

Urban Bird Talk: Great Horned Owl (*Bubo virginianus*)

Gillian Martin



Adult owl preening owllet on a limb. *Photo courtesy of Peggy Honda.*

Ask any first grader to draw an owl and you'll recognize a good likeness to this species. It's safe to say the great horned is the most familiar to Americans of all ages. I suspect people, consciously or not, find something intriguingly familiar in its appearance, specifically its face. It is large and flat, and accented with big, yellow, wide-set eyes. Particularly engaging are its expressions when we disturb its sleep. Like a leery librarian it peers down from its perch as if looking over spectacles (Figure 1). At other times it seems to give us the once over by opening only one eye (Figure 2) or separating its upper and lower eyelids ever so slightly to view us through mere slits. But most astonishing is that it can scan its surroundings by turning its head 270 degrees, depending on its starting position (Figure 3). Can you imagine what a cartoonist could do with all this?



Figure 1. When disturbed from sleep the bird may discreetly turn its head and cast its eyes down over its shoulders. *Photo courtesy of Connor Kane.*



Figure 2. Opening one eye instead of two is intended to avoid detection. *Photo courtesy of Scott Book.*



Figure 3. From certain positions, an owl can rotate its head 270 degrees. *Photo courtesy of NaturesFan/Wikimedia Commons.*

Amusement aside, these cautious, regulated movements and other aspects of its biology (which I will describe later) are designed to avoid detection. Its survival hinges heavily on this ability.

Since you are likely to encounter this bird during tree care I also want to suggest how to ensure your safety and theirs, and when it would be wise to consult a wildlife biologist. Because it's not unusual for immature owls and other raptors to fall from their nests I'll offer guidance on what to do when one is found on the ground. These best practices are expanded upon in *What Tree Care Providers Should Know Before Rescuing and Transporting Raptors*. It is available on TreeCareforBirds.com (a link to the file is the first item in the list of references).

An indicator of biodiversity

Did you know the great horned owl meets all the

requirements to be considered an indicator of biodiversity (Ghimire, 2015)? One of the reasons is that it is a top-of-the-food-chain predator with a highly diverse diet and range. In most of the bird's range small mammals such as hares and rabbits, and large and small rodents make up about 90% of its diet (Figures 4-5). Though about fifty species of birds are also preyed upon, marshland birds such as ducks, rails, coots, herons, and geese are commonly chosen (Figure 6). To a much lesser extent reptiles, amphibians, insects, and other invertebrates are consumed. (Artuso, 2022). Other reasons for its ranking as an indicator species are that it is generally non-migratory and particularly sensitive to environmental contaminants, especially to the cumulative and lethal impacts of second-generation rodenticides. Studying this bird can yield valuable ecological data (Artuso, 2022; Sheffield, 1997).



Figure 4. Small mammals such as mice make up the lion's share of its diet. *Photo courtesy of Michael Cohen/Flickr.*



Figure 5. An immature owl receives a squirrel for its dinner. *Photo courtesy of Ghost Bear.*



Figure 6. The head of larger prey such as ducks may be removed to reduce weight in flight and provide access to its brains. *Photo courtesy of David Hess/Flickr.*

The owl everyone knows

Though it is not considered abundant, this is the most common, widespread, and long-lived owl in the United States, except for Hawai'i. Deserts (Figure 7), grasslands, forests (Figure 8), and suburban habitats are all home to the bird. When working along a riparian area there's an increased chance you are in the territory of this or another owl. If you are in Nevada, you are less likely to find it in lowland salt desert and Mojave habitats (Floyd, 2007). But essentially, it can be found anywhere in North America except arctic-alpine regions. You'll discover some regional color variation in the species. But don't be fooled by its less common look-alike, the long-eared owl (*Asio otus*) which is smaller, more slender, and has ear tufts closer together (Figure 9).

Though its vocalizations vary greatly, the male's territorial and courtship *Whoohoo-ho-o-o* is familiar to most of us¹. The species' deep hooting may have evolved for its carrying power in forests. At the start of the breeding season, I regularly hear our neighborhood pair in a monotonous, prolonged courtship duet. The female (who is larger) can be identified by her higher pitch and fewer syllables (Voous, 1988). I wonder if these exchanges are a code for "I am yours... you are mine." If so, lots of reminders seem to occur.

The sleeping owl

You've likely discovered the great horned owl at an active nest or its daytime roost. It is often at mid-height in trees. When roosting, it instinctively stands erect within a fork or hugs the trunk. The intent is to be mistaken for bark (Figure 10). It may also nest or roost in palm fronds (Figure 11), saguaro (Figure 12), large tree crevices and cavities (Figure 13), or ledges high on buildings and rocky cliffs (Figure 14). On rare occasion you may find one sleeping, face and body lying flat on a limb, wings hanging down as on a clothesline (Figure 15). I ask you – who wouldn't melt at this sight?

¹ While the call of a great horned owl is similar to that of the mourning dove, owls vocalize in the evening while mourning doves call during the day.



Figure 7. The great horned is also successful in desert habitats. Photo courtesy of Evelyn D Harrison.



Figure 8. Forests are among the many biomes that are home to this bird. Photo courtesy of Larry Jacobsen.



Figure 9. Long eared owls are smaller, slimmer, their tufts are closer together, and they are less common. Photo courtesy of Becky Matsubara.



Figure 10. Roosting owls often hug a tree trunk hoping to be perceived as bark. *Photo courtesy of Great Sand Dunes National Park/Wikimedia Commons.*



Figure 11. Palms also shield the bird from detection. *Photo courtesy of David M Zamudio.*



Figure 12. The fork in a large saguaro is a suitable platform for a nest. *Photo courtesy of Jason Yoder.*



Figure 13. Broken treetops and trunks with large cavities are nest sites as well. *Photo courtesy of Andy Reago & Chrissy McClarren.*



Figure 14. Even rocky cliff openings meet nesting requirements. *Photo courtesy of future.fotoz (William van Oostrum)/Flickr.*



Figure 15. An owl sleeping face down on a tree limb is not common but possible. *Photo courtesy of Joe Chandler.*



Figure 16. Nests about mid-way up a tree are perhaps the most common. *Photo courtesy of Anita Braconnier.*

Like all birds, only half of the owl's brain sleeps at a time. The other is on duty for signs of danger. By alternating sides, the bird gets sufficient rest (Lovette and Fitzpatrick, 2016) unless disturbed too often, in which case its fitness can be impaired. Tip-offs to its alertness are the eye and head movements I described at the start, as well as movement of its ear-tufts. Tufts are not ears, however. They are believed to be designed for camouflage. Perhaps to look like twigs?

A menace to other birds and squirrels

The great horned owl uses the abandoned stick nests of daytime birds of prey (Figure 16). However, it also usurps nests of crows, ravens, herons, magpies, and squirrels (Artuso, 2022; Peteers, 2007). When it nests or roosts in the territory of other species such as songbirds, small owls, and squirrels, the community's social media lights up with alarm. A noisy mob gathers and is often led by crows or chickadees. Their goal is to chase the owl out of their territory to prevent predation of their young. If their raucous screams and mobbing behavior occur in the breeding season in an area you are scheduled to work, look for signs of nesting in that tree or those nearby. I suggest looking in nearby trees because parents often roost in an adjacent tree once their young can regulate their body temperature.

Life in a poorly lit world requires special adaptations

Though the bird is nocturnal, much of its active life is spent in the grey-draped landscapes of sunset and sunrise. That's because it hunts primarily by sight rather than by sound. In these transitions of light we occasionally spot it perched against the sky.



Figure 17. The species' large, stocky body with ear tufts angled outward make an identifying night profile. *Photo courtesy of Jonathan Coffin/Flickr.*

Power poles, dead trees, and signposts are favorite perches for hunting. Its identity can be confirmed by its large, stocky silhouette and its two ear tufts angled somewhat far apart on the top of its head (Figure 17). When we catch a glimpse of it slipping between trees or descending toward the smudgy grey-green mounds of a field, it is not because we heard it. "The Flying Tiger" (as it's sometimes called) is as silent as it is voracious. Its razor, sharp talons and heavy de-curved beak do the work of a cat's claws and teeth. What is striking is its 22" long body and 54" wide wings, and how it alternates between rapid, shallow flaps and glides. The unexpectedness of its appearance makes its dark, sizable presence more wondrous.

Except for a white throat, adults are feathered in grey and earth tones. You can guess why. Darker colors on its chest are laid out in broken bars (resembling bark). But what's not readily apparent is that its flight feathers are structured and cushioned to absorb sound when air flows over the wings and feathers rub against each other (Sibley, 2001). Imagine the "whooshing" sound it would make otherwise. It would interfere with the bird's hearing and alert its prey.

Apart from having excellent binocular vision, the owl's pupils can open very wide and adjust rapidly to changes in light. At the back of their tubular shaped eyes are many highly specialized photoreceptors called rods and cones. The former is useful for seeing movement and contrasts between light and dark. Cones are for seeing color. It makes sense that rods are more abundant than cones in owls. But good hearing is essential as well. The bird is assisted by its broad facial disc designed for capturing sound

waves. In Figure 18 you can see that its hooked beak divides its flat face down the middle. Notice its facial bristles brush outward away from the beak. They direct sound waves to the ear openings on each side of the head.

Protecting your safety and theirs during tree care

The owl's breeding period can begin as early as December and extend through August: earlier than most non-raptors. Females lay dull-white eggs, generally about two days apart. Incubation can last about 30 days and eggs hatch about two days apart. This means that offspring maturity varies and juveniles may fledge at different times.

As you may know, best practices include doing a pre-work survey for nests: if you find a nest with eggs or young, you should delay work until young are no longer in the nest or are not still being fed in the nest tree by a parent. Most juvenile owls can fly well by 9-10 weeks and have left the nest tree by mid-April, just about the time most songbirds are at the peak of their breeding season. It may interest you to know that immature great horned owls depend on their parents for food through summer, and some are still begging in October (Voous, 1988).

This species is fairly tolerant of human presence

and noise, though some individuals may be less so. If their comfort zone is breeched, adults and sometimes immature owls will give you fair warning (Figure 19). An owl's legs and talons are its primary weapons, and talons can grip with great force, enough to do severe damage to your fingers, face, and clothing. Owl warning signs escalate if they are not heeded. Here's what to expect before it strikes:

- bill-clapping, hissing, drawn-out screams, short barking notes or guttural noises;
- foot stamping, rocking side to side, wing flapping, or wings arching in a wall toward you;
- body is poised to strike with its feet forward.

An additional risk of working near an active nest (or in the nest tree when owlets are recently out of the nest) is that young birds may bolt before they can fly (Figure 20). They may fall to the ground or become tangled in branches on the way down. A fallen nestling may be able to climb back up in the tree and escape predators if the following conditions exist:

- most of its down (fluffy) feathers have been replaced;
- its primary flight feathers are well developed;
- the bark of the nest tree is sufficiently rough to grip.



Figure 18. Coarse facial bristles act as sound conductors to ears. *Photo courtesy of John Nelson/Wikimedia Commons.*



Figure 19. This aggressive posture is a "last chance" warning to back away. *Photo courtesy of Annette Shaff.*



Figure 20. Fledgling owlets rely on their nest tree until they can fly well. *Photo courtesy of Peggy Honda.*



Figure 21. Pounce-and-capture practice improves the fitness and hunting skills of young owls. *Photo courtesy of David Hess.*

However, when too undeveloped to climb back, even very young owls instinctively seek shelter in vegetation and will hiss and make other sounds to enable their parents to locate them. (I'll get to managing such emergencies shortly.)

Even when not disturbed by humans, young owls sometimes fall out of their nest. When flight feathers start to emerge, nestlings engage in humorous shenanigans (Figure 21). They practice catching and killing prey, sometimes aiming for knots on a branch. But they also jostle with one another over toys. Rabbit legs, sticks, pinecones, or other objects may be employed. These behaviors strengthen their legs and wings and prepare them for self-reliance.

A wildlife biologist can keep you on the right side of the law

The federal Migratory Bird Treaty Act protects the nests of all native owls (and all other native birds) when eggs or young are present. If you need to work closer than within 300 feet from an active owl's nest, contacting a wildlife biologist is recommended. (A 500 foot radius is recommended as a buffer in riparian or other areas of high-quality habitat.) The biologist will be able to monitor the parents' behavior as work proceeds and assist in contacting your state or federal Department of Wildlife if, for safety reasons only, a nest needs to be relocated or removed. (In California it is illegal to remove even the inactive nest of a raptor.)

These items prepare you to handle an emergency:

- heavy work gloves and eye protection; and a helmet if tree climbing becomes necessary;

- a cell phone to take photos or videos;
- contact number for your nearest raptor or wildlife rehab center;
- towel or cloth to throw over and capture the owl;
- Box or sturdy container with a lid and ventilation holes, or small animal carrier (Figure 22). All-wire cages are not recommended.

What to do if an owlet falls from its nest

Because responding appropriately to this type of emergency requires knowledge of the species and careful consideration of its age, condition and location, the nearest raptor or wildlife rehab facility should always be consulted before acting. Calling your regional Animal Control Center would be the next best alternative. Prior to calling for assistance:



Figure 22. Sturdy covered containers with lids and holes are useful for transporting birds. *Photo courtesy of Mary Jane Sesto.*

- keep onlookers at a safe distance and ask them to be quiet. Ask dog walkers to leave the immediate area;
- observe the bird's behavior, including looking for signs of injury;
- take photos of the bird if you can do so without overly stressing it;
- take photos of the adjacent landscape;
- never approach the bird without sturdy gloves and eye protection
- never give water or food to the bird.

Anticipate the following questions from a wildlife rehab center:

- does the bird have mainly fluffy down feathers or some flight feathers?
- can it stand and hop?
- does it flutter or hop away from you as you approach?
- does it fly (even if awkwardly) to a perch nearby or seeks cover on its own?
- do you see blood, a drooping wing, a bone sticking out, or other sign of injury?
- does it fall over on its side when it tries to walk?

If the raptor rehabilitator believes the bird does not need to be brought in for care, and that its parents are likely nearby, you may be asked to do one of several things:

- leave it alone if it is safe where it is;
- place it on a sturdy branch in its tree, or place it nearby where it is sheltered by ground vegetation and out of full view;
- climb or use a bucket truck to return it to its

nest if it is very young, still primarily covered in down feathers, and if its nest is intact;

- visit the site the following day to look for signs that parents are caring for it.

It is always best for immature birds to be raised by their parents and returned to their care as soon as possible.

How to capture a raptor

- Using protective gear and with a suitable container nearby, slowly approach the bird and place an item such as a towel or appropriate size cloth over it.
- With the towel still covering the bird, you may be asked to use both hands to identify the location of the head, and firmly pick it up (head upright) and place it in the box. *It's important to hold the bird at arm's length, keeping its face and legs facing away from you. If told to secure its legs, always do so by reaching between its legs from behind. Never grasp the bird by its talons.*
- If you are asked to place it back in the tree, additional guidance will be provided.

An example of an excellent response to a bird emergency

You'll enjoy this story. While removing trees fallen in a windstorm in Sacramento, California, a West Coast Arborists crew discovered three juvenile raptors on the ground. Francisco Villanueva reported the discovery to his boss, Jason Pinegar, who called The Wildlife Care Association in Sacramento. Jason was asked to bring the birds in to be examined and hydrated. Meanwhile Francisco was asked to construct a large nest and install it in the nearest, most suitable tree. (A sturdy container with holes at the bottom would be another option [Figure 23]). Francisco had constructed the nest by the time Jason returned with the birds (Figure 24). The following day Francisco checked the site and confirmed that the parent hawks had returned to care for their young. Five stars for the teamwork!!

If you have been involved in rescuing a bird, please contact the Tree Care for Birds and other Wildlife Committee of WCISA. We'd appreciate learning from your experiences and may be able to recognize your efforts with a blog or on social media.

A personal story

Early one evening in the spring of 2021 an immature great horned landed on the ground in the



Figure 23. Plastic tub with holes on bottom substitutes for a nest. *Photo courtesy of Peggy Honda.*



Figure 24. Artificial nest constructed by West Coast Arborists. Photo courtesy of Francisco Villanueva.

small pocket park of my neighborhood. I happen to be there watching several western bluebirds (*Siala mexicana*) and American robins (*Turdus migratorius*) foraging in the diminishing light. Some had young to feed. Immediately they vocalized alarm and became a menacing mob. The owlet was probably hungry but clearly not yet master of its wings. I watched it repeatedly and awkwardly lunge at its tormentors applying its beak as a weapon. I'm confident one of

its parents was nearby, but it did not come to its aid; and I knew to remain as still as standing water. This was a test of the combatants' fitness, and a single distraction could shift the fate of one of the small birds. Nevertheless, I was gripped by anxiety and dread.

The war went on, perhaps for three minutes. There were no casualties. Ultimately the owlet retreated to the cluster of eucalyptus from which I suspect it had emerged. The robins and bluebirds settled quietly nearby. I have no doubt they remained alert for some time – just as I, too, withdrew to a bench, reluctant to walk away from the deepening shades of steel and soot, reluctant to trust the silence among the trees. Being a witness was curiously uniting, and I preferred to remain a while longer with the lives I knew were there. While on that bench a difficult reality came to mind: Hunger and fear are part of every life. But another thought quickly centered me: Long, long before I was here, wildlife evolved to protect and take what they need and no more, thereby helping to ensure enough remained to sustain the web of life. And long, long ago, mindful native cultures shared this wisdom in their teachings and cultural practices, and still do.

Gillian Martin

Co-leader, Tree Care for Birds

Committee of WCISA

Gillian.Martin@CavityConservation.com

LITERATURE CITED

What tree care providers should know before rescuing and transporting raptors: <https://treecareforbirds.com/wp-content/uploads/2023/05/Prevent-destruction-of-nests-3.pdf>

Artuso, C., C.S. Houston, D.G. Smith, and C. Rohner. 2022. Great horned owl (*Bubo virginianus*), version 1.1. In D. Sly (ed.), *Birds of the World*. Cornell Lab of Ornithology, Ithaca, NY, USA. <https://doi.org/10.2173/bow.grhowl.01.1>

Floyd, T., C.S. Elphick, G. Chisholm, K. Mack, R.G. Elston, E.M. Ammon, and J.D. Boone (eds.). 2007. *Atlas of the Breeding Birds of Nevada*. University of Nevada Press, Reno and Las Vegas

Ghimire, B. 2015. Technical Report: *Ecology and Importance of Owls*. DOI: 10.13140/RG.2.2.32294.68165

Lovette, I.J., and J. Fitzpatrick. 2016. *Handbook of Bird Biology (Cornell Lab of Ornithology)*, 3rd Edition. Wiley-Blackwell, USA.

Peteers, H. 2007. *Field Guide to Owls of California and the West*. University of California Press, Berkeley and Los Angeles, CA

Sheffield, S.R. 1997. *Owls as biomonitors of environmental contamination*. Source: In: Duncan, James R.; Johnson, David H.; Nicholls, Thomas H., eds. *Biology and conservation of owls of the Northern Hemisphere: 2nd International Symposium*. Gen. Tech. Rep. NC-190. St. Paul, MN: U.S. Dept. Of Agriculture, Forest Service, North Central Forest Experiment Station. 383-398.

Sibley, D.A. 2001. Typical owls, pp. 339-347. In: C. Elphick, J.B. Dunning Jr., and D.A. Sibley (eds). *The Sibley Guide to Bird Life and Behavior*. Alfred A. Knopf, New York.

Voous, K.H. 1988. *Owls of the Northern Hemisphere*. William Collins Sons and Company Ltd., London, UK.

CEU - What tree care providers should know before rescuing or transporting raptors

- Which factors make the great horned owl an indicator of biodiversity (circle all that apply)?
 - It is a large and aggressive predator.
 - It has a broad, diverse range and diverse diet.
 - It is generally non-migratory.
 - It is sensitive to environmental contaminants.
- Which types of prey make up about 90% of the great horned owl's diet?
 - Medium-size songbirds.
 - Insects and reptiles.
 - Small mammals and rodents.
 - Marshland birds and waterfowl.
- What body characteristics help to identify the great horned owl (circle all that apply)?
 - It is long and slender.
 - It is large and stocky.
 - Its ear tufts are far apart on the top of the head.
 - Its ear tufts are more centered on the top of the head.
- Which of these adaptations contribute most to the owl's success when hunting in low light (circle all that apply)?
 - Large eyes and strong binocular vision.
 - More cones than rods.
 - Ear tufts.
 - Sharp talons.
- Which of the following does not assist the owl's hearing?
 - Its ear tufts.
 - Its outward pointed bristled feathers on its facial disc.
 - Ear openings on the side of its head.
 - Its ability to fly silently.
- In which of the following habitats are you highly likely to find this or another owl species?
 - Riparian.
 - Desert.
 - Grasslands.
 - Suburban turf park.
- In which two of the following locations is this owl likely to roost in the daytime (circle all that apply)?
 - In a large tree cavity.
 - Close to the trunk or in a fork mid-way in a large, dense tree.
 - On a roof near a chimney.
 - On a power pole.
- Which of the following is the best clue that an owl is roosting in a tree?
 - A medium-size nest can be seen in the tree.
 - Several birds can be seen flying away from the tree.
 - A noisy mob of crows or other birds are repeatedly flying around the same area of the tree.
 - Night hooting has been reported from within the tree.
- Which of the following two statements are false?
 - The owl's breeding period is usually from April through August.
 - The owl's breeding period can start in December and extend through August.
 - Baby owls usually hatch about two days apart and therefore vary in maturity.
 - Immature owls are self-reliant when they move out of their nest.
- If you find immature owls on a branch in the same tree as their nest, it is safe to work in the tree.
 - True
 - False
- When you get too close to an owl and it appears distressed, which of these behaviors should you take as warning signs (circle all that apply)?
 - Bill-clapping, hissing, screams, short barking notes or guttural noises.
 - Turning around and defecating on you.
 - Foot stamping, rocking side to side.
 - Its wings are arched high.
- Which of the following describes the Migratory Bird Treaty Act's protection of birds' nests?
 - Nests of all birds are protected, even when they have no eggs or young.
 - Nests of all native birds are protected from the time young have hatched.
 - Nests of all birds are protected only when they contain eggs or young.
 - Nests of all native birds with eggs or young are protected.
- In which of the following tree care situations is a wildlife biologist not necessary?
 - When work closer than 300-radius in feet to an active raptor's nest cannot be delayed.
 - When an active raptor's nest needs to be relocated to prevent harm to people or property.
 - When you have determined that the raptor's nest is empty, and no young raptors or other active nests are in the tree.
 - When you are working in California and for safety reasons need to remove an inactive raptor's nest.
- Apart from self-protective gear, which of the two following items would help prepare you for an owl emergency (circle all that apply)?
 - Sturdy container with a lid and ventilation holes.
 - Masking tape to bind the bird's legs.
 - Bottled water to hydrate the bird.
 - Towel to throw over the bird to capture it.
- When you find an immature raptor on the ground you should contact the nearest wildlife/raptor rehabilitation center
 - only if the bird is clearly injured.
 - if the bird can only hop but not fly.
 - whether or not it is injured.
 - only if you don't see parents watching over it.
- When calling a wildlife rehabilitator about a fallen young raptor you are likely to be asked to do which of the following (circle all that apply)?
 - Offer it food and water
 - Observe if the bird can hop, fly or perch, or if there is blood or other signs of injury.
 - Take photos of it and its surroundings.
 - Ask people nearby to form a circle around the bird to prevent it from getting away
- Which statement is false? A fallen nestling may be able to climb back up in the tree if the following conditions exist:
 - if down feathers cover its entire body.
 - its flight feathers are well developed.
 - the bark of the nest tree is sufficiently rough to grip.
 - all down feathers have been replaced by well-developed ones.
- Which two of the following should you not do when capturing a raptor?
 - Ask onlookers to keep quiet and a safe distance away.
 - Place a towel or small cloth over it.
 - Hold it facing toward you before you have both its legs securely in your hand.
 - Grasp it by its talons.
- When attempting to capture a raptor, which of the following actions will increase your safety and that of the bird (circle all that apply)?
 - Allowing a dog walker to remain nearby.
 - Wearing personal protective gear.
 - Placing a towel or other cloth over the bird then determining its head and face position.
 - Keeping it covered and positioning the bird facing away from you while holding your arms extended.
- Which of the following actions is likely to be advised for a fallen uninjured owl which is covered in down feathers only?
 - Leave it alone and put food and water out for it.
 - Return it to its nest as soon as possible.
 - Put it under the cover of nearby vegetation.
 - Carefully place it in the fork of the nest tree.

Home study for CEUs



You may receive one hour of continuing education units (CEUs) for reading the designated article and completing the test questions. Copy the question pages and use it to record your answers. Darken the correct letter choices and circle your choice for true and false or correct choice questions. Each question has only one correct answer. Passing score for this test is 16 correct answers (80%).

Next, complete the registration information on this form and send it to:

**WCISA Admin. Office
31910 Country Club Drive
Porterville, CA 93257
559-784-8711 fax**

Note: If 80 percent or greater of the questions have been answered correctly, the ISA will be notified of the CEU assignment and it will be posted by the Chapter and ISA. If a passing score is not achieved, the test will be returned for corrections. No CEU confirmations will be sent to you.

Registration Information

Name: _____

Cert. # _____

Address: _____

City: _____

State: _____ Zip: _____

Home study quizzes are also available online in the wcisa.net member portal.