if the missing subject has been at a given location. Air scent resources might be assigned to areas with limited access or lower POD from other search modalities. Those resources could be used to raise the cumulative POD in higher POA's as well. In multiple operation period searches, area dogs may be a good resource to put outside the statistical search area to cover large areas, especially if containment wasn't satisfactory. They may be assigned to recheck areas of special interest from previous debriefings. Scent specific dogs may be used to verify areas of interest and all can be used to raise cumulative PODs, especially if subject may have been moving. A canine handler may have or request a flanker, also called a navi-

gator, whose role is to help watch the dog, watch for hazards, do navigation and communications if competent, and carry extra water for the dog, if needed. A handler should not have a crowd or family members of the missing person with the dog because it may well distract the dog and the handler. Support in this manner needs to be tasked by management, if possible, based on the information logistics gathered about the team that is responding. Handlers can work alone, but assistance is appreciated, if available.

Communications with dog teams should be by the communications plan, but dog teams may have their own equipment and frequencies. That information can be gathered when logistics contacts the team initially and should be built into the communications plan. Radio traffic between multiple dog teams deployed simultaneously precludes the use of a command frequency and may preclude that frequency being monitored by the communications center. That dog team radio traffic is crucial for the coordination of dogs within the search area, but is not generally relevant to overall search operations.

Transport of dog teams and support people can challenge logistics, but a well trained dog will go willingly with the handler on any mode of transportation provided; that is part of the dog and handler's training. A handler and dog should not be separated except in case of emergency; another handler is the best choice for that task should it arise.

Base camp operations should know that no special accommodations are required for the dog and handler. Management needs to be wary of handlers demanding "special" treatment such as motel rooms, restaurants, etc. Such treatment IS appreciated by dogs & handlers when provided, not so much by the other searchers, and isn't worth the alienation it can provoke. Management does need to plan on keeping dog and handler together; a good handler will not allow someone else to take their dog, except in an emergency. Some searchers don't like dogs so a separate, isolated base camp area,

away from smoke and exhaust, assigned specifically to dog teams can be a good idea. Dog food should be provided by the handler; only in unusual circumstances should dog food become a logistics section issue. If it becomes one because of a prolonged mission or flight weight restrictions, for example, it is generally not good to change foods during a search and every effort should be made to procure the same food. Dogs do get injured or ill on missions and handlers appreciate the plans section having a veterinarian on standby in the IAP. Mobile vet units are an advantage in that they can significantly reduce response time in a crisis. The same veterinarian may handle mounted emergencies also or may be a small animal specialist. The operation section chief will need a measure of the reliability of clues turned in by deployed canine teams. The ROC depends on the dog finding the scent, the dog trained to indicate that find, the handler reading the dog correctly, the handler communicating the clue in a reasonable, profession-

al manner, and the ops chief's perception of the communication and of the credibility of the team. Dog handlers use a particular vocabulary to report those clues unless prompted to do otherwise. Examples include **Interest** which describes a change in the dog's behavior but may not be related to scent from the lost subject (Flower, et al, 2004). **Find Indication** is when the dog finds the subject (source). Find indication is normally the trained or accepted and enhanced natural response developed by training such as refind, bump, barking at source etc. Indications are normally associated with contact to a subject (Barton, 2009). Those indications may be aggressive such as a bark, bite or scratch or may be passive such as a sit, down, or stare (modified from Fleck, 2009).

The term **Alert** is being phased out because, as explained by Flower, et al, 2004, saying the US Border Patrol reports that at trial, a jury better understands the word **Indication** than

trying to explain what is meant by the term **alert**. Goodman proposed a system using a scale of 1 to 10 with 1 being the weakest and 10 being a positive find, but it hasn't been widely adopted. Some management teams ask canine resources to use Goodman's method since it is commonly used with other resources and provides for a standard reporting and recording system.

Another issue for the management team may be the POD's reported in debriefing by canine teams. The specific POD for an area may be assigned by the Plans Section and in that case it is the handler's job to reach that POD to the best of their ability. Obviously, the POD reported will depend on the handler's experience with that specific dog. All reports should indicate areas not searched and why, hazards and areas of interest. The Garmin ASTRO system and other similar systems will provide a track with waypoints of the dog & handler on a map of the search area. Such electronic data is invaluable to management for plan-

ning and defense of activity, should the need arise.

Fringe benefits from dogs on scene are the public relations and the companion dog aspects. The public relations efforts of canine teams have mitigated anger on the part of missing subject's families; "the dogs are here, now management has done everything they could do". The companion dog aspect for responders is well documented at disaster scenes but plays a role in other types of missions as well.

In conclusion, canine search teams can be a valuable asset to search management if understood and used appropriately.

www.k9team.org

Acknowledgements: Mr. Lee Lang for his editorial patience and support! Ms. Kimberly Kelly for her continual encouragement, support, being a team mate on two teams, and for being a best friend. Ms. Judy Britton, team mate on two teams, for her technical writing support. And, last but not least, to the canines and K-9's that have had unbelievable patience with my ignorance over the past 26 years!

Ad