

K9H2F HANDBOOK

U.S. ARMY CANINE HOLISTIC HEALTH AND FITNESS

A Comprehensive, Integrated Health Program for Military Working Dogs

U.S. ARMY

Approved for public release; distribution unlimited.

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1.0 K9H2F General Information



Figure 1-1. An MWD rests on a mobility support bed.

1.1 Introduction to the K9 Holistic Health and Fitness (K9H2F) Program

1.1.1 What is K9H2F?

The K9 Holistic Health and Fitness (K9H2F) program is a comprehensive, proactive approach to Military Working Dog (MWD) wellness and performance optimization. It moves beyond traditional veterinary care to encompass all essential elements needed to keep MWDs physically, mentally, and emotionally fit for duty. K9H2F serves as the foundational framework for ensuring our canine partners are not just healthy but are actively flourishing. This program provides a structured approach to nutrition, physical and mental conditioning, sleep, and overall well-being to enhance performance and resilience while minimizing injuries and behavioral issues.

1.1.2 The Strategic Importance of K9H2F

Investing in K9H2F is a mission-critical imperative. A holistically healthy MWD is a more effective and resilient asset. The key justifications for this program are:

- **Enhanced Operational Performance:** A physically fit and mentally sharp MWD exhibits improved detection capabilities, faster response times, and greater endurance.
- **Increased Longevity & Career Length:** Proactive care extends an MWD's working life, maximizing the significant investment in their training and development.

- **Reduced Injury and Illness:** A focus on proper conditioning, enrichment, and sanitation minimizes the risk of preventable injuries and illnesses that can prematurely end a career. Examples include musculoskeletal injuries, tail tip trauma, and scrotal dermatitis.
- **Improved Resilience:** A dog with strong physical and mental well-being is better equipped to handle the stressors of demanding operational environments and recover more quickly.
- **Mitigation of Behavioral Issues:** By addressing the root causes of stress, such as boredom or fear, we reduce the likelihood of problematic behaviors like aggression, anxiety, or destructive stereotypies (e.g., pacing, fence chewing).
- **Ethical Responsibility:** As stewards of these vital assets, we have an obligation to provide the highest standard of care, ensuring their physical and mental welfare throughout their service.

1.1.3 Core Principles: The Five Domains and the Canine Activity Time Budget

K9H2F is built on two scientifically validated principles: The Five Domains Model for assessing welfare and the Canine Activity Time Budget for practical implementation.

1.1.3.1 The Five Domains Model

This modern framework is used to assess an animal's overall welfare. It recognizes that physical health (Nutrition, Physical Environment, Health, Behavioral Interactions) directly influences the animal's Mental State. Our goal is to move beyond simply avoiding negatives (like fear or pain) and to actively promote positive mental states like confidence, curiosity, and a sense of agency. A flourishing MWD is an optimistic and resilient one.

Table 1-1. The Five Domains of Canine Physical Health.

Domain	Negative State (To Avoid)	Positive State (To Promote)
Nutrition	Under/overweight, dehydration	Ideal body condition, satiety, food novelty
Environment	Extreme temperatures, poorly fitting gear	Choice of resting places, quiet zones, comfort
Health	Injury, illness, poor hygiene, low stamina	High muscle tone, rapid recovery, fluid movement
Behavior	Aggression, repetitive pacing, hiding	Play, exploration, soliciting social interaction
Mental State	Fear, boredom, anxiety, chronic stress	Confidence, resilience, optimism, sense of agency

1.1.3.2 The Canine Activity Time Budget

To put this into practice, K9H2F establishes a daily time budget based on the natural activity patterns of domestic dogs. This structure is the primary tool for preventing behavioral issues and ensuring each MWD's needs are met. Each dog's 24-hour period should be structured to allow for:

- 50% Sleeping (12 hours): Undisturbed opportunities for rest in a quiet, low-stress environment.
- 30% Observing (7 hours): Time when the MWD is awake and calm but not physically active, such as resting in a kennel run or office.
- 20% Active (5 hours): Purposeful physical and mental engagement. This includes training, structured exercise, yard time, and interactive enrichment.

1.1.4 From Principle to Practice: The Individual Enrichment Plan (IEP)

While the Time Budget provides a template, K9H2F is not one-size-fits-all. The Individual Enrichment Plan (IEP) is the primary tool used to tailor the program to each MWD. Developed and maintained by kennel management with veterinary oversight, the IEP addresses the specific needs of each dog, considering factors like life stage, assignment status, and known behavioral indicators.

If an MWD displays negative welfare indicators (e.g., excessive vocalization, repetitive behaviors), the IEP is reviewed and adjusted to provide targeted intervention, ensuring the dog receives the support needed to thrive.

1.1.5 Purpose and Structure of This Handbook

This handbook is your official guide to implementing the K9H2F program. It provides detailed, actionable guidance for Commanders, MWD leadership, Handlers, and veterinary personnel. The subsequent chapters will break down the main components of the program:

- Chapter 1: K9H2F General Information.
- Chapter 2: Cooperative Care: Techniques for voluntary participation in husbandry and veterinary procedures.
- Chapter 3: K9 Enrichment: A deep dive into cognitive, sensory, and social enrichment strategies.
- Chapter 4: MWD Socialization: Guidelines for safe and positive social interactions.
- Chapter 5: Physical Conditioning: Protocols for developing and maintaining operational fitness.
- Chapter 6: Welfare: Detailed instructions on maintaining sanitation to improve welfare and health while reducing the risk of infectious diseases.

By implementing the principles and protocols within this handbook, we will ensure our Military Working Dogs are not only mission-ready but are also healthy, resilient, and prepared to meet the challenges of the evolving operational landscape.

1.2 Introduction to Welfare Indicators

This document provides a foundational understanding of how to assess MWD welfare through observable behavior. The goal is to move beyond simply keeping a dog "healthy" and towards a state where the MWD is actively "flourishing." This is achieved by using the Five Domains Model, which focuses not just on avoiding negative states (like pain or fear) but on actively promoting positive ones (like comfort, curiosity, and play).

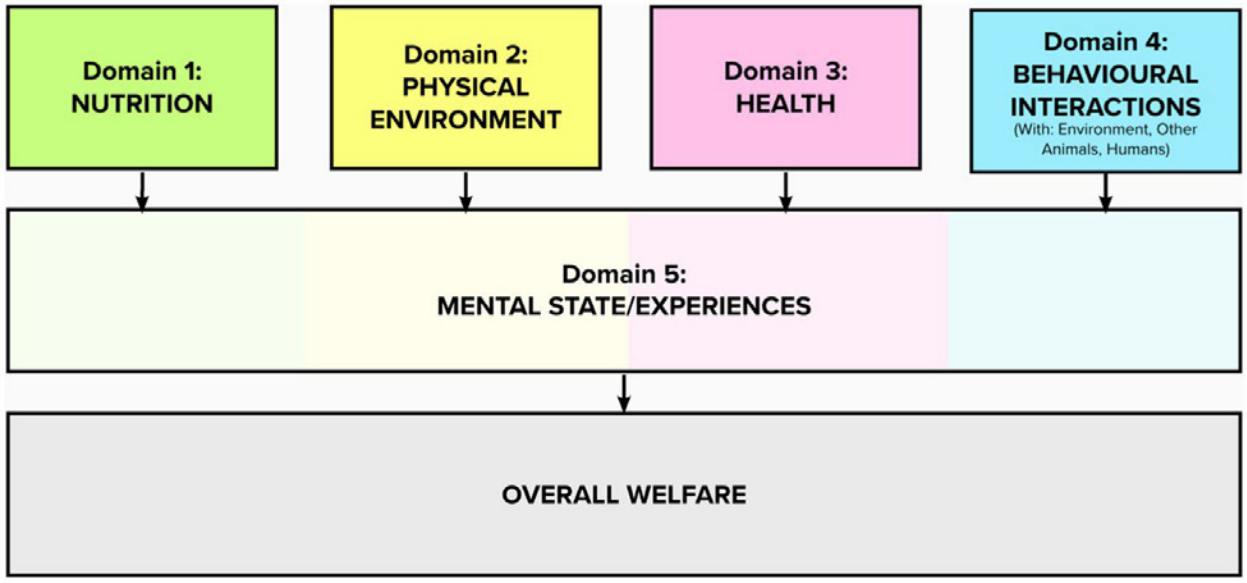
1.2.1 What is "Welfare" for a Working Dog?

For an MWD, welfare is about more than just a clean kennel or the absence of disease. It is a state of flourishing where the dog has the emotional resilience and cognitive "headspace" to perform elite tasks. An MWD can be physically healthy but still have poor welfare if it is bored, socially isolated, or feels it has no control over its environment.

1.2.2 The Five Domains Model

This model provides a framework for assessing welfare across five key areas. The first four domains (Nutrition, Physical Environment, Health, Behavioral Interactions) influence the fifth, most critical domain: the MWD's Mental State.

The modern standard for assessing welfare is the Five Domains Model. The Five Domains model is an internationally accepted, scientifically validated framework for determining an animal's welfare. This framework looks at four physical areas—Nutrition, Environment, Health, and Behavioral Interactions—to determine the dog's overall Mental State. An MWD's behavior is the most direct window into its mental state. Handlers must become experts at reading both negative and positive indicators.



Source: https://doi.org/10.3389/fvets.2023.1284869

Figure 1-2. The Five Domains Model.

The following table frames the indicators of inadequate care alongside positive "luxury" behaviors that indicate a dog is truly thriving.

Table 1-2. Positive and Negative Welfare Indicators Using the Five Domains Framework

Indicator Category	Negative Indicators (Inadequate Care)	Positive Indicators (Flourishing)
Nutrition	Over/under weight Lack of access to water	Ideal Body Condition Well-Hydrated Variety and Novelty in Food Textures & Flavors Satiety
Physical Environment (Physical Comfort/ Discomfort)	Excessive heat/cold Exposure to wind/rain/snow without shelter Poorly fitting gear Exposure to excessive noise	Variety of Resting Places Relaxed Resting Postures Quiet Zones or Quiet Hours for Sleep
Health (Illness-Wellness-Fitness continuum)	Poor coat hygiene Scrotal Dermatitis Tail Tip Trauma Musculoskeletal Injuries Stress Diarrhea Low Stamina	High muscle tone Shiny coat Rapid recovery after physical exertion Free, fluid movement without lameness or stiffness
Behavioral Interactions (Human-Dog, Dog-Dog, Dog-Environment)	Stereotypies Self-attention behaviors Human-directed Aggression Gear-directed Aggression Displacement Behaviors Hiding/Refusal to Move	Play Behaviors Active Exploration Tail Wagging (Relaxed, Rhythmic) Soliciting Social Interaction (Nudging/Licking)
Mental State	Fear Boredom Chronic Stress Anxiety Learned Helplessness	Confidence Resilience Optimism Sense of Agency

1.2.3 Behavioral Markers of Positive Affective States

Behavioral indicators are the most accessible markers for handlers and kennel staff. Unlike stereotypies (pacing, spinning, etc.) which indicate chronic stress, positive markers indicate "luxury behaviors" that animals only perform when their primary needs are met.

- Play: Voluntarily engaging in play, either alone with a toy or with a handler. A "play bow" is a clear invitation to play.



Figure 1-3. An MWD exhibits a voluntary play bow, displaying front end down, back end up, and a relaxed tail wag.

- Exploration: Confidently and curiously investigating novel objects and environments.
- Relaxed Postures: Resting comfortably on their side, showing a relaxed body and facial expression.
- Affiliative Social Behavior: Voluntarily seeking positive social contact with a trusted handler.
- Calm Demeanor: Observing the environment with a relaxed, neutral posture rather than a tense, hyper-alert one.



Figure 1-4. A visual comparison of demeanor. Top: A dog with a tense, anxious posture (whale eye, tucked tail, furrowed brow). Bottom: A dog with a relaxed, neutral posture (soft eyes, neutral ears, relaxed mouth)

1.2.3.1 Play Behavior and Exploration

Play is one of the most widely recognized indicators of good welfare in dogs. In the kennel context, play includes object play (toys), social play (with humans or compatible dogs), and the "play bow" posture (front paws down, rear up). Play occurs when a dog feels safe and is not in a state of high acute stress. Furthermore, active exploration of a novel environment or an enrichment item suggests a state of "confidence" and "optimism."

1.2.3.2 Affiliative Social Signaling

Positive interactions with humans are essential for social animals like dogs. Specific signs of a positive emotional state during interaction include:

- **Relaxed Body Posture:** Neutral tail carriage (level with the body), soft eyes, and relaxed mouth.
- **Social Licking and Nudging:** Behaviors like leaning against a handler or gentle nudging are markers of attachment and comfort.
- **Tail Wagging Nuance:** While often misinterpreted, a relaxed, rhythmic wag (especially with a wide arc) is associated with positive valence, whereas a high, stiff wag can indicate arousal or threat.

1.2.3.3 Agency and Choice-Based Behaviors

One of the most powerful tools for an MWD's mental health is agency—the ability to make voluntary choices. Activities like nosework allow a dog to solve problems independently. Research shows this induces a "positive judgment bias," essentially making the dog an "optimist" who is more resilient when faced with the unknown.

1.2.4. Root Cause Analysis of Negative Welfare Indicators

To help handlers and kennel masters move from identifying a problem to solving it, we need to look at the root causes of any identified negative welfare indicators. These are the specific "gaps in care" that, if left unaddressed, lead to progressively worsening illness or injury, breakdown of handler bonds, poor performance, shortened service life, and overall poor quality of life for the MWD. These are behaviors that signal stress, fear, boredom, or frustration.

1.2.4.1 Tail Tip Trauma: This is typically caused by the dog repeatedly striking its tail against kennel walls due to high arousal or environmental stress.

Mitigation: Increase enrichment efforts like food puzzles to lower frustration, reduce environmental stressors, and acclimate the dog to calm behaviors when personnel enter the kennel.

1.2.4.2 Scrotal Dermatitis: This painful skin inflammation is caused by the dog resting on wet or dirty surfaces, often exacerbated by spilled water buckets or poor drainage.

Mitigation: Provide elevated resting platforms to keep the dog off the floor, improve sanitation timing to ensure floors stay dry, and use differential reinforcement to encourage alternate behaviors to water bucket flipping.

1.2.4.3 Paw Pad Wear: This can stem from poorly maintained kennel floors or repetitive "fence-running".

Mitigation: Check for slick surfaces and increase cognitive engagement to stop the repetitive pacing.

1.2.4.4 Bite to Human: Bites often serve as a form of communication triggered by fear, anxiety, or highly aversive training and handling practices.

Mitigation: Identify and address the root cause of fear-anxiety, ensure all gear fits correctly to avoid pain, re-evaluate knowledge of canine body language, and reduce training methods that are overly stressful or punishing.

1.2.4.5 Stereotypies (Spinning, Pacing, Bouncing): These repetitive, functionless behaviors are "red flags" for chronic boredom, lack of mental stimulation, or a high-stress environment.

Mitigation: Increase the dog's agency by providing choices in their environment and utilize detection to foster a more optimistic mental state.

1.2.4.6 Dental Attrition or Metal Staining: This damage to the teeth often results from the dog chewing on kennel fencing or metal gates due to frustration or a lack of appropriate chew outlets.

Mitigation: Enhance enrichment practices to meet the dog's species-specific need to chew and use acclimation techniques to encourage calm behavior within the primary enclosure.

1.2.5 Proactive Welfare: Using Enrichment as Preventative Medicine

The most effective way to manage welfare is to proactively prevent negative indicators from developing. The K9 Enrichment Program is the primary tool for achieving this.

Table 1-3. Proactive Enrichment Strategies for Preventing Negative Indicators.

To Prevent This Negative Indicator...	Implement This Proactive Enrichment Strategy...
Stereotypies (Pacing, Spinning)	A robust Cognitive Enrichment plan (e.g., daily puzzle feeders, "Find It" games) to combat boredom.
Dental Attrition from Fence Chewing	A varied Sensory Enrichment plan that provides multiple, appropriate chew outlets (e.g., KONGs, safe chew toys).
Gear/Human-Directed Aggression	A consistent Social Enrichment plan focused on Cooperative Care and positive reinforcement to build trust and reduce fear.
Hypervigilance/ Inability to Settle	A predictable daily routine that includes calming Sensory Enrichment (e.g., music, appropriate chew) and Physical Enrichment (e.g., decompression walks).

1.2.6 Roles and Responsibilities

- **MWD Handler:** Daily implementation, logging, and feedback.
- **Unit Leadership (Kennel Master):** Procuring equipment, protecting time, coaching, and reviewing logs.
- **Commander:** Fostering a positive command climate and serving as approval authority for high-risk activities.
- **Veterinary Staff:** Providing medical clearance and guidance.

1.2.7 Glossary of Key Terms

- **Affective State:** The technical way of describing "how an animal feels" (e.g., happy, anxious, frustrated).
- **Agency:** The dog's ability to interact voluntarily with its environment and make choices, which builds competence and resilience.
- **Capturing:** A training method where you wait for the dog to perform a natural behavior (like a sit) and immediately reinforce it to put it on cue.
- **Differential Reinforcement:** Reinforcing a desired behavior while withholding reinforcement for an undesirable one.
- **Displacement Behavior:** Normal behaviors (like yawning or scratching) performed out of context, usually because the dog is feeling conflicted or frustrated.
- **Five Domains:** A science-based framework for assessing welfare by looking at how physical factors (Nutrition, Environment, Health, Behavior) combine to create a dog's mental state.
- **Five Freedoms:** An older welfare model focused on the *absence* of negatives (e.g., freedom from hunger/thirst). The Five Domains has largely replaced it by focusing on *positive* experiences.
- **Luring:** Using a treat or object to guide a dog's body into a specific position (e.g., following a treat to lie down).
- **Stereotypy:** Repetitive, functionless behaviors—such as kennel circling, pacing, or wall-bouncing—that often indicate chronic stress or boredom.

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1.3 Military Working Dog (MWD) Daily Time Budget Requirements

To ensure optimal welfare and prevent the development of behavioral issues stemming from a lack of appropriate outlets, the MWD's 24-hour time budget is structured into three main categories. These requirements are based on current published information on the natural activity patterns of domestic dogs. The time budget is broken down into three areas of time throughout the day: 50% (12 hours) sleeping, 30% (7 hours) awake but observing, and 20% (5 hours) physically active. The time activity budget requirement may be adjusted by the attending Veterinary Corps Officer (VCO)/Veterinary Medical Officer (VMO) based on the individual MWD's needs. For instance, physical activity may be reduced due to a decrease in performance or increased if negative welfare indicators continue. The main enrichment intervention for MWDs is the provision of physical activity opportunities. MWDs may be provided additional sensory or cognitive enrichment based on individual welfare indicators; this is often paired with physical activity. MWD personnel will document any enrichment provided, annotating the MWD's engagement and reaction through the records management system.

Each WD will have an IEP designed specifically to meet their species-specific time budget requirements to promote animal well-being and minimize medical and behavioral indicators of substandard welfare. The plan will be designed to address each of the domains of animal welfare and categories of enrichment. The plan requires monitoring and reporting of the medical and behavioral welfare indicators in the MWD records management system and VSSM. It is suggested to pair structured, physical activity with social interaction, cognitive engagement, and sensory stimulation enrichment. These plans will be developed and maintained by the kennel management and inspected by the attending VCO/VMO. The kennel team and attending VCO/VMO may coordinate on the IEPs, but it is the responsibility of the kennel team to develop and maintain the IEP (e.g., Kennel management will consider WD-specific factors during IEP development like life stage, assignment status, known preferred or disliked enrichment activities, and activity acclimation status).

1.3.1 Weekly Activity Planning

During the work week all MWDs will be provided the outlined time budget requirements based on the outlines in the following sections. All attempts should be made to provide adequate opportunities to maintain the canine activity time budget on the weekends. It is understood that the intensity of physical activity opportunities may be less than during the work week, and MWD-independent activities should be maximized during this time.

For MWDs who continue to display negative welfare indicators, such as excessive vocalization, repetitive behaviors, or lack of engagement, their IEP will be reviewed and adjusted to meet their needs. Some MWDs may require an increase in an enrichment activity, especially during the weekends. This targeted intervention is essential to counteract the negative behavioral patterns and prevent them from becoming more severe. MWD personnel should identify these MWDs and ensure they receive additional structured and interactive sessions to address their specific needs and improve their overall well-being. The IEP should be adjusted accordingly.

1.3.2 Physical Activity

Any physical activity during training or utilization helps fulfill the 5-hour physical enrichment requirement. The MWD must voluntarily interact with the enrichment to count towards the 5 hours. Staff will document the physical enrichment, annotating any abnormalities or reluctance. Examples of appropriate physical enrichment include training time, yard time, and active social interactions.

1.3.3 Sleep/Rest

Any period in a quiet, low-stress environment helps fulfill the 12-hour sleep/rest requirement. The MWD must be provided an undisturbed opportunity to rest for the time to count towards the 12 hours. Examples of appropriate rest opportunities include designated kennel time, downtime in a quiet office, and scheduled breaks during utilization. If the MWD is experiencing issues preventing the 12-hour sleep/rest requirement impacting performance or medical, then the VCO should be consulted for further evaluation.

1.3.4 Awake and Observing

Any time the MWD is awake, calm, and not actively engaged in physical enrichment helps fulfill the 7-hour observing requirement. The MWD must be in a safe environment where it can observe its surroundings for the time to count towards the 7 hours. Examples of appropriate awake and observing time include time in a kennel run, enrichment yard, resting in an office, or sitting in a vehicle, etc. MWDs may be provided sensory or cognitive enrichment based on individual welfare indicators during this time period. MWDs that are displaying positive welfare may be able to self-regulate their activity and may not need additional sensory or cognitive enrichment.

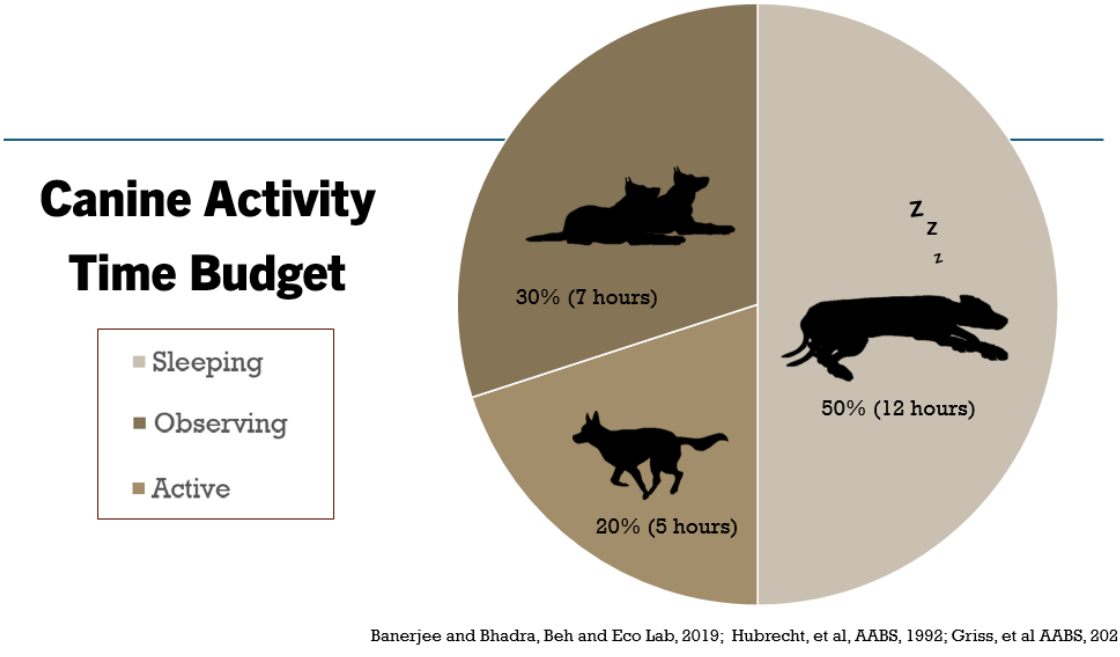


Figure 1-5. The canine activity time budget consists of three activities: sleeping, observing, and being active.

1.4 K9H2F Resource List

An annotated list of products, including recommended activities, enrichment categories, and usage, is included here. The full K9H2F Resource List can be found at the K9H2F Core website.

1.4.1 Activity: Chew

- Goughnuts, XL Ring (for Dogs 100+ Pounds)
- Goughnuts, Large Maxx Heavy Duty Tug Toy
- West Paw, Hurley Durable Chew Toy, Large
- KONG, Bounzer, XL
- Playology, Channel Chew Ring (PB, Beef, Chicken, Bacon), Jumbo
- Playology, Squeaky Chew Stick (PB, Beef, Chicken, Cheese, Sweet Potato), Jumbo
- RuffDawg, Dawg-Cube XL
- RuffDawg, Dawg-Nut XL
- Nylabone, Textured Ring Power Chew Toy for Large Dogs, Durable Dog Toys for Aggressive Chewers, Strong Dog Chew Bones To Keep Them Busy, Flavor Medley, X-Large - 50+ lbs, 1 Count
- Nylabone, Textured Knuckle Bone Power Chew Toy for Dogs, Durable & Tough Dog Toys for Aggressive Chewers, Bacon Flavor, X-Large - 50+ lbs, 1 Count
- Nylabone, Double Action Bone Power Chew Toy for Dogs, Dog Toys for Aggressive Chewers, Bacon Flavor, X-Large - 50+ lbs, 1 Count

1.4.2 Activity: Catch/Fetch

- Monster K9, Aero Disc
- Monster K9, Giant Ring Ball
- Monster K9, Indestuctible Beast Ball, Durable Tennis-Ball Replacement for Aggressive Chewers
- Chuckit!, Sport 26L Dog Ball Launcher, 26" Length, Includes Large Ball (3") for Dogs 60–100 Pounds
- Chuckit!, Ultra Tug Dog Toy - Ultra Ball on a Durable Nylon Cord Handle - Fetch and Tug-of-War Toy for Dogs - Size Large - For Breeds 60–100 lbs - 3-inch Diameter - Orange and Blue
- KONG, Extreme Ball with Hole - Fetch Toy - Durable Dog Toy for Training, Interactive Playtime & More - Natural Extreme Rubber Ball - Black - for Large Dogs

1.4.3 Activity: Chase/Herd

- PetKore, KOREflex® Dog Ball & Tail
- PetKore, Solid Ball 33 lb | Zoo
- Jolly Pets, Jolly Egg Dog Toy, 12 Inches/Large, Yellow
- Otto Environmental, Large Heavy Duty Zoo Enrichment Toys (Saurus Egg)
- Otto Environmental, Boomer Ball Large Bobbin (Yellow, BBLB)
- Jolly Pets, Push-n-Play Ball Dog Toy, 14 Inches/Extra-Large, Blue (314 BL)

1.4.4 Activity: Tug

- Goughnuts, Large Tug (for Dogs 60+ Pounds)
- KONG, Reflex Tug
- Jolly Pets, 10" Jolly Ball Horse Toy, Red
- TetherTug, Heavy Duty

1.4.5 Activity: Food Dispensing

- PetKore, Luna® Ring | Zoo
- “HOMEMADE,” Schedule 40 PVC Food Releasing Device (FRD)
- KONG Wobbler - Interactive Dog Toy for Treat Dispensing - Dog Slow Feeder for Healthy Eating - for Medium/Large Dogs
- Otto Environmental, Spinner Treat Ball (1 opening)
- Otto Environmental, Otto Lick Board
- West Paw, Tux Shallow Cavity for Treating, Large
- Trixie, Move-2-Win, Level 3, blue and white (32025)
- Outward Hound, Dog Brick Treat Puzzle Enrichment Toy, Level 2 Intermediate Game, Blue
- Pet Arena, Snuffle Mat for Dogs - Adjustable Interactive Puzzle Toy for Large & Small Breed Slow Feeder for Mental Stimulation & Stress Relief Encourages Natural Foraging Ideal for Indoor & Outdoor Use

1.4.6 Activity: Eat/Chew

- WhiteTail Naturals, Water Buffalo Horns for Dogs, XXL
- Big Dog Antler Chews, XL Deer Antler Dog Chew - Extra Large, Jumbo, for Large Dogs and Puppies Who are Aggressive Chewers
- Virbac, C.E.T. VeggieDent Zen Dental Chews for Large Dogs, over 66 lbs, 30 count
- Yummy Combs, Size Extra Large 12oz Bag Fish & Egg Yummy Combs
- KONG, Easy Treat - Dog Treat Paste - Liver - 8 Ounce - 2 Pack

1.4.7 Activity: Food Luring/Food Reward

- Cheese (small bites/cubes)
- Mini Marshmallows
- Stewart, Freeze Dried Liver
- Cheerios
- Zukes, Training Treats - Chicken
- Zukes, Training Treats - Duck [FOR DOGS WITH FOOD ALLERGIES]
- Hill’s Natural, Training Soft & Chewy Treats - Chicken
- Food Dispensing Pouch
- Voila Pets, Ultimate Treat Pouch, Large
- Vital Essentials, Freeze Dried Training Treats - Rabbit [FOR DOGS WITH FOOD ALLERGIES]

1.4.8 Activity: Comfort

- Kuranda, Chew Proof Aluminum Dog Bed with Heavy Duty Vinyl, 50” x 36”
- K&H Pet Products, Outdoor Elevated Dog Cot, Large
- Tail Stories, Outdoor Large Washable Dog Bed, 41” x 27” x 3.5”
- Tall Tails Elevated Cot Bed, XXL
- Orthopedic Bed

1.4.9 Activity: Fitness

- FitPaws, Trax Donut & Circular Product Holder Bundle, OS
- FitPaws, Made to Move Harness and Leash, XL
- Maximum K9 Services, Dog Runner Treadmill Revolution Pro
- Fit Fure Life, Professional Fit Fur Life Treadmill
- Cato Outdoors, Cato Plank XL Platform, w/ tilt and rubber surface
- Cato Outdoors, Cato Board Dog Training Platform
- Blue-9, Dog Training Platform (KLIMB001BLU)
- Non-Stop Dogwear, Freemotion harness 5.0 for running
- Guardian Gear, Nylon 2-Way Medium Dog Coupler with Nickel-Plated Swivel Clip, 12", Black
- Blue-9, Propel Air Platform (SKU: PRO-PLAT-Gry)
- Pets Pro Max, No-Pull Dog Headcollar, Large
- BOEN, 36 in. Orange PVC Reflective Traffic Safety Cone (9.6 lbs) Stackable
- Bike tow leash
- Rogue Fitness, Rogue Pack Sled Plastic Kit
- Team K9, Classic Heavy Duty Tactical No Pull Team K9 with Front/Back D rings, Medium
- Condro, Large Utility Pouch
- LISPOO, Dog Pulling Harness for Running, Skiing, Biking & Weight Pulling, Large
- FitPaws, Balance Discs (14", 18" or 22")
- Home Depot, 2 in. x 12 in. x 10 ft. #2 Premium Grade Fir Dimensional Lumber

1.4.10 Activity: Play, Cooling

- VISTOP, Extra Large Foldable Dog Pool XXL, Hard Plastic Shell Portable Swimming Pool for Dogs Cats and Kids Pet Puppy Bathing Tub Collapsible Kiddie Pool (67 inch D x 11.8 inch H, Blue)
- Puptily, Foldable Dog Pool, XL
- Summer Waves, Deep Kiddie Pool. 45” round or greater, 7.9” deep
- Piepea, Brass Valve Outdoor Dog/Pet Water Fountain, Step On Dog/Pet Water Dispenser System for Fresh Water, Upgraded Version providing Constant Stream,41" Hose

1.4.11 Activity: Grooming

- WOPQAEM, Undercoat Rake for Dogs - Dual-Sided Deshedding Blade, Wooden Handle, Professional Pet Grooming Tool with Matting Remover & Shedding Control for Double Coat Dogs & Long-Haired Cats, Large
- KONG, Zoom Groom Dog Brush, Groom and Massage While Removing Loose Hair and Dead Skin - Blue
- Maxpower Planet, Original Pet Grooming Rake - Double-Sided Deshedding Dematting Tool, Undercoat Rake for Dogs & Cats, Extra-Wide Dog Grooming Brush & Deshedder Comb for Long Hair, Reduces Shedding 95%, Large
- Garvee, Hydraulic Dog Grooming Table
- Paw Brothers, Super Low-Low 48" Electric Grooming Table
- Paw Brothers, Stainless Steel 48-inch Tub with Ramp
- Dytrend, Professional Dog Washing Station (56")
- K-9 Dryers, K-9 III Dog Dryer™
- Oneisall, Dog Vacuum & Dryer
- H Handson, Pet Grooming Gloves - Patented #1 Ranked, Award Winning Shedding, Bathing, & Hair Remover Gloves - Gentle Brush for Cats, Dogs, and Horses (Grey, Large)

1.4.12 Activity: Scratching

- Otto Environmetnal, Animal Itchin' Itching Post Scratcher (With Hardware), 23.25" x 14.8"
- Otto Environmental, Astro Panel 18" x 24″
- Otto Environmental, Otto Heavy-Duty Scratcher For Large Animals (with hardware), 36"
- BOUTICOL, Soft itch relief pad, 2x (14.17x11.8")
- De'Vora, Dog Nail Scratch Board with Treat Box & Drawer, 13.75" x 10" 1.26"
- LovIntry, M-shaped Dog Scratch Pad for Nails(XL), 20.9" x 9.6" x 2.7"

1.4.13 Activity: Sensory Stimulation

- Music (calming), Nature sounds
- Bubble machine
- Videos of animals, toddler movies
- Frozen fruits: blueberries, strawberries, apple chunks (NO GRAPES)
- Anise, clove, ginger, lavender scents
- ThunderShirt Classic Anxiety & Calming Vest for Dogs, Heather Grey, X-Large
- Adaptil, Dog appeasing pheromone (Thunderease) Diffuser

1.4.14 Activity: Safety

- Baskerville Ultra Muzzle, Black, Size 6
- Rex Specs, Ear Pro | Noise Cancelling Ear Wraps for Dogs
- Nurkul, Nylon Heavy Duty Hook and Loop Tape Strips, 4" x 18"

1.4.15 Recommended Sanitation Products

- Disinfectants
  - KennelSol 1 Gallon
  - KennelSol 5 Gallon
  - KennelSol HC 1 Gallon
  - KennelSol HC 5 Gallon
  - Rescue XL Wipes
  - Rescue 1 Gallon
  - Wysiwash Sanitizer-V + 8ct caplets
  - Wysiwash 8ct caplets
- All Purpose Wipes
  - Lysol Wipes
  - Clorox Wipes
- All Purpose Sprays
  - Lysol All Purpose Cleaner Spray
  - Lysol Disinfectant Spray
  - Clorox Disinfecting All Purpose Cleaner Spray
- Dish Detergent
  - Dawn Dish Soap 56 fl oz
  - Fabuloso Concentrated 128 fl oz
- Fabric Disinfectant Spray
  - Lysol Laundry Sanitizer
  - Clorox Laundry Sanitizer 0% Bleach
- Human PPE
  - Waterproof Boots
  - Waterproof Overshoe
  - Disposable Nitrile Gloves
  - Reusable Nitrile Gloves for Cleaning
  - Reusable Water-Proof Apron
  - Goggles
- Cleaning Equipment
  - Measuring Cup
  - Mop Bucket
  - Mop
  - Pump Sprayer 1 Gallon
  - Stiff-Bristled Deck Brush
  - Large Squeegee
  - Small Squeegee
  - Small Pressure Washer w/ Foamer
  - Medium Pressure Washer w/ Foamer
  - Large Pressure Washer
  - Pressure Washer-End Foamer
  - Hose-End Foamer
  - Hose 50ft

    - Spray Bottle
    - Shop Vacuum
    - Dish Brushes
    - Pooper Scooper
    - Poop Bags
- Sanitation Verification
    - Oxi Clean White Revive
    - Blacklight
    - Brush

1.5 Comprehensive MWD Profile Worksheet

MWD Name/Tattoo ID	**Handler**
Date of Birth/Age	**Date Assigned to Unit**
Medical Alerts/Allergies	**Miscellaneous**
Behavioral Summary Select all applicable keywords: ☐Confident & Stable ☐Environmentally Focused ☐Handler Focused ☐High Drive / Intense ☐Anxious / Lacks Confidence ☐Reactive to People ☐Reactive to Dogs ☐Sound Sensitive ☐Reserved / Aloof ☐People-Social / Affectionate ☐Other:	**Primary Drive** Select one: ☐Food ☐Play (Toys) ☐Chase ☐Praise / Affection ☐Combination: ☐Other:
Reinforcement Preferences Select all applicable: ☐High-Value Food Treats ☐Standard Kibble ☐Tug Toys ☐Ball/Hard Toys ☐Verbal Praise ☐Physical Praise ☐Other:	**General Notes** Select all applicable keywords: ☐Vocal in Kennel ☐Quiet in Kennel ☐Destructive with Bedding/Toys ☐Non-Destructive ☐Easy to Handle for Husbandry ☐Difficult for Husbandry ☐Travels Well ☐Shows Stress During Travel ☐Other:
Dislikes / Avoidances Select all applicable: ☐Loud, Sudden Noises ☐Unfamiliar People ☐Being Crowded / Cornered ☐Specific Surfaces ☐Vet / Medical Procedures ☐High-Traffic Areas ☐Specific Dog Types ☐Other:	**Social Compatibility** Select one: ☐Dog Social ☐Dog Selective ☐Dog Neutral ☐Dog Reactive ☐No Dog Contact ☐Other:

Designed and intended for use in the VRA, FB MWD Enrichment Development Revised 20260205

2.0 Cooperative Care



Figure 2-1. A MWD handler performs an examination of the MWD's teeth.

2.1 Cooperative Care Guidelines for MWD Personnel

The techniques described in this guide provide a foundational framework and are not a substitute for professional judgment. These methods are not "one-size-fits-all" and must be adapted to the individual needs, temperament, and reinforcement history of each MWD; the dog's progress always dictates the training timeline. The handler's primary responsibility is to avoid postures that could be perceived as intimidating, such as standing or leaning directly over the dog and continuously monitoring the MWD's body language. For program consistency, all personnel will standardize the cues referenced in this handbook. When troubleshooting complex behavioral issues or seeking advanced techniques, handlers must consult with veterinary professionals and senior MWD trainers; maximizing observational learning from experienced peers is also critical for success.

2.1.1 Commander's Intent and Purpose

This guideline establishes the framework for implementing cooperative care as a mandatory component of MWD handling. The objective is to enhance MWD welfare, build stronger handler-MWD cohesion, and improve mission readiness by reducing the risk of injury to both dogs and personnel. Cooperative care is a foundational approach to animal husbandry and healthcare that minimizes stress and promotes a voluntary partnership. Leadership at all levels is responsible for providing the time, resources, and oversight to ensure these practices are consistently applied.

2.1.2. Foundational Principles of Cooperative Care

- **Trust and Communication:** Cooperative care is built on a foundation of trust. The handler must become an expert in their MWD's body language, recognizing subtle signs of stress (lip licking, yawning, "whale eye," tense muscles).
- **The Power of Choice:** The MWD must always have the ability to say "no." If the MWD moves away or refuses a cue, the handler must stop and reassess. Forcing the interaction destroys trust. This refusal is not defiance; it is communication.
- **Positive Reinforcement:** All training will be conducted using positive reinforcement (e.g., high-value food, play, praise). This builds a positive association with handling procedures.
- **Food Luring:** Food is a primary reinforcer for many animals as food is required for survival and is also associated with positive emotions
- **Safety First:** Control the environment to set the MWD up for success. Always prioritize the safety of both the handler and the MWD.
- **Enable Data-Driven Handling (Trust & Communication):** This requires handlers to become experts at reading their MWD's body language, treating it as actionable intelligence. This allows them to preempt performance degradation and make informed decisions to maintain the MWD's peak mental and physical condition, ensuring reliability under pressure.
- **Instill Psychological Resilience & Prevent Critical Failure (The Power of Choice):** The MWD's ability to say "no" is an invaluable early warning signal that prevents catastrophic failures like shutdown or aggression. By building an asset that can communicate its limits instead of breaking under pressure, we create a more thinking, resilient, and ultimately more reliable partner in high-stress situations.
- **Maximize Operational Drive & Motivation (Positive Reinforcement):** This framework moves beyond simple compliance to cultivate a deep, intrinsic will to work in the MWD. This results in a more enthusiastic, focused, and enduring partner who maintains a higher operational tempo for longer durations, directly enhancing the team's warfighting capability.
- **Implement Proactive Risk Mitigation (Safety First):** Systematically controlling the training environment is a core risk mitigation strategy that guarantees safety and ensures predictable outcomes. This principle directly reduces the risk of losing assets, both human and MWDs to preventable training incidents, ensuring mission continuity and force preservation.

2.1.3 Onboarding a New MWD to Cooperative Care

The initial weeks are the most critical period for establishing trust. The goal is to demonstrate that you are a safe and predictable partner.

2.1.3.1 The First 72 Hours: Build Association

- **Be the Source of All Good Things:** You provide food, water, and comfort without any demands.
- **Use Passive Cues:** Say "Ready" before opening the kennel and "Free" when you walk away. The MWD begins to learn that your words predict your actions.

- **Observe, Don't Command:** Your primary job is to learn the MWD's personality and body language.

2.1.3.2 Weeks 1–4: Introduce Voluntary Engagement

- **Start with "Freebies":** In a quiet space, toss high value treats to the MWD for simply being near you.
- **Introduce Foundational Skills:** Begin teaching "Place" and nose-to-hand targeting as fun, low-pressure games.
- **Keep Sessions Short:** All training sessions should be 3–5 minutes at most. End on a high note, leaving the MWD wanting more.

Training Technique: Food Luring

Food luring is a training technique used to guide a dog into a specific position or through a particular movement without using any physical force. By using a high value treat as a "magnet," the handler can steer the dog's nose; where the nose goes, the body will follow. It is an effective, low-stress way to introduce new behaviors and positions, forming the foundation for more advanced training. Food luring will transfer to other enrichment categories and advanced training techniques.

Purpose in Cooperative Care

- **Teaches Movement Voluntarily:** It allows the handler to teach the dog how to perform actions like a "Stand," "Place," "Rest," or “Side” on its own, building the dog's confidence and body awareness.
- **Prevents Physical Manipulation:** It eliminates the need to push, pull, or physically force a dog into position, which is critical for building trust and preventing negative associations with handling.
- **Foundation for Other Skills:** Mastering luring is essential for teaching more complex behaviors, such as spinning in a circle for a body inspection or stepping onto a scale.
- **Food Reward Selection:** Most MWDs have not been introduced to food reward. A handler's first responsibility is to identify the specific high-value reward that their MWD finds motivating. For an MWD inexperienced with food as a reward, its value must be built separately by introducing items like cheese or dried protein in a quiet, neutral environment free from any training pressure. Reference the K9H2F recommended items list for examples of high value reward. If an MWD consistently refuses high-value food, a veterinary consultation is the mandatory first action to rule out underlying medical or dental issues. Once medically cleared, the handler must pivot to utilizing alternative rewards, such as structured play or task-based activities, as detailed in section 2.1.6.1, “Alternate Rewards for MWDs.”

How to Effectively Use a Food Lure

The process is straightforward, but success lies in the details and timing.

Table 2-1. Steps for Effective Use of a Food Lure

Step	Action	Rationale
1. Capture Attention	Let the dog sniff a high value treat in your hand, then close your fingers around it. Your hand is now the "lure."	The dog knows a reward is present and will be motivated to follow your hand to get it.
2. Guide the Movement	Place the lure directly in front of the dog's nose and move it slowly and deliberately in the direction you want the dog to go. - For a "Sit": Move the lure from the nose upward and slightly back over the head. The dog's head will tilt up, causing its rear end to lower. - For a "Down": Move the lure from the nose straight down between the paws.	The dog's nose will stay "glued" to your hand. The movement should be slow enough for the dog to follow without losing contact.
3. Mark and Reward	The *instant* the dog completes the desired position (e.g., its rear touches the floor for a "Sit"), say your marker word ("Yes!" or "Click") and immediately open your hand to give the treat.	The marker pinpoints the exact moment the dog did the right thing, and the immediate reward reinforces that specific action.
4. Reset and Repeat	Keep sessions short and fun (3–5 minutes). After a successful lure, you can toss another treat a few feet away to "reset" the dog, encouraging it to stand up and re-engage for the next repetition.	Short, successful sessions build enthusiasm. Ending on a high note leaves the dog wanting to train more.

2.1.3.3 Common Handler Mistakes to Avoid During Onboarding

- **Rushing the Process:** Trying to teach too much, too soon. The MWD's progress dictates the timeline.
  - Ending the sessions on a negative note.
  - Choosing to do “one more” versus ending on a positive note.
- **Using Physical Force:** Pushing, pulling, or physically manipulating the MWD destroys trust.

- **Misinterpreting Stress as Stubbornness:** A refusal is communication, not defiance. Adjust the training plan.
- **Ignoring the "No":** Respecting the MWD's choice to disengage is the most powerful trust-building exercise.

2.1.3.4 Adapting for an MWD with a History of Fear, Anxiety, or Stress (FAS)

If an MWD has a history of sensitivity, the dog dictates the pace. The priority shifts from teaching skills to building a sense of safety.

- **Extend the Observation Phase:** Spend the first week or more simply being present without demanding interaction.
- **Emphasize "Choice and Control":** The MWD must have control over all interactions. Allowing the dog to retreat builds confidence. Explain to others: *"By letting him walk away, I'm building a 'trust bank.' It makes him want to try again tomorrow."*
- **Use Counter-Conditioning:** This changes the MWD's emotional response to a trigger by pairing it with a high-value reward. Work "sub-threshold" (at a distance where the dog is aware but not reacting).
    - Example (Fear of Strangers): A "stranger" appears 100 feet away -> MWD gets a stream of steak -> stranger stops, steak stops -> stranger walks away. The MWD learns that the appearance of a stranger makes steak appear.
- **Prevent "Trigger Stacking":** Be aware that stressors are cumulative. A dog startled by a dropped object (Trigger 1) is more likely to react to a new person entering the room (Trigger 2).
- **Manage the Environment:** Use visual barriers (tarps, plywood, parked vehicles) to block line of sight to triggers. Use sound masking (fans, white noise machines) to dampen startling noises.

2.1.4 Phased Skill Implementation and Training Guides

2.1.4.1 Phase 1: Foundational Skills

Table 2-2. Cues for Phase 1: Foundational Skills

Cue/Skill	Description
"Ready"	A passive cue word that signals you are about to begin an interaction.
"Free"	A passive cue word that signals the interaction is complete.
“Take a Break”	A passive cue to allow the MWD to relieve themselves.
"Place"	An active cue teaching the MWD to go to a designated spot (e.g., non-slip mat).
“Touch”	An active cue teaching the MWD to touch their nose to an object (e.g., nose to hand or muzzle as the MWD progresses).
“Muzzle”	An active cue teaching the MWD to place their muzzle in the basket muzzle (e.g., nose in muzzle).
"Stand"	An active cue for the MWD to stand and hold still.

2.1.4.2 Phase 2: Core Behaviors & Equipment Training

Table 2-3. Cues for Phase 2: Core Behaviors & Equipment Training

Cue/Skill	Description
"Rest"	An active cue for the MWD to “rest” their chin on the handler’s hand.
"Side"	An active cue for the MWD to lie down in a lateral position for exams.
"Gear-Up"	An active cue where the MWD voluntarily moves into its own equipment.

How-To Guide: Muzzle Training

The goal is to make the basket-style muzzle a positive experience with the MWD voluntarily moving to the muzzle.

Table 2-4. Steps for Conducting Muzzle Training.

Step	Action
1. “Muzzle” = Treat Machine	Reward the MWD for simply looking at the muzzle. Always pairing the cue “Muzzle” during the necessary steps.
2. Voluntary Engagement	Reward the MWD for voluntarily putting its nose into the muzzle to get a treat inside.
3. Introduce Duration	Briefly delay the reward for one second while the MWD's nose is in the basket.
4. The "Click" of the Buckle	Desensitize the MWD to the sound and feel of the straps separately from the basket.
5. Wear Time	Buckle the muzzle. Feed several small, high value treats rapidly through the front for 2-3 seconds, then unbuckle. The best rewards happen *while* wearing the muzzle and on a variable reward schedule.
6. Muzzle Types	Ensure the MWD can perform the voluntary wear of a variety of muzzles (e.g., aggression muzzle, nylon muzzle, etc.).
7. End State	End state is for the MWD to voluntarily move towards a variety of muzzles on cue.

Troubleshooting Guide for Muzzle Training

Table 2-5. Potential Problems and Solutions for Muzzle Training.

Problem	Solution
Turns head away.	Go back to Step 1 of Table 2-4. Place the muzzle on the floor and reward for just looking at it.
Paws at the muzzle.	Wear time is too long. Shorten the buckled duration to literally one second, then unbuckle *before* the pawing starts.
Panics with straps.	Go back to Step 4 of Table 2-4. Desensitize the straps completely separately from the muzzle. Reward for looking at the straps, then for being touched by them.
Freezes or shows "whale eye."	Emergency stop. Immediately remove the muzzle. You have moved too fast. Rebuild trust by going back to Step 1 of Table 2-4 in the next session.

2.1.4.3 Phase 3: Advanced Skills & Procedures

Table 2-6. Cues for Phase 3: Advanced Skills and Procedures

Cue/Skill	Description
“Relax”	A passive cue to reduce impulse control or fidgeting while improving hyperactivity and focus.
"Say Ah"/Oral Exam	An active cue for the MWD to open its mouth for examination.
Voluntary Nail Trims	Using "Place", "Rest", or “Side” cues, the MWD presents or offers its paw for a trim.
Voluntary Injections	Using the "Rest" cue, the MWD holds still for an injection.
Voluntary Blood Draws	MWD presents paw (front leg) or is cued to “Stand” (hind leg)

How-To Guide: Voluntary Nail Trims

Table 2-7. Steps for Conducting Voluntary Nail Trims

Step	Action
1. Paw Desensitization	Reward the MWD for allowing you to touch its shoulder, then elbow, then wrist, then paw.
2. Introduce the Tool	Reward the MWD for looking at the clippers/Dremel on the floor.
3. Combine Handling & Tool	Touch the *handle* of the tool to the MWD's leg and paw and reward.
4. Isolate a Toe	Gently hold a single toe for 1–2 seconds and reward.
5. Sound Desensitization	Click the clippers or turn on the Dremel at a distance and reward. Gradually decrease the distance.
6. The First Trim	Trim the very tip of a single nail, then immediately give a jackpot reward and end the session.
7. End State	End state is for the MWD to voluntarily allow the nail trim using positive reinforcement.

Troubleshooting Guide for Nail Trims

1. Seek vet guidance and consider introducing nail trim boards (see K9H2F Item List).
2. Maximize the use of observational learning utilizing other MWDs that are neutral to nail trims.
3. Suspending an MWD by any body part or piece of equipment is not an acceptable handling method.

How-To Guide: Voluntary Blood Draws

Table 2-8. Steps for Conducting Voluntary Blood Draws

Step	Action
1. Leg Hold & Extension	Reward the MWD for calmly allowing you to hold its front leg, then for letting you gently extend it forward for a few seconds.
2. Passive Cue	Use the “Ready” cue to indicate that you will be performing an action; repeat for each step (leg hold, alcohol wipe, introduction of needle)
3. Simulate Vein Occlusion	With the leg extended, gently squeeze the upper part of the leg for 1–2 seconds to mimic a tourniquet, then reward for holding still.
4. Introduce Tools	Reward the MWD for looking at a capped syringe and an alcohol wipe placed nearby, making them neutral objects.
5. Combine Handling & Sensation	While holding the leg and applying the squeeze, gently wipe the area with a dry cotton ball (to simulate the wipe), then reward.
6. Simulate the "Poke"	With the leg held and squeezed, gently press the tip of a capped pen against the vein area for one second, then give a jackpot reward.
7. The Real Draw (Team Effort)	The handler cues the MWD into position, providing a steady stream of high value treats for holding still, while a vet tech performs the actual draw.
8. End State	The end state is for the MWD to voluntarily hold still for a blood draw, with the handler focused on reinforcement and the vet tech focused on the procedure.

2.1.5 Integration and Advanced Strategies

2.1.5.1 Integrating into Daily Schedules

- Focus on Micro-Sessions: Train in short bursts of 3–5 minutes, multiple times a day.
- Link to Daily Routines:
  - **Feeding Time:** Practice a "Place" before placing the food bowl down requiring the MWD to go to their “Place” (e.g., platform, doghouse, or bed). Once the bowl has been placed in the kennel the handler will use the “Free” cue to allow them MWD to breakaway and begin to eat. Same process to pick the bowls up.
  - **Gearing Up:** Practice the "Gear-Up" cue with harnesses/collars.
  - **Grooming:** Use the cues “stand and side” to properly groom the MWD and brush as a desensitization tool.

2.1.5.2 Advanced Generalization Strategies

To make skills reliable anywhere, change only one variable at a time.

- Vary the Environment: Once the MWD can reliably perform the behavior in a neutral environment, gradually introduce the distance, duration, or distraction.
- Introduce New People: Have another person observe, then toss treats, then assist with a non-threatening part of the task.
- Vary Handler Position: Practice skills while you are sitting, kneeling, and standing on different sides of the MWD.

2.1.6 Resources and Record Keeping

2.1.6.1 Alternative Rewards for MWDs

Table 2-9. Alternate Reward Types and Examples.

Reward Type	Examples
Play-Based	A 3–5 second, high-energy game of tug with a special toy; one throw of a favorite ball.
Task-Based	A quick, easy "Find It" game; release to a desired activity (e.g., going outside).
Social	Intense, enthusiastic praise; chest or butt scratches. Handlers should recognize what is rewarding to the MWD based on the MWD’s personality.

2.1.6.2 Prioritized Equipment List

- Tier 1 (Essential): High-Value Rewards (food or toys), Non-Slip Mats, Appropriate Basket Muzzles.
- Tier 2 (Recommended): Adjustable Chin Rest Stand, Target Sticks, Designated Training Tools.
- Tier 3 (Enhancement): Camera for recording sessions, Whiteboard for tracking, Durable Logbooks.

2.1.6.3 Tracking Progress

- Daily Training Log: A handler-maintained log detailing each micro-session, the MWD's response, and the plan for the next session. Handlers are required to record their training and use of equipment in their daily records captured in the working dog records management system.
- MWD Cooperative Care Proficiency Chart: A high-level chart, initialed by leadership, that tracks the MWD's progress on each skill from "Introduction" to "Generalized."

2.1.7 Roles and Responsibilities

- **MWD Handler:** Responsible for daily integration of cooperative care, patiently applying the correct onboarding protocols, identifying the most effective rewards, and diligently maintaining all training records.
- **Unit Leadership (Kennel Master):** Responsible for providing top-level support and executing leadership duties, including:
    - Resource Management: Procuring and maintaining all prioritized equipment.
    - Protecting Training Time: Formally scheduling micro-sessions and ensuring they are not sacrificed for other tasks.
    - Active Coaching: Regularly observing training, providing constructive feedback, and helping handlers troubleshoot issues.
    - Lead by Example: Be proficient in the techniques to demonstrate the standard.
- **Commander:** Responsible for fostering a command climate where MWD welfare and trust-based handling are paramount, and ensuring the program is properly resourced.
- **Veterinary Staff:** Responsible for being parallel with the training techniques and cues being utilized by MWD personnel to improve safety and outcomes for the MWDs. Provide SME input or medical support when necessary. Vets can assist with developing customized plans to meet MWD’s needs.

2.2 Conditioning a Quiet Kennel

2.2.1 Setup

Materials Needed:

1. Approved treats and/or daily ration
2. Bucket with lid
   - Example: disposable plastic container with lid (cover is important to keep contamination and bugs/vermin out)
   - Poke two holes in the side of the container and zip-tie to the outside of the run (kennel hallway area)
3. Small plastic baggies (ex: plastic sandwich bags)
   - Place these inside the plastic containers for easy change-out and sanitation; this also makes it easy to move if the MWD is moved to another kennel
   - Label the baggies with the name of the food item and the MWD's name

Key Information:

1. The amount of ration used for this exercise should be taken from the daily ration amount, so the MWD is not receiving extra calories. If treats are being used, ask your veterinarian for assistance with calculating how much daily ration to subtract based on the amount of treats added.
   - Subtract the amount the MWD consumed each day from their PM feeding.
2. Choose food items that the MWD enjoys, but that is also 'shelf-stable' (dry kibble, dry training treats, cheerios, etc.). Do not place items that must be refrigerated in the plastic containers, because they will spoil. If items that will spoil are going to be used, they need to be stored appropriately and only brought into the kennel area when they will be immediately used.

2.2.2 Procedure

Phase I: The purpose of this phase is simply to create an association between people walking by and food.

- Whenever ANYONE walks by the kennel at ANY time, they need to toss a treat, no matter what behavior the dog is performing.
- If the dog does not eat the food, a different option should be offered. Having a variety of crunchy or chewy options, and pre-determining the dog's preference is recommended. A common mistake is shying away from trying to train this association during high stimulation times such as feeding or pulling other MWDs. Instead, use this time to capitalize on reducing stress with a treat. Have personnel actively prep feed pans while other handler's provide treats. You should notice the few dogs that are more vocal and amp up the rest. This is where a more detailed behavioral training plan is important. Is the MWD receiving adequate physical conditioning and enrichment? Are you noticing specific noises or variables that trigger the MWD? What are their outside/training mannerisms compared to inside the kennel run? Use the training plans for data and continually refine. Remember

that the more calm and clear you remain, the faster the MWD will accept and respond to the training.

Phase II: The purpose of this phase is to condition a quiet behavior to receive the food item.

- Once the dogs start to reduce their jumping up and barking and start getting quietly excited in anticipation of someone walking by and giving them something good, then additional criteria can be added.
- If the dog is quiet when you approach and remains quiet, mark the behavior, and toss the treat.
- Most of the dogs will be quiet when you approach but will start to spin/jump/bark when you go to retrieve the food. For this, you can pause with the treat in-hand, then wait for the dog to pause and mark the quiet before tossing the treat.

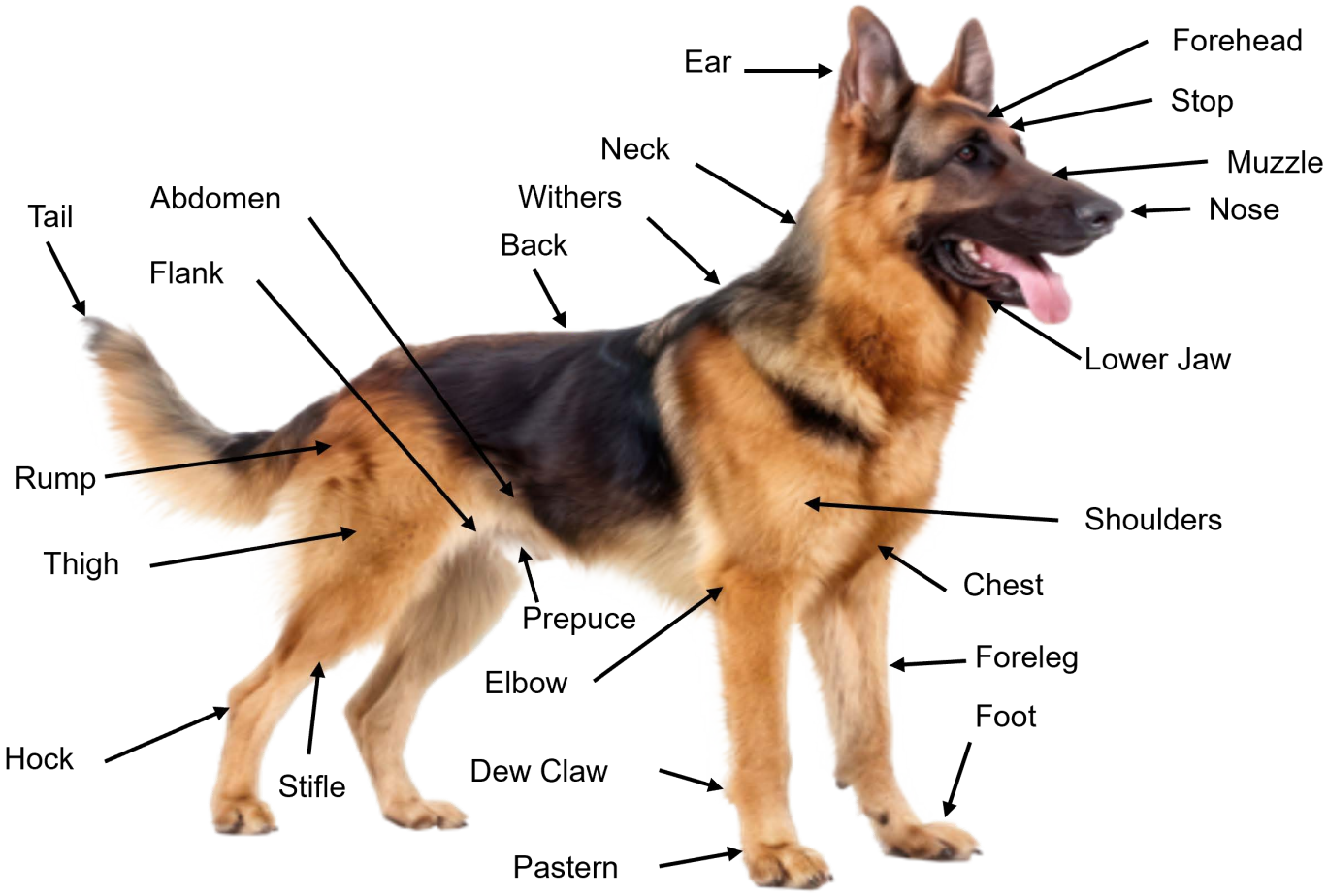
Phase III: The purpose of this phase is to go beyond the ‘quiet’ kennel behavior to a quiet and ‘well-mannered’ behavior.

- Further criteria can be added, once the dogs are conditioned to quiet. For example, the dogs can be expected to not only show quiet behavior, but also to not jump up or spin or lunge. The benefit to this is when the handler enters the kennel for management tasks or to gear-up the dog, the interaction can be kept low-key. Keeping the energy calm in the kennel reduces safety issues with overexcited dogs, but also reduces potential injuries to the dog from all the acrobatics in the kennel when the handlers are trying to clean/feed/place gear.
- One example behavior is "four on the floor". This means that the dogs should have all four paws on the floor before they get the food (mark the ‘four on the floor’ with a ‘good’ and then toss the food). Most of the dogs will be doing this anyway, but for the ones that are still jumping/spinning, this added step helps reduce that behavior as well.
- Another example is “place”. This can be used to have the dog station themselves on their bed or elevated platform and wait for the handler to enter for interaction and food reward.

If the kennel wants to document improvements, they can download the free OSHA app "NIOSH" and take decibel readings in the kennel to track progress. Or they can just record a video before they start these exercises, then video once a week and compare. Progress should occur quickly if all personnel are consistent.

Additional 'quiet time' can be encouraged by playing meditation/classical music or books-on-tape during certain times of the day, because this encourages the dogs to rest and relax.

2.3 Daily MWD Health Check Roster Worksheet

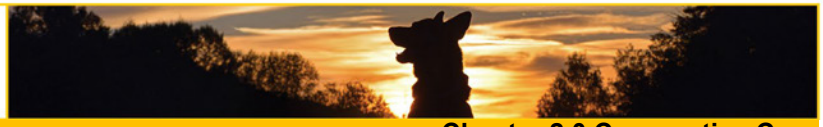


MWD Name:

Tattoo:

Month/Year:

Date	Time	Observations/Actions	Reported To	Date/Time Notified



Date	Time	Observations/Actions	Reported To	Date/Time Notified

Date	Time	Observations/Actions	Reported To	Date/Time Notified

3.0 Enrichment



Figure 3-1. An MWD engages in enrichment on a playground structure.

3.1 Military Working Dog (MWD) Enrichment Guidelines

3.1.1. Introduction

The following guidelines provide a framework for the development of a safe and effective enrichment program for Military Working Dogs (MWDs). Enrichment is a mandatory part of MWD care. Its purpose is to improve MWD welfare, support mission readiness, and reduce negative welfare indicators, such as stress-related behaviors and preventable injuries. This is achieved by providing appropriate outlets for each MWD's physical and mental needs.

These guidelines provide a clear framework for introducing and managing enrichment activities. They do not replace professional judgment. Each MWD is different. Enrichment plans must be adjusted based on the dog's temperament, reinforcement history, and health status. The dog's behavior and response will determine which activities are used, how quickly they progress, and how long they continue.

Handlers must continuously monitor MWD body language for signs of stress, fear, disinterest, or over-arousal. If these signs appear, the handler will adjust or stop the activity. When concerns arise, handlers should consult veterinary staff and senior trainers.

Proper enrichment supports mission performance. A structured and predictable schedule reduces boredom, limits unwanted behaviors, and improves resilience when faced with environmental changes, operational stress, injury rehabilitation, or previous deprivation. It helps prevent behavior problems and improves overall well-being.

Enrichment is a shared responsibility. Daily execution rests with the handler, but leaders at all levels must provide the time, resources, oversight, and command emphasis required to ensure these guidelines are followed.

3.1.2 Roles and Responsibilities

A successful program requires coordination between handlers, leaders, and veterinary personnel. Clear responsibilities ensure the program is executed consistently and safely. The enrichment program is executed at the detachment level. While handlers conduct daily activities, leadership and veterinary staff provide oversight, coordination, and medical guidance.

Table 3-1 Summary of Roles and Responsibilities for Enrichment Personnel

Roles	Primary Responsibilities
MWD Handler	Conducts scheduled enrichment activities. Observes the dog's behavior, arousal, and recovery during activities. Records enrichment sessions and the dog's response in the approved tracking system. Adjusts or stops activities when stress or avoidance appears. Maintains sanitation and safe use of enrichment equipment. Reports welfare concerns through the NCO support channel.
Team Leader	Supervises daily enrichment execution. Verifies activities are conducted and properly recorded. Reviews logs for accuracy and completeness. Coaches handlers on sequencing, arousal control, and recovery balance. Corrects minor issues and reports recurring problems to the Squad Leader.
Squad Leader	Oversees enrichment execution across the squad. Reviews weekly enrichment records and welfare indicators. Identifies trends in workload, recovery, and behavior. Adjusts schedules when mission requirements, weather, or personnel availability change. Ensures enrichment continues even when handlers are absent.
Kennel Master	Manages the enrichment program and maintains consistency across squads. Develops risk assessments for new enrichment activities or equipment. Publishes the Unit Enrichment Plan and integrates it with the training calendar. Maintains the approved activity list and tracking standards. Conducts monthly trend analysis and coordinates veterinary consultation when concerns are identified.
Detachment Commander	Provides command authority and resources for the enrichment program. Approves the Unit Enrichment Plan and associated risk assessments. Ensures enrichment time and resources are protected in the training calendar. Reviews trend reports and directs corrective action when needed. Reinforces that MWD welfare supports mission readiness.
Animal Care Specialist	Monitors kennel health trends and identifies concerns that may require veterinary review. Helps identify changes in appetite, hydration, injury indicators, or behavior. Assists with veterinarian-directed activity restrictions or recovery plans. Advises on sanitation, feeding devices, and enrichment items that may affect health.
Veterinary Corps Officer (VCO)	Evaluates dogs with persistent welfare concerns or behavioral instability. Establishes medical restrictions, recovery protocols, and return-to-duty guidance. Advises leaders on enrichment adjustments related to injury or illness.
Senior Veterinarian / Veterinary Specialist	Provides program-level medical oversight. Reviews trends that may indicate environmental, workload, or nutrition concerns. Advises leadership on enrichment practices that affect long-term health and welfare.

3.1.3 Foundational Principles of MWD Enrichment

The enrichment program is built on several key principles that protect the health, safety, and well-being of the MWD.

3.1.3.1 Five Domains of Animal Welfare

The first principle is to understand and apply the Five Domains of Animal Welfare. These five areas describe what every MWD needs to stay healthy and perform well.

Nutrition: MWDs must have regular access to clean water and high-quality food that meets their energy needs. When appropriate, food may also provide variety in taste and texture.

Physical Environment: MWDs must have a safe and clean living space. This includes adequate room to move, shelter from weather, comfortable resting areas, proper lighting, appropriate temperatures, and minimal exposure to unpleasant or harsh odors.

Health: MWDs must receive proper medical care and husbandry. This includes maintaining physical fitness and hygiene as well as preventing or treating injury, illness, or pain.

Behavioral Interactions: MWDs must be allowed to perform natural dog behaviors. This includes sniffing, chewing, exploring, problem-solving, and appropriate interaction with people and other dogs when approved.

Mental State: MWDs should feel safe and secure with mostly positive experiences. Fear, stress, boredom, and frustration should be minimized while comfort and satisfaction are maximized.

3.1.3.2 Safety

The second key principle is safety. All enrichment activities must be supervised and evaluated for risk. Safety procedures are required at all times. Any exposure to stress must be planned and controlled, never accidental.

3.1.3.3 Additional Principles

Several additional concepts guide the development of effective enrichment programs.

Time Activity Budget: Animals naturally divide their day between rest, activity, eating, and exploration. An enrichment schedule should reflect natural canine behavior patterns, as described in scientific literature, and provide a healthy balance of activity and recovery.

Agency (Choice): Agency is the dog's ability to make choices and influence its environment. The MWD must choose to participate in enrichment. Interaction should never be forced. If the dog refuses to engage, the activity should stop.

Appropriate Selection: Enrichment should create positive experiences. Activities must match the dog's temperament, training level, and current condition. If the dog becomes agitated, frustrated, or distressed, the activity should be modified or stopped.

Arousal Management and Drive Expression: Arousal refers to how excited or alert a dog is. High drive without regulation is a liability. Introduce new items gradually and manage activity intensity. Balance high- and low-arousal activities appropriately.

Context Discrimination: The dog must clearly understand the difference between work tasks and enrichment activities. Work and play should not be confused.

Rotation and Novelty: Rotate enrichment items and activities regularly (daily or weekly) to prevent boredom and maintain interest.

Data-Driven Approach: Handlers must observe and document the dog's response to enrichment. This information is used to adjust the program and ensure it supports MWD welfare and mission readiness.

3.1.4 Phased Implementation of the Unit Enrichment Plan

The Unit Enrichment Plan is developed at the detachment level, approved by the Detachment Commander, and carried out by squads. The program follows four phases:

1. Baseline and Risk Screening
2. Plan Development and Approval
3. Execution
4. Evaluation and Refinement

Using a phased approach helps units introduce enrichment in a safe and organized way. Each phase produces specific information that supports the next phase. When followed in order, the program remains stable and sustainable even during high operational tempo.

PHASE 1: Baseline and Risk Screening

Phase 1 establishes a baseline of MWD behavior during work, kennel time, and off-duty periods. This information is combined with the kennel's operational baseline to ensure the enrichment plan reflects the unit's workload.

The MWD Plans NCO develops a detachment-level operational baseline that considers training requirements, certification timelines, expected taskings, law enforcement shifts, environmental conditions, kennel capacity, and available personnel. This information defines the operational tempo that the enrichment plan must support.

Handlers provide dog-level observations using the MWD Profile (see example template in the table 4.1 below). These observations include behavior patterns, welfare indicators, preferences, medical limitations, and training restrictions. Handlers should also note the dog's typical arousal level, engagement with the handler, and social behavior.

Team Leaders review and consolidate handler input and identify common trends within their teams.

Squad Leaders then confirm how the workload normally appears during a typical week. This includes routine duties such as kennel maintenance, motor pool maintenance, leave and pass schedules, and other administrative requirements. Squad Leaders also evaluate

each MWD's response to new objects, sounds, and environments. They assess the dog's frustration tolerance, handler engagement, recall reliability, and kennel behavior.

Table 3-2 MWD Enrichment Profile

MWD Name/Tattoo:
Handler:
Date of Birth/Age:
Date Assigned to Unit:
Medical Alerts/Allergies:
Behavioral Summary:
Primary Drive (e.g., food, play, praise):
Reinforcement Preferences (e.g., specific toys, treats):
General Notes (e.g., high food drive, cautious with new objects, sound sensitive, etc.):
Likes (e.g., chasing, puzzle toys, scent work, specific people, etc.):
Dislikes / Avoidances (e.g., loud noises, being crowded, specific textures, etc.):
Social Compatibility (e.g., specific MWDs, is best for parallel walks only, etc.):

Phase 1 also includes risk screening. During this step, the Kennel Master (KM) Team identifies behaviors, equipment, or environmental hazards that could create safety concerns. The team reviews possible enrichment activities, equipment, and conditioning exercises to identify supervision requirements and potential risks. Known medical restrictions are reviewed with the VCO. This helps establish medical limits before the enrichment plan is finalized. Veterinary personnel provide guidance during this stage to ensure health considerations are properly addressed.

Outputs of Phase 1

- Updated MWD Baseline Profiles (completed by handlers)
- Detachment Operational Baseline Summary (prepared by the KM Team)
- Initial Enrichment Risk Screening Documentation (prepared by the KM Team)
- Medical Restriction Summary (provided by the VCO)

PHASE 2: Plan Development and Command Approval

After the baseline and risk limits are established, the unit develops the Unit Enrichment Plan.

A weekly enrichment schedule should be integrated into the kennel's routine. Leaders can use a weekly template to overlay the kennel schedule with the canine time activity budget. This includes work periods, rest, feeding, health care, and both low- and high-arousal enrichment activities. Leaders then add enrichment activities to fill gaps and support natural canine behaviors and individual dog needs. Table 4.2 provides examples of enrichment activities that can be incorporated into the schedule.

Not all enrichment activities are appropriate for every MWD. Medical restrictions, injury recovery, or individual preferences may limit certain activities. In these cases, handlers should select alternative activities that provide cognitive engagement or sensory stimulation. Example modifications are provided in Table 4.3.

Units may also experience temporary shortages of handlers due to leave, schools, or other assignments. During these periods, leaders should maximize simple enrichment activities such as decompression walks, small group play, food-dispensing devices, ice blocks, or short training sessions rotated among available handlers.

Squad Leaders should plan at least eight weeks in advance. Early planning helps deconflict competing requirements, allocate resources, and allow time for review and approval. Leaders must also identify the equipment required for enrichment activities. Reference materials listing common activities, equipment, and associated risks may assist this process.

Once squad plans are developed, the MWD Plans NCO consolidates them into a single Unit Enrichment Plan aligned with the unit training calendar. Physical, cognitive, sensory, and social enrichment activities are distributed across the week to balance workload and

recovery. Administrative requirements such as kennel sanitation, motor pool maintenance, and shift schedules are also included to ensure the plan remains practical and sustainable.

The MWD Plans NCO reviews each plan to confirm it aligns with the operational baseline from Phase 1, enrichment principles, and known medical restrictions. Plans are also reviewed for activity balance, supervision requirements, and overall feasibility.

The Kennel Master develops formal risk assessments for enrichment activities and presents them to the Detachment Commander. Any new enrichment equipment, devices, or procedures must be included in the risk assessment before implementation.

The VCO reviews the plan and provides recommendations based on medical considerations. Veterinary personnel confirm that planned activities are appropriate for the health and conditioning profile of the MWD population. They provide guidance but do not approve or execute the plan.

The Detachment Commander reviews the completed Unit Enrichment Plan to ensure it supports mission priorities and available resources. The Commander approves required risk assessments and formally approves the plan for execution.

Outputs of Phase 2

- Approved Unit-Level Enrichment Plan
- T+8 Enrichment Training Calendar outlining short-term priorities
- Weekly Enrichment Schedule
- Approved Enrichment Risk Assessments

The table below provides examples of enrichment activities that can be incorporated into the schedule.

Table 3-3. Examples of Enrichment Activities

Enrichment Activity Examples	Categories	Location Performed
Enrichment walk/Long-leash walk	Physical Activity; Sensory Stimulation, Cognitive Engagement	Outside of kennel
Physical Conditioning Drills: Off-leash Retrieves	Physical Activity; Social Interaction, Cognitive Engagement	Outside of kennel
Grooming: Brushing/Combing/Petting	Physical Activity; Social Interaction, Sensory Stimulation	Outside of kennel
Play: Interaction with person and treat games	Physical Activity; Cognitive Engagement, Social Interaction	Outside kennel
Task-related: Cooperative Care session	Cognitive Engagement; Physical Activity	Outside kennel
Puzzle: Food puzzle	Cognitive Engagement; Sensory stimulation	Inside or outside kennel
Smell: Scent exploration	Sensory Stimulation; Cognitive Engagement	Inside or outside kennel
Sight: Movie	Sensory Stimulation	Inside kennel
Sound: Reading with canine	Sensory Stimulation; Social Interaction	Inside or outside kennel
Instinctual-Touch: Digging pool (dirt or water)	Physical Activity; Sensory Stimulation, Cognitive Engagement	Outside kennel
Instinctual-Chew: Layered or solid treat	Sensory Stimulation	Inside or outside kennel
Instinctual-Social: Interaction with other MWDs	Social Interaction; Physical Activity, Cognitive Engagement	Outside kennel

Table 3-4. Examples of Enrichment Modifications for Medical Restrictions

Medical Condition	Appropriate Enrichment Options	Restrictions/ Considerations
Ensure appropriate safety, security, and comfort goals are met with each patient		
Isolation/Infectious disease A. Giardia B. CIRDC	•Movies •Food-releasing device; frozen treats •Music	↓↓ Physical/Outdoor activity (due to isolation) ↑↑Sensory options ↑↑ Cognitive options
Musculoskeletal A. LS Disease B. Stifle disease C. Myopathy/ Tendinopathy	•Movies •Music •Handler social time •Approved chew toys (ex: XXL Kong) •Cooperative Behavior Training	↓ Physical (unless prescribed activity) ↑↑ Sensory options ↑↑ Cognitive options
Soft Tissue A. Abdominal surgery B. Laceration repair recovery C. Nail/Paw pad trauma	•Movies •Music •Cognitive puzzles/games •Frozen treats •Approved chew toys (ex: XXL Kong) •Handler social time •Cooperative Behavior Training	↓ Physical (unless prescribed activity) ↑↑ Sensory options ↑↑ Cognitive options
Heat Injury	•Movies •Music •Cognitive puzzles/games •Food-releasing device; frozen treats •Indoor sniff walk/hunt games •Cooperative Behavior Training	↓↓ Outdoor physical options (unless prescribed activity) ↑↑ Cognitive options ↑↑ Sensory options
Internal Medicine A. Dietary restriction B. Gastrointestinal disease C. Autoimmune/ Endocrine D. Seizures	•Handler social time •Cooperative Behavior Training (with prescribed food reward only) •Food-releasing device; frozen treats (with prescribed food only)	↓↓ Food variety (Prescribed food only for Dietary/GI) ↑↑ Cognitive options ↑↑ Sensory options (caution with movies and seizure patients) ↑ Physical activity that does not exacerbate patient discomfort

PHASE 3: Execution and Evaluation

This phase focuses on carrying out the Unit Enrichment Plan. Execution occurs at the squad level and requires consistent leader supervision.

Handlers conduct scheduled enrichment activities and record them in the approved tracking system. Documentation must include Measures of Performance and Measures of Effectiveness. Measures of Performance track time spent on enrichment activities, while Measures of Effectiveness record observable welfare indicators such as arousal control, engagement, recovery, and social behavior. This data supports program-level visibility and confirms that the framework is being executed as directed by higher headquarters.

Team Leaders verify daily execution and documentation. They correct minor issues early and ensure enrichment activities remain balanced.

Squad Leaders manage enrichment within the squad training schedule. They protect enrichment time, review weekly records, and adjust activities when negative welfare indicators increase. They review weekly Measures of Performance and Measures of Effectiveness to evaluate whether load and recovery remain aligned. Squad Leaders initiate corrective adjustments within the squad before elevation to the KM Team or VCO becomes necessary.

The MWD Plans NCO monitors execution across the detachment. MWD Plans NCOs should be present at least twice on a weekly basis during enrichment activities to ensure the Commander's end state is being met. They serve as the bridge between the execution level and the management level, receiving concerns from Squad Leaders for potential evaluation from the KM or Veterinary teams.

Introduction and Acclimation

All new enrichment activities should be introduced using positive reinforcement. This approach strengthens desired behavior by immediately providing a reward after the correct response. Positive reinforcement supports learning while maintaining trust between the handler and the MWD.

Activities should progress from simple to complex. New elements should be introduced one at a time to allow the MWD to build confidence and resilience. Handlers must observe the MWD's response throughout the activity. If red-flag behaviors appear, the handler should stop or regress the activity and adjust the approach as needed.

The following guiding principles support safe and effective activity introduction:

Table 3-5. Guiding Principles for Executing an Enrichment Plan

Guiding Principle	Description
Go Slow and Be Patient	Never force an interaction. Allow the MWD to approach new items at their own pace.
Employ crawl, walk, run approach	Introduce one variable at a time to build resilience to mild frustration and novelty Use common-sense selections for enrichment immediately before and after high-intensity work Increase duration, difficulty, and distraction as MWDs are acclimated
Positive Reinforcement Only	All training should be based on rewards like treats, praise, or toys; selection of reward should be appropriate for the dog's arousal state with the reward. Use high-value reward to create a positive association with the new item or activity.
Observe Body Language	Watch for signs of stress (stiffness, growling) versus contentment (loose body, play bows).
Mitigate Red-Flag Behavior	Immediately regress and adjust if Red-Flag behaviors appear, to foster improved recovery without increasing reactivity
Handler Initiates and Controls	The handler should always initiate and conclude enrichment sessions to maintain structure and predictability.

PHASE 4: Evaluation, Trend Analysis, and Refinement

This phase reviews the effectiveness of the Unit Enrichment Plan and identifies adjustments when needed. Regular evaluation ensures the program continues to support MWD welfare and operational readiness.

Handlers record enrichment activities and the MWD’s response in the approved tracking system. Leaders use this data to identify trends in workload, recovery, and behavior. If negative welfare indicators persist or increase, leaders should conduct a detailed assessment and consult veterinary staff.

Date	Activity	Enrichment Categories- primary listed first (auto-populates)	Time Spent (minutes)	Level of Canine Interest	Canine Engagement with Enrichment	Canine Interaction with Dogs/People	Location of Activity	Comments
01/05/2026	Free run in exercise yard	Physical Activity; Sensory Stimulation	20	5-Positive Interaction	3-Appropriate	0-Unknown/Not Applicable	Outdoor Enclosure: Independent	
01/05/2026	Puzzle: PVC tumbler filled with kibble for breakfast or dinner	Cognitive Engagement; Sensory stimulation	30	5-Positive Interaction	3-Appropriate	0-Unknown/Not Applicable	Primary Run: Independent	100% meal consumption
01/05/2026	Task Related: Cooperative Care session	Cognitive Engagement	30	5-Positive Interaction	3-Appropriate	3-Appropriate	Indoor	Worked on place and target behaviors
01/05/2026	Species-Typical (foraging)/Tactile: Ball pit (+/- hidden food/treats), "Snuffle mat"	Sensory Stimulation; Physical Activity, Cognitive Engagement	20	4-Needed Encouragement	0-Unknown/Unsure	0-Unknown/Not Applicable	Primary Run: Independent	Used ball pit with hidden kibble, MWD explored when encouraged but did not eat the kibble; may need more acclimation
01/05/2026	Treatment Exercise: Other	Physical Activity	30	5-Positive Interaction	1-Inappropriate	3-Appropriate	Indoor	Daily hip flexor exercises; MWD resistant but not aggressive- seemed painful; notified vet
01/06/2026	Sight: Bubble blower	Sensory Stimulation	20	2-Avoidant	2-Did Not Engage	2-Did Not Engage	Outdoor Enclosure: Interactive	MWD startled; may need acclimation
01/06/2026	Sound: Audiobook	Sensory Stimulation	20	5-Positive Interaction	0-Unknown/Unsure	0-Unknown/Not Applicable	Primary Run: Independent	
01/06/2026	On-leash trotting	Physical Activity; Social Interaction	30	5-Positive Interaction	3-Appropriate	3-Appropriate	Outdoor: On Leash	
01/06/2026	Physical Conditioning Drills: Sled drags	Physical Activity; Cognitive Engagement	30	2-Avoidant	2-Did Not Engage	2-Did Not Engage	Outdoor Enclosure: Interactive	Notified trainer; MWD in treatment for hip flexors- discontinue sled drags until treatment complete
01/06/2026	Treatment Exercise: Other	Physical Activity	40	5-Positive Interaction	3-Appropriate	3-Appropriate	Indoor	Daily hip flexor exercises; no resistance

Figure 3-2. Example unit level tracking system.

Handlers must also respond to behavioral changes during enrichment and operational activities. A troubleshooting algorithm is provided in Figure 3-3 and common responses are summarized in Table 3-6.

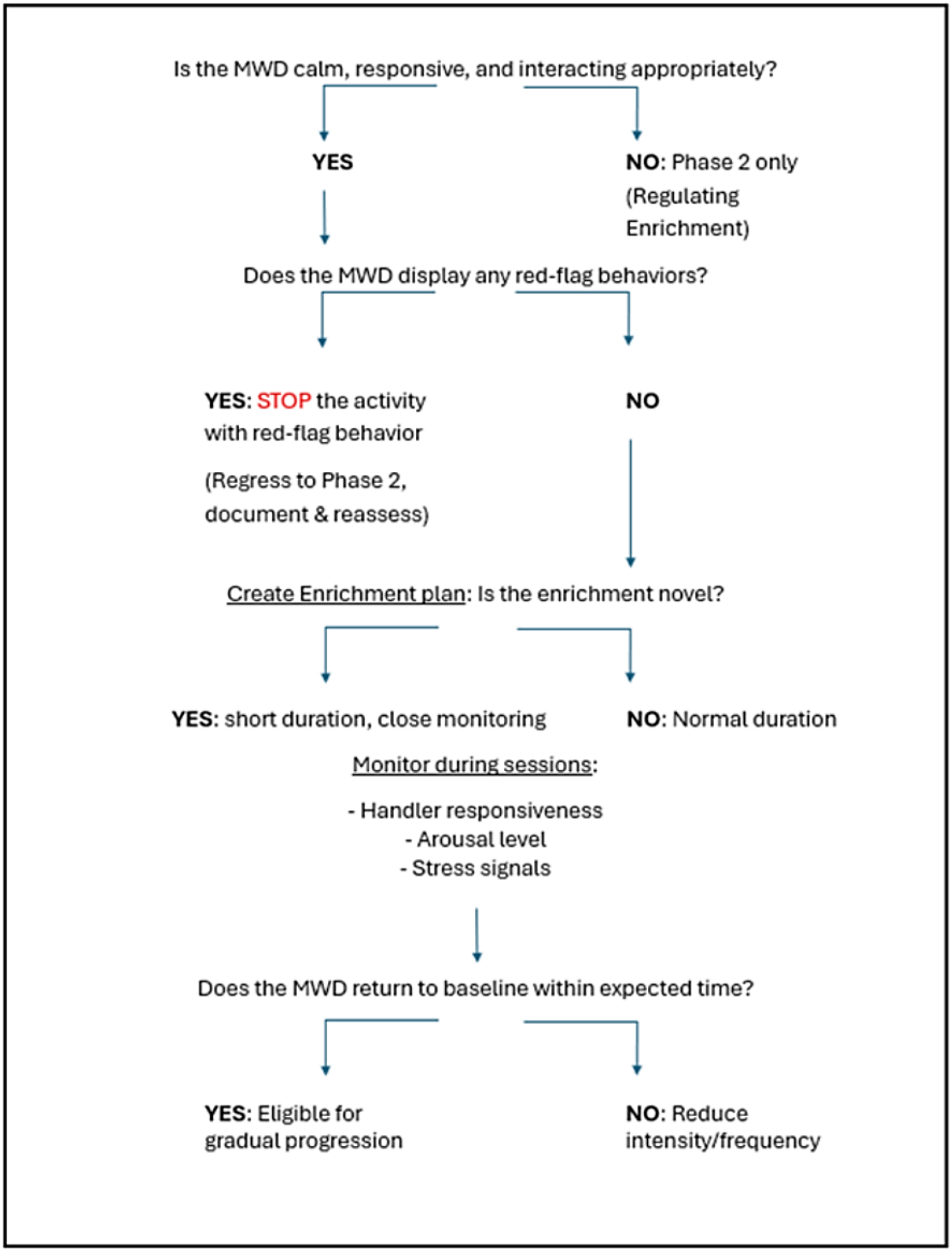


Figure 3-3. MWD Enrichment Response Algorithm

Table 3-6. Common Responses During Enrichment

During enrichment, if the MWD is...	What to Do
Disinterested	Evaluate if MWD appears ill or tired. Modify or re-evaluate the activity based on MWD preference. Try a higher value treat or a different activity.
Fearful or Frustrated	Stop immediately. The activity may be too challenging or aversive. Re-evaluate appropriateness of the activity and consider breaking it into smaller steps.
Distracted	Manage the environment by removing negative distractions or moving to a quieter area. Annotate positive distractions to capitalize on those opportunities, either changing the scheduled activity or removing the distraction.

Squad Leaders conduct weekly reviews of enrichment records and welfare indicators. Measures of Performance confirm that enrichment activities are being conducted and balanced across domains. Measures of Effectiveness show how dogs respond to enrichment, including arousal control, engagement, recovery, and social stability.

The MWD Plans NCO conducts biweekly reviews to monitor trends across squads. The KM Team and Detachment Commander review enrichment data during routine training reviews. Monthly reviews compare squad data, identify trends, and detect signs of program imbalance or system stress.

Evaluating Measures

Leaders should use measures of performance and measures of effectiveness to adjust enrichment activities when needed. If workload increases and recovery declines, the enrichment plan should be adjusted to reduce intensity or add rest. If engagement remains low, enrichment activities should be adjusted to better match the dog's needs.

Measures of Performance

Measures of Performance show whether the enrichment plan is being carried out as directed. They track what activities were done, for how long, and in which domain (physical, cognitive, sensory, social). This helps leaders quickly spot trends. For example, a dog with high physical activity but low recovery may be at risk of overload. Meanwhile, a dog with low cognitive or social activity may be under-stimulated.

Measures of Effectiveness

Measures of Effectiveness show if the plan is achieving its goals for MWD welfare using four key indicators.

1. **Arousal Regulation:** The dog's ability to shift between activity and calm behavior. Can the dog shift between activity and calm?

2. **Engagement:** The dog's interest and participation in activities. Is the dog motivated and curious?
3. **Recovery Quality:** How quickly the dog returns to baseline or a relaxed state after activity
4. **Social Stability:** The dog's ability to interact with people and other dogs. Is the dog comfortable with people and other dogs?

These four indicators are critical because they reflect long-term performance risk. They are functional states that respond to training load, enrichment balance, and recovery.

Red Flag Indicators and Response

Handlers and leaders must watch for red-flag behaviors, which show that a dog may be stressed, overloaded, or at risk. Red flags signal the need for immediate review and action before problems worsen.

Red flags help leaders identify sustained decline, imbalance between workload and recovery, or other serious welfare concerns. Squad Leaders address issues at the squad level first. If patterns continue or affect multiple dogs, the Kennel Master (KM) Team conducts detachment-level analysis.

If simple adjustments do not correct the issue, veterinary consultation may be required. Veterinary personnel assess potential medical or behavioral causes and provide guidance for modification.

A red flag occurs when one or more of the following conditions are observed:

- A single critical welfare score showing severe stress, instability, shutdown, or increasing score with no cause or mitigation plan.
- Two consecutive weeks of low scores in the same enrichment domain.
- A sustained increase across multiple welfare indicators.
- Persistent imbalance between operational workload and recovery.
- Escalating arousal that interferes with disengagement, release, or operational control.

Table 3-7. Red Flag Indicators

Red Flag Trigger	Likely Underlying Condition	Immediate Squad-Level Action	Escalation Criteria
Single critical welfare score	Acute stress response, overload, environmental trigger	Review last 72 hours of workload and enrichment sequencing. Reduce intensity. Increase structured recovery. Reassess within 72 hours.	If instability persists or worsens
Two consecutive low scores in same domain	Chronic under-recovery, imbalance in enrichment distribution	Adjust weekly enrichment distribution. Increase low-arousal enrichment. Reduce high-intensity load temporarily.	If no improvement after one week
Sustained downward trend across indicators	Cumulative stress, inadequate recovery, environmental friction	Conduct full squad-level review of workload, sequencing, and handler consistency. Modify T+8 plan if needed.	If decline continues across two review cycles
Persistent workload vs recovery imbalance	Structural overtraining or scheduling compression	Rebalance weekly training schedule. Protect recovery blocks. Coordinate with MWD Plans NCO if structural conflict exists.	If imbalance affects multiple dogs
Escalating arousal affecting disengagement or control	Poor sequencing, insufficient context discrimination, excessive stimulation	Increase impulse control drills. Reduce retrieval-based enrichment temporarily. Emphasize decompression and low-arousal tasks.	If operational control degrades or safety risk increases

Leadership Response

The Squad Leader conducts the initial review. This includes examining enrichment distribution, workload, activity sequencing, handler execution, and recent environmental changes. Minor corrections should be made at this level. Reviews and adjustments must be documented, and the MWD Plans NCO should be informed.

If red flags continue or appear across multiple dogs, Squad Leaders report to the Kennel Master. The KM Team conducts detachment-level analysis. This review evaluates workload density, scheduling conflicts, environmental stressors, and other systemic issues. Adjustments to the Unit Enrichment Plan may be directed.

Veterinary consultation occurs when indicators suggest medical decline, behavioral instability beyond leadership correction, or failure to recover after structured adjustments. Veterinary personnel evaluate clinical risk and provide guidance within medical authority.

3.2 Sample Weekly Enrichment Breakdown

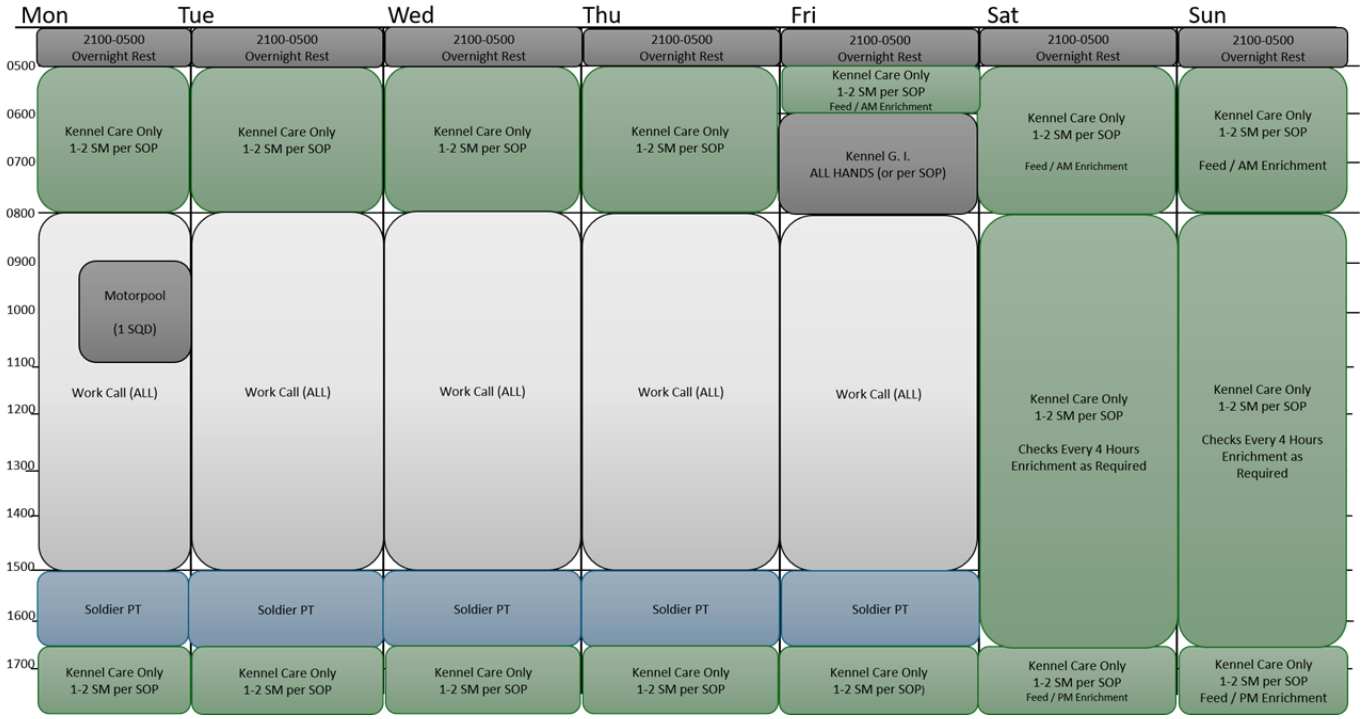
Implementation Recommendations:

- Change is expected. Structure creates effectiveness.
- KM Teams set the battle rhythm, direct, and provide oversight.
- Squad leaders drive execution and set the pace daily.
- Teams adapt the overlay to mission, kennel size and shifts.
    - Overlays provide examples, Unit SOP will drive reality.
- Rotate admin and taskings at Squad Level.
- Consistency turns effort into readiness.

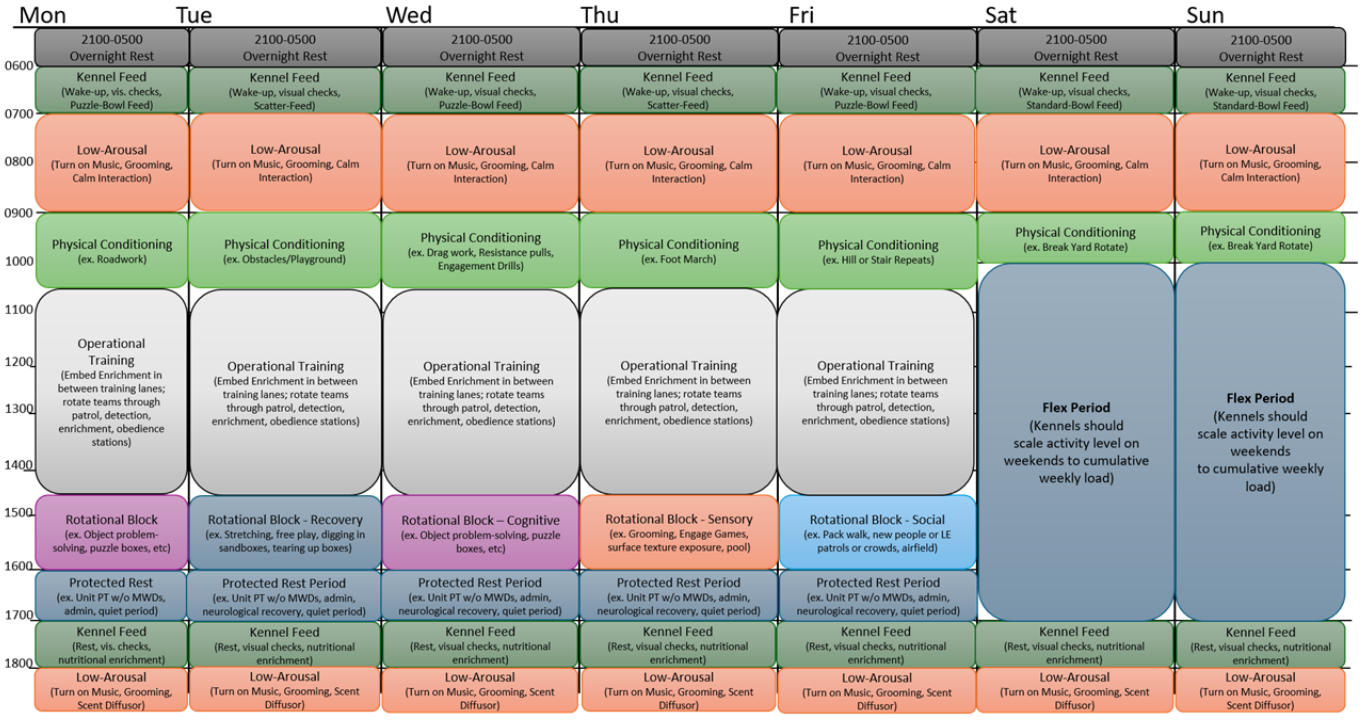
(Reverse-Cycle PT Version) Sample Weekly Enrichment Breakdown (Average MWD) – Enrichment Overlay

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
0500	2100-0500 Overnight Rest	2100-0500 Overnight Rest	2100-0500 Overnight Rest	2100-0500 Overnight Rest	2100-0500 Overnight Rest	2100-0500 Overnight Rest	2100-0500 Overnight Rest
0600	Kennel Feed (Wake-up, vis. checks, Puzzle-Bowl Feed)	Kennel Feed (Wake-up, visual checks, Scatter-Feed)	Kennel Feed (Wake-up, visual checks, Puzzle-Bowl Feed)	Kennel Feed (Wake-up, visual checks, Scatter-Feed)	Kennel Feed (Wake-up, visual checks, Puzzle-Bowl Feed)	Kennel Feed (Wake-up, visual checks, Standard-Bowl Feed)	Kennel Feed (Wake-up, visual checks, Standard-Bowl Feed)
0700	Low-Arousal (Turn on Music, Grooming, Calm Interaction)	Low-Arousal (Turn on Music, Grooming, Calm Interaction)	Low-Arousal (Turn on Music, Grooming, Calm Interaction)	Low-Arousal (Turn on Music, Grooming, Calm Interaction)	Low-Arousal (Turn on Music, Grooming, Calm Interaction)	Low-Arousal (Turn on Music, Grooming, Calm Interaction)	Low-Arousal (Turn on Music, Grooming, Calm Interaction)
0800	Physical Conditioning (ex. Roadwork)	Physical Conditioning (ex. Obstacles/Playground)	Physical Conditioning (ex. Drag work, Resistance pulls, Engagement Drills)	Physical Conditioning (ex. Foot March)	Physical Conditioning (ex. Hill or Stair Repeats)	Physical Conditioning (ex. Break Yard Rotate)	Physical Conditioning (ex. Break Yard Rotate)
0900	Operational Training (Embed Enrichment in between training lanes; rotate teams through patrol, detection, enrichment, obedience stations)	Operational Training (Embed Enrichment in between training lanes; rotate teams through patrol, detection, enrichment, obedience stations)	Operational Training (Embed Enrichment in between training lanes; rotate teams through patrol, detection, enrichment, obedience stations)	Operational Training (Embed Enrichment in between training lanes; rotate teams through patrol, detection, enrichment, obedience stations)	Operational Training (Embed Enrichment in between training lanes; rotate teams through patrol, detection, enrichment, obedience stations)	**Flex Period** (Kennels should scale activity level on weekends to cumulative weekly load)	**Flex Period** (Kennels should scale activity level on weekends to cumulative weekly load)
1000							
1100							
1200							
1300							
1400	Rotational Block (ex. Object problem-solving, puzzle boxes, etc)	Rotational Block - Recovery (ex. Stretching, free play, digging in sandboxes, tearing up boxes)	Rotational Block – Cognitive (ex. Object problem-solving, puzzle boxes, etc)	Rotational Block - Sensory (ex. Grooming, Engage Games, surface texture exposure, pool)	Rotational Block - Social (ex. Pack walk, new people or LE patrols or crowds, airfield)		
1500	Protected Rest (ex. Unit PT w/o MWDs, admin, quiet period)	Protected Rest Period (ex. Unit PT w/o MWDs, admin, neurological recovery, quiet period)	Protected Rest Period (ex. Unit PT w/o MWDs, admin, neurological recovery, quiet period)	Protected Rest Period (ex. Unit PT w/o MWDs, admin, neurological recovery, quiet period)	Protected Rest Period (ex. Unit PT w/o MWDs, admin, neurological recovery, quiet period)		
1600	Kennel Feed (Rest, vis. checks, nutritional enrichment)	Kennel Feed (Rest, visual checks, nutritional enrichment)	Kennel Feed (Rest, visual checks, nutritional enrichment)	Kennel Feed (Rest, visual checks, nutritional enrichment)	Kennel Feed (Rest, visual checks, nutritional enrichment)	Kennel Feed (Rest, visual checks, nutritional enrichment)	Kennel Feed (Rest, visual checks, nutritional enrichment)
1700	Low-Arousal (Turn on Music, Grooming, Scent Diffusor)	Low-Arousal (Turn on Music, Grooming, Scent Diffusor)	Low-Arousal (Turn on Music, Grooming, Scent Diffusor)	Low-Arousal (Turn on Music, Grooming, Scent Diffusor)	Low-Arousal (Turn on Music, Grooming, Scent Diffusor)	Low-Arousal (Turn on Music, Grooming, Scent Diffusor)	Low-Arousal (Turn on Music, Grooming, Scent Diffusor)

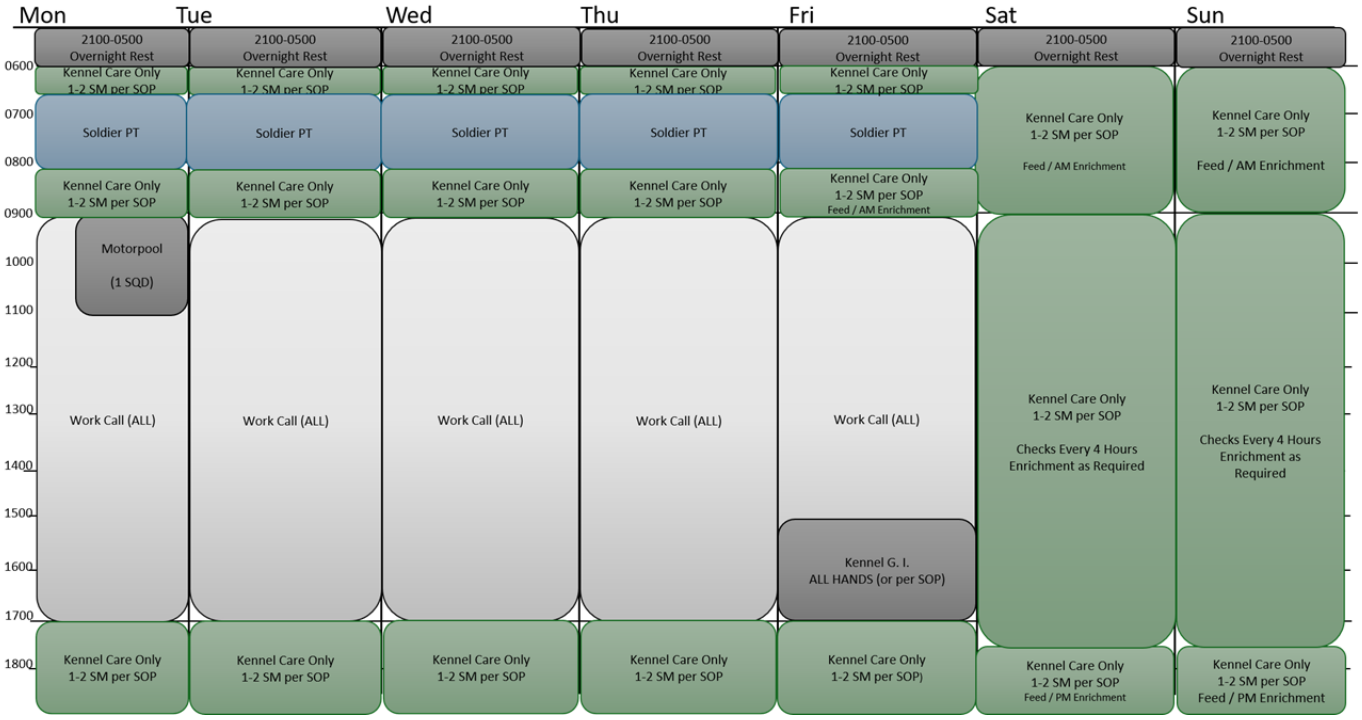
(Reverse-Cycle PT Version) Sample Weekly Enrichment Breakdown (Average MWD) Soldier Overlay



(AM PT Version) Sample Weekly Enrichment Breakdown (Average MWD) – Enrichment Overlay



(AM PT Version) Sample Weekly Enrichment Breakdown (Average MWD) – Soldier Overlay



4.0 Socialization



Figure 4-1. Two MWD teams participate in a run together.

4.1 Military Working Dog (MWD) Socialization Guidelines

This document outlines a phased approach to MWD socialization, emphasizing handler safety, risk mitigation, and continuous training, in accordance with the guidance provided.

Purpose: To provide guidance and instruction for initiating safe interactions between MWDs. Progression is based on consistent, friendly interactions between familiar MWDs with support from kennel leadership. The safety of MWDs and all personnel is the number one priority.

Table 4-1. Foundational Requirements

Aspect	Procedure
Socialization Plan	Each kennel must maintain a written socialization plan, including this document, local addendums, and a journal or chart to track MWD interactions and rapport. All activities must be approved by the Kennel Master.
Socialization Area	A large, open area not used for regular training must be designated. It must be pre-inspected for hazards, have a clear path, no civilian traffic, and designated shade/water stations.

Handler & Observer	The MWD must be handled by their assigned handler. A dedicated, non-handling Observer must be present to watch interactions, direct handlers, and physically check the fit and tightness of each MWD's muzzle.
Health & Behavior	MWDs with acute medical issues are excluded. Those with chronic issues require VCO clearance. MWDs with known behavioral issues (aggression, fear) must be pre-identified for special instruction.
Preparatory Training	These are skills or tasks that are utilized throughout the socialization process. Establishing a foundation at the very minimum allows for all steps to be completed successfully and efficiently. This includes: • Muzzle Training • Loose Leash walking • Off-Leash Recall • “Place command” • Sociability spectrum • “Focus on me” or other focus cue training Also prior to attempting any socialization steps, handlers should conduct an initial assessment based on observations of each dog-to gauge where their personalities lie on the sociability spectrum. Are they: • dog-social? • dog-selective? • dog-aggressive? Use this information as a guide to creating your socialization plan.
Equipment Needed	• Muzzles • 6-foot leash • Flat collar (NO E-collars) • High value treat/reward • Suggested: • Airhorn to break up potential dog fights • Sound device with real world sounds. This should be used before or during initial stages of MWD socialization for any MWDs that have large environmental anxiety and may need some extra desensitization • Break Stick

Table 4-2. Phase I: Acclimation and Observation

Aspect	Procedure	Goal & Rationale
Equipment	All dogs must be equipped with a properly fitted basket-style muzzle, a collar, and a six-foot leash. Choke chains may be present for emergency safety purposes only. Aggression muzzles and e-collars are prohibited.	
Activity	Group Walks: Moderately fast-paced walks with MWDs and their handlers spaced apart. Initially, spacing should prevent any physical contact. As MWDs adjust (acclimate), the distance can be gradually reduced. Observation: Let MWD observe successful and positive socialization from two other MWDs, observing MWD should not partake at this time. Proximity activities (grooming, physical conditioning, training, etc.)	Allow MWDs to become used to and desensitized to the presence of other MWDs. If your MWD cannot do these tasks without showing aggressive behaviors, you are not ready to move on
Handling	Handlers will walk with the MWD on a loose leash. No harsh verbal or physical corrections are to be given. Pay careful attention to body language. If an MWD displays aggression, the handler will immediately walk away and fall in at the back of the group.	
Safety Considerations	Group walks should start with two MWDs and can increase as able to while keeping it a positive experience. Other activities should be kept four or fewer MWDs. Ensure MWDs are a safe distance away where they cannot interact. If looking to close the distance, have MWD wear a muzzle Common safety issues to look out for are leashes getting tangled, muzzle punching if too close and stress builds, scratches, self-correction on leash if they get overzealous or overexcited and run to the end of the leash.	

Table 4-3. Phase II: Small Groups & Purposeful Interactions

Temperament Type	**Example "Purposeful Interaction"** *see "Detailed Guide to "Purposeful Interactions" for MWDs" below*	**Goal & Rationale**
All MWDs	Obedience & Cooperative Care: While near another paired MWD (at a safe distance), handlers reinforce basic obedience, practice cooperative care behaviors like grooming (brushing), or have the MWD station on a mat.	To teach the MWD to remain engaged with the handler and perform tasks calmly in the presence of another dog.
Purposeful Interactions	See "4.1.1 Detailed Guide to "Purposeful Interactions" for MWDs" below Examples: • "Look at That" game • Three second greetings • Parallel heels	To teach the MWD that the presence of another dog is a cue to focus on the handler and remain neutral
Safety Considerations	Ensure that MWDs are not within reach. As you progress you may move MWDs as close as 4ft. There should be no primary rewards present.	

Table 4-4. Phase III: Enrichment Walks

Aspect	Procedure	Goal and Rationale
Equipment	All dogs are on a six-foot leash. Handlers must have muzzles clipped to their person, ready for immediate use if needed.	
Activity	Pre-paired MWDs with a history of friendly interactions engage in a social walk. The dogs are allowed to explore and sniff the environment. The level of dog-to-dog interaction is dictated by the dogs' observed body language.	Allows MWDs that have demonstrated consistently friendly and calm behavior with each other to engage in a more natural, less structured activity. This phase serves as a crucial bridge between highly structured, on-leash drills and potential off-leash play.
Safety Considerations	Ensure you are in a safe environment with no stressful factors such as other off leash dogs, loud noises, etc. Ensure proper handling of equipment and do not let leashes get tangled. Ensure handlers are comfortable and ready to break up any MWD altercations.	

Table 4-5. Phase IV: Controlled & Modified Free Play

Phase	Equipment	Activity	Goal and Rationale
IVa: Modified Free Play	MWDs are muzzled. Recommended to start with only two dogs. Handlers have leashes clipped to their person. Have NO toys present	In a contained area not used for training, pre-paired MWDs interact with each other and their handlers. Each time a new MWD is introduced, there should only be one other MWD present. Adding a third MWD should only happen after confirming that all three MWDs can interact positively in individual pairs.	Determine MWDs readiness to move to more advanced and less structured socialization
IVb: Controlled Play	Handlers have leashes and muzzles clipped to their person.	In a controlled environment free of triggers (e.g., food, toys), handlers engage MWDs in play or conditioning. Short duration play between MWDs is allowed, but MWDs must have a clean recall to stop the session if arousal escalates. During this time you can introduce structured activities for the MWDs and handlers to create a more engaging environment. See “4.1.2 Detailed guide to Structured Activities for Multiple MWDs” below. See “4.2 MWD Socialization Safety Plan” for examples on what appropriate vs non-appropriate arousal looks like.	Serves as the final test of MWD temperament in a high arousal setting. By operating in a trigger-free environment, the focus is purely on the dogs' social interaction
Optional: Fence Play	Two secure areas that share a fully closed fence in between.	Giving no commands, encourage MWDs to interact. This can look like sniffing, running along fence, etc.	This can act as a precursor for MWDs who aren’t ready to physically interact but could still benefit from positive social play.

Safety Considerations		Ensure the muzzles are well fitted and tightened appropriately Ensure you are in a safe environment with no stressful factors such as other off leash dogs, loud noises, etc. Ensure proper handling of equipment and do not let leashes get tangled. Ensure handlers are comfortable and ready to break up any MWD altercations	

Table 4-6. Phase V. Desensitization and Advanced Techniques

Technique	Description
Sound Habituation	Play recordings of operational sounds (vehicles, radios) at a very low volume during feeding time, gradually increasing the volume over many sessions.
Object Desensitization	Introduce novel objects (e.g. umbrellas, vacuum cleaners) into the environment at a distance. Reward the MWD for calm observation, gradually decreasing the distance.
Surface and Texture Exposure	Expose the MWD to various surfaces like metal grates, tarps, or wet concrete in a controlled, positive manner.

4.1.1 Detailed Guide to "Purposeful Interactions" for MWDs

"Purposeful interactions" are not about play; they are about work. The goal is to teach the MWD that the presence of another dog is a cue to focus on the handler and remain neutral. All exercises should be conducted on-leash, and a designated, non-handling Observer should be present to monitor for safety.

Table 4-7. Examples of Purposeful Interactions by Temperament Type

Temperament Type	Example "Purposeful Interaction"	Detailed Breakdown (Setup, Execution, and Goal)
High-Drive / Overly Energetic	Parallel "Focus" Heeling	Setup: Two handler-MWD teams begin walking in the same direction, approximately 20–30 feet apart. The environment should have minimal distractions initially. Execution: Handlers maintain a brisk, consistent pace. The goal is for the MWD to heel without pulling toward the other dog. The handler should use verbal praise ("Good heel," "Yes") and occasional high value treats or reward for maintaining a loose leash and focusing forward. If the MWD fixates on the other dog, the handler should use a verbal cue ("Watch me") or make a quick turn in the opposite direction to regain focus, then praise the MWD for re-engaging. Goal: To teach the high-drive MWD to channel its energy into a task and remain under handler control, even when its instinct is to engage with the other dog. It builds impulse control and reinforces that the handler is the most important part of the environment.
Cautious / Anxious / Fearful	The "Look at That" (LAT) Game	Setup: Team 1 (with the anxious MWD) is stationary. Team 2 walks by at a significant distance—far enough that the anxious MWD notices but does not react fearfully (e.g., no lunging, barking, or stiffening). This is called the "sub-threshold" distance. Execution: The moment the anxious MWD looks at the other dog, the handler marks the behavior with a verbal "Yes!" and immediately provides a very high-value reward. The MWD will likely turn to get the reward. Repeat this every time the MWD looks at the other dog without reacting. Do not ask the MWD to sit or stay; just let them observe. Goal: To change the MWD's underlying emotional response to seeing another dog. It rewires the brain from "Oh no, another dog—I feel scared!" to "Oh, look, another dog—that means I get a reward!" It builds confidence and teaches the MWD to check in with the handler when it sees a potential trigger.
Confident / Dominant / Pushy	"Place" Command &	Setup: Two MWDs are commanded to "Place" on their respective platforms (e.g., raised cots, rubber mats)

	Boundary Games	positioned at a safe distance from each other. The platforms create clear, physical boundaries. Execution: Handlers reward their MWDs for staying on their designated "place." Initially, the handlers stay near their dogs. As the MWDs show they can remain calm, the handlers can begin to walk around, switch places, or even walk past the *other* MWD's platform (but not too close). The MWDs are rewarded for holding their position and not attempting to break command or challenge the other dog. Goal: To reinforce handler control and teach the MWD that it must remain obedient and respect boundaries, even when another dog is present. This exercise discourages resource guarding (of the handler or space) and promotes a mindset of calm compliance over assertive behavior.
Social / Easily Distracted	Controlled "Three-Second Greeting"	Setup: Two handler-MWD teams with a history of calm behavior approach each other slowly. The leashes should be loose, not tight, as leash tension can create anxiety. Execution: On the handler's cue ("Go say hi"), the dogs are allowed to approach and sniff each other for a maximum of three seconds. After three seconds, the handlers use a cheerful recall ("Fido, come!") and walk backward away from the other dog. When the MWD turns and follows their handler, they receive enthusiastic praise and a reward. Goal: To teach a polite, brief greeting protocol. It satisfies the MWD's natural desire to investigate while reinforcing that the handler dictates the beginning and, more importantly, the end of the interaction. It prevents over-arousal that can stem from prolonged, unstructured greetings and keeps the MWD's focus on the handler.

4.1.2 Detailed Guide to Structured Activities for Multiple MWDs

These Structured Activities are crucial for fostering positive and healthy interactions. It provides a structured and enjoyable environment where dogs can learn and practice essential social skills, such as reading body language, appropriate play etiquette, and bite inhibition. They create a positive association with the presence of other dogs and in turn helps build confidence in dog-to-dog interactions.

Table 4-8. Structured Activities for Multiple MWDs

Structured Activity	Detailed Breakdown (Setup, Execution, and Goal)	Safety Considerations
Paired Agility Course Work	Setup: Setup obstacles and cones for dogs to maneuver around. Execution: Have handlers moving beside 2 friendly/social dogs, while directing dogs to maneuver around obstacles, run cone drills, do low hurdles, etc. Goal: Having the dogs feel completely comfortable and secure while running, working, and maneuvering while with other handlers and their dogs.	Ensure obstacles are safe, well supported, and have more than enough room for both dogs to comfortably fit. Ensure handler stays close to ensure the dog's safety.
Controlled Fetch (Multiple Dogs, Handler Involvement	Setup: Set up a large, gated area with plenty of maneuvering room and a multitude of toys for the dogs. Execution: Have 2–3 dog friendly/social dogs in yard, and play a controlled game of fetch with them, ensuring that they still listen to commands while doing so. Goal: A controlled environment for the dogs to play and socialize with other dogs.	Ensure there are enough toys for all dogs so no fighting over toys occurs. Ensure there is at least 1 handler per dog to supervise in case a dog fight breaks out. Ensure regular checks on dogs to make sure they don't overheat
Soccer	Setup: In a large open area have 1–2 soccer balls, have at least two predetermined MWDs present. You can use balls with some texture that make it easier for the MWD's to grab while playing. Execution: The execution of the game should be managed by at least one	Ensure there is a securely fenced in area free of hazards. Ensure all balls used are dog safe material. All MWD's present must have been pre-determined pairs who

	human facilitator who can guide the play. Begin by rolling the ball to get the dogs interested, and then gently kick it for them to chase. Encourage the dogs to use their paws or noses to push the ball back, creating an interactive and engaging activity. You can also incorporate basic obedience commands like "stay," "come," or "leave it" to reinforce their training in a fun context. Constant supervision is crucial to ensure the play remains safe and to intervene if any interactions become too rough. This can be done with or without muzzles. Goal: This structured activity serves as excellent physical and mental exercise, improving cardiovascular health and providing necessary stimulation. It offers a valuable opportunity for dogs to practice reading social cues and engaging in polite play, which strengthens their socialization skills. Furthermore, the game helps develop better motor skills and coordination while reinforcing the bond between the dogs and their owners, fostering trust and communication in a positive environment.	have shown safe interactions thus far.

Socialization is not for every MWD. The goal for MWD-to-MWD socialization is to provide a positive enrichment experience, if it is not positive it is not meeting the goal. Some MWDs will only be able to make it part of the way and some may not be able to at all. This is okay and the enrichment plan should include other activities

4.2 MWD Socialization Safety Plan

4.2.1 Safety Considerations

This document outlines the essential safety considerations, mitigation strategies, and handler responsibilities to ensure safe and productive socialization sessions.

Table 4-9. Safety Considerations and Mitigations

Safety Consideration	Mitigation Strategy
Handler Experience	Handlers must first be trained on the appropriate socialization steps, canine body language and communication principles, and emergency procedures.
Communication Via Handlers	Handlers must remain situationally aware and communicate what they observe in MWDs interactions to the participating handler.
Dog's History and Temperament	A thorough review of each MWD's behavioral history, highlighting indications of fearful, anxious, and/or aggressive tendencies. Socialization should be tailored to individual MWD comfort level and temperament. Socialization should be tailored to the individual dog's temperament.
Neutral Territory	Initial introductions should always take place in a neutral and secure area, if possible- unfamiliar to both dogs, to reduce territorial instincts.
Proper Equipment	Both dogs should be on leash during initial socialization; however, as the MWD becomes more comfortable, leashes may no longer be required. Handlers must still keep leashes readily accessible at all times. Both dogs should wear a collar or harness. A collar provides greater control, while a harness provides stable contact points to grab MWD if MWDs need to be separated. Handlers should have intervention tool of choice ready, i.e., breaker bar/bite release stick/airhorn. MWDs need flat collar with choke chain. NO pinch collars due to injuries if MWDs need to be pulled apart.
Distraction tools	A loud noise, a blast of water from a hose, or a citronella spray can startle the dogs enough to disengage. These are used to interrupt escalating behaviors *before* it turns into a fight.

4.2.2 Recognizing Signs of Stress

Handlers must be vigilant for subtle and overt signs of aggression, which can include:

- Stiff, rigid body posture
- Direct, unwavering eye contact
- Growling, snarling, or baring teeth
- Raised hackles (piloerection)
- Tail held high and stiff, possibly with a rapid, tense wag
- Ears pinned back or pointed forward intently
- Lip licking or yawning out of context (stress signals)

See “4.5 VTF Patient Stress Scale” for additional information on recognizing signs of stress.

4.2.3 Appropriate Arousal vs. Signs Requiring Redirection

It is crucial to differentiate between healthy play and arousal that is escalating toward aggression.

Table 4-10. Examples of Appropriate Arousal and Signs Requiring Redirection

Appropriate Arousal (Play)	Signs Requiring Redirection
Play Bows: The dog lowers its front end while keeping its rear up.	Fixation: The dog is intensely focused on the other dog, unable to disengage.
Reciprocity: Dogs take turns chasing and being chased.	Stiffening: The dog's body becomes tense and rigid during play. Miscommunication: one MWD shows signs of being stressed but the other MWD continues to play being rough and overbearing.
"Softer" Body Language: Loose, wiggly bodies and relaxed, open mouths.	Bullying: One dog persistently pins, nips, or barks at the other, who is trying to disengage.
Voluntary Breaks: The dogs pause the play on their own.	Over-aroused Barking: High-pitched, frantic barking.

4.2.4 What is Redirection and How to Apply It

Redirection is the act of shifting a dog's focus from an undesirable or inappropriate behavior or stimulus to a more appropriate one. It is a proactive technique to prevent escalation.

Application of Redirection

1. Verbal Cue: Use a sharp, positive interrupter sound or a trained cue like "Touch" or "Look at me."
2. Engage with a Toy: If a dog starts to fixate, the handler can present a high-value toy to redirect its attention to a game of fetch or tug.
3. Leash Guidance: Use the leash to gently guide the dog away from the other dog and create space.
4. Practice a Trained Behavior: Ask the dog to perform a known obedience cue, such as "Sit" or "Down," to get its mind off the other dog and back on the handler.

By understanding and implementing these safety protocols, handlers can provide MWDs with the benefits of socialization while minimizing the risk of injury to both the dogs and personnel.

4.2.5 Intervening in a Dog Fight

Should a fight happen, handlers must act immediately. The primary goal is to separate the dogs without getting bitten.

Immediate Actions

1. Stay Calm: Panic can escalate the situation.
2. The Wheelbarrow Method: Each handler should grab their dog’s hind legs and lift them off the ground, like a wheelbarrow. This reduces the dog's leverage and ability to fight. Handlers should then move backward, pulling the dogs apart.
3. Airhorn: Sound the airhorn in an attempt to startle the MWDs enough that they break apart or pause. This will give you the opportunity to grab them safely.
4. Pull MWDs apart: Grab any stable part of the body or collar, pull the MWDs apart, and move to a safe distance
5. Use a Break Stick: If a dog has a firm grip or is latch onto another MWD, a break stick can be inserted behind the molars and twisted to coax the jaws open.

NOTE: If MWD is latched onto another MWD, avoid forcefully pulling the dog off, as it may cause further injury. Instead, attempt to break the bite using approved methods such as tactical outing with the flat collar or a choke chain.

Post-Fight Protocol

1. Separate and Secure: Immediately place MWDs in separate, secure locations.
2. Thorough Medical Exam: Perform a full-body check for puncture wounds and lacerations, which can be hidden by fur so use bear claw method
3. Veterinary Care: Any puncture wound requires mandatory veterinary attention.
4. Notify/Document: Notify chain of command then document the incident on an MWD Socialization Incident Report

4.3 MWD Socialization Incident Report

1. Basic Information

Date of Report:

Date of Incident:

Time of Incident:

Location of Incident:

2. MWD & Handler Information

MWD 1 Name/Tattoo:

MWD 2 Name/Tattoo:

Handler Involved Name/Rank/Unit:

Handler Involved Name/Rank/Unit:

3. Incident Summary (Provide a brief, objective summary of the event.)

4. Detailed Narrative

(Describe the events leading up to, during, and after the incident in chronological order. Include the socialization phase being conducted, distances between MWDs, observed body language, and any potential triggers.)

5. Actions Taken During Incident
(Check all that apply and describe.)

☐Verbal Redirection
☐Loud Noise, Specify:
☐Physical Barrier, Specify:
☐Water
☐Wheelbarrow Method
☐Pulled Apart
☐Airhorn
☐Break stick
☐Other, Specify:

6. Injuries Sustained

MWD 1 Injuries:

Photos taken? ☐Yes ☐No

MWD 2 Injuries:

Photos taken? ☐Yes ☐No

Handler(s):

Photos taken? ☐Yes ☐No

7. Veterinary Assessment & Care Provided

(Summary of on-site first aid and/or veterinary evaluation.)

8. Contributing Factors & Recommendations

(Identify potential causes and suggest preventative measures.)

9. Reporting Personnel

Name/Rank:

Signature:

Date:

4.4 MWD Enrichment Activity Overview: Dog-to- Dog Socialization

4.4.1 Basic Description of the Activity

This guide provides a structured, phased approach to facilitating safe and positive social interactions between MWDs. Based on prior experiences, MWDs may have highly variable experiences with other dogs, and their behavioral responses cannot be assumed to be friendly. This guide outlines a progressive plan to acclimate MWDs to each other's presence, moving from structured group walks to controlled off-leash play for suitable candidates. The safety of the MWDs and all personnel is always the number one priority, and the end state of socialization will be different for every dog.

4.4.2 Enrichment Categories Covered

- **Social:** The primary focus, providing direct physical and visual access to canine companions in a controlled manner.
- **Physical:** The group walks and play sessions provide low-to-high intensity physical movement.
- **Cognitive:** MWDs are constantly processing the complex body language of other dogs, making decisions, and learning social rules.
- **Sensory:** Provides a rich influx of social smells, sights, and sounds that are highly stimulating for asocial species.

4.4.3 Logistics Required

Personnel

- **Handler:** The MWD's assigned handler. They are responsible for managing their own dog on a loose leash and avoiding harsh corrections.
- **Observer:** A designated individual who is not handling a dog. Their sole focus is to watch interactions, help direct handlers, and physically check that all muzzles are fitted correctly before the session begins.

Equipment

- Six-foot leash and a standard collar.
- A choke chain for emergency safety purposes only. It is not to be used for corrections.
- An appropriately fitted basket-style muzzle that allows the MWD to pant, drink, and take food rewards. Aggression muzzles, open-face, or restrictive nylon muzzles are not suitable.
- E-collars should not be worn, as they will not be used and can be detrimental to the interaction.

Space & Building

- A large, open area that is not used for operational training.
- The area must be pre-inspected for hazards and have no civilian traffic.
- Designated shade areas and water stations must be available.

4.4.4 Getting Started: Prerequisites

For the Human (Handler & Kennel Leadership)

- A written socialization plan, including a chart of MWD pairings and interactions, should be approved by the Kennel Master and kept on file.
- Handlers must be calm and proficient in reading MWD body language.

For the Dog

- Must be cleared by the local VCO/VMO. MWDs with active medical issues are excluded. MWDs with stable chronic conditions (e.g., allergies) need specific clearance.
- MWDs with known behavioral issues (aggression, fear) must be pre-identified. Their interaction plan will be determined by kennel leadership, and they should be positioned at the front or back of the group to allow for more space and processing time.

4.4.5 Step-by-Step Procedure: The Phased Progression Reading the Interaction: Managing Aggressive Behavior

This rule applies to ALL phases. If an MWD displays aggressive behavior (growling, lunging, hard staring), the handler will immediately and calmly walk away with their dog, verbally redirecting them to de-escalate the situation. The team can then fall in at the back of the group and gradually rejoin from a distance over the next 2–5 minutes once the MWD is calm.

Phase I: Acclimation and Observation (Group Walks)

- **Equipment:** All MWDs are muzzled and on a six-foot leash. An Observer is present.
- **Activity:** Conduct a moderately fast-paced group walk. Initially, handlers should maintain enough space to prevent any physical contact. As the dogs acclimate to the presence of others and display calm behavior, the distance can be gradually reduced to allow for brief, passing interactions.

Phase II: Small Groups (Purposeful Interaction)

- **Equipment:** All MWDs are muzzled and on a six-foot leash. An Observer is present.
- **Activity:** Pair MWDs with known friendly behavior toward each other. The main goal is for the MWDs to engage in "purposeful interactions" with their handler while near another dog. These are familiar, no-consequence activities like practicing basic obedience (with positive reinforcement only), cooperative care positions ("paws up," "chin rest"), or light grooming. This gives a potentially nervous dog a predictable task to focus on, helping them relax near others.

Phase III: Enrichment Walks

- **Equipment:** All MWDs are on a six-foot leash. Handlers must have their dog's muzzle clipped to their person and ready for immediate use.

- **Activity:** Pre-paired, friendly MWDs go on a social/enrichment walk together. Unlike a structured walk, the dogs are allowed more freedom to explore and sniff the environment, and the pace can vary. The level of dog-to-dog interaction is dictated by the dogs' own body language.

4.4.6 Advanced Scenarios: The Path to Play

Phase IVa: Modified Free Play

- **Equipment:** All MWDs are muzzled and off-leash. Handlers must have leashes clipped to their person for quick control.
- **Activity:** In a secure, contained area, pre-paired MWDs with a consistent history of non-aggressive interactions are allowed to interact off-leash. This allows for more natural social behavior while the muzzles prevent any biting injuries.

Phase IVb: Controlled Play

- **Equipment:** Handlers must have both leashes and muzzles clipped to their person.
- **Activity:** This is the ultimate goal for highly social MWDs. In a controlled environment free of triggers (like toys or single food bowls), trusted pairs or groups are allowed to play off-leash and unmuzzled for short durations.
- **CRITICAL:** MWDs in this phase must have a reliable recall to stop play if it becomes overstimulating.
- Water should be available in multiple bowls (more bowls than dogs). Any food rewards should be delivered by hand directly from the MWD's own handler.

4.4.7 A Note on Difficult MWDs

Not all dogs will be social. If an MWD remains intolerant of other dogs even after careful attempts, do not force it. Instead, focus on counter-conditioning by having calm, non-aggressive dogs at a safe distance during relaxed daily tasks like grooming or breaks. The goal is to help the intolerant dog become more tolerant of simply being near other dogs without direct interaction.

4.4.8 References

Information Paper, Military Working Dog (MWD) Socialization Activities, 6 September 2022.

“MWD Enrichment Activity Overview: Dog-to- Dog Socialization” was developed for and intended for use in the VRA, FB MWD Enrichment Workshop, Revised 20260129

4.5 VTF Patient Stress Scale

VTF Patient Stress Scale

0- **Extremely friendly**, outgoing, solicitous of interaction, no stress signals

1- **Relaxed** (may show 1-2 mild stress signals, less than 4 times in 1 minute), interactive, readily accepts treats

2- **Alert**, cooperative, moderate stress signals (1-2 signals), may accept treats intermittently or stop with handling

3- **Tense**, cooperative but needs encouragement, moderate stress signals (more than 2 signals, more than 4 times in 1 minute), does not accept treats readily or takes them roughly

4- **Very tense**, anxious, severe stress signals, difficult to maneuver, does not typically accept treats; not typically aggressive

5- **Extremely stressed**, unmanageable, unable to return to baseline, defensive aggression behavior

Legend: Examples of Stress Signals (not all inclusive)

Stress Signals	Dog	Cat
Mild	ears slightly back or to the side, brow furrowed, slow movements, lip licking, blinking, yawning, pawing, averted gaze, lowered tail	ears slightly to the side, brow furrowed, turning head away, tail closer to body than typical, tongue flick/swallow, excessive grooming or scratching
Moderate (mild signs +)	ears back, pupils dilated, tight lip commissures, lowered or crouched/tense body, rounded back, tail tucked or wagging with tension, hiding, sweaty paw prints, moving away from veterinary personnel	ears to the side, pupils dilated, increased respiratory rate, tail tight to body (+/- tip moving), whiskers back, crouched/tense body, hiding, leaning/moving away from veterinary personnel
Severe (mild and moderate signs +)	fight/flight/freeze/fidget postures, ears flattened, tail tucked tightly or stiff high wag, panting, growling, urination/defecation, avoidance of veterinary personnel	fight/flight/fidget/freeze postures, panting, excessive vocalization, ears pinned, tail pinned or thrashing, hair loss, urination/defecation, avoidance of veterinary personnel

5.0 Physical Conditioning



Figure 5-1. Two MWDs engage in physical conditioning on treadmills.

5.1 Military Working Dog (MWD) Physical Fitness Program

5.1.1 Commander's Intent and Purpose (The "Why")

5.1.1.1 Purpose of the MWD Physical Fitness Program

This guideline establishes the official framework for implementing a comprehensive and structured physical fitness program as a mandatory component of Military Working Dog (MWD) handling and care. It provides a standardized, evidence-based, and data-driven approach to physical conditioning that prioritizes the health, welfare, and sustained operational readiness of the MWD. The objective is to produce and maintain a canine athlete that is physically and mentally prepared for the rigors of training, deployment, and mission execution.

5.1.1.2 Commander's Intent

The primary objective of this program is to enhance MWD physical fitness to improve mission readiness, build resilience against injury, strengthen handler-MWD cohesion, and prolong the service life of our K9 partners. This program is not an ancillary task; it is an integral part of the MWD's daily and weekly routine, essential for maintaining these critical assets at peak performance. Leadership at all levels is responsible for providing the time, resources, and oversight necessary to ensure these practices are consistently and safely applied across the unit.

5.1.1.3 Terminology: Fitness vs. Conditioning

Throughout this document, it is important to understand the distinction between two key terms:

- **Physical Fitness:** This refers to a set of measurable attributes that an MWD possesses. It is the dog's inherent or developed capacity to perform physical work. These attributes, as detailed in this guideline, include strength, power, endurance, balance, and stability. Fitness is the *state* of being physically capable.
- **Physical Conditioning:** This is the *process* of planned, systematic physical training used to develop and improve the attributes of physical fitness. Conditioning is the structured application of exercise to achieve a desired level of fitness.

In short, conditioning is the tool we use to build and maintain fitness. This program is a formalized conditioning protocol designed to enhance the physical fitness of every MWD.

5.1.1.4. The Purpose and Benefits of Physical Fitness

A dedicated fitness program extends far beyond simple exercise. It is a multi-faceted approach designed to ensure our MWDs are not just mission-capable, but mission-dominant throughout their careers.

- **Enhance Operational Performance and Sustainment:** A formalized fitness program builds a set of physical attributes—endurance, muscular fitness, and neuromuscular fitness—that are the foundation of all athletic tasks. The program is designed to improve an MWD's physical capabilities beyond the minimum operational requirement and, critically, to sustain those abilities for as long as possible. A fit dog is a more effective dog, capable of working longer with greater focus, and with less risk of performance failure due to physical exhaustion. In a tactical environment, a dog's physical failure, such as being too fatigued to detect an explosive device or apprehend a suspect, can have catastrophic consequences. Fitness ensures the dog remains above the "operational requirement" line when it matters most, reducing the risk of mission failure and harm to personnel.
- **Improve Injury Resilience and Mitigation:** A stronger, more stable dog is a more resilient dog. Many working dog injuries are not from single traumatic events but from repetitive stress on underdeveloped muscle groups, particularly in the core and hindlimbs. This program specifically targets these areas to build a robust musculoskeletal "chassis" that can better withstand the dynamic forces of operational work. This makes the MWD better able to avoid injuries during demanding tasks like obstacle navigation or apprehension. Should an injury occur, a well-conditioned body has stronger tissues, which can lead to reduced injury severity and a significantly more rapid recovery and return to duty.
- **Support Career Longevity and Animal Welfare:** Fitness assessments can help identify a decline in physical capability, allowing for mission adaptation or timely and humane retirement before catastrophic injury or degenerative disease occurs. This proactive approach ensures the long-term well-being of the MWD, maximizes their effective service life, and prevents working them beyond their physical capacity.

- **Upholding the "Social License to Operate":** By investing in a structured, scientific, and humane fitness program, we demonstrate a clear commitment to the welfare of these critical assets. This upholds our responsibility and reinforces the public and professional trust placed in the MWD program, showing that we are dedicated to preparing these dogs for the tasks we ask them to perform.

5.1.2 Roles and Responsibilities (The "Who")

The successful implementation of the MWD Physical Fitness Program requires a collaborative effort from all personnel involved in the MWD's care and employment. Each role is distinct but interconnected.

- **MWD Handler:** The handler is the primary executor and the cornerstone of this program. They are responsible for the daily implementation of conditioning sessions, including warm-ups, workouts, and cool-downs. The handler must become an expert in their MWD's body language and response to exercise, accurately assessing exertion levels using the tools provided, such as the Canine Record of Perceived Exertion (K9-RPE). They are responsible for patiently applying training protocols, meticulously maintaining training logs, and identifying and reporting any issues or abnormalities to leadership and veterinary staff.
- **Unit Leadership (Kennel Master/Trainer):** Leadership is the program's enabler. Kennel Masters are responsible for procuring and maintaining the necessary equipment, protecting dedicated training time from other duties, and providing ongoing coaching and mentorship to handlers. They lead by example, ensure overall compliance with this guideline, and serve as the approval authority for MWD progression within the program's phases. They are the first-line supervisors for troubleshooting non-medical performance issues.
- **Commander:** The Commander is the program's champion. They are ultimately responsible for fostering a command climate where MWD welfare and physical readiness are considered paramount to mission success. The Commander ensures the program is properly resourced and that leadership is held accountable for its implementation.
- **Veterinary Staff (VCO/VMO):** Veterinary staff are the program's medical backbone and subject matter experts. They are responsible for providing initial medical clearance for all MWDs to participate in the program. They serve as consultants for handlers and leadership when an MWD faces challenges, and they provide the definitive medical work-up when an injury or illness is suspected. They advise on program modifications for individual MWDs recovering from injury and ensure the program's overall safety and medical soundness.
- **Program Working Group:** A dedicated working group, composed of veterinary sports medicine specialists, experienced MWD trainers, and other subject matter experts, is responsible for the ongoing development, refinement, and assessment of this fitness program. They develop the educational materials, analyze data to update protocols, and serve as the top-level technical advisors for the entire MWD enterprise.

5.1.3 Foundational Principles of Physical Conditioning (The "How")

5.1.3.1. Veterinary Clearance and Medical Status

All MWDs must receive medical clearance from the responsible veterinarian before beginning or progressing in any conditioning program. Any lameness or signs of illness must be reported immediately, and the MWD removed from the program until cleared by veterinary staff.

5.1.3.2. Safety First Protocol

The handler's primary responsibility is the safety of the MWD. This includes using proper equipment, monitoring for signs of stress, fatigue, or heat injury, and controlling the environment. No conditioning exercise should occur within 1 hour before or after feeding, or 2 hours before or 1 hour after strenuous operational training.

5.1.3.3. The "Train Once, Use Forever" Approach: Foundational Training Techniques

A key principle of this program is its efficiency. Each foundational exercise requires an initial learning phase where the dog is taught the proper movement and posture. Once the MWD understands the exercise, progression is achieved by simply increasing resistance, duration, or instability.

- **Positive Reinforcement:** All conditioning activities will be a positive and rewarding experience. Use high-value rewards (e.g., food, praise) to build a strong, positive association with physical exercise. Compulsion, manipulating or forcing a dog into position, or harsh handling is strictly prohibited.
- **Luring and Shaping:** Handlers will use luring (guiding the dog with a reward) and shaping (rewarding successive approximations of the final behavior) to teach the exercises. This focused, interactive process is fundamental to both effective learning and handler-MWD team building, directly contributing to the MWD's cognitive and social enrichment.

5.1.3.4. Principle of Gradual and Data-Driven Progression

The conditioning program is built on a phased, progressive approach. The MWD's individual progress, physical and behavioral well-being, and objective response to exercise always dictate the training timeline. Never rush the process. Progression is based on defined criteria, not arbitrary timelines.

5.1.3.5. Meeting MWD Enrichment Requirements

This fitness program directly supports and helps fulfill enrichment requirements by integrating various forms of enrichment simultaneously:

- **Cognitive Engagement:** The initial learning phase for each new exercise challenges the MWD mentally, forcing them to problem-solve and learn new motor patterns. This active thinking is a powerful form of cognitive enrichment.
- **Social Interaction:** The hands-on, positive-reinforcement-based training process inherently strengthens the handler-MWD bond, trust, and communication.
- **Sensory Stimulation:** The program introduces the MWD to new surfaces (balance beams), equipment (treadmills, sleds), and physical sensations

(resistance bands), enriching their sensory experience and building environmental confidence.

5.1.4 Program Overview & Structure (The "What")

5.1.4.1: MWD Task, Motion, and Fitness Analysis

To build an effective fitness program, we must first understand the demands placed on the MWD's body. The process begins with a "needs analysis," where we break down operational duties into specific physical tasks, analyze the body motions required for those tasks, and identify the underlying fitness modalities that power those motions. This ensures that every exercise has a purpose and directly translates to improved on-the-job performance.

- **Step 1: Identifying Physical Tasks**
  MWD operational duties can be deconstructed into a hierarchy of core physical tasks. While the frequency varies, these tasks form the basis of their physical workload.
  - High Priority/High Frequency:
    - Transversing the Environment: Simply moving from point A to point B with a handler, often over long distances and varied terrain. This is the most fundamental task.
    - 2D/3D Detection Search: The physical act of searching. This involves not only horizontal movement (2D) but also vertical movement (3D), such as jumping onto objects, placing paws up on vehicles, or contorting the body to get the nose into a specific location.
  - Moderate Priority / Moderate Frequency:
    - Low-Level Obstacle Navigation: Maneuvering around, over, or under common obstacles encountered during a search or patrol, such as furniture, debris, or low barriers.
    - Apprehension (Biting & Fighting): The physical engagement with a suspect. This involves a complex combination of biting, pulling, twisting, and resisting force.
  - Lower Priority / Low Frequency:
    - Pursuit Sprinting: An all-out sprint to chase a suspect.
    - High-Obstacle Navigation (Pursuit): Scaling obstacles like fences or walls while in pursuit.
- **Step 2: Analyzing Body Motion Archetypes**
  Just as human bodies move in predictable patterns like squatting, hinging, and pressing, canine bodies also utilize core "movement archetypes." These are multi-joint movements that form the building blocks of the physical tasks identified above.
  - Gait: The primary form of movement, including the walk, trot, and gallop/sprint.
  - Multi-Joint Hind Limb Extension: The powerful straightening of the hip, stifle (knee), and tarsus (ankle) joints. This is the dog's engine for generating forward and upward power, essential for sprinting and jumping.

- Multi-Joint Forelimb Extension: The straightening of the shoulder, elbow, and carpus (wrist) joints, used for landing from jumps and changing directions.
- Spinal & Limb Stability (Anti-Motion): This is arguably the most critical and often overlooked aspect. Stability is the ability of the muscles to *resist* unwanted movement.
  - Anti-Flexion/Extension: Preventing the spine, hips, or shoulders from collapsing under load. For example, when a dog lands from a jump, the forelimb muscles work to prevent the body from collapsing forward (anti-flexion). During a bite, the core muscles work to prevent the spine from being forced into hyperextension (anti-extension).
  - Anti-Rotation/Lateral Bending: Resisting twisting or side-bending forces. This is crucial for maintaining balance during sharp turns and for stabilizing the body during an apprehension when a suspect is pulling or twisting.

- **Step 3: Linking Tasks and Motions to Fitness Modalities**
  Once we know the tasks and the motions, we can identify the specific types of fitness (the "fitness modalities") that need to be trained.
  - Muscular Fitness:
    - Strength: The ability to exert maximal force. This is especially important in apprehension, where the dog must oppose the force of a resisting suspect.
    - Power: The ability to exert force *quickly*. This is the explosive element needed for jumping onto a high surface or bursting into a sprint.
    - Muscular Endurance: The ability to exert a sub-maximal force repeatedly over time. This is critical for sustained searching, where a dog might perform hundreds of "hup" motions, or for a long apprehension engagement.
  - Neuromuscular Fitness: This is the connection between the brain and the muscles.
    - Proprioception, Coordination, Balance, & Agility: Proprioception is the body's awareness of its position in space. Coordination is the ability to sequence multiple movements together. Balance allows a dog to keep its center of gravity inside its base of support and not fall over. An agile dog can rapidly and accurately perform movements like changing direction after landing from a jump. Together, these allow a dog to navigate a cluttered room, walk across an unstable surface, or land from a jump without looking at its feet. This is trained "muscle memory."
  - Endurance (Cardiovascular):
    - Low-Intensity, Long-Duration: The aerobic fitness needed to sustain long patrols or extended detection searches without excessive fatigue.
    - High-Intensity, Short-Duration: The anaerobic fitness required for an all-out sprint or a violent, explosive struggle during an apprehension.

- Work Capacity: The ability to perform, recover, and perform again. This is the fitness to handle multiple deployments in a single duty day.

5.1.4.2. The Three Pillars of MWD Fitness

1. Endurance Conditioning: Building the cardiovascular "engine" for sustained effort.
2. Foundational Strength & Stability Conditioning: Strengthening the core and limbs to generate power and resist injury.
3. Neuromuscular Fitness: Improving the brain-body connection for enhanced balance, coordination, and body awareness.

5.1.4.3. Required and Recommended Equipment

- **Tier 1 (Core):** Canine Treadmill, Non-Restrictive Harness, Cinder Blocks, Balance Beam, Inflatable Discs or Pads.
- **Tier 2 (Handling):** Stopwatch, Cones, High-Value Food Rewards & Toys, Collar, Leash, Muzzle.
- **Tier 3 (Advanced):** Weighted Vest (for strength only), Sled and low-pulling harness.

5.1.5 Warm-Up and Cool-Down Procedures

A structured warm-up and cool-down are mandatory components of every conditioning session.

5.1.5.1 Mandatory Warm-Up Protocol (4–5 Minutes)

The warm-up prepares the MWD's body for exercise by increasing body temperature and blood flow, increasing tissue elasticity and reducing injury risk.

- **Part 1: Cardiovascular Warm-Up (1–2 minutes):** A brisk walk or light trot to gently elevate heart rate.
- **Part 2: Dynamic Stretches (2–3 minutes):** Active, controlled movements through a full range of motion.
  - Play Bow ("Downward Dog" hamstring stretch): 5 repetitions of 3-second holds.
  - Paws Up (hip flexor stretch): 5 repetitions of 3-second full stretches.
  - Figure 8 ("Windmill" spinal stretch): 3 complete repetitions at a brisk pace in each direction.

5.1.5.2. Mandatory Cool-Down Protocol (3–5 Minutes)

The cool-down allows systems to return to a resting state, helps clear metabolic byproducts, and provides a crucial opportunity to assess for injury.

- **Part 1: Active Cool-Down (3–5 minutes):** Walk at a comfortable pace while observing gait for any abnormalities.
- **Part 2: Static Stretches (1–2 minutes):** Perform static holds to gently lengthen warm tissues.
  - Play Bow: One continuous 15–30 second hold.

- Paws Up: One continuous 15–30 second full stretch.
- Figure 8: 3 complete repetitions at a slow or deliberate pace.

- **Part 3: Post-Activity Injury Check:** A thorough examination of paws, pads, and nails for injury.

5.1.6 Endurance Conditioning Program

Endurance is the MWD's ability to sustain physical activity and resist fatigue. It is the engine that powers long detection searches, extended patrols, and the capacity to recover between bursts of intense action. This program develops endurance through a primary, highly controlled modality and is supplemented with more variable field-based work.

5.1.6.1. Primary Modality: MWD Treadmill Exercise

The powered land treadmill is the single most effective and controlled tool for developing and assessing an MWD's cardiovascular and muscular endurance. It allows for precise control over speed, incline, and duration, enabling data-driven conditioning. The program involves acclimation followed by three conditioning levels (0%, 5%, 10% incline) guided by initial assessments and the K9-RPE scale. The specifics of treadmill operation, acclimation, and phased conditioning are contained in the "MWD Treadmill-Based Endurance Fitness Program," contained in section 5.7

- **Preparation and Safety:**
  Safety is the paramount concern during all treadmill operations. The following protocols are mandatory:
  - The MWD must be given a break to urinate and defecate before any session.
  - A non-restrictive, Y-front harness (e.g., Blue 9 Balance Harness) attached to the treadmill frame via two adjustable couplers is mandatory. Never use only a collar and leash. This setup prevents the dog from falling off and allows for natural movement without restricting the shoulders.
  - The handler must remain attentive and within arm's reach of the emergency stop mechanism at all times. Distractions like phone use are strictly prohibited.
  - The treadmill should be oriented to minimize distractions and to allow the handler to stand at the front, maintaining the dog's focus.
- **Phase I: Walking Acclimation:**
  The first step is to ensure the MWD is comfortable and confident on the treadmill. This is not about fitness; it is about building a positive association.
  - Goal: The MWD willingly walks on the treadmill for 5 continuous minutes at a moderate pace (2.0–2.5 mph) on a 0% incline, showing no signs of anxiety and maintaining a low exertion level (K9-RPE of 1–3).
  - Process: This phase uses high-value food rewards and positive reinforcement. The MWD is first rewarded for simply standing on the non-moving treadmill. The belt is then started at the lowest speed, with the handler providing a high rate of reinforcement for forward movement. Speed

is gradually increased as the dog becomes comfortable. Most MWDs can achieve this goal within two sessions.

- **Phase II: Trotting Acclimation:**
  Once the dog is comfortable walking, it is introduced to the trot. The trot is the required gait for all conditioning and assessment phases, as it is a biomechanically efficient and symmetrical gait. Pacing (where the legs on the same side move together) is an inefficient and undesirable gait.
  - Goal: The MWD can trot comfortably (not pace) for 5 continuous minutes at a moderate speed (4.0–6.0 mph) on a 0% incline, with a K9-RPE of 1–3.
  - Process: Starting from a walking warm-up, the speed is gradually increased into the trotting range. If the dog begins to pace, the handler can manipulate the speed or offer a reward to the side to gently unbalance the dog, encouraging a switch to a trot. This phase is typically achieved within one session after walking acclimation is complete.
- **Endurance Assessment & Conditioning Levels:**
  The core of the treadmill program consists of three progressive levels, each involving a higher incline to increase intensity. Each level begins with an Endurance Assessment to determine the MWD's current fitness and establish a starting point for the corresponding Conditioning Program. During all assessments, the session is stopped at the first sign of a Level 4 K9-RPE or after 30 minutes, whichever comes first. This is a critical safety measure to prevent overexertion.
  - Level 1: Basic Conditioning (0% Incline): The goal is to build the MWD's endurance to trot for 30 continuous minutes at a 0% incline while maintaining a K9-RPE of 1–3.
  - Level 2: Intermediate Conditioning (5% Incline): Once an MWD masters Level 1, they are assessed at a 5% incline. The goal is to achieve a 30-minute trot at a 5% incline with a K9-RPE of 1–3.
  - Level 3: Advanced Conditioning (10% Incline): Once an MWD masters Level 2, they are assessed at a 10% incline. The final goal is to achieve a 30-minute trot at a 10% incline with a K9-RPE of 1–3.

The detailed 24-week progression chart for each conditioning level, along with specific protocols for missed sessions, is located in the supplemental treadmill program appendices (section 5.7). This highly structured, data-driven approach ensures that every MWD is challenged appropriately and progresses safely.

5.1.6.2. Supplemental Modalities: Field-Based Conditioning

While the treadmill provides a controlled environment for building a pure endurance base, field-based conditioning is essential for translating that fitness to the operational environment. Field work introduces the MWD to varied terrain, accustoms them to working with tactical gear, and builds mission-specific strength and stamina.

- **On-Leash Walking and Trotting (Unweighted):**
  The primary benefit of this activity is the critical conditioning of the paw pads, bones, ligaments, and tendons of the feet. There is no substitute for "miles on the feet" to build resilience against paw injuries. This simple, low-impact activity is

essential for preparing the MWD for varied operational terrains encountered in the field.

- **"Rucking" or Conditioning with a Weighted Vest:**
  - Guidance: Directly weighting an MWD during endurance runs (rucking) is prohibited. Unlike bipedal humans whose spine is compressed by a ruck, a quadruped's spine is pushed into hyperextension by a weighted vest, especially during trotting or running. This places undue stress on the spinal extensors and intervertebral discs, increasing the risk of injury.
  - Approved Use: Weighted vests are approved only for advanced, controlled strength exercises (e.g., Weighted Squats, detailed in Section 7.0) after a dog has developed significant foundational core strength, and for slow, short-duration acclimation to wearing tactical gear.
- **High-Intensity Sprints (Retrieves):**
  - Rationale & Safety: Retrievals are excellent for developing high-intensity, short-duration anaerobic endurance and explosive power. However, safety is paramount. Standard "centerline drills" with randomly bouncing objects (KONG) carry a high risk of injury from awkward landings or sudden stops and should be avoided. Refer to the “safer retrieve” guidance in section 5.2.4, “Physical Activity and Enrichment Guidelines,” for details on how to correctly and safely perform retrieves.
  - Protocol: For conditioning, retrievals must be performed in a strict work-to-rest format (e.g., one 50m sprint, followed by a 60-second static rest) to prevent cumulative fatigue.
- **Sled Dragging:**
  - Rationale: The sled drag is the most versatile and recommended field-based tool for developing multiple fitness modalities. It allows for simple, safe, and progressive overload to target endurance, muscular endurance, or strength in a controlled fashion. It also provides excellent conditioning for the MWD's paw pads and nails due to sustained traction.
  - Equipment: A specific low-pulling harness (e.g., Non-stop Dogwear Nansen Stick Harness) is required to ensure force is distributed correctly, a flexible tether of at least 1 meter, and a light sled.
  - Execution and Safety: Handlers must use food reinforcement to maintain a controlled pace. Do not use a thrown toy, which encourages sprinting and creates a significant tripping hazard. The exercise must be performed at a controlled trot, not a sprint. Use a smooth, flat surface (grass or dirt is preferred). Conduct the exercise in large circles or with wide turnarounds to avoid sharp turns under load.
  - Acclimation and Progression: First, acclimate the dog to the harness, then to dragging the empty sled. Once acclimated, perform an assessment by gradually adding light weight until the dog’s position moves from being slightly in front of the handler (Position 'A') to directly beside the handler (Position 'B'). Lagging behind (Position 'C') indicates the weight is too heavy or the dog is fatigued. The weight that induces Position 'B' is the starting point for conditioning. A sample training protocol is 5 sets of 60-second drags at a steady trot, followed by 60 seconds of complete rest. Progress

by gradually increasing the number of sets to 10. Once 10 sets are achieved, increase the weight and drop back to 5 sets, repeating the progression.

5.1.7 Foundational Strength & Stability Conditioning Program

The principles and exercises in this section are supported by peer-review scientific evidence, including from the following article:

- Farr, B. D., Ramos, M. A., & Otto, C. M. (2020). The Penn Vet Working Dog Center Fit to Work Program: A Formalized Method for Assessing and Developing Foundational Canine Physical Fitness. *Frontiers in Veterinary Science, 7*, 470. doi: 10.3389/fvets.2020.00470

5.1.7.1 Structure: Circuit-Based Training

To maximize efficiency, prevent overuse injuries, and target different muscle groups effectively, the strength and stability program is structured into two distinct, alternating circuits performed three times per week (e.g., Circuit A on Monday, Circuit B on Wednesday, Circuit A on Friday).

- Circuit A: Posture Down/Chipmunk & Pivot
- Circuit B: Simple Plank & Squat

The execution of these circuits differs depending on whether the MWD is proficient in the exercises or is still in the initial learning phase.

Protocol for Trained MWDs (Proficient in Exercises)

This protocol is for MWDs that have already learned the proper form for the exercises and are now working on building strength and endurance. The session is structured using supersets to ensure efficiency and provide active recovery for opposing muscle groups.

- **Warm-Up Sets:** Before beginning the main work, perform two warm-up sets for EACH exercise in the day's circuit to properly prepare the muscles.
  - Warm-Up Set 1: Perform one set at approximately 50% of the MWD's current working load, height, or distance.
  - Warm-Up Set 2: Perform one set at approximately 75% of the MWD's current working load, height, or distance.
- **Working Sets (Superset Structure):** After completing the warm-up sets, perform the main workout as follows:
  - Perform one (1) working set of the first exercise (e.g., Posture Down/Chipmunk).
  - Rest for 30–60 seconds.
  - Perform one (1) working set of the second exercise (e.g., Pivot).
  - Rest for 30–60 seconds.
  - Continue repeating this alternating sequence until a total of three (3) working sets of each exercise have been completed.

Protocol for MWDs in Learning Phase

This protocol is for MWDs that do not yet know the exercises and are being taught the proper form and movement patterns. The focus is on positive association and correct execution, not on hitting specific repetition or time goals. To prevent the MWD from becoming frustrated or bored with a single new task, the learning session is broken into timed blocks.

- The handler will spend 4–5 minutes training the first exercise (e.g., Posture Down/Chipmunk), focusing on luring and shaping the correct position.
- After the first block, the handler will switch to the second exercise (e.g., Pivot) and spend 4–5 minutes training it.
- The handler will then return to the first exercise for another 4–5 minute training block.
- Finally, the handler will finish with a second 4–5 minute training block on the second exercise.

This structure (e.g., A-B-A-B) keeps the session engaging and allows the MWD to process the new skills with built-in mental breaks, leading to more effective and positive learning. An entire learning session should last approximately 16–20 minutes.

5.1.7.2 Core Exercises

- **Squat: Hindlimb Extension Strength & Muscular Endurance**
  - What it is: A compound exercise where the MWD places its forepaws on an elevated object, sits, and then returns to the starting position.
  - What it targets: Primarily develops hip, stifle (knee), and tarsus (ankle) extension strength and muscular endurance.
  - Why use it: Forceful hindlimb extension is vital for jumping, sprinting, and apprehension. This exercise directly translates to improved performance and reduces the risk of common injuries like cranial cruciate ligament disease by providing robust muscular support.
  - Progression Goal: The MWD must be able to complete 7 repetitions in 30 seconds before advancing to the next height or weight progression. Progression occurs in half-block (4-inch) increments. Advanced progression focuses on adding external resistance via a properly fitted weighted vest.
- **Pivot: Hindlimb Abductor/Adductor Stability**
  - What it is: The MWD places its forepaws on an elevated object and then sidesteps with its hind paws around the object.
  - What it targets: Primarily develops hip, stifle (knee), and tarsus (ankle) stability by strengthening the hip abductor and adductor muscles.
  - Why use it: Hip stability is paramount for injury prevention. It enables stable footing on slippery surfaces, provides control during an apprehension, and allows for agile turns. It is a safer alternative to uncontrolled agility drills for developing lateral strength.
  - Progression Goal: The MWD must be able to complete 3 full rotations in 30 seconds in each direction before advancing to the next height progression. Progression occurs in half-block (4-inch) increments. For advanced

progression, external weight can be added with a vest or lateral resistance bands can be applied to the hind limbs.

- **Simple Plank: Core Stability (Anti-Extension)**
  - What it is: The MWD stands with its forepaws and hind paws on two separate stable objects. This simplified protocol does not require hip-height measurements.
  - What it targets: Develops core stability by strengthening the muscles that resist spinal hyperextension (preventing the back from sagging).
  - Why use it: A strong anti-extension core is vital for transferring power efficiently and protecting the spine during high-impact activities like jumping. It enhances a dog's ability to resist external forces during apprehension or while navigating unstable terrain.
  - Progression Goal: The initial training distance is determined by gradually increasing the separation between blocks until the dog shifts its weight back or steps down; this distance is then reduced by 5 cm to establish the starting point. The goal is a continuous 30-second hold. Progression occurs in 2 cm increments until the dog cannot extend further. Advanced progression involves adding external weight via a weighted vest.
- **Chipmunk / Posture Down: Core Stability (Anti-Flexion)**
  - What it is: The Posture Down is a "sphinx" position with a straight spine. When the dog can perform this successfully, they can transition to the Chipmunk. The Chipmunk involves the MWD sitting with forelimbs suspended.
  - What it targets: Strengthens the muscles that resist spinal flexion (rounding the back).
  - Why use it: A strong anti-flexion core helps maintain proper posture and can serve as an early screening tool for spinal or hip pain.
  - Progression Goal: The first goal is to achieve and maintain a continuous 30-second Posture Down hold with proper form. Once this is achieved, the dog can be taught the Chipmunk. The second goal is to achieve and maintain a continuous 30-second Chipmunk hold with proper form. For advanced progression of the Chipmunk, the dog's balance can be challenged by slowly moving the lure side-to-side or by performing the exercise on an unstable surface.

5.1.8 Neuromuscular Fitness Program

Neuromuscular Fitness (NMF) is the link between the MWD's brain and its body. It encompasses balance, coordination, and proprioception—the body's subconscious awareness of its position and movement in space. This pillar of fitness is what allows an MWD to move with agility, confidence, and precision, especially over uneven, unstable, or complex terrain. The purpose of this program is to "hard-wire" the reflexes and body awareness an MWD needs to perform athletic movements safely and efficiently. When a dog slips on a wet surface or missteps on rubble, a highly developed neuromuscular system allows for instantaneous, reflexive corrections to regain balance and prevent injury.

5.1.8.1. Structure: A Modular "Bolt-On" Program

The Neuromuscular Fitness (NMF) program is designed as a modular, or "bolt-on," piece of training that can be added to other conditioning sessions. For any given NMF session, the handler should choose to focus on either the Balance Beam or the Back-up exercise, not both.

The scheduling of the NMF session is critical and depends on the other training planned for that day:

- **Placement with Endurance Training:** NMF sessions should be performed BEFORE endurance training (e.g., treadmill). Neuromuscular exercises require precise coordination and mental focus. Performing them after a fatiguing endurance session would mean the dog is attempting to learn or refine a complex motor pattern while neurologically tired, which increases the risk of poor form, ingraining bad habits, and potential injury.
- **Placement with Strength & Stability Training**: NMF can be performed either before or after a strength/stability circuit, depending on the goal.
    - Performing NMF *before* strength training acts as an excellent neuromuscular activation or "primer" for the session, waking up the stabilizer muscles and improving body awareness for the subsequent strength exercises.
    - Performing NMF *after* strength training can be useful for refining coordination on a body that is already warmed up but not aerobically exhausted.

Protocol for Trained MWDs (Proficient in Exercise)

For an MWD that knows the chosen exercise (Balance Beam or Back-up), perform 3–5 working sets, with 30–60 seconds of rest between each set.

Protocol for MWDs in Learning Phase

For an MWD that is still learning the exercise:

- If training the Back-up: Spend a focused 3–5 minute block working on the exercise.
- If training the Balance Beam: Spend up to 10 minutes total on the exercise, but this time must be broken up into smaller chunks. For example, spend 2–3 minutes working only on walking across, rest, then spend 2–3 minutes working only on sit-to-stand transitions on the beam. Do not work for 10 minutes straight through, as this will lead to frustration and decreased learning.

5.1.8.2 Core Neuromuscular Exercises

- **Balance Beam**
    - What it is: The balance beam exercise involves the MWD walking, doing position transitions, and turning around on a narrow, elevated surface, often progressing to an unstable surface.
    - What it targets: This exercise directly challenges and improves coordination, balance, and proprioception. It forces the engagement of small stabilizer muscles throughout the core and limbs and heightens the dog's awareness of its foot placement and weight distribution.

- Why use it: Enhanced neuromuscular control is vital for preventing injuries on uneven ground, reducing the risk of falls in dynamic situations, and improving overall agility. The balance beam forces the MWD to make continuous, subtle adjustments to maintain equilibrium, translating directly to greater stability in unpredictable operational environments. Its progressive instability mimics real-world challenges, preparing the MWD to react instinctively and effectively.
- Progression Goal: Progression involves mastering movements (walking, turning, sit-to-stands, and down-to-stands) on a stable beam before moving to a semi-unstable beam (one end on an inflatable object) and finally a fully unstable beam (both ends on inflatable objects).

- **Back-up: Neuromuscular Control & Proprioception**
  - What it is: The MWD is cued to walk backward in a straight line, eventually progressing over small obstacles.
  - What it targets: Primarily develops hind limb proprioception (awareness). It forces the dog to move without being able to see where it is placing its feet, which dramatically enhances its awareness of its hind limbs.
  - Why use it: Backward walking dramatically enhances the dog's awareness of its hind limbs, which is invaluable for navigating complex terrain, backing out of tight spaces during a search, or adjusting foot placement during an unstable moment to prevent a fall or injury. The focus is on the neuromuscular skill of controlled backward motion.
  - Progression Goal: The MWD should be able to walk backward a distance of 3 meters (approx. 10 feet), 3 times within a 30-second period before progressing to trotting or backing over small, low-profile obstacles.

5.1.9 Periodization: Adapting the Program to the Mission (Scheduling)

Periodization is the logical and systematic planning of physical training. It is the process of structuring training into progressive phases to optimize performance for specific goals while managing fatigue and preventing injury. For an MWD, this means that training should not be static; it must be a dynamic plan that adapts to the dog's weekly workload, operational tempo, and long-term career goals. The core principle is manipulating training variables (intensity, volume, and frequency) to achieve peak fitness and readiness when it matters most, while ensuring adequate recovery for physiological adaptation.

5.1.9.1 The Principle of Supercompensation: How Fitness is Built

Fitness is not built during the workout itself; it is built during recovery. The training process follows a predictable cycle:

1. **Stimulus:** A conditioning session (e.g., a strength circuit or endurance run) applies a stressor to the body, causing fatigue and a temporary decrease in performance capacity.
2. **Recovery**: After the session, the body begins to repair the micro-trauma and replenish energy stores.

3. **Supercompensation:** With adequate recovery and nutrition, the body adapts by rebuilding itself to be slightly stronger and more resilient than before the stimulus. It "supercompensates" to better handle the next stressor.
4. **De-training:** If too much time passes before the next stimulus, the benefits of supercompensation are lost.

This entire program is designed to apply a structured stimulus, then allow for the critical recovery phase where the MWD's body adapts and grows stronger. Failing to respect the recovery phase by overtraining will lead to a constant state of fatigue, diminished performance, and a significantly increased risk of injury.

5.1.9.2 Structuring the Training Week: A Sample Schedule

A well-structured week balances the three pillars of fitness and incorporates essential recovery days. The goal is to avoid training the same primary muscle groups or energy systems on consecutive days. Strength sessions should be separated by at least one day to allow for muscle repair.

The following is a sample weekly schedule. This is a template and should be adapted by handlers and leadership based on operational schedules and individual MWD needs.

Table 5-1. Sample Weekly Training Schedule for MWDs

Day	Primary Conditioning Focus	Notes
Monday	Strength & Stability (Circuit A) + Neuromuscular Fitness	Perform NMF (Back-up or Balance Beam) before the strength circuit as a neuromuscular primer.
Tuesday	Endurance Conditioning	Perform a primary treadmill session or a field-based sled drag session, focusing on building cardiovascular or muscular endurance.
Wednesday	Strength & Stability (Circuit B) + Neuromuscular Fitness	Alternate the strength circuit to target different movement patterns.
Thursday	Active Recovery	A low-intensity day. This could be a long "Sniffari" walk, light swimming, or mobility work (stretching).
Friday	Endurance Conditioning	Second endurance session of the week. Could be of a different type or intensity than Tuesday's session (e.g., intervals).
Saturday	Strength & Stability (Circuit A)	Third strength session of the week, returning to the first circuit.
Sunday	Full Rest	No structured physical conditioning. This allows for complete physical and mental recovery before the next training week begins.

5.1.9.3 Adapting the Daily Session to Operational Workload

Periodization must also happen on a micro-level. Handlers and Kennel Masters must be intelligent and flexible in applying the fitness program based on the work the MWD has already performed that day. The goal is to supplement, not exhaust.

- **Scenario 1: High-Volume Operational Day**
  - Workload: The MWD has already performed several hours of strenuous detection work, including extensive searching in difficult environments (e.g., vehicle yards, cargo warehouses).
  - Fitness Adjustment: The planned endurance session for that day should be cancelled or significantly reduced in intensity and duration. The dog's

aerobic system has already been heavily taxed. Instead, performing a short, low-intensity Neuromuscular Fitness session (e.g., Balance Beam) can provide mental stimulation and work on body awareness without adding significant physical fatigue. A full cool-down with static stretching would be highly beneficial.

- **Scenario 2: High-Intensity Operational Day**
  - Workload: The MWD has participated in a patrol training day involving multiple, high-drive bite work scenarios.
  - Fitness Adjustment: The planned Strength & Stability session for that day should be modified or postponed. Bite work is a full-body explosive strength exercise. Adding another heavy strength session on top of this creates a high risk of over-training and muscle strain. A low-intensity, moderate-duration Endurance session (e.g., a steady 20-minute trot on the treadmill at 0% incline) would be a better choice, as it helps facilitate recovery by increasing blood flow without further taxing the power-based muscle fibers.
- **Scenario 3: Low-Activity Day**
  - Workload: The MWD has had a day with minimal operational tasking (e.g., administrative duties, classroom training for the handler).
  - Fitness Adjustment: This is the ideal day to execute the planned fitness session exactly as prescribed. It is the perfect opportunity to apply a structured training stimulus to a well-rested dog, maximizing the potential for adaptation and supercompensation.

5.1.9.4 Long-Term Periodization: Pre-Deployment and Tapering

In the 4–6 weeks leading up to a deployment or a physically demanding specialized training course, the training intensity and/or volume can be gradually increased to "peak" the dog's fitness. This might involve adding an extra set to strength circuits, slightly increasing the weight on sled drags, or extending the duration of endurance sessions.

Critically, this intensified phase must be followed by a taper period of 7–10 days immediately before deployment. During the taper, training volume and intensity are significantly reduced. This allows the MWD's body to fully recover, repair, and super compensate, ensuring they arrive at their operational assignment in a state of peak physical readiness, not fatigue.

5.1.10 Monitoring and Record Keeping

Consistent, accurate, and detailed monitoring and record-keeping are the mechanisms that transform this program from a simple set of exercises into a data-driven system for athletic development. Diligent record-keeping allows handlers and leadership to objectively track progress over time, identify performance plateaus or regressions early, troubleshoot issues effectively, and make informed, evidence-based decisions about an MWD's training, readiness, and welfare.

5.1.10.1 Canine Record of Perceived Exertion (K9-RPE)

When conducting treadmill sessions as outlined in the supplemental endurance protocol, the K9-RPE is a mandatory assessment tool. It provides a standardized, semi-objective method for gauging the MWD's level of exertion and fatigue. It is a 5-level scale based on a combination of observable indicators, including the dog's position on the treadmill, its interest in and response to rewards, and its facial expression. Handlers must become experts in identifying the subtle cues for each level. The absolute guiding principle of treadmill conditioning is to stop the session at the FIRST sign of a Level 4 K9-RPE. Pushing a dog past this point provides no additional conditioning benefit and dramatically increases the risk of overexertion, negative association with the equipment, and potential injury. The full K9-RPE scale and its use are detailed in the supplemental MWD Treadmill-Based Endurance Fitness Program (see section 5.7, "Physical Conditioning Appendices").

5.1.10.2 Tracking Progress: The Daily Training Log

The Daily Training Log is the most critical data collection tool in this program. It is the handler's detailed, daily record for every conditioning session performed. Vague entries like "did fitness" are unacceptable. The log must be specific enough that another handler or a veterinarian could look at the entry and know exactly what was accomplished. This log is the primary source of data for troubleshooting performance issues and making informed decisions about progression.

At a minimum, every entry in the Daily Training Log must include:

- Date and Time of Session
- Exercise(s) Performed
- Handler Notes: A crucial section for subjective but vital information. It should include observations on the MWD's motivation, attitude toward the exercise, any difficulties encountered, signs of fatigue, or any other relevant details.

Specific Recording Requirements by Exercise Type (with Examples):

- For Strength & Stability Conditioning:
  - Squat:
    - Platform Height (e.g., 16 inches)
    - Number of Repetitions completed per set
    - Weight added via vest, if applicable (+/- lbs/kg)

EXAMPLE LOG ENTRY: SQUAT

- Date: 2026-03-16, 14:00
- Exercise: Strength Circuit B - Squat
- Warm-up Set 1: 8in platform, 7 reps (50% height)
- Warm-up Set 2: 12in platform, 7 reps (75% height)
- Work Set 1: 16in platform, 7 reps
- Work Set 2: 16in platform, 7 reps
- Work Set 3: 16in platform, 6 reps
- Handler Notes: Rex showed high drive and great form for the first two sets. On the last rep of set 3, his form got a little loose and he was slower on the 'up' motion. Motivation still high, likely just muscle fatigue. Ready to test for progression to 20in next week.

  - Simple Plank:
    - Platform Separation Distance (cm)
    - Duration of Hold achieved for each set (seconds)
    - Weight added via vest, if applicable (+/- lbs/kg)

EXAMPLE LOG ENTRY: SIMPLE PLANK

- Date: 2026-03-18, 09:30
- Exercise: Strength Circuit B - Simple Plank
- Warm-up Set 1: 40cm separation, 30s hold (50% distance)
- Warm-up Set 2: 60cm separation, 30s hold (75% distance)
- Work Set 1: 80cm separation, 30s hold
- Work Set 2: 80cm separation, 24s hold (broke form by shifting back)
- Work Set 3: 80cm separation, 21s hold (broke form again)
- Handler Notes: Bella was solid on the first working set. On sets 2 and 3, she started to show a slight tremor and then shifted her weight back off her front paws to break the plank. Did not seem painful, just fatigued. Will hold at 80cm for another week to build endurance before attempting progression.

- For Neuromuscular Fitness (NMF) Conditioning:
  - Balance Beam:
    - Progression Level used (e.g., Stable, Semi-Unstable, Unstable)
    - Tasks performed and number of reps/sets

EXAMPLE LOG ENTRY: BALANCE BEAM

- Date: 2026-03-20, 10:00
- Exercise: NMF - Balance Beam
- Progression Level: Semi-Unstable (one end on disc)
- Task 1: Walk & 180-degree Turn. 3 sets of 2 turns each direction.
- Task 2: Sit-to-Stand. 2 sets of 5 reps.
- Handler Notes: Kilo is very confident walking and turning on the semi-unstable beam. His turns to the left are a little less smooth than his turns to the right. He is struggling more with the sit-to-stand; he sits very slowly and rocks a bit before standing. Will focus more on the sit-to-stand reps next session before trying the fully unstable beam.

5.1.10.3. MWD Physical Conditioning Proficiency Chart

Purpose: The MWD Physical Conditioning Proficiency Chart is a high-level, strategic summary of an MWD's *current validated fitness status* across the various program components. Its primary function is for overall program oversight, progression management, and communication to leadership and veterinary staff. It represents the highest achieved, verified level of proficiency for each exercise or program phase.

Key Characteristics and Distinction from the Daily Training Log:

- **Summary & Current Status:** Unlike the daily log's granular, session-specific data, the proficiency chart presents an "at-a-glance" overview of the MWD's *current, sustained capability* in each program area. It does not record day-to-day fluctuations but rather the achieved benchmark.
- **Validated Achievement:** An MWD's status on the proficiency chart is typically updated only when a new progression level has been officially achieved and validated, often requiring observation or sign-off by a Kennel Master or designated trainer. This contrasts with the daily log, which records every attempt and observation.
- **Leadership-Oriented:** This chart is designed for easy consumption by Kennel Masters, Commanders, and Veterinary Staff to quickly understand an MWD's fitness level, readiness for progression, or any current limitations.
- **Long-Term View:** It tracks the MWD's overall progress and current standing within the phased program, rather than the details of individual workouts.
- **Simplified Representation:** It presents key metrics (e.g., current level, max height/distance, validated reps/duration) rather than the raw data.

What Needs to Be Captured on the MWD Physical Conditioning Proficiency Chart:
This chart should track the *highest validated and sustained* progression level or key metric for each MWD in the unit. It provides a concise summary of their current physical capabilities within the program.

- **MWD Name/Tattoo**
- **Current Treadmill Conditioning Level:**
  - The highest completed Level (e.g., Level 1: 0% Incline, Level 2: 5% Incline, Level 3: 10% Incline).
  - The week of the 24-week conditioning protocol they are currently on for that level (e.g., Level 2, Week 5), indicating their current training intensity and duration targets.
- **Current Squat Progression Level:**
  - The highest validated platform height (e.g., 16 inches).
  - The achieved repetition count at that height (e.g., 7 reps in 30s).
  - Note if external weight is now being used for advanced progression (e.g., "16in, 7 reps, +5lbs vest").
- **Current Pivot Progression Level:**
  - The highest validated platform height (e.g., 12 inches).
  - The achieved rotations in both clockwise (CW) and counterclockwise (CCW) directions (e.g., "12in, 3 CW / 3 CCW rotations in 30s").
- **Current Simple Plank Max Distance:**
  - The greatest validated platform separation distance achieved (in cm) for a continuous 30-second hold (e.g., 85 cm).
  - Note if external weight is now being used for advanced progression (e.g., "85cm, +2.5lbs vest").
- **Current Chipmunk/Posture Down Status:**
  - Indicate if the MWD can perform a continuous 30-second hold with proper form (e.g., "30s hold, proper form").
  - Note if on unstable surface progression (e.g., "30s hold, unstable").
- **Current Back-up Progression:**
  - Indicate the highest validated progression stage (e.g., "Walk 3m x 3 in 30s," "Trot 3m x 3 in 30s," "Back-up over obstacles").
- **Current Balance Beam Progression:**
  - Indicate the highest validated stability stage (e.g., "Stable," "Semi-Unstable," "Unstable").
  - Note the achieved tasks (e.g., "Unstable: Turns 5 reps each way").
- **Last Fitness Assessment Date:** Date of the most recent formal assessment (e.g., Treadmill Endurance Assessment, Foundational Fitness Assessment).
- **Medical Restrictions/Notes:** Any specific instructions from the VCO/VMO regarding limitations, adaptations, or areas of concern (e.g., "No right-hand pivots per VCO," "Hindlimb strengthening focus," "Post-surgery return to duty: Phase 1 only").
- **Next Progression Target:** A brief note on what the MWD is currently working towards (e.g., "Working toward Plank +5cm," "Treadmill Level 2 assessment").

5.1.11 Detailed Exercise Protocols

This section provides the detailed "how-to" training instructions for the exercises contained within this program. Handlers and leaders should also refer to the accompanying “how-to” videos for additional guidance.

5.1.11.1 Warm-Up and Cool-Down Exercises

- **Paws-Up**
  - Training Use:
    - Warm-up: 5 sets of 3-second full stretch Paws-ups, with a 1-second pause between reps.
    - Cool-down: One continuous 15-second full stretch Paws-up.
  - Learning Steps (Stack Method):
    - Lure front feet onto a 4" stack. Reward, get down. Repeat 3x.
    - Lure front feet onto an 8" stack. Reward, get down. Repeat 3x.
    - Lure front feet into a full stretch on the 8" stack. Reward. Repeat 3x.
    - Lure and hold full stretch for 3 seconds on the 8" stack. Reward. Repeat 3x.
  - Learning Steps (Arm Method):
    - Have the MWD begin in a sit position. Kneel next to them.
    - Gently scoop your forearm under their forelimbs, just above the paws.
    - Using a high-value food reward or toy in your other hand, lure the dog into a standing position as you slowly rise with them. Your arm provides a platform for their paws.
    - Use the lure to encourage them to stretch forward and up into the full Paws-Up position, keeping their back and hind legs as straight as possible.
    - Use the reward to maintain them in the correct stretched position for the desired duration.
  - Common Technique Errors to Avoid:
    - Luring Too High: Do not hold the reward so high that it causes the dog to overextend its neck backwards. The goal is a straight line from nose to tail.
    - Supporting Too Much Weight: Your arm is a target and a guide, not a shelf. The MWD should be actively supporting its own weight through its core and hind limbs to get the full benefit of the stretch. Avoid letting the dog simply rest its full weight on your arm.
- **Figure-8**
  - Training Use:
    - Warm-up: Three complete Figure-8 repetitions at a brisk pace in each direction.
    - Cool-down: Three complete Figure-8 repetitions at a slow, deliberate pace.
  - Learning Steps (Using Handler's Legs):

        - Begin by standing with your feet set wide apart, approximately twice your shoulder width. This creates a large, easy target for the dog to move through.
        - Using a high-value lure, guide the dog's head between your legs from the front to the back. Mark and reward this simple pass-through. Repeat 3 times to build confidence.
        - Next, lure the dog's head between your legs and immediately guide it to the outside of one leg, making a quarter turn. Mark and reward this small turn. Repeat 3 times on each side.
        - Now, progress to a half-repetition. Lure the dog from the center, around the outside of one leg, and back to the center starting position between your legs. Mark and reward. Repeat 3 times for each leg.
        - Finally, lure the dog through a full Figure-8 repetition: between your legs, around one leg, back through the center, around the other leg, and back to the start. Mark and reward upon completion.
    - Common Technique Errors to Avoid:
        - Imprecise Luring: Using slow, wide, or unclear hand movements with the lure will cause the dog to make a wide, lazy turn instead of a sharp, tight pivot around your leg. Keep the lure close to your leg to encourage a tight turn.
        - Poor Handler Posture: Slouching or hunching over while luring can obstruct the dog's path and change the mechanics of the exercise. The handler should aim to stand up straight to create a consistent and clear obstacle for the dog to navigate.
        - Rewarding at the Wrong Time: Do not reward the dog if they complete a sloppy turn or go wide. Only reinforce the moments when they are moving correctly and turning tightly to shape the desired behavior.
- **Play Bow**
    - Training Use:
        - Warm-up: Five sets of 3-second Play Bows with a 1-second pause in the stand between reps.
        - Cool-down: One continuous 15-second Play Bow.
    - Learning Steps (Luring Method):
        - Begin by ensuring the dog is comfortable with your hands on its body. Gently acclimate the dog to your hand resting on its back, then its flank, and finally under its abdomen. This is crucial for providing support later.
        - From a standing position, place one hand gently under the dog's abdomen. This hand is not for lifting, but for providing stability and preventing the dog from laying down completely.
        - With a lure in your other hand, slowly guide the dog's nose downward toward the floor, just in front of its paws. Mark and reward any slight downward head movement.
        - Continue to lure the nose down until the dog naturally begins to bend its elbows to follow the lure.

- Progress to luring the nose all the way to the ground, and then slowly between its front paws. The goal is to have the dog's elbows touch the ground while its hindquarters remain high.
- Once the dog can achieve the full position, begin working on duration. Lure them into the full Play Bow and hold the lure in position for 3 seconds before rewarding.

- Common Technique Errors to Avoid:
  - Forcing the Position: Never physically push the dog's back or hind end down. The movement must be voluntary and guided by the lure. Forcing the position can cause injury and will create a negative association with the exercise.
  - Allowing the Hind End to Drop: If the dog's hind end collapses into a "down" position, you have likely lost the forward stretch. Reset and try again, perhaps with a higher value lure, ensuring your supporting hand is only preventing a full drop, not holding the dog up.
  - Luring Too Far Forward: If the lure is too far in front of the paws, the dog may crawl forward instead of bowing. Keep the lure point close to, and then between, the front paws.

5.1.11.2 Strength & Stability Exercises

- **Pivot**
  - Learning Steps:
    - Lure the dog to place its front paws up onto a low, stable object (e.g., a 4-inch stack or a single cinder block).
    - Stand next to the dog's flank and use gentle body pressure to encourage a single lateral (sideways) step with the outside hind foot. Mark and reward any successful step.
    - Gradually fade the body pressure, using only a lure and a verbal cue ("Step" or "Pivot") to encourage the lateral steps.
    - Shape the behavior and fade the lure by rewarding successive steps until the dog can complete a quarter-turn (90 degrees) around the block.
    - Continue shaping until the dog can complete a full 360-degree rotation in each direction, keeping its front paws stationary.
  - Progression: Once the dog can complete 3 full rotations in 30 seconds in each direction, the platform height is increased by a half-block (4-inch) increment. This continues until the dog's paws are at their shoulder level. At this point the dog has reached their maximum height. Advanced progression involves adding external weight via a weighted vest or using lateral resistance bands on the hind limbs.
  - Common Technique Errors to Avoid:
    - Relying on Body Pressure: Do not continue to "push" the dog around with your body after the initial learning phase. The movement must be voluntary.
    - Front Paws Moving: The front paws should remain relatively stationary on the platform. If they are moving excessively, the dog is not isolating the hind-end movement correctly.
    - Skipping or Crossing Feet: If the dog is hopping, skipping, or crossing its hind feet instead of taking deliberate side-steps, slow the exercise down and reward smaller, more controlled movements.
- **Simple Plank**
  - Learning Steps:
    - Set up two low, stable platforms (e.g., cinder blocks) with a small, step-able gap between them.
    - Lure the dog to walk from the rear platform, across the gap, to the front platform to build confidence.
    - Lure the dog into a standing position with its front paws on the front platform and hind paws on the rear platform.
    - Use a continuous lure (like a lickable treat on a plate) held at nose level to encourage the dog to stand where their front legs remain vertical.
    - Slowly slide the rear platform backward to increase the separation distance, ensuring the dog's front legs remain vertical.
    - Stop when the dog shifts backwards away from the lure or steps off the rear block.

- Progression: The goal is to achieve a continuous 30-second hold. Once this is accomplished at the current distance, increase the platform separation by 2–5 cm. Once the dog's maximum distance is reached, advanced progression involves adding external weight via a weighted vest.
- Common Technique Errors to Avoid:
  - Allowing a Sagging Back: The primary purpose of the exercise is to resist spinal extension. If the dog's back sags, the core is fatigued, and the set should be ended immediately.
  - Shifting Weight Back: The dog's front legs should remain vertical. If the dog shifts its weight backward, bending its front legs, it is breaking form to relieve pressure on the core.
  - Improper Head Position: The lure should be held to keep the head in a neutral position, aligned with the spine.

- **Posture Down**
  - Learning Steps:
    - Begin by placing the dog on a narrow platform or between two objects (like blocks) to encourage them to align their limbs in a straight (sagittal) plane.
    - Cue the dog into a correct "sphinx" down position.
    - Using a high-value lure held at the dog's resting nose level, encourage the dog to move its head and neck forward just 2–7 cm.
    - Reward the dog the instant its spine becomes straight and its stifles (knees) are positioned directly over or just in front of its hind paws.
    - Use a continuous lure (like a lickable treat on a plate) held at nose level to encourage the dog to hold this extended position.
  - Progression: The primary progression is increasing the duration of the hold up to 30 continuous seconds. Once a 30-second hold is mastered progress to the Chipmunk.
  - Common Technique Errors to Avoid:
    - Lure Too High: Holding the lure too high will cause the dog to stand up from the position.
    - Lure Too Low: Holding the lure too low will cause the dog to crawl forward (from a down) or round its back.
    - Rewarding Incorrect Posture: Only deliver the reward when the dog's spine is perfectly straight and all limbs are correctly aligned.
- **Chipmunk (Sit Pretty)**
  - Learning Steps:
    - Start with the dog in a perfect Posture Sit. In a Posture Sit, the dog is in a perfect “square” sit with its spine straight and extended.
    - Using a lure held directly above the dog's nose, encourage a very slight lift of the front paws from the ground. Mark and reward the instant the paws lift.
    - Repeat, gradually increasing the height of the lift until the carpi (wrists) are suspended between the dog's elbow and shoulder height.

        - Throughout the movement, the dog's back must remain straight. An easy way to observe this is to look at the position of the dog's stifles (knees) relative to its toes. The dog's stifles (knees) should be over or in front of its toes. If the stifles (toes) move behind the toes, the dog's back is likely not straight.
        - Once height is achieved, begin to increase the duration of the hold, starting with 1–2 seconds and slowly building up.
    - Progression: The goal is to achieve a continuous 30-second hold with perfect form. Advanced progression involves challenging balance by slowly moving the lure side-to-side or by performing the exercise on an unstable surface.
    - Common Technique Errors to Avoid:
        - Slouching or "Turtle-Shelling": A rounded back indicates the core is not properly engaged. Reset to a proper Posture Sit and reward smaller, more correct lifts.
        - Ignoring Fatigue: Muscle tremors (fasciculations), reluctance to lift, or attempting to place paws on the handler are clear signs of fatigue. End the session immediately.
        - Rushing Duration: Do not try to increase the hold time until the dog's form (straight back, square sit) is perfect and consistent.
- **Squat**
    - Learning Steps:
        - Lure the dog's front feet onto a platform made of four concrete blocks arranged in two parallel lines.
        - Lure the dog's hind feet onto the blocks as well, so all four paws are on the flat platform.
        - Perform a simple sit-to-stand on the flat blocks to build confidence with the equipment.
        - Elevate the front two blocks by 2 inches. Lure the dog into position with front paws on the elevated section and hind paws on the lower section.
        - Perform a sit-to-stand on the 2-inch incline.
        - Elevate the front two blocks by 4 inches. Lure the dog into position.
        - Perform a sit-to-stand on the 4-inch incline.
        - Elevate the front blocks to 8 inches (a full second cinder block high). Lure the dog into position.
        - Perform a sit-to-stand on the 8-inch incline.
    - Progression: The goal is to complete 7 repetitions in 30 seconds. Once achieved, increase the front block height by a half-block (4-inch) increment. Continue this progression until the dog's paws are at their shoulder level when they are sitting. This is the dog's maximum height, and further progression involves adding external weight via a weighted vest.
    - Common Technique Errors to Avoid:
        - Lifting Front Paws: The dog's front paws must remain on the elevated object throughout the entire repetition.

- Incomplete Reps: Ensure the dog performs the full range of motion, from a full sit to a full stand.

5.1.11.3 Neuromuscular Fitness Exercises

- **Balance Beam**
  - Learning Steps:
    - Start with the beam (a 10–12" wide wooden board) placed flat on the ground. Lure the dog to walk its full length. Reward generously.
    - Progress to having the dog walk across the beam on a stable, slightly elevated surface (e.g., placing each end on a single concrete block laid flat, approx. 4 inches high).
    - Teach the dog to stop and hold a stand in the middle of the beam for increasing durations.
    - Once standing is stable, teach sit-to-stand repetitions in the middle of the beam.
    - Once sit-to-stands are stable, teach down-to-stand repetitions in the middle of the beam.
    - Finally, teach a 180-degree turn on the beam. Initially, you can use guide blocks on either side to prevent the dog from stepping off as it learns the footwork. Gradually remove the guides.
  - Progression:
    - Progression 1 (Stable): The beam is stable at both ends (e.g., on blocks). The goal is to master all tasks: holding a stand for 10 seconds, performing 3 sit-to-stand reps, 3 down-to-stand reps, and 2 turns in each direction.
    - Progression 2 (Semi-Unstable): Place an inflatable object under one end of the beam. The goal is to repeat and master all the tasks from Progression 1 on this semi-unstable surface.
    - Progression 3 (Unstable): Place inflatable objects under both ends of the beam. The goal is to repeat and master all the tasks on this fully unstable surface.
  - Common Technique Errors to Avoid:
    - Rushing: All movements on the beam must be slow, controlled, and deliberate. If the dog is rushing, they are using momentum, not stability and proprioception. Slow them down with the lure.
    - Looking Down: Encourage the dog to keep its head up and look forward. This forces it to rely on proprioception (knowing where its feet are) rather than sight.
    - Jumping Off: Do not allow the dog to jump off the beam midway. If this happens, it may indicate the progression is too difficult. Go back a step to build more confidence. Always lure them to walk to the very end.

- **Back-up**
  - Learning Steps:
    - Use a narrow hallway or place the dog between a wall and a chair to create a "chute." This is critical as it prevents the dog from simply turning around.
    - Stand directly in front of the dog and take a small step towards them. At the same time, use a lure held at their nose level to encourage a single backward step as they move to follow the lure away from your body pressure.
    - Mark and reward any successful backward movement, even a single step.
    - Once the dog understands the concept, gradually decrease the frequency of rewards, asking for two steps, then three, before reinforcing.
    - Ensure the dog maintains a straight spine and is lifting its feet cleanly off the ground with each step.
  - Progression: The goal is to have the dog walk backward a distance of 3 meters (approx. 10 feet), 3 times within a 30-second period. Once this is mastered, the next progression is to have the dog trot backward with the same criteria. The final progression is to have the dog back up over small, low-profile obstacles (e.g., a 2x4 board, a broom handle).
  - Common Technique Errors to Avoid:
    - Improper Lure Position: This is the most common error. Holding the lure too low will cause the dog's back to round and its head to drop. Holding it too high will cause the dog to pop up into a sit. The lure must be kept level with the dog's nose to maintain a straight, neutral spine.
    - Dragging Feet: The dog must be actively lifting its feet to take a step, not just scuffing or sliding them backward. If the feet are dragging, the dog is not properly engaging the muscles for the exercise. Slow down and reward smaller, more correct movements.
    - Environment Too Wide: If the dog is constantly trying to turn its body to the side instead of moving straight back, the training "chute" is too wide. Narrow the space to remove the option of turning.

5.2 MWD Physical Activity Guidelines

5.2.1 Commander's Intent and Purpose

This guideline establishes the official framework for implementing a structured physical activity and enrichment program as a mandatory component of MWD care. The primary objective is to enhance MWD welfare, improve mission readiness, and build stronger handler-MWD cohesion by providing safe, voluntary outlets for species-appropriate behaviors.

These activities are designed to be mentally stimulating and physically safe, reducing stress and promoting a voluntary partnership based on trust and communication. Leadership at all levels is responsible for providing the time, resources, and oversight to ensure these practices are consistently and safely applied.

5.2.2 Foundational Principles

- **Veterinary Clearance:** All MWDs must receive medical clearance from the responsible VCO/VMO before beginning any new physical activity program.
- **The Power of Choice:** The MWD must have the ability to voluntarily participate in or opt out of an activity. If the MWD shows signs of stress or refusal (e.g., avoidance, hesitation), the handler must stop and reassess. This refusal is not defiance; it is communication. Forcing the interaction destroys trust.
- **Safety First:** Control the environment to set the MWD up for success. The core principle is to structure activities to minimize risk while maximizing physical and mental benefits. Always prioritize the safety of both the handler and the MWD.
- **Positive Reinforcement:** All activities will be conducted using positive reinforcement (e.g., high-value food, play, praise). This builds a positive association with the activity and strengthens the handler-MWD bond.
- **Trust and Communication:** The handler must be proficient in their MWD's body language, recognizing subtle signs of stress (lip licking, yawning, whale eye, tense muscles) and fatigue (sloppy gait, loss of interest). This is critical for preventing injury and ensuring the activity remains positive.

5.2.3 General Prerequisites and Safety

5.2.3.1 Handler and MWD Prerequisites

- **For the Handler:**
  - Must be proficient in reading MWD body language, especially signs of stress, fatigue, and heat stress.
  - Must be trained in positive reinforcement and low-stress handling techniques.
  - Must be able to lead dynamic warm-ups and cool-downs.
- **For the MWD:**
  - Must have medical clearance from the VCO/VMO for the specific activity.
  - Must be comfortable wearing any required equipment (harness, etc.).
  - Should be given an opportunity to eliminate waste before each session.

5.2.3.2 General Safety Considerations

- **Warm-Up and Cool-Down:** A dynamic warm-up (2–3 minutes) is mandatory before high-intensity activities, and a cool-down walk (3–5 minutes) is required at the end of all sessions.
- **Meal Timing:** Do not conduct high-intensity activity within 30 minutes before or 60 minutes after a meal to reduce the risk of bloat.
- **Thermal Injury Risk:** Proactively monitor for overheating. Have cooling methods (water, shade, fans, cooling vests) readily available, especially on warm days or during intense activities.
- **Surface Selection:** For high-intensity activities, use a secure, fenced-in area with a level, consistent surface that provides good footing (e.g., well-maintained grass). Avoid hard or slippery surfaces like concrete, asphalt, or wet tile.

5.2.3.3 Defining Activity Intensity

- **Low-Intensity Activity:** These activities are characterized by sustained, low-impact movements, primarily at a walk or a trot. The goal is to provide mental stimulation, sensory enrichment, and gentle physical exercise without pushing the MWD to a state of high exertion. This is analogous to a human going for a long walk or a light jog. Examples include on-leash "Sniffari" walks where the dog controls the pace, treadmill walking for fun, food-based foraging where the dog is moving slowly to search, and most detection training scenarios.
- **High-Intensity Activity:** These activities involve short, powerful bursts of movement, including cantering, galloping, sprinting, and strength-based exercises. They are designed to build and maintain an MWD's peak physical condition but must be managed carefully to prevent injury and manage arousal. This is analogous to a human performing weightlifting, sprints, or agility drills. Examples include safer retrieve games, herding ball play, and the exercises within the formal Physical Fitness Program like sled drags.

5.2.4 Physical Activity and Enrichment Guides

5.2.4.1 On-Leash Activities: The "Sniffari" and Structured Walks

Basic Description of the Activity: This guide covers methods for transforming standard on-leash walks into rich enrichment opportunities that provide physical movement, mental stimulation, and handler-dog engagement. This is not about structured physical fitness training; it is about providing fulfilling physical movement. The dog's natural gait is the trot, and while short-leash walking is a necessary skill, it often restricts this natural movement. This guide explores how to improve short-leash walks, use long lines to allow for more species-appropriate behavior (like lagging behind to sniff and trotting to catch up), and safely incorporate on-leash running to finally move at a pace more suitable for the MWD. The core principles are to grant the MWD choice, encourage environmental investigation, and build confidence through novel challenges.

- **Enrichment Categories Covered:**
  - Physical: Provides structured, low-intensity movement (walking, trotting, running) and builds body awareness through obstacle navigation.

- Cognitive: Engages the MWD in problem-solving (obstacle navigation), making choices about the route, moving with their handler at various speeds, and practicing impulse control ("Leave It").
- Social: Requires constant, subtle communication between the handler and MWD, strengthening their partnership.
- Sensory: Massively stimulates the olfactory system (sniffing) as well as the tactile senses through interaction with novel terrain and objects.

- **Logistics Required:**
  - Equipment:
    - A properly fitted, non-restrictive harness. A Y-front harness that is distinct from one used for work is preferred (e.g., Blue-9 Balance Harness).
    - Leashes: standard 6' leash, a 15–30' long line, and/or a high-quality retractable leash.
    - High-value food rewards for training.
    - Operational Gear: Muzzles, booties, goggles, ear protection for desensitization practice.
    - Low-Light Safety: Reflective gear and lights (e.g., Noxgear Lighthound harness, Nite Ize NiteHowl collar).
    - Cooling Gear: Hose, pool, and/or evaporative cooling vests (e.g., Ruffwear Swamp Cooler, Non-stop dogwear Cooling Vest).
  - Space & Building:
    - Any safe area suitable for walking or running. Routes with varied terrain and low-level obstacles are ideal.
    - Early in the acclimation process, activities should be conducted in lower stimulation areas (e.g., free of wildlife and without food debris on the ground).
- **Step-by-Step Procedure:**
  - Phase 1: Mastering Leash Skills & Handler Mindset
    - The Handler's Role: Be the Guide, Not the Dictator: The primary goal of an enrichment walk is to let the dog explore. This means stopping frequently to let them sniff - this is the entire point. When feasible, allow the MWD to choose the direction at intersections.
    - Teaching Loose-Leash Walking (6' Leash): Positive reinforcement is preferred - reward the MWD heavily for any moment the leash is slack. If they pull, simply stop moving. When they release the pressure (by looking back or stepping closer), praise them and continue. If additional positive punishment is desired, consider a head collar/halter (e.g., by Canny Collar or PetsPro Max) rather than neck-based or front-clip methods. Keep sessions short and positive.
    - Building a "Leave It" Cue: This is non-negotiable for safety. Practice rewarding the MWD for turning away from low-value items on cue, gradually working up to more tempting objects. This cue allows you to safely grant freedom while preventing the MWD from continuing to investigate hazards or pursue wildlife.

- Phase 2: Expanding Freedom with a Long Line
  - Enrichment vs. Operations: A long line (or a retractable leash used as an auto-retracting long line) for enrichment is different from patrol or detection work. The purpose is to give the MWD space to lag behind for a deep sniff, explore the environment off the direct path, and then trot to catch back up to you.
  - Managing the Line: Keep the line from getting tangled under the MWD's legs. Practice gathering and releasing the slack smoothly. A retractable leash can help with line management.
  - Teaching the Limit: Gentle pressure on the line (using gloves!) as the MWD moves away from you can help cue an approach to the end of the line. The locking button on a retractable leash should not be used for MWDs that are not acquainted with the limit of their freedom.
- Phase 3: Adding Complexity and Intensity
  - Low-Level Obstacle Navigation: Use the environment as an agility course. Cue the MWD to go over a bench, under a bench, walk along a low wall, jump over a low fence, or go under a rail. Also, seek out novel terrain (e.g., crunchy leaves, shallow water, logs) to build confidence.
  - Integrating Operational Gear Desensitization: Use the positive context of the walk to build comfort with operational gear. Start by having the MWD wear one piece of gear (e.g., muzzle, booties, goggles, or ear protection) for a very short duration (30–60 seconds) during the walk, then remove it and reward heavily. Gradually increase the duration as the dog shows comfort.
  - On-Leash Running: This is simply an extension of on-leash walking and requires excellent communication. Start with a loose leash at a walking pace. Use a cue like "Let's go!" and pick up the pace to a slow jog and then a run. Keep the leash slack; the MWD should be running with you, not pulling you.

- **Advanced Scenarios:**
  - Urban Agility & Parkour: This is an advanced form of obstacle navigation that uses urban architecture to build confidence and body awareness. Beyond simple "over/under," ask the MWD for more complex behaviors like "paws up" on a ledge, weaving through bike racks, or hopping between two stable, low platforms. This must be done on-leash and only on objects that are low to the ground and stable.
  - Cooperative Care on the Go: Use the walk to practice voluntary husbandry procedures in new environments. Use a park bench to cue a "paws up" for a mock paw inspection or a "chin rest" for a mock eye/ear check. Rewarding these behaviors in different locations builds an MWD's confidence and makes real veterinary or husbandry procedures less stressful.
  - The "Sniffari" (Decompression Walk): This is the ultimate expression of a choice-based walk. The handler's only job is to keep the MWD safe. For the entire duration, the MWD is in 100% control of the pace and direction. If they want to spend ten minutes sniffing a single bush, the handler waits.

This activity is incredibly valuable for mental decompression and sensory stimulation.

5.2.4.2 Treadmill Trotting for Fun

Basic Description of the Activity: This guide outlines the process for introducing and using a powered land treadmill as a low-stress, voluntary, and mentally engaging enrichment activity. The purpose is to provide an outlet for the MWD to move at a species-appropriate speed (4–6 mph) and gait (trot), which is often not possible when limited to a human's walking pace. The core principle is positive reinforcement; the MWD's comfort and willingness are the top priorities.

- **Enrichment Categories Covered:**
  - Physical: Provides structured, low-intensity activity at an appropriate gait (trotting).
  - Cognitive: Engages the MWD in learning a new skill and problem-solving to maintain balance.
  - Social: Requires consistent, positive one-on-one interaction with a handler.
  - Sensory: Stimulates the senses of touch, sound, sight, and taste.
- **Logistics Required:**
  - Equipment:
    - Powered land treadmill (Dog Runner, FitFurLife, and AirPaws are recommended)
    - A non-restrictive, properly fitted harness and two adjustable safety couplers.
    - High-value, lickable/spreadable food rewards (e.g., squeeze cheese) and a lick pad.
    - Access to water and cooling methods (e.g., pool, hose) for post-session use.
  - Space & Building:
    - A quiet, low-distraction indoor area with adequate ventilation is strongly recommended.
    - Outdoor use introduces significant environmental stimuli. If used outdoors, an overhead shelter is required. The treadmill must not be stored outdoors.
    - Ensure at least 3–4 feet of clear space in front of and behind the treadmill.
- **Step-by-Step Procedure:**
  - Pre-Session Protocol (5 min): Assess for lameness and conduct 2–3 minutes of dynamic stretches.
  - Phase 1: Walking Acclimation (First 1–2 Sessions): Introduce the MWD to the stationary treadmill, rewarding heavily. Secure the MWD, start the belt on its lowest speed, and reward continuously as you build to a moderate walking pace (2–3 mph) for 5 minutes.
  - Phase 2: Trotting Acclimation: After a walking warm-up, increase speed to a slow trot for a short interval. Adjust speed so MWD is trotting, not pacing. Reduce speed to a walk. Repeat and extend intervals over several sessions until the MWD can comfortably trot for 5 minutes.

  - Phase 3: Trotting for Fun: After a warm-up, transition to the MWD's identified trotting speed. Continue for the desired interval and assess for K9-RPE.
  - Post-Session Protocol: Always end with a 3–5 minute cool-down walk on a 0% incline. Monitor the MWD for 15 minutes post-session.
- **Reading Your MWD:** The Canine Rate of Perceived Exertion (K9-RPE): Your primary job is to watch the dog, while also monitoring the environment. A dog's comfort level is assessed by observing a combination of factors. If you see signs of stress, stop the session.
  - Factors to Assess:
    - Harness & Position: Is the dog loose in the harness or pulling back? Is their gait smooth or sloppy?
    - Reward Interest: Are they eager for treats or are they refusing them?
    - Facial Expression: Are their eyes soft and alert or tight with a wrinkled brow?
- **Enrichment vs. Fitness on the Treadmill**: It is critical to distinguish the purpose of a given treadmill session.
  - For Enrichment ("Trotting for Fun"): The primary goal is a low-stress, voluntary outlet for species-appropriate movement. The handler focuses on the MWD's comfort, keeping the pace steady and enjoyable, and stopping if the dog shows signs of stress. This is about mental engagement and choice.
  - For Fitness Conditioning: The primary goal is to build physical endurance. This is a high-intensity activity guided by a formal progression plan, where MWDs are assessed by trotting on increasing inclines (e.g., 0%, 5%, 10%) until they reach moderate exertion. The goal is to systematically increase duration and intensity to meet specific conditioning benchmarks. This is about structured performance enhancement.
- **Safety Considerations:**
  - Handler Focus: The handler's sole attention must be on the MWD.
  - Emergency Stop: Always remain within arm's reach of the emergency stop mechanism.
  - Meal Timing: Do not conduct this activity within 30 minutes before or 60 minutes after a meal.
  - Thermal Injury: Monitor for overheating. Have cooling methods ready.
  - Fatigue: Stop immediately if the MWD shows signs of moderate exertion (K9-RPE Level 3).

5.2.4.3 Food-Based Foraging

Basic Description of the Activity: This guide outlines methods for using an MWD's daily meal ration to create enriching, species-appropriate foraging opportunities. By converting mealtime from a simple bowl feeding into a cognitive and sensory challenge, we tap into the MWD's natural instinct to scavenge and hunt for food. This not only extends the duration of their meal but also provides significant mental stimulation and encourages low-intensity physical movement. The core principle is to make the MWD problem-solve to access their food, turning a routine event into a rewarding activity.

- **Enrichment Categories Covered:**
  - Cognitive: Engages the MWD in problem-solving, learning, and memory to manipulate devices or locate scattered food.
  - Sensory: Heavily stimulates the sense of smell (olfaction) for searching, as well as taste and the tactile sensation of interacting with various objects.
  - Physical: Promotes sustained, low-intensity physical movement as the MWD explores their environment to find every piece of their meal.
- **Logistics Required:**
  - Equipment:
    - The MWD's daily ration of kibble.
    - Commercial Off-the-Shelf (COTS) Devices: KONG Wobbler, Buster Cube, Starmark Bob-a-Lot, puzzle/slow feeder bowls.
    - DIY Food-Releasing Devices (FRDs): PVC-based "Tumblers" or "Bullets."
    - Destructible Items: Clean, recycled cardboard boxes (all staples, plastic tape, and foam inserts removed).
  - Space & Building:
    - A clean area free of contaminants. The MWD's kennel run is suitable for devices.
    - A secure, fenced-in grassy area is ideal for scatter feeding. Avoid sand.
- **Step-by-Step Procedure:**
  - Phase 1: Introduction to Simple Foraging: Start with a simple device (KONG Wobbler) or an open cardboard box. Make it very easy for the dog to succeed. For scatter feeding, toss a handful of kibble in a small area while the MWD watches. Use a "Find it!" cue.
  - Phase 2: Increasing Difficulty: Introduce more complex puzzles or the PVC-based FRDs. Start loosely closing the flaps on cardboard boxes. Gradually increase the area for scatter feeding to encourage more movement.
  - Phase 3: Advanced Foraging: Use masking tape to seal cardboard boxes, requiring the dog to rip and shred. Nest smaller boxes inside larger ones. For scatter feeding, have the MWD hold a stay while you throw the kibble, then give a release command.
- **Proofing and Context: Preventing Unwanted Behaviors:** It is imperative that the MWD learns to differentiate between "enrichment time" and "work time."
  - Context is Key: Clearly define where and when these activities occur. Scatter feeding should only be done in designated enrichment areas to teach the MWD that searching for food on the ground is only appropriate in that specific context.
  - Use a Verbal Cue: For destructible enrichment, use a specific verbal release cue (such as "Take it!" or "Get your box!") before allowing the MWD to interact with the cardboard box. This cue signals that a particular object is "approved" for shredding.
- **Reading Your MWD: Frustration vs. Engagement:** The goal is productive challenge, not frustration. If an MWD is too challenged, they may disengage or

become destructive. Signs of frustration include frantic barking at the device, aggressively chewing the device itself, or giving up on the task.

- **Safety Considerations:**
  - Supervision: Always supervise the MWD during food enrichment to prevent the ingestion of non-food materials.
  - Device Maintenance: Regularly inspect all devices for cracks or sharp edges. Discard if damaged.
  - Box Safety: Only use clean cardboard. Meticulously remove ALL staples, plastic packing tape, and foam inserts.

5.2.4.4 Safer Retrieves and Herding Ball Play

Basic Description of the Activity: This guide details methods for conducting high-intensity retrieve and herding ball games that are both mentally stimulating and physically safer for the MWD than standard high-impact drills. These games tap into prey drive but must be structured to minimize the risk of injury from awkward landings, sharp turns, or sudden stops.

- **Enrichment Categories Covered:**
  - Physical: Provides structured, high-intensity activity (galloping, cantering, sprinting).
  - Cognitive: Engages the MWD in tracking moving objects, strategizing pursuit, and impulse control.
  - Social: Builds on the handler-MWD relationship through cooperative play.
- **Logistics Required:**
  - Equipment:
    - Dog-safe balls and flying discs.
    - Long tug toys (no toys on ropes).
    - Large, durable herding balls or egg-shaped toys.
    - High-value spreadable rewards for acclimation.
    - Access to proactive cooling methods and clean water.
  - Space & Building:
    - A secure, fenced-in area with a level, consistent surface that provides good footing (e.g., well-maintained grass). AVOID concrete, asphalt, or other hard surfaces.
- **Step-by-Step Procedure:**
  - A. Safer Retrieve Modifications:
    - Catch on the Bounce: Use an underhand toss to make a ball bounce once in front of the MWD, allowing them to catch it on the run at mouth height, reducing awkward jumps.
    - The "Dead Ball" Retrieve: Throw the object out of the MWD's line of sight (e.g., into tall grass) and wait for it to stop. Release the MWD with a "Find It!" cue to encourage hunting by nose, which reduces high-speed sprinting and braking.
    - The "Run-Through": The handler stands 10–15 meters away holding a large tug toy. The MWD sprints toward the handler and grabs the tug as they run past, redirecting momentum forward.

        - Disc Catch: Use only dog-safe discs. The throw is critical: it should be level and fly 3–5 feet off the ground, allowing the MWD to run and catch it without leaping high into the air.
    - B. Herding Ball Play:
        - Acclimation: The goal is to teach the MWD to nudge and push the ball with their nose and shoulders, not bite or frantically paw at it. Smear a spreadable reward on the ball to encourage nudging. Partially filling the ball with water can slow it down to encourage deliberate movement.
        - Gameplay: Once acclimated, the game is for the MWD to "herd" the ball back to you across the field. This requires problem-solving and controlled movements.
- **Safety Considerations:**
    - High-Intensity Activity: Sessions should be short, generally no longer than 20 minutes.
    - Warm-Up and Cool-Down: A dynamic warm-up (2–3 minutes) is mandatory before and a cool-down walk (2–3 minutes) is required after.
    - Fatigue & Rest: Watch for signs of fatigue (sloppy gait, slower returns). Implement a work:rest ratio.
    - Thermal Injury Risk: The risk is high. Implement proactive cooling (e.g., a dip in a pool or a hosing down) between reps.
    - Surface is Key: The surface MUST be level, free of hazards, and offer good traction.
- **Advanced Scenarios:**
    - Directional Retrieves: Set up multiple "dead ball" toys and send the MWD to retrieve specific toys using directional commands.
    - Herding Obstacle Course: Set up cones or low obstacles and have the MWD herd the ball in a specific pattern, requiring a high degree of control.

5.2.4.5 Physical Fitness Conditioning

A formal Physical Fitness Program serves as an excellent source of high-intensity physical activity and cognitive enrichment. However, its primary purpose is distinct from general enrichment; it is a structured, progressive program designed to build and assess specific fitness attributes such as strength, stability, mobility, and body awareness. The goal is to enhance operational performance and mitigate the risk of musculoskeletal injury through targeted, voluntary exercises. The detailed protocols, exercise descriptions, and progression plans for this program are covered in the dedicated "MWD Physical Fitness Program" guide and should be implemented as a separate, but complementary, part of the MWD's overall conditioning plan.

5.2.5 Resources and Record Keeping

5.2.5.1 Prioritized Equipment List

- **Tier 1 (Essential):** High-Value Rewards, Non-Slip Mats, Appropriate Muzzles, Non-restrictive Harnesses, Leashes/Long Lines, Dog-safe Toys.
- **Tier 2 (Recommended):** Powered Land Treadmill, Large Herding Balls, Cooling Vests/Mats.

- **Tier 3 (Enhancement):** Camera for recording sessions, Whiteboard for tracking, Durable Logbooks.

5.2.5.2 Tracking Progress

Handlers are required to record all physical activities and the MWD's response (e.g., signs of enjoyment, stress, fatigue) in their daily records captured in the working dog records management system.

5.2.6 Roles and Responsibilities

- **MWD Handler:** Responsible for the daily integration of physical activity, patiently applying protocols, identifying the most effective rewards, and diligently maintaining all training records.
- **Unit Leadership (Kennel Master):** Responsible for procuring and maintaining prioritized equipment, formally scheduling time for these activities, and providing active coaching and feedback to handlers.
- **Commander:** Responsible for fostering a command climate where MWD welfare and structured physical activity are paramount, and ensuring the program is properly resourced.
- **Veterinary Staff (VCO/VMO):** Responsible for providing medical clearance, offering SME input on MWD-specific needs, and assisting with developing customized activity plans.

5.3 Physical Conditioning Equipment List

1. Modified Ball Play:

- A regular ball (for predictable bounces)
- A tug toy (optional)
- A large "Jolly Ball" (optional)

2. "Play Bow" Stretch:

- A very low object (no more than 4 inches high)
- Treats

3. Hip Flexor Stretches:

- An elevated object (about 20–24 inches high)

4. Paraspinal Muscle Stretches (Figure 8s or Weaves):

- 5–6 cones or two objects to weave around (spaced 1.5–2 feet apart)

5. Balance Beam Training:

- A sanded piece of lumber (approximately 2” thick x 12” wide x 8–10 ft long)
- A stable, elevated base to place the lumber on
- A balance disc (for advanced levels 2 and 3)

Based on the "MWD Treadmill Exercise Program" document, here is a list of all the necessary equipment needed to successfully implement the program:

Core Exercise Equipment:

- Canine Treadmill: One of the three types mentioned in the document (Jog-A-Dog, Fit-Fur-Life, or AirPaws) with an emergency stop feature.
- Non-restrictive Harness: The document specifically recommends the "Blue 9 Harness" in the appropriate size for the dog.
- Adjustable Couplers: Two are required per treadmill to attach the harness to the treadmill. The "Petsafe Adjustable Coupler" is the recommended example.
- Stopwatch: To time the duration of exercise sessions and assessments.
- Cinderblocks: May be required to manually achieve specific inclines, particularly for the Jog-A-Dog treadmill model.

Handling and Safety Equipment:

- Collar and Leash: For initial introduction and walking the dog to the treadmill area.
- Muzzle: To be used if a dog shows signs of aggression.

Reward and Reinforcement Items:

- Food Rewards: A variety of low-value and high-value treats are essential for acclimation and motivation. Examples include:
    - Kibble
    - Training treats (e.g., Charlee Bear, Purina ONE)

  - Spreadable treats (e.g., peanut butter, squeeze cheese, cream cheese)
  - High-value meats (e.g., freeze-dried liver, boiled chicken)
- Lick Pad / Pup Cup: For delivering spreadable or frozen treats without interrupting the exercise.
- Toys: To be used as an alternative reward if the dog is not motivated by food.

5.4 Five Essential Warm-Up Recommendations for MWDs

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5.4.1 Modified Ball Play – Cardiovascular Warm-Up

This provides safer alternatives to centerline drills while still satisfying your MWD's play drive.

- **How to do it:** Instead of throwing a ball, start by rolling it for short, easy sprints. Alternatively, you can throw the ball, let it land, and then send the MWD from a short distance (10–15 meters). This is often called a "hunting drill." For an even safer activity, try to have the ball land where it's slightly hidden, causing the dog to slow down and search.
- **Best practices:** Use a regular ball for a predictable bounce, not an irregular object like a Kong. You can also have the dog sprint to you and take a tug toy from your hand or kick a large "Jolly Ball" for the dog to chase.
- **Duration:** Keep sprint intervals short: start with 10–15 seconds and work up to 30 seconds. Maintain short distances to prevent sharp, twisting movements that could injure the back legs.



Figure 5-2. An MWD engages in modified ball play.

5.4.2 "Play Bow" – Active Hamstring Stretch

- **How to do it:** Elevate your MWD's back feet on a very low object (no more than 4" high). Lure him to lean down and take a treat from between his front legs. This stretches his hamstrings. Your dog may try to "cheat" by stepping backward, so you might need to place his hindquarters against a wall or use your foot to block him.
- **Alternative:** The dog can also perform a play bow on flat ground. You may need to support his belly with your hand at first.
- **Repetitions:** Once the MWD knows the movement, perform 2 sets of 8–10 reps as a warm-up.



Figure 5-3. An MWD demonstrated a "play bow" stretch with rear feet elevated on a platform.

5.4.3 Hip Flexor Stretches

- **How to do it:** Lure the MWD to place his front paws on an elevated object (about 20–24" high). Encourage him to stretch forward until his back and hind legs form a nearly straight line.
- **Watch for:** Be alert for any issues like one back leg consistently stepping out to the side, refusal to perform the exercise, or a hunched/rounded back. Report these signs to your veterinarian.
- **Repetitions:** As a warm-up, perform 1–2 sets of 8–10 reps, holding each stretch for 1–2 seconds.



Figure 5-4. An MWD demonstrates a hip flexor stretch.

5.4.4 Paraspinal Muscle Stretches – Figure 8s or Weaves

This exercise improves spinal flexibility and body awareness.

- **How to do it:** Have your MWD weave through 5–6 cones or in a figure-8 pattern around two objects spaced 1.5–2 feet apart. Start at a slow pace and work up to a brisk walk. You can get creative by having the dog weave between your legs or chair legs.
- **Best practices:** Encourage tight turns to get the most benefit for spinal movement.
- **Repetitions:** Begin with 1 set of 5–6 reps and work up to 2 sets of 8–10 reps.



Figure 5-5. MWDs demonstrate figure 8s (left) and weaves (right).

5.4.5 Balance Beam – Core & Proprioception Training

This exercise is excellent for body awareness, core strength, and balance. All movements should be performed slowly, forcing the MWD to use strength, not momentum.

- **Equipment:** Use a sanded piece of lumber (approx. 2” thick x 12” wide x 8–10 ft long) placed securely on a stable, elevated base.
- **Progression:**
  - Walks: Have the MWD walk across the beam several times.
  - Holds: Teach him to stop and stand still in the middle, working from 10 seconds up to 30 seconds.
  - Sit-to-Stands: On the beam, have him perform sit-to-stand reps, working from 2–3 reps up to 8–10.
  - Turns: Teach him to turn 180 degrees. This may need to be taught on a wider surface first.
- **Levels of Difficulty:** This exercise has three levels. Do not advance to the next level until the MWD can perform the 180-degree turns with ease.
  - Level 1: The beam is stable on both ends.
  - Level 2: One end is unstable (place a balance disc under it).
  - Level 3: Both ends are unstable.
- **Duration:** Spend about 1–2 minutes on each activity (e.g., 8–10 reps or a 30–60 second hold). Aim for a total of two 3–5 minute sets on the balance beam.



Figure 5-6. An MWD demonstrates the balance beam exercise.

5.5 MWD Treadmill Exercise Guidelines

5.5.1 Purpose

The following section serves as a set of guidelines and standards for preparation, acclimation, reward, foundational conditioning, and contraindications pertaining to treadmill exercise for MWDs. The relevant background for principles of practice of treadmill exercise will be reviewed and followed.

5.5.2 Preparation

5.5.2.1 MWD Candidate Determination

Behavior

The majority of MWDs can acclimate to walk at a moderate pace on a flat treadmill within two sessions. MWDs should not be pressured to continue acclimation if they are showing behaviors of severe anxiety or show anxiety that interferes with correctly walking on the treadmill beyond the first two sessions. Acclimation to trotting is not generally a behavioral concern once MWDs are consistently able to walk on a treadmill. However, learning to consistently perform the trotting, rather than a pacing gait, may require some initial effort and speed manipulation within the recommended range for trotting, and can usually be achieved within one session.

The following are criteria for involving the VCO/VMO in the initial acclimation of the MWD to the treadmill, or in rare cases may render the MWD a poor candidate for treadmill use:

- Intense anxiety with the moving treadmill, to include repeated attempts to escape over the side rails, refusal to walk, lunging forward, clawing at the belt and/or inability to walk with a proper gait, attempting to sit or lie down, or significant aversion to approaching the treadmill, harness, or area containing the treadmills.
- Continued expression of minor levels of any of the above behaviors after the second treadmill acclimation session.
- Repeated biting at the equipment control panel, belt, straps, treadmill rails, or other equipment.
- Repeated incidents of urination/defecation on the treadmill.
- Aggression necessitating the use of a muzzle with handling.

The treadmill must be treated as a rewarding experience. Compulsion, dragging, or rough handling are prohibited unless personnel are in immediate danger from an MWD, and such handling is required for defense. The main form of reward that will be utilized for acclimation to the treadmill will be food. Use of praise, positive tone and positively reinforcing touch are also encouraged, depending on the MWD. The use of toys is prohibited unless the MWD is unresponsive to food or praise. If neither form of reinforcement works, the MWD must be evaluated with the toy by a Kennel Master or VCO/VMO to ensure appropriate use and reward frequency can be maintained to elicit proper treadmill exercise.

If an MWD is deemed to be a candidate for the treadmill but is not able to be acclimated after two sessions with the use of food, positive verbal encouragement or physical touch, the Kennel Master or Trainer should consult with the attending VCO/VMO.

5.5.2.2 Medical Status

- No MWD of a Deployment Category III or IV will be allowed to exercise on the treadmills unless specifically authorized in writing by the responsible VCO/VMO.
- Approval from the responsible VCO/VMO should be obtained for all MWDs prior to enrolling in exercise on the treadmills.
- If MWD is showing any lameness, he/she must not be exercised on the treadmill. If lameness, reluctance to walk or run, or other abnormal gait are observed while the MWD is on the treadmill, the treadmill session should be immediately discontinued, and normal procedures for sick calls should be followed with the responsible VCO/VMO.

5.5.2.3. Preparation of the MWD

MWDs should have a break outside and should have been given time to eliminate prior to entering the treadmill exercise. If MWDs soil the treadmill, it can be difficult to remove urine and feces from underneath the belt to completely sanitize the equipment, which will be required to prevent spread of infectious diseases and to prolong the treadmill's working life.

Harness Placement on MWD: MWDs must wear a non-restrictive harness attached by the treadmill to couplings (Appendix A) when exercising on the treadmill. They should not be walked on the treadmill using only collar and leash.

5.5.3 Treadmill Functional Operation

- MWDs must always be loaded onto the treadmill with the treadmill belt at a stop until the MWDs are harnessed in place, connected to the treadmill at the two required points of contact, and the caretaker is positioned in front of the treadmill (or to the side of the dog as required initially in some cases).
- The treadmill should always be started at the lowest speed, then slowly raised to the appropriate speed for the current stage of acclimation or training.
- The treadmill should be oriented so that the handler is able to rest at the front, maintaining the MWD's attention centrally at the front and reducing the likelihood of drifting to one side or the other. There should not be a wall close to the front of the treadmill to allow the handler space and to avoid giving the MWD the impression of running into a wall.
- The treadmill should be oriented to minimize distractions (such as additional handler-dog teams walking by) behind the MWD, as he/she will repeatedly try to turn and look at or move towards the distractions, disrupting the normal gait and increasing risk of an accident.
- The handler should maintain a position in front of the treadmill (1–2 feet, within reach of the emergency pull cord but not so close that the MWD lunges) after the

MWD is acclimated. Alternate positions such as at the “heel” may be temporarily required in early acclimation to walking and trotting on a case-by-case basis.

- Operating Parameters for each treadmill can be found in Appendix B (section 5.7).

5.5.4 Reward Provision During Exercise

The following are examples of food rewards that may be useful for assisting with MWD acclimation and early training to exercise on a treadmill. The foods are separated into lower-value and higher-value foods, as dogs will often require a higher-value reward initially to overcome their anxiety about the new task/environment and can then be transitioned to a lower-value reward as they become more comfortable. This is to prevent hyperactivity in response to the high-value reward once the MWD becomes more comfortable with the tasks. MWDs will typically not require continuous administration of a reward once they have completed acclimation. However, reward offering will be used as described later in this protocol to assess the MWD’s perceived exertion during treadmill exercise.

It will be important to initially offer the reward consistently (at a high frequency of reinforcement – reward every 2–3 seconds). Then, gradually decrease the interval between treat provisions if the dog remains interested and focused on the provider/handler. Once the MWD can walk on the treadmill for up to 30 seconds without reward and his gait is not disrupted by signs of distress, the reward can then be offered more periodically/intermittently. After the MWD can consistently remain comfortable between rewards for periods of up to 30 seconds, the rate at which the food reward is offered should be varied to “keep the MWD guessing” about when the next reward will arrive Typically, dogs can become familiarized to a treadmill within two sessions, after which a lower value treat may be able to be offered. Reward use will change when MWDs are at the conditioning stage and are reaching a higher level of fatigue (see Records of Perceived Exertion (RPE) and use of reward in the K9-RPE appendix).

- Solid or firm treats can be difficult to chew when MWDs are intensely exercising. Intermittent provision of a spreadable or frozen reward on a “lick plate,” “pup cup”, or other item that encourages licking at the reward, rather than chewing it, will interfere much less with the exercise.
- The responsible VCO/VMO must authorize the use of a variety of food rewards for each MWD under his/her AO. Some MWDs may have dietary sensitivities, food allergies, and/or other disorders that require exclusive use of a specialized diet. The Hill’s Hypoallergenic HA Treats should be the only food reward offered in those cases, unless the responsible VCO/VMO authorizes an alternative option.
- An MWD should not receive more than 10% of his daily calories from treats. If weight maintenance is of particular concern for certain MWDs, this must be carefully regulated. Calorie content of common rewards is detailed below. The responsible VCO/VMO can identify a particular MWD’s overall calorie content and make recommendations about volume of food rewards. ***NOTE: If treats are used short-term (1–2 weeks’ duration) for treadmill exercise, the calorie content is unlikely to play a significant role.

- Exercise only contributes to about 15% of daily calorie use. Adding treadmill exercises may make a small contribution to the MWD's caloric needs, but the change is not typically dramatic. The caloric needs should be addressed by the responsible VCO/VMO based on routine monthly weight monitoring, or more frequent monitoring as directed by the VCO/VMO.
- Food reward option examples are available in Appendix C.

5.5.5 Assessment Tools

Assessment of each MWD's cardiovascular fitness will occur after each phase of initial treadmill introduction and will inform whether the MWD is ready to progress to the next phase or level. The tool utilized for the assessment will be the K9-RPE, which can be undertaken by experienced handlers, trainers and kennel masters upon training.

5.5.6 MWD Acclimation and Conditioning

Acclimating the MWD to the treadmill occurs in two phases.

1. Phase 1 – Walking Acclimation. The first phase starts with introduction to the treadmill and ends with the MWD being able to walk for 5 minutes at a moderate pace on a flat treadmill with no behavioral signs of anxiety and a Level 1–3 K9-RPE. The details of this phase are in Appendix D.

2. Phase 2 – Trotting Acclimation. The second phase starts after the first phase and ends with the MWD being able to trot for 5 minutes at a moderate pace on a flat treadmill with no behavioral signs of anxiety and a Level 1–3 K9-RPE. The details of this phase are in Appendix E.

All personnel acclimating and conditioning MWDs must be familiar with the difference between a trotting and pacing gait. The trot is the required gait, and in this gait the front and rear legs on the same side move in opposite directions (away from each other and then towards each other. The pace is an undesirable gait, and in this gait the front and rear legs on the same side move in the same direction (both towards the rear and then both towards the front. Examples of these gaits are shown below. If the MWD paces during trotting acclimation, attempt to have the MWD switch into a trot by increasing the speed or gently destabilizing the MWD with a food reward offered to one side or above the head.



Figure 5-7. This MWD is trotting. The legs on the near side are moving away from each other, and the legs on the far side are moving towards each other.



Figure 5-8. The MWD on the right is pacing. The legs on the MWD's right side are moving together towards the rear, and the legs on the MWD's left side are moving together towards the front.

Conditioning the MWD using the treadmill occurs in three pairs of assessment and conditioning phases.

3. Phase 3 – Basic Endurance Assessment. The first step in conditioning the MWD is conducting an initial assessment to determine the MWD's low-level cardiorespiratory and muscular endurance to guide subsequent conditioning and track progress. This phase begins after the MWD completes Phase 2 and is comfortable trotting on the treadmill.

This assessment has the MWD trot on a 0% incline until they show the first sign of a Level 4 K9-RPE or they complete 30 minutes. The details of this assessment are in Appendix F.

4. Phase 4 – Basic Conditioning Program. The first phase of the conditioning program develops the MWD's low-level cardiorespiratory and muscular endurance and lays the foundation for more intense future training. The MWD's starting point in this program is determined by the Initial Endurance Assessment. The end state of this program is a 30-minute trot on a 0% incline with a Level 1–3 K9-RPE. The structure of this program is 3–5 weekly sessions of increasing duration at a moderate trot on a 0% incline with a Level 1–3 K9-RPE. The details of this program are in Appendix G.

5. Phase 5 – Intermediate Endurance Assessment. The next step in conditioning the MWD is conducting a second assessment to determine the MWD's intermediate-level cardiorespiratory and muscular endurance to guide subsequent conditioning and track progress. This assessment has the MWD trot on a 5% incline until they show the first sign of a Level 4 K9-RPE or they complete 30 minutes. The details of this assessment are in Appendix H.

6. Phase 6 – Intermediate Conditioning Program. The second phase of the conditioning program develops the MWD's intermediate-level cardiorespiratory and muscular endurance and lays the foundation for more intense future training. The MWD's starting point in this program is determined by the Initial Endurance Assessment. The end state of this program is a 30-minute trot on a 5% incline with a Level 1–3 K9-RPE. The structure of this program is 3–5 weekly sessions of increasing duration at a moderate trot on a 5% incline with a Level 1–3 K9-RPE. The details of this program are in Appendix I.

7. Phase 7 – Advanced Endurance Assessment. The next step in conditioning the MWD is conducting a third assessment to determine the MWD's advanced-level cardiorespiratory and muscular endurance to guide subsequent conditioning and track progress. This assessment has the MWD trot on a 10% incline until they show the first sign of a Level 4 K9-RPE or they complete 30 minutes. The details of this assessment are in Appendix J.

8. Phase 8 – Advanced Conditioning Program. The third phase of the conditioning program develops the MWD's advanced-level cardiorespiratory and muscular endurance and lays the foundation for more intense future training. The MWD's starting point in this program is determined by the Advanced Endurance Assessment. The end state of this program is a 30-minute trot on a 10% incline with a Level 1–3 K9-RPE. The structure of this program is 3–5 weekly sessions of increasing duration at a moderate trot on a 10% incline with a Level 1–3 K9-RPE. The details of this program are in Appendix K.

5.5.7 Warm-up and Cool-down Procedures:

Once the MWD has completed acclimation phases and is ready to begin the conditioning phases on the treadmill, it will be critical to incorporate warm-up and cool-down procedures before and after the treadmill exercise, respectively.

The warm-up protocol is described in Appendix L, and the cool-down protocol for all phases consists of a 3–5 minute walk on the treadmill at the MWD's comfortable walking pace, at 0% incline.

5.5.8 Canine Record of Perceived Exertion during Treadmill Exercise

The Canine Record of Perceived Exertion (K9-RPE) (Appendix M) will be utilized during all phases of treadmill exercise beginning with Phase 2 – Trotting Acclimation. K9-RPE will assist in determining the MWD's fitness level during the Basic, Intermediate, and Advanced Endurance Assessments and will assist in progression within the Basic, Intermediate, and Advanced Conditioning Programs.

Kennel Masters and Trainers will assist handlers in assessing K9-RPE during the Basic, Intermediate, and Advanced Endurance Assessments, and handlers will assess K9-RPE during each conditioning session to guide progression to the next level.

5.5.9 Safety and Precautions

- Handlers must always be attentive to the MWDs on the treadmills. They must not be on their phones and must not walk away from the exercising MWD. The handler, or designated substitute (in case of need to step away) should always be within arm's reach of the emergency pull shut-off cord or power button on the treadmill.
    - MWD should not exercise on the treadmill within:
        - 1 hour before or after feeding
        - 1 hour before or after training
- The MWDs will be getting much of their cardiovascular exercise via the treadmill according to this program. Therefore, it is important to emphasize to handlers that any additional cardiovascular exercise outside of training should be considered for enrichment purposes only, or as a brief warm-up to training, and should consist of up to 5 minutes of activity/play. This may include centerline drills or other exercise involving a toy reward and chase.
- If handlers are instructed or request to run with their MWDs weekly and the run is at least 20 minutes in length, this should substitute for a treadmill session for the week.
- Kennel Masters and Trainers should be prepared to adapt treadmill exercise requirements within the context of the MWD's overall activity, which may vary from week to week. Treadmill sessions may need to be adjusted if MWDs participate in an unusually heavy training burden on a given day or period of days, and/or if the MWDs demonstrate the maximum level of exertion as described above earlier than expected during their treadmill exercise, due to fatigue from combined efforts made during heavy training.

5.5.10 Responsibilities

The responsibility for MWD selection and clearance to perform treadmill conditioning falls on the VCO/VMO responsible for the participating kennel. A Kennel Master or Trainer will be present for initial acclimation, movement from acclimation to foundational training, and at each assessment point identified in the protocol. An MWD handler will be always present when the MWD is exercising on the treadmill and is responsible for assessing the MWD's perceived exertion upon changes in intensity after being trained to perform this task. The handler is also responsible for performing a brief evaluation of the MWD before each session to ensure no lameness, signs of illness or other changes are present that may impact the MWD's ability to exercise on the treadmill. The handler will ensure that the MWD is properly warmed up before exercise and cooled down after exercise. The handler will maintain detailed records of each training session in a format designated by the developers of this SOP. The Kennel Master or Trainer will oversee the training documentation to ensure accuracy and compliance. A DoW DACVSMR (sports medicine and rehabilitation specialist veterinarian) will be responsible for developing and maintaining this SOP, for video analysis and/or consulting as needed. The Kennel Master or Trainer will ensure all personnel read and understand the procedures and policies within this SOP.

5.5.11 References

TB-MED 298: U.S. Army Veterinary Services, Veterinary Care and Management of the Military Working Dog. 2019.

Millis, D; Levine, D. Canine Rehabilitation and Physical Therapy, 2nd Ed. 2014.

5.6 Early Recognition, Management, and Risk Mitigation of Heat Injury in MWDs

Produced by: Dr. Andrea L. Henderson, DVM, MS, DACVSMR and LTC Brian D. Farr, DVM, MSTR, DACVSMR (Canine), DACVPM

5.6.1 Heat Injury Impact on MWDs

Heat injury is a critical issue that significantly impacts the health and service longevity of Military Working Dogs. Understanding its consequences is the first step toward effective prevention.

- **Leading Cause of Lost Service:** Heat injury is a leading cause of lost MWD service life and is one of the five most prominent causes of service discharge in the DoW.
- **Significant Cost:** Heat injury results in the loss of dozens of MWD service years and an estimated financial cost of over $5.0M every fiscal year.
- **Reduced Service Life:** The average service life of an MWD medically discharged for heat injury is significantly shorter than the required service duration, representing a substantial loss of capability and investment.

5.6.2 Heat Injury Risk Factors

Assessing risk requires a multi-faceted approach, considering environmental conditions, activity-based restrictions, and individual dog characteristics.

5.6.2.1 Environmental Risk Factors

- High ambient temperature and/or humidity
- Confinement in poorly ventilated areas (crates, trailers)
- Direct sun exposure
- Hot surfaces (asphalt, concrete)
- Low or reduced airflow

5.6.2.2 Heat Loss Restriction Factors

- **Mouth Obstruction:** Carrying a reward (e.g., Kong), bite work (sleeve/suit), or wearing a restrictive muzzle.
- **Airway Obstruction:** Disease, specific airway anatomy, or pulling on a leash that constricts the trachea.
- **Worn Gear:** Harnesses, protective equipment (booties, goggles), etc., that trap heat.

5.6.2.3 Dog-Specific Risk Factors

- **Breed:** Some breeds, such as the Belgian Malinois, are at a significantly higher risk than others, like the German Shepherd.
- **Individual Traits:** Genetics, dehydration, being overweight, poor physical fitness, and certain behaviors (high drive, excitability, anxiety) increase risk.

- **Acclimatization:** Lack of acclimatization to a new, hotter environment is a major risk factor.

Table 5-2. Heat Injury Environmental Risk Chart

<30% RH	Very low	Very low	Very low	Very low	Low	Moderate
30–40% RH	Very low	Very low	Very low	Low	Moderate	Moderate
40–50% RH	Very low	Very low	Very low	Moderate	Moderate	High
50–60% RH	Very low	Very low	Low	Moderate	High	High
60–70% RH	Very low	Very low	Low	High	High	Very high
70–80% RH	Very low	Low	Low	High	Very high	Very high
80–90% RH	Very low	Low	Moderate	Very high	Very high	Very high
90–100% RH	Very low	Low	High	Very high	Very high	Very high

*Weather conditions should be monitored throughout training by dedicated personnel and communicated regularly to MWD trainers in field operations. A WBGT meter or local weather application should be used to determine temperature (T) and relative humidity (RH), but the source must be standardized.

** Sample heat injury environmental risk factor chart based on heat injury case data collected at JBSA-Lackland. Individual environmental, animal care and training practices may require adjustments unique to each kennel:

5.6.3 Heat Injury Progression and Early Signs

Observation of behavior and appearance—not body temperature—is the key to early identification and treatment. Rectal temperature is not well-correlated with clinical risk in MWDs. Heat injury progresses through the following stages:

- **Working Condition:** The dog is performing normally with moderate, controlled panting.
- **Heat Stress (Mild Heat Injury):** The dog shows reduced performance, shade-seeking behavior, and loss of focus.
- **Heat Exhaustion/Stroke (Severe Heat Injury):** The dog exhibits uncontrolled panting, stumbling, lethargy, dull mental status, or collapse.

Table 5-3. Detailed Behavioral Recognition of Heat Injury Signs

Stage	Performance/ Mental Status	Ears	Eyes	Lips	Tongue	Face	Panting	Movement
Cool dog	Normal	Normal color	Relaxed	Minimally retracted	Partially extended	Relaxed	Minimal, will stop	Normal
Warm dog	Normal	Red, up, and forward	Relaxed	Partially retracted	Extended but flat	Relaxed	Moderate, will stop	Normal
Heat stress (exertional hyperthermia?)	Delayed return with reward, offering alternative behaviors (e.g. sniffing, urinating), Shade seeking, loss of focus	Back	Squinted	Fully retracted	Extended and scooped	Worried forehead	Heavy, will stop	Normal
Heat exhaustion	Shade seeking, loss of focus with dull or lethargic mental status	Same	Same	Same	Same	Same	Heavy, will NOT stop	Stumbling
Heat stroke	Same with dull or lethargic mental status, abnormal or delayed responses to stimulation, seizures	Same	Same	Same	Same	Same	Same	Collapse

*Items in red are critical staging indicators.

5.6.4 Heat Injury Risk Reduction and Prevention Strategies

Modify workloads and observation frequency based on the assessed risk level.

These are maximum recommended continuous work durations assuming a young, fit dog with no concurrent medical issues.

Table 5-4. Workload Modifications Based on Risk Levels.

Risk Level	Easy Work (e.g., loose-leash walking)	Moderate Work (e.g., detection training)	Hard Work (e.g., bitework)
Very Low	N/A	N/A	N/A
Low	N/A	N/A	Up to 25 min
Moderate	Up to 45 min	Up to 30 min	Up to 15 min
High	Up to 30 min	Up to 20 min	Up to 10 min
Very High	Up to 15 min	Up to 10 min	Up to 5 min

General Prevention

- **Pause and Observe:** Implement short (30–60 second) breaks to observe the MWD for signs of HI. The frequency should increase with the risk level (e.g., every 30 mins for Low Risk, every 5 mins for Very High Risk).
- **Proactive Cooling:** In Moderate or higher risk conditions, pre-cool all MWDs before activity and cool them during every observation interval.
- **Airway Management:** Minimize activities that cause airway obstruction (e.g., prolonged holding of rewards, pulling on leash) in High/Very High-risk conditions. Use head halters for leash walking if needed and ensure muzzles (e.g., Baskerville) allow for maximum airflow.
- **Environment:** Conduct training in shaded or climate-controlled areas whenever possible. Avoid staking out MWDs in the sun and minimize time in poorly ventilated trailers or crates.



Figure 5-9. An example of warm dog – monitor and continue.

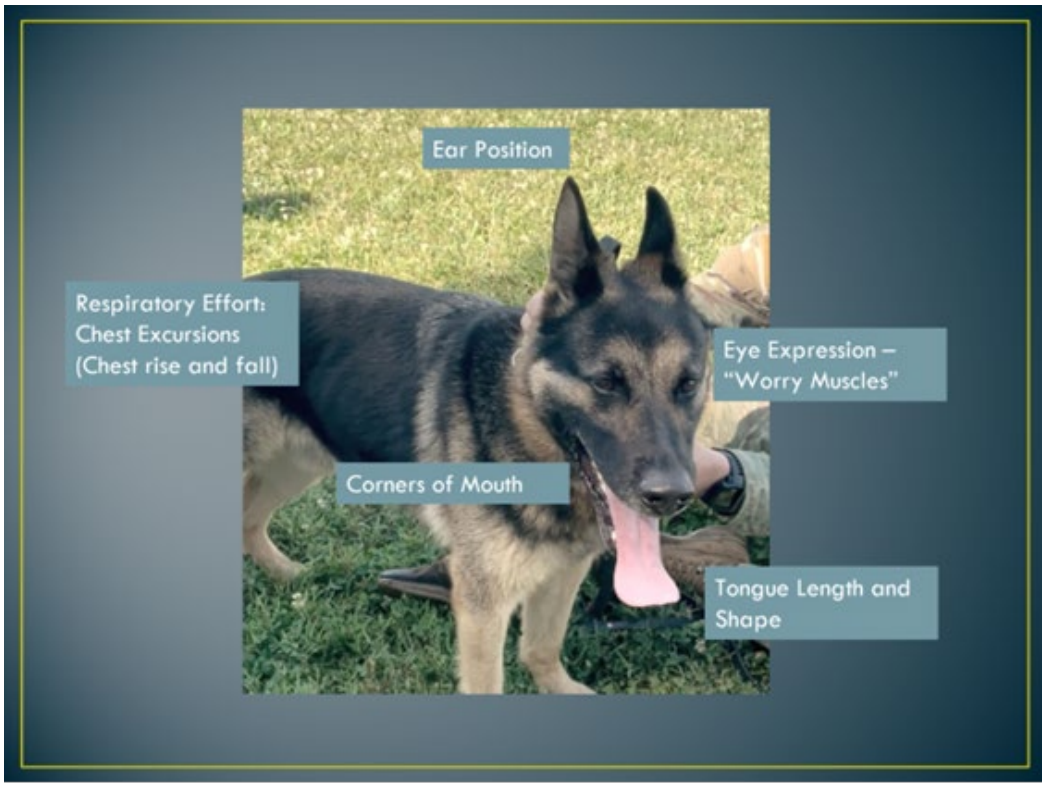


Figure 5-10. An example of exertional hyperthermia – initiate cooling measures.

5.6.5 Cooling Methods

The recommended method is soaking the MWD to the skin with large quantities of water.

- Voluntary Immersion (Preferred):
  - Use a pool deep enough (12–24 inches) to cover the majority of the dog's body.
  - Condition the MWD to voluntarily enter the pool and lie down.
  - Use cool, shaded water. Adding ice is not recommended as it is inefficient and not supported by scientific literature for cooling overheated dogs.
  - Clean pools regularly and do not use them for MWDs with wounds or giardiasis.
- Soaking with a Hose:
  - A feasible option for pre-cooling but less optimal for cooling a hot MWD.
  - Use a "shower" type nozzle to maximize coverage and moderate pressure.
  - Soak the dog to the skin from the neck down, paying attention to the underside, armpits, and groin.
  - Do not use this method on dogs with an aversion to hoses.

Note: Air conditioning and fans are supplemental aids; they are not primary cooling methods.

5.6.6 Hydration

Proper hydration is essential for reducing heat injury risk.

- **Pre-Hydration is Key:** The most important time to support hydration is in the 6–24 hours prior to activity. Ensure continuous access to water.
- **During Activity:** Provide access to water at least every 15 minutes.
- **Encourage Drinking:** Fresh, novel water (e.g., with ice chips, small food pieces, or veterinary-approved flavoring) can encourage intake. Do not add these to cooling pools.

5.6.7 Post-Activity Monitoring & Cool-Down

A dog’s core body temperature continues to rise for 8–10 minutes after activity stops. This effect is worsened by confinement and a stimulating environment. Active cooling is crucial.

5.6.7.1 Post-Activity Cool-Down

- This section describes methods to be used with MWDs that are NOT showing signs of a Heat Injury. MWDs showing these signs should be cared for as described in the next section “Heat Injury Response.”
- Any MWD showing signs of being hot (working condition) and every WD performing activity in moderate or higher heat injury risk conditions should be proactively cooled after activity.

- MWDs should be walked (on leash with a loose leash) in a shaded and well-ventilated area for about one minute to support respiration and mental transition from activity.
- MWDs that are heavily panting due to strenuous physical activity should be walked for an additional 1–2 minutes.
- MWDs should have non-essential protective (e.g., booties or goggles) or operational (e.g., harness or muzzle) gear removed before or during this initial period.
- MWDs should not have objects (e.g., toy reward or bite sleeve) in their mouths during this period.
- MWDs should not be discouraged from drinking water, but hydration is not the primary goal of this period.

5.6.7.2 Post-activity cooling (4–10 minutes post-activity)

- After completing the initial post-activity period above, MWDs should be actively cooled using either immersion (preferred) or soaking with a hose. MWDs should be encouraged to drink water while being cooled.
- MWDs should be actively cooled for approximately 3–5 minutes or until most of the "working temperature" signs have resolved.
- Post-activity monitoring (5+ minutes post-activity) steps:
- During high and very high heat injury category conditions, MWDs should be continuously monitored for 15 minutes after the end of activity. This can be done while remaining in the cooling pool, loose leash walking in a shaded and well-ventilated area, or when returned to a permanent, temporary, or mobile housing that meets the DAFI 31-126 requirements.

5.6.7.3 Monitoring (15+ mins post-activity)

- In High/Very High-risk conditions, continuously monitor the MWD for at least 15 minutes after activity, even after cooling.

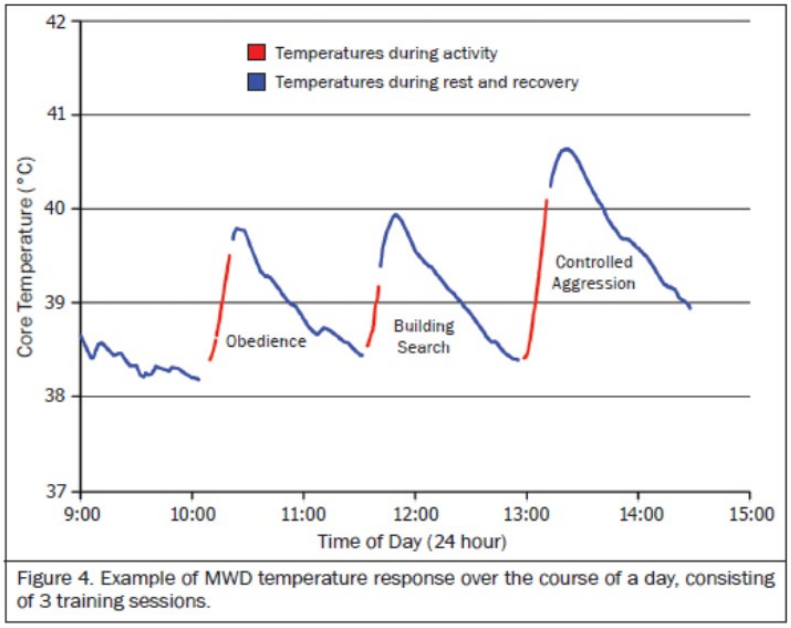


Figure 4. Example of MWD temperature response over the course of a day, consisting of 3 training sessions.

Figure 5-11. Ongoing rises in MWD temperature after cessation of activity. From O'Brien et al, Core Temperature Responses of Military Working Dogs During Training Exercises and Walks, 2017

- This duration is decreased to 15–20 minutes with the use of partial immersion cooling methods.
- This duration is believed to further decrease with the use of the recommended cooling methods, and especially full body immersion.
- An MWD with a core body temperature elevated 3–4 degrees over normal would take a total of 45–60 minutes to return to normal.
- This duration is believed to be increased by post-activity housing that does not meet requirements and/or does not have supplemental thermoregulation support.
- This duration is decreased with effective cooling, reducing overall heat strain (time spent with elevated core body temperature), thus enabling more rapid return to activity.

5.6.8 Heat Injury Response

5.6.8.1 Mild Heat Injury (Heat Stress)

Action: Cool First, Consider Transport.

1. **Stop, Shade, Strip:** Immediately stop activity, move to a shaded area, and remove all non-essential gear.
2. **Wet and Windy:** Begin active cooling via immersion (preferred) or hosing.
3. Document & Notify: Begin documenting signs (video or notes) and notify veterinary staff immediately. Follow their directions.
4. **If Vet Staff is Unreachable:** Continue cooling until the rectal temperature is 103°F. Then, dry the MWD and transport them for evaluation.

5.6.8.2. Severe Heat Injury (Heat Exhaustion or Heat Stroke)

Action: Cool First, Transport Second. This is a medical emergency.

1. **Immediate Cooling:** Do not delay transport for cooling but begin active cooling immediately via immersion or hosing. If a pool is not immediately available, begin transport while soaking the MWD.
2. **Transport:** Transport to the veterinary clinic by the most rapid means available.
3. **Document & Accompany:** A person familiar with the incident should accompany the MWD with all documented records.
4. **After-Hours Incidents:** Contact the on-call veterinary personnel and follow their guidance precisely. Continue cooling until rectal temperature is ≤103°F before or during transport as directed.

5.6.9 References

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Gogolski SM, O'Brien C, Lagutchik MS. Retrospective analysis of patient and environmental factors in heat-induced injury events in 103 military working dogs. *J Am Vet Med Assoc.* 2020; 256(7):792–9.

Hall EJ, Carter AJ, Chico G, Bradbury J, Gentle LK, Barfield D, O'Neill DG. Risk Factors for Severe and Fatal Heat-Related Illness in UK Dogs-A VetCompass Study. *Vet Sci* 2022; 9(5):231.

O'Brien C, Karis AJ, Tharion WJ, Sullivan HM, Hoyt RW. Core temperature responses of military working dogs during training activities and exercise walks. *US Army Med Dep J.* 2017; 3-17:71–78.

5.7 MWD Treadmill-Based Endurance Fitness Program

Appendix A: MWD Treadmill Exercise

Harness and Coupling Equipment and Attachment

Harness and Coupling Equipment

- Blue 9 Harness: M/L for average (most) MWDs, L for above-average MWDs, and M for small MWDs.



Figure 5-12. The Blue 9 Harness and sizing chart.

- Coupler (2 per treadmill) - Petsafe Adjustable Coupler or similar recommended:



Figure 5-13. The Petsafe Adjustable Coupler.

Harness and Coupling Attachment to Treadmill and MWD

- The harness should be attached to the treadmill as pictured below.
- There should be a clip from the O-ring on the front of the harness (in the MWD's pectoral/chest area) to the side of the treadmill, and a clip from the O-ring on the MWD's mid-back area to the opposite side of the treadmill.

- There should be approximately 12 inches of play forward and backwards so that the MWD has the flexibility to walk closely to the front or to the rear of the treadmill. This will be a key component of handler determination of the MWD's exertion level.



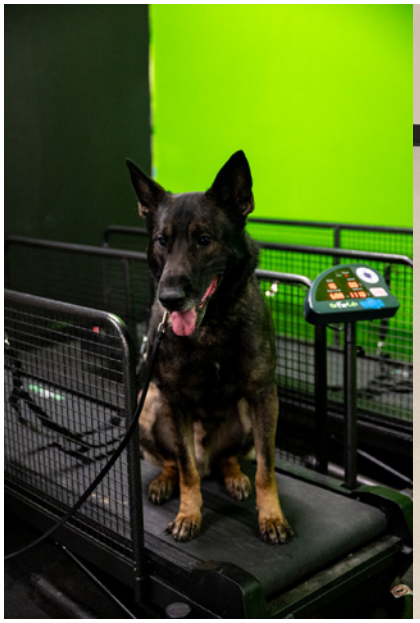




Figure 5-14. Treadmill and Coupler Setup from side (above), front (below, left) and top (below, right)

Appendix B: Operating Parameters for 3 Types of Treadmills Used for MWD Exercise

Table 5-5. Operating Parameters for Jog-A-Dog, Fit-Fur-Life, and AirPaws Treadmills

Treadmill Parameter	Jog-A-Dog	Fit-Fur-Life	AirPaws
Minimum (starting) Speed	1.0 mph	0.3 mph	0.8 mph
Speed Range on Control Readings (Actual speed in parentheses)	0–100 (0.0 to 12 mph)	0.3–12.4 (0.3 to 12.4 mph)	1.8–13.3 (0.8 mph to 12.5 mph)***
Incline Range	0%, 4%, 8%, 12% (manual)	-1.75% to 3.5% (Levels -5–10 on control panel)	0% to 13% (Levels 0–15 on control panel)
Method to Achieve 0% Incline	Manual: Prop horizontal bar at rear of treadmill in max elevated position.	Automatic: Level 0 on control panel	Automatic: Level 0 on control panel
Method to Achieve 10% Incline	Manual: Set to 8% incline and apply low partial cinderblocks	Set to Level “8” for incline on control panel; prop on horizontal cinderblocks	Set to Level “9” on control panel
Emergency Stop?	Yes – power switch on control panel – will stop belt instantly if turned off.	Yes – magnetic pull cord on control panel. Treadmill will not start if not in place.	Yes – magnetic pull cord on control panel. Treadmill will not start if not in place.
Treadmill Length	72 inches	78 inches	70 inches
Control Panel Location	Mobile box	Affixed at right side (when facing MWD) of front of treadmill	Affixed centrally to horizontal bar at treadmill front.
Additional Comments	Highly robust	Maintains incline when paused.	***NOTE: This treadmill runs approximately 1 mph faster than what the control panel reads!

Appendix C: Food Rewards for MWDs During Treadmill Exercise

Table 5-6. Food Rewards, Value Levels, and Calories for MWDs During Treadmill Exercise

Food Reward	Value Level	Calories
Kibble (from MWD's actual diet	Low (usually lowest)	Dependent on diet – 350–580 calories per cup
Hill's "Hypoallergenic HA Treats"	Low	17 calories per treat
Charlee Bear Treats (variety of flavors)	Low	3 calories per treat
Commercial Dog Training Treats	Low or High (depends on flavor/moisture content and dog preference)	Varies; example: Purina ONE True Instinct Training Treats (Chicken and Venison flavors): 2.5 calories per treat
Peanut Butter: *****Note – some brands of peanut butter, typically not the major name brands, may contain xylitol, an artificial sweetener that is very toxic to dogs! ALWAYS check with the VCO/VMO for safe brands of peanut butter to use.**	High	Example: Jiff Creamy Peanut Butter: 190 calories per 2 tablespoons. Contains NO xylitol.
Squeeze Cheese	High	Example: Kraft Easy Cheese, 190 calories per 2 tablespoons. Note – Kong also makes squeeze cheese cans for dogs, and some may prefer certain flavors (e.g., cheddar with bacon).
Cream Cheese	High	Example: Philadelphia Whipped Cream Cheese spread: 50 calories per 2 tablespoons
Freeze-Dried Liver (Beef, chicken)	High	110–170 calories per oz (depending on source/animal type)
Boiled, grilled or roasted chicken WITHOUT seasoning (NO garlic, onion, or herbs)	High	120 calories per 3.5 oz (boiled), 170–180 calories per 3 oz (rotisserie)
Frozen chicken broth	High	10v15 calories per cup, more if other treats are frozen within
"Fresh Pet" - variety of flavors	High	About 150 calories per ¼ pound

Lick Pad example (for delivery of sustained treats that can be smeared, e.g., peanut butter, squeeze cheese):



Figure 5-15. An example of a lick pad smeared with peanut butter.

Appendix D: Phase 1 – Walking Acclimation

Prerequisite: The MWD has been cleared by the VCO/VMO to conduct treadmill exercise. This appendix guides introduction of the MWD to the treadmill for the first time.

Goals: The MWD can willingly ascend and descend the treadmill from the rear and can walk comfortably at a moderate (2.0–2.5 mph) pace for 5 minutes on a flat treadmill with no behavioral signs of anxiety and a Level 1–3 K9-RPE.

Protocol

Upon the MWD's first contact with the treadmill, the MWD can be introduced to the treadmill *while the belt is not in motion* on collar and leash. Allow the MWD to explore the treadmill and offer a reward when the dog enters the treadmill and stands on the belt. It is important at this very initial stage that if the MWD wants to turn around and leave the treadmill, he should be allowed to do so on the first couple of passes. **Avoid allowing the MWD to step forward off the front of the treadmill. He should be allowed only to turn and exit from the rear of the treadmill at this stage.**

- If the MWD remains on the treadmill, reward for this behavior. The goal for this stage is to have the MWD stand on the unmoving treadmill for 8–10 seconds, willingly, with maintained interest in the offered food reward.
- Once the MWD is comfortable standing on the treadmill as above, apply the harness. Do this while the MWD is OFF the treadmill.
- Allow the MWD to ascend the treadmill with the harness on and apply the couplers to the front and top O rings as previously described, maintaining the MWD in place on the treadmill.
- When the MWD can focus on the handler/reward for 5–6 seconds without attempting to exit the treadmill (turn, jump onto the side), start the treadmill belt at the lowest setting. Attempt to vigorously maintain the MWD's attention with positive verbal and food rewards, giving the food reward to the MWD for taking steps forward on the belt and using verbal distractions when the MWD is trying to turn, jump, or demonstrate any other undesired activities.
- Increase treadmill speed slowly to 1.0 mph while continuing to reward walking behavior. Allow 30 seconds to 1 minute of uninterrupted movement, then slowly turn the speed up to achieve a moderate walking pace at 2.0 mph. Note: It may take 1–2 minutes or up to 5 minutes to work up to 2.0 mph or a moderate walking pace for the MWD.
- Aim for one 5-minute walking session, adjusting speed up to the MWD's comfortable moderate walking speed (2.0–2.5 mph) as appropriate for that individual.
- Each MWD will be different and may require 2–5 acclimation sessions to work up to Phase 2 – Trotting Acclimation (Appendix E).

Appendix E: Phase 2 – Trotting Acclimation

Prerequisite: Before starting this phase, the MWD must have completed the first acclimation phase and be able to walk comfortably at a moderate (2.0–3.0 mph) pace for 5 minutes on a flat treadmill with no behavioral signs of anxiety and a Level 1–3 K9-RPE.

Goals: The MWD will be able to trot (not in a pacing gait) comfortably at a moderate (4.0–6.0 mph) pace for 5 minutes on a flat treadmill with no behavioral signs of anxiety and a Level 1–3 K9-RPE.

Protocol

- Take the MWD for a 5-minute on-leash walk to warm-up and eliminate.
- Set the treadmill to a 0% incline.
- Have the MWD get on the treadmill and secure them using the harness and couplers.
- Increase the speed to the MWD's comfortable walking speed in the 2.0–2.5 mph range and do a 2-minute on-treadmill warm-up.
- Increase the treadmill speed by 0.5 mph and provide an increased rate of reinforcement. Continue for 30 seconds and observe the MWD's behavior.
    - If they are moderately or severely anxious, decrease the speed to the original walking pace for 30 seconds, and then try to increase the speed again.
    - If they are minimally anxious, continue at the current pace for another 30 seconds and reevaluate.
    - If they appear comfortable, increase the speed by 0.5 mph. Once 3.2 mph is reached, increase to 4.0 mph as MWDs frequently have an awkward amble at the 3.2–4.0 mph range of speed.
- Continue to increase the speed by 0.5 mph in 30 second increments until either:
    - The MWD is uncomfortable at a specific speed despite two attempts to reduce and then increase the speed again. If this happens, decrease the speed to the MWD's comfortable walking pace, do a 2-minute on-treadmill cool-down, and end the session. Repeat the format above at the next session.
    - The MWD is comfortably trotting at a moderate (4.0–6.0 mph) pace. If this happens, note the treadmill speed, and continue for up to 5 minutes. Observe for behavioral signs of anxiety and the first signs of Level 4 K9-RPE.
- If the MWD completes 5 minutes of trotting at a moderate pace with no behavioral signs of anxiety and a Level 1–3 K9-RPE, this phase is complete. Begin Phase 3 – Basic Endurance Assessment.
- If the MWD shows behavioral signs of anxiety, decrease the speed to the MWD's comfortable walking pace, do a 2-minute on-treadmill cool-down, and end the session. At the next session, do the on-treadmill warm-up, and then rapidly increase the speed to the MWD's previous comfortable trotting speed. Continue until the MWD shows signs of behavioral anxiety, the first signs of Level 4 K9-RPE,

or completes the full 5 minutes. Repeat this format until the MWD is behaviorally comfortable trotting for 5 minutes.

- If the MWD shows signs of Level 4 K9-RPE, decrease the speed to the MWD's comfortable walking pace, do a 2-minute on-treadmill cool-down, and end the session.
- At the next session, do the on-treadmill warm-up, and then rapidly increase the speed to the MWD's previous comfortable trotting speed. Do alternating 1-minute intervals at the MWD's trotting speed and walking speed. Continue these intervals until the MWD shows the first sign of Level 4 K9-RPE.
- At the next session, perform one more walk-trot interval than the last session if the MWD remains at a Level 1–3 K9-RPE.
- Continue this format until the MWD can perform 10 1-minute trotting intervals. At this point reattempt the 5-minute trotting session.

Appendix F: Phase 3 – Basic Endurance Assessment

Prerequisites: Before starting this phase, the MWD must have completed the second acclimation phase and be able to trot (not in a pacing gait) comfortably at a moderate (4.0–6.0 mph) pace for 5 minutes on a flat treadmill with no behavioral signs of anxiety and a Level 1–3 K9-RPE. The MWD must have had at least 48 hours since the last treadmill session, and this assessment should be timed to occur before strenuous training or work.

Goal: Determine the MWD's low-level cardiorespiratory and muscular endurance to guide subsequent conditioning and track progress.

Protocol

- Take the MWD for a 5-minute on-leash walk to warm-up and eliminate.
- Set the treadmill to a 0% incline.
- Have the MWD get on the treadmill and secure them using the harness and couplers.
- Increase the speed to the MWD's comfortable walking speed in the 2.0–3.0 mph range and do a 2-minute on-treadmill warm-up.
- Adjust the speed in the 4.0–6.0 mph range to the MWD's previously determined comfortable trotting speed.
- Start a stopwatch to record the elapsed time.
- Reward verbally, physically, and with food as needed.
- Continue at this speed and carefully monitor the MWD's K9-RPE.
- Stop the assessment when the MWD shows the first sign of Level 4 K9-RPE. Note the time elapsed in the assessment. Decrease the speed to the MWD's comfortable walking speed and do a 3–5 minute on-treadmill cool-down.
- If the MWD remains at a Level 1–3 K9-RPE, continue for up to 30 minutes. Then, decrease the speed to the MWD's comfortable walking speed and do a 3–5 minute on-treadmill cool-down.

Appendix G: Phase 4 – Basic Conditioning Program

Prerequisite: Before starting this phase, the MWD must have completed the Basic Endurance Assessment and have the duration for that assessment recorded.

Goal: Increase the MWD's low-level cardiorespiratory and muscular endurance to the point where the MWD can complete the Basic Endurance Assessment by trotting (not in a pacing gait) comfortably at a moderate (4.0–6.0 mph) pace for 30 minutes on a flat treadmill with no behavioral signs of anxiety and a Level 1–3 K9-RPE

Starting the Program

- The program weekly format is described at the end of this appendix.
- Use the duration of the Basic Endurance Assessment to guide where to start the protocol. Start at a session duration one lower than the duration on the Basic Endurance Assessment. For example, if the MWD completed 11 minutes on the Basic Endurance Assessment, start training on Week 7 (10 minutes).
- If the MWD completes 30 minutes of the Basic Endurance Assessment, start at Week 21. Even if the MWD is physically capable of reaching the end goal of this phase, 4 weeks of training (beginning at Week 16) will still be required before moving to the next phase.

Program Format

- Each week features 3–5 identical sessions for simplicity and to gauge the MWD's response to the training.
- Start at three sessions per week (preferably on nonconsecutive days) for at least one week. If the protocol describes and the mission allows, increase to four sessions per week for one week and then to five sessions per week.
- The MWD must complete the last session of the week at a Level 1–3 K9-RPE to progress to the next week. The duration of each session increases by approximately 10% each week.
- A consolidation week is built into the program every four weeks to promote recovery and enable continued progression. If the MWD starts the program less than four weeks before the first consolidation week, complete the consolidation week as planned.
- The last week is another iteration of the Basic Endurance Assessment to confirm the MWD can complete 30 minutes.

Training Session Format

- Take the MWD for a 5-minute on-leash walk to warm-up and eliminate.
- Perform the dynamic stretch warm-up as described in Appendix L.
- Set the treadmill to a 0% slope.
- Perform a 2-minute on-treadmill walk at the MWD's comfortable walking pace.

- Increase the speed to the MWD's comfortable trotting pace.
- Start a stopwatch to record the elapsed time.
- Reward verbally, physically, and with food as needed.
- Continue at this speed and carefully monitor the MWD's K9-RPE.
- If the MWD completes the prescribed duration with a Level 1–3 K9-RPE, decrease the speed to the MWD's comfortable walking pace for a 3–5 minute on-treadmill cool-down.
- If the MWD shows the first sign of Level 4 K9-RPE, decrease the speed to the MWD's comfortable walking pace for a 3–5 minute on-treadmill cool-down.

Progression and Missed Sessions and Weeks

- If the MWD completes at least three sessions during a week and has a Level 1–3 K9-RPE on the last session, the MWD is allowed to progress to the next week.
- If the MWD misses one or more planned sessions during a week, the MWD is allowed to progress to the next week if they complete at least three sessions that week and meet the K9-RPE requirement.
- If the MWD only completes one or two sessions during a week, the MWD must repeat the week.
- If the MWD misses 1–3 full weeks of training, the MWD must go back the same number of weeks in the program (for example, back two weeks if two weeks were missed), repeat that number of weeks, repeat the missed week, and continue the program.
- If the MWD misses four or more weeks of training, the MWD must repeat the Basic Endurance Assessment, and start training at one week lower than duration of the Basic Endurance Assessment or four weeks back from the last completed week (whichever is lower).

Program

Table 5-7. Summary of the 24 Week Basic Conditioning Program

Week	Sessions per week	Duration (min)	Week	Sessions per week	Duration (min)
1	3	5	13	3–5	14
2	3	6	14	3–5	15
3	3	7	15	3–5	17
4	3	5	16	3–5	14
5	3–5	8	17	3–5	19
6	3–5	9	18	3–5	21
7	3–5	10	19	3–5	23
8	3–5	8	20	3–5	19
9	3–5	11	21	3–5	25
10	3–5	12	22	3–5	27
11	3–5	13	23	3–5	29
12	3–5	11	24	1	30

Appendix H: Phase 5 – Intermediate Endurance Assessment

Prerequisites: Before starting this phase, the MWD must have completed 30 minutes of the Basic Endurance Assessment at a Level 1–3 K9-RPE and at least the last 4 weeks of the Base Conditioning Program. The MWD must have had at least 48 hours since the last treadmill session, and this assessment should be timed to occur before strenuous training or work.

Goal: Determine the MWD's intermediate-level cardiorespiratory and muscular endurance to guide subsequent conditioning and track progress.

Protocol

- Take the MWD for a 5-minute on-leash walk to warm-up and eliminate.
- Set the treadmill to a 5% incline.
- Have the MWD get on the treadmill and secure them using the harness and couplers.
- Increase the speed to the MWD's comfortable walking speed in the 2.0–3.0 mph range and do a 2-minute on-treadmill warm-up.
- Adjust the speed in the 4.0–6.0 mph range to the MWD's previously determined comfortable trotting speed.
- Start a stopwatch to record the elapsed time.
- Reward verbally, physically, and with food as needed.
- Continue at this speed and carefully monitor the MWD's K9-RPE.
- Stop the assessment when the MWD shows the first sign of Level 4 K9-RPE. Note the time elapsed in the assessment. Decrease the speed to the MWD's comfortable walking speed and do a 3–5 minute on-treadmill cool-down.
- If the MWD remains at a Level 1–3 K9-RPE, continue for up to 30 minutes. Then, decrease the speed to the MWD's comfortable walking speed and do a 3–5 minute on-treadmill cool-down.

Appendix I: Phase 6 – Intermediate Conditioning Program

Prerequisite: Before starting this phase, the MWD must have completed the Intermediate Endurance Assessment and have the duration for that assessment recorded.

Goal: Increase the MWD's intermediate-level cardiorespiratory and muscular endurance to the point where the MWD can complete the Intermediate Endurance Assessment by trotting (not in a pacing gait) comfortably at a moderate (4.0–6.0 mph) pace for 30 minutes on a treadmill with a 5% slope with no behavioral signs of anxiety and a Level 1–3 K9-RPE

Starting the Program

- The program weekly format is described at the end of this appendix.
- Use the duration of the Intermediate Endurance Assessment to guide where to start the protocol. Start at a session duration one lower than the duration on the Intermediate Endurance Assessment. For example, if the MWD completed 11 minutes on the Intermediate Endurance Assessment, start training on Week 7 (10 minutes).
- If the MWD completes 30 minutes of the Intermediate Endurance Assessment, start at Week 21. Even if the MWD is physically capable of reaching the end goal of this phase, 4 weeks of training (beginning at Week 16) will still be required before moving to the next phase.

Program Format

- Each week features 3–5 identical sessions for simplicity and to gauge the MWD's response to the training.
- Start at three sessions per week (preferably on nonconsecutive days) for at least one week. If the protocol describes and the mission allows, increase to four sessions per week for one week and then to five sessions per week.
- The MWD must complete the last session of the week at a Level 1–3 K9-RPE to progress to the next week. The duration of each session increases by approximately 10% each week.
- A consolidation week is built into the program every four weeks to promote recovery and enable continued progression. If the MWD starts the program less than four weeks before the first consolidation week, complete the consolidation week as planned.
- The last week is another iteration of the Intermediate Endurance Assessment to confirm the MWD can complete 30 minutes.

Training Session Format

- Take the MWD for a 5-minute on-leash walk to warm-up and eliminate.
- Perform the dynamic stretch warm-up as described in Appendix L.

- Set the treadmill to a 5% slope.
- Perform a 2-minute on-treadmill walk at the MWD's comfortable walking pace.
- Increase the speed to the MWD's comfortable trotting pace.
- Start a stopwatch to record the elapsed time.
- Reward verbally, physically, and with food as needed.
- Continue at this speed and carefully monitor the MWD's K9-RPE.
- If the MWD completes the prescribed duration with a Level 1–3 K9-RPE, decrease the speed to the MWD's comfortable walking pace for a 3–5 minute on-treadmill cool-down.
- If the MWD shows the first sign of Level 4 K9-RPE, decrease the speed to the MWD's comfortable walking pace for a 3–5 minute on-treadmill cool-down.

Progression and Missed Sessions and Weeks

- If the MWD completes at least three sessions during a week and has a Level 1–3 K9-RPE on the last session, the MWD is allowed to progress to the next week.
- If the MWD misses one or more planned sessions during a week, the MWD is allowed to progress to the next week if they complete at least three sessions that week and meet the K9-RPE requirement.
- If the MWD only completes one or two sessions during a week, the MWD must repeat the week.
- If the MWD misses 1–3 full weeks of training, the MWD must go back the same number of weeks in the program (for example, back two weeks if two weeks were missed), repeat that number of weeks, repeat the missed week, and continue the program.
- If the MWD misses four or more weeks of training, the MWD must repeat the Intermediate Endurance Assessment, and start training at one week lower than duration of the Intermediate Endurance Assessment or four weeks back from the last completed week (whichever is lower).

Program

Table 5-8. Summary of the 24 Week Intermediate Conditioning Program

Week	Sessions per week	Duration (min)	Week	Sessions per week	Duration (min)
1	3	5	13	3–5	14
2	3	6	14	3–5	15
3	3	7	15	3–5	17
4	3	5	16	3–5	14
5	3–5	8	17	3–5	19
6	3–5	9	18	3–5	21
7	3–5	10	19	3–5	23
8	3–5	8	20	3–5	19
9	3–5	11	21	3–5	25
10	3–5	12	22	3–5	27
11	3–5	13	23	3–5	29
12	3–5	11	24	1	30

Appendix J: Phase 7 – Advanced Endurance Assessment

Prerequisites: Before starting this phase, the MWD must have completed 30 minutes of the Intermediate Endurance Assessment at a Level 1–3 K9-RPE and at least the last 4 weeks of the Intermediate Conditioning Program. The MWD must have had at least 48 hours since the last treadmill session, and this assessment should be timed to occur before strenuous training or work.

Goal: Determine the MWD's advanced-level cardiorespiratory and muscular endurance to guide subsequent conditioning and track progress.

Protocol

- Take the MWD for a 5-minute on-leash walk to warm-up and eliminate.
- Set the treadmill to a 10% incline.
- Have the MWD get on the treadmill and secure them using the harness and couplers.
- Increase the speed to the MWD's comfortable walking speed in the 2.0–3.0 mph range and do a 2-minute on-treadmill warm-up.
- Adjust the speed in the 4.0–6.0 mph range to the MWD's previously determined comfortable trotting speed.
- Start a stopwatch to record the elapsed time.
- Reward verbally, physically, and with food as needed.
- Continue at this speed and carefully monitor the MWD's K9-RPE.
- Stop the assessment when the MWD shows the first sign of Level 4 K9-RPE. Note the time elapsed in the assessment. Decrease the speed to the MWD's comfortable walking speed and do a 3–5 minute on-treadmill cool-down.
- If the MWD remains at a Level 1–3 K9-RPE, continue for up to 30 minutes. Then, decrease the speed to the MWD's comfortable walking speed and do a 3–5 minute on-treadmill cool-down.

Appendix K: Phase 8 – Advanced Conditioning Program

Prerequisite: Before starting this phase, the MWD must have completed the Advanced Endurance Assessment and have the duration for that assessment recorded.

Goal: Increase the MWD's advanced-level cardiorespiratory and muscular endurance to the point where the MWD can complete the Advanced Endurance Assessment by trotting (not in a pacing gait) comfortably at a moderate (4.0–6.0 mph) pace for 30 minutes on a treadmill with a 10% slope with no behavioral signs of anxiety and a Level 1–3 K9-RPE

Starting the Program

- The program weekly format is described at the end of this appendix.
- Use the duration of the Advanced Endurance Assessment to guide where to start the protocol. Start at a session duration one lower than the duration on the Advanced Endurance Assessment. For example, if the MWD completed 11 minutes on the Advanced Endurance Assessment, start training on Week 7 (10 minutes).
- If the MWD completes 30 minutes of the Advanced Endurance Assessment, start at Week 21. Even if the MWD is physically capable of reaching the end goal of this phase, 4 weeks of training (beginning at Week 16) will still be required before moving to the next phase.

Program Format

- Each week features 3–5 identical sessions for simplicity and to gauge the MWD's response to the training.
- Start at three sessions per week (preferably on nonconsecutive days) for at least one week. If the protocol describes and the mission allows, increase to four sessions per week for one week and then to five sessions per week.
- The MWD must complete the last session of the week at a Level 1–3 K9-RPE to progress to the next week. The duration of each session increases by approximately 10% each week.
- A consolidation week is built into the program every four weeks to promote recovery and enable continued progression. If the MWD starts the program less than four weeks before the first consolidation week, complete the consolidation week as planned.
- The last week is another iteration of the Advanced Endurance Assessment to confirm the MWD can complete 30 minutes.

Training Session Format

- Take the MWD for a 5-minute on-leash walk to warm-up and eliminate.
- Perform the dynamic stretch warm-up as described in Appendix L.
- Set the treadmill to a 10% slope.

- Perform a 2-minute on-treadmill walk at the MWD's comfortable walking pace.
- Increase the speed to the MWD's comfortable trotting pace.
- Start a stopwatch to record the elapsed time.
- Reward verbally, physically, and with food as needed.
- Continue at this speed and carefully monitor the MWD's K9-RPE.
- If the MWD completes the prescribed duration with a Level 1–3 K9-RPE, decrease the speed to the MWD's comfortable walking pace for a 3–5 minute on-treadmill cool-down.
- If the MWD shows the first sign of Level 4 K9-RPE, decrease the speed to the MWD's comfortable walking pace for a 3–5 minute on-treadmill cool-down.

Progression and Missed Sessions and Weeks

- If the MWD completes at least three sessions during a week and has a Level 1–3 K9-RPE on the last session, the MWD is allowed to progress to the next week.
- If the MWD misses one or more planned sessions during a week, the MWD is allowed to progress to the next week if they complete at least three sessions that week and meet the K9-RPE requirement.
- If the MWD only completes one or two sessions during a week, the MWD must repeat the week.
- If the MWD misses 1–3 full weeks of training, the MWD must go back the same number of weeks in the program (for example, back two weeks if two weeks were missed), repeat that number of weeks, repeat the missed week, and continue the program.
- If the MWD misses four or more weeks of training, the MWD must repeat the Advanced Endurance Assessment, and start training at one week lower than duration of the Advanced Endurance Assessment or four weeks back from the last completed week (whichever is lower).

Program

Table 5-9. Summary of the 24 Week Advanced Conditioning Program

Week	Sessions per week	Duration (min)	Week	Sessions per week	Duration (min)
1	3	5	13	3–5	14
2	3	6	14	3–5	15
3	3	7	15	3–5	17
4	3	5	16	3–5	14
5	3–5	8	17	3–5	19
6	3–5	9	18	3–5	21
7	3–5	10	19	3–5	23
8	3–5	8	20	3–5	19
9	3–5	11	21	3–5	25
10	3–5	12	22	3–5	27
11	3–5	13	23	3–5	29
12	3–5	11	24	1	30

Appendix L: Warm-up Protocol

All MWDs must undergo a warm-up prior to each treadmill exercise session past Phase 2: Trotting Acclimation. This will consist of two phases: 2–3 minute warm-up off the treadmill consisting of dynamic stretches, and a 2-minute warm-up on the treadmill built into each training session.

Dynamic Stretch Warm-Up:

1. Hip Flexors: With the MWD in a high “hup,” have the MWD stretch upward and forward so that the back and thighs are in a relatively straight line. Use a food reward to encourage the stretch. Hold that extra stretch for 5–6 seconds then release. Repeat for 6–8 repetitions. Alternate stretch for dogs with mild lumbar pain if identified by the veterinarian (picture on bottom): MWD can be trained to lean forward with a barrier preventing the hind limbs from stepping forward, to achieve the same motion with less pressure on the lower back. MWD can be lured to lean forward to secure the complete stretch for 3–4 seconds then release. Repeat for 5 repetitions.



Figure 5-16. Hip flexor stretch – dynamic component (on left) with MWD encouraged to lean forward for 3–4 seconds with a sustained treat on a lick pad. Right: more advanced stretch on three levels of cinder blocks.

2. Hamstrings: Have MWD stand with hind limbs on the ground or on a low (4”) elevated surface such as a half-cinder block. Lure the MWD to back up with the forelimbs towards the elevated object if applicable – this will replicate a forward bend. Initiate the stretch by positioning a food reward between the front paws. If the MWD’s hind limbs are on the ground, encourage the elbows/forearms to touch the ground. However, this should only be achieved if the MWD is not overly sloping the lower back downward (see image below). Additionally, the handler’s arm, or a leash wrapped in a loop, may be needed to assist the MWD in keeping the back legs elevated. Reward the proper stretch immediately until the position is learned. Then, hold for up to 3–4 seconds. Repeat for 5–6 repetitions.



Figure 5-17. The MWD should be encouraged to allow elbows/forearms to touch the ground only if the lower back is not overly sloped downwards (left). If needed, the back legs may be elevated to assist with the stretch (right).

3. Dynamic Spinal Stretches: Figure 8s: Have the MWD perform a set of 8–10 figure 8s through 2 elevated objects placed about 1–1.5 feet apart (1 foot will be more challenging, start with the greater distance when first teaching the exercise). The objects can be anything sufficiently high enough that the MWD will not step over them, and narrow. Examples may include traffic cones or cinder blocks standing up on end. Begin at a slow pace then allow for more rapid, tighter turns as the activity becomes learned and the MWD becomes more proficient.



Figure 5-18. A pair of cinderblocks may be used for Figure 8 dynamic spine stretches.

Appendix M: Canine Record of Perceived Exertion (K9-RPE)

Table 5-10. The Five Levels of Canine Record of Perceived Exertion (K9-RPE)

Level 1	Level 2	Level 3	Level 4	Level 5
MWD is at a "minimum" level of exertion.	MWD is at a "light/easy" level of exertion.	MWD is at a "comfortable/ moderate" level of exertion.	MWD is at "maximum acceptable" level of exertion.	MWD is at an "unacceptably high" level of exertion and the treadmill must be stopped immediately to begin the cool-down.
Loose in harness, moving periodically towards the front of the treadmill if rewarded; otherwise maintaining aligned position from front to back	Loose in harness, occasionally falling back but correcting almost immediately, maintaining a symmetric gait, stride length	Tension on harness >50% time but frequently moves forward to correct, symmetric gait	Pulling back and causing moderate tension in the harness, attempting occasionally to move forward to relieve tension/"catch up" but only lasts 1–2 seconds, strides becoming asymmetric	Pulling back as far as harness will allow, back feet are at or beyond the rear edge of the treadmill in gait extension, stride is moderately asymmetric and sloppy
Reward not needed to maintain position on treadmill	Significant, sustained interest (maintains position in front, enthusiastic biting for/licking/reaching for food or toy reward or marked forward movement toward food, toy, or verbal reward	Significant facial/body movement demonstrating interest but unable to sustain forward movement towards physical or verbal reward	Shows mild facial interest/acknowledgement but no capability (barely moving forward, then returning to position, cannot concentrate on chewing or grabbing food with mouth	Shows no interest in reward/ continues to fall back or remain in current position without change in effort in response to reward, minimal or no facial acknowledgement of reward
Sharp, alert, and focused. Looking around at people or objects in room with alert interest. Skin around the eyes smooth. Eyes soft and alert.	Sharp, alert, and focused. Staring straight ahead, minimally looking in any other direction. Eyes alert, focused ahead.	Eyes are becoming somewhat soft and less sharp and alert. Staring straight ahead exclusively.	Tight skin around eyes, wrinkled brows, looking ahead exclusively	Tight skin around eyes, wrinkled brows, rapid, darting looks, "whale" eye (whites of eyes shown)

MWD TREADMILL TRAINING PROGRAM ACCLIMATION TRACKER

MWD NAME:			Reward:		Walking Speed:			Trotting Speed:		Harness Size:
Date	Time	Handler	Phase (all on 0%)	Highest Speed	Duration	End K9 RPE	Reason for Stopping	Frequency of reward	Behavior assessment	Stride Evaluation

Phase 1 - Walking Acclimation Goal: 5:00 at moderate walking pace. Phase 2 - Trotting Acclimation goal: 5:00 at moderate trotting pace

Figure 5-19. An example of an MWD Treadmill Training Program Acclimation Tracker for Phase 1.

6.0 Welfare

6.1 Combined DoW MWD Care Requirements: Sanitation

Combined DoW MWD Care Requirements - Sanitation

Requirement	Reference
MANAGEMENT, CLEANING AND SANITIZING, FREQUENCY: All equipment and areas **MUST** be cleaned with appropriate detergents and disinfectants as often as needed to keep them sanitary and free of debris and harmful contaminants.	DAFI 31-126 DAFGM 2025-01, Table A4.2(4)(a)
MANAGEMENT, CLEANING AND SANITIZING, MINIMIZING RISK: The facility should be cleaned in order of animal susceptibility to disease and potential risk to the general population, starting with the most susceptible animals and ending with those who carry the highest risk of transmitting infectious disease.	DAFI 31-126 DAFGM 2025-01, Table A4.2
MANAGEMENT, CLEANING AND SANITIZING, FACILITY: Housing facilities and areas used for storing animal bedding **MUST** be free of accumulation of trash, waste material, junk, weeds, and other discarded materials.	9 CFR § 3.1(b)
MANAGEMENT, CLEANING AND SANITIZING, PREMISES: Premises where housing facilities are located, including buildings and surrounding grounds, **MUST** be kept clean, well-maintained (e.g., weeds, grasses, bushes) and in good repair, and free of accumulated trash, junk, waste products, and discarded matter to protect the dogs from injury, to facilitate husbandry practices required in 9 CFR § 3.11, to protect the health and well-being of the dogs, and to reduce or eliminate breeding and living areas for rodents and other pests and vermin.	9 CFR § 3.11(c)
MANAGEMENT, CLEANING AND SANITIZING, PRIMARY ENCLOSURE: Cages **MUST** be sanitized, using proper agents followed by thorough rinsing before animals are placed in them.	DAFI 31-126 DAFGM 2025-01, Table A4.2
MANAGEMENT, CLEANING AND SANITIZING, PRIMARY ENCLOSURES, FREQUENCY: Used primary enclosures **MUST** cleaned and sanitized in accordance with 9 CFR § 3.11(b) before use by another dog, at least once every two weeks, or more often if necessary to prevent an accumulation of dirt, debris, food waste, excreta, and other disease hazards.	9 CFR § 3.11(b)(1); 9 CFR § 3.11(b)(2)
MANAGEMENT, CLEANING AND SANITIZING, HARD SURFACES, FREQUENCY: Hard surfaces with which the dogs come in contact **MUST** be spot-cleaned daily and sanitized in accordance with 3.11(b) to prevent accumulation of excreta, prevent accumulation of excreta, and reduce disease hazards.	9 CFR § 3.1(c)(3)
MANAGEMENT, CLEANING AND SANITIZING, HARD SURFACES, METHOD: Hard surfaces of primary enclosures and food and water receptacles **MUST** be sanitized using one of the following methods: i. Live steam under pressure. ii. Washing with hot water (at least 180 °F (82.2 °C)) and soap or detergent. iii. Washing all soiled surfaces with appropriate detergent solutions and disinfectants, or by using a combination detergent/disinfectant product that accomplishes the same purpose, with a thorough cleaning of the surfaces to remove organic material, so as to remove all organic material and mineral buildup, and to provide sanitization followed by a clean water rinse.	9 CFR § 3.11(b)(3)
MANAGEMENT, CLEANING AND SANITIZING, SOFT SURFACES, FREQUENCY: Floors made of dirt, sand, gravel, grass, or other similar material **MUST** be raked or spot-cleaned with sufficient frequency to ensure all animals the freedom to avoid contact with excreta.	9 CFR § 3.1(c)(3)
MANAGEMENT, CLEANING AND SANITIZING, SOFT SURFACES, METHOD: Pens, runs, and outdoor housing areas using material that **CANNOT** be sanitized using the methods provided in 9 CFR § 3.11(b)(3), such as gravel, sand, grass, earth, or absorbent bedding, **MUST** be sanitized by removing the contaminated material as necessary to keep animals dry and clean and to prevent odors, diseases, pests, insects, and vermin infestation.	9 CFR § 3.11(b)(4); 9 CFR § 3.1(c)(3); DAFI 31-126 DAFGM 2025-01, Table A4.2(4)(a)
MANAGEMENT, CLEANING AND SANITIZING, OTHER SURFACES, FREQUENCY: All other surfaces of housing facilities **MUST** be cleaned and sanitized when necessary to satisfy generally accepted husbandry standards and practices. Sanitization may be done using any of the methods provided in § 3.11(b)(3) for primary enclosures.	9 CFR § 3.1(c)(3)
MANAGEMENT, CLEANING AND SANITIZING, OTHER SURFACES, METHOD: Sanitization may be done using any of the methods provided in § 3.11(b)(3) for primary enclosures.	9 CFR § 3.1(c)(3)
MANAGEMENT, CLEANING AND SANITIZING, RAISED FLOOR KENNELS: The pans under primary enclosures with grill-type floors and the ground areas under raised runs with mesh or slatted floors **MUST** be cleaned as often as necessary to prevent accumulation of feces and food waste and to reduce disease hazards pests, insects and odors.	9 CFR § 3.11(a)

MANAGEMENT, CLEANING AND SANITIZING, PROTECTION: When steam or water is used to clean the primary enclosure, whether by hosing, flushing, or other methods, dogs **MUST** be removed, unless the enclosure is large enough to ensure the animals would not be harmed, wetted, or distressed in the process. Dogs (including those in adjacent primary enclosures) **MUST** be protected from being contaminated with water, cleaning chemicals, and other wastes during the cleaning.	9 CFR § 3.11(a); DAFI 31-126 DAFGM 2025-01, Table A4.2(4)(a)
MANAGEMENT, CLEANING AND SANITIZING, DRYING: Standing puddles of water in animal enclosures **MUST** be removed (e.g., by draining or mopping up) so that the animals stay dry.	9 CFR § 3.11(a) 9 CFR § 3.1(f)
MANAGEMENT, CLEANING AND SANITIZING, AEROSOLIZED WASTE: Litter should be emptied from cages and pens in a manner that minimizes exposure of animals and personnel to aerosolized waste.	DAFI 31-126 DAFGM 2025-01, Table A4.2
MANAGEMENT, CLEANING AND SANITIZING, NOXIOUS AGENTS: Animals and personnel **MUST** be protected from noxious agents.	DAFI 31-126 DAFGM 2025-01, Table A4.2
FEEDING, STORAGE, SANITIZATION: Areas where food is prepared or stored **MUST** be kept clean.	DAFI 31-126 DAFGM 2025-01, Table A4.2
FEEDING, STORAGE, SANITIZATION: Food containers **MUST** be sanitized frequently.	DAFI 31-126 DAFGM 2025-01, Table
FEEDING, DEVICE, SANITIZATION, REUSABLE: Used, non-disposable feeding devices (including self-feeders) **MUST** be cleaned and sanitized in accordance with 9 CFR § 3.11(b) before use by another dog, at least once every two weeks, or more often if necessary to prevent an accumulation of dirt, debris, food waste, excreta, and other disease hazards. Sanitization is achieved by using one of the methods described in 9 CFR § 3.11(b)(3).	9 CFR § 3.9(b); 9 CFR § 3.11(b)(1); 9 CFR § 3.11(b)(2)
FEEDING, DEVICE, SANITIZATION, DISPOSABLE: If the food receptacles are disposable, they **MUST** be discarded after one use.	9 CFR § 3.9(b)
WATERING, DEVICE, SANITIZATION: Used water receptacles **MUST** be cleaned and sanitized in accordance with 9 CFR § 3.11(b) before use by another dog, at least once every two weeks, or more often if necessary to prevent an accumulation of dirt, debris, food waste, excreta, and other disease hazards.	9 CFR § 3.11(b)(1); 9 CFR § 3.11(b)(2)

6.2 The Guidelines for Standards of Care in Animal Shelters: Sanitation Chapter

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5. Sanitation

5.1 General

Maintaining a sanitary environment is an integral part of supporting health and welfare and minimizing the risk of infectious disease. Whether or not infectious disease occurs is dependent on the interaction of several factors: the animal (e.g. species, age, and immunity), the pathogen (e.g. infectious dose and ability to survive outside of the body), and the environment (e.g. temperature, housing, and amount of pathogens present), and how each of these factors are managed[1] (Fig. 5.1).

Through cleaning and the proper use of disinfectants, the number of pathogens in the environment is reduced, decreasing the likelihood of spread.[2] A clean shelter increases the comfort level of the animals and personnel, and presents a positive image of the shelter to the public.[3,4] Protocols for proper sanitation are essential for any sheltering program.

5.2 Definitions

Cleaning is defined as the manual removal of urine, fecal matter, food waste, hair, bodily fluids, and other debris from the environment.[2,4,5] Oils and grime found on surfaces, especially soiled, porous, or rough surfaces, can interfere with the ability to kill pathogens[6] (see Appendix E). Detergents and degreasers break down oil and grime with soap-like action and can remove up to 90% of environmental pathogens.[3,7–9]

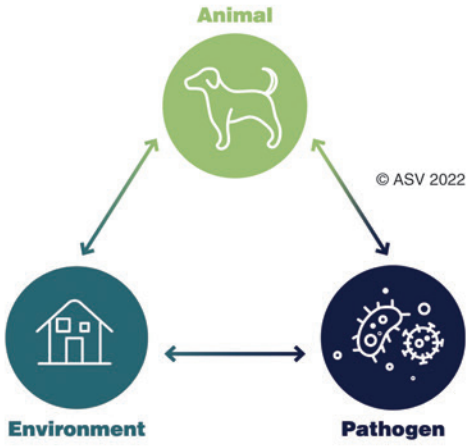


Figure. 5.1. Factors impacting disease transmission in the shelter.

Disinfection, typically by the application of a chemical product to a clean surface for a specific time period, is the process of killing most of the remaining pathogens.[9] Sanitation refers to the combination of cleaning and disinfection. Cleaning and disinfection are separate steps, even when using a detergent-disinfectant combination product that is labeled for both purposes.[2]

Sterilization is the destruction of all pathogens (e.g. viruses, bacteria, and fungi), including spores, and is generally reserved for surgical instruments and other equipment necessary for sterile procedures.[9] True sterilization of cage and kennel surfaces does not occur.

5.3 Sanitation practices

Shelters must have a sanitation plan for all locations in which animals are present, including enclosures, common-use areas, foster homes, and outdoor spaces. Sanitation protocols are used to describe which areas to sanitize, which products to use, and how to use them.[4]

Sanitation protocols should be based on pathogens, routes, and risk of transmission. Sanitation protocols must include steps for removal of organic matter, cleaning, and disinfection.[4] Ideally, sanitation protocols will be developed in consultation with a veterinarian experienced in shelter medicine.[4] Those making decisions about sanitation protocols need to be familiar with the active ingredients of common disinfectants, target pathogens, and potential routes of transmission. An increasing number of resources provide guidelines tailored to the shelter environment.[6,10,11]

Sanitation products must be diluted and used according to label instructions or published recommendations. Solutions that are too weak may be ineffective, and those that are too strong may be harmful to animals and people.[4,9] Some disinfectants such as quaternary ammonium products and bleach can be harmful when animals contact or ingest them, even at recommended dilutions, so removing the residue is an essential step.[3,4]

Disinfectants used in animal areas must be effective against non-enveloped viruses, such as parvovirus, panleukopenia, and calicivirus. Several studies have found that quaternary ammonium-based products, which are commonly used in shelters and veterinary clinics, do not eliminate non-enveloped viruses in spite of label claims.[12–15] Other products, such as accelerated hydrogen peroxide, potassium peroxymonosulfate, and bleach products, are effective against non-enveloped pathogens and dermatophytes at the appropriate concentration and contact time.[2,12–15]

Adequate sanitation cannot be accomplished by using water alone, by spraying and quickly wiping off a

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disinfectant, or by using a disinfectant with no detergent properties (i.e. bleach) without cleaning first.[2,4] Alternative methods of disinfection such as ultraviolet light, steam, freezing, and air filtration systems must not be relied on as the sole means of sanitation in shelters.[9,16–24]

Sufficient personnel must be assigned to complete sanitation tasks promptly each day so that animals spend most of their time in sanitary conditions. Industry guidelines recommend a minimum of 9 min per animal per day for routine cleaning of enclosures.[25] The actual time needed to accomplish daily sanitation will vary based on population, housing size and type, specific products and protocols, and facility use. Calculating how long proper sanitation typically takes per housing unit can provide better estimates of sanitation staffing needs in individual shelters (see Population Management).

Sanitation should proceed in an order that minimizes both the risk of pathogen transmission from infected animals and the exposure of vulnerable animals. In general, the recommended order of cleaning and care, from first to last, is:

- healthy puppies and kittens
- healthy adult animals
- unhealthy animals[3]

This order of cleaning may be customized to include specific animals or subpopulations (e.g. different infectious diseases and immune-compromised animals) based on the specific needs of the shelter, population, and protocols.[5,26]

Sanitation practices should be observed regularly to ensure consistency with written protocols. Observation of sanitation practices provides an opportunity to identify and correct deviations from the protocols.[3] It is important to ensure that contact times are observed, supplies are readily available, and equipment is adequate for the job.

Pathogen risks in a shelter can change over time, and shelters may need to alter sanitation protocols when disease rates increase or a more difficult to kill pathogen is identified. During an outbreak, protocols should be reviewed and practices observed to ensure efficacy against suspected pathogens.[11,27] Pathogens can be spread inadvertently when protocols are improper or practices are not in line with protocols. Common mistakes include incorrect choice of disinfectant, under or over-dilution, not observing contact times, etc.[28,29]

5.3.1 Sanitizing primary enclosures

Sanitizing primary enclosures is critical to ensure health and comfort. Enclosures must be completely sanitized before being occupied by a different animal.[4] This process, also known as deep cleaning, is important even if an animal has only occupied a primary enclosure for a short period of time, the enclosure is not visibly soiled, or the animal appears healthy. Animals are capable of shedding pathogens without showing signs of illness.[30] Sanitation is indicated when enclosures are heavily soiled, an infectious disease is diagnosed and on a regular schedule based on use. Table 5.1 shows basic steps and indications for sanitation of primary enclosures.

Sanitation methods significantly impact animal health and welfare. Splattering or soaking animals when spraying water, cleaning, or disinfection products can cause significant distress. It is unacceptable to spray primary enclosures while animals are inside them.[3,4,31] Animals need to be removed from nearby housing compartments when overspray is likely.

Adequate drainage is essential for animal housing areas regularly hosed or sprayed with cleaning fluids.[32,33] Drainage systems or operational practices (e.g. squeegee and towel drying) must prevent the accumulation of standing water. Dry surfaces are required before animal use because they promote animal comfort and drying aids in the inactivation of pathogens.

Ideally, mopping is avoided in animal housing areas. Mops may harbor pathogens, allowing them to be deposited in other locations.[4] However, mopping may be necessary when sanitizing animal enclosures and ward hallways that do not have drains. When mopping cannot be avoided, personnel must ensure that both cleaning and disinfection of the floor surface occur. Mop heads require disposal or sanitation and drying between uses, including between cleaning and disinfection products and between housing areas.

5.3.2 Spot cleaning primary enclosures

When an animal will remain in their enclosure and it has not been heavily soiled, complete sanitation of the enclosure may not be necessary or supportive of animal health.[3,4,34,35] Daily cleaning is essential, even in cage-free or home environments, but can often be accomplished using a spot cleaning method.

During spot cleaning, an animal may remain in their enclosure or be given out-of-kennel enrichment. Multi-compartment enclosures facilitate spot-cleaning by allowing personnel to clean in the other compartment to avoid animal contact. Spot cleaning should be conducted at least daily when an animal will remain in the same enclosure. Soiled bedding, old food, urine, and feces are removed, the area tidied, and food and water resupplied (Table 5.1).

Spot cleaning is typically less stressful for animals as it requires less animal handling and does not remove familiar scents.[36] Spot cleaning is particularly important for shy or under-socialized animals, and animals with mild diseases worsened by stress (e.g. feline infectious respiratory disease).

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Table 5.1. Basic steps for cleaning primary enclosures

Sanitizing	Spot cleaning
Remove animal (or move to different compartment)	Keep animal in enclosure (or give out of kennel enrichment)
Remove all items	Remove bowls, wet or soiled items
Remove all organic material	Remove all organic material
Apply detergent solution and physically scrub all surfaces	Clean soiled areas with detergent and single-use towel as needed
Rinse all surfaces and then remove standing water	Wipe surfaces to remove detergent
Apply disinfectant solution for appropriate contact time	Replace care items
Rinse all surfaces as indicated and then remove standing water	
Reset enclosure	

5.4 Reducing pathogen spread

Fomites are objects that may be contaminated with pathogens and contribute to transmission of disease. Hands, work clothing, medical equipment, food bowls, litter boxes, toys, and cleaning and handling equipment may serve as fomites.[4] Care to avoid the spread of disease through fomites is important during sanitation and when interacting with animals in the shelter.

5.4.1 Personal protective equipment

Personal protective equipment (PPE) is a physical barrier that reduces the spread of disease when used properly. PPE should be selected based on specific pathogens and exposure risks within each population (see Public Health). As the health of the population varies, the type of protective equipment needed may also vary. Appropriate PPE should be used in each area and disposed of or sanitized before proceeding to care for other animals[37] (Appendix C).

PPE may need to be changed between individual enclosures or areas based on disease risk because contaminated PPE can contribute to pathogen spread. Protective garments must be changed between handling each animal when there is a high risk for disease transmission.[38] Staff training, adequate supplies, and facility set-up (e.g. location of trash receptacles) allow for proper use and removal of PPE. Personnel should wash hands after removing PPE.

5.4.2 Hand hygiene

Hand sanitation is a key part of preventing disease transmission.[37,39] Hand hygiene stations should be available in or near every area where contact with animals occurs.[40] Ideally, hand hygiene stations are sinks that allow washing with soap and water, and drying with single use towels. At a minimum, hand hygiene stations provide hand sanitizer with at least 60% alcohol.[41] Because hand sanitizers are ineffective against some of the most concerning pathogens in shelters (e.g. parvovirus, calicivirus, and ringworm), hand sanitizers should not be relied on as the sole means of hand hygiene.[41,42]

Proper handwashing technique includes wetting hands with clean, running water; applying and scrubbing with soap for at least 20 seconds; rinsing with clean water; and drying thoroughly with a fresh towel or forced air.[43] Proper hand sanitizer techniques include applying 1–2 pumps of gel product to one hand and then rubbing hands together until all surfaces are covered and dry (approximately 20 seconds). Hand sanitizer should only be used on hands that are visibly clean.[41]

Sanitation protocols must address hand hygiene for shelter staff, volunteers, and visitors.[3,4,37] Although all people can move pathogens around, shelter personnel are significantly more likely to do this while they complete daily care tasks compared to shelter visitors.[44]

5.4.3 Equipment and supplies

All items that come into contact with animals should be sanitized on a regular basis, whenever visibly soiled, and when in direct contact with bodily fluids. In the case of disease outbreaks or when proper sanitation of supplies is not possible between animals, the use of disposable items may be warranted. It is essential to note that gloves, clothes, and shoes can serve as fomites, underscoring the importance of the proper use and replacement of PPE.

Separate cleaning supplies must be designated for each shelter area or be sanitized prior to use in each area. Some supplies need to be changed or sanitized between enclosures, such as rags or towels. Other supplies, such as mop heads and squeegees, can be changed between areas, unless there is a high risk of disease transmission.

Transport cages and traps, as well as vehicle compartments used for animal transport, must be sanitized before being occupied by a different animal.[45] Mobile equipment such as rolling trash cans, shopping carts, and food or treatment carts should be assigned to one area or be sanitized between areas.[45,46] Sanitation of these items includes wheels and outside contact surfaces. Objects with scratched, damaged, and porous surfaces are difficult or impossible to completely disinfect and should be used with caution or discarded between animals.[47] These

objects include plastic litter pans, airline carriers, and plastic or unglazed ceramic water bowls.

All bedding and other textiles used at the shelter must be discarded or laundered and thoroughly dried when visibly soiled and before reuse with a different animal.[45] Items that are heavily soiled may need to be laundered separately from other textiles.[29,48,49] Organic debris (e.g. feces) should be removed from items before laundering.[37] Items that cannot be readily disinfected, such as leather gloves and muzzles, may contribute to disease spread when used with animals who appear ill and/or during a disease outbreak.[45] Routine cleaning or laundering of bedding could fail to remove non-enveloped viruses and dermatophytes; in these situations, discarding the items in question or using pathogen-specific laundry protocols is recommended.[29,49]

Automatic watering devices and water bottles should not be used if the watering valve cannot be sanitized before being used by another animal.[50,51] Food and water bowls must be sanitized in a different location or at a different time than litter pans or items soiled by feces, to prevent cross contamination.[4,52] Dishwashers have excellent mechanical washing action and attain high temperatures which destroy the majority of pathogens but may not destroy non-enveloped viruses such as parvoviruses.[26,53] The best way to inactivate these viruses is through the application of a disinfectant to the dishes following the dishwasher cycle. When a dishwasher is not available, disinfectant can be applied following thorough washing and rinsing by hand.[52] Basins used to sanitize food and water bowls and litter pans should be thoroughly sanitized between uses.[3]

5.5 Other shelter areas

Foot traffic plays a role in fomite transmission throughout the shelter and grounds; dedicated boots that can be sanitized or disposable shoe covers should be used in potentially contaminated or protected areas, such as isolation and surgery.[4,54,55] Footbaths must not be relied on for infectious disease control in the shelter.[4,56,57] This is because achieving adequate contact time is impractical, and the accumulation of organic debris within the bath inactivates many disinfectants. Poorly maintained footbaths create environments that encourage pathogen growth and contribute to disease spread. It is unacceptable for animals to walk through footbaths.[3]

Animal waste and bodily fluids must be removed from indoor common spaces as soon as possible.[5,58] After removal, the area needs to be sanitized properly. Feces must be removed from outdoor areas between animals or groups.[59] To reduce parasite egg accumulation in the environment, daily removal of feces is acceptable, although immediate removal is preferred.

Outdoor areas around the shelter must be kept clean, recognizing it is impossible to disinfect gravel, dirt, and grass surfaces.[29] Surface covers (e.g. pea gravel, mulch, and rubber chips) can be replaced or recovered regularly to reduce contaminant load. To manage this risk, many shelters designate certain outdoor areas for use by specific animals. This allows closure of an area when needed while still preserving other areas for continued use. Access to areas that cannot be sanitized should be restricted to adult animals who have been vaccinated, dewormed, and appear healthy, or animals for whom the benefits of such access outweigh the risks of disease exposure or transmission.[60,61]

Standing water should not be allowed to accumulate in or around the shelter because mosquitos breed and many pathogens thrive in wet environments.[62,63] Well drained substrates and exposure to sunlight aid in the destruction of pathogens; however, some pathogens survive even in environmental extremes.

5.6 Wildlife, rodent, and insect control

Rodents and insects may harbor pathogens that can spread to shelter animals through direct ingestion, contamination of pet food, or contamination of the environment. Areas of food storage are particularly vulnerable to infestation. All food must be protected from wildlife, rodents, and insects.[64,65] Properly storing food bags in sealed bins, promptly cleaning spills or waste, and resealing and refrigerating opened food containers (animal or human) can help mitigate infestations. Rodent and insect control solutions must be safe, humane, and effective.[66] Integrated pest management plans are recommended and utilize a variety of environmental measures to reduce the need for pesticides, rodenticides, and insecticides.[67]

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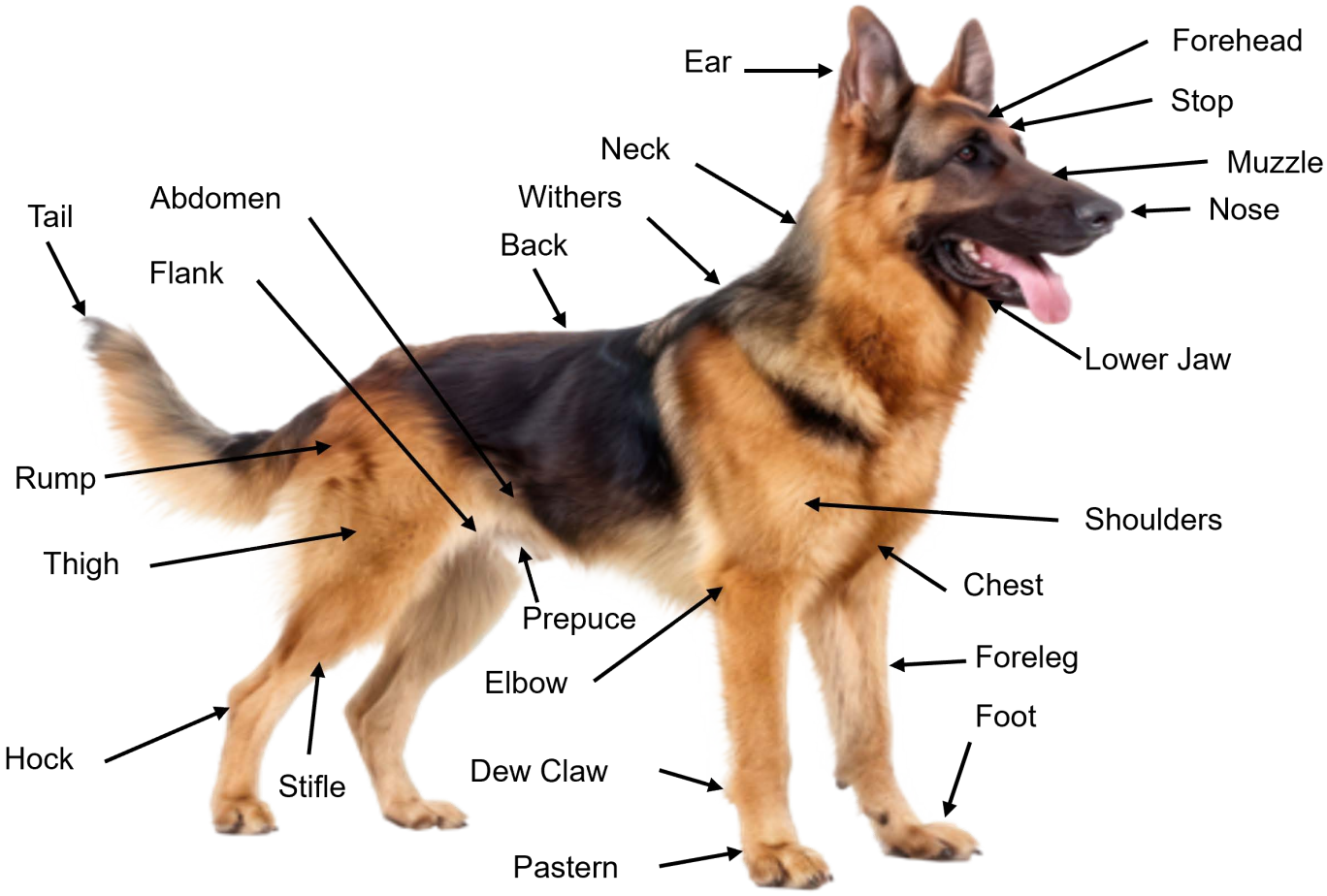
Appendix: Forms and Documentation

Comprehensive MWD Profile Worksheet

MWD Name/Tattoo ID	Handler
Date of Birth/Age	**Date Assigned to Unit**
Medical Alerts/Allergies	**Miscellaneous**
Behavioral Summary Select all applicable keywords: ☐Confident & Stable ☐Environmentally Focused ☐Handler Focused ☐High Drive / Intense ☐Anxious / Lacks Confidence ☐Reactive to People ☐Reactive to Dogs ☐Sound Sensitive ☐Reserved / Aloof ☐People-Social / Affectionate ☐Other:	**Primary Drive** Select one: ☐Food ☐Play (Toys) ☐Chase ☐Praise / Affection ☐Combination: ☐ Other:

Reinforcement Preferences Select all applicable: ☐High-Value Food Treats ☐Standard Kibble ☐Tug Toys ☐Ball/Hard Toys ☐Verbal Praise ☐Physical Praise ☐Other:	**General Notes** Select all applicable keywords: ☐Vocal in Kennel ☐Quiet in Kennel ☐Destructive with Bedding/Toys ☐Non-Destructive ☐Easy to Handle for Husbandry ☐Difficult for Husbandry ☐Travels Well ☐Shows Stress During Travel ☐Other:
Dislikes / Avoidances Select all applicable: ☐Loud, Sudden Noises ☐Unfamiliar People ☐Being Crowded / Cornered ☐Specific Surfaces ☐Vet / Medical Procedures ☐High-Traffic Areas ☐Specific Dog Types ☐Other:	**Social Compatibility** Select one: ☐Dog Social ☐Dog Selective ☐Dog Neutral ☐Dog Reactive ☐No Dog Contact ☐Other:

Daily MWD Health Check Roster Worksheet



MWD Name:

Tattoo:

Month/Year:

Date	Time	Observations/Actions	Reported To	Date/Time Notified



Date	Time	Observations/Actions	Reported To	Date/Time Notified



Date	Time	Observations/Actions	Reported To	Date/Time Notified

MWD Enrichment Profile

MWD Name/Tattoo:

Handler:

Date of Birth/Age:

Date Assigned to Unit:

Medical Alerts/Allergies:

Behavioral Summary:

Primary Drive (e.g., Food, Play, Praise):

General Notes (e.g., high food drive, cautious with new objects, sound sensitive, etc.):

Likes (e.g., chasing, puzzle toys, scent work, specific people, etc.):

Dislikes/Avoidances (e.g., loud noises, being crowded, specific textures, etc.):

Social Compatibility (e.g., specific MWDs, is best for parallel walks only, etc.):

MWD Socialization Incident Report

1. Basic Information

Date of Report:

Date of Incident:

Time of Incident:

Location of Incident:

2. MWD & Handler Information

MWD 1 Name/Tattoo:

MWD 2 Name/Tattoo:

Handler Involved Name/Rank/Unit:

Handler Involved Name/Rank/Unit:

3. Incident Summary (Provide a brief, objective summary of the event.)

4. Detailed Narrative

(Describe the events leading up to, during, and after the incident in chronological order. Include the socialization phase being conducted, distances between MWDs, observed body language, and any potential triggers.)

5. Actions Taken During Incident
(Check all that apply and describe.)

☐Verbal Redirection
☐Loud Noise, Specify:
☐Physical Barrier, Specify:
☐Water
☐Wheelbarrow Method
☐Pulled Apart
☐Airhorn
☐Break stick
☐Other, Specify:

6. Injuries Sustained

MWD 1 Injuries:

Photos taken? ☐Yes ☐No

MWD 2 Injuries:

Photos taken? ☐Yes ☐No

Handler(s):

Photos taken? ☐Yes ☐No

7. Veterinary Assessment & Care Provided

(Summary of on-site first aid and/or veterinary evaluation.)

8. Contributing Factors & Recommendations

(Identify potential causes and suggest preventative measures.)

9. Reporting Personnel

Name/Rank:

Signature:

Date:


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