Canine Avalanche Search / Scent Theory
Objective

Explain the theory of scent as it relates to canine search
Enabling Objective's

1. Explain the rationale for understanding scent movement
2. Describe the factors that may affect scent
3. Describe how scent is transported away from the victim
4. Plan the search of a avalanche scene to efficiently work canines into scent
The Canine Olfactory System

“The Nose Knows”
Human Scent

Adipose
- Bacterial Action
- MEOH, H₂SO₄, Volatile Fatty Acids

Eccrine
- K, Cl, Urea, Ca, Mg, PO₄, HOH
- Volatile Fatty Acids, Amines

Sebaceous
- Sebum, Squalene
- Respiratory Tract, GI Tract

Apocrine
- Other factors: Genetic, Diet, Environment
Huh?
Rationale

1️⃣ Scenting Dogs “see” the world through their nose
2️⃣ Scent is 3-dimensional to them
3️⃣ Our job is to put them where they can best detect scent
Influences on Scent Dispersal
How is scent dispersed?

The scent is heaviest at the source and dispersed away from the victim in a cone.
Environmental Influences
Environmental Influences

- Wind strength and direction
- Temperature
- Humidity
- Day Vs. Night
Wind

_strength
_direction
Temperature

- Warm
- Cold
- The temperature of victim versus the temperature of the environment
Humidity

- High
- Low
- Rain
- Snow
Day vs: Night Search

- Sunny & warm
- Dark & cold
- Overcast sky
- Clear
Scent Flow and Detection
Influences on your scene
Influences on your scene
DETENTION vs: LOCATION

1. Dogs are SCENT detectors, NOT victim locators.
Scent Flow—Channeling

- Trees
- Large Chunks
- Solid Slabs

Bark - Dig
Bark - Dig
• Solid Slabs
• Large Chunks
Scent Source Detection

Be able to interpret your dog’s alert
Use your scent knowledge

1. Understand rational of scent
2. Identify factors that may affect scent
3. Understand how scent can be affected and transported
4. Send canine from position which maximizes probability of detection
Ending the deployment  (training)

10 Debriefing
10 Handler to Handler
10 Handler to Search Team Manager
10 Documentation & records
Ending the deployment

- Examination and care of K-9
- P.T.S.D. individual and group
Questions?
Tracy D. Christensen
President

PO Box 980266
Park City, Utah 84060
United States of America

801-361-5614

mickskidog@comcast.net