The purpose of the new KyEM Form 400, “SEARCH AND RESCUE MISSION NOTIFICATION AND REPORT,” is to enable the Division to track all SAR missions with much more accuracy and detail. What we have learned over a number of years, is that the reporting mechanism that we have used is good, but the amount of information critical to tracking missions, is lacking both in detail and consistency of terminology. Very little is provided to determine its usefulness in future missions.

By providing accurate details, the Division eventually will be able to produce a “KY Lost Person Behavior” database detailing where a person may be found based on a history of KY SAR missions. This information can only be provided by those agencies who actually perform the missions – you. By compiling all of the details of searches over a long period of time, patterns will be demonstrated in a lost person’s behavior. This predictability can and will greatly enhance the planning of SAR missions as well as reduce the search time which could be the difference in life and death to the subject.

This new Form 400 will be completed online, can be printed and added to the other mission notes for a complete file. Details of the mission can be reviewed for details and can also be used in training as scenarios. The new Form 400 may seem lengthy and tedious at first, but with some understanding and practice, it can be done quickly and render much more detail. The learning curve may be slow at first, but the end product will be well worth the effort.

With that said, I would like to thank Michelle Hamilton of Pendleton Co., who provided the technical means to make this effort a reality. Her work to assist the KY Division of Emergency Management better serve the citizens of the Commonwealth is greatly appreciated.

All of the work and final product of this project is dedicated to every person in the Commonwealth who has participated in a SAR mission. It is because of you that many families are still together, and because of your training and dedication, the vast majority of subjects were found within the initial response period and found unharmed.

I would also like to thank Robert Koester who provided the form as a means to track SAR missions. Robert is a Type 1 incident commander, instructor for the Virginia Department of Emergency Management, and past president of the Virginia Search and Rescue Council (15 years). Robert has also worked for the United States Coast Guard, National Aeronautics and Space Administration, National Park Service, and Federal Emergency Management Agency. The International Search & Rescue Incident Database (ISRID) is a product of Robert’s vision to increase the capabilities of every SAR team.

In the Service of the Commonwealth,

Don Franklin
FORM 400 INSTRUCTIONS

ADMINISTRATIVE INFORMATION

Submit by Email  clicking this box will forward the form to the KYEM SAR Collection Data location. NOTE: to save a digital copy for your records you will have to “save as” and rename the file. Otherwise, you will save the completed data on the template form.

Print Form  clicking this box will print a copy of the form and the information provided

Reset Form  clicking this box will delete all information you have provided without being saved

Incident Status

ACTIVE: A mission has been started and is currently being worked
CLOSED: A mission report has already been filed and this is the final report closing the incident
OPEN: This is a continuation of an active mission that may have been suspended or limited effort, i.e., patrolling the banks of a river
OPEN TO CLOSED: A single report from start to finish (no other reports have been filed)

Lead Agency: Name of the agency responsible for the SAR effort

Incident #: The State incident number provided by the KyEM Duty Officer

Mission #: The mission number as it is listed at the local dispatch center (911) or other agency

Incident Date: The date the mission started

Incident Time 24hr: The time the mission started in military time

Prepared by: The name of the individual completing the form

Organization/Agency: The name of the agency of which the form preparer is a member

Email address: The email of the individual completing the form (can be the agency email address)

Phone #: The phone number of the individual who completed the form (can be the agency phone #)
Incident Type

SEARCH: search for a missing, lost, or overdue person whose whereabouts is unknown
RESCUE: the location of the subject is known, but has to be rescued
BEACON: personal locator or ELT (aircraft)
RECOVERY: recovery of a body
TRAINING: a full-scale SAR exercise
DISASTER: SAR mission during a disaster, i.e., swift water rescue from flood waters
FUGITIVE: NOT PERMITTED BY KRS
FALSE REPORT: agency paged out and no actual search is necessary
STANDBY: agency activated in preparation for missions, but no mission is assigned
ATTEMPT TO LOCATE: the subject is mobile and no specific area or direction of travel known, i.e., Alzheimer’s patient driving
EVIDENCE: assist law enforcement in searching for evidence by means of diving or dragging operations (KRS 39F.170(2))
OTHER-SPECIFY: any “other” incident type needs to be specified in the narrative at the end of the form

Incident Environment

AIR: any mission involving aviation
LAND: any mission on land
WATER: any mission on any body of water

COUNTY: the name of the county where the incident occurred
COMMUNITY: the name of the city/town where the incident occurred
STATE: the State where the incident occurred (all States included for EMAC missions)
REGION: the KYEM Region number

PRIMARY RESPONSE AREA?: is your agency working within your primary response area?

INCIDENT INFORMATION

Subject Category: what the subject was doing that caused the incident

HIKER: someone who intentionally wanders on foot for recreational purposes
HUNTER: someone who is “game” hunting for animals; includes trappers
CHILD: anyone less than the age of 16 (for data purposes)
DEMENTIA: any person with an organic brain disorder, i.e., Alzheimer’s disease
DESPONDENT: anyone suffering from mental state, i.e., depression, anguish, etc.
ABDUCTION: anyone who is lost due to the cause of another person, i.e., kidnapping, molestation, etc.
AIRCRAFT: any aircraft reported missing or Emergency Locator Transmitter (ELT) activated
ANGLER: anyone fishing from the bank or any watercraft
ATV: anyone driving or riding on an All-Terrain-Vehicle, i.e., 4-wheeler, 6-wheeler, etc.
AUTISTIC: anyone diagnosed with this disorder
CAMPER: anyone participating in a camping event
CAVER: anyone lost inside a cave
CLIMBER: anyone participating in vertical ascension, i.e., rock climbing, etc.
GATHERER: anyone who is searching for natural growing products, i.e., mushrooms, dry-land fish, etc.
HORSEBACK: anyone participating in horseback riding
MENTAL ILLNESS: anyone diagnosed with schizophrenia, bipolar, or any other psychotic disorder
MENTAL RETARDATION/ID: anyone diagnosed with mental retardation
MOUNTAIN BIKER: anyone involved in the recreational use of mountain bikes
BASE JUMPER: anyone who parachutes from Buildings, Antennae, Spans (bridges), or Earth (cliffs)
EXTREME SPORTS: anyone involved in extreme racing (Ironman), canyoneering (kloofing), regaining (extreme orienteering), or dog racing
MOTORCYCLE: anyone riding a 2-wheeled, motorized vehicle, i.e., motocross, dirt bike, etc.
RUNNER: anyone participating in running, jogging, speed-walking, etc.
SKIER – ALPINE: anyone participating in downhill skiing
SKIER – NORDIC: anyone using skis as a means of transportation, i.e., cross-country skiing, etc.
SNOWBOARDER: anyone involved in snowboarding, including lift, backcountry, in-bounds, and out-of-bounds
SNOWMOBILER: anyone driving or riding a snowmobile
SNOWSHOER: anyone using snowshoes as a means of locomotion
SUBSTANCE ABUSE: anyone under the influence of a substance, typically alcohol or illicit substance
URBAN ENTRAPMENT: anyone entrapped in a collapsed structure due to earthquake, tornado, hurricane, explosion, mudslide, landslides, or rising flood water
VEHICLE: anyone who was last seen driving a vehicle that went missing between one point and another, i.e., stranded, out of gas, over an embankment, wash away by flood water, etc.
VEHICLE – 4WD: anyone participating in activities involving a 4-wheel drive vehicle for recreational use
VEHICLE ABANDONED: anyone who has left a vehicle for the purpose of getting gas, vehicle is snow-bound, wedged on rocks, etc.
WATER – POWERED: any motorized water vehicle, whether gas or electric
WATER – NON-POWERED: any non-motorized water vehicle, i.e., canoe, kayak, sailboat, etc.
WATER – PIW-FLAT: (Person In Water) water is stagnant (not moving), i.e., pond, lake, etc.
WATER – PIW-CURRENT: (Person In Water) water is moving, i.e., creek, river, etc.
WATER – PIW-FLOOD: (Person In Water) flood waters; stagnant or current
WORKER: anyone who is employed for outdoor work, i.e., forestry, Fish & Wildlife, ranchers, farmers, surveyors, wilderness firefighters, etc.

SUBJECT SUB-CATEGORY: any additional information to clarify Subject Category, i.e., VEHICLE ABANDONED; FLAT TIRE (may be left blank if the Subject Category is clear)

SUBJECT ACTIVITY: what the subject was supposed to be doing at the time the mission was reported (activity may be unknown)

CONTACT METHOD: how was the subject found to be missing
REPORTED MISSING: subject(s) reported missing to a central dispatch center by family or friends
VEHICLE FOUND: the subjects’ vehicle was found and no contact with the subject
REGISTRATION CARD: subject(s) was registered at a location with no further contact (overdue). This is common in parks and many cave systems
ELT/PLB/EPIRB: Emergency Locator Transmitter (aviation)/Personal Locator Beacon (land based)/ Emergency Position Indicating Radio Beacon (marine based)
SATELLITE ALERTING TECHNOLOGY: an alerting device using satellite technology
SUBJECT CELL PHONE: subject used cell phone to report he/she was lost
RADIO: subject used radio (2-way, i.e., walkie-talkie, family radio, amateur (HAM) radio, etc.)
DISTRESS SIGNAL: any means of signaling for help, i.e., smoke signal, 3 gun-shots, shouting, etc.

IPP: Initial Planning Point; point that is initially used to plan the search incident
PLS: Point Last Seen; last place the subject was actually seen by a witness (may be revised during search)
LKP: Last Known Point; location of a significant clue, i.e., parked car, wallet, that places the missing subject (LKP can be revised during search)

IPP CLASSIFICATION
AIRPORT: any location were aircraft may take off or land, including airstrips
BEACON: a reported electronic signal received, i.e., personal location device, or ELT
BUILDING: any man-made structure used as an employment location, or storage including out-buildings, unattached garages, etc. Does not include residential area
FIELD: any open area
RADAR: any reported radar sighting
RESIDENCE: any area in or around the subject’s home or residential location; including yard, garden, etc.
ROAD: any road including dirt roads, forestry roads, etc.
SIGNAL: any visible or audible attempt by the subject to show their location, whistle, shout, smoke, etc.
TRAIL: any path to give purposeful direction
TRAILHEAD: the starting point of a trail; usually marked
UNKOWN: neither witnesses nor clues
VEHICLE: abandoned vehicle; includes wrecked vehicles and disabled vehicles
WATER: any body of water, moving or stagnant
WOODS: any area that includes trees over a significant area; includes forests
OTHER – SPECIFY: anything not listed and must be listed in the narrative
N/A:

IPP COORDINATES*
N/S (Lat): latitude (north/south)
E/W (Long): longitude (east/west)
FORMAT: determined by the GPS (can be changed) or map being used
DD: decimal degrees  DDD.DDDDD°
DM: degrees, minutes, seconds  DDD.MM’S’S.S”
UTM: Universal Transverse Mercator  RRR UUU
USNG: United States National Grid Spatial Address  RRRR UUUU
DDM: degrees and decimal seconds  DDD°MM.MMM’

ECO-REGION DOMAIN
TEMPERATE: characterized by rainfall that generally results in forests and four seasons (all of KY is temperate)

ECO-REGION DIVISION
220 HOT CONTINENTAL: anywhere is KY that is not in the mountainous region (predominately west of I-75)
M220 HOT CONTINENTAL: anywhere is KY that is in the mountainous region (predominately east of I-75)

POPULATION DENSITY
WILDERNESS: an area essentially undisturbed and uninhabited by humans
RURAL: an area relating to the countryside, marked by farming or raising livestock, which is sparsely populated; it is often mixed with open spaces and woods
**SUBURBAN:** a residential area on the edge or border of a city or a large urban area; it also will have associated retail and commercial areas; primary routes or roads; green areas and larger parks are common

**URBAN:** an area where the natural environment has been almost completely modified by humans; an area that is densely inhabited, significantly developed with structures, and where travel is greatly facilitated by roads; mass transit is available

**WATER:** An area of open water (pond, lake, reservoir, river, bay, sea, ocean; even in the densest of urban areas, open water retains its essential characteristics

**TERRAIN**

- **MOUNTAINOUS:** any terrain having mountains, i.e., Appalachians
- **HILLY:** any terrain having rolling hills
- **FLAT:** any terrain that is relatively flat; no hills or mountains
- **WATER:** any larger body of water, i.e., lake, reservoir

**LAND COVER**

- **BARE:** no trees or brush
- **LIGHT:** brush, briars, or generally overgrown area with ground vegetation
- **MODERATE:** brush, briars, or generally overgrown area with ground vegetation and sparse to moderate trees
- **HEAVY:** considerable amount of brush, briars, and thick ground vegetation or heavily wooded areas where vision is limited
- **WATER:** any larger body of water, i.e., lake, reservoir

**LAND OWNER**

- **PRIVATE:** privately owned property
- **COMMERCIAL:** property owned by a company or corporation
- **COUNTY:** county property
- **STATE:** property of the Commonwealth of KY
- **NPS:** National Park Service
- **USFS:** United States Forest Service
- **BLM:** Bureau of Land Management
- **MILITARY:** any military owned property, i.e., military installation (Ft. Knox, Ft. Campbell, etc.)
- **NATIVE/TRIBAL:** any property owned by tribal communities, i.e., reservations, etc.
- **NAVIGABLE WATER:** All waters which are currently used or were used in the past or may be susceptible to use in interstate or foreign commerce, including all waters subject to the ebb and flow of the tide
- **OTHER – SPECIFY:** any other ownership must be described in the narrative

**WEATHER**

- **CLEAR:** no clouds
- **PARTLY CLOUDY:** some clouds
OVERCAST: sky completely covered by clouds
FOGGY: ground is completely or partially covered by fog
DRIZZLE: very light rain with no definable raindrops
SHOWERS: raining on and off
RAIN: continuous rain
HAIL: hail at times during the mission
SLEET: frozen rain
FLURRIES: light snow
SNOW: continuous snow
BLIZZARD: heavy snow that impair vision
SMOKEY: ground covered by smoke, i.e., caused by forest fire
WINDY: continuous wind or periodic wind; heavy in nature

TEMP. (Max): highest temperature during the mission (72° listed as 075)
TEMP. (Min): lowest temperature during the mission (5° below 0 is listed as -05)
WIND (mph): average wind speed during mission (23 mph listed as 023)
SNOW ON GROUND: was there snow on the ground during the search

SNOW
   NONE: no snowfall during mission
   FLURRY: slight snow during mission; no accumulation
   LIGHT: falling snow during mission with little accumulation
   MEDIUM: falling snow during mission with moderate accumulation
   HEAVY: falling snow during mission with heavy accumulation

LIGHT
   DAY: daylight hours with enough light to see distances
   NIGHT: darkness
   NIGHT (BRIGHT MOON): after sunset, but enough light reflected off of moon to provide adequate light to see some distance
   DAY + NIGHT: mission extends from day to night, or night into day
   OBSCURED: cannot clearly see distances do to haze or light blocked by clouds
   TWILIGHT: the light from the sky between full night and sunrise or between sunset and full night

SUBJECT INFORMATION

SOLO SUBJECT: single subject
GROUP STAYED TOGETHER: a group of subjects that stayed together as one

GROUP SEPARATED/DIFFERENT OUTCOMES: the group of subjects separated causing the mission to be divided into different search strategies

GROUP TYPE
- **M**: single male
- **F**: single female
- **MM**: multiple males
- **MF**: group includes both males and females
- **FF**: multiple females
- **AC**: at least one adult (>=21) and one child (<=16)

(NOTE: For groups: if different outcomes, complete for each person. Use additional forms if required) If there are more than 4 in the group, use multiple forms.

SUBJECT: each subject is listed individually
- **AGE**: in years
- **SEX**: M/F
- **LOCAL**: is the subject from the area where he/she got lost
- **WEIGHT**: in pounds
- **HEIGHT**: in inches (5’ 9” would be 69”)

BUILD
- **THIN**: lean; skinny; bone structure is visible
- **MEDIUM**: bone structure is not visible, but no “love handles”
- **HEAVY**: bone structure is not visible; love handles; belly protruding
- **OVERWEIGHT**: large belly; larger than body structure should be
- **OBESE**: very large; grossly overweight

FITNESS
- **EXCELLENT**: subject excels at the activity he/she is performing (hiking, etc.); survivability is great
- **GOOD**: subject can perform activity with occasional rest periods; survivability is good
- **FAIR**: subject can perform activity with multiple rest periods; survivability is questionable
- **POOR**: subject is not capable of performing activity; not survivable
- **UNKNOWN**: fitness condition is not known/reported
- **N/A**: subject does not actively participate in activity (wheel-chair, carrier, etc.)

EXPERIENCE
- **EXCELLENT**: subject is very familiar with conditions required to perform activity and has performed the activity many times; survivability is great
- **GOOD**: subject is familiar with conditions required to perform activity and has performed the activity on occasion; survivability is good
FAIR: subject is somewhat familiar with conditions required to perform activity, but has little, if any experience; survivability is questionable
POOR: subject is not familiar with condition required to perform activity and has no experience; not survivable
UNKNOWN: experience is not known/reported
N/A: subject depends on other’s experience (child, infant, wheel-chair)

EQUIPMENT
EXCELLENT: subject is well-equipped for the activity, and equipped to handle unexpected conditions; survivability is great
GOOD: subject has proper equipment for the activity, and may have enough to handle unexpected conditions; survivability is good
FAIR: subject has some equipment, but not enough to handle unexpected conditions; survivability is questionable
POOR: subject does not have proper equipment for activity; not survivable
UNKNOWN: proper equipment is not known/reported
N/A: subject depends on others for equipment (child, infant)

CLOTHING
EXCELLENT: subject is well-dressed for the activity, and equipped to handle unexpected conditions; survivability is great
GOOD: subject has proper clothing for the activity, and may have enough to handle unexpected conditions; survivability is good
FAIR: subject has some clothing, but not enough to handle unexpected conditions; survivability is questionable
POOR: subject does not have proper clothing for activity; not survivable
UNKNOWN: proper clothing is not known/reported
N/A: subject depends on others for clothing (child, infant)

SURVIVAL
EXCELLENT: subject has necessary experience, equipment, clothing, and knowledge to survive even in unexpected conditions
GOOD: subject has some experience, equipment, clothing, and knowledge to survive even in unexpected conditions
FAIR: subject has little experience, equipment, clothing, and knowledge to survive and probably cannot survive unexpected conditions
POOR: subject has no experience, equipment, clothing, nor knowledge to survive
UNKNOWN: proper equipment is not known/reported
N/A: subject is totally dependent on others (child, infant)

MENTAL
NORMAL: no mental issues
**MED:** subject demonstrates mild mental illness; depression, ADD, 1st stage Alzheimer’s, etc.

**MOD:** subject demonstrates moderate mental illness; despondent, possibly suicidal, etc.

**SEVERE:** advanced case of mental illness; final states of Alzheimer’s, etc.

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**TIME LOG**

**LAST SEEN:** date last seen (format YYYY-MM-DD; 2010-08-05)

**TIME:** time last seen (24 hr clock, i.e., 01:17, 16:24)

**SAR NOTIFIED:** date the mission was activated (format YYYY-MM-DD; 2010-08-05)

**TIME:** time mission was activated (24 hr clock, i.e., 01:17, 16:24)

**SUBJECT LOCATED:** date subject was located (format YYYY-MM-DD; 2010-08-05)

**TIME:** time the subject was located (24 hr clock, i.e., 01:17, 16:24)

**INCIDENT CLOSED:** date the mission was closed (format YYYY-MM-DD; 2010-08-05)

**TIME:** time the mission was closed (24 hr clock, i.e., 01:17, 16:24)

**TOTAL TIME LOST:** total amount of time the subject was missing; time last seen to subject located (format in hours and minutes, i.e., 03:27, 36:54)

**TOTAL SEARCH TIME:** time SAR notified to subject located (format in hours and minutes, i.e., 03:27, 36:54)

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**INCIDENT OPERATIONS**

**DESTINATION COORDINATES**

N/S (Lat): latitude (north/south)

E/W (Long): longitude (east/west)

**FORMAT:** determined by the GPS (can be changed) or map being used

DD: decimal degrees DDD.DDDDD°

DM: degrees, minutes, seconds DDD.MM' SS.S"

UTM: Universal Transverse Mercator RRR UUU

USNG: United States National Grid Spatial Address RRRR UUUU

DDM: degrees and decimal seconds DDD'MMM.MMM'

**DIRECTION OF TRAVEL (TRUE):** direction of travel shown by compass bearing, i.e., 90°, 247°, etc.

**DOT HOW DETERMINED:** Direction of Travel (DOT) was determined by

INTENDED DESTINATION: subject was known to be traveling to a specific destination

PHYSICAL CLUE: evidence showed direction of travel (debris, trash, etc.)

SIGHTING: subject was seen by a witness in his/her direction of travel

TRACKS: subject’s tracks (sign) was noted by qualified search member
TRACKING/TRAILING: SAR Dog Team following scent
OTHER – SPECIFY: other means must be noted in narrative

REVISED PLS/LKP COORDINATES 1*: list any changes in Point Last Seen/Last Known Point
N/S (Lat): latitude (north/south)
E/W (Long): longitude (east/west)
FORMAT: determined by the GPS (can be changed) or map being used
  DD: decimal degrees DDD.DDDDD°
  DM: degrees, minutes, seconds DDD.MM’SS.S”
  UTM: Universal Transverse Mercator RRR UUU
  USNG: United States National Grid Spatial Address RRRR UUUU
  DDM: degrees and decimal seconds DDD°MM.MMM’

REVISED HOW DETERMINED: how was a change determined
PHYSICAL CLUE: evidence showed direction of travel (debris, trash, etc.)
TRAIL REGISTER: the subject completed a trail register (written documentation showing presence, destination, and time)
SIGHTING: subject was seen by a witness in his/her direction of travel
TRACKS: subject’s tracks (sign) was noted by qualified search member
OTHER – SPECIFY: other means must be noted in narrative

REVISED DOT: list the new direction of travel (true: compass bearing, i.e., 90°, 247°, etc.)

DECISION POINT COORDINATES*: a decision point is where the subject makes a decision to change direction (active), such as a fork in a trail or change direction (passive), such as missing a turn or fork in a trail, reading the map upside-down, etc. Either way, there is a mistake in navigation
N/S (Lat): latitude (north/south)
E/W (Long): longitude (east/west)
FORMAT: determined by the GPS (can be changed) or map being used
  DD: decimal degrees DDD.DDDDD°
  DM: degrees, minutes, seconds DDD.MM’SS.S”
  UTM: Universal Transverse Mercator RRR UUU
  USNG: United States National Grid Spatial Address RRRR UUUU
  DDM: degrees and decimal seconds DDD°MM.MMM’

TYPE OF DECISION POINT: decision points may not be known until interviewing subject(s)
OTHER: specify in narrative
SADDLE: a saddle is a dip or low point between two areas of higher ground. A saddle is not necessarily the lower ground between two hilltops; it may be simply a dip or break along a level ridge crest. If you are in a saddle, there is high ground in two opposite directions and lower ground in the other two directions. A saddle is normally represented as an hourglass on a topo map
SHORTCUT: subject take what he/she believes there is a shorter route
TRAIL ANIMAL: path or trail make by wildlife’s use
TRAIL CROSSED: trail intersection
TRAIL LOST: trail became less obvious and seems to “disappear”
TRAIL SOCIAL: subject met someone or a group and travelled with them
TRAIL TURNOFF: directional change in the trail

DECISION POINT A FACTOR: the decision by the subject to change direction contributed to being lost

INCIDENT OUTCOME

INCIDENT OUTCOME: how the subject was found (unless still open or suspended)
CLOSED BY SEARCH: subject found by SAR members
CLOSED BY PUBLIC: subject found by someone from the general public (family/friends included)
CLOSED BY SELF-RESCUE: subject walked out or self-rescued
CLOSED BY RESCUE: subject was located and needed assistance to get out
CLOSED BY INVESTIGATION: information determined there was no search necessary
   FALSE REPORT: subject reported missing when he/she was actually not lost; not an intentional report
   FRIEND/FAMILY: friends/family knew the subject’s location
   IN FACILITY: subject was in or near facility (residence, workplace, park etc.)
   STAGED: intentional false report
   TRANSPORTED: subject was picked up by vehicle
OPEN/SUSPENDED: subject not found, but search efforts are limited, i.e., checking river banks, etc.
OTHER: must be listed in narrative

SCENARIO: what actually caused the SAR incident
   AVALANCHE: this includes mudslides, rock falls, etc.
   CRIMINAL: subject was being pursued by law enforcement
   DESPONDENT: subject suffers from depression, anxiety, etc.; may be suicidal
   EVADING: subject does not wanting to be found; hiding
   INVESTIGATIVE: subject was investigating (looking) at or for something, i.e., camping location, waterfall, cave, etc.
   LOST: subject was unable to determine his/her location and find their way out
   MEDICAL: subject suffered from a condition, existing or onset, that rendered him/her unable to walk out
   DROWNING: subject’s cause of death was drowning; may involve near-drowning incidents
   OVERDUE: subject did not return at an expected time
STRANDED: subject was unable to walk out due to other issues, i.e., break down, wrecked vehicle, etc.
TRAUMA: subject suffered physical injury and was unable to walk out

SUSPENSION REASONS: why the search was suspended (use Ctrl and click to choose multiple reasons)
LACK OF CLUES: no clues to indicate the subject is missing or in the area of search
LACK OF RESOURCES: insufficient resources to continue search in a safe manner
WEATHER: weather conditions render the mission unsuccessful or unsafe
HAZARDS: area of search is hazardous to safety of searchers
LACK OF SURVIVABILITY: probability of subject’s survival is zero or nearly zero
INVESTIGATIVE INFORMATION: investigation shows subject is no longer in search area or shows other factors as to why the search no longer needs to continue

# SUBJECTS: number of subjects located

# WELL: number of subjects found is good condition; without injury or illness

# INJURED: number of subjects found with injury sustained during their activity or during their attempt to walk out

# DOA: number of subjects found deceased

# SAVED: number of subjects that possibly would not have survived had they not been found

FIND COORDINATES*: where the subject(s) was found (use multiple forms for multiple subject found is different locations)
N/S (Lat): latitude (north/south)
E/W (Long): longitude (east/west)
FORMAT: determined by the GPS (can be changed) or map being used
  DD: decimal degrees DDD.DDDDD°
  DM: degrees, minutes, seconds DDD.MM’SS.S”
  UTM: Universal Transverse Mercator RRR UUU
  USNG: United States National Grid Spatial Address RRRR UUUU
  DDM: degrees and decimal seconds DDD*MM.MMM’

DISTANCE IPP: distance from Initial Planning Point (straight line)

BEARING T: compass bearing (true) from IPP to find location

FIND FEATURE: feature description of where the subject(s) was found
   BRUSH: undergrowth, i.e., high weeds, etc.
CANYON: a deep, narrow valley with steep sides; often with a stream or river flowing through it
CAVE: an underground passage including mines
DRAINAGE: a natural or man-made route for water to flow; permanent or conditional
FIELD: open area of ground with minimal vegetation
FORREST/WOODS: area covered with trees and/or undergrowth
ICE/SNOW: area covered in ice and/or snow (does not include frozen lakes, ponds – see “rock”)
STRUCTURE: any building
ROAD: any path that may be travelled by a vehicle such as a car or truck (not ATV’s)
ROCK: area of bear rock and ice (solid water); pavement is classified under roads
SCRUB: sparse trees as found is desert areas
TRAIL: any path travelled by foot or ATV
VEHICLE: any motorized vehicle, i.e., car, truck, motorcycle, bicycle, ATV, etc.
LAKE/POND/WATER: any body of water not frozen (see “rock”)
WETLAND: swampy area that naturally stays wet
YARD: area immediately near the subject’s residence (does not include farmland or fields)

FEATURE SECONDARY: list any secondary features where the subject(s) was found

DETECTABILITY: probability of detection based on investigation, terrain, clues, etc.
   EXCELLENT: probability of detection is very high
   GOOD: probability of detection is high
   FAIR: probability of detection is 50/50
   POOR: limited or no probability of detection

MOBILITY/RESPONSIVE: subject’s condition after located
   MOBILE/RESPONSIVE: subject can travel on their own and is coherent
   MOBILE/UNRESPONSIVE: subject can travel on their own, but is not coherent
   IMMOBILE/RESPONSIVE: subject cannot travel on their own, but is coherent
   IMMOBILE/UNRESPONSIVE: subject cannot travel on their own and is not coherent
   (includes fatalities)

LOST STRATEGY: what the subject did after discovering they were lost
   BACKTRACKING: attempt to follow the path from which they came; reverse path
   DIRECTION SAMPLING: tried to travel in a different direction (shortcut or what seemed to be the correct direction); random traveling
   DIRECTION TRAVELLING: traveled cross-country in a perceived correct direction often crossing paths, power-lines, railroad tracks, etc.
   DOWNHILL: traveled downhill in search of road or stream
   EVASIVE: attempt to hide
FOLK WISDOM: follow the “natural” signs, i.e., moss always grows on the north side of trees, etc.

FOLLOWED TRAVEL AID: followed a compass, GPS, etc.

LANDMARK: followed a landmark, i.e., water tower, radio tower, road, etc.

NOTHING: subject stopped traveling because of not knowing what to do or fear of doing something

PANIC: lost mental control and traveled randomly out of fear; usually fast and uncontrolled with no determined direction

ROUTE SAMPLED: subject uses an intersection of trails as a base, traveling some distance down each trail in search of something familiar

STAYED PUT: a conscientious decision to stop traveling and allow searchers to find them

VIEW ENHANCEMENT: attempt to find an area of greater elevation to see landmarks

SEEK CELL SIGNAL: attempt to travel to an area of better cell-phone service

OTHER – SPECIFY: must be listed in the narrative

MOBILITY (HRS): how long did the subject travel

TRACK OFFSET (yds): the shortest distance (in yards) from the location the subject was found to the closest linear feature (Linear Feature: includes trails, power lines, railroads, pipeline right of way, and other similar linear features; roads and drainages will be included for this measurement)

ELEVATION CHANGE FROM IPP: Initial Planning Point
    UP: subject was found at a higher elevation than the IPP (uphill)
    DOWN: subject was found at a lower elevation than the IPP (downhill)
    FEET: difference in feet (find location elevation minus IPP elevation, or IPP elevation minus find location elevation)

MEDICAL/RESCUE INFORMATION

SUBJECT
    STATUS: subject’s medical/rescue condition after rescue
        WELL: good condition; normal
        INJURED: subject incurred an injury during time lost or during rescue
        DOA: Dead on Arrival; subject found deceased or expired during rescue
        NOT FOUND: subject was not found

MECHANISM: cause of the subject’s injury
    ANIMAL ATTACK: subject was attacked by wild or domestic animal
    AVALANCHE: includes mudslides, rock avalanche, etc. (not rock fall)
    BITE/STING: subject was bitten or stung, i.e., snake, bee (not an animal attack)
<table>
<thead>
<tr>
<th>ENVIRONMENT:</th>
<th>includes temperature, elevation, ease of travel, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>FALL-GROUND LEVEL:</td>
<td>subject was injured by tripping, stumbling while walking</td>
</tr>
<tr>
<td>FALL-HEIGHT:</td>
<td>subject was injured by falling off of something or from a height distance</td>
</tr>
<tr>
<td>GUNSHOT:</td>
<td>accidental or intentional (see “HUMAN ATTACK”)</td>
</tr>
<tr>
<td>HUMAN ATTACK:</td>
<td>subject was attacked by another human (no gunshot)</td>
</tr>
<tr>
<td>MEDICAL CONDITION:</td>
<td>pre-existing condition or onset of a condition</td>
</tr>
<tr>
<td>ROCK FALL:</td>
<td>single or low number of rock falling (not an avalanche)</td>
</tr>
<tr>
<td>TREE FALL:</td>
<td>tree(s) fell on subject</td>
</tr>
<tr>
<td>WATER:</td>
<td>body of water; stagnate or moving (including flood water)</td>
</tr>
<tr>
<td>OTHER-SPECIFY:</td>
<td>must be listed on narrative</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>INJURY TYPE:</th>
<th>the type of injury incurred by the subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A:</td>
<td>no injury incurred</td>
</tr>
<tr>
<td>ABRASION:</td>
<td>scrapes; a layer or several layers of skin damaged or lost</td>
</tr>
<tr>
<td>AMPUTATION:</td>
<td>loss of a limb (avulsions included: loss of skin and muscle tissue)</td>
</tr>
<tr>
<td>BRUISE:</td>
<td>hematoma; blueness under the skin</td>
</tr>
<tr>
<td>BURN:</td>
<td>1\textsuperscript{st}-3\textsuperscript{rd} degree (include sunburn)</td>
</tr>
<tr>
<td>CHEST INJURY:</td>
<td>injury by an external cause causing internal injuries (no heart attacks)</td>
</tr>
<tr>
<td>CRAMP:</td>
<td>muscle tightening or pain</td>
</tr>
<tr>
<td>CRUSH:</td>
<td>trauma caused by a falling object or compression to limbs/tissue</td>
</tr>
<tr>
<td>DROWNING:</td>
<td>subject found in water (near-drowning included)</td>
</tr>
<tr>
<td>FRACTURE:</td>
<td>broken bone(s)</td>
</tr>
<tr>
<td>FROSTBITE:</td>
<td>injury caused by low temperatures resulting in frozen or nearly-frozen tissue</td>
</tr>
<tr>
<td>HEAD INJURY:</td>
<td>serious injury to the head and/or face (see crush, amputation)</td>
</tr>
<tr>
<td>INFECTION:</td>
<td>medical condition brought on by my infection, i.e., fever, sickness, etc.</td>
</tr>
<tr>
<td>LACERATION:</td>
<td>cut; slice</td>
</tr>
<tr>
<td>MULTI-TRAUMA:</td>
<td>severe injury to more than one area of the body (see crush; amputation)</td>
</tr>
<tr>
<td>PAIN:</td>
<td>no obvious injury, but subject is complaining or hurting</td>
</tr>
<tr>
<td>PUNCTURE:</td>
<td>something has penetrated the skin and tissue</td>
</tr>
<tr>
<td>SOFT-TISSUE:</td>
<td>injuries to muscle, fat, fibrous tissue, blood vessels, or other &quot;soft&quot; supporting tissues of the body</td>
</tr>
<tr>
<td>SPRAIN:</td>
<td>injury to a ligament</td>
</tr>
<tr>
<td>OTHER-SPECIFY:</td>
<td>must be listed in narrative</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ILLNESS:</th>
<th>the type of illness the subject had that caused the search or incurred during the search</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADDISON:</td>
<td>a hormonal (endocrine) disorder involving destruction of the adrenal glands</td>
</tr>
<tr>
<td>ALLERGIC REACTION:</td>
<td>a negative reaction to the body caused by a foreign substance; demonstrated by itching, redness, rash, fever, etc.</td>
</tr>
<tr>
<td>ALTITUDE DISORDER:</td>
<td>altered level of consciousness due to lack of oxygen usually caused by high altitudes</td>
</tr>
</tbody>
</table>
APPENDICITIS: infection or irritation of the appendix
ASTHMA: chronic inflammation of the bronchial tubes that can cause difficulty in breathing
DEHYDRATION: lack of sufficient fluids in the body
CHILDBIRTH: include contractions through delivery
EXHAUSTION: excessive fatigue
HYPERThERMIA: overheating of the body
HEAT EXHAUSTION: subject’s body lacks sufficient water and salt from sweat; subject may have muscle cramps, dizziness, headache, fainting
HYPOTHERMIA: subject’s body core temperature is cooler than 95°
FLU/COLD: Influenza (flu) is a respiratory illness caused by a virus. Flu symptoms include fever, cough, sore throat, runny nose, headache. The common cold (viral upper respiratory tract infection) is a contagious illness that may be caused by various viruses
INTOXICATED: subject has ingested more alcohol than it can process (include the influence of drugs)
SEIZURES: uncontrolled muscle spasms; subject can be rendered unconscious; causes are multiple
SHOCK: shock is a critical condition brought on by a sudden drop in blood flow through the body
SHORTNESS OF BREATH: a general term for someone who is not able to breath sufficiently
STROKE: A stroke results from impaired oxygen delivery to brain cells via the bloodstream
HEART ATTACK: A heart attack is a layperson's term for a sudden blockage of a coronary artery
ANGINA: Angina is chest pain that is due to an inadequate supply of oxygen to the heart muscle
UNCONSCIOUSNESS: a partial or complete loss of consciousness with interruption of awareness of oneself and ones surroundings
UTI: Urinary Tract Infection; an infection of the kidney, ureter, bladder, and/or urethra; symptoms and signs include fever and abdominal pain
OTHER-SPECIFY: must be listed in narrative

TX BY: transmitted (told) by
NONE: nothing was stated
SELF: was told by subject
PUBLIC: someone from the public who knew the subject (family/friends included)
FIRST-AID: someone who administered first-aid
FIRST-RESPONDER: someone who has completed the First-Responder course
EMT: Emergency Medical Technician
WEMT: Wilderness Emergency Medical Technician
ALS: Advanced Life Support (Paramedic)
RN: Registered Nurse
**MD:** Medical Doctor

**N/A:** does not apply (no injury or illness)

**RESCUE/EVACUATION METHODS:** how the subject was removed from the hazardous environment (if any)

- **WALKOUT:** subject was able to walk out under his/her own power
- **CARRYOUT:** subject had to be carried out (backboard, Stokes® basket, etc.)
- **SEMI-TECH:** use of ropes (Ops level)
- **TECHNICAL:** use of technical rope training (Tech level)
- **VEHICLE:** subject driven out in a vehicle (ATV’s included)
- **BOAT:** subject was transported by boat (include powered and unpowered)
- **SWIFTWATER:** rescued by swift water team
- **HELICOPTER:** subject was rescued by means of a helicopter (hoist); not a medical helicopter
- **AEROMEDICAL:** medical helicopter
- **OTHER:** must be listed in narrative

**SIGNALING:** was any signaling used in the rescue/recovery process

- **NONE:** no signaling used
- **N/A:** no signaling available
- **ELT:** Emergency Locator Transmitter
- **EPIRP:** Emergency Position Indicating Radio Beacon (marine based)
- **PLB:** Personal Locator Beacon
- **SPOT:** Satellite Personal Tracker
- **SATELLITE-ALERTING:** alerts if tracker is moved out of designated area
- **CELL PHONE:** cellular phone/device
- **CELL + GPS:** cellular phone/device and GPS (may be in same unit)
- **RADIO:** 2-way, walkie-talkie, etc.
- **FRS/GMRS:** Family Radio/General Mobile Radio System
- **FIRE/SMOKE:** whether a fire is built or a smoke-signaling device
- **FLARE:** bright-burning signaling device
- **MIRROR:** signaling mirror
- **OTHER VISUAL:** bright clothing, SOS on ground, etc.
- **SOUND:** loud noises, i.e., air-horn, etc.
- **OTHER:** any other device or means to signal rescuers or rescue resources

**INJURED SEARCHER/RESPONDER:** a searcher and/or responder was injured during the rescue

**DETAILS:** provide information on the cause of the injury

**RESOURCE INFORMATION/SUMMARY**

**GSAR:** Ground Search & Rescue Team
DOGS: Search & Rescue Teams utilizing search-trained dogs, i.e., air-scent, trailing, tracking
EMS: Emergency Medical Services
FIRE: Fire Department(s)
TRACKER: Man-Tracker (trained)
LAW: Law-Enforcement (any branch)
DIVERS: Water Rescue/Recovery utilizing divers
BOATS: any water vehicle, powered or unpowered
CAVE: Cave Rescue Team(s)
PARKS: Park Service personnel
USAR: Urban Search & Rescue (building collapse units/teams)
PUBLIC: citizens; general public
HELICOPTER: rotary powered aircraft
FIXED WING: non-rotary powered aircraft
SWIFTWATER: Swift Water (Moving Water) Rescue Units/Teams
OTHER: must be listed in narrative

FIND RESOURCE: which resource made the find

# TASKS: how many tasks were assigned during the mission

# DOGS: how many SAR dogs were utilized (all included)

# AIR TASKS: how many aircraft tasks were assigned (all included)

# AIRCRAFT: total number of aircraft (rotary and fixed wing)
# AIR HRS: total number of hours of actual flying time

EMERGENT VOL.: total number of volunteers (non-responders; citizens; family)

TOTAL PEOPLE: total number of people assisting with mission (paid, volunteer, and emergent vols)

MANHOURS: total number of man-hours (paid, volunteer, and emergent vols.)

# VEHICLES: total number of response vehicles (include all vehicles actively involved in mission)

# MILES: total number of miles travelled by response vehicles

TOTAL COST: total cost (include responders, volunteers, vehicles, and any food or other purchases necessary for mission)

COMMENTS
Please include a brief narrative of the incident. Include how the subject became lost, what they were doing, etc. Describe how and where they were found. Include any significant lessons learned, searcher incidents, methods to mitigate future incidents.

*Symbols for degrees, minutes and seconds:

<table>
<thead>
<tr>
<th>°</th>
<th>Degrees</th>
</tr>
</thead>
<tbody>
<tr>
<td>′</td>
<td>Minutes</td>
</tr>
<tr>
<td>″</td>
<td>Seconds</td>
</tr>
</tbody>
</table>

The three common formats:

| DDD° MM' SS.S" | Degrees, Minutes and Seconds |
| DDD° MM.MMM' | Degrees and Decimal Minutes |
| DDD.DDDDD° | Decimal Degrees |

**Degrees, Minutes and Seconds**

**DDD° MM' SS.S"**

32° 18' 23.1" N 122° 36' 52.5" W

This is the most common format used to mark maps. It’s also the most cumbersome to work with. It’s a lot like telling time...

*There are sixty seconds in a minute (60" = 1’) and
There are sixty minutes in a degree (60’ = 1°).*

Keeping in mind a few easy conversions between seconds and decimal minutes will help when working with maps that use degrees, minutes and seconds.
15 seconds is one quarter of a minute or 0.25 minutes
30 seconds is one half of a minute or 0.5 minutes
45 seconds is three quarters of a minute or 0.75 minutes

---

Degrees and Decimal Minutes

**DDD° MM.MM'M**

32° 18.385' N 122° 36.875' W

This is the format most commonly used when working with electronic navigation equipment.

---

Decimal Degrees

**DDD.DDDDD°**

32.30642° N 122.61458° W

or +32.30642, -122.61458

This is the format you'll find most computer based mapping systems displaying. The coordinates are stored internally in a floating point data type, and no additional work is required to print them as a floating point number.

Often the N-S and E-W designators are omitted. Positive values of latitude are north of the equator, negative values to the south. Watch the sign on the longitude, most programs use negative values for west longitude, but a few are opposite. This saves a lazy western hemisphere programmer from having to type in a minus sign before most of their longitude values.

---

Which format should you use?

First off, if you are working with other people who have agreed upon a format to use, then you should probably use that format.

Next, you will want to look at the maps, lists of coordinates, and any software you may be using. If you can find a consistent format among them, your work will be easier.

You can set your GPS to display any one of these three formats. Locations can be entered into the GPS with the selected format, and then by switching the display format setting, viewed in a different format.

I frequently choose to use the Degrees and Decimal Minutes format, even though the USGS maps I'm using are marked in Degrees, Minutes and Seconds. The markings on the map are all at either 0, 15, 30, or 45 seconds. By remembering the "quarter minute conversions" of 0.00, 0.25, 0.50, and 0.75, I can quickly do the conversions.
in my head.