

Protocol for Performing Humane Euthanasia in the Shelter Environment

Effective Date: _____, _____

EUTHANASIA

1. General. Since euthanasia is the final act of kindness that can be shown to an animal, it is the policy of _____ (Department/Shelter name) that animals be handled with respect and sensitivity and protected from stress, fear, discomfort or pain at all times while in the shelter environment and *especially during euthanasia*.
2. Training. Euthanasia training in a certified course is required prior to any employee or volunteer administering euthanasia solution. Euthanasia training is then supplemented on an on-going basis, in-house, by personnel who have already been trained in a certified course. Euthanasia may only be performed by, or in the presence of, a person who has been approved as being adequately trained in euthanasia by the Kennel Manager or Executive Director. Periodically staff members will perform euthanasia in the presence of a veterinarian or other expert who will observe and question the staff member to insure technical skill and proficiency.

In training, staff will learn how to humanely perform euthanasia including:

Various injection sites for both pre-euthanasia and euthanasia drugs. Injection sites include:

- subcutaneous (SC or SQ) – under the skin;
- intravenous (IV) – into a vein, the preferred injection site for administration of euthanasia drugs;
- intramuscular (IM) – into a muscle, commonly used for pre-euthanasia tranquilization or sedation;
- intraperitoneal (IP) – into the peritoneal cavity, the space that surrounds the organs in the abdominal cavity, sometimes used for feral cats, kittens and very small puppies;
- intracardiac (IC) – into the chambers, but not the muscular walls, of the heart, sometimes used on very ill, dehydrated or fractious animals *but only when sedated to a surgical level*.

Drug measurements:

- mg = milligram, 1/1000th of a gram

- ml = milliliter, about 1/5 of a teaspoon. One milliliter is the same thing as one “cc” (a cubic centimeter)

Drug names, including the use of “trade names” which are given to a specific manufacturer’s preparation of the drug. For example: Ketamine is a type of anesthetic drug that is sold as “Ketaset©” or “Vetalar©”

3. Authorization for euthanasia.

- Approval to euthanize any domestic animal is needed from a manager, preferably the kennel manager or director; and
- A comprehensive policy is created, implemented and adhered to in order to select animals for euthanasia.

Exceptions to this policy on prior authorization would include: suffering animals; unweaned stray animals without a mother; verified owner requests; known feral animals signed over as owned; and situations in which a veterinarian recommends euthanasia.

Critically sick or injured wildlife may also be euthanized without prior approval as is the case for any wild warm-blooded animals who have bitten a person. Sick or injured endangered species are to be taken to a veterinarian.

4. Owner requests. The Shelter will euthanize animals of citizens requesting this service.

- A. In-taking the animal. An intake slip must be completed for animals of owners requesting euthanasia. It is important for staff to ascertain whether the individual surrendering the animal is the legal owner. Staff should Xerox© some form of identification and vet records or licensing information. If the person surrendering the animal is not the owner, staff must call the owner for his/her consent.

The reason that the owner is requesting euthanasia is very important. If it is for medical reasons, the condition of the animal will help staff to avoid handling him/her in such a way which may hurt the animal and to understand any affect the condition may have on the animal during the euthanasia process. If the reason for euthanasia is for behavior, it is equally important to understand the behavior. One of the most common problems is aggression. Staff should inquire into the circumstances under which the animal exhibits aggressive behavior.

The person handling the intake of the animal should be certain to write the name of the animal on the intake slip, so he/she can be comforted during euthanasia.

- B. Adoptable animals. There may be occasions when an owner requests euthanasia for a pet, and the staff member receiving the animal feels that he/she is adoptable. The employee may discuss this with the owner and may consult a supervisor, but intake forms should reflect that the owner is surrendering the animal to the shelter for disposition which could result in humane euthanasia or screened adoption at the shelter's discretion. To lower liability and protect ethical boundaries, staff should be diligent in verifying ownership prior to performing owner requested euthanasia. Consider this: a domestic/neighborhood dispute leads one partner/family member/neighbor to inappropriately request euthanasia of a favored pet for retaliation; an uneducated owner requests euthanasia for "normal" dog/cat behavior rather than learning to humanely correct the behavior or re-home the animal.
- C. Staff. Two staff persons should be present when euthanizing an owner-request animal. If two people are not available at the time of an owner request, the animal should be taken to a veterinarian for euthanasia if possible or appropriately sedated prior to euthanasia.
- D. Owner presence. Owners should be asked if they want to be with their animal during the procedure. Though the euthanasia or treatment room should always be left well-stocked and clean, the treatment room must be verified as cleaned and prepared before bringing the owner and animal to the room. A box of tissue should be available, the table covered with a towel and, if possible, syringes prepared in advance.

It is imperative for technicians to explain the entire procedure so that the owner knows what to expect. Preparing the owner for any possible problems or anything which may alarm them, such as an animal's reaction to a tranquilizer, will ease the person's discomfort. Since the preparation process may take a few moments, it is important to kindly let the owner know when the animal is going to "go to sleep."

Since some movement of the body can occur after death, staff should inform owners that this is normal and to be expected, but that the animal is no longer alive. The technician should ascertain that there is no eye reflex and, using the stethoscope, make certain that there is no heartbeat. Once death is determined, the technician should quickly and quietly secure syringes, needles and drugs and offer to let the owner be alone with the

animal. The technician should wait in the hallway to lead the person out when ready and to make certain that the individual is given pet loss materials.

- E. Owner's non-presence. In some cases the owner will not want to be present during euthanasia, but may want to see the animal after the procedure. In these cases it is important to have the body arranged nicely; to clean up any blood or excrement; to cover the body, if necessary, leaving just the head out; and to tidy the room. Syringes, needles and drugs must be removed.

If the owner does not want to be present, nor see the body after euthanasia, the animal should be euthanized as expediently as possible to ensure the animal is not unduly stressed by the shelter environment.

- 4. Selection of animals. (APNM recommends implementing a comprehensive policy based on Sue Sternberg's Temperament Testing Model which ensures adoptable animals get every chance at a adoption into a permanent home while dangerous animals are removed from the community. Other considerations that are factored into Temperament Testing will, during evaluation and re-evaluation, include: the animal's ability to cope in a shelter environment or new home environment, health, age, condition and length of stay. Owner surrendered animals should never be immediately euthanized without being Temperament Tested. Under this method, animals are continually evaluated by staff to observe behavior/health issues. There may be times when an animal's condition or behavior precludes any evaluation and results in immediate euthanasia. In addition to Temperament Testing, animals should be checked for identification, tattoos and microchips.)
- 6. Pre-euthanasia checklist. Prior to euthanasia, a checklist (based on intake forms, kennel records, adoption records, temperament evaluation, identification verification and euthanasia log) is completed by kennel staff to ensure that there are no special circumstances which may make euthanasia an inappropriate decision for that animal at that time. Cross-checking paperwork for each animal scheduled to euthanasia is done at this time by each person handling the animal prior to, at the onset of, and after euthanasia.
- 7. Controlled substances. All controlled substances, needles and syringes are to be kept securely locked and must never be accessible to the public or any unauthorized persons. Only staff members who have been adequately trained to use such supplies will have access to them. Drugs which are in use are kept under lock and key in the medical treatment room and only trained employees should have access to the key. No controlled substance is to be removed from the Shelter

without the approval of the Kennel Manager or Director. State and Federal Laws regarding controlled substances are strictly adhered to.

- A. Record keeping. Each time any amount of a controlled substance is used it must be completely and accurately documented in a bound book kept in the medical treatment room. The following information must be documented: date, animal's intake number, description of animal, address where animal came from, weight, amount used, balance remaining, technician, assistant and reason for euthanasia (e.g., health, age, behavior). Any discrepancy in the drug balance should be immediately reported to the Kennel Manager or Director.

The animal's intake slip should be updated to record the date of and reason for euthanasia, weight of animal and the technician's initials.

- B. Inventory. All controlled drugs must be carefully inventoried. The supply of drugs are locked in the drug safe, and only managerial employees have the combination/key to the safe. Each time a shipment of a controlled drug is received, it should be immediately placed in the safe with the appropriate paperwork being completed.

A bound book is kept in the safe listing the type and amount of each controlled drug within. Each time a drug is removed from the safe, the person taking the drug is to mark it in the book and check to make certain the inventory is accurate. Under no circumstances should a page be removed from the book. If a mistake is made, a thin line should be drawn through the error with the necessary correction being made and initialed. All entries should be made in ink, and no entry should be erased or completely obliterated. Any discrepancy should be immediately reported to the Kennel Manager or Director.

8. Preparation for euthanasia.

- A. Treatment room. Prior to euthanizing an animal care should be taken to limit access to the euthanasia room. If the treatment room has a door, post a sign reading: "In Use Do Not Enter" on the door of the treatment room facing the hallway. When this sign is on the door, no one should enter that room if at all possible and never without making certain that it is safe to do so. Entering the room when euthanasia is taking place could frighten the animal and endanger the animal as well as staff members present. Once euthanasia is complete, the sign should be removed or turned over.

During euthanasia the treatment room, hallway and adjacent areas should be kept as quiet as possible, however relaxing music in muted volumes can be played. Only essential persons should be present during euthanasia.

- B. Needle size. The proper size of needle and syringe to use varies depending upon the size of the animal. It is preferable to use the smallest syringe which holds the proper amount of drug as it is easier to hold and manipulate.

The needle size should be chosen for the size of the animal's vein. Always use the smallest sized needle possible (i.e. the highest gauge number) to lessen physical pain of insertion yet allow for quick delivery of solution. A copy of The Shelter Advisor chart "Common Needle Sizes for Various Methods of Injection" should be available for reference. Typically, for IV injection:

Kittens: 25 gauge x 5/8" - 27 gauge needle;
Adult cats: 22 gauge x 3/4 or 25 gauge x 5/8" (3/4) needle;
Puppies: 22 gauge x 3/4 or 25 gauge x 5/8" needle;
Dogs (depending upon size): 20 - 25 gauge x 3/4, 5/8, 1" needle.

The 2" needles are usually used only in determining death by checking for a heartbeat in large dogs.

Needles should be checked for barbs prior to use and should be changed to prevent dulling if more than two insertions are needed. When drawing drug solution from the bottle into the syringe, use a different needle than the one being used for injection. Rubber caps on drug bottles dull needles immediately causing a painful injection.

When drawing solution into a syringe, select a needle to leave in the rubber stopper of the drug bottle during euthanasia, attach the appropriate sized syringe to the fixed needle, draw the appropriate amount of solution and remove the syringe, leaving the needle in the rubber cap of the drug bottle. Attach a brand new appropriately sized needle to the full syringe and proceed with euthanasia. Used needles and syringes are disposed of by placing them in an approved medical waste container.

- C. Staff presence. Generally, euthanasia should be performed by two people. The handler is responsible for: comforting the animal; securing and controlling the animal so he/she cannot bite; speaking gently to him/her using the animal's name, if known; soothing the animal and directing his/her

attention to the handler, rather than on the procedure itself. The second person administers the injection.

If sufficient number of trained staff are unavailable to perform euthanasia and the situation cannot wait, it is usually best to take the animal to a veterinarian for euthanasia, or, sedate the animal to a surgical level prior to euthanasia by a certified technician.

Euthanasia may be performed by one person if necessary and only if it is safe to do so. Such situations may involve: a newborn animal which can be held and injected by one person; a wild animal which can be safely tranquilized first; or a critically ill or injured animal which must be euthanized immediately to prevent further suffering. For safety of personnel and animal comfort, it may be necessary to pre-anesthetize animals prior to euthanizing animals with just one technician.

- D. Presence of other animals. Generally only one animal at a time is present in the treatment room. Live animals should not see another animal being euthanized nor should they see a carcass. Only under rare and extenuating circumstances may an exception be made and only if it will make the process easier on the animals. Such an exception may be with a litter of newborn animals who would not be conscious of what is happening, but are comforted by each other's presence. Care should be taken to keep the remaining animals from seeing the actual euthanasia such as covering the cage with a towel.

If a mother animal and her young are going to be euthanized, the mother is always euthanized first to spare her the anxiety of worrying about what is happening to her babies. If the babies are newborn with their eyes still closed, are nursing and are going to be euthanized with an intra-peritoneal injection, they may be placed against the mother's breast (if she has just been euthanized) after being injected and until death occurs as continuing to nurse and be with the mother will comfort them.

9. Euthanasia agent. Sodium pentobarbital is the euthanasia agent used. **The preferred method of administration is intravenously.** Intra-peritoneal injections are acceptable for infant animals, companion animals other than cats and dogs and small wild or feral animals, or in some other situations where IV injection is not possible. Intracardiac injections must never be performed on conscious animals. An intracardiac injection may only be used if the animal is completely unconscious and an intravenous injection is not possible. Prior to administering an IC injection, the animal must be verified as unconscious through eye reflex, toe pinch or other accepted method.

10. Tranquilizers/Anesthetics.

There are varying degrees of tranquilization/anesthesia to be aware of:

- **Tranquilization** is the mildest form of making an animal calm and less responsive to stimulation, usually without sleepiness.
- **Sedation** is a state in which an animal is calm and less responsive to stimulation, usually accompanied by drowsiness or sleep.
- **Analgesia** is the absence of pain, particularly the relief of pain without loss of consciousness; absence of pain or noxious stimulation.
- **Anesthesia** is the loss of feeling or sensation, especially the loss of pain sensation induced to permit the performance of surgery or other painful procedure. If an intracardiac injection is used, the animal must always be anesthetized to a surgical level, rather than just tranquilized.

Domestic animals should be tranquilized or anesthetized when necessary. Tranquilizing/anesthetizing is needed if the animal is extremely frightened, uncooperative, excessively active or aggressive. Wild animals and feral animals should usually be tranquilized/anesthetized first. Animals which are succumbing to the effects of a tranquilizer/anesthetic will lose control and may stumble and fall or hit their head into an object. It is therefore important for staff to carefully hold the animal or place padding around it to prevent the animal from being harmed. Animals which have been tranquilized/anesthetized should be handled very gently and spoken to in a soft, quiet and soothing voice. There should be no abrupt movement or loud noises. While waiting for the tranquilizer/anesthetic to take effect, it may help to dim the lights. Under no circumstances may a tranquilized/anesthetized animal ever be left alone.

Tranquilizing agents may also cause the animal to vomit. If the animal is muzzled, it is essential to carefully monitor the animal and to remove the muzzle if it shows signs of vomiting to prevent it from strangling on its own vomit. Following recommended drug combinations may reduce vomiting.

Pre-euthanasia anesthetics may be given as follows (remember, “mg” is the strength of the drug and “ml” which is interchangeable with “cc” is the amount of drug):

A) Acepromazine (10 mg/cc, small animal product)

Acepromazine provides mild tranquilization but has no analgesic property.

Suggested pre-euthanasia dosage (SM or SQ): dogs is 0.5-1.0 cc/10 lbs;
cats 0.25-0.5 cc/10 lbs.

When using this product, remember:

- the third eyelid may roll up when the animal is tranquil.
- animals may look calm but can still bite – the drug is thought to suppress normal inhibitions and therefore may make dogs more agitated rather than calmed.

To fully anesthetize animals to a surgical level use Acepromazine in combination with another drug or drugs that have a sedation quality and analgesic.

B) Xylazine (sold as Rompun© or Ana Sed©): Sold in two strengths “large animal” (100 mg/ml) and “small animal” (20 mg/cc).

Suggested pre-euthanasia dosage for dogs and cats (SM or SQ):

When using small animal Xylazine the drug can be given at 0.5 cc/10 lbs.

When using large animal Xylazine the drug can be given at 0.1 cc/10 lbs.

Xylazine provides pronounced tranquilization and analgesia (relief from pain) and is an **excellent choice for a pre-euthanasia anesthetic, though it is usually combined with Ketamine**. Many professionals use it for capturing urban wildlife and feral animals.

When using this product remember:

- often induces reflex vomiting in cat and sometimes the dog (vomiting is lessened with addition of Ketamine).
- dogs given excessive doses may whine and vocalize during IV SP injection.
- when using large animal Rompun© (100 mg/ml) some people report there is a delay before cardiac arrest causes death.
- can be reversed by using yohimbine (Yobine©) given slowly IV at 0.05 mg/lb (0.5 cc/20 lb). Can also be given SC or IM. Important when capturing and releasing wildlife.
- may make animals grouchy and prone to bite if they cannot retreat.

C) Ketamine (Ketaset©, 100 mg/cc)

Ketamine is a paralytic drug that does not contain analgesic (relief from pain) and must be used in combination with other drugs for invasive or painful procedures.

The best combination for all species as a pre-euthanasia drug is a mixture of Xylazine (1 mg/lb) with Ketamine (5 mg/lb).

Formula One: The suggested mixture by volume is 1:1, such as 0.5 cc of Xylazine (20 mg/cc) + 0.5 cc of ketamine (100 mg/cc). Note: Ensure the produce used is Small Animal Xylazine or small animal Rompun© when using this dosage. Dosage is: 1 cc of ketamine/xylazine mixture per 10 lbs given IM – sedation should occur within five minutes.

Formula Two: Add 2 ml of “large animal Xylazine (100 mg/ml) to a 10 ml vial of ketamine. Label the vial with the date, the amount of

xylazine added and your initials. Dosage for dogs, cats, raccoons, opossum and skunks is: 0.6 ml per 10 lbs, IM or SQ.

Suggested dosage chart for ketamine/xylazine mixture:

**0.6 mls - 10 lbs
0.9 mls -15 lbs
1.2 mls - 20 lbs
1.5 mls – 25 lbs
1.8 mls – 30 lbs
2.1 mls – 35 lbs
2.4 mls – 40 lbs
2.7 mls – 45 lbs
3.0 mls – 50 lbs**

When using this product, remember:

- stings when injected IM
- must be handled very carefully as an accidental injection in people could be serious and the potential for human abuse is high. Shelters should monitor the drug with all the same safeguards that are used for DEA controlled drugs.
- recommended for feline and wildlife species, but must be used in combination with an analgesic for invasive/painful procedures.
- can be used for cats prior to IP or IV injection (never IC!) when mixed with Acepromazine. Add 2 ml of acepromazine to one 10 ml vial of ketamine. Label the vial with the date, the amount of acepromazine added and your initials. Approximately six month shelf-life. Dose for cats only is: 0.5 - 1.0 ml per 10 injected IM.

D) Telazol© (100 mg/cc)

Telazol is a combination of tiletamine HCL and Zolazepam HCL. This drug produces a state of unconsciousness termed dissociative anesthesia. It is less painful upon injection than other drugs and is fast acting and is a good choice as a pre-euthanasia anesthetic.

Telazol comes in a dry powder form which is mixed with sterile water. The strength of the drug and dosage to use varies depending on how the drug is mixed. Telazol also expires shortly after it is mixed so it is very important for staff to check the strength and date of mixture before administering the drug. The correct dosage to use, depending upon the strength of the drug and the animal's weight, should be listed on a chart (available from the drug company) and hung in the treatment room.

Suggested pre-euthanasia dosage for dogs and cats is 4mg/lb or 0.4 cc/10 lbs.

When using this product, remember:

- provides good pain relief

- works well for field capture.
 - sold as a schedule III drug.
 - slightly more expensive
 - sold as a powder that has a short shelf life when reconstituted.
11. Dosage. The proper dosage for IV injection of sodium pentobarbital is 1 cc per ten pounds, however, an overdose should always be administered. If necessary, additional dosages will be administered until unconsciousness and death occur. Cats weighing up to nine pounds receive 1 to 1 1/2 cc of sodium pentobarbital. Cats over nine pounds receive 2 cc. If IP euthanasia is employed, the dose is usually (see “H.” below).
12. Euthanasia procedures. It is virtually impossible to list a direct step-by-step procedure regarding euthanasia since the proper method depends upon several factors, such as the species, age, size, behavior and medical condition of the animal. However, there are important guidelines, as set forth below, which should be followed.
- A. Small and medium-sized animals should be placed on a towel on the table or scale, and large animals may be placed on the scale or may be euthanized on the floor. Depending on the kennel area, some animals may be less frightened being euthanized in their home cage after appropriate visual barriers are put up to ensure other animals do not witness euthanasia.
- B. It is usually preferable to use the vein in the front leg of the animal for the intravenous injection. If this is not possible the vein in the rear leg may be used. The vein in the rear leg may be prominent on the outside of the leg or the inside thigh area depending on the species. If the rear leg is used in cats, the vein on the inner thigh area should be used; in dogs the vein on the outside of the rear leg should be used.
- C. For intravenous injections, in most animals the vein is easily detected by merely applying pressure to it, by pumping the paw or by wetting the area with water or alcohol. It is preferable to locate the vein by these methods as it is much less stressful to the animal.

However, if the vein cannot easily be seen in this way, the leg should be shaved using the clippers on dogs. Shaving is not usually too upsetting to dogs; however, the clippers should be turned on before touching the animal with them to avoid suddenly frightening the animal.

The noise of the clippers usually causes cats a great deal of anxiety, stress and fear, and clippers should not be used. With cats, a small area of hair

can be cut away with scissors. Animals other than dogs and cats should usually be tranquilized and then shaved if necessary.

- D. Once the vein has been located, the handler should hold off the vein by slightly rolling it and applying pressure. The technician will then insert the needle into the vein and aspirate. If the needle is properly inserted into the vein, blood will appear in the syringe. Once the vein has been located, the technician should secure the syringe and tell the handler to release pressure on the vein. The handler will continue to firmly hold the animal's leg to prevent any sudden movement.
- E. The technician will then quickly and smoothly inject the sodium pentobarbital into the vein, watching carefully to ensure that the vein is not lost or does not "bubble." A bubble occurs when the needle comes out of the vein and the solution is injected into the surrounding area. This will be painful to the animal and convulsions may occur depending on how much solution has been injected. If the animal remains calm, the injection should quickly be administered into the vein above the site of the bubble or into the vein in a different leg. If the animal is in pain, stressed, convulsing or another vein cannot be promptly found, an anesthetic should be quickly administered.
- F. Once the sodium pentobarbital is properly injected into the vein, the animal will collapse very quickly. The handler must continue to support the animal, speaking softly, gently caressing him/her and slowly laying the animal down. The animal may remain conscious for a few moments afterwards, so it is very important to continue comforting the animal, periodically checking for consciousness. Once the animal loses consciousness, he/she is essentially brain dead though breathing and heartbeat may continue for a few moments.
- G. Intraperitoneal injections should only be used if an intravenous injection is not possible and only according to guidelines established in a certified training course. The injection is made into the center of the abdominal area directly under the rib cage, at a slightly upward angle as taught in a certified course. A greater amount of sodium pentobarbital is necessary for intraperitoneal injections (often three times the amount), and the proper amount varies upon the size and condition of the animal. The intraperitoneal injection is often more painful than an intravenous one and death usually does not occur as quickly. In some cases it will be best to tranquilize the animal before rendering an intraperitoneal injection. Once the injection is complete, the animal, if socialized, should be held and comforted until unconsciousness occurs, and then checked for death as

described above. If the animal is unsocial they should be placed on a soft towel or blanket in a quiet darkened place where they are unable to injure themselves and then checked for death as described above. After IP injection, the animal will often try to regain their balance or walk which is why the environment must be safe and comforting.

- H. Death is determined by using as many recommended methods as necessary to verify death. They include: watching for signs of breathing; palpating the animal for a heartbeat, breath or pulse; toe pinch; checking for a heartbeat with the stethoscope; eye reflex; Rigor Mortis (facial muscles first in 1/2 to one hour); and by inserting the needle into the heart to check for movement. The animal is never to be put in the refrigerator/freezer/bag or left alone until death has been verified absolutely.

Once death is determined, unless an owner wishes to make other arrangements, the carcass is gently placed into the appropriate place in a refrigerator/freezer – the animal may first be placed in a cadaver bag. Animals which must be tested for rabies are laid to the side.

- I. To provide a comforting environment, the scale and table should be disinfected between each euthanasia procedure to eliminate any lingering smells of animals. It is also important for staff to wash their hands between each animal.
13. Disposal. Arrangements should be made to pick up bodies in the freezer on a regular basis. After disposal, the barrels and freezer should be disinfected with bleach, a disinfectant agent and water. Carcasses disposition should be known so information can be related to owners if necessary. Owners may make other arrangements, such as cremation or burial if they wish.
 14. Staff Support. Anytime any staff member is scheduled to perform or assist with euthanasia but is uncomfortable with performing this task, the Kennel Manager or Director should be notified and that person should be assigned a different task until a comfort level with the process is maintained. Emotional support will be offered as needed or requested.