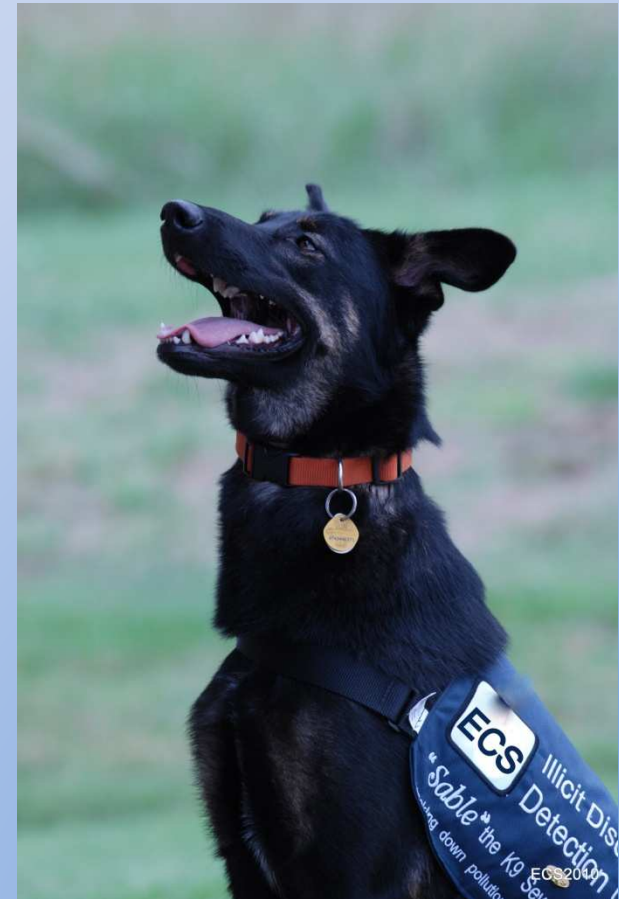


# The Nose Knows

A Shelter Dog Becomes a Sewage Sniffing Dog



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# NPDES Phase II

- All pipes not just MS4s
- Over 3,000 miles open
- Lakes, rivers, retention ponds
- Upstream enclosed systems

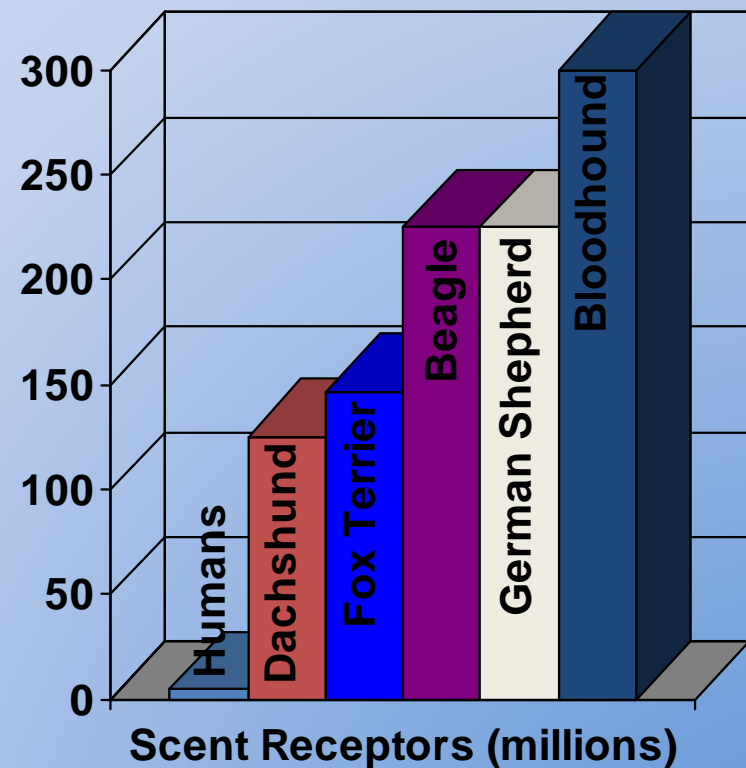


# Why A Canine?

- **Narcotics**
- Explosives
- **Live human**
- **Human remains**
- **Drowning victims**
- Avalanche
- **Evidence** (guns, knives, money, etc.)
- Arson
- Diabetic alert
- Toxic Molds
- DVDs
- Mercury- 1mg
- Fruits, vegetables, meats
- Brown Snakes
- Entomology pests
- Utility pole rot
- Fox scat
- Grizzly Bear scat
- Whale feces
- Gas leaks
- Water leaks
- Abalone
- Truffles
- VOC's
- 4 - Cancers
- Bovine Estrus
- Gypsy moth eggs
- Cooling fluid for underground power lines
- *And many more. . .*

# Born to Sniff

- 75% Nature, 25% Nurture
- Scent Receptor Area
  - Human 1-sq in (size of a postage stamp)
  - Dog = 60 sq in (size of a Kleenex)
- Chemical Signals
  - Create odor image
  - More detailed than a photograph for people
- Bloodhounds have been known to stick to a trail for over 130 miles

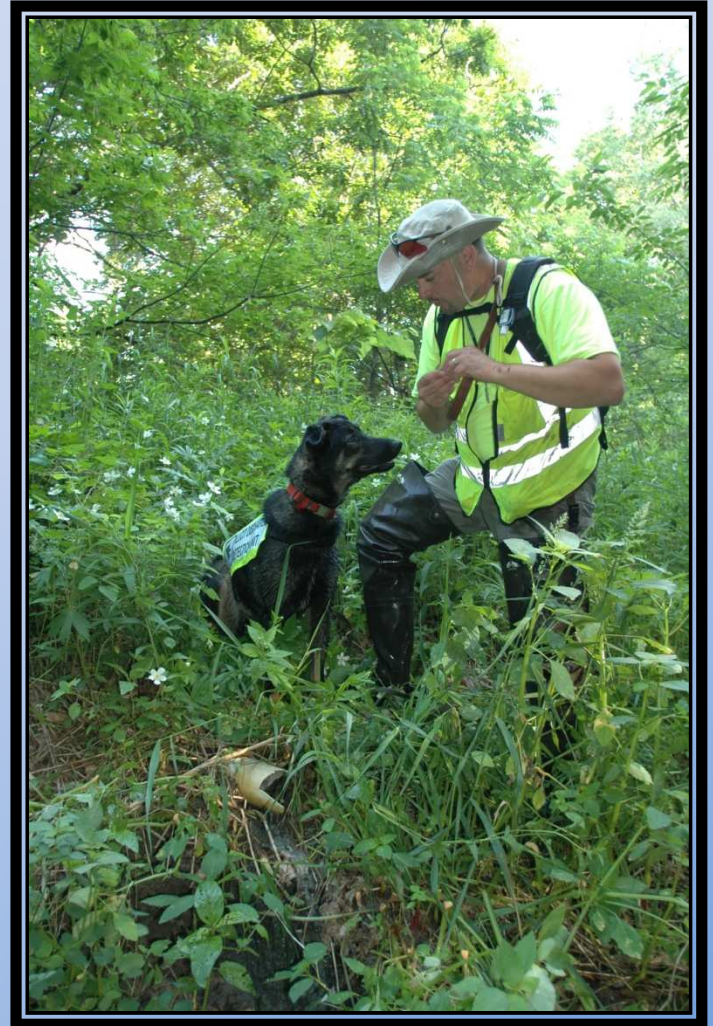


# Training

- Began April 2007
- Positive Reinforcement
- Septage from Residential System
  - Contains surfactants and fecal material
- Imprinting
- Free Search
- The Alert (chaining)
- Proofing





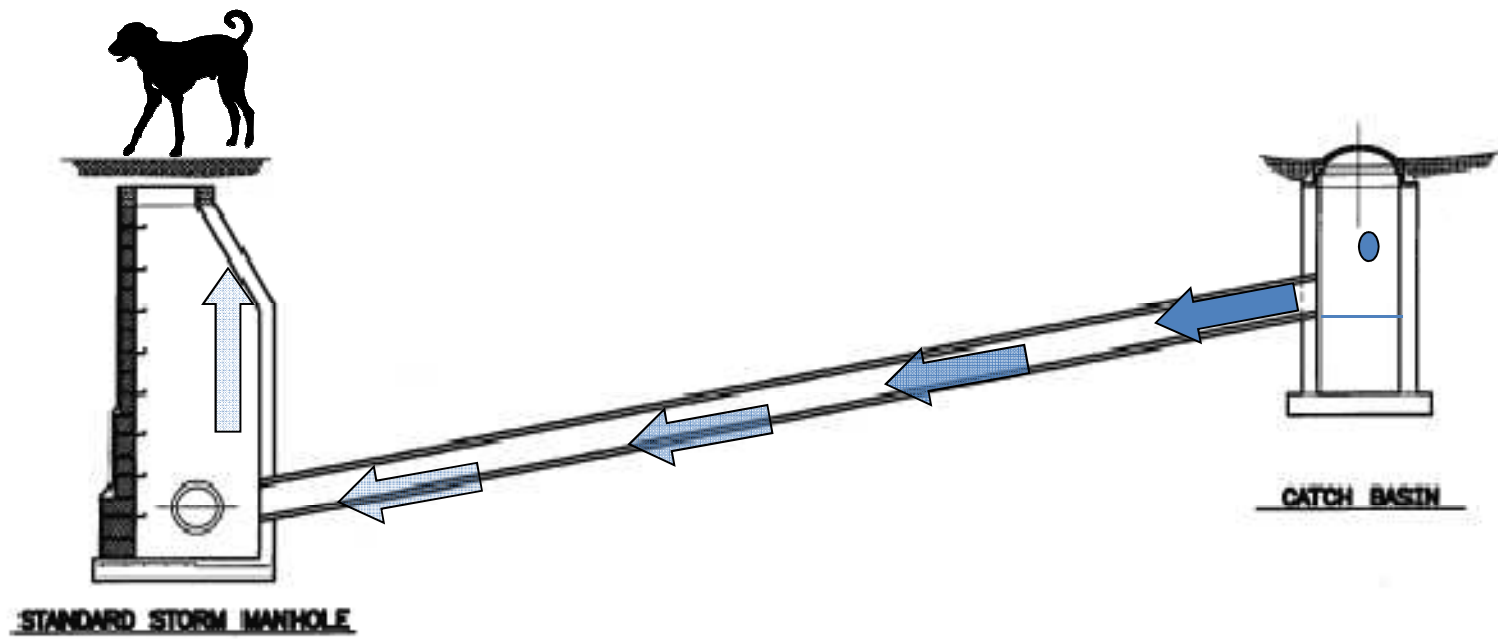


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## **Logan joins the pack**

Sable: What the &\$\*@ is this ?



## **New Sniffer**

Karen and Logan



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## **New Sniffer**

Dan and Sky



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## ECS TRAINING AREA

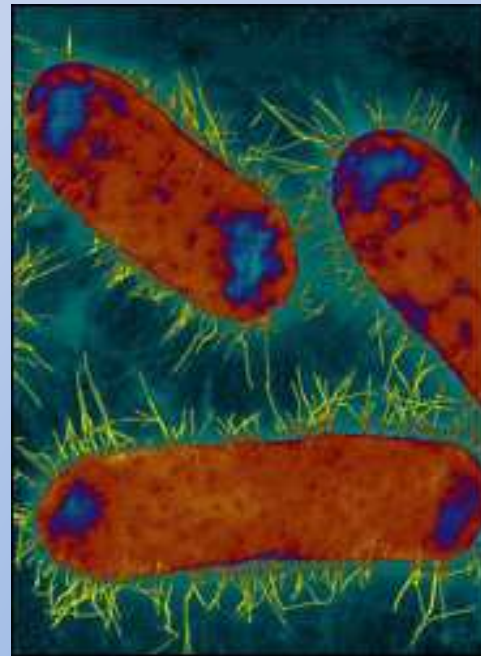
"Real World" training area.

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# What's Next?

## Research

- City of Santa Barbara
- USCSB
- K-9s ability to discriminate
  - Human v Animal
- DNA source tracking
- Publication/Presentation



# Questions?



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