RVC Deployment:
Veterinary Care of SAR Canines on the SR 530 Slide Disaster

Minden L. Buswell, DVM, MPH, DACVPM
WSDA Reserve Veterinary Corps (RVC) Coordinator
Introduction
About RVC Members

- Currently 139 volunteer members in WA, OR, ID
  - Veterinarians, veterinary technicians, and other first responders

- Various levels of experience and training
  - **RVC Level 2**
    - Basic ICS Training completed
  - **RVC Level 1**
    - Basic ICS Training and specific WSDA trainings completed

- **WDSA trainings includes:**
  - Further ICS and NIMS
  - Emergency/disaster workshops and foreign animal disease trainings
Reserve Veterinary Corps
Mission
SR 530 Slide

- March 22, 2014 at 10:37 am a landslide buried a residential community and part of the SR 530 near Oso, WA
- Lieutenant Governor, Brad Owen officially proclaimed a State of Emergency in Snohomish County
- March 24, 2014, President Obama declared a State of Emergency in WA, supplying federal aid
- ESF 11 - State Animal Health Plan was activated by the State Emergency Operations Center (EOC)
Mission Request

- WA EOC sent a mission request on April 3, 2014 at 1600 to activate the WSDA – RVC
  - 2 veterinarians, 2 veterinary technicians, and 2 veterinary vehicles
  - Support the federal and county search and rescue canines that were deployed to the SR 530 Slide
RVC Deployment
Incident Needs Assessment

- Coordinating the vet support for local, state, and federal resources
  - Emergency Management Specialist, Paige Beck and Dr. Buswell conducted a needs assessment for both the east and west sides of the incident

- Resources Found On-Site
  - 2 volunteer veterinary ambulance vehicles
  - Volunteer vets and vet techs

- Needs
  - 2 vets, 2 techs, vehicles/vet emergency supplies
  - Trained ICS Coordinator and assistant
Incident Needs Assessment

- WSDA contracted with two local veterinary clinics
  - Seattle Veterinary Specialists and Pilchuck Veterinary Hospital to maintain their ambulances on the incident site

- April 5, 2014 - Lori Gordon, DVM was activated through FEMA to act as an Incident Support Team (IST) Function
  - Resource for the FEMA Search and Rescue (SAR) canines
  - Acted as the lead on medical services to all the FEMA SAR canines, with support from the WSDA RVC members
SR 530 Slide Environment
Environmental Assessment

- Collaboration between local, state, and federal resources
  - HAZMAT
  - Medical
  - Environmental Engineers

- Followed standard HAZMAT Protocol
  - Cold Zone – Rest and eating areas
  - Warm Zone – Resource/tool storage and gross decontamination
  - Hot Zone – Debris Field

http://www.ecoweek.ca/issues/ViewPhoto.asp?pid=1000256237&stype=archive
Responder Safety Hazards

- **Chemical Hazards**
  - Propane tanks
  - Petroleum
  - Pesticides
  - Refrigerant
  - Mercury
  - Acid from vehicle batteries
  - Gun powder, ammunition, firearms
  - Other household products

- **Physical Hazards**
  - Cold weather (hypothermia)
  - Soil instability
  - Standing/moving water
  - Household materials
    - Nails, tin, glass, etc.
  - Heavy equipment accidents
  - Vehicular accidents
  - Boat accidents

- **Biological Hazards**
  - Sewage
  - Poor hygiene
  - Fatigue/mental stress
  - “Camp Crud”
Canine Responder Safety and PPE

- Major Injury Concerns
  - Cold weather
  - Physical trauma
  - Systemic Toxicity
  - Contact dermatitis
  - Fatigue
  - Dehydration

- Canine PPE
  - No specific requirements
  - Handlers
  - Decontamination
  - Neoprene vests
  - Paw bandages as needed
Veterinary Care
## Veterinary Statistics

<table>
<thead>
<tr>
<th>Affiliation</th>
<th>No.</th>
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</thead>
<tbody>
<tr>
<td>WSDA Staff</td>
<td>12</td>
</tr>
<tr>
<td>RVC Members</td>
<td>18</td>
</tr>
<tr>
<td>SVS Staff</td>
<td>17</td>
</tr>
<tr>
<td>Pilchuck Staff</td>
<td>3</td>
</tr>
<tr>
<td>Volunteers</td>
<td>2</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>52</strong></td>
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</tbody>
</table>
Canine Statistics

**SR 530 Slide**

**SAR K9 Breeds**

<table>
<thead>
<tr>
<th>Breed</th>
<th>Number of K9s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labrador Retriever</td>
<td>14</td>
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<tr>
<td>German Shepherd</td>
<td>12</td>
</tr>
<tr>
<td>Belgium Malinois</td>
<td>4</td>
</tr>
<tr>
<td>Border Collie</td>
<td>6</td>
</tr>
<tr>
<td>Golden Retriever</td>
<td>4</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
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</tbody>
</table>

**SR 530 Slide**

**SAR K9 Ages**

<table>
<thead>
<tr>
<th>Age in Years</th>
<th>Number of K9s</th>
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</thead>
<tbody>
<tr>
<td>1-&lt;4</td>
<td>6</td>
</tr>
<tr>
<td>4-&lt;6</td>
<td>14</td>
</tr>
<tr>
<td>6-&lt;8</td>
<td>6</td>
</tr>
<tr>
<td>8-&lt;10</td>
<td>2</td>
</tr>
<tr>
<td>&gt;10</td>
<td>2</td>
</tr>
</tbody>
</table>

*Washington State Department of Agriculture*
Canine Veterinary Care

- Anywhere from 4-25 dogs were seen daily for:
  - Pre-mission physical exams, post-mission veterinary checks, and various minor medical treatments
  - Total RVC Exams = 133

- The injuries/issues included:
  - Mild hypothermia, mild exhaustion, dehydration
  - Mild/moderate dermatitis (“hot-spots”)
  - Paw-pad lacerations/abrasions
  - Inappropriate ingestion led to mild/moderate indigestion
  - Suspected toxicity issues on two dogs
  - No other major medical events
Veterinary Care Statistics

Canine Injuries

- Abrasions
- Pads Worn
- Pads Spites
- Inflamed/Itchy Skin
- Lacerations
- Lameness/Swelling
- Skin Mass Complications
- Stiff Gait
- Hot Spot/AMD
- Cold Tail/ACH

No. of Injuries and K9's

- No. of Injuries
- No. of K9s
Veterinary Care Statistics

Canine Medical Events

<table>
<thead>
<tr>
<th>Condition</th>
<th>No. of K9s</th>
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<tbody>
<tr>
<td>Subj. Dehydration</td>
<td>10</td>
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<tr>
<td>Dietary Indiscretion</td>
<td>7</td>
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<tr>
<td>Exhaustion</td>
<td>4</td>
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<tr>
<td>Ear Infection</td>
<td>1</td>
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<tr>
<td>Conjunctival Redness</td>
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<tr>
<td>Stool Abnormalities</td>
<td>4</td>
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<tr>
<td>Vomiting</td>
<td>1</td>
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<tr>
<td>Weight Loss</td>
<td>5</td>
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</table>
Search and Rescue Canine Caveats

- **Emergency Hospital Access**
  - Local emergency hospital “on-call” if canine needed transport for further treatment
  - Pilchuck Veterinary Hospital “on-call” for helicopter transport
    - Had to be cleared with Air-Ops first

- **Search and Rescue Canine Healthcare Differences**
  - Tend to have higher temperatures – can be up to 104°F
  - Toxicity assessment - decontamination was necessary
    - Absorption for system toxicity risk low **IF** well-hydrated
  - NO treats or toys!
Decontamination
RVC Demobilization
Demobilization

- On April 23, 2014, control of incident was transferred to Snohomish County Incident Management Team
  - At that time, only two victims were still missing
  - All victims have been located now

- The WSDA-RVC was officially demobilized on that day
  - FEMA search and rescue canines were all demobilized
  - County SAR canines were going to be used intermittently

- As of April 29, 2014 – Snohomish County ended active search operations in the field
Lessons Learned

- Further training on HAZMAT, ICS, and situation awareness
- Further training on search and rescue (SAR) canines
  - Principals of search and rescue in general
  - How they are trained
  - Specific injuries
- Need for basic veterinary response equipment for small animal emergency/critical care for up to 30 canines
- You can never be fully prepared for these events, but training and exercising can help immensely!
- It is a shared GOAL - leave your ego at the door!
Special Thank-You

- Dr. Lori Gordon, FEMA IST
- James Brown, EMT Clallam County Wildfire
- Pilchuck Veterinary Hospital and Seattle Veterinary Specialists
- Nikki Coffer, LVT
- Reserve Veterinary Corps Members
- WSDA Veterinarians and Staff

The community of Arlington, Oso, and Darrington
Thank You

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Resources

Supplemental Slides
Critical Incident Stress Management

What is CISM?
- Protocol developed to deal with traumatic events
- Structured, formal, and professional process
- Share experiences, vent emotions, learn about stress reactions

History of CISM
- First developed for military combat veterans
- Spread to first responders
- Then to anyone impacted by the traumatic event
Green Cross – Academy of Traumatology

- **What is Green Cross?**
  - International NGO
  - Comprised of trained traumatologists and compassion fatigue providers
  - Mental health professionals

- **What does Green Cross do?**
  - Crisis assistance and counseling
  - Referral services
  - Long-term trauma counseling
  - Animal-assisted therapy
Further Training Recommendations

- Join the WSDA – Reserve Veterinary Corps!
- Citizen Emergency Response Teams (CERTs)
- Local Search and Rescue Teams (SAR)
- Local Fire Departments
- FEMA Urban Search and Rescue (USAR)
- AVMA Veterinary Medical Assistance Teams (VMAT)
- USDA – APHIS –VS National Animal Health Emergency Corps (NAHERC)
- US – DHHS National Veterinary Reponses Team (NVRT)