



Washington Department of Fish and Wildlife

Wildlife Rehabilitation Manual

By Patricia Thompson



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Table of Contents

	Page
Introduction	-4-
The Washington Department of Fish & Wildlife and Wildlife Rehabilitation .	-5-
Preparing for Your Life as a Wildlife Rehabilitator	-6-
Regional Offices & Phone Numbers	-6-
Study Guides	-7-
Training	-8-
Build a Working Relationship with an Established Permittee	-8-
Your Relationship with a Veterinarian	-9-
Species Identification	-10-
FIELD GUIDES AND NATURAL HISTORY REFERENCES	-10-
Recognizing Threatened and Endangered Species	-11-
Common vs Rare Species; Native vs. Non-Native; Nuisance Species.....	-12-
Transferring Animals	-12-
Preparing for the Exam	-13-
Outline of Exam Topics	-13-
Washington Wildlife and Natural History	-13-
Housing and Enclosures	-13-
Diet, Nutrition and Feeding Methods	-14-
Public Contact and Education	-15-
Animal Restraint and Handling	-15-
Animal Stress	-16-
Taming, Handling, and Imprinting	-16-
Disease, Care, and Treatment, and First Aid and Triage	-17-
Epizootic Diseases	-17-
Zoonotic Diseases – Your Safety & Public Health	-18-
<i>Baliscaris procyonis</i> – Raccoon roundworm	-17-
Rabies Vector Species	-18-
Euthanasia & Carcass Disposal	-20-
Threatened and Endangered Species	-20-
Release	-21-
Non-releasability	-20-
Laws and Rules pertaining to Wildlife Rehabilitation in Washington State	-22-
Primary Wildlife Rehabilitation Law in Washington State	-22-
Transferring animals across state lines	-23-
Importation – Prohibition of other mammals	-23-
Mandatory Disease Reporting	-24-
Delegation of Permit Authority – Sub-permittees	-24-
Wildlife Rehabilitation Permit Conditions	-24-
APPENDIX 1. General Wildlife Rehabilitation Exam Questions	-26-

INTRODUCTION

Thank you for your interest in wildlife rehabilitation. Before deciding to become a wildlife rehabilitator, please read all the material on the Washington Department of Wildlife (WDFW) Wildlife Rehabilitation web page at <http://wdfw.wa.gov/conservation/health/rehabilitation/>. We also encourage you to volunteer at a wildlife rehabilitation facility or with an experienced licensed rehabilitator to understand their daily life and routine. The demands on wildlife rehabilitators are great. It is a time consuming and expensive profession and you will be donating personal time and resources. One must be very dedicated to be a successful wildlife rehabilitator.

All native wild birds, mammals, reptiles, and amphibians are protected by Federal and/or Washington State laws and regulations (RCW's and WAC's). Therefore, wild animals may not be held in captivity without the proper permits. A Wildlife Rehabilitation Permit authorizes a person to temporarily possess injured, ill, or orphaned wildlife for the purpose of rehabilitation and release back to the wild. Individuals must meet several requirements to earn this permit. Those who work with native migratory birds must also have a US Fish and Wildlife Service Migratory Bird Rehabilitation Permit. Licensing ensures high standards of practice and that all persons engaged in wildlife rehabilitation are trained, qualified, and provide humane care and housing for wildlife in their custody.

Completing 1000 hours of volunteering and/or training is required for your permit. This is the equivalent of about six months of full time or two and a half years of one day/week, such as volunteering every Saturday. You will also be required to list a sponsoring licensed Washington Wildlife Rehabilitator on your Washington Wildlife Rehabilitation Permit Application. We, therefore, recommend that you start building a relationship with a WDFW licensed wildlife rehabilitator or qualified veterinarian now.

After attaining your permit, you must continue your education. Good rehabilitators continue developing their skills forever, no matter what their level of expertise. State, national, and international professional wildlife rehabilitation organizations as well as fellow rehabilitators provide opportunities for continued education and increased skill. Washington Wildlife Rehabilitation Association (WWRA), National Wildlife Rehabilitators Association (NWRA), and International Wildlife Rehabilitation Council (IWRC) publish newsletters and journals and sponsor conferences. Joining at least one of these organizations is essential for rehabilitators to stay current and is required for the permit.

A wildlife rehabilitation permit **does not** allow nor authorize a person to be a veterinarian, wildlife biologist, wildlife officer, public-health official, or nuisance animal control officer (someone who, for example, removes raccoons or squirrels from peoples' homes). You may not legally act in any of these capacities. Nevertheless, rehabilitators aid and support all these professions and you must prepare for a complex role within the professional wildlife community.

Lastly, avoid becoming what is termed an "egotistical" or "gratificational" practitioner - a rehabilitator who maintains their self-image through wildlife rehabilitation and views him- or herself as a "savior" or "trusted companion" of wild animals. Those who pursue wildlife rehabilitation for these reasons usually do more harm than good. Animals in their care often become habituated and tame and have a poor chance of surviving in the wild. This style of rehabilitator gives the public the wrong impression of the free nature of wild animals.

The following presents an overview of wildlife rehabilitation, requirements for this profession, and an introduction to the WDFW Wildlife Rehabilitator Exam.

The WDFW and Wildlife Rehabilitation

The WDFW manages wildlife at the population level rather than individual level; therefore, rescuing individual animals is not in the WDFW management plan. Nevertheless, the WDFW acknowledges the value of professional wildlife rehabilitation, and in more ways than simply animal treatment and rehabilitation.

Additionally, there are challenges to overcome within the wildlife rehabilitation community that by addressing these concerns, wildlife rehabilitation in the state of Washington will be the best it can be.

Valuable Services to the WDFW provided by licensed Wildlife Rehabilitators

- Decreases Wildlife Biologist and Wildlife Officer workload
- Insures humane and professional care of injured wildlife
- Provides a pool of professional wildlife handlers to help WDFW with wildlife pick-up and emergencies
- Provides data and staff-power for areas of wildlife research and retrospective studies
- Assists in threatened and endangered species recovery
- Assists in disease monitoring and domestic animal protection and public health
- Provides self-regulation and self-enforcement within the wildlife rehabilitator community
- Provides valuable public education

Subjects for improvement in the Washington wildlife rehabilitation community

- Negative and uncooperative attitude toward the WDFW and non-compliance with license requirements resulting in improper and inappropriate care of animals
- Negative and uncooperative attitude toward fellow wildlife rehabilitators resulting in lack of networking and diminished services for sick and injured wild animals, and the public
- Treatment and release of non-native wildlife
- Release in unapproved and inappropriate locations.

By far the majority of licensed wildlife rehabilitators in this state are professional, highly capable, and willing to assist and collaborate at any time. The WDFW believes wildlife rehabilitation services outweigh the concerns, if the concerns are responsibly addressed within the Wildlife Rehabilitation community. If you are to become a Wildlife Rehabilitator, you must be part of the solution and not part of the problems of wildlife rehabilitation.

The WDFW does not pay for wildlife rehabilitation, nor is it responsible for any costs incurred by a licensed wildlife rehabilitator. Nevertheless, the WDFW offers grants to wildlife rehabilitators on a biennial basis. See http://wdfw.wa.gov/grants/wildlife_rehabilitators/index.html. Wildlife

Rehabilitators may also find it advantageous to incorporate as a 501(c)(3) tax exempt non-profit organization.

Preparing for Your Life as a Wildlife Rehabilitator

Material in this booklet and on our web page is designed to give a brief introduction to what you need to know to become a wildlife rehabilitator. It introduces you to general wildlife rehabilitation, care techniques, and applicable Washington and Federal laws and obligations, but will not go into the detail needed for a successful wildlife rehabilitation career. This booklet **does not** contain enough information, nor should it be used, as your exclusive resource for the exam. To be successful, you will need to read and study materials far beyond the scope of this publication. It is equally and vitally important that you network with licensed Washington wildlife rehabilitators and veterinarians as much as possible and attend wildlife rehabilitation conferences and workshops. You must have six months (1000 hours) experience with a licensed established wildlife rehabilitator to qualify for your WDFW Wildlife Rehabilitation Permit. Educational training may count for a portion of that experience.

Study Material

In addition to the WDFW Wildlife Rehabilitation web page, must-reads are: **WDFW Wildlife Rehabilitation Facility and Care Standards, NWRA Principles of Wildlife Rehabilitation, NWRA/IWRC Minimum Standards for Wildlife Rehabilitation, and Compendium of Veterinary Standard Precautions for Zoonotic Disease Prevention in Veterinary Personnel**, all listed below. You will need field guides and basic references recommended to you by licensed rehabilitators to augment your knowledge and understanding. A good source of natural history information for some species is the WDFW **Priority Habitats and Species Management Recommendations** at <http://wdfw.wa.gov/publications/pub.php?id=00026>

Exams are given by appointment at WDFW Regional Offices. Please call your Regional Wildlife Rehabilitation Permit Coordinator to schedule an exam time.

Region 1

*Asotin, Columbia, Ferry, Garfield, Lincoln, Pen Oreille, Spokane, Stevens, Walla Walla, Whitman
(509) 892-1001*

Region 2

*Okanogan, Chelan, Douglas, Grant, Adams
(509) 665-3391*

Region 3

*Kittitas, Yakima, Benton, Franklin
(509) 457-9303*

Region 4

*Whatcom, Skagit, Snohomish, King, Island, San Juan
(425) 775-1311*

Region 5

*Lewis, Wahkiakum, Cowlitz, Clark, Skamania, Klickitat
(360) 906-6722*

Region 6

*Clallam, Jefferson, Kitsap, Grays Harbor, Mason, Pierce, Thurston, Pacific
(360) 249-4628*

Study Guides

1. *WILDLIFE REHABILITATION FACILITY AND CARE STANDARDS*. 1996. WASHINGTON DEPT OF FISH AND WILDLIFE. 19 PP.
http://wdfw.wa.gov/conservation/health/rehabilitation/permit_requirements.html
2. *PRINCIPLES OF WILDLIFE REHABILITATION: THE ESSENTIAL GUIDE FOR NOVICE AND EXPERIENCED REHABILITATORS*, 2ND EDITION. 2002. ADELE MOORE & SALLY JOOSTEN. NATIONAL WILDLIFE REHABILITATION ASSOC. 667 PP.
May be purchased at <http://www.nrawildlife.org/pubs.asp>; also scroll down to see other publications.
3. *MINIMUM STANDARDS FOR WILDLIFE REHABILITATION 3RD ED.* 2000. ERICA A. MILLER DVM, ED. NWRA/IWRC COOPERATIVE PROJECT. 77PP.
This book is available for free download at www.iwrc-online.org/pub/publications.html.
4. *COMPENDIUM OF VETERINARY STANDARD PRECAUTIONS FOR ZOO NOTIC DISEASE PREVENTION IN VETERINARY PERSONNEL*. 2008. NATIONAL ASSOC. OF STATE PUBLIC HEALTH VETERINARIANS, VETERINARY INFECTION CONTROL COMMITTEE.
www.nasphv.org/Documents/VeterinaryPrecautions.pdf
5. *MAMMALIAN ZOO NOTIC DISEASE COURSE*
http://www.nwhc.usgs.gov/outreach/mammalian_zoonotic_course.jsp
6. *FIELD MANUAL OF WILDLIFE DISEASE – GENERAL FIELD PROCEDURES AND DISEASES OF BIRDS*
http://www.nwhc.usgs.gov/publications/field_manual/index.jsp

THE FOLLOWING ARE FROM **DIFFERENT STATES**; their laws, regulations, and State Threatened, Endangered, and Sensitive Wildlife Lists **WILL NOT APPLY TO WASHINGTON**, but the information on wildlife medicine, diseases, housing, husbandry, etc. will; these are excellent manuals to study:

7. *STUDY GUIDE FOR PROSPECTIVE MAINE WILDLIFE REHABILITATORS & EXAMINATION BOOKLET FOR PROSPECTIVE MAINE WILDLIFE REHABILITATORS*
May be downloaded from <http://maine.gov/ifw/wildlife/rehabilitation>. Click on Becoming a wildlife rehabilitator; click “letter explaining the procedure and requirements for obtaining your permit.” Click on Study Guide PDF in 1. and Exam Booklet PDF in 2. The Study Guide contains a good Wildlife Rehabilitation Glossary. Also see <http://maine.gov/ifw/wildlife/rehabilitation/pdfs/remainebooklet.pdf>.
8. *WILDLIFE REHABILITATION IN WISCONSIN: An Introduction and Study Guide*
May be downloaded from
www.dnr.state.wi.us/org/land/wildlife/whealth/rehab/RehabGuide.pdf
9. *MINNESOTA WILDLIFE REHABILITATION STUDY GUIDE & MINNESOTA WILDLIFE REHABILITATION EXAMINATION STUDY BOOKLET*
May be purchased from the Minnesota Bookstore.
www.dnr.state.mn.us/eco/nongame/rehabilitation. Click on Study guide & exam book at left; click on Minnesota Bookstore.

Training

Wildlife rehabilitation is not a hobby. You must complete 1000 hours of volunteering and training with an established licensed wildlife rehabilitator before obtaining your permit. This is the equivalent of about six months full time or two and a half years of one day/week, such as volunteering every Saturday. Of these 1000 hours, 500 must be during the spring/summer “baby” season. Approved workshops and classes count towards your training hours; out-of-state training and volunteering counts if you present valid letters of recommendation from the person or facility for which you worked. Internships in Wildlife Rehabilitation are offered at the larger facilities such as Blue Mt. Wildlife, Pendleton OR (www.bluemountainwildlife.org/intern.cfm); PAWS Wildlife, Lynnwood WA (www.paws.org/wildlife-rehab-intern.html); Sarvey Wildlife Care Center, Arlington WA (www.sarveywildlife.org); West Sound Wildlife Shelter, Bainbridge Is. WA (www.westsoundwildlife.org/Volunteer.html); Wolf Hollow, Friday Harbor WA (<http://wolfhollowwildlife.org/index.php/education/internships>). You will find a list of Washington wildlife rehabilitators on line at <http://wdfw.wa.gov/conservation/health/rehabilitation>. Ask about their facilities, reference materials, veterinarians, treatments, protocols, procedures and with whom they network.

Become a member of the Washington Wildlife Rehabilitators Association (WWRA) www.wwrwildlife.org and one or both of the national organizations (NWRA and IWRC), read their publications and attend the conferences. Sign up for training courses such as those offered by Washington rehabilitators and by the International Wildlife Rehabilitation Council (www.iwrc-online.org/training/training.html).

Build a Working Relationship with an Established Permittee. The rehabilitator with whom you work should be willing to share any and all information with you. Oddly, wildlife rehabilitation can at times be a competitive profession. Each facility is competing for much needed donations and funding. However, if there is one profession that should be cooperative, supportive, and communicative, it is wildlife rehabilitation. First and foremost, the animals should be considered above all. In addition to valuable information and training, networking helps when animals must be transferred to another facility, such as when single orphans need to be placed with others of their own species for appropriate imprinting.

Some criteria for selecting an experienced licensed wildlife rehabilitator to train with are:

- You feel compatible in your working relationship;
- They are patient, open, honest, and supportive;
- They are willing to provide quality rehabilitation and training;
- They are accessible and available;
- They are willing to evaluate you and communicate with the WDFW;
- They are in good standing with the WDFW and US Fish and Wildlife Service;
- They are willing to support you after you obtain your permit;
- They frequently network with other licensed wildlife rehabilitators.

Your Relationship with a Veterinarian

You must already have a principle veterinarian when applying for your permit. This is a requirement of the permit. Your veterinarian is the person who oversees all of your rehabilitation procedures. Wildlife rehabilitators may not practice veterinary medicine (such as surgery, diagnostics, anesthesiology, etc.) unless they currently hold a Washington State Veterinary Medical License. Wildlife rehabilitators are not trained nor licensed to diagnose and treat animal diseases. Medical or surgical treatments, drug prescription and administration, injections, vaccinations, and anesthesia must only take place under the direction and supervision of a Washington licensed veterinarian.

Ask the veterinarian in what capacity she or he is able to assist you with services such as radiographs, blood work, fecal exams, lab work, surgery, anesthesiology, euthanasia, and carcass disposal. Draw up a written and signed agreement with your veterinarian as to what services will be provided and for what cost if any. You may wish to learn how to perform laboratory work yourself.

Points to consider in your agreement:

- Goods and services that the veterinarian is willing to provide.
- Goods and services that the veterinarian is willing to provide pro bono;
- Services and supplies for which the veterinarian must charge.
- Diagnostic procedures the veterinarian is willing to perform (radiographs, hematology, etc.) and costs;
- Treatments the veterinarian is willing to perform (prescribe and administer medications, fracture management, surgery, etc.);
- Wildlife species that the veterinarian will and will not work with.
- Wildlife species for which the veterinarian has sufficient medical and care knowledge;
- Types of phone consultation the veterinarian will provide;
- Time availability;
- Willingness to come to your facility;
- Arrangements for bringing wild animals to the clinic (appointment only, emergency, etc.);

Veterinarians may treat wild animals in their clinic short-term (48 hours or until the animal is stabilized) without a wildlife rehabilitation permit. Veterinarians who wish to retain wild animals past that time period must obtain a WDFW Wildlife Rehabilitation Permit.



- How wild animals should be brought into the clinic (secure carrier, through a back door, etc.);
- Housing facilities for wild animals at the clinic in order to minimize stress (noise, foot traffic, proximity to predators, etc.);
- Follow up care protocols, record keeping and communications;
- Protocols and agreements on euthanasia. Agree, in advance, on a process of how you and your veterinarian will make euthanasia decisions. Make sure to address the details of how the process will be carried out including safe disposal of the carcasses;

Any agreements must abide by the laws and regulations governing the practice of veterinary medicine.

Species Identification

Accurate species identification is crucial for diagnosing diseases and parasites, and for prescribing medications. Treatments, housing, and diets are often species-specific. Some field guides and other natural history books are listed below for your reference. Also consult local colleges and universities and university facilities such as the UW Burke Museum web site



Pygmy rabbit (*Brachylagus idahoensis*)

www.burkemuseum.org/fieldguide. Birding organizations such as the many Audubon chapters in Washington have good resources. For links to local Audubon Society chapters see: http://wa.audubon.org/chapters_websites.html.

Some species have more than one common name; therefore, knowledge of scientific names is necessary. Diseases are occasionally referenced by species' scientific names. For example, the scientific name for the raccoon is *Procyon lotor*; the scientific name for raccoon roundworm is *Baylisascaris procyonis*.

Consult the references below and ask your sponsoring wildlife rehabilitator and Principle Veterinarian for additional pertinent reference material.

FIELD GUIDES & NATURAL HISTORY REFERENCES

American Society of Mammalogists. *Mammalian Species Series*. Individual monographs may be downloaded at www.mammalsociety.org; follow prompts to PDF files for the series.

Baicich, P. & Harrison, C. 1997. *A Guide to the Nests, Eggs and Nestlings of North American Birds*, 2nd edition. NY: Academic Press. 347 pp.

Bell, Brian H., Kennedy, G., & Fisher, C. 2006. *Birds of Washington State*. Lone Pine Publishing. 384pp.

Benyus, Janine M. 1989. *Field Guide to Wildlife Habitats of the Western United States*. Fireside Publishers. 336 pp.

Corkran, Charlotte C. and Chris Thoms. 2006. *Amphibians of Oregon, Washington, and British Columbia: A Field Identification Guide*. Lone Pine Publishing. 176 pp.

Eder, Tamara. 2002. *Mammals of Washington and Oregon*. Lone Pine Publishing. 352 pp

Erlich, Paul. R., David S. Dobkin, and Darryl Wheye. 1988. *The Birder's Handbook: A Field Guide to the Natural History of North American Birds*. Fireside Publishers. 785 pp.

Johnson, David H. and Thomas A. O'Neil. 2001. *Wildlife-Habitat Relationships in Oregon and Washington*. Oregon State University Press. 736 pp.

Martin, A., Zim, H. & Nelson, A. 1951. *American Wildlife and Plants: A Guide to Wildlife Food Habits*. NY: Dover Publications. Available through WRT; also can often be found in used bookstores.

Maser, Chris. 1998. *Mammals of the Pacific Northwest: From the Coast to the High Cascades*. Oregon State Univ. Press. 406 pp.

National Audubon Society. 1996. *National Audubon Soc Field Guide to North American Mammals*. Knopf Doubleday Pub. 992 pp.

Poole, A. & Gill, F. (Eds.) *The Birds of North America*. The Academy of Natural Sciences and The American Ornithologists' Union. The complete series is available at most university libraries. Species monographs may be purchased from Buteo Books see: www.buteobooks.com/bna.html

Reid, Fiona. 2006. *Peterson Field Guide to Mammals of North America*. Houghton Mifflin Harcourt. 608 pp.

Sibley, D. A. 2000. *National Audubon Society The Sibley Guide to Birds*. Knopf Doubleday Publishing. 544 pp

Sibley, D, A. 2003. *The Sibley Field Guide to Birds of Western North American*. Knopf Doubleday Publishing Group. 472pp.

Sibley, D. A. 2009. *The Sibley Guide to Bird Life and Behavior*. Knopf Doubleday Publishing. 608 pp.

See www.buteobooks.com/category/NEARFG.html for an extensive list of bird Field Guides.

Recognizing Endangered and Threatened Species. For a list of animals endangered or threatened in Washington State, as well as federally listed endangered or threatened species see <http://wdfw.wa.gov/conservation/endangered/>. Should you receive a member of one of these species, it must be given priority. Your permit requires that you notify your Regional Wildlife Rehabilitation Coordinator within 24 hours of admitting a threatened or endangered animal. The US Fish and Wildlife Service must also be notified in the case of federally endangered or threatened species. The WDFW and US Fish and Wildlife Service must also be notified within 24 hours

Threatened and Endangered Species Lists

Federal and State Threatened and Endangered Species Lists are different.

For the **Washington State** Threatened and Endangered List see:

<http://wdfw.wa.gov/conservation/endangered>. Or see the lists on the Wildlife Rehabilitation page at http://wdfw.wa.gov/conservation/health/rehabilitation/for_current_wr.html

For the **Federal** Threatened and Endangered Species List see:

www.fws.gov/endangered

These lists change when species are added, delisted, or downlisted. It is your responsibility to keep up with these lists.



Marbled murrelet
(*Brachyramphus marmoratus*)

upon death of the animal.

Common vs. Rare Species; Native and Non-Native; Nuisance Species. Many people, particularly biologists, believe that common nuisance animals and introduced species should not be rehabilitated but, rather, should be euthanized. These introduced species are highly competitive and destructive to some of Washington's native wildlife. It is considered by some to be ill-advised to rehabilitate and release, for example, European starlings, house sparrows, or Eastern gray squirrels.

You will undoubtedly face the question of why one species is more important or valuable than another and be forced to choose which you treat and which you do not. Some say that by practicing on common species, one develops skills that can be applied to the rare species. This is a valid argument.

Some of the common urban species such as raccoons become aggressive annoyances, and sometimes dangers, to people and pets. Nuisance Wildlife Control Operators (NWCO) are often called to eliminate these animals, meaning they will be killed. Seriously consider whether you want to rehabilitate animals that may cause trouble and be killed.

The WDFW encourages wildlife rehabilitators to develop policies that reflect best practices for native Washington wildlife. The rehabilitation and release of threatened and endangered individuals will have the most positive impact on their populations, simply because there are fewer animals in that population. Conversely, although the rehabilitation and release of common nuisance and non-native individuals may not positively affect their population numbers, the release of many rehabilitated non-native species may have deleterious effects on local native wildlife.

Transferring animals

To another facility. Transfer animals if:

- The disease or injury is beyond your skill level
- Your cages are too small/large or otherwise inappropriate
- Lack of necessary diagnostic and treatment equipment
- The animal, such as young, needs a conspecific companion
- You have received a threatened, endangered, or oiled species for which you are not permitted
- You are at capacity

Across state lines. Cervids (deer, elk, and moose) may NOT be transported across state borders for rehabilitation. State laws are strict against interstate movement of deer, elk, and moose because of chronic wasting disease (CWD), brucellosis, and tuberculosis.

Preparing for the Exam

The intent of the exam is to test your understanding of wildlife rehabilitation concepts, practices and procedures, the needs and habits of Washington species, and specifics of wildlife care, injury, and disease. Even though you may want to specialize in birds or mammals, you still must take the General Exam with questions on both. We believe this makes a better qualified wildlife rehabilitator. It is likely that you will be put in situations where the public brings you wildlife not in your “specialty” area.

Raptors are not on the State General Wildlife Rehabilitation Exam. Those wishing to rehabilitate raptors must take the General Exam plus an additional Raptor Exam and achieve a score of eighty percent (80%) or higher on both in order to pass. You may not rehabilitate raptors without the special raptor permit. You must also have a permit from the US Fish and Wildlife Service.

The Washington State Wildlife Rehabilitation Exam consists of 285 multiple-choice, true-false, and vocabulary questions and you will have 90 minutes maximum to take the exam. For sample questions, see *Appendix 1*. They are real questions on the test. They do not represent everything on the test but serve to acquaint you with the form and layout and how the questions are asked. Answers are provided to these sample questions for study purposes.

A. Washington Wildlife Ecology and Natural History
Many of the field guides and references listed above provide natural history facts. You only need to know very basic ecology and general life history of the species with which rehabilitators most commonly work. It is important to know, for example, the gestation period of a Douglas squirrel should a pregnant female enter your facility.

B. Housing & Environment

Before proceeding, check that your local jurisdiction (city or county) will permit the building and operation of wildlife care facilities.

Animals in rehabilitation may not be housed where they are subject to public viewing, display, access, or exhibit.

Outline of exam topics

- Section A. Washington Wildlife Ecology and Natural History**
- Section B. Housing & Environment**
- Section C. Diet, Nutrition, & Feeding**
- Section D. Public Contact & Education**
- Section E. Restraint & Handling**
- Section F. Diseases, Care, & Treatment**
- Section G. Wildlife First Aid & Triage**
- Section H. Epizootic Diseases**
- Section I. Zoonotic Diseases**
- Section J. Euthanasia and Carcass Disposal**
- Section K. Release**
- Section L. Rules, Laws, & Regulations**



Fawn Barn, Wolf Hollow

Wildlife species have a wide array of caging and enclosure requirements both for their physical and psychological health. They need everything from proper food containers to appropriate enrichment activities. You will need to know the housing requirements for many species and groups of animals.

Three stages of caging are required for each degree, or phase, of injury or illness. **Temporary or stabilizing confinement** caging restricts activity and mobility to a minimum allowing

for observation, rest, and preventing further injury. **Recovery phase** cages allow for limited activity and mobility. **Conditioning phase** requires cages large enough for the animal to perform most of its natural daily behaviors, such as flight cages for birds. Depending on the species of animal, these may have to be very large, allowing for unlimited activity and mobility and to provide physical and psychological conditioning.



Songbird Aviary, conditioning phase, Wolf Hollow

A critical part of captive animal housing is sanitation – cleaning everything properly. There are many types of disinfectants; directions must be followed carefully. An ideal disinfectant should kill a broad spectrum of disease organisms, be non-toxic, non-irritating, non-corrosive, and readily inactivated after application.

Because of the dangers associated with the raccoon parasite *Baylisascaris*, no other species should be housed in a cage that raccoons have occupied, with the exception of stainless steel cages and outdoor enclosures that can be flame sterilized.

C. Diet, Nutrition, & Feeding

Animals' diets can be highly specialized or very general, or somewhere in between. Raccoons, bears, skunks, and robins are omnivores, or generalists, as are people. Cats are usually strict carnivores and deer, elk, and moose strictly herbivores. It is vitally important that you know the details of wildlife nutrition and specific food requirements of the species with which you work. Something as obscure as a calcium to phosphorus ratio imbalance can be deadly for many species. It is imperative that you know the natural wild foods of the species you are treating.

D. Public Contact & Education

By signing the WDFW Wildlife Rehabilitation Permit, you are agreeing to the publication of your name and contact numbers of your choice on the WDFW Wildlife Rehabilitation web page; your name and contact numbers are therefore made public. You are not, however, legally or morally obligated to pick up any and all sick and injured animals when a member of the public demands it. You may choose when and where at any given time that you wish to pick up or receive an animal. You may also decline to rehabilitate any species you do not wish to have in your facility. For example, some rehabilitators do not wish to rehabilitate raccoons, therefore, will not accept or retrieve them. You may wish to prepare a sympathetic answer for the public should this occasion arise where you do not wish to or cannot take an animal.

Much of your time as a wildlife rehabilitator is spent on the phone educating callers. You will get questions on wildlife identification, wildlife nuisance problems, life history and behavior, and laws and regulations. Most of the time you will be educating the public to simply leave wildlife alone, as in the case of "orphaned" wildlife. Even when wildlife has been injured, you will make the judgment whether it is in the animal's best interest to bring it in or leave it alone.

When the public calls about nuisance or problem wildlife, wildlife rehabilitators are not permitted nor licensed to remove these animals. This must be done by NWCOs. You may want to consult Link, R. 2004. *Living With Wildlife in the Pacific Northwest*. Univ. of Washington Press. 392pp, or refer them to the WDFW web page <http://wdfw.wa.gov/living/nuisance/>.

E. Restraint & Handling

The most important aspect of animal restraint and handling is to consider how you and your staff can protect themselves against injury; human safety comes first. Animal restraint classes are offered by several organizations. You may also train with an experienced wildlife rehabilitator. Restraint skill takes experience and an intimate knowledge of that particular species' behavior and physiology. You or the animal can be injured due to improper technique. Without the proper gloves, rabies poles, etc. even small mammals such as squirrels can give serious bites. Unless you are properly prepared to restrain a given species, you should not accept it into your facility.



You must also be able to advise the public on how to handle wild animals. If a member of the public calls to report an injured animal, consider first how that animal could harm the caller. Find out the species, its condition, and behavior. Provide specific advice on how to avoid the animal's defense weapons (such as teeth in the case of most mammals; the beak in the case of a great blue heron, etc.). Discourage the caller from handling larger animals. The level of legal liability for yourself is not yet clear should the person get hurt while following your advice.

Animal stress. Wild animals in captivity are exposed to a great amount of stress that can cause them physical injury and psychological harm. Avoiding stress to the animals in your care is paramount. Some stress reduction practices are:

- Minimize handling
- Evaluate the animals' cages and enclosures for frightening or startling objects
- Provide sight barriers between other animals and humans
- Limit talking and noise (no radio, TV, etc.)
- Prohibit pets from within auditory and visual range of any wildlife patients
- Provide proper diet and enrichment

There is a fine line in wildlife rehabilitation between not stressing the animal and making it feel too comfortable.

Taming, Imprinting, and Habituating. It is of supreme importance that wildlife rehabilitators avoid taming, imprinting, or habituating animals in their care. This means no holding, grooming, talking to, or cuddling. Ever. Also no visiting your patients unnecessarily. Tamed, habituated and human-imprinted animals cannot be released; they will not survive in the wild and they can be dangerous to humans and domestic animals. A tame, habituated, or imprinted animal must be euthanized. If a wildlife rehabilitator does not comply with this directive, they could have their permit revoked permanently.

Taming is a process by which wild animals learn not to fear humans, and are domesticated enough to seek out human company. Imprinting occurs in very young animals at a precise critical period where the animal fixes its attention on and follows the first object or creature it sees, hears, or touches, and becomes socially, and later sexually, bonded, identifying itself as whatever it imprints upon. If the animal imprints upon you, it will believe it is supposed to follow you and do what you do. Imprinting persists into adulthood, is permanent, and cannot be reversed.

Habituation is a course by which an animal stops responding to frequent and repeatedly occurring stimuli (noises, sights, smells) because no negative consequences have occurred. If an animal hears humans talking all the time and nothing bad happens to it, they will no longer believe they are in danger and will respond inappropriately when around other humans. They no longer perceive these things as a threat. The risk of habituation in rehabilitation facilities is high if wildlife is not sequestered and cared for properly.

You can avoid taming and improper imprinting by raising animals with others of their own species (conspecifics). You can decrease the chance of habituation by minimizing to the extreme any handling and exposure to yourself and other people, especially once the young are feeding independently. The more comfortable a wild animal is around people, the less likely it is to survive and properly function in the wild.

F. Disease, Care, & Treatment

Life threatening conditions require skill and training. Shock, severe dehydration, and emaciation are three of those. Treatment of dehydration and emaciation requires very specific steps administered by a skilled rehabilitator. Emaciated (starving) animals will need warmth and fluids first and must not be given solid food right away. An emaciated animal is in a catabolic, rather than the normal anabolic, state where it draws energy for body functions from stored reserves or, in extreme cases, from its muscle mass. Ingested solid food can abruptly shift the patient's physiology to a clinical condition called Refeeding Syndrome. This is a potentially fatal condition characterized by imbalance in electrolytes and fluid as well as multi-system failure and multi-organ dysfunction.

Treatment of dehydration and emaciation is advanced medicine.

A rehabilitator must be able to recognize shock instantly, warm the animal and administer the correct electrolyte fluids preferably subcutaneously or intravenously. Major bleeding is another life threatening situation that may be alleviated by manual pressure directly over the wound.

Only extensive study, training, and working with skilled licensed wildlife rehabilitators will prepare you for care and treatment of sick and injured animals. Wildlife rehabilitation requires no less training than some other medical technical professions.

G. Wildlife First Aid & Triage

Triage is deciding which illness and injury will be treated first (urgent and life-threatening), and which can be done later (stable and minor). Some will not be treated at all – those that are severe beyond repair or treatment, and zoonotics - these cases are almost always immediately euthanized. Your volunteer training at an established licensed facility will teach you the process of triage and how to identify which conditions need immediate attention and which do not. Often the best initial treatment, even for broken limbs and larger wounds, is simply placing the animal in a warm, quiet, dark enclosure for stabilization and recovery from stress.

H. Epizootic Diseases

An epizootic disease is the nonhuman equivalent of an epidemic, such as West Nile Virus in birds and Epizootic Hemorrhagic Disease (EHD) in deer (<http://wdfw.wa.gov/conservation/health/ehd/>).

An epizootic disease is one that occurs in many individuals of the same or related species in the same area. Wild animals transport a variety of diseases that can cause significant mortality in pets or food animals. Canine distemper carried and suffered by raccoons is a disease with the potential of causing large-scale mortality in dogs and other susceptible species. It is, therefore,



essential to isolate new animals entering a facility. Domestic animals should be kept well away from all wild animals, their feces, and bedding. Be careful to change contaminated clothing and wash well before going into family or pet areas.

It is required that you report all epizootic diseases to the WDFW state veterinarian and Washington Dept. of Health; rehabilitators can play a significant role in protecting domestic animal health.

I. Zoonotic Diseases – Your Safety & Public Health

Zoonotics are animal diseases transmissible to humans - you. They are diseases that are shared between wildlife and people. Zoonotics are caused by bacteria, viruses, parasites, protozoans, vectors such as ticks, or other agents. Diagnoses of zoonotics cannot be made by a single sign but must be made through a veterinarian's examination and tests. A few examples of zoonotics are:

- Staph and strep infection
- Cryptosporidiosis
- Salmonella
- Tularemia
- Psittacosis
- West Nile virus
- Raccoon roundworm *Baylisascaris procyonis*
- Rabies

The potential for zoonotic infection is everywhere. Good hygiene and sanitation practices are essential. Rehabilitators play an important role in protecting public health by being alert to these diseases. Wildlife rehabilitators are required by the WDFW to report all zoonotics to the WDFW state veterinarian. You will receive a report form with your packet upon becoming a wildlife rehabilitator.

All zoonotics can cause disease in humans. However, some are more prevalent and dangerous or very dangerous if encountered. Two good examples of those diseases are raccoon roundworm and rabies; diseases for which you must be extra careful. Both of these are potentially deadly to humans. Raccoon roundworm is very prevalent in raccoon feces, whereas, the rabies virus is very rare in Washington State. Get to know your local health department page: see www.doh.wa.gov/LHJMap/LHJMap.htm.

***Baylisascaris procyonis* – Raccoon roundworm.** The eggs of this parasite are shed in raccoon feces and when

Human Safety

The safety of yourself, the public, your employees, and your volunteers comes first. You must always educate and protect yourself and those who work with you.



ingested cause a condition called visceral larval migrans to which humans are highly susceptible. When the ingested eggs hatch, they penetrate the digestive tract and migrate to other organs of the body, not uncommonly the brain. The eggs are extremely resistant to degradation in the environment and can lay dormant and viable for years. They are not killed by common cleansers, disinfectants, or conventional cleaning. To successfully kill and remove *Baylisascaris* eggs, flaming with a blowtorch throughout the cage is most effective.

Rabies Vector Species. Any mammal can be a carrier of rabies but the primary reservoir in the Northwest is bats, and even then the occurrence is very rare. Between 5-10% of bats **submitted for testing** in this state are found to be rabid. This is a skewed population of sick and injured bats. In reality, less than 1% of the total Washington state bat population is infected with rabies according to the Washington State Dept. of Health. In 2009, one rabid bat was identified in Washington State in Snohomish County. In 2008, seventeen rabid bats were identified in Washington State: one each from Pierce, Clallam, King, Whitman, Thurston, Chelan, Island, Skagit and Whatcom Counties, and two each from Clark, Pacific, Snohomish and Wahkiakum Counties. Other wild animals infected in other states are raccoons, foxes, and skunks. A few coyotes in Oregon have begun showing up with rabies. Lagomorphs (rabbits and hares) rarely carry rabies, and rabies is rare among rodents with the exception of woodchucks.

Be aware of the risks not only to yourself to but to your family, staff, volunteers, and anyone else who might come in contact with these animals. Become familiar with the symptoms of rabies and their similarity to symptoms of other conditions. Discuss with your physician the pre-exposure series, and with your local Health Department the protocol for managing situations involving bites or other exposure to animal saliva. Thoroughly wash animal bite wounds and safely capture any bat that has had contact with a person.

The primary defense against zoonotics is good hygiene – wash hands well after handling wildlife and do not store or consume food where animals are housed or treated.

A Few Zoonotic and Epizootic Disease Prevention Measures

- Good hygiene – wear disposable gloves and wash hands after handling wildlife;
- Do not store food, eat, or drink where wildlife is housed or treated;
- Immediately wash well the site of bite wounds should you be bitten;
- If you are bitten by a carnivore or bat, thorough clean the bite wound and immediately contact your doctor or local health department;
- Appropriately disinfect all areas where wildlife is housed and treated and all items wildlife touches;
- Launder wildlife rehabilitation clothing and towels separate from any personal laundry in a separate washing machine;
- Let your doctor know you work with wildlife;
- Keep tetanus shots current;
- Consider rabies pre-exposure vaccination.

J. Euthanasia and Carcass Disposal

You must have your euthanasia policies and procedures in place before you begin admitting animals for rehabilitation. You can expect possibly half of the animals you admit to your facility will die or need to be euthanized. You must be confident in your emotional ability to euthanize animals when frequently necessary.

Many humane euthanasia techniques require the use of injectable drugs that can only be administered by a veterinarian; therefore, make arrangements with your veterinarian before opening your facility. If it is not practical for you to involve your veterinarian directly in euthanasia, you must find a safe and humane alternative to scheduled drugs and these must be listed in your written protocol. The American Veterinary Medical Association Guidelines on Euthanasia (2007) are the national euthanasia standards provided as a link on the WDFW Wildlife Rehabilitators website (http://wdfw.wa.gov/conservation/health/rehabilitation/for_current_wr.html). An animal must be euthanized if:

- It is unable to recover from injuries or illness;
- It has a terminal illness;
- It is imprinted on humans, habituated, or tame;
- It is unable to hunt or forage successfully
- It is unable to reproduce

Threatened and Endangered Species. Technically, wildlife rehabilitators must obtain permission before euthanizing a threatened or endangered species. In many cases this is inhumane and impractical. Most often, the WDFW respects the clinical judgment of veterinarians and licensed rehabilitators and allows euthanasia without direct permission. However, try to contact the WDFW Regional Wildlife Rehabilitation Coordinator in your WDFW Regional Office (page 6) before euthanasia; you **must** contact them after euthanizing one of these species. Then, do not dispose of the body without state or federal approval. State or federal officials may wish to recover the carcass, as in the case of bald eagles, to send to the bald eagle repository.



Western Gray Squirrel (*Sciurus griseus*).
For squirrel identification see
wdfw.wa.gov/conservation/gray_squirrel/

Carcass Disposal. Animals that die of natural causes or are euthanized must be disposed of according to local rules and ordinances. Examples of acceptable disposal methods include: incineration, rendering, transferring to an institution with a valid salvage or possession permit, or burying to a sufficient depth to prevent excavation by scavengers. Bald eagles and golden eagles must not be disposed of but must be sent to the National Eagle and Wildlife Property Repository. Endangered or threatened species and bald or golden eagles must not be necropsied without first obtaining permission from the U.S. Fish and Wildlife Service. Carcasses of any wild animal cannot be sold, used as food for rehabilitation, kept for display without a valid Washington State Scientific Collections Permit, or used for any other purpose.

You may check with Washington State University Conner Museum (<http://sbs.wsu.edu/connermuseum/>) or University of Washington Burke Museum (<http://www.washington.edu/burkemuseum/>) to see if they would like your carcasses for study skins. You may only give deceased wildlife, or parts of wildlife including feathers, to institutions that have a valid permit to possess them for educational or scientific purposes.

K. Release

Rehabilitation and release should only be undertaken when the animal has a reasonable chance for **survival and reproduction in the wild**. In Washington, there is a six-month (180 day) limit on the length of time an animal may be kept in rehabilitation (though extensions are granted if a longer recuperation could realistically result in release).

Rehabilitated animals released to the wild must be physically and psychologically equipped to handle this release and they must be conditioned to survive and reproduce. There are many criteria to consider when preparing to release an animal (http://wdfw.wa.gov/conservation/health/rehabilitation/release_criteria.html).

Reproductive potential must always be weighed and each species' natural history must be known. Your main concern is to minimize stress on the animal. Some of the most important release criteria include:



- recovery from the primary injury/illness
- positive health screening; zero exposure to infectious diseases and parasites during rehabilitation,
- physical conditioning,
- acclimation to weather,
- release site selection,
- seasonal timing of release,
- behavioral and psychological fitness such as food recognition and hunting/foraging skills, predator recognition and avoidance, including human, and conspecific recognition.

Non-releasability. Many animals cannot be released. If an animal is non-releasable, there are two options: 1) euthanasia, 2) life in captivity.

Most captive wild animals are under constant stress from human contact and confinement and may exhibit self-destructive behaviors when caged. It is inhumane to keep these animals; euthanasia rather than placement should be seriously considered. Any animal that is tamed, habituated, or imprinted is not likely to survive or breed successfully, and is *highly likely* to become a problem animal due to its lack of fear of people. These animals should not be released. Endangered and threatened species, candidate species, and species of concern may be considered for education, breeding, or research. Non-releasable wildlife **cannot** be legally retained under a Wildlife Rehabilitation Permit.

The U.S. Fish and Wildlife Service requires that migratory birds unable to feed themselves, perch, or ambulate; are blind, or require an amputation of a leg, foot, or wing at the elbow or above be euthanized (www.fws.gov/permits/mbpermits/birdbasics.html) (50 CFR 21.31).

L. Laws, Rules, & Regulations pertaining to Wildlife Rehabilitation in Washington State

You will need to know the WDFW requirements, WACs (Washington Administrative Code), and RCW's (Revised Code of Washington) pertaining to Wildlife Rehabilitation in Washington State. Please read the Washington State Wildlife Rehabilitation Requirements at http://wdfw.wa.gov/conservation/health/rehabilitation/permit_requirements.html.

WDFW Wildlife Rehabilitation Permits expire three years from the date of issuance. They are, therefore, valid for 3 years and must be renewed upon the expiration date. You must fill out a Permit Renewal Application prior to the expiration date, and another facility inspection is required. You must submit all required Annual Reports and Ledgers to have your Wildlife Rehabilitation Permit renewed.

All native birds are protected by state **and/or** federal laws and Federal permits are required for everyone holding a migratory bird. This is all native species of wild birds including songbirds, waterfowl, wading and shore birds, and raptors.

Unlawful Take Laws

RCW 77.15.130

Protected fish or wildlife — Unlawful taking — Penalty.

(1) A person is guilty of unlawful taking of protected fish or wildlife if:

(a) The person hunts, fishes, **possesses**, or maliciously kills protected fish or wildlife, or the person possesses or maliciously destroys the eggs or nests of protected fish or wildlife, and the taking has not been authorized by rule of the commission; or

(b) The person violates any rule of the commission regarding the taking, harming, harassment, possession, or transport of protected fish or wildlife.

(2) Unlawful taking of protected fish or wildlife is a misdemeanor.

RCW 77.15.120

Endangered fish or wildlife — Unlawful taking — Penalty.

(1) A person is guilty of unlawful taking of endangered fish or wildlife in the second degree if the person hunts, fishes, **possesses**, maliciously harasses or kills fish or wildlife, or maliciously destroys the nests or eggs of fish or wildlife and the fish or wildlife is designated by the commission as endangered, and the taking has not been authorized by rule of the commission.

(2) A person is guilty of unlawful taking of endangered fish or wildlife in the first degree if the person has been:

(a) Convicted under subsection (1) of this section or convicted of any crime under this title involving the killing, possessing, harassing, or harming of endangered fish or wildlife; and

(b) Within five years of the date of the prior conviction the person commits the act described by subsection (1) of this section.

(3)(a) Unlawful taking of endangered fish or wildlife in the second degree is a gross misdemeanor.

(b) Unlawful taking of endangered fish or wildlife in the first degree is a class C felony. The department shall revoke

any licenses or tags used in connection with the crime and order the person's privileges to hunt, fish, trap, or obtain licenses under this title to be suspended for two years.

Primary Wildlife Rehabilitation Law in Washington State

WAC 232-12-275, it is unlawful to possess wildlife for the purpose of rehabilitation without first obtaining a valid Washington State Wildlife Rehabilitation Permit. (For full text see http://wdfw.wa.gov/conservation/health/rehabilitation/for_current_wr.html and click on the correct WAC number (above).

Exempt from these regulations are non-native birds (pigeons, starlings, house sparrows, and domestic and exotic birds) and non-native mammals and reptiles. Licensed veterinarians may hold migratory birds for up to 48 hours without a permit but must transfer them to a licensed wildlife rehabilitator after that time.

These are the codes (laws) you must know:

See <http://leg.wa.gov/wac>; <http://leg.wa.gov/rcw>. Click on Title 232, 220, 16 and 246 for the WAC's and Title 77 for the RCW's.

- WAC 232-12-011 – Wildlife classified as protected shall not be hunted or fished
- WAC 232-12-017 - Deleterious exotic wildlife
- WAC 232-12-064 - Live wildlife. Taking from the wild, importation, possession, transfer, holding in captivity.
- WAC 220-20-045 - Scientific collection permits
- WAC 16-54-180 - Wild and exotic animals and birds - Importation and testing requirements
- WAC 246-100-191 Animals, birds, pets – measures to prevent human disease
- Chapter 246-100 - WAC Communicable and certain other diseases
- RCW 77.12.469 - Renewal of wildlife rehabilitation licenses
- RCW 77.15.250 - Unlawful release of fish, shellfish, or wildlife
- RCW 77.12.020 – Wildlife to be classified

Transferring animals across state lines

Cervids (deer, elk, and moose) may **NOT** be transported across state borders for rehabilitation. State laws are strict against interstate movement of cervids due to Chronic Wasting Disease (CWD), brucellosis, and tuberculosis. The state Department of Agriculture also monitors these populations and diseases closely.

Importation – Prohibition of other mammals - Bats, skunks, foxes, raccoons, and coyotes. The state Department of Health has regulations against importing bats, skunks, foxes, raccoons, and coyotes because of rabies. WAC 246-100-191 prohibits importation into the state any **bat, skunk, fox, raccoon, or coyote** without a permit. To import these species, you must obtain a permit from the Washington State Department of **Agriculture**.

Mandatory Disease Reporting

WDFW requires that certain diseases be reported to the State Wildlife Veterinarian within 24 hours of diagnosis using the WDFW ***Wildlife Rehabilitation Disease Report Form you receive with your Permit***. These diseases are:

- West Nile virus
- White-nose syndrome
- Avian Cholera
- Avian pox
- Duck viral enteritis
- Psittacosis
- Rabies
- Environmental toxin
- Canine distemper
- Tuberculosis
- Newcastle disease
- Salmonellosis
- Hair loss syndrome
- Deer adenovirus
- Plague
- Leptospirosis

Delegation of Permit Authority – Sub-permittees

Registered volunteers designated on your Permit as Sub-permittees may bring home animals on a very temporary basis for 24-hour or emergency care. This is only allowed on an emergency and overflow basis. The volunteers' home facility must have been inspected and approved by the licensed Wildlife Rehabilitator.

Sub-permittees are by WDFW definition *those people listed on your permit who care for wildlife under your direction in their homes only during special circumstances of overflow, initial care emergency, or the need for 24-hour care, such as nestling care or nursing small mammals.*

Wildlife Rehabilitation Permit Conditions

These conditions apply when you receive your permit; your signature is required on the permit, indicating that you agree to abide by these conditions.

1. Only those sites specified on this permit are authorized as wildlife rehabilitation facilities. A copy of this permit and the daily ledger must be kept at the rehabilitation facility.
2. Wildlife acquired under this permit remains the property of the state and will not be offered for sale or sold. Disposition of non-releasable wildlife will be determined by the Director of the Department of Fish and Wildlife.
3. Permittee will submit to the Department an Annual Report providing information as required by the Director no later than the 31st of January each year.
4. Permittee will notify by telephone and in writing to the Regional Rehabilitation Permit Coordinator within 24 hours of receiving a state or federally endangered or threatened species; and within 72 hours of receiving a state sensitive species or marked, tagged, or banded wildlife; and prior to release of threatened or endangered species.
5. Permittee will notify by telephone and in writing Regional Rehabilitation Permit Coordinator within 24 hours after the death of a state or federally endangered or threatened species; or as soon

as an endangered or threatened species is determined to be non-releasable to the wild. Endangered or threatened species will not be disposed of or euthanized without prior Department approval.

6. Wildlife may not be held longer than 180 days without written authorization from the Director. Rehabilitated wildlife will be released as soon as possible into its proper habitat in the same area as recovered except as authorized by the Director.

7. Wildlife held for rehabilitation at the facility shall have no contact with domestic animals and minimal contact with humans to prevent habituation and imprinting.

8. Permittee will notify Rehabilitation Permit Coordinator of any wildlife known to have died of the following diseases: avian cholera, avian pox, duck viral enteritis, environmental contaminants, ornithosis, Newcastle's disease, rabies, canine distemper or tuberculosis (in species other than birds).

9. *This permit does not authorize the practice of veterinary medicine unless the permittee is a licensed veterinarian in the state of Washington as authorized by Revised Code of Washington.*

10. Dead wildlife will be disposed of through deposit with a permitted institution or research project or through burial, incineration, or a licensed rendering facility.

11. All wildlife is a potential vector for disease transmission to humans. Person(s) handling dead or live wildlife as specified under this permit do so at their own risk and the state of Washington is not responsible for any injury to the permittee or any other person.

12. Other federal and/or local permits may be required. It is the responsibility of the permittee to ensure that proper permits are obtained.



APPENDIX 1. General Wildlife Rehabilitation Exam Questions

SAMPLE

Answers are provided for study purposes



Washington Department of Fish and Wildlife

GENERAL WILDLIFE REHABILITATION EXAM

Sample Questions

The General Exam contains questions on both birds and mammals

Section A. Washington Wildlife Ecology & Natural History

1. All passerines are precocial. FALSE
2. It is natural for some mammals to leave their young unattended for long periods of time, only returning to feed their young. TRUE
3. The following mammal species are considered introduced in all or part of Washington State EXCEPT:
 - a. Coyote
 - b. Eastern cottontail
 - c. Common opossum
 - d. Fox squirrel
 - e. All are introduced in Washington State

a. Coyote
4. In mammals, what type of feeding group has both sharp canines and smooth molars for grinding food?
 - a. Carnivores
 - b. Omnivores
 - c. Herbivores
 - d. Insectivores
 - e. Pre-weanlings

b. Omnivores
5. The term weaning refers to:
 - a. Sleeping
 - b. Drinking water
 - c. Transition from milk to solids
 - d. Releasable
 - e. Shedding winter coat

c. Transition from milk to solids

Section B. Housing & Environment

6. Detergents are effective against fungi and viruses. FALSE

7. Deer should be kept in pens with smooth cement floors. FALSE
8. Wild birds should never be kept in damp, poorly ventilated holding cages because:
- This environment is favorable to the development of fungal and bacterial infections
 - The bird's feathers will be damaged
 - It will cause an unnatural molt
 - Food will spoil quickly in this type of environment
 - This type of caging is acceptable for ducks
- a. This environment is favorable to the development of fungal and bacterial infections**
9. If an adult of the same species is not available for proper imprinting, what substitutes can be employed?
- Unrelated juvenile or fledgling conspecifics
 - Sibling conspecifics with a bird skin puppet
 - Bird skin puppet if conspecifics are not available
 - All of the above
 - Substitutes should not be used
- d. All of the above**

Section C. Diet, Nutrition, & Feeding

10. For their size, growing juvenile animals have greater caloric requirements than adult animals. TRUE
11. The mothers' milk of all mammals has pretty much the same proportions of macronutrients (protein, fat, carbohydrate); therefore, mammal orphans can all be raised on the same milk substitute. FALSE
12. In captivity, a wild animal offered a variety of foods will always eat those that are good for it. FALSE
13. Mammals are easier to tube feed than birds because their glottis is visible when the mouth is opened. FALSE
14. The natural diet of chickadees, finches, and grosbeaks consists of which of the following food groups?
- Mainly seeds with some insects and fruits
 - Mainly fruits with some insects
 - Mainly earthworms
 - Mainly fruits
 - Mainly nectar
- a. Mainly seeds with some insects and fruits**
15. Metabolic bone diseases can result from which of the following problems?
- Calcium deficiency
 - Vitamin D deficiency
 - Improper calcium/phosphorous ratio
 - All of the above
 - None of the above
- d. All of the above**

16. Aspiration pneumonia is a common problem with bottle-feeding orphaned mammals. It is caused by:
- a. Feeding too large a volume of formula too rapidly
 - b. Burning the face with the warmed formula
 - c. Missing more than one feeding
 - d. a and c
 - e. b and c

a. Feeding too large a volume of formula too rapidly

Section D. Public contact and education

17. Advise people to feed weak animals as soon as possible before taking them to a rehabilitator. **FALSE**
18. The primary concerns when advising the public on how to handle ailing wildlife are to (first) avoid injury to the handler, and to (second) avoid any further injury to the animal. **TRUE**
19. When a fledgling bird is found on the ground under a bush in the yard, the best advice is:
- a. Take it in immediately for care and rehabilitation
 - b. Place the bird in a sheltered location nearby and leave the scene so that the parent bird will return to its young
 - c. Remain nearby in the yard to observe the bird for awhile
 - d. Ignore it
 - e. Chase it to make sure it can fly
- b. Place the bird in a sheltered location nearby and leave the scene so that the parent bird will return to its young**
20. In spring, a caller tells you that a bird is repeatedly flying into her window; this goes on for long periods on a daily basis. This bird:
- a. was probably hand-raised and tamed by a human
 - b. is cold and hungry and is trying to get inside, where there is food and shelter
 - c. thinks that the bird in the window is its baby
 - d. has a neurological problem and should be captured, if possible, and brought in for rehabilitation
 - e. sees its reflection in the glass and is attacking what seems to be a competitor
- e. Sees its reflection in the glass and is attacking what seems to be a competitor**

Section E. Restraint & Handling

21. You may restrict a bird's ability to breathe by holding it too tightly around the chest. **TRUE**
22. The health status of an animal does not determine the restraint method used. **FALSE**
23. Rescued animals should be transported in which manner?
- a. In your hands
 - b. In a warm, well ventilated, dark, quiet box or pet carrier secured at the top
 - c. In an open box or bucket
 - d. Under your jacket
 - e. None of the above
- b. In a warm, well ventilated, dark, quiet box or pet carrier secured at the top**
24. In rescuing an animal in the field, your paramount concern is:
- a. Securing the animal at all cost
 - b. Safety to the people involved
 - c. Using high-technology capture equipment
 - d. Possibility of hypothermia
 - e. To bring as many people as possible
- b. Safety to the people involved**

Section F. Diseases, Care, & Treatment

25. The clinical signs or symptoms of infectious diseases (e.g. rabies, distemper) are distinctive enough for a rehabilitator to determine the difference in a wild animal. FALSE
26. Many parasite eggs can be identified in a stool sample by use of fecal flotation or sedimentation. TRUE
27. Avian pox is a viral infection that causes lesions on the unfeathered portions of the skin of birds. It is generally not a life-threatening illness. TRUE
28. Home products such as Gatorade® or flat cola are as good for treating shock and dehydration as commercial medical products like Lactated Ringers® or Normasol®. FALSE
29. The most common problems in orphaned wildlife are dehydration, starvation, and exposure. TRUE
30. A bird's normal body temperature is considerably higher than that of a mammal. TRUE
31. Accurate body weights are necessary in determining which of the following?
- Fluids for replacement or maintenance
 - Proper growth or maintenance
 - Caloric requirements
 - Medication dosages
 - All of the above
- e. All of the above**
32. Once an emaciated animal has been warmed, what is the next step in caring for it?
- Feed it solid food
 - Administer fluids
 - Give it antibiotics
 - Feed it a diet consisting of basic elements that requires little energy for digestion
 - Put it in a quiet environment
- b. Administer fluids**
33. You have a litter of three young mammals in your care, when another young animal of the same species is brought to you, you should:
- Immediately add this animal to the existing litter
 - Do a fecal exam and if it is negative, add this animal to the litter
 - Isolate this new individual for several days before adding it to the litter
 - Isolate this new individual for a few hours, and if it appears healthy, add it to the litter
 - Do a complete physical then immediately add the animal to the existing litter
- c. Isolate this new individual for several days before adding it to the litter**
34. PCV stands for:
- Poor circulatory venting
 - Packed cell velocity
 - Premium carbohydrate volume
 - Packed cell volume
 - Poor circulatory velocity
- d. Packed cell volume**

35. What is the fungal disease called whose hosts are generally wild birds and transmission is through inhalation of spores?
- a. Ornithosis
 - b. Aspergillosis
 - c. Distemper
 - d. Rabies
 - e. Viral pneumonia

b. Aspergillosis

36. In species other than raccoons, which of the following symptoms are caused by *Baylisascaris procyonis* (raccoon roundworm)?
- a. Central nervous system abnormalities
 - b. Blindness
 - c. Death
 - d. All of the above
 - e. None of the above

d. All of the above

37. The term for excessive elevation of the body temperature characterized by panting and increased respiratory and heart rates, is called:
- a. Anemia
 - b. Hypothermia
 - c. Hyperthermia
 - d. Acidosis
 - e. None of the above

c. Hyperthermia

Section G. Wildlife First Aid and Triage

38. Shock, severe dehydration, severe emaciation, blood loss, or other fluid loss are life-threatening conditions and should be treated immediately. TRUE
39. Rehydrating animals too quickly without careful monitoring can be fatal. TRUE
40. Signs that help you to recognize an animal in shock include:
- a. Severe, watery diarrhea
 - b. Rapid, shallow breathing
 - c. Weak pulse and pale mucous membranes
 - d. b and c
 - e. You can never recognize shock

d. b and c

41. Which of the following disinfectants may be used to clean wounds?
- a. Iodophores (e.g., Betadine®)
 - b. Chlorine (e.g., Chlorox®)
 - c. Creasols (e.g., Pine-Sol®)
 - d. Phenols (e.g., Lysol®)

a. Iodophores (e.g., Betadine®)

42. A rabbit attacked by a cat has a two-inch tear through the skin in the back of its right thigh. The wound is jagged and contaminated with debris. After stabilizing the animal, you should:
- Flush the wound thoroughly with lots of saline or warm water
 - Wash the wound vigorously with a lot of soap and water
 - Amputate the leg
 - Apply antibiotic salve to the wound and bandage the leg
 - Immediately begin oral antibiotics
- a. Flush the wound thoroughly with lots of saline or warm water**

Section H. Epizootic Diseases

43. Mammals cannot contract West Nile Virus. FALSE
44. Which of the following statements about raccoon distemper in wildlife is **false**?
- The symptoms often resemble those of rabies
 - Raccoons, foxes and skunks are all commonly affected
 - The symptoms often include a runny nose and eyes, disorientation, and lack of fear
 - A raccoon with distemper, found walking in circles in someone's yard, can probably be saved if taken to a veterinarian right away
 - Unvaccinated pet dogs can contract distemper
- d. A raccoon with distemper, found walking in circles in someone's yard, can probably be saved if taken to a veterinarian right away.**
45. Mycoplasmal Conjunctivitis (or "finch eye") is spread by:
- Eating contaminated foods
 - Physical contact with infected birds
 - Contact with eye secretions from infected birds
 - Spread at bird feeders
 - Any or all of the above are possible.
- e. Any or all of the above are possible**

Section I. Zoonotic Diseases

46. Quarantining wild animals for a ten-day period is sufficient for determining rabies infection. FALSE
47. Although *Baylisascaris procyonis* (raccoon roundworm) can be spread to humans, it is not particularly harmful to humans. FALSE
48. If a wildlife rehabilitator is bitten by a raccoon or other mammal, the **first** thing he or she can do to reduce the risk of possible rabies infection is:
- Wash the wound well with soap and water
 - Kill the animal
 - See a physician immediately
 - Quarantine the animal
 - Look for signs of rabies
- a. Wash the wound well with soap and water**
49. Humans may become infected with raccoon roundworms by:
- Eating undercooked raccoon meat
 - Swallowing something contaminated with roundworm eggs
 - Coming in contact with the blood of a raccoon killed on the highway
 - Being bitten by a raccoon showing nasal discharge, weeping eyes and matted greasy fur
 - Petting a raccoon
- b. Swallowing something contaminated with roundworm eggs**

Section J. Euthanasia & Carcass Disposal

50. Acceptable methods of euthanasia for cold-blooded vertebrates include placing them in a freezer. FALSE
51. When deciding to continue treatment or to euthanize an animal, factors to consider should include:
- The availability of an effective and humane course of treatment
 - Once treatment is completed, whether the animal will be able to re-enter the wild with a reasonable chance of survival
 - If an animal is not releasable, whether there is a good justification for keeping it in captivity other than just to avoid euthanasia
 - All of the above
 - Never euthanize an animal
- d. All of the above**

Section K. Release

52. Even though a wild animal has been kept with humans and habituated to them, it is okay to release them because they are wild. FALSE
53. Normal body weight is a factor in considering the release of an animal. TRUE
54. One of the most important factors to the success of releasing a rehabilitated animal is:
- Releasing the animal in its natural habitat
 - Releasing the animal on a weekend, so people are more likely to find it if it gets into trouble
 - Releasing the animal on a weekday, because people are likely to be at work and not bother it
 - Releasing **all** your rehabilitated animals in the same place
 - Releasing the animal as far away from your facility as possible
- a. Releasing the animal in its natural habitat**
55. Which problem in each of the following animals would prevent the successful release of the individual back into the wild?
- Loss of vision in a red-tailed hawk
 - Loss of one eye in a red fox
 - Loss of a digit in the hind foot of a raccoon
 - Loss of the tip of an ear in a rabbit
 - All would prevent the successful release of these individuals
- a. Loss of vision in a red-tailed hawk**

56. Assuming all other release criteria have been met, it would be appropriate to release which of the following species in Washington in December:
- Western tanager
 - Rufous hummingbird
 - Yellow warbler
 - Vaux's swift
 - Ring-necked pheasant
- e. Ring-necked pheasant**

Section L. Laws, Rules & Regulations

57. It is permissible to allow the public to view wildlife while it is being cared for in rehabilitation. FALSE
58. Birds such as robins, mourning doves, crows, etc. that are present in Washington year-round are not migratory; therefore, a federal permit is not required to rehabilitate them. FALSE

59. A permitted wildlife rehabilitator may accept sick and injured deer from outside Washington. FALSE

60. A wildlife rehabilitation permit may be revoked or not renewed if the rehabilitator:

- a. keeps permanently crippled animals as pets
- b. keep animals in environmental conditions not approved by the WDFW
- c. habituates wild animals and keeps as pets
- d. performs anesthesia and surgery without a vet
- e. all of the above

e. all of the above

61. For a wildlife rehabilitator who does not have a federal rehabilitation permit, which of the following species may be kept for treatment?

- a. crow
- b. bald eagle
- c. turkey
- d. robin
- e. great blue heron

c. Federal permits are required only for native migratory birds (as defined by the Migratory Bird Treaty Act), marine mammals and reptiles and endangered species. Washington State governs non-migrating game birds such as turkeys.

62. Which of the following is **not** listed as a state threatened or endangered species in Washington?

- a. snowy plover
- b. sea otter
- c. Vaux's swift
- d. western gray squirrel
- e. gray wolf

c. Vaux's swift

63. When a mortally injured state endangered species enters a rehabilitation facility, the rehabilitator should:

- a. Euthanize it immediately
- b. Turn it over to the U.S. Fish and Wildlife Service
- c. Contact the Washington Department of Fish and Wildlife and advise them that the animal should be euthanized
- d. Refuse to treat it
- e. Release it to the wild

c. Contact the Washington Department of Fish and Wildlife and advise them that the animal should be euthanized