

# A GUIDE TO WILDLIFE VIEWING AND PHOTOGRAPHY BLINDS

Creating Facilities To Connect People With Nature



Bluff Lake Nature Center Viewing Blind, Colorado Photo: BLNC

*“When we get the design of buildings and communities right, they will instruct us properly in how we fit within larger patterns of energy and materials. They will tie our affections and minds to the care of particular places.”*

DAVID ORR, *BEAUTY IS THE STANDARD*



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- To promote safety for persons and property in connection with boating, hunting and fishing;
- To provide educational outreach programs and materials that foster an awareness of and appreciation for Virginia's fish and wildlife resources, their habitats, and hunting, fishing, and boating opportunities.

VDGIF is responsible for the management of inland fisheries, wildlife, and recreational boating for the Commonwealth of Virginia. The Department has an operational budget of approximately \$49.5 million which is funded primarily through hunting and fishing license fees, boating registration fees, matching federal grants and an appropriation from the Virginia General Assembly from the sales tax money collected on the sale of outdoor equipment in Virginia.

## A PUBLICATION FOR:

- Agencies and organizations that manage natural areas and want to enhance visitor wildlife viewing and photography experiences by adding or improving viewing facilities; *and*
- Landscape architects, recreation planners, biologists, interpreters, educators, and conservationists who may help plan and manage the facility; *and*
- Organizations and individuals raising funds for wildlife viewing enhancement facilities.

## OUR GOAL

To assist agencies and organizations in planning and providing positive wildlife viewing experiences for the growing numbers of bird watchers and wildlife viewers; and ultimately, by providing these experiences, to continue to develop a more knowledgeable and conservation-minded constituency.

## OBJECTIVES

- 1 To provide information and discussion that can help resource and recreation managers decide what kind of blinds will best meet the needs of viewers with least impact to wildlife; *and*
- 2 To share examples, case studies and photographs of blinds from across the United States in order to foster creative and efficient planning, *and*
- 3 To initiate the development of a database of viewing and photography blinds and observation structures.

## FUTURE OBJECTIVE

To continue to build a dynamic resource of information that expands beyond blinds and this printed publication to providing a nationwide Watchable Wildlife Facilities resource accessible online.

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# INTRODUCTION

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*“Does anyone out there know of a book or web site where I can find some photo blind plans? I have had three requests recently and I can’t track any resources down.”*

That email from Jeff Trollinger, Virginia Department of Game and Inland Fisheries, in March 2006, sparked a flurry of responses from Watchable Wildlife and Nature Tourism Coordinators from across the United States.

*“Great minds. I was just about to put the same request out there! I was even thinking that if there isn’t a source for photography and viewing blinds, maybe we could pool some resources and get someone to put one together for us?”* emailed Karen Hardesty, Colorado Division of Wildlife.

The original guide, which featured western state facilities, resulted from that conversation. The revised guide expands the publication that Colorado Division of Wildlife developed to include blinds from eastern states. The goal is to offer both a how-to guide and a growing database where managers can peruse different types of viewing structures and photography blinds.



**Colorado Division of Wildlife mobile viewing trailer:** viewers watch prairie chickens at dawn. Photo: CDOW

While it may be tempting to take a cookie-cutter approach to building blinds, the best blinds are adapted to the natural and cultural environment: habitats, species, weather conditions, and architecture. The best blinds meet the needs of their target visitors. For example, blinds designed specifically for photographers tend to serve that group better than multi-purpose blinds.

*While it may be tempting to take a cookie-cutter approach to building blinds, the best blinds are adapted to the natural and cultural environment: habitats, species, weather conditions, and architecture.*

The publication reflects a commitment on behalf of Watchable Wildlife Programs with the states of Colorado and Virginia to help managers design and locate high quality viewing or photography blinds. In an era when budgets are tight, it’s more important than ever to share creative ideas and projects.



Photo: © Shawn P. Carey

# INTRODUCTION

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Today, birdwatching is growing faster than any other form of outdoor recreation. Birding and Nature Trails now guide viewers to a network of sites along our nation's coastlines, through mountains and valleys. States are promoting trails as nature tourism becomes an ever more important source of economic revenue.

Facilities that enhance viewing experiences at sites on a birding trail represent an investment in that economy, as well as in creating a conservation constituency. Viewing and photography blinds are increasingly popular, and have the potential to facilitate memorable experiences that in turn lead to both return visits and to conservation actions.



Photo: Andrews WMA

## QUESTIONS EXPLORED IN THIS HANDBOOK

- What is a blind and what purpose does it serve?
- What kinds of blinds exist today and where are they?
- What is the difference between a viewing and a photography blind?
- How might a blind enhance the experience for visitors?
- How can blinds blend with nature? With culture?
- When are blinds essential for protecting wildlife from disturbance?
- When are blinds not essential but still effective for focusing visitors' attention?
- How do you choose the best site, approach and design for your blind?
- What does it take to maintain a blind?
- What about costs and partnerships?

# CHAPTER 1: WHY BUILD A BLIND?

## WHY BUILD A BLIND?

This first chapter highlights the benefits of viewing blinds, suggests some situations in which a blind may not be desired, and provides a short checklist of questions to consider before deciding to add a viewing blind to your site.

It's not hard to think of good reasons to build a viewing blind. In some places, blinds give viewers or photographers the chance to observe easily disturbed wildlife species. Blinds can direct and concentrate visitor use to lessen impacts and serve management goals. For example, a blind can prevent birdwatchers from wandering into sensitive habitats by giving them what they are looking for in an ideal setting.

Blinds can support your site's educational efforts, offering new experiences and perspectives to both school groups and recreational learners. Interpretive media in blind settings can enhance visitor knowledge and appreciation. Blinds may serve "double-duty" as shelter from snow, cold, rain, heat or insects – assuring more enjoyable wildlife watching.

*"You enter. View nature through a slit. You can't see behind you. You can't see above you. You can't see what's around you. About 75 percent of the natural world is blocked from view."*

PETE DUNNE

There are cases, however, when viewing blinds may not be needed or even hinder the achievement of site goals. Pete Dunne, renowned birder, author and director of the New Jersey Cape May Bird Observatory, finds the confining nature of the classic photo blinds an impediment to birding and to connecting to nature.

Many wildlife viewers would empathize with Dunne. We desire the opportunity to experience the big



**Ninepipes National Wildlife Refuge viewing blind, Montana**

Photo: Deborah Richie Oberbillig

picture with all of our senses; we don't want to miss anything. However, Dunne acknowledges that not all wildlife can easily habituate to people. At Rutland Waters, in Great Britain, he's found that stepping outside of the "hide" (the European term for a blind) sends hundreds of ducks flushing skyward.

The over-arching goal is to offer a safe and rewarding visitor experience while minimizing impacts to wildlife. Could a viewing blind be beneficial to wildlife watchers or help you meet your resource protection goals? The following section supplies additional discussion on the benefits that viewing blinds can add to a site.

## Protecting Birds and Other Wildlife From Disturbance

*"In some cases, you must have a blind or the birds will be disturbed."*

PAUL BAICICH

Paul Baicich is an independent consultant and leader on birding-related and conservation issues, and formerly served as editor of *Birding* magazine. He points out that there are some cases where blinds are the only way to view and appreciate sensitive wildlife species up close.

Protecting wildlife from disturbance caused by viewers and photographers is one of the key goals of Watchable Wildlife programs. Understanding the wildlife on your site will be important. Sometimes, the *species* is not so much the issue as the setting. For example, in Colorado, waterfowl in urban areas are often habituated

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**Klamath Lakes National Wildlife Refuge, California:**

A photographer blind concealed near the tree allows bald eagles to roost without disturbance. Photo: USFWS

**DEFINING A VIEWING “BLIND”**

A blind (or “hide”) is a structure that conceals viewers and photographers from birds or other wildlife – facilitating opportunities for positive wildlife viewing experiences. A well designed blind facility makes it possible for people to see wildlife behaving naturally, undisturbed by human presence. In this publication, the term “blind” is used to refer to certain platforms and observation towers that partially conceal viewers and rely on wildlife to habituate to the presence of people in those locations.

**THE POSITIVE WILDLIFE VIEWING EXPERIENCE**

Before you begin planning a new wildlife viewing facility, consider what to aim for when designing a “positive viewing experience.” For a quick start, review the following excerpt from the book *Providing Positive Wildlife Viewing Experiences*.

What does a “positive viewing experience” look like? Wildlife watchers depart with a memorable, enjoyable and educational experience. The wildlife continues to feed, rest, nest or otherwise go about daily living without stress or interference with its ability to survive. All wildlife viewing facilities minimize and concentrate impacts. The viewers come and go without altering the habitat. The local community and landowners see viewers as respectful and desirable visitors. Ultimately, managers hope to facilitate an experience that leads wildlife watchers to want to learn more, and to take informed action on behalf of wildlife and habitats.

*(From Providing Positive Wildlife Viewing Experiences, written by Deborah Richie Oberbillig; published by Colorado Division of Wildlife and Watchable Wildlife Inc., 2002. For a copy of the book, see [www.watchablewildlife.org](http://www.watchablewildlife.org))*

to human activity – making urban parks and open spaces great places to begin birdwatching. But waterfowl in rural and remote areas can be particularly sensitive, and disturbance, as Pete Dunne noted, can cause entire groups to flush. In some cases, tolerance appears to depend on the individual. Research on raptor flushing distances seems to indicate that some individual bald eagles, for example, are less easily disturbed – or likely to flush – than others.

It might seem logical that observing breeding coastal birds that nest on island refuges would be off limits. But Baicich has discovered one place where blinds are allowing people to come onto an Atlantic island to view puffins, razorbills, terns and other seabirds. Machias Seal Island off the coast of Maine, (an island claimed by both the U.S. and Canada) provides unmatched opportunities for education and viewing. (For description and photos, check this website: <http://www.birdingamerica.com/Maine/machias.htm>)

Blinds can also be critical for viewing the spring courtship dances of several grouse species. The desire to experience this springtime spectacle brings many birders to Colorado each spring. But birds on leks can be easily disturbed. The birds will flush if they see people and movement, which in turn threaten their reproductive success. Populations of sage grouse, lesser and greater prairie-chickens, and sharp-tailed grouse are declining, in some places precipitously, due to habitat loss and



Puffin Photo: USFWS

## CHAPTER 1: WHY BUILD A BLIND?



**Flint Hills, Kansas:** A portable blind for viewing greater prairie-chickens on a private ranch protects the birds and builds local support for nature tourism and conservation.

Photo: Ken Brunson, Kansas Dept. of Wildlife and Parks

alteration. By creating ethical opportunities to view these species, we can build conservation constituencies.

The Colorado Division of Wildlife designed and built a mobile viewing blind that allows twenty people to enjoy watching greater prairie-chicken courtship rituals and to watch the sun come up at the same time. (See Case Studies for more information). Successful prairie chicken viewing blinds in Canadian, Texas and in the Flint Hills of Kansas on private ranches, are simultaneously building local support and nature tourism economies. For example, see this website for the BarH ranch in Canadian, Texas that is part of the Texas Prairie Rivers Initiative: <http://barhduderanch.com/prairiechicken.html>

### **Blinds as a Visitor Management Tool**

In addition to protecting wildlife from direct disturbance by wildlife viewers, blinds can help to manage visitor use – serving the same important function as trails and other landscape design features. Whether or not a blind is needed to hide visitors from wildlife, a well designed blind and trail approach can guide and concentrate visitor use to protect natural resources.

Jack Clinton Eitniew, director of the Center for the Study of Tropical Birds, Inc. in south Texas, appreciates blinds as a recreation management tool for directing the flow of visitors. He explains that when a blind is provided,

viewers converge to watch birds in one place. As a result, visitors are less likely to wander through a preserve where their actions can disrupt wildlife nesting, courting and feeding.

Blinds and other viewing facilities can also serve to separate visitor use. For example, offering a designated photography blind and a separate viewing blind (or platform) will ensure that photographers and casual users both have positive experiences, and don't end up disturbing one another.

### ***Blinds as visitor prompts***

Blinds can serve as “prompts” that cue visitors to turn their full attention to viewing nature. Managers involved with watchable wildlife and education programs are always looking for ways to engage people in wildlife viewing – to increase awareness of the wildlife and habitat around them.

*“The same way that crossing a footbridge seems to prompt people to stop and look down and a bench invites us to pause and rest, a viewing blind can be a cue to look carefully. Viewing facilities are like those highway signs that say “scenic overlook,” all of us stop to see what’s there – we don’t want to miss the opportunity!”*

KAREN HARDESTY

Blinds can be designed to encourage viewers to take notice. Even in places where a blind is not required to protect wildlife, adding a blind with comfortable benches can draw people in, and suggest that it's time to lower voices, watch and listen. Here, managers might choose a more open design that still includes screening.

The topic of landscape design cues can be intriguing to explore. Consider teaming up with a landscape architect to help design your site, and to include prompts

## CHAPTER 1: WHY BUILD A BLIND?



Red Lion State Wildlife Area, Colorado Photo: CDOW

that will enhance the visitor experience. At the **Red Lion State Wildlife Area** in Colorado, The Colorado Division of Wildlife worked with landscape architecture firm Mundus-Bishop Design to place a stand-alone entry gate on a trail through the prairie. While the trail continues from one side of the gate to the other, the gate marks the beginning of the “nature trail” section that leads to a viewing blind overlooking a small pond. They anticipate that the process of opening the gate will provoke a feeling of *entering* a new place. The gate serves to say: “Leave behind the quick pace, and the noise of cars and conversation, and immerse yourself in the natural sounds and sights.”

### Offering a New Perspective on Nature and Wildlife

Inviting visitors to experience nature in a meaningful way is one of the goals of the Watchable Wildlife program. Designing a facility that offers a new experience and perspective can be particularly powerful and memorable. Consider the following brief examples.

#### *Offer New Way to See*

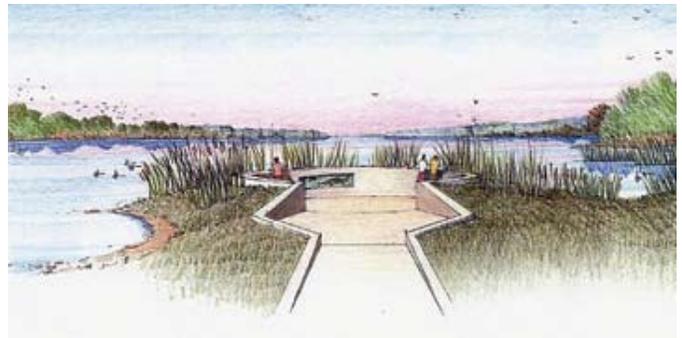
*“My rule is that if I cannot provide a unique experience, one dependent on such installations, then I advise against them”*

TED EUBANKS

Ted Eubanks, owner of Fermata Inc., a nature tourism consulting firm influential in creating birding trails and the World Birding Center, agrees that facilities for viewing ought to offer novel ways to access nature.

A blind is one possibility, but so are boardwalks, platforms, towers, and canopy walks.

Eubanks also reminds us that blinds need not be the classic wooden boxes with slits. They can offer a way of looking at nature from an unusual angle. For instance, Fermata designed a “punt” that will give viewers at an Illinois Nature Conservancy property the chance to descend into a marsh and see from below looking up, rather than looking out from above. (A punt is a structure that duck hunters use along the Maritime coast).



Emiquon Preserve, The Nature Conservancy, Illinois:

“Punt” design viewing offers new angles for viewing the marsh wildlife. Illustration by permission of Fermata, Inc.

### *Encourage Increased Awareness of Sound*

Viewing blinds can include “prompts” that encourage visitors to engage all their senses. Designing a facility to increase awareness of sound, touch and smell can be key to providing universally accessible experiences. A microphone outside a blind can transmit natural sounds to an indoor blind location – so that the natural sounds are amplified. A parabolic microphone – either permanently mounted, or portable, can bring in sounds visitors never before experienced.

Some managers have added audio recordings of bird calls (for one example, see **Bluff Lake Nature Center** in Denver, Colorado). A prairie dog and raptor viewing

# CHAPTER 1: WHY BUILD A BLIND?

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facility at the **Cathy Fromme Natural Area** in Fort Collins, Colorado, features audio recordings of prairie dog calls. Both of these facilities aim to educate visitors and increase awareness of natural sounds.

As with all aspects of the watchable wildlife facility design, it's important that audio features not disturb wildlife or disrupt natural behavior. A Senior Environmental Planner for the City of Fort Collins, Edith Felchle, acknowledges the potential impacts of playing recorded prairie dog alarm calls, but says that so far there's no evidence that the calls are influencing wildlife behavior. To keep the sound from traveling far from the viewing blind, the volume remains low.

Similarly, the staff at the Bluff Lake facility strictly controls the bird song recordings. The songs, played selectively when school groups visit, serve as an extremely useful tool for engaging students in the natural world. Planners considering adding audio features to their site must weigh the educational benefits and the potential wildlife disturbance.

Some managers believe that bird and wildlife watching ethics prohibit the use of song/sound devices during breeding seasons, or when they change wildlife behavior. Be sure to involve knowledgeable biologists in the planning, and monitor the effects of audio recordings. Headphones and listening devices can confine the audio transmission to a very small area. Aim to ensure that your target visitors are the only ones experiencing the audio – and wildlife won't hear a thing.

## A Few More Benefits

**Meeting Visitor Demand:** Viewing blinds offer more benefits than we have discussed here. Additional reasons to build viewing blinds include visitor demand. Wildlife viewers want to see wildlife and a blind suggests there's a place to focus their observation skills. Photographers may

also need viewing blinds to pursue their interests with a high level of satisfaction.

**Visitor Safety:** While we have emphasized that blinds can be critical for protecting wildlife, blinds and other viewing facilities can also be important for visitor safety and comfort. Blinds can be designed to shelter visitors from inclement weather, or biting insects. And blinds can protect wildlife viewers from wildlife; this can be particularly important in viewing bears in western North America, and predators in other places.

**Tourism Attraction:** The addition of a blind or other viewing facility may add to the perceived appeal or value of your site, helping to promote it. As nature and heritage tourism participation continues to increase, features such as blinds, trails and interpretive media may distinguish sites and serve as nature tourism attractions.

## When a blind may not be the answer

Planning, building and maintaining a blind is an investment of time and resources, and there are times when the costs will outweigh potential benefits. Consider some of the situations in which a blind may not be necessary or may work against your goal of providing positive experiences. These may include:

- **The wildlife species that you hope to observe are habituated to people, or can habituate to viewing.** In some cases a blind just simply is not needed; birds or other wildlife species come close enough to the visitor to allow a positive experience. Resource protection, visitor management, and education can be accomplished in numerous other ways.
- **The site management agency cannot commit resources to ensure visitor safety or facility maintenance.** Some agencies find themselves with funding for capital improvements, such as viewing facilities, but no funding

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or additional resources for people or maintenance. In some settings, a blind that is not regularly checked and maintained can become an attractive nuisance; it can become unsafe for visitors.

- **The approach to the blind can't be designed to attract and guide visitors into the blind.** Without a well-designed approach, visitors may ignore the blind, and resource protection goals will not be met. Think of a broad, flat prairie site, or a beach. If you want to attract visitors to use the blind, and not just walk around it, you must design the approach to attract and guide visitors to the facility.
- **The approach to the blind can't be designed to "hide" the visitor.** In many cases the approach is just as important as the blind. If visitors disturb wildlife on their way to the blind...what use will it be?
- **The wildlife viewing opportunity is too inconsistent.** If the wildlife species you want to highlight is only occasionally seen from your site, you may not want to invest in a permanent blind. Visitors see a blind as an indication that wildlife can be seen; they may use a blind with a high expectation of positive viewing experiences. The resulting disappointment may impact their perceptions and attitudes toward wildlife viewing and/or the managing agency. If a blind is needed, perhaps a temporary or portable blind is appropriate. See chapter two for more information on various types of blinds.



**Kenosha Pass Viewing Deck, Colorado:** Sometimes a viewing deck is all that's needed for wildlife watching, rather than a fully screened blind.  
Photo: CDOW

- **Last, don't bother with a blind if your target audience doesn't want to use it.** Recall that many nature and wildlife enthusiasts would empathize with Pete Dunne's feelings about some blinds. In some cases, reinforcing and supporting responsible viewing behaviors may be enough to protect your resource and enhance the visitor experience.

If you decide you don't need or can't afford a blind, consider other ways to provide visitors with positive experiences. Pete Dunne provided several examples of places where visitors can encounter wildlife "up close" without a blind. The World Birding Center headquarters (Rio Grande Valley State Park), near McAllen, Texas, features feeders, watering holes and benches. Chachalacas, olive sparrows and long-billed thrashers drink and bathe at close range without any barriers between birds and people. At South Cape May Meadows, Dunne cites leading a bird walk past a foraging snowy egret, six feet away. The bird and others are habituated to human activity on regularly used trails.

# CHAPTER 1: WHY BUILD A BLIND?

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## Summary and Discussion

Wildlife viewing blinds clearly can offer benefits to both wildlife and people. In contrast, we've acknowledged some situations in which viewing blinds may not be needed or desired. How to sort through all this? Before launching into a viewing blind project, ask yourself some questions. Most important, determine how a blind will help to provide the positive wildlife viewing experience.

Do you need to protect a sensitive species or habitat from disturbance? Is a blind the best way for visitors to get close without disruption? Will a blind help to manage visitor use to protect other resources? Will a blind enhance the viewer experience by offering a new perspective, educational opportunities, or protection from the elements? Is the blind needed to help meet the needs of serious photographers? If you want to build facilities for both general visitors and serious photographers, will you need two blinds?

Take note of other opportunities and facilities are in your area. Is your opportunity unique? Will the viewing opportunity be consistent and reliable? Will you have the resources to sustain the facility so it continues to provide a safe and satisfying experience?

To help you plan for your site, invite the assistance of people who are intimately familiar with the wildlife and habitat, as well as someone knowledgeable about visitor needs and preferences. You might put together a small team, including a wildlife biologist, a recreation specialist, a wildlife viewer, a photographer, a landscape architect, and an interpretive naturalist. Use the following basic checklist to help you evaluate your site.

### CHECKLIST

#### SHOULD WE BUILD A BLIND?

Building a blind may be a great idea if you answer yes to most of the following:

- A viewing facility will help us meet our site objectives.
- Wildlife species require, or will benefit from, protection from disturbance.
- Wildlife viewing opportunity is fairly consistent and reliable.
- A blind serves as a management tool;
  - ✓ facility and approach needed for resource protection
  - ✓ facility can direct or separate visitor user groups
- A blind will enhance visitor experience:
  - ✓ wildlife viewer or photographer demand (visitors want a blind!)
  - ✓ blind will provide new perspective on nature/wildlife
  - ✓ interpretive media can increase knowledge/appreciation
  - ✓ blind facility can protect visitors from elements
- Our agency/organization has resources to sustain a safe and satisfying viewing opportunity.

## CHAPTER 2: WHAT KIND OF BLIND TO BUILD?



**South Platte Park, Littleton, Colorado:** This accessible blind overlooks a wetland with plentiful waterfowl and features six interpretive panels, plus recycled plastic lumber in the interior that has proved low-maintenance and effective for reducing sound. Photo: Skot Latona

### WHAT KIND OF BLIND TO BUILD?

Once you've decided that a blind is right for your site, the next question is: *what kind of blind is best for meeting our wildlife and visitor needs?* This chapter introduces a variety of options. Later chapters will explore characteristics of blinds in greater depth.

#### Viewing or Photography Blinds?

Do you need a viewing blind or a photography blind, or both? For which group are you designing your facility? While elements of design may be similar in any blind, the needs of photographers and general visitors may be very different. Dual-purpose blinds often fall short of meeting visitor satisfaction goals; photographers using blinds can seldom meet their objectives with other visitors sharing the same blind. However, Jack Clinton Eitniear, director of the Center for the Study of Tropical Birds, Inc. in south Texas, is creating a convertible blind that can be adjusted for photography or viewing, depending on the user.

#### Viewing/Observation Blinds

Blinds built for birdwatchers, wildlife viewers, casual photographers and nature enthusiasts are meant to provide a reasonably “up-close” viewing experience, while “hiding” visitors just enough to avoid disturbing the wildlife they came to see. With some species it appears important to disguise the human shape; many structures include back

walls to avoid backlighting viewer silhouettes. Holes or slits of varying sizes, and at varying heights offer views.

Comfort features such as benches or elbow rests (for those holding binoculars or cameras) may better serve the visitor. Because many people visit sites in groups, viewing blinds should be designed to comfortably accommodate several people. They can be open and airier than more confined photo blinds. Birdwatchers will appreciate blinds oriented to best take advantage of lighting; accurate perception of color can be important for identification.

Increasingly, sites are exploring new designs for blinds, placing more emphasis on aesthetic appeal, and aiming to create structures that complement the local environment and culture. Later chapters will invite planners to consider how blinds can help communicate a sense of place.

#### Photography Blinds

A blind for serious photographers needs to be designed with attention to one all-important feature of the site – lighting. Light can make or break a photo opportunity; it must fall on the subject in *just the right way* if a picture is to accurately and artistically portray a species or setting. Orienting the blind so that the photographer can take advantage of morning or evening light is best. Place the blind with attention to the setting too; photographers will desire access to a composition that doesn't include unsightly intrusions (power lines, etc.).



**Bear River Migratory Bird Refuge, Utah:** This photography blind features a design available from the nonprofit North American Nature Photography Association. NANPA is in a partnership with the U.S. Fish and Wildlife Service to cost-share the building of photography blinds for National Wildlife Refuges. Photo: NANPA

## CHAPTER 2: WHAT KIND OF BLIND TO BUILD?



**Queens State Wildlife Area, Colorado:** Converted grain bin is now a viewing blind. Photo: CDOW

The interior of photo blinds can be smaller than viewing blinds, but must accommodate a tripod. Often, photo blinds are available by reservation only, for one photographer at a time. Photo blinds work best when fully enclosed so light enters the blind only through the slit where the photographer has positioned the lens. Special features such as additional camera slits (at different levels) will be welcomed. Ask a photographer to help you design the blind.

### Blinds Come in all Shapes and Sizes

As we've suggested, there is no one-size fits all viewing blind. While a facility should match the needs at a particular site, there are basic designs and plans available that can be adapted to various sites.

Blinds can be permanent, temporary, portable or mobile. They can be as elaborate as some of the spacious "hides" in Great Britain, with features like air-lock double doors and screens for viewing web-cams filming close-ups in a nest. Or they can be as small and inexpensive as a retrofitted portable out-house serving as a photography blind for waterfowl, such as the one at **Klamath Basin National Wildlife Refuges**. Once you've considered the basics, you can adapt or create a design unique to your site. A blind at **Queens State Wildlife Area** in Colorado illustrates an innovative design that fits well in the agricultural landscape of the plains; the blind is made from a converted grain bin.

### Permanent Blinds

*"If you can design a wooden box with a roof, window and door, you can design a bird-hide; but why stop there? One good way to stimulate design ideas is to visit as many existing bird-hides as you can, use them, and then assess how well they work for you and how they could be improved..."*

BIRDS AUSTRALIA

[http://www.birdsaustralia.com.au/infosheets/08\\_hides.pdf](http://www.birdsaustralia.com.au/infosheets/08_hides.pdf)

Much of this publication is devoted to permanent viewing blind facilities. A typical permanent photo blind is some version of a wooden shed with slits or windows at the front and sides, with a door at the back. Permanent observation blinds range from wooden walls with slits to multi-level structures. They can be concrete "bunker" style structures that peek out from the ground, and simpler, more organic styles such as willow screens or rock walls. The challenge is to create or adapt designs that are functional, but also complement the landscape and culture of the area. Permanent blinds are best suited to places where wildlife viewing opportunities are reliable, visitor use is consistent or increasing, and the organization has the resources to maintain the blind.



**Cathy Fromme Prairie Natural Area, Fort Collins, Colorado:** An innovative concrete viewing blind built into the hill features prairie dog and hawk watching. Interpretive media lines the inside walls. Photo: CDOW



**Audubon's Rowe Sanctuary, Nebraska:** This permanent blind for viewing sandhill cranes along the Platte River offers a positive viewing experience without disturbing cranes. Visitors arrive in the dark. Photo: Rowe Sanctuary

## CHAPTER 2: WHAT KIND OF BLIND TO BUILD?



### **Anan Bear Viewing Area, Wrangel Ranger District, Alaska:**

Managers leave the frame on the platform and erect a camouflaged tent structure over this semi-permanent blind during the bear viewing season. Photo: USFS

### *Temporary or Seasonal Blinds*

Setting up temporary blinds for short-term or seasonal viewing allows managers to adjust locations as wildlife shifts their uses of landscapes, or as habitats change. Temporary blinds may be preferred for seasonal viewing opportunities. They may be a good choice when funds for a permanent structure are not available (temporary blinds are often less costly), or when maintaining a permanent structure would be challenging; e.g., in places exposed to weather extremes, or vandalism. Temporary blinds usually hold at least two-people, but are often much larger.



### **Colorado Mobile Viewing**

**Blind:** The blind is a highlight of a February Eagle Days celebration in Pueblo, Colorado (above). Wildlife watchers take in the courtship rituals of prairie chickens from the blind at dawn (below). Photos: CDOW

### *Mobile Blinds*

Often literally blinds-on-wheels, these substantial structures can be moved from one location to another, or used for viewing-en-route. Vehicles often serve as ideal mobile blinds for visitors driving auto tour roads alongside wetlands or other habitats. (There are a number of places where wildlife has habituated to the presence of vehicles, but will be disturbed when or if people leave the vehicle). Mobile blinds offer intriguing options for managers. There are mobile blinds designed from remodeled trailers, vending units, buses, and even railcars. The Colorado Division of Wildlife uses several remodeled trailers for observing prairie-chicken and sage grouse on leks in the spring. The up to twenty viewers arrive before dawn and are seated, watching and listening with anticipation when the birds begin their courtship dances (see case study). The trailer can be used on other sites and for special events like Eagle Days during the rest of the year.

### *Portable Blinds*

Portable and temporary blinds have long been used by hunters, starting thousands of years ago when aboriginal people hid in blinds of natural materials to get close to their prey. Today, many hunting companies offer portable blinds and materials for camouflaging blinds. Keeping at least one of these blinds on hand gives managers the flexibility to respond to unexpected viewing or photography opportunities.



Portable Tent Blind Photo: CDOW

## CHAPTER 2: WHAT KIND OF BLIND TO BUILD?

Professional nature photographers often opt to buy or invent their own one-person portable blind. Generally, they seek designs with these qualities: lightweight; made of camouflaged fabric that doesn't reflect light (no shiny fabrics); easy to carry and set-up; weatherproof yet breathable; stable and roomy enough for a chair, tripod, and camera, and space for the photographer to turn without touching the walls. Photographers may alter the lens holes to fit their needs.

### Viewing blind, observation deck, or tower?

In this publication, we discuss some facilities we call “observation decks,” rather than “blinds.” Bob Hernbrode, who directed Colorado Division of Wildlife's Watchable Wildlife Program for many years, offers a good distinction between the two.

*“The purpose of a blind is to hide people from the wildlife being viewed. A viewing deck depends on the animals' ability to habituate to the managed, predictable and non-threatening presence of people. The purpose of the viewing deck is to control how people use the site.”*

BOB HERNBRODE

When do you need a blind, and when will an observation deck suffice? Hernbrode recommends using a blind for viewing migratory species, for any species extremely sensitive to the presence of people, or in situations where habituation to human presence may endanger the species when they move on to other places. He adds that the facility should fully hide people, and recommends planning a system for controlling visitor use.

An excellent example of a viewing blind and a system for visitor use is Audubon's **Rowe Sanctuary sand-hill crane viewing blinds** on the Platte River of Nebraska (see case study). When sage grouse, prairie chickens and



Balcones  
Canyonlands  
National  
Wildlife  
Refuge, Texas  
Photo: USFWS

sharp-tailed grouse are using “leks,” or dancing grounds, they are also very sensitive to disturbance. Creatively designed blinds and carefully managed visitor use systems allow people from all over the world to enjoy viewing these birds. At the Rowe Sanctuary and at several grouse viewing locations, viewers come to the site before dawn, arriving before the birds, and leaving after the birds depart.

For wildlife that can habituate to predictable human use, facilities such as the **Shin Oak Observation Deck at Balcones Canyonlands National Wildlife Refuge** are ideal. The deck partially screens viewers from the surrounding brush and gives people the unrivaled opportunity to see the endangered black-capped vireo just three-feet away. The deck and walkway also guide visitor traffic, and prevent people from wandering through the nesting areas in search of vireos, which would cause harm (see case study).

Observation decks can serve as visitor prompts, as discussed in Chapter 1; who can pass up the chance to stop and look around? For example, near the **Red Fish Visitor Center at the U.S. Forest Service Sawtooth National Recreation Area** (Idaho), bridges and platforms perched over a stream prompt visitors to slow down and allow them to observe salmon spawning.

## CHAPTER 2: WHAT KIND OF BLIND TO BUILD?

An observation *tower* could be designed to serve as both a viewing deck and a blind. A tower, or any elevated deck, invites a new perspective as well as a better view. This may be especially helpful in relatively flat terrain, such as the prairie or shoreline. A tower can be used to protect people from wildlife; in Alaska several bear watching areas feature viewing towers. In some places a tower may have an open deck, but still “hide” visitors simply because they are no longer in the viewing plane of the wildlife observed. Finally, an elevated platform in a forest can give birdwatchers a better look at birds that live high in the tree canopy.

**Note:** it may be challenging to offer observation tower viewing experiences to all visitors; universal design for towers can be expensive. But the rewards can be worth it. (See page 25 for an example of an elevated viewing deck with an accessible approach).

### Summary and Discussion

Once you’ve decided a blind is what you want for your site, consider the range of options – from temporary to permanent; from mobile to stationary; from fully enclosed blinds with portals to screened decks. Ask yourself and your team the following questions: how sensitive is the wildlife species? Are viewing opportunities seasonal or year-round? Is the environment stable or changing? Can we maintain a blind exposed to weather year-round? Who is our target audience – a casual viewer or a professional photographer? Review the following list of conditions in which particular blind-designs seem to work best. This may help you focus your ideas.

#### CHECKLIST

##### CHOOSING A BLIND

Which kind of blind may work best for your site and visitors?

- Photography blinds may be best when:
  - ✓ wildlife use of site is relatively predictable
  - ✓ high interest level from photographers
  - ✓ need to protect wildlife from photographer disturbance
  - ✓ need to separate users (by offering both photography and viewing blinds)
- Permanent blinds may be best when:
  - ✓ need fully enclosed, concealed blind and approach
  - ✓ wildlife is sensitive to disturbance
  - ✓ wildlife use of habitat is consistent or year-round
  - ✓ visitor use is consistent or substantial
  - ✓ blind is compatible with site
  - ✓ managers can maintain blind
- Temporary blinds (seasonal, mobile, portable) may be best when:
  - ✓ wildlife viewing opportunity is seasonal or short-term
  - ✓ visitor use is seasonal or inconsistent
  - ✓ managers desire less impact to site (to habitat or to view)
  - ✓ maintenance resources are limited or site remote
  - ✓ funds are limited (temporary may mean cost savings)
- Observation decks or platforms may be best when:
  - ✓ elevation will provide better viewing experience
  - ✓ wildlife is habituated to human activity; it's not necessary to fully conceal viewers
  - ✓ prompting visitors to observe, or guiding visitor traffic is your primary goal; decks and platforms invite visitors to stop and observe
- Towers may be best when:
  - ✓ elevation is needed for better viewing
  - ✓ visitors need protection from wildlife (e.g., bear viewing)
  - ✓ goal is to offer a unique perspective

### A LOOK AT BLINDS TODAY

*“However beautiful the strategy, you should occasionally look at the results.”*

WINSTON CHURCHILL

Throughout North America, public and private refuges, ranches, national forests, city parks and other natural areas are providing visitors with facilities to view wildlife while minimizing their impacts. Facilities are designed to manage visitor flow, to help visitors see nature “up close” or from a new perspective, to keep viewers safe, and/or to meet specific site or user needs (e.g., providing blinds for professional photographers). Taking a look at viewing blinds primarily in the western U.S., we found plenty to learn from successes and failures. Planners and managers are employing both “tried and true” designs as well as innovative approaches to facilities that help people connect with nature. This chapter explores the following innovations and challenges:

- Blinds that blend with the landscape
- Blinds that complement local culture
- Permanent yet portable blinds
- Towers as blinds
- Blinds that build community support for conservation
- Accessible blinds
- Site enhancements – from feeding to perches and plantings



**Wildlife photography floating blind:** Made of polystyrene and plywood, the blind has with a hole in the middle for a photographer in waders. Camouflage netting and cattails help the blind mimic a muskrat house. Photo: Sparky Stensaas

### Blinds that Blend with the Landscape

*“Form follows function—that has been misunderstood. Form and function should be one, joined in a spiritual union.”*

FRANK LLOYD WRIGHT

Blinds that harmonize with the local landscape help to connect people with nature, and enhance a *sense of place*. Whenever possible, use local native materials to build at least part of a blind. Blinds can peek out from a hillside so visitors view a prairie at eye-level, or invite visitors to observe the marsh through a screen of cattail or willow. It’s time to challenge ourselves to design our facilities to further interpret our places.

To meet this challenge, gather ideas from others; involve landscape architects, artists, or schools. You may discover ways to camouflage a simple shed-like blind, or may design something new that looks like it belongs on the landscape – perhaps a beaver lodge, a prairie dog mound, or hollowed tree. Experiment with an approach to the blind that invites people to enter as they would an animal den or a bird nest; this makes the experience more participatory, and memorable.

#### *Learning from Hunting Blinds*

Hunting blinds are a logical source of ideas for designs that blend with nature. Designers of hunting blinds

## CHAPTER 3: A LOOK AT BLINDS TODAY

must know about natural habitats and wildlife behavior and understand hunter needs as well. Duck blinds can range from simple box structures covered with sedges and cattails to elaborate floating blinds with fancy interiors that include propane heaters, stoves, refrigerators, captain's chairs and even beds. Solo wildlife photographers have similarly designed their own blinds to bring them face to face with their subjects without disruption.

The **Crowley Ridge Nature Center** in Arkansas (managed by the Arkansas Game and Fish Commission) features a viewing blind designed to resemble a duck hunter's blind, with branches and logs strewn on the roof, and supports built from unpeeled tree trunks. The blind overlooks a pond surrounded by a hardwood forest. According to Shawn Merrill, the director of the Center, a local hunting club (Delta Waterfowl) built the blind for the purpose of interpreting waterfowl hunting. Groups gather to look over the pond and to experience the feel of a duck hunting blind. The blind both interprets the hunting experience and serves as a viewing platform. Recently, low water levels have made waterfowl viewing inconsistent, but Merrill says visitors still enjoy the experience. At a separate location at the same Center, Eagle Scouts constructed a simple photographer's blind with portals overlooking a food plot planted to attract wildlife. As part of the project they planted honeysuckle to conceal the approach and the blind. (For more information on this center, see: <http://www.crowleysridge.org>).

### *Can the same blind be used for hunting and viewing?*

This question comes to mind when looking to hunting blinds for design inspiration. We suggest that it depends on the site, your management goals, and the audience or user group you want to serve. Most site managers provide separate facilities for these user groups because a single facility couldn't meet the needs of both user groups at once. Viewing blinds are rarely designed to accommodate safe hunting practices, and hunting blinds aren't designed to hold the number of people often expected at viewing blinds or platforms. Portable blinds, such as tent-blinds, may be suitable for either group at different times.

### **Blending with Nature or Not? Examples**

The following photos illustrate blinds that blend with their surroundings, and a few that could blend a little better. Consider how these ideas relate to your own site.



**Springfield Conservation Nature Center, Missouri**

Photo: David Catlin, National Audubon Society

### *Tucked into the Forest*

Note how the boardwalk is closely surrounded by trees. The result is a pleasing structure that tucks into the forest, inviting people to wander in and spend time.



**Trinidad Lake State Park, Longs Canyon, Colorado** Photo: CDOW

### *Rock Blind for a Rocky Habitat*

Native rock materials complement the rocky landscape. This is one of two sheltered blinds overlooking ponds in Longs Canyon.

## CHAPTER 3: A LOOK AT BLINDS TODAY



**Bosque del Apache National Wildlife Refuge, New Mexico**

Photo: Deborah Richie Oberbillig



### *Tamarisk Quail Viewing Blind*

In the southwest, near the Rio Grande River, natural materials create excellent natural shelters that can serve as quiet viewing observatories. The wall of this quail viewing shelter is made of salt cedar (tamarisk) branches. (Using tamarisk is a great idea. Managers seek to rid the site of this non-native and invasive plant, and the branches hold up well in this kind of construction).

### *Photo Blind or Outhouse?*

The use of a modified outhouse as a blind, as shown in this photo, may be functional and practical for photographers. But a modified outhouse can present challenges. In this case, the blind does not blend well with the surroundings,



**Quivira National Wildlife Refuge, Kansas**

Photo: Ken Brunson

nor is there cover to screen the photographer on the way to the blind. In addition, at least one manager suggests that a facility that resembles an outhouse may be used as one if it is not kept locked or if use is not carefully managed.

### **Klamath Basin National Wildlife Refuges, California**

Photo: USFWS



### *Fastgrass Solution*

This water-bird photo blind on Tule Lake might have seemed unattractive or out-of-place until it was covered by fastgrass. The use of fastgrass is a well-known camouflage technique popular with hunters who cover their boats. Fastgrass and other camouflage materials can be found in catalogues that sell hunting supplies.

### *Quick and Simple*

Painting a cattail design on this blind is a simple, inexpensive way to create a blind that blends with its surroundings. In addition, this simple art hints at what is special about the site.

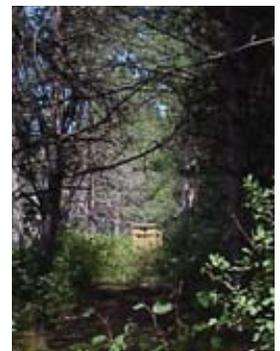


**Montezuma National Wildlife Refuge, New York**

Photo: NANPA

### *Hidden Approach, Sweeping View*

The two photos illustrate an ideal approach to a photography blind, with plentiful natural screening and barriers. Waterfowl in the area appear undisturbed by arriving or departing photographers.



**Humboldt Bay National Wildlife Refuge, California**

Photo: NANPA

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**Blackwater National Wildlife Refuge, Maryland**  
Photos: USFWS

Left: Before  
Below: After



### *Before and After*

These two photos capture “before” construction and “after” when wetland plants naturally grew close to the walkway to create a more pleasing natural setting. It’s important to take into account the lushness or aridity of a site and seasonal changes when planning a blind.



**Bluff Lake Nature Center, Denver, Colorado**  
Photo: BLNC

### *Using art to create a sense of place*

This viewing blind may not appear to “blend with nature” in the sense that it is not hidden from view. However, site managers creatively designed the blind to help communicate a sense of place. The viewing portal is cut in the shape of a large, flying bird. The shape accommodates observers of varying heights, and the image reinforces visitor awareness of the purpose of the site.

### **CHECKLIST**

#### **BLINDS THAT BLEND WITH NATURE**

When designing your blind, consider the following ideas. They may help support a positive viewing experience *and* communicate a sense of place.

- Keep site disturbance to a minimum.
- Restore native plants around the site.
- Allow vegetation to grow in close to the approach and the blind (but avoid blocking the view).
- Build a blind into a hillside or berm.
- Create an approach trail or boardwalk that winds around trees, rocks and other natural features.
- Build a blind with materials native to that area.
- Camouflage a traditional blind with paintings, or native materials.
- Design a blind to mimic natural features of the landscape: trees, hills, mounds etc.
- Design a blind to mimic wildlife homes (i.e. beaver lodge, bird’s nest).
- Cut viewing ports in bird or plant shapes; use an artistic approach to communicate the essence of your site.

### **Blinds that Complement Local Culture**

Blinds designed to complement the regional atmosphere can be derived from local cultural features too. Designs that use, build on, or are simply inspired by cultural elements can enhance visitor experiences and help people connect with the essence of your area. Blinds can resemble stone walls, old fences, miners’ shacks, or haystacks. To get more ideas, tour your locale, brainstorm with landscape architects and history buffs. Have fun and you will probably design something visitors will enjoy and remember.

Here’s one example: for viewing bears in Alaska, managers of the Pack Creek tower (see page 51) designed the facility to look like a familiar backcountry structure – an Alaskan food cache on poles.

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Queens State Wildlife Area, Colorado: Grain Bin Blind Photo: CDOW

### Blending With Agriculture

When viewing wildlife in farm country, why not remodel a grain bin as a viewing blind? A State Wildlife Area on Colorado's southeastern prairie offers a great example of what is possible.

#### CHECKLIST

##### BLINDS THAT BLEND WITH CULTURE

When designing your blind, consider the following ideas.

- Look for structures already on site or on adjoining properties.
- Ask yourself which features tell a story about your place.
- Once you pick a feature, consider how it needs to be modified to serve as a blind; how can you provide a safe and satisfying experience for viewers?
- If your site interprets cultural history, you may be able to consider structures from another time or society. Your blind facility, viewed from a distance, may help visitors picture something from the past. *Be sure to work with your heritage interpretive staff, or with local historians – as tempting as it may be, don't add a structure that doesn't belong on your site.*

### A Blind on Skids – when a permanent blind becomes semi-portable

What would *you* do when the featured wildlife at your site moves and abandons the blind location? This happens! A beaver pond fills in or rookery trees fall down, or dancing grouse move their lek to another site.

The **Matheson Wetlands Nature Preserve** in Moab, Utah built a two-story viewing blind during high floodwater years in 1995. After two years of spectacular viewing over wetlands in the otherwise desert red rock country, drought set in and the wetlands retreated. The viewing opportunity changed considerably. At **Lowell State Wildlife Area** in Denver, Colorado, a viewing platform that once overlooked Clear Creek now overlooks a weedy bank; floods caused the creek to change its course a few years ago.

Some situations, like those caused by drought or flood, will be nearly impossible to plan for and challenging to fix later. But for other situations, you can design a blind that is only semi-permanent, it can be moved if necessary. The greater prairie-chicken viewing blind used in the **Flint Hills** of Kansas (see page 7) is a great example. Another is the sharp-tailed grouse viewing blind at **Benton Lake National Wildlife Refuge** in Montana. The blind is constructed on skids to allow staff to adjust the blind's location each spring to reflect slight changes in the lek location.

**Benton Lake National Wildlife Refuge, Montana:**  
Grouse House blind – on skids.  
Photo: USFWS



### Observation Towers as Viewing Blinds?

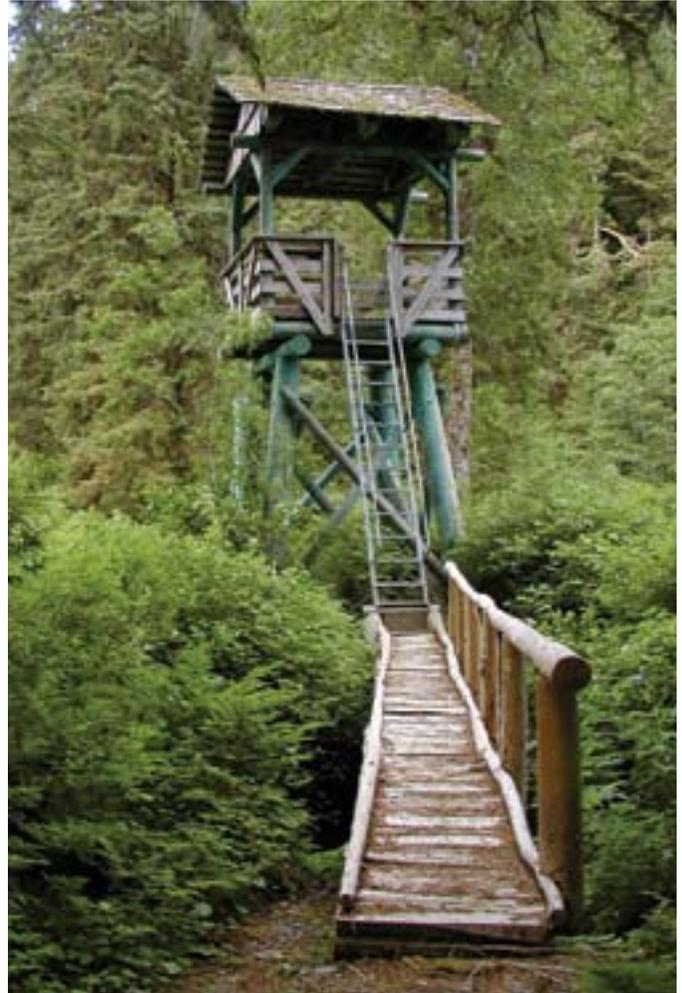
As discussed in Chapter 2, observation towers are often built to offer an elevated vantage point for panoramic views in otherwise flat landscapes. They can also be useful to lift viewers to a birds-eye view and to protect visitors from wildlife.

Towers are popular features of many national wildlife refuges featuring marshes, ponds and other wetlands. Birdwatchers can climb up a tower in **J.N. Ding Darling National Wildlife Refuge** to locate flocks of roseate spoonbills, egrets and herons; once they determine where the birds are, they can head down a trail or up the shoreline for a closer view.

Elevated platforms can offer visitors a chance to see soaring raptors at close-range. With some screening, those towers can doubly serve as partial blinds, while railings or walls also help block the wind. Pete Dunne notes the new, accessible hawk watch at **Bensten Rio-Grande State Park** as a good example. (He also notes that while the roofed elevated platform at **Cape May Point State Park** did impede some viewing, it was a lifesaver during the rain.)

#### *Watching Bears from Above*

Towers can also offer a safer close-up viewing experience. When viewing coastal brown bears on Admiralty Island in Alaska, visitors to the Pack Creek Observation Tower have the memorable experience of safely watching the magnificent bears fishing for salmon. Viewers have a broad field of view as they look down at the bears. The bears can see the people, but are accustomed to their presence, and continue their natural behaviors. Visitors to the site also have the option of viewing from a ground level gravel pad in a nearby meadow that is closely monitored by rangers, but the tower offers a rewarding perspective with a broader field of view.



**Pack Creek Bear Viewing Tower, Admiralty Island, Alaska**

Photo: USFS

John Neary, wilderness field manager for Admiralty Island, notes that people “love the tower” even at times when viewing opportunity is better in the meadow. “They think it must be better from the tower or the tower wouldn’t have been built there,” he writes. His experience supports the idea that viewing blinds can help manage visitor flow by serving as a “cue” or an attraction.

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**Rio Grande Nature Center, Albuquerque, New Mexico:** Visitors can stay warm and cozy and watch waterfowl and listen too. Inside the Center, speakers transmit natural sounds picked up by microphones near the pond. A feeder attracts wood ducks and other natives. (Note the concrete blind on the left side of the photo; the blind allows viewing from outside the center). Photo: Deborah Richie Oberbillig

### Nature Centers as Blinds

The **Rio Grande Nature Center** in Albuquerque illustrates that with planning, architects can design entire nature centers to serve as a blind. Built in 1982 by the State of New Mexico Parks and Recreation Department, the Center remains an innovative example of creating a structure that gives visitors a perception-changing view of nature. Elements of the Center blend with both the local landscape and the local culture. The following is a description of the Center:

*This nature center acts as an unobtrusive “blind”, affording visitors discrete panoramic views of the wildfowl areas. Built of rough formed concrete, this structure blends with the Bosque environment that surrounds it. An element of “river-bottom vernacular” – an eight-foot-diameter corrugated drainage culvert – forms and frames the tunnel entry into the Center. Upon entering, visitors become aware of the salient features of both the preserve and the building. Vertical, eight-foot-high, water-filled plastic tubes circle a sunken, ramped exhibit/view area. Light shimmers through these tubes from skylights to create an underwater effect. The ramp descends physically and symbolically to allow views*

*of the vast forage area, the range marshland, and a reverse-periscope underwater image of aquatic systems. It leads finally to an old-fashioned hand pump, which visitors can operate. At each stage along the ramp, interpretive displays augment the view; similarly, the exhibits complement interpretive trails which lace the refuge.*

**Project cost:** \$600,000.

**Source:** <http://artonfile.com/html/projectimages.lasso?id=687>

### Blinds that Contribute to Local Community Pride and Economies

As we discussed in the first chapter, although blinds are built primarily to meet the needs of wildlife and wildlife watchers, working with the community can result in additional benefits to the site, the community, and even the local economy. The opening of new facilities can provide a “news angle” for getting the press to visit and promote your site. Some viewing facilities can become nature tourism attractions, bringing additional revenue to the area – especially to small towns in rural locations. Involving the local residents, schools, youth groups or clubs can result in creative ideas that better communicate a sense of place *and* inspire a local sense of ownership.

#### **Eureka Springs, Arkansas:**

Enlisting community support is extremely worthwhile, according to J. Pat Valentik, who has recently completed a viewing blind for the local city park in Eureka Springs, Arkansas. Built in



**Lake Leatherwood City Park, Eureka Springs, Arkansas**

Photo: J. Pat Valentik

## CHAPTER 3: A LOOK AT BLINDS TODAY

2006 with donations from the arts festival budget and the local Audubon chapter, the blind at **Lake Leatherwood City Park** is a source of community pride. The facility has increased local interest in bird watching and is a focal point for school field trips. In addition, it has become a nature tourism draw that is bringing revenue to the town. Valentik, an accomplished carpenter, has created a blind that is well crafted. Viewers are rewarded with up-close sightings of songbirds and waterfowl, from cuckoos to wood ducks, in their natural habitat. Valentik maintains a BLOG site on the Internet where he posts local nature news, including a photo record of the blind's construction: <http://natureofeureka.blogspot.com/>

*Salineno, Texas:*

*“Our philosophy is the local community should have a vested interest in the area. If they do, they will keep an eye on it.”*

JACK CLINTON EITNIEAR, DIRECTOR,  
CENTER FOR THE STUDY OF TROPICAL BIRDS

Jack Clinton Eitniear is in the process of building a convertible viewing and photography blind on the 3-acre **Salineno Birding and Research Area**. Involving the small community of Salineno, Texas, on the border of Mexico is an important aspect of the project. Half of all donations from birders visiting the site will go to the community for outdoor education at the school. In addition, donated funds will be used to employ local youth in maintaining the site.

*Heron Pond in Globeville, Colorado*

Community involvement can be a benefit in the city too. One example is the viewing wall that serves as a blind at **Heron Pond**. The City of Denver offered a summer education and employment program called ArtStreet, in which urban youth spent several weeks learning about an area of the arts (visual or performing), and then creating something to give back to the community. One project, in the community of Globeville, involved young people learning about tile mosaic art. In addition, Colorado Division of Wildlife staff introduced the students to the ecology of an urban pond. Once participants had



**Heron Pond, Globeville, Colorado: Viewing wall** Photo: CDOW

explored the environment and the wildlife found there, they designed an artistic mosaic to interpret the area, and to decorate the viewing wall. Students and neighborhood residents worked side-by-side to construct the mosaic in a community work day.

**A special note:** Designers of this blind aimed to demonstrate new concepts in sustainability. Almost everything used to build the wall and construct the mosaic was recycled material. The large concrete blocks that formed the wall came from the run-ways at the former Denver airport.

### **Universal Design: Accessible Blinds and Towers**

When we design facilities that offer visitors new perspectives, it is important to remember how diverse our visitor audience can be. Providing blinds, trails, platforms and other facilities that meet the varied abilities of our visitors takes planning, and may require the help of additional specialists. A great resource for managers looking for ways to make sites universally accessible is *Everyone's Nature, Designing Interpretation to Include All*, written by Carol Hunter and published by the Colorado Division of Wildlife and Watchable Wildlife, Inc. In her book, Hunter makes the point that planning to accommodate a variety of needs usually results in a better experience for everyone.

## CHAPTER 3: A LOOK AT BLINDS TODAY

*“Universal design means taking into consideration the needs of as many people as possible, then incorporating those needs into nature trails, visitor centers, and interpretive displays. It is a satisfying process as well, for when we begin to look at people as family members and individuals, and not “persons with disabilities,” we suddenly recognize them as people we know and care about.”*

CAROL HUNTER

The Americans with Disabilities Act (ADA), signed into law in 1990, intended to make our society more accessible to people with disabilities (as well as to provide other protections). Today, you can see the benefits that universal design has accomplished for *all* visitors when you consider guidelines for trail development. Wider trails, pull-outs at regular intervals, guardrails and reasonable inclines have helped many people to have experiences they may otherwise have missed.

Carol Hunter’s book includes reminders that accessibility is about more than mobility, and provides information on how to evaluate your current facilities. Copies of the book are available through Watchable Wildlife, Inc. ([www.watchablewildlife.org](http://www.watchablewildlife.org).) For additional guidance: [www.access-board.gov](http://www.access-board.gov)

Consider listing your universally accessible sites on your website. For an example, see the Colorado Division of Wildlife site at <http://wildlife.state.co.us/Viewing/Where-toGo/AccessibleViewingSites/Accessible.htm>

*The following photos show some examples of universal access features in viewing blinds, decks and towers.*

**Lake Leatherwood City Park, Arkansas:**

Specially designed features for wheelchair viewing area (in construction 2006). A wood ramp provides access. Photo: J. Pat Valentik



**Quivira National Wildlife Refuge, Kansas:** ADA-accessible viewing tower Photos: Ken Brunson

Below: View from top of tower (Note slats for shade)



**Lolo National Forest, Montana:** Seeley Lake Viewing Blind features slots at varying heights. The Forest Service invited wheelchair users to help position the viewing slots that open up to a marsh, home to loons, moose and songbirds like the American redstart. At the entry to the boardwalk, an interpretive panel on marsh ecology also encourages viewers to lower voices and remain quiet for best observation. Photo: USFS

## CHAPTER 3: A LOOK AT BLINDS TODAY

Painted turtles bask on a log. Adding basking and perching logs enhances viewing and photography opportunities.  
Photo: Kristi DuBois



### Viewing Facilities that *Attract Wildlife*

Blinds and other viewing facilities are most recommended when wildlife viewing opportunities are consistent. But wildlife is not always so predictable. So, to promise viewing success, some site managers are enhancing the habitat by adding food, water or shelter to attract wildlife species.

Planting native plants and shrubs or agricultural crops may attract a variety of wildlife closer to your viewing blind. In arid environments, building a small pond may attract water birds as well as deer or small mammals that come for a drink. By providing shelter, or hiding cover for quick escape, you may invite species to come just a bit closer without increasing stress.

Placing bird feeders near a blind or nature center window can assure hours of delightful viewing for some visitors. Ideally, sites that are located further from the center or parking area should be as natural as possible. Restoring native vegetation to attract birds and butterflies may better reinforce interpretive messages about habitat needs. Professional photographers often avoid taking photos of birds on feeders and seek out natural settings.

#### ALEJANDRO'S GIFT

A wonderful children's story called *Alejandro's Gift* (by Richard Albert, illustrated by Sylvia Long), features a lonely man who lives in the desert and decides to dig a water hole by his home so the wild animals will come in close. His first watering hole is too close to his house without any screening and the animals do not come. He learns from his mistake and digs a second water hole further from his house and surrounded by the native desert bushes. Then the animals visited, and he knew of their presence "by the twitter of birds gathering in the dusk. By the rustling of mesquite in the quiet desert evening telling of the approach of a coyote, a badger, or maybe a desert fox."

A variety of structures can be added to your site to enhance habitat and viewing. For example, along the Front Range in Colorado, small reservoirs and ponds created from former gravel pits now provide wildlife habitat and viewing opportunities for urban neighborhoods. Placing a fallen tree or old log that reaches from shoreline into the water, can attract wildlife to safe, dry "perches" surrounded by water. Double-crested cormorants will stand on the log and spread their wings to dry, geese may climb on and take a nap, and turtles will lie on the branch to sun. Where few trees are found, the addition of a raptor perch or two – whether by a pond or a prairie dog town – can bring hawks and even eagles into view.



Deschutes National Forest, Cabin Lake Viewing Blinds, Oregon

Photo: USFS

#### *Water in a Dry Land*

Blinds that attract upland or desert animals often feature a source of water.

The Cabin Lake Viewing Blinds date to 1968, and have aged well as rustic shelters that are reminiscent of old sheepherder shacks of the high desert. Just in 2005, the Forest Service renovated the water guzzlers.

## CHAPTER 3: A LOOK AT BLINDS TODAY

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The blinds are featured on this website: <http://www.fs.fed.us/r6/centraloregon/wildlife/sites/05-cabinlake.shtml> with the following description:

*Two 8' x 12' covered shelters, approximately 300' apart on a north-south line, permit silent human observers to spy upon thirsty animals. Each blind has a small concrete basin that puddles water piped nearby water collection aprons and storage tanks. Veiled wall openings allow viewing and photography from a distance of 15-20 feet. A barbed-wire fence surrounds the lower site and a pole fence surrounds the upper site. Be sure to browse the registry for its decades-long, international record of human and wildlife visitors.*

*The presence of surface water at this bone-dry location attracts Lewis's woodpecker, white-headed woodpecker, gray flycatcher, loggerhead shrike, Clark's nutcracker, pinyon jay, common poorwill, green-tailed towhee, Brewer's sparrow, Cassin's finch, red crossbill, yellow-pine chipmunk, least chipmunk, and American badger. In evening darkness, you might glimpse mule deer, bushy-tailed woodrat, deer mouse, and more than one species of bat coming to drink.*

### **What is the Cost of all this benefit?**

In this chapter, and the previous two, we've offered an overview of the benefits of viewing blinds as well as a few cautionary notes. We've shown some innovative designs that meet diverse needs. And further in the document you will find details about a number of viewing sites.

We now ask a practical question. What will it cost to meet the needs of wildlife and wildlife watchers on your site? The answer is as varied as the examples we have shown. Viewing and photography blind costs can range from very little to very much.

What's the difference between a \$50 blind and a \$50,000 blind? The level of permanence and the size/scale of the facility are obvious factors. A simple blind of brush and natural screenings might cost very little, although it may last only a season and require annual rebuilding by volunteers. Using native, local materials and recycling existing structures can be cost effective.

In contrast, a highly engineered boardwalk through wetlands that culminates in an artistically designed viewing blind (built to meet universal design standards and to stand up to harsh weather) is certain to require a large investment of funds.

Partnerships and grants may be available to help with funding. For example, in an effort to promote the construction of photography blinds (and to support wildlife refuges) the North American Nature Photography Association (NANPA) offers matching funds up to \$1,500 for National Wildlife Refuges to build photography blinds – a great incentive for refuges to build blinds to fit the budget.

Last, but not at all least, many sites find that employing volunteers to help build and maintain facilities keeps costs down and provides a great connection to the local community.

The following sections introduce a few details on the costs of specific projects. The information is taken directly from the project surveys found in Chapter 7. This information does not include the cost of maintenance.

## CHAPTER 3: A LOOK AT BLINDS TODAY

### DISCUSSION: TO FEED OR NOT TO FEED?

Whether or not you might try attracting wildlife to your site by feeding will depend upon your agency mission, the species found at the site, and the needs or preferences of your visitors. In addition, consider that feeding sites (and watering holes) take maintenance. The following examples illustrate how the choice to feed or not to feed reflects agency missions and management objectives.

The management philosophy at **Santa Ana National Wildlife Refuge** on the Rio Grande River of Texas emphasizes maintaining a wild setting with native habitats. The site supports a spectacular array of birds and wildlife, from green jays to javelinas. Bird feeders are used only adjacent to the visitor center. Additionally, a limited amount of birdseed is dispersed at the photo blind. In comparison, nearby **Bensten Rio-Grande State Park** is managed to meet a different mandate, and staff attract wildlife by feeding liberally, allowing visitors to see animals up-close.

The **Nature Conservancy's Ramsey Canyon Preserve** in Arizona maintains hummingbird feeders at an observation area not far from the parking lot. The feeders give viewers the chance to see a variety of unusual bird species and in turn help managers direct visitor flow. By helping birders find the species they are seeking, the viewers are less likely to go off-trail and disturb habitat, and more likely to support and fund the preserve.

Although there are places that benefit from bird or wildlife feeding, most wildlife managers agree that the benefits should be weighed against some risks. Feeding wildlife - even when using natural foods - can change animal behaviors and harm the species we intend to highlight. Animals that congregate unnaturally close to one another increase the risk of spreading diseases, and such congregation may be harmful to the local habitat or environment. Enhancing food sources for one species may be a detriment to another. Feeding may alter the local species diversity and/or predator-prey relationships.

Feeding bears can be disastrous – for bears and for people. It's always a good lesson to review the story of bear viewing and management at **Yellowstone National Park**. By the late 1800s, bears – particularly black bears, but also grizzlies – had discovered that people brought food to the area. Bears frequented garbage piles and dumps, and black bears eventually “panhandled” for food along roadsides. Visitors gathered in bleachers to watch feeding bears. By the 1960s, families visiting the Park expected to see bears begging for food. Today bear management policies and philosophies in western states emphasize the importance of avoiding an association between people and food. “A fed bear is a dead bear,” rings true in several states; bears that learn that food and people



**McNeil River Brown Bear Sanctuary, Alaska:** Bears fish for salmon in Mikfik Creek. Viewers watch quietly from a designated area above the pools. The bears never associate people with food. The experience is positive for bears and people. Photo: Deborah Richie Oberbillig

go together often run into conflicts with people, and are “dispatched” or killed by managers.

Bear viewing opportunities, such as those in Alaska at **Anan Wildlife Observatory** and **McNeil River Brown Bear Sanctuary**, are possible only because managers have worked to habituate bears to the presence of people. Bears must perceive humans as a neutral presence – neither an attractant nor a threat. For the viewing areas to be sustained, people must never be permitted to allow bears to associate them with food.

## CHAPTER 3: A LOOK AT BLINDS TODAY

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### *Projects that cost less than \$5000*

#### **Klamath Lakes National Wildlife Refuges**

feature several photography blinds that are retrofitted outhouses, costing just \$47 apiece. The blinds are serviceable and fit serious photographer needs, but are short on aesthetics. Portable tent blinds can cost less than \$200, even with “tailoring.”

Metal viewing blinds at the **Arizona Riparian Institute** (capacity 3-4) cost about \$500 each, the same cost as the grouse viewing blind at **Benton Lake**. The **Santa Ana National Wildlife Refuge** photo blind cost approximately \$5000, and the **Rowe Sanctuary** blinds in Nebraska originally cost about \$2,500, but replacement cost would be much higher (estimated at \$10,000 or more).

The **Lake Leatherwood** viewing blind in Arizona cost just \$2,200 in materials, but all labor was donated, providing considerable savings. The resulting wooden blind with two decks and accessible ramp reflects the expert level of carpentry from volunteers.

### *Projects that cost more than \$5000*

Moderately priced blinds include the accessible wooden walkway and viewing blind at Montana’s **Seeley Lake Ranger District**; the facility cost about \$10,000 in the early 1990s (replacement costs would be higher). Colorado’s stone viewing blind at **Longs Canyon Wildlife Viewing Area** cost about \$7,500, and was built by youth crew members. **South Platte Park**, in Littleton, Colorado, constructed a spacious wood blind for \$14,000, with an additional \$3,000 for interpretive panels.

In Alaska, where weather and safety are important considerations when designing bear viewing facilities, the **Anan Bear Observatory** seasonal photo blind overlooking a popular bear fishing hole cost \$18,000. The **Pack Creek Tower** for bear viewing on Admiralty Island cost \$40,000 in 1990; costs would be higher today.

Some of the more innovative blinds featured in the descriptions from surveys took a substantial investment in funding. Colorado’s recycled grain bin for viewing in the prairie cost \$25,000 for moving and retrofitting. The concrete blind built into a prairie hillside at **Cathy Fromme Natural Prairie** (in Ft. Collins, Colorado) cost \$90,000.

Viewing decks that serve as blinds can become costly when designed to hold large groups, meet universal design standards, provide comfort features (benches, protection from weather etc.), and create an aesthetically pleasing tourist attraction. The viewing decks at **Balcones Canyonlands National Wildlife Refuge** cost \$35,000 (Shin Oak) and \$139,000 (Sunset Deck, new in 2006).

### Summary and Discussion

We have explored a variety of viewing blinds, and come to a few conclusions. Blinds and viewing facilities come in all shapes, sizes, and cost ranges. What you decide to do at your site must be based on the unique characteristics of your place – your habitat, the wildlife that live there, and the visitors you want to serve. While we have emphasized that one-size won't fit all, we do think that any site can design a safe and sustainable blind facility to meet the needs of their visitors without breaking the budget.

We've learned that viewing blinds that blend with the landscape and complement local culture provide additional attractions and opportunities. Blinds built to observe changing environments, like grouse leks, beaver ponds or heron rookeries, can be designed to move elsewhere when the viewing opportunities are no longer there. Blinds can be built underground or far above it. Getting the community involved in the design, construction and maintenance of facilities can result in benefits to all, and employing universal design standards will result in a better experience for everybody. And enhancing the habitat near the viewing blind may improve wildlife watching satisfaction.

Once you've finished looking at the ideas illustrated in this document, brainstorm with your team. The best viewing blinds may be yet to be designed.

### CHECKLIST

#### VIEWING BLIND IDEAS BASED ON FINDINGS

- Create something new and different to meet the unique needs of your site.
- Build something with an organic and interesting shape.
- Build a blind to blend with the natural landscape.
- Design a blind to complement local cultural features.
- Build a semi-permanent blind so you can adjust its position (e.g., for a grouse lek).
- Look at hunting blinds for more ideas.
- Build your blind into a hillside and give visitors a from-the-ground view.
- Use an observation tower to provide a new perspective and to see across a flat landscape.
- Build a convertible viewing and photography blind.
- Incorporate universal design.
- Invite community involvement.
- Use your new facility to promote your site: start a BLOG site to track the blind's progress, and hold an open-house and press event to commemorate a new blind.
- Enhance the site to attract wildlife.
- Increase visitor satisfaction and educational opportunity by adding interpretive panels at the approach and/or within the blind.
- Develop a realistic budget for your project, and don't forget to plan for maintenance.
- Seek grants, partnerships and volunteer help.
- Be creative – do something new and interesting! Let us know how it works out!

# CHAPTER 4: VIEWING BLIND FUNDAMENTALS

## VIEWING BLIND FUNDAMENTALS

*“Make it as simple as possible. But no simpler.”*

ALBERT EINSTEIN

### We know we want a viewing blind, what now?

We'll briefly review the questions that managers will want to answer before building a viewing blind. Then we'll dig a little deeper – exploring new topics before you start hammering boards together. The goal is to help you design a viewing facility that's right for your unique site. Chapter five will focus on successful steps to create a photography blind.

#### *A quick review of the first decisions:*

Before deciding to build a viewing blind, consider the wildlife and the habitats found on your site, the needs of your target visitor audience, and the other potential benefits that a blind may offer. You'll pinpoint whether to

build a viewing or photography blind, or both. Next, you'll want to decide which kind of viewing blind, or combination of blinds, is ideal for your location. This will require evaluating wildlife use and visitor needs, as well as the physical and social conditions at your site (i.e. weather and vulnerability to vandalism) and the size of your expected maintenance budget.

Make sure to involve a team of people to help you plan a positive viewing experience – one that is safe, satisfying and sustainable. Ensure that a team member knows about the local wildlife needs, behavior and sensitivity, and can guide the design to minimize disturbance. Someone on the team should understand the needs and preferences of your target visitor, and the principals of universal design. An artist or landscape architect lends design sense and skills for blending the blind with the nature and culture of the site.

### CHECKLIST

#### GOING A LITTLE DEEPER INTO PLANNING

Now that you are getting serious, a quick review and a few new thoughts:

**WILDLIFE NEEDS:** When considering the needs of wildlife at your site, ask yourself:

- Is research available to guide us in planning our site to minimize impact?
- Do we need to hide visitors completely, or just provide a safe place to view wildlife that has habituated to human presence?
- Can we build an approach that will get visitors to the blind without disturbing wildlife?
- Is wildlife use seasonal? (Could a mobile or portable blind be sufficient?)
- When can we schedule construction to minimize negative impacts?
- Even with a blind, do we need staffing to manage visitor use to best protect wildlife from disturbance?

**VISITOR NEEDS:** You'll want to consider not only your current visitors, but potential visitors. Ask yourself:

- Who are the visitors that come to the site now? Are they general nature enthusiasts? Beginning birders from the local area? Local school groups? Or serious and experienced birders from around the world?
- Are there other audiences you hope to attract? Are there visitor groups we don't have now that might come to see/use a new facility?

- Which visitors will be the *target* of your planning efforts? (Note: it's likely you can't design for "everyone" and okay to have a target group in mind).
- What other facilities exist nearby? How should the presence of that facility influence your planning and design?
- If you want a blind for general viewers, will you need a second observation blind to meet photographer needs?
- Will it help to enhance the habitat near the blind with plantings, water, or feeders?

**SUSTAINABILITY:** Wildlife viewing facilities should be safe, satisfying and sustainable. What does that mean at your site? Ask yourself:

- Is the viewing experience likely to be reliable for the future or is the habitat changing? (The answer may help you choose between a permanent or temporary structure.)
- Can you design a structure or manage visitors to lessen future maintenance needs?
- What environmentally responsible choices can we make to design and construct a "green" blind? For example, can you:
  - use recycled materials
  - use "certified" products
  - use locally produced materials and/or
  - minimize waste?
- Can we design a blind made of native materials to blend with the landscape or complement local cultural features?

## CHAPTER 4: VIEWING BLIND FUNDAMENTALS

### What's the next step?

As you approach the drawing table, consider the following topics.

- Placement
- Design
- Approach (trail and entry to the blind)
- People Management
- Planning for a sustainable facility

#### *Placement: Selecting the Ideal Viewing Location*

Plan for wildlife and visitors alike when placing the blind. Consult your biologist team member about the sensitivity of species you want to view. Find out whether your site will need a blind that fully conceals people and will require managed use (like the sandhill crane viewing blinds on the Platte River in Nebraska), or if the species can habituate to people's activities.

For additional help to determine how far from the wildlife to place the viewing blind, consult the book *Wildlife and Recreationists, Coexistence Through Management and Research*, edited by Knight and Gutzwiller, 1995. For more information on recreation impacts we recommend the *Recreation in Wildlife Habitat Report and Bibliography* published by The Wildlife Society Montana Chapter; (see [www.montanatws.org](http://www.montanatws.org)). Beginning in the summer of 2007, the Colorado Division of Wildlife will post a supplemental bibliography highlighting research regarding trail use and viewing impacts on birds; (see [wildlife.state.co.us/viewing](http://wildlife.state.co.us/viewing)).

To ensure a positive experience for visitors, choose a **quiet location**. Situate the blind so that road noise and parking-lot activity can't be heard, and visitors can listen to the natural sounds. When looking out from the selected site, be aware of what other elements are in the view – look at the whole scene. You want visitors to



**Balcones National Wildlife Refuge, Texas:** Managers selected this bluff for a golden-cheeked warbler viewing deck because it featured a small gap in the canopy and allowed visitors to look out over the forest and Lake Travis. Photo: USFWS

relax and enjoy the scenery and to take home snapshots that complement your site.

Evaluate placement for the **best lighting**; light needs to shine on the subject, not on the visitor. While both morning and evening light are excellent for viewing, birdwatchers tend to come in the morning for best viewing. To identify birds in morning light well, often the best orientation is west-facing. Remember that when light is coming from behind the viewer, you must design a way to break-up or eliminate silhouettes.

Choose your site and your **approach** to the blind together. Make use of natural screening as much as possible to keep visitors hidden from wildlife as they walk up to the blind. You might erect a temporary blind and test the location. Invite your target audience to check it out and give you feedback on their experience.



**Eastlake Park, Thornton, Colorado:** This is an example of a site that didn't work. The viewing wall blind is too far from the water. A walking/biking trail lies between the blind and the lake. The only users today are children playing on the wall. Photo: CDOW

## CHAPTER 4: VIEWING BLIND FUNDAMENTALS

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### *Design: Fitting Form to Function*

Once you've seen some of the creative ideas out there, it's tempting to dive in to planning a unique design. But be sure that your design has a form that fits the function. Here are a few of the most important functional considerations.

Hiding (or screening) people so that they can watch without disturbing wildlife is the whole point of a blind, so screening is perhaps the most important consideration. *How much screening do you need?* You want wildlife to feed, flock, rest, or nest nearby without disruption.

In some cases, a partially screened blind or deck may be all that's needed. In others you may want to completely conceal visitors and allow them to peer through viewing slits. Be sure that viewing portals are placed at various levels, and are big enough for binoculars and camera lenses. Remember the Bluff Lake blind with one large portal cut in a flying bird design? Viewing slots that cross the viewing plane diagonally allow viewers of all shapes and sizes a chance to see. At least one portal should accommodate a viewing scope.

You can plan additional elements to help you minimize wildlife disturbance. Consider "soundproofing" the blind by placing carpet or other soft materials on the floor and/or walls. Make sure that if there are doors or window covers they can be opened or shut without making a lot of noise. In Colorado, the Division of Wildlife has found that prairie chickens don't respond to people in a viewing trailer unless they make noise or reach out beyond the dark interior. You might want to design a structure that makes it difficult for users to reach beyond the plane of the blind's front surface.

*Size* of the blind will be determined by whether you want to accommodate small groups or large. How many people do you want to have in the blind at once? Use elements of universal design to make your site accessible to as many ability levels as possible.

"Creature comforts," or elements designed to make visitors more comfortable, are sure to enhance the viewing experience. What *comfort* can you build in to your blind? Include as many universal design elements as you can. Add a shelf so visitors with binoculars can rest their arms. Add a few benches so that people can stay awhile. Benches situated where those seated can see out the blind are optimal (don't forget backrests). A bench farther from the front may allow one family member to rest while another looks out a portal. (Conversely, if you need to keep moving visitors through the area, consider keeping the blind a bit sparse). Plan to protect visitors from uncomfortable weather where possible, but allow for air flow and the opportunity to enjoy the outdoors in good weather.

Now that you've selected the site, orientation, and the functional elements of the blind (screening, portals, comforts, size) you can get creative. What can you design that will blend function with the form of the natural environment or complement local culture? How will you make the blind irresistible to the new visitors you want to attract? Will you do something daring?

As you are brainstorming, don't forget to consider how the approach to the blind will integrate with your design, and what kind of interpretive media you want to include. The next two short sections look further into these questions.

## CHAPTER 4: VIEWING BLIND FUNDAMENTALS



**Bosque del Apache National Wildlife Refuge, New Mexico:** This blind includes arm rests for viewers. These arm rests are comfortable, but they prevent leaning in close with binoculars or a long lens. That may be intentional, so visitors don't break the plane of the front surface. Consider both the pros and cons of features when you are still in the design stage. The arm rests shown here cover the porthole when not in use and are secured with latches; while the arm rests are welcome, the covers and latches present maintenance and noise challenges.

Photo: Deborah Richie Oberbillig



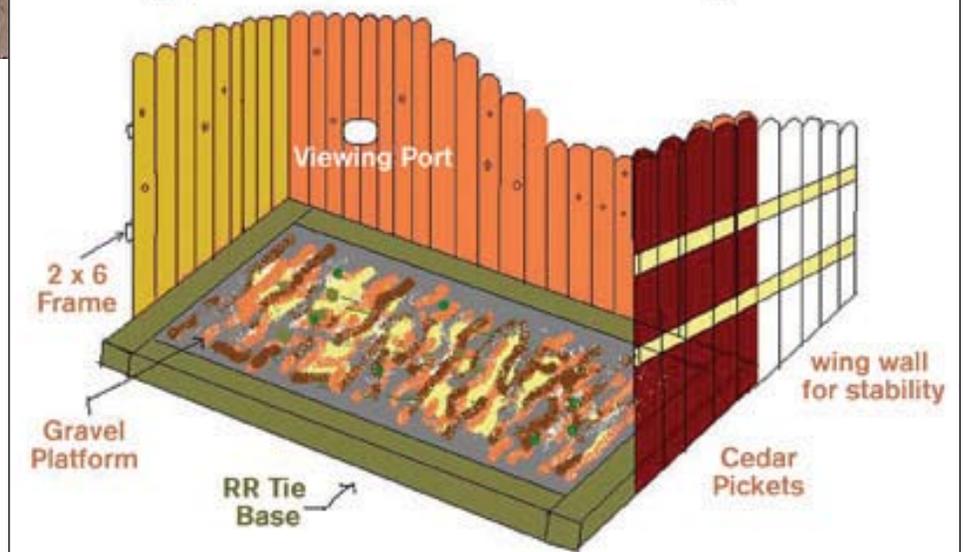
**Limon Wetlands, Colorado:**  
The Colorado Division of Wildlife designed a simple blind made of fence pickets.  
CDOW photo and design

### CHECKLIST

#### DESIGN

- How big does it need to be?
- What elements of universal design are essential?
- How much screening do you need?
- How else can you minimize wildlife disturbance?
- What creature comforts will enhance the experience?
  - Should there be seating with backrests? By the portals?
  - Will you need arm rests?
- How will people of different sizes each be able to see out? How many viewing portholes are needed at what heights?
- Is there room for a tripod? Two?
- Is there adequate ventilation and natural light, but not too much?
- How can the blind blend with the landscape or complement local culture?
- How will the approach be integrated into the design? (see next section)
- Should you plan for interpretive media now? (see next section)

### Dog-eared Picket Viewing Blind



## CHAPTER 4: VIEWING BLIND FUNDAMENTALS



**Rowe Sanctuary, Platte River, Nebraska:** The simple fence effectively screens groups of people as they approach and leave the sandhill crane viewing blind. Cranes are very sensitive to disturbance.  
Photo: National Audubon Society, Rowe Sanctuary

### *Approach: Planning how visitors get to the blind*

Walk the approach to the blind, and decide how to make it appealing to visitors but protective of wildlife. If wildlife will flush from the site (or run away) when they perceive visitors moving toward the blind, you must plan for some kind of screening for the approach trail. We've seen more than one great blind that is almost useless because visitors flush birds on the way to the blind.

Obviously, planning for the approach is not as important if your site is managed so that viewers arrive to a site before the wildlife, such as arriving in pre-dawn to a grouse or sandhill crane viewing blind. It also isn't crucial if wildlife at your site is habituated and you are using the blind facility primarily to manage visitors. If you do need a good approach, you want to design it to integrate well with the blind.

If the blind is relatively near a busy trail, be sure to plan an approach that is separate from the main trail. Screen the trail with natural features from the area, planting additional native species or adding fences or brush piles if necessary. Cultural features work too; you might use a strategically placed straw-stack or wall. At one wetland site in Colorado, managers lined the approach trail with vertical poles of different sizes; the hope was that the waterfowl would acclimate to the sight of vertical shapes. (This is an experiment in design – we don't really know yet if it works.)

Remember to “screen” sounds too. Avoid surfacing trails with “noisy” materials like crunchy gravel. We've found that boardwalks made of the newer recycled plastic and wood blends can be much quieter than wood and require less maintenance.

### **CHECKLIST**

#### **APPROACH**

**Be sure that the approach to the blind integrates with the blind design; ask yourself:**

- Do you need to design an approach to protect wildlife from disturbance (and ensure that they don't flush before visitors arrive)?
- What elements of universal design are essential?
- Do you need screening? If so, how much?
- How will you “screen” sounds?

## CHAPTER 4: VIEWING BLIND FUNDAMENTALS

### Interpretation to inform and inspire appreciation

*“We can be ethical only in relation to something we can see, feel, understand, love and otherwise have faith in.”*

ALDO LEOPOLD:

Many site managers find that interpretive media (sign panels, brochures, audio) can help visitors appreciate wildlife, conservation and lead to responsible viewing. Blinds are excellent places to include interpretive media; visitors lingering there are often searching for information.

Will you use interpretive staff or plan for interpretive media or both? Blinds that are designed to accommodate an interpretive guide offer excellent opportunities for learning and teaching viewing skills. Helping a new birder to spot a nest or interpreting behavior from the cover of a blind can be a memorable experience for the interpreter as well. If your site may handle staff or volunteer guides, plan space for them and a few “tools of the trade” they may bring to the site.



**South Platte Park, Littleton, Colorado:** Interpretive panels inside a viewing blind focus on the wetland food web. Photo: Skot Latona

You can offer meaningful interpretation without a guide

using interpretive media such as sign panels, three-dimensional models, or audio recording. Aim to create media that can be experienced with multiple senses where possible.

The messages you choose for your interpretive media will be tailored to your site. Panels inside a blind may point out features of the site, and recommend how to find wildlife. Commonly seen birds and other wildlife species may be noted along with practical field identification tips.



Blue-winged teal  
Photo: USFWS



### Rio Grande Nature Center, Nature Journal

**Tiles:** A series of ceramic tiles shaped to look like pages of a nature journal are placed next to the portals of a concrete blind overlooking a pond. The writing and drawings interpret the site and may subtly persuade visitors to take close note and perhaps start their own journals. Photo: Deborah Richie Oberbillig

Many sites also include general wildlife watching tips near the approach to the blind. Interpretive messages at these locations emphasize safe, successful and responsible viewing. These common tips include: move slowly and quietly, bring binoculars, best time of day for viewing, and don't feed wildlife.

Decide whether you want to offer interpretation at your site *before* you complete your design. Include an interpretive planner or your site guides on your team. Not only will you be better able to include traditional interpretive media, but you may inspire yourself or your team to think of a way for *form to match the function*. Consider how the very design of your blind may help communicate something about the site, and inspire appreciation for the area.

#### CHECKLIST

##### PLANNING A BLIND TO INCLUDE INTERPRETATION

Invite an interpretive specialist to help you plan, and ask yourself:

- Should you include interpretive media?
- What should it look like?
- Will you use staff for “personal” interpretation?
- Will you use interpretive media for non-personal interpretation?
- Can you incorporate media for multiple senses? (e.g. audio or touch).
- What messages will you communicate?
- Can you *design* the facility to help communicate a message?

## CHAPTER 4: VIEWING BLIND FUNDAMENTALS

### Planning for Managing Visitor Use

As you design your facility, plan to manage visitor use. What is the natural flow of visitors *now* and how might they use the new facility? Will the blind and the approach be sufficient for managing the viewing experience? Or will you need additional strategies for controlling use of the facility?

If the facility is sufficient for protecting wildlife, and providing a positive experience, then planning for visitor management can be minimal. Simply design the blind to invite people into the space and to place the blind where people can find it. “Way-finding” signage may be the only visitor management you need to plan.

But in some places additional control may be needed. Casual walk-in visitation may not protect wildlife sufficiently. If this is the case at your site, plan how you will guide visitors to responsible viewing. Many places limit visitation by reservation only; some also require a guide to go with viewers.

Visitation to the sandhill crane viewing blinds on the Platte River in Nebraska is closely managed: participation is limited, reservations are required, and a guide takes you to the site. Because the prairie chicken viewing in Wray, Colorado takes place on private property, participants are bused to the site. This arrangement allows the Colorado Division of Wildlife to carefully manage when and how many people come to the site. Guided trips that include interpretation can enhance the experience for visitors, and a chance to ask the staff questions helps viewers to personalize their learning experience. School groups almost always require or benefit from an informed guide or interpreter.

To meet the diversity of wildlife watching preferences, you may want to offer alternatives. For example, while the main deck at the **Anan Wildlife Observatory** in Alaska was designed for a (relatively) large visitor capacity, bear viewers can sign up to use the smaller photo blind located below the deck. In Nebraska, crane viewers without reservations for the blinds can still watch migrating cranes from viewing decks placed along country roads.

If no reservations or guides are needed, planners should still strategize on best ways to manage use. You may want to increase patrol of the area to ensure public safety and compliance with site rules, or gate the site when staff is not on-hand. At some sites that lacked sufficient resources for oversight, viewing facilities became targets for vandalism or “hang-outs” for inappropriate use.

The double-deck blind at **Matheson Wetlands Preserve** in Moab, Utah became less popular with viewers once drought changed the wildlife viewing opportunity and the blind unfortunately became popular with local youth for parties. **Balcones Canyonlands National Wildlife Refuge** has had vandalism at the Shin Oak observation deck (for viewing the black-capped vireo, an endangered species), which is close to a popular road and far from refuge headquarters. The refuge plans to install a gate to the parking area to protect the blind at night.

Some sites have found that a positive way to prevent vandalism is to enlist partners and volunteers to be part of a project from start to finish. Community pride and ownership may lead to better stewardship of any recreation facility.

#### CHECKLIST

##### PLANNING FOR VISITOR MANAGEMENT

Invite an interpretive specialist to help you plan, and ask yourself:

- How will we manage visitor use?
- Do we need to plan way-finding/directional signage?
- Should we manage use through a reservation system?
- Should we provide more than one alternative experience?
- What site management or patrol do we need to do to ensure that the blind is a safe place to visit? How can we plan to minimize vandalism and use of the site for inappropriate activities?
- Are there opportunities for community involvement that may benefit the site?

## CHAPTER 4: VIEWING BLIND FUNDAMENTALS

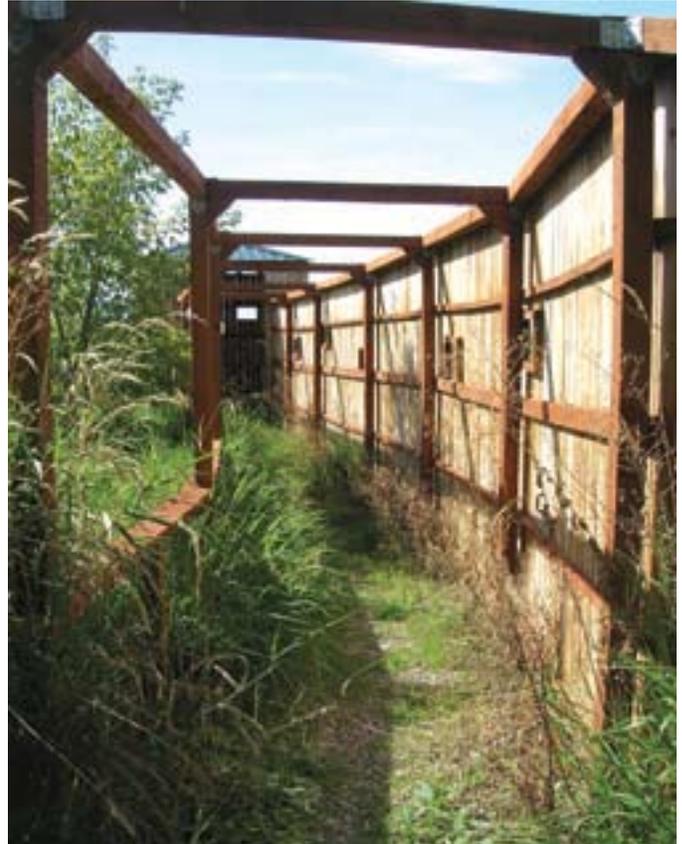
### Maintenance

Build it and they will come! But – don't forget to plan for maintenance. When designing and constructing your blind, consider using materials that require the least maintenance. Managers generally agree that caring for your site is the best insurance against vandalism and destruction. Make sure upkeep of your new facility is added to the maintenance plan for the site, and included in the budget. Enlist volunteer groups to adopt blinds.

#### CHECKLIST

##### PLANNING MAINTENANCE

- Manage the vegetation around the blind so it doesn't obscure the view. We've seen several wetland viewing sites that looked amazing when they opened, but were soon overtaken by cattails.
- Maintain the approach to the blind, especially on universally accessible trails where you want to minimize lumps and bumps. Walkways and approaches can get weedy, brushy or washed out.
- If you have wooden decks or blinds, finish construction to minimize the re-emergence of nails or screws that can trip or cut someone. Also, consider using a plastic/wood composite material (e.g., TREX). This product lasts longer and doesn't seem to splinter as much, requiring less upkeep of handrails and benches.
- Keep signage in place (and clean) to help your site make a good impression. Be sure to ask sign panel fabricators for up-to-date information on how to clean their products. Spray paint and other materials can be cleaned from most sign materials with the right cleansing agent.



**Ninepipes National Wildlife Refuge, Montana:** The approach to this viewing blind, built in spring 2006, became overgrown and difficult to find by late summer of the same year. There's no sign that lets visitors know of the blind's location. The actual blind is beautiful, but requires upkeep.  
Photo: Deborah Richie Oberbillig

## CHAPTER 5: PHOTOGRAPHY BLINDS



**Santa Ana National Wildlife Refuge, Texas:** Left: This accessible bird photography blind, built in 2003, holds 1-3 photographers or up to 8 birdwatchers. Green jays, Altamira orioles, chachalacas and other birds of high interest come within 6-10 feet of the blind. Refuge staff spread bird seed once a day to attract birds.  
Photos: USFWS



Right: View from inside the Santa Ana photography blind.

### PHOTOGRAPHY BLINDS

*“Good design must also meet other standards imposed by the way the physical world works. It must result in systems that are flexible and resilient in the face of changing circumstances.”*

DAVID ORR

The dynamic nature of nature often leads serious wildlife photographers to design or purchase their own portable blinds so they can take their blinds to the best locations. In addition, owning their own portable blind ensures them solitary, uninterrupted outdoor photography experiences. However, some wildlife refuges or parks that are especially attractive to professional photographers may choose to offer permanent or semi-permanent blinds. To be effective, permanent photography blinds require more stringent design criteria than viewing blinds.

The North American Nature Photography Association (NANPA) is engaged in a partnership with the U.S. Fish and Wildlife Service to build photography blinds on refuges, offering a basic design and funding. NANPA reimburses the Refuge up to \$1500, so most sites strive to build blinds within that budget. For details on this program and the most current list of blinds, please see the Appendix.

Steve Sherman, of Dillon, Montana, has 30 years of wildlife photography experience in connection with his work with the Bureau of Land Management, and then as a professional since 1996. He has taught classes at Grand Teton National Park and at Yellowstone National Park, and has a deep understanding of animal behavior as well as

photography. He has a key piece of advice for photographers and managers alike:

*“Every photographer should keep the welfare of the species the uppermost concern. If your presence is bothering the species, the animal will exhibit that stress in the photo as well. That’s not good photography.”*

STEVE SHERMAN

Sherman uses his own portable and semi-portable blinds. He stresses the importance of understanding the behavior and habitat needs of the wildlife to know best where to place the blinds for the best, most ethical shot.

Managers planning to design and construct a permanent wildlife photography blind on their site should consider the following list of tips for ethical photography blinds, based on advice from both Sherman and Gary Kramer, a former refuge manager for California’s Sacramento NWR and now full-time professional photographer (see his website at [www.garykramer.net](http://www.garykramer.net)).



**Klamath Basin National Wildlife Refuge, California:** This retrofitted portable toilet is one of 8 photography blinds that meet the high level of demand. The refuges host the largest concentration of bald eagles in the lower 48 states and enormous numbers of waterfowl. All blinds are oriented for morning light.  
Photo: USFWS

## CHAPTER 5: PHOTOGRAPHY BLINDS

### CHECKLIST

#### PLANNING A PHOTOGRAPHY BLIND

##### PICKING THE BEST LOCATION:

- Blinds must be designed and placed so that photographers can go in and out without disturbing wildlife.
- Blinds need to be placed to frame the picture photographers have come for. Scenic foregrounds and backgrounds are important. Avoid cluttered backgrounds and eyesores like power lines.

##### ORIENTING FOR THE RIGHT LIGHT:

- Orient the blind to take advantage of the best light.
- Often a photographer wants early morning or early evening light on the subject. Photographers call the ½ hour before sunrise or sunset to the ½ hour after – the “golden hour.”
- To keep light *on* the subject, a northern orientation is best. For the best early morning pictures, orient the blind to the northwest; for blinds featuring sunset light, face them toward the northeast.
- Consider multiple portals that can be opened and closed depending on the time of day (location of light source).
- Ideally, provide blinds for sunrise and sunset photography; this may require multiple portals.
- If the site hosts a highly desired wildlife species only at a particular time of day, be sure to orient the blind so the featured species can be seen.

##### DESIGNING THE APPROACH:

- Make the approach as *invisible* as possible; take advantage of topography and vegetation. (This is different from the public viewing blind which requires a fairly obvious and inviting approach).
- Establish rules for approaching and leaving the blind to minimize disturbance to wildlife. For example, you may require people to arrive 30 minutes before sunrise or permit only one entry and exit per day.
- Learn from your visitors' requests, and help them where possible. For example, some photographers will ask to bring a companion to the blind, and then have them leave the site. Why? They've found that hawks and eagles are pretty smart; they notice people entering a blind and will wait for someone to leave before returning to natural behaviors. Photographers can “trick” the birds by bringing a friend as a decoy; when the friend departs, the raptors may think the blind is empty.

##### HABITAT ENHANCEMENT:

- Most wildlife photographers prefer to photograph natural settings. Natural habitat enhancement may be a welcome, but bird feeders and other artificial elements are not needed.



#### Montezuma National Wildlife Refuge, New York

The interior of this photography blind features heavy fabric flaps over openings. The outside is painted with cattails to blend in with the wetlands. Photo: USFWS

- Do consider manipulating the natural environment to attract wildlife *in a natural way*. For example, providing structure at the edge of a pond, an island in a wetland, or a rock or log in a stream can invite wildlife to rest, sun or preen. A fallen tree may be the perfect structure if left lying where it fell. In wetlands the structure may entice waterfowl to preen or turtles to come out of the water and sun. A rock or log in a stream may offer a resting place for a dipper.

##### MAINTENANCE:

- Keep the vegetation trimmed in front of the blind to assure a clear view of wildlife through the portholes.

##### DESIGN AND COST:

- Make sure the blind is enclosed on all sides, so animals cannot see movement within the blind.
- Add carpeting to the floor to keep noises down.
- Make the blind comfortable for photographers, who often spend several hours waiting for the best shot. Consider providing a swivel chair with a backrest that's adjustable in height; be sure it isn't squeaky.
- Create openings big enough for a telephoto lens (8 to 9 inches in diameter) with room to tilt up and down.
- Camouflage the blind so it blends well into the environment.
- At many sites, where the best photography opportunities vary from year to year, a photography blind should not be designed for permanence, but for effectiveness. Consider portable or semi-permanent blinds.
- Costs will vary, but managers may not have to invest as heavily in photography blinds as in permanent viewing blinds. Photographers are more interested in the effectiveness and usefulness of the blind, and less in the creative features.

## CHAPTER 5: PHOTOGRAPHY BLINDS

### FIELD VISIT TO A PHOTOGRAPHY BLIND:

#### LEE METCALF NATIONAL WILDLIFE REFUGE, MONTANA

Photos: Deborah Richie Oberbillig

For an up-close look at what makes a photo-blind effective, we accompanied Steve Sherman to the new photography blind at Lee Metcalf National Wildlife Refuge (NWR) in Montana's Bitterroot Valley. Sherman had worked closely with the managers here to adapt the NANPA blind design for this site.

Lee Metcalf NWR consists of a series of ponds and wetlands along the Bitterroot River below the stunning Selway-Bitterroot Wilderness. The blind offers one or two photographers the chance to photograph waterfowl, shorebirds, herons, eagles and osprey – all in the beautiful sunrise light, with a mountain backdrop.



Sherman is satisfied with the blind overall, but has suggestions for improvements. The blind's location close to a popular new walking and observation trail poses challenges. Currently, natural vegetation almost hides the blind (for the ¼-mile area around it), but gaps allow waterfowl to see people walking by. The proximity to the main trail makes the blind more vulnerable to vandalism; already someone has carved initials in a tree by the blind. On the positive side, the waterfowl may habituate to the consistent presence of trail walkers. We passed within six feet of tree swallows nesting in boxes. The birds did not change their behavior.



The blind blends well with cattails facing the wetlands and is backed by a grove of cottonwoods and willows. Sherman



points out that the cattails are great natural screens, but they require regular management to prevent new growth from blocking the camera lens portals. Optimally, the vegetation would grow just up to the portals.

We walk the narrow trail (not wheelchair accessible) to the blind, set in the shade of trees and facing a secluded pond that serves as a nursery for families of ducks. Sherman chose the location with refuge staff because of the shelter and plentiful aquatic vegetation. He suggests adding natural perching and preening stations for waterfowl, placed approximately 30-50 feet from the blind. Fallen trees work well and fit with the setting.

We pick our way through the soggy wetland entry to the low-slung blind (5' 7" at its peak) with the sturdy corrugated metal roof. Sherman unlocks the wooden door – the refuge headquarters holds the key and gives it only to photographers who register to use the blind.

Inside, the fragrance of cedar fills the space. The scent comes from two benches; the cedar is a long-lasting wood, and transforms the atmosphere of what might otherwise feel like a cramped space. The benches could use a backrest, he notes. He brings a stadium chair to provide back support and cushioning whenever he goes to a blind.

Sherman demonstrates how the viewing slats slide so photographers can adjust the openings. Sherman appreciates the sliding slats, but would like to see them changed to be removable, giving photographers more flexibility.

A brood of goldeneyes swim by. We watch, and even in the heat of midday, it's tempting to linger and see what other birds might come if we stayed longer. A welcome breeze wafts through the blind openings. The goldeneye chicks scoot along in a flotilla behind their gliding mother and disappear from view. Common yellowthroat warblers sing witchety-witchety from the cottonwoods.

## CHAPTER 6: CASE STUDIES

### CASE STUDIES

In the following chapter, we take a more detailed look at four viewing blinds and one photography blind. The first two case studies appeared in *Providing Positive Wildlife Viewing Experiences* (2002).

#### **TEXAS: ENDANGERED SONGBIRD OBSERVATION DECK**

**KEY FEATURES:** VIEWING AN ENDANGERED SPECIES UP-CLOSE WITHOUT DISTURBANCE; AESTHETICALLY PLEASING AND ARTFUL DESIGN; INTEGRATION OF PARKING, BOARDWALK, AND INTERPRETIVE PANELS.

The federally endangered black-capped vireo sings from the shin oaks on three sides of the attractive, covered viewing deck at Balcones National Wildlife Refuge near Austin, Texas. Yellow-breasted chats, painted buntings and other breathtaking songbirds add to the spring show.



Photo: USFWS

The gazebo-style deck is elevated to give viewers a better vantage point to look out across the shrubby upland prairie vegetation. Waist-high vertical railings made of juniper branches, (juniper is a local native plant), allow for refreshing airflow

on typically warm days in Texas, and partially break-up the silhouettes of viewers. The boardwalk snakes up to the deck, which is not only pleasing to the eye, but prompts visitors to slow down.

To minimize disturbance to birds, the viewing deck doesn't open until late April, after the birds have established their nesting territories. Vireos have nested

within just of few yards of the deck. In fact, Chuck Sexton, wildlife biologist at Balcones National Wildlife Refuge, reports that in June 2004, a black-capped vireo pair built a nest within three feet of the deck. However, this particular nest failed from natural causes.

Birders are generally respectful of the needs of the vireo, a bird once common from Mexico to Kansas but now reduced to small populations in Texas and Oklahoma. Development, agriculture, fire suppression, and nest parasitism by the brown-headed cowbird have each contributed to a reduction in the population. Balcones National Wildlife Refuge is an important stronghold for the endangered vireo.



Photo: USFWS

Sexton says that only very occasionally have birders left the deck to wander into the trees where their activities would disturb nesting vireos. A kiosk at the trailhead interprets the natural history of the vireo and encourages ethical wildlife viewing.

Refuge managers built the gazebo deck in 1999 in a small opening within the low shrublands, making sure all construction was completed outside of the vireo's breeding season. Since then, the shrublands around the deck gradually have grown taller. To maintain visibility within a 50-yard radius of the deck, managers have removed several juniper shrubs and hackberry saplings that were overtopping the shin oak. The shin oak is due for a "haircut," as well later in 2006, reports Sexton.

## CHAPTER 6: CASE STUDIES

Another challenge for the site is protecting the structure from vandalism. The location of the deck, off a public road and far from the refuge headquarters, adds to its vulnerability. Vandals have kicked over a railing, spray-painted graffiti, stolen a plaque acknowledging the deck's architect (Bob Anderson), and taken the visitor sign-in book. The main problem is the lack of staffing resources to allow the refuge to close the gates each night and re-open them the next day – a challenge the refuge hopes to solve.

In spite of vandalism from non-birders, the deck is very popular locally, regionally and internationally, attracting birders for breathtakingly close views of the black-capped vireo.

The success of the shin oak deck for viewing an endangered songbird led managers to build a second deck featuring another endangered songbird found on the refuge, the golden-cheeked warbler. The fully accessible Sunset Deck is located at the southern end of the refuge where it is tucked into a small gap in the forest at the edge of a bluff. The refuge held a dedication ceremony in 2005 with the former owners of the Sunset Ranch, which is now part of the refuge.

### CONTACT:

Rob Iski or Chuck Sexton  
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24518 FM 1431, Box 1  
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### NEBRASKA:

#### **PLATTE RIVER SANDHILL CRANE VIEWING BLINDS**

**KEY FEATURES: RELATIVELY "UP-CLOSE" VIEWING OF THOUSANDS OF CRANES WITHOUT CAUSING DISTURBANCE; REGULATED VIEWING; ACCOMMODATING LARGE NUMBERS OF VIEWERS AND PHOTOGRAPHERS.**

The penetrating bugling of sandhill cranes drift across Nebraska's Platte River as the sun sets over the prairie. Thirty-five people in a viewing blind on Audubon's Rowe Sanctuary witness the unforgettable spectacle of thousands of roosting cranes close up.

Photo: Dave Menke, USFWS



Ninety percent of the world's population of sandhill cranes – almost half a million cranes – will rest here, along the Big Bend Region of the Platte River, during their spring migration. Now and then a whooping crane settles in with the flocks. The cranes feed in the local fields during the day, and roost on sandbars in the river at night. The sandbars, and the flowing water separating them from shore, provide protection from predators.

Thousands of people come too. Peak crane viewing is mid- to late-March; cranes are migrating from mid-February to mid-April. Thanks to a series of well-managed viewing blinds, the visitors are rewarded with outstanding viewing opportunities without disturbance to the birds.

The Audubon Rowe Sanctuary features four public blinds, as well as special blinds for serious photographers. The **Crane Meadows Nature Center** offers tours to a 25-person bunker-blind to watch cranes and learn about them from the guide.

While the blinds work extremely well, as this case study illustrates, the increasing numbers of crane watchers that gather each year has made it important for the region to add alternate viewing areas. The Central Platte Natural Resources District solved a traffic safety problem of viewers clogging bridges across the Platte by building a series of free crane-viewing decks. A hike/bike bridge at **Fort Kearny State Recreation Area** offers yet another alternative for crane watching.

## CHAPTER 6: CASE STUDIES

### LILLIAN ANNETTE ROWE SANCTUARY, NATIONAL AUDUBON SOCIETY VIEWING BLINDS

*“One crane calls, then another. As the dawn sifts through the river, the calls pick up. Dark black shapes slowly light up into birds standing quietly in the shallow water. Suddenly there is an explosion. A bald eagle flying up the river causes thousands to erupt up and out over us, every crane calling out.”*

SCOTT REED, 1995 OBSERVATION BLIND VISITOR,  
ROWE SANCTUARY (FROM A ROWE SANCTUARY BROCHURE)

At Rowe Sanctuary, the staff works hard not to disturb the cranes on the four-mile stretch of river that shelters some of the largest roosts. The Sanctuary limits public access. People can watch the cranes only through the blinds. The staff hosted more than 3,000 people to the four viewing blinds in March alone (2006). The enclosed, wooden blinds hold up to 36 people. Observers are usually elated, and rarely disappointed. Thousands of

Photo: Rowe Sanctuary



cranes may fly or settle as close as 30 yards away. In addition, four photo blinds, limited to two people per blind, are available for an unforgettable overnight experience.

Guided trips to the river are led in the early morning and evening. A staff member accompanies each group, a guarantee that every person will follow the rules. Visitors make reservations three months in advance and pay \$20 plus tax per person.

In the morning, groups enter the blinds before dawn so their approach will be as invisible as possible to the cranes. The guides prepare the visitors in advance, sometimes suggesting that the quiet approach is a game that you win only if the birds never know you're there.

Portholes in the large blinds open, allowing visitors to hear the cranes, even in the dark. The visitors remain in the blind two hours, watching and listening as guides quietly interpret crane natural history and conservation. They wait to leave until the cranes have departed from their roost sites, sometimes flying right overhead. In the evening, viewers enter the blind in daylight (before the cranes arrive at their roost) and leave, quietly, after dark.

*“It's an unforgettable experience to be surrounded by the primeval calls of cranes filling the sunrise or sunset over the Platte River.”*

KEANNA LEONARD, EDUCATION DIRECTOR

The four photo blinds are so close to the crane roosts that photographers must arrive before the cranes and leave after them – requiring them to spend the entire night in their midst. The 5-foot-long, 8-foot-wide and 5-foot-high blind includes a porta-potty. Photographers bring sleeping bags and food. The goal, of course, is for the photographers to get great shots without disturbing the cranes. In such an important area and with such a sensitive species, one hundred percent compliance is expected. An overnight stay in one of the popular photo blinds costs \$150 plus tax.

While the blinds work well, Leonard cites some problems with trespassers who don't make reservations ahead of time and who attempt to get close to the birds on their own, despite clearly displayed signs. Most violators are beginning birdwatchers or amateur photographers, representing less than one percent of viewers.

While all seems to be working very well, the Rowe Sanctuary staff knows the future brings a challenge. Increasing numbers of people are “flocking” to the region to see the cranes. The interest in wildlife is crucial to conservation, and the wildlife tourism is good for the local economy. But how will the region provide positive viewing experiences for so many people and still meet the needs of sandhill cranes, who stop on the river for a protected rest on their long journey.

## CHAPTER 6: CASE STUDIES

### CRANE MEADOWS NATURE CENTER

*“The numbers are just phenomenal. There’s no place like this in the world and no question that people viewing here leads to greater appreciation and conservation.”*

CRAIG DAVIS, AVIAN ECOLOGIST

The Crane Meadows Nature Center features a recently remodeled 12,000-square-foot interpretive center, and a bunker style blind for crane viewing. The concrete bunker has a glass front and is completely enclosed. Earth piles conceal the blind from the birds. The viewing is rewarding; however, the glassed front prevents visitors from hearing the cranes and is not conducive to photography.

The Center offers fee naturalist tours to the blind from early March through early April. A staff naturalist presents an introductory program about the cranes during the day, then tours leave for the blind at 5 p.m. to watch cranes returning to their roost. The Center encourages people to call ahead to reserve a spot on the popular tour.

#### CONTACTS

##### LILLIAN ANNETTE ROWE SANCTUARY

National Audubon Society  
44450 Elm Island Road, Gibbon, NE 68840  
Phone: (308)468-5282  
Website: [www.rowesanctuary.org](http://www.rowesanctuary.org)

##### CRANE MEADOWS NATURE CENTER

Nebraska Bird Observatory  
PO Box 90, Alda, NE 68810  
Phone: (308) 382-1820  
Email: [info@cranemeadows.org](mailto:info@cranemeadows.org)  
Website: [www.cranemeadows.org](http://www.cranemeadows.org)

### CALIFORNIA: SACRAMENTO NATIONAL WILDLIFE REFUGE COMPLEX PHOTO BLINDS

**KEY FEATURES:** TWO PHOTOGRAPHY BLINDS DESIGNED BY A PROFESSIONAL PHOTOGRAPHER; RESERVATION SYSTEM.

Who best knows what wildlife photographers need for a blind? A professional wildlife photographer, naturally. Gary Kramer, photographer and former refuge manager for California’s Sacramento National Wildlife Refuge Complex, designed two blinds specifically for photographers to give them a chance to be as close as possible to waterfowl without disturbing them. In fact, photographers actually wade to the blinds. They often sign up a year in advance for available times one day each week on Tuesday, Thursday or Saturday from October 1 - April 1.

Kramer recommended that these factors be considered when designing photography blinds:

- Offer both a morning and an evening blind, so photographers will have the light at their back during key times.
- Avoid cluttered backgrounds that, including any potential eyesores like a building or power line.
- Make the blind comfortable for photographers. (He emphasized that an overturned bucket does not suffice as a seat.)
- Create openings big enough for a telephoto lens (8 to 9 inches in diameter) with room to tilt up and down.
- Separate users; use of a photo blind should be limited to photographers. Casual observers coming and going can scare off the wildlife. (At the Sacramento National Wildlife Refuge Complex, driving routes offer plenty of wildlife viewing opportunities where people can use their cars as blinds.)

Photo: USFWS



## CHAPTER 6: CASE STUDIES



This popular viewing deck meets the demands of wildlife watchers, while the two photo blinds serve the serious wildlife photographers.  
Photo: USFWS

The Sacramento blinds are each 4½ X 6 feet-wide and 5 feet-high, with adjustable camera size openings on three sides and the roof. One blind is made of redwood, the other of gray, recycled plastic boards. Each blind is big enough for two, but ideal for one (only one swivel chair with a backrest will fit). Managers have enhanced the habitat by adding tree snags and islands; birds are drawn to perch or rest within range of a 300 to 500 mm lens.

To register for use of the blind, photographers send in a written request at least two weeks in advance, wait for confirmation, register at the refuge office the day before, and pay \$10. They follow a strict code of etiquette, starting with a pre-sunrise arrival. Each photographer files a report at checkout, listing bird species photographed and evaluating the experience.

**News Flash:** The Colusa NWR (part of the complex) recently added a photography blind as well.

### CONTACT

Refuge manager  
Sacramento National Wildlife Refuges Complex  
752 County Road, 99W, Willows, CA 95988  
Phone: (530) 934-2801  
[www.fws.gov/sacramentovalleyrefuges/photography.htm](http://www.fws.gov/sacramentovalleyrefuges/photography.htm)

### COLORADO:

#### MOBILE VIEWING TRAILERS FOR GROUSE VIEWING

**KEY FEATURES:** MOBILE BLIND; BUILDING LANDOWNER RELATIONS; SUCCESSFULLY VIEWING OF A SENSITIVE SPECIES; GROUSE ON LEKS.

Each March and April, an odd trailer parks on a ranch the eastern Colorado prairie. On the weekend, people from all over the world gather into the trailer before dawn. As the sun rises, they savor the sights and sounds of male greater prairie-chickens “dancing” on traditional courting grounds called leks. The prairie chickens, like other grouse that use leks, dance, coo and scuffle with one another to establish breeding territories and to attract females. Once the females have left the lek, which signals that breeding is over for the morning, visitors leave the viewing trailer from the back, and take the bus to the ranch headquarters for breakfast. Here they compare experiences, talk and laugh, and sip hot coffee.

The Wray Prairie Chicken Viewing project, one of the first watchable wildlife projects in the state, succeeded as a cooperative effort of the Colorado Division of Wildlife (CDOW) the local community, and the ranch consortium that owns the land. The project has provided outstanding viewing, enhanced local good will, and contributed significant economic benefit to the local, rural community.

At the time, greater prairie-chickens were listed as endangered in Colorado. Biologists and wildlife managers were working with landowners to protect and enhance habitat to help the grouse population recover. All greater prairie-chicken leks in Colorado were found on private property. Birders wanted to see the birds, especially during the courtship season. Managers decided that a well managed viewing opportunity, (using a blind, a reservation system, and guided tours,) could help the agency meet viewing recreation goals, offer public education, *and* benefit the local economy.

## CHAPTER 6: CASE STUDIES

They put their heads together and remodeled a trailer to serve as a mobile viewing blind. (Since then the agency has purchased and remodeled additional trailers for similar purposes.) The fully enclosed and insulated 26-foot-long trailer has entrance doors in the back, and two-tiered bench seating inside. The front opens completely (like a garage door, or like a vendor-trailer at the fair). The front panel includes brackets for scopes and cameras. The interior is painted dark brown so the birds cannot see silhouettes.

Carpeting on the floor and a portion of the wall, and cushions on the seats serve to make the trailers quieter, as well as more comfortable. (While the old trailer shown in this picture is not technically wheelchair accessible, at least one visitor that used a chair was lifted, in the chair, into the trailer. The newer ones have slightly wider doors and portable ramps to allow independent entry.)

A team then designed a program that would enhance the visitor experience. Participants pre-register for the tours, and pay a fee that includes the educational program, their overnight accommodations, the guided “tour” and a hearty breakfast. The evening before the tour, participants attend an educational program offered by CDOW staff. This pre-trip session takes place at the Wray Historical Museum, a partner in the program. Wildlife watchers learn about prairie chicken natural history and management, and review the “rules” for the morning tour.

Managers found that in order to avoid disturbing the birds, visitors must adopt a few important rules of behavior. Participant receive these rules in a letter with their confirmation, and reviewed again the night before the tour:

Photo: CDOW



- Keep noise to a minimum. Voices need to be whispers; wear wool or other “quiet” fabrics; leave “noisy” knapsacks behind; prepare optics before you get in the trailer. No paper or aluminum snack wrappers – better yet, no snacks. Too noisy!
- Don’t reach out through the opening, including pointing scopes or camera lenses outside the trailers; the birds always flush.
- Take photos without a flash.

The letter and the evening review also include comfort tips, such as to wear warm, soft clothing, go to bed at a reasonable hour (the bus leaves at 4am sharp) and a very important one: “Don’t drink coffee before the tour, there are no facilities out there!”

Volunteers from the community help out at the museum, with the morning trip, and with the ranch breakfast.

Although greater prairie-chickens are no longer endangered in Colorado, the species is very sensitive to disturbance, and most of the leks are still on private property, so the viewing experience is still carefully managed. Before parking the viewing trailer on the chosen lek, biologists determine the lek’s borders. The trailer is then parked at the edge of the lek (in the afternoon, when the prairie chickens have scattered from the site) and left

## CHAPTER 6: CASE STUDIES

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Photo: CDOW



in place for a couple of weeks before any people come. This allows the birds to habituate to the trailer itself.

CDOW has monitored the short and long-term impacts and has found that the birds habituate quickly to the presence of the trailer. Moving the trailer to different lek locations each year helps to prevent impacts. After several years of providing the viewing opportunity, managers believe the benefits outweigh any disadvantages. Today the program is well established, and busy, and little promotion is needed beyond the “word of mouth” exchange between folks who have had the experience, and friends and family that haven’t.

The newer trailers provide each region of the state with a mobile viewing blind, and programs have expanded. Wildlife watchers can join the CDOW staff for viewing greater sage grouse on a lek near Walden; the program there also is a cooperative effort between the wildlife agency and the local community. Greater sage grouse appear to be considerably more sensitive to disturbance; males often spend the night on the lek and can be disrupted by viewers arriving before dawn. As a result, the blind at Walden is placed further from the lek.

We know that species differ considerably in their abilities to tolerate human presence, that sensitivity may change with the seasons, and that individual animals are sometimes more tolerant than others. Colorado has learned from experience that different grouse species vary in their tolerance of mobile viewing trailers. Monitoring and careful study are essential to their successful use.

When not parked in grouse terrain, the blinds become interpretive trailers for bald eagle festivals, county fairs and shows. We hope this close-up look at one mobile viewing blind inspires ideas for additional innovations.

### **CONTACT**

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## CHAPTER 6: CASE STUDIES

### MASSACHUSETTS:

#### MASSACHUSETTS AUDUBON SOCIETY (MASS AUDUBON): DANIEL WEBSTER WILDLIFE SANCTUARY VIEWING/ PHOTOGRAPHY BLINDS

**KEY FEATURES:** ROOMY BLINDS WITH PHOTOGRAPHER-FRIENDLY FEATURES ADDED INSIDE AND OUT; BIRD ID PANEL ON INSIDE; COOPERATIVE APPROACH

Often, blinds built for viewing do not serve serious photographers well. In this case, recent modifications to the Daniel Webster Wildlife Sanctuary wooden blinds built in the mid-1980s (based on “hide” designs of the Royal Society for the Protection of Birds), have made them outstanding for both groups. Inside, wildlife photographers share a bench in front of windows overlooking a man-made pond and wetland that’s rich in birds. They can mount their cameras on special built-in plates or use beanbags placed on the window ledge. Casual viewers can study the bird Identification panel as they look out. Plexi-glas windows lower to open. Thanks to perches placed in front of the blind, red-winged blackbirds, eastern kingbirds and other songbirds land close by.

The two blinds are identical in design and comfortably accommodate 10 people. One is located at the pond’s west end and oriented toward the east for afternoon photography. Currently, this afternoon blind



Perches placed outside blind attract birds Photo: Shawn P. Carey



Photographers comfortably enjoy this spacious blind Photo: Shawn P. Carey

works the best for photography. The morning blind at the opposite end of the pond faces west.

Shawn Carey, an avid professional photographer and volunteer, has worked with the sanctuary staff to improve both blinds. He praises the managers for their willingness to allow photographers to suggest and make improvements, and for their participation in projects. The staff even went so far as to move a huge rock 10 feet closer to attract birds within easy view of the afternoon blind. In 2007, they cleared phragmites (an invasive grass) around the morning blind, and have added a log in the water for birds to land on. In return, photographers often contribute their images taken from the blind for use by Mass Audubon.

The afternoon blind likely will remain the most popular, because it is ideally situated close to the parking lot, and easy to reach with a load of photographic equipment. In addition to the rock resting place for birds, carefully placed tree branch perches bring birds within 25 to 30 feet of the blind. The perches are placed at various heights and require occasional maintenance. The first structure added was an eight-foot log with branches, placed 25 feet out at a slight angle for best afternoon light,

## CHAPTER 6: CASE STUDIES

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a success for photographers with a minimum of a 400 mm lens with a 1.4x, and for viewers to appreciate perching flycatchers, tree swallows, barn swallows and more. They next moved another log from the pond into slightly deeper water to attract green herons. The background is also a pleasing blend of colors – greens of trees intermixed with reds and oranges from tall cattails and marsh grasses.

The key factors that make the Daniel Webster blinds so popular all stem from the cooperative relationship between photographers and sanctuary staff, and a willingness to continually improve and maintain the blinds, the setting, and the habitat.

### **CONTACTS**

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Photo: Shawn P. Carey

## CHAPTER 6: CASE STUDIES

### PENNSYLVANIA:

#### **PENNYPACK ENVIRONMENTAL CENTER BIRD NEST BLIND**

**KEY FEATURES:** BLIND SHAPED LIKE BIRD NEST;  
ART MEETS FUNCTION

*“I went to the woods because I wished to live deliberately, to front only the essential facts of life, and see if I could not learn what it had to teach and not, when I came to die, discover that I had not lived.”*

HENRY DAVID THOREAU

Why should a bird blind be a four-sided structure when it could be round and woven like a bird’s nest? Artist Ed Levine created the Pennypack bird blind as part of a 2003 sculpture project for the Philadelphia park called, Embodying Thoreau: “dwelling, sitting, watching.”

Visitors wandering in the park feel drawn to linger in all three places to immerse in nature in the spirit of nineteenth century writer and naturalist Henry David Thoreau. The sculptures are deliberately set in different parts of the park. The “dwelling” recreates the dimensions of Thoreau’s cabin on Walden Pond to give the feel of a simple home connected to nature. The “sitting” component draws visitors to meditate on three circular forms that serve as benches and face one another. Two are intentionally large to encourage musings on size and scale.

Levine chose a bird blind for the “watching” component to facilitate close observation of wildlife as Thoreau did and to highlight birds that he says, “give us an awareness of our inherent rootedness in the earth and our desire to transcend it.” To explore our connection and separation with nature, Levine designed the exterior as a woven nest and the interior as traditional architecture. The blind is made of cedar and stainless steel on a concrete pad, and is approximately 10 feet high and 20 feet wide.



Pennypack Bird Blind Photo: Pennypack Environmental Center

Viewers peer through an open slat like nestlings seeing the world from the shelter of an enclosed yet airy nest.

How can a park involve artists to create works that help connect people to nature, and particularly to build aesthetic bird blinds? Levine’s project is part of the Fairmount Park Art Association that falls within a special program in 1992 called “New Land Marks: public art, community and meaning of place.” The Art Association teamed up with the Pennypack Environmental Center for this project and even provides the yearly maintenance. Levine, a retired director of the Visual Arts Program of the Massachusetts Institute of Technology, is well known as an artist, thinker and educator. He chose to honor Thoreau for his values that so closely matched those of a park where nature and culture intersect.

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## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS

### ALABAMA

#### U.S. FISH AND WILDLIFE SERVICE WHEELER NATIONAL WILDLIFE REFUGE PHOTOGRAPHY BLIND

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##### FEATURED SPECIES

Wintering waterfowl – mallards, American wigeon, gadwall, American black ducks, blue-winged teal, northern shoveler, northern pintail, ring-necked duck, Canada geese, snow geese, greater white-fronted geese, wood ducks, pied-billed grebe; sandhill cranes, great blue herons, American kestrel, red-tailed hawk, northern harrier, Cooper's hawk, osprey, bald eagle, greater and lesser yellowlegs, belted kingfisher, ruby-throated hummingbird, eastern bluebird, American goldfinch, indigo bunting, yellow-rumped warbler; white-tailed deer, coyote.

##### FEATURED HABITAT

Ten-acre freshwater impoundment with abundant natural food and cover surrounded by wildlife-managed agricultural fields and wooded wetlands

##### DESCRIPTION

The photography blind is located north across the ten-acre pond from the Wildlife Observation Building. It is accessible from a gravel roadway via a foot path along a field road approx. 170 yards long. The blind is constructed of rough lumber with a metal roof and measures 6 feet by 8 feet. There are viewing ports covered with canvas on the front and both sides. The blind was constructed as an Eagle Scout project in 2006.

##### GOAL

To provide public opportunities for wildlife photography

##### TARGET VISITORS

Photographers

##### BLIND DESIGN/ CONSTRUCTION

**When constructed:**  
2006

**Design:** Wooden rectangular building with viewing ports covered in canvas.

**Placement:** Built on bank of viewing pond facing south. Early morning is best time for photographing.

**Materials:** Treated lumber

**Cost to build (approx.):** \$600.00

**Partnerships/Volunteers involved?** Yes, Boy Scouts

**Plans available?** Yes

##### APPROACH TO THE BLIND

Access to photo blind is approx. 170 yards from gravel parking area via an unimproved foot path. A privacy fence and vegetation offers some screening, but approaching viewers need to move quietly.

##### RULES FOR USE

The blind is located in a closed area of the refuge. Use of blind is by permit only. Contact the Supervisory Ranger at the Visitor Center to obtain a permit.

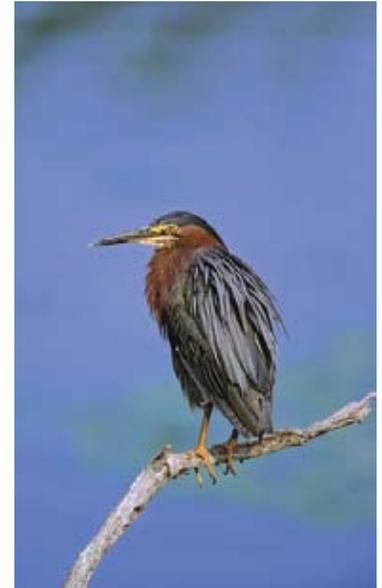


Photo: Shawn P. Carey

## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS

### ALABAMA

#### U.S. FISH AND WILDLIFE SERVICE WHEELER NATIONAL WILDLIFE REFUGE WILDLIFE OBSERVATION BUILDING

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##### FEATURED SPECIES

*Wintering waterfowl* – mallards, American wigeon, gadwall, American black ducks, blue-winged teal, northern shoveler, northern pintail, ring-necked duck, Canada geese, snow geese, greater white-fronted geese, wood ducks, pied-billed grebe; great egrets, sandhill cranes, great blue herons, American kestrel, red-tailed hawk, northern harrier, cooper's hawk, osprey, bald eagle, greater and lesser yellowlegs, belted kingfisher, ruby-throated hummingbird, eastern bluebird, American goldfinch, indigo bunting, yellow-rumped warbler; white-tailed deer, coyote.

##### FEATURED HABITAT

Ten-acre freshwater impoundment with abundant natural food and cover surrounded by wildlife managed agricultural fields and wooded wetlands.

##### DESCRIPTION

The Wildlife Observation Building is located 200 yards from the Wheeler NWR Visitor Center. It is accessible via a well-maintained, handicap accessible, nature trail which meanders through a small bottomland hardwood habitat. The two-story building was opened in 1974 and overlooks the ten acre pond. It features windows on all sides with a large open viewing room with mirrored glass. The upper level offers an excellent view of the surrounding fields and wetlands. Visitors inside listen to outside sounds via a microphone located within the pond. Spotting scopes are located on both levels of the building. A backyard wildlife habitat area on the south side of the building attracts various songbirds and butterflies.

##### GOAL

To provide public opportunities for wildlife interpretation, observation and photography

##### TARGET VISITORS

General public, students, birders, photographers



Photo: USFWS

##### BLIND DESIGN/CONSTRUCTION

**When constructed:** 1974

**Design:** Two story building (heated and cooled), with large mirrored glass viewing areas.

**Placement:** Built on a man-made knoll overlooking a ten acre pond surrounded by corn and soybeans fields and a small bottomland hardwood tract.

**Materials:** Wood

**Cost to build (approx.):** \$80,000

**Partnerships/Volunteers involved?** No

**Plans available?** No

##### APPROACH TO THE BLIND

Visitors walk a 200-yard, well-maintained, accessible, gravel based trail to the building. The trail meanders through a small tract of bottomland hardwoods along the adjacent pond.

##### RULES FOR USE

The building is open during regular Visitor Center hours: March through September – Tuesday through Saturday from 9 AM to 4 PM. October thru February – Daily from 9 AM to 5 PM. Stay on the trail and inside the building.

##### INTERPRETATION

Interpretive panels featuring the habitat are located throughout the building.

##### TIPS/LESSONS LEARNED

This building is a wonderful place to comfortably observe and photograph wildlife.

## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS

### ALASKA

#### WRANGELL RANGER DISTRICT ANAN WILDLIFE OBSERVATORY

Bear Viewing Deck and Shelter Photo Blind

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#### FEATURED SPECIES

Primarily black bear with frequent viewing of brown bear. Other species commonly seen include bald eagles (in July), harbor seals, and mink.

#### FEATURED HABITATS

Temperate rainforest, riparian

#### DESCRIPTION

The Anan Observatory Viewing Deck and Shelter (year-round viewing) and the Anan Photo blind (available late June to early September) together provide spectacular viewing of black bears, as well as brown bears fishing in Anan Creek. Very habituated bears often come right up to the deck railing or under deck and stairs leading down to the photo blind. The photo blind is about 15 feet above creek level with bears sometimes directly below. Viewing can be from 10-200 feet or more depending on where the bears come in and the path they take to the creek. Peak season for bear viewing is July and August.

**When built:** The viewing site has been established/known as such since the 1930's. The existing shelter was constructed in late 60's and the shelter level deck added in 1991. The second level deck was added in 1993. The stairway to creek level was constructed in 1999 and the existing canvas blind was constructed in 2002 (replaced a jerry-rigged photo blind using two duck hunting blinds ordered from Cabela's and sewn together).

**Details:** The deck/shelter is a permanent structure that holds 40 people. Once in the deck and shelter, people may sign up to spend approximately ½ hour (depending on demand – they can have more time if less demand), in the photo blind (capacity 5), accessed by stairs covered in camouflage netting. The blind's aluminum frame is permanent, with the canvas camouflage tent and stairway netting set up seasonally. The facilities are not designed for accessibility.



Anan Wildlife Observatory – shelter and deck, covered stairway, lower photo blind. Photo: USFS

**Management:** The entire site is restricted to 60 visitors/day during managed season (July 5 - August 25). Visiting hours are 8 am to 6 pm daily. Outside the managed season, access to site is open and free of charge, though stairway netting and photo blind canvas only erected during times when Forest Service staff are at the site (generally late June through early September depending on annual bear activity). The website gives detailed information on reservations (required July 5-August 25) and fee of \$10/pass/day.

#### GOAL

Provide a high quality and relatively safe (this IS bear country) bear-viewing experience. Goal for interpretation is to make visitor use as predictable as possible to bears, thus habituating them to our presence – all site rules are for this purpose. No dogs or food are allowed and people must stay on the trail, and never purposefully approach a bear, etc.

#### TARGET VISITORS AND USE

Bear viewers and photographers

60/day max visitors, both guided and independent

#### BLIND DESIGN/CONSTRUCTION

**Built:** 2002

**Design:** Custom designed to fit the fish passage platform by Forest Service engineers. Contracted a company specializing in boat covers and awnings to construct a photo blind tent. Stairway tunnel designed and constructed on site by Anan personnel using PVC pipe for frame – cut and glued on site.

**Placement:** Oriented to face the creek and opposite bank; camouflage canvas for photo blind tent and camouflage netting for stairway tunnel.

**Materials:** See above.

## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS



Black bear and bald eagle, taken from lower photo blind. Photo: USFS

**Other special features?** Door between photo blind and bottom of stairs to protect visitors if a bear happens onto the stairway or climbs into blind (has not happened since new photo blind tent fits better on platform).

**Cost to build (approx.):** Stairway construction contract \$36,000. Photo blind construction contract \$18,000.

**Plans available?** Yes. Hard copy can be mailed if desired.

### APPROACH TO THE BLIND

Approach to viewing deck and shelter by a 1/2 mile, mostly boardwalk trail that leads from trailhead at the beach to the viewing deck. Approach to photo blind is through a gate in the deck railing leading to stairway. Stairway is covered with camouflage netting to mitigate sight of visitors moving on the stairs. Photo blind has zippered windows for unrestricted view for photography. Flash prohibited.

### RULES FOR USE

Once on the deck, visitors sign up for 1/2-hour block of viewing from the photo blind. Limited to 5 visitors at one time. If a visitor has been in the photo blind for one session, they must wait until there is an opening (no competition) to use the photo blind again (first time users for the day get preference). As long as there are no “new” users, a person can stay there all day if they want, although its location on the creek shore limits the view of the rest of the site and folks usually want to come up to the deck to see what’s going on elsewhere along the creek – demand depends on where the bears are fishing, which is dependent on creek water levels and where the fish pool up.

### INTERPRETATION

**Displays:** Interpretive displays are purposefully sparse. Generally we have a salmon cycle display and a couple of posters about bears on the walls of the shelter. We have the Alaska Department of Fish and Game wildlife notebook series laminated and available for visitors along with a bear photo ID

book showing the common bears and their history at Anan. Some plant identification signs are on the deck rail.

**Staff:** The deck always has one Forest Service staff person for informal interpretation and site management (late June to early September), as well as a second Forest Service staff person stationed at trailhead to greet groups and give safety orientation. Inside the photo blind, there are no interpretive displays and the staff only goes down there to rouse people out when their time is up if needed.

### TIPS

We didn't expect the camouflage design on the photo blind canvas to fade quite so much. What might have been described earlier as “forest green camouflage” has now turned a weird pinkish color...kind of “desert camouflage”... but it still looks okay. The canvas was sent in for repair after three seasons and will probably need replaced in a couple more, but overall we're quite happy with it. The aluminum frame for the photo blind tent was designed and installed to be torn down each year, but we leave it up (couldn't see an advantage to tearing it down).



Lower Photo Blind. Photo: USFS



Brown bear fishing at Anan Wildlife Observatory. Photo: USFS

## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS

### ALASKA

#### ADMIRALTY NATIONAL MONUMENT PACK CREEK BROWN BEAR OBSERVATION TOWER

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##### FEATURED SPECIES

Primarily brown bears although deer, birds and salmon are regularly viewed

##### FEATURED HABITATS

Coastal, temperate, rain forest, riparian

##### DESCRIPTION

The permanent observation tower for brown bears offers very controlled viewing of brown bears, from June 1 to September 10 during prime bear viewing season. Otherwise the tower is open. The tower holds 12 people. In 1990, it was reconstructed from the 1934 original tree stand. Bears come within 30 to 100 feet of the tower. Peak viewing times are July 5 to August 25th.

##### FEES/RESERVATION

\$50 per adult, \$25 per juvenile or senior, half price in shoulder season (June 1-July 4, and August 26-Sept. 10).

##### GOAL

To offer safe viewing of brown bears feeding in salmon stream, giving viewers an independent viewing experience without the presence of ranger. This isn't really a blind, per se. The bears easily see the visitors and know they are present.

##### TARGET VISITORS/USE

Not to exceed 24 per day. Generally about 18-20 per day.

##### BLIND DESIGN/CONSTRUCTION

**When built:** 1990

**Design:** Looks (ironically) like an Alaskan Food Cache on poles

**Placement:** Stands within the stream channel on a vegetated gravel bar that occasionally washes over at high water but is generally dry, with dense salmonberry, alder and other thick vegetation. All sides are open to view, 360 degree perspective

**Materials:** Treated poles and deck, natural cedar railing and roofing

**Other special features?** Iron ladder 10 feet tall requires physical ability



Pack Creek bear viewing tower, Admiralty Island, Alaska Photo: USFS

**Cost to build (approx.):** about \$40,000

**Partnerships/Volunteers involved?** Yes, design and construction involved partners. Volunteers on site contributed many hours of physical labor.

**Plans available?** Yes

##### APPROACH TO THE BLIND

One-mile trail from access beach includes gravel tread and natural wood surfacing (puncheon). Placement was critical to avoid existing bear trails near the stream corridor and to intersect the stream only at the observation stand itself.

##### RULES FOR USE

Visitors are limited to three hours total from the time they leave the trailhead until they return. They are not allowed to leave the trail or the tower to go into the brush (bear habitat). Rangers give them a thorough briefing on the rules and maps are provided for clarity, but visitors walk the trail with their group or guide, not with a ranger.

## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS

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### INTERPRETATION

The trailhead sign identifies the name of the trail and is regularly chewed on by bears. This is the most effective interpretive device I've ever seen for making the point that bears live along the trail. A register box in the tower includes interpretive pamphlets and information, but it's non-descript. Signs are minimized and experiential learning is encouraged.

### TIPS

This observation tower is one of two viewing opportunities at Pack Creek. The other is a gravel pad bordered by sitting logs at the estuary meadow where bears are seen grazing, digging clams, traveling, resting and pursuing or eating salmon. Sometimes the meadow viewing is superior to the viewing from the tower, especially when the salmon aren't yet up the creek in front of the tower.

It is very expensive to manage bear viewing at Pack Creek, including this observation stand. The US Forest Service has partnered with Alaska Fish and Game for 21 years to provide this opportunity and it now costs the agencies about \$100,000 per year to staff the site, with permit fee collections reimbursing only about \$40,000 of that cost. There is no way to do it cheaper. Bears require management presence to insure safety and minimize impacts from people's behavior.

Although located in a Congressionally designated wilderness area, the structure pre-dates designation as wilderness as it was constructed in 1934 by the CCC as a tree stand at the end of a trail. The structure is otherwise, in conflict with wilderness objectives where no human structures of this sort are generally allowed. The public, however, loves the structure and feels it's the best place to visit, even when the bear viewing is sometimes better in the meadow. They think it must be better near the tower or the tower wouldn't have been built there.

## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS

### ARKANSAS

#### LAKE LEATHERWOOD CITY PARK LAKE LEATHERWOOD VIEWING BLIND

Eureka Springs, AR 72632

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#### FEATURED SPECIES

Birds – waterfowl, wading birds and songbirds

#### HABITAT

Lake, thicket, bottomland hardwoods

#### DESCRIPTION

Built in spring 2006, the permanent viewing and photography blind is tucked into a wooded thicket at the shallow end of a 160-acre lake. It's accessible, free, open year-round and holds 10 persons on the upper deck and extra room for 2 wheelchairs on the lower deck. Peak months for viewing are spring and fall for migrants and winter for ducks. Birds come within 5 feet to the lake edge with cover.

#### GOAL

To increase awareness of bird resources at a great city park. Hoping for an IBA (Important Bird Area) designation.

#### TARGET VISITORS

Birders, tourists, campers, youth

#### BLIND DESIGN/CONSTRUCTION

**Design:** basic deck construction, poles in concrete

**Placement:** on lake edge, natural vegetation on all sides

**Materials:** Pressure treated lumber and western red cedar fencing

**Other special features:** Wheelchair ramp, wheelchair viewing ports

**Cost to build (approx.):** \$2,200 materials, all volunteer labor (~\$3,000 value)

**Partnerships/Volunteers involved?** Private contributions, City contribution, Local Audubon society contribution. Most of the money came from J. Pat Valentik as a gift to the city.

**Plans available?** Yes

#### APPROACH TO THE BLIND

Trail and wheelchair ramp from backside through thick cover, part of ramp is fenced from lake view.

#### RULES FOR USE

"Don't mess it up, don't burn it down."

#### INTERPRETATION

Plans to add interpretation on the site.

#### TIPS

Valentik is amazed at the enthusiastic reception and emerging support. He believes keeping the public informed of progress through a Blog, newspaper articles, and the local online bulletin board helps build and maintain local interest and ownership.

#### PHOTO CHRONOLOGY OF LEATHERWOOD BLIND PROJECT

Photos: J. Pat Valentik



April 30 View from Lower Deck (above) and Portholes Framed Out (below)



## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS



**May 7** Upper Deck Walls



**June 8** Upper Section of the Ramp Framed



**May 11** Stair entry from woodland path



**June 15** The fence along the upper portion of the ramp slopes upward from under five feet to the full height of the fence on the decks.



**May 11** Lower Deck. The shelves provide a place to rest arms. The portholes are intended for wheelchair viewing as well as for children. The ramp hasn't been started yet.



**June 15** The finished ramp.

# CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS

## ARIZONA

### RIPARIAN INSTITUTE RIPARIAN INSTITUTE VIEWING BLINDS

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#### FEATURED SPECIES

- Shore birds, water birds
- 10-12 species of ducks, Herons, Avocets, Stilts, Ibis, Egrets, Yellow legs

#### HABITATS

Riparian and Uplands

#### DESCRIPTION

The nonprofit Riparian Institute constructed 7 permanent, accessible viewing blinds overlooking recharge basins within the 110-acre Water Ranch in Gilbert, Arizona. The blinds are part of wildlife watching stations that include interpretive signs, and brochures. The no-fee, accessible blinds built in 1999 are open year-round. Each blind can hold 3-4 viewers. Shorebirds and water birds come within 50-100 feet of the riparian blinds. The greatest attraction for a diversity of wildlife is the cycling of wet and dry periods in the recharge basin.

#### GOAL

To provide viewing opportunities for a wide variety of visitors to introduce them to wildlife viewing.



American Avocet Photo: USFWS

#### TARGET VISITORS

Families and birders

#### BLIND DESIGN/CONSTRUCTION

**Design:** Single wall with varied height for viewing, metal construction with bench.

**Placement:** Oriented toward water, no camouflage. Upland blinds face toward water as well – greatest viewing potential at each of the recharge basins.

**Materials:** Metal

**Cost to build (approx.):** \$500 per blind and \$750-\$1000 for the wildlife watching station.

**Plans available?** No

#### APPROACH TO THE BLIND

Placed near trails where visitor would be least visible to wildlife.

#### RULES FOR USE

None, open during preserve hours, dawn to dusk.

#### INTERPRETATION

The preserve focuses wildlife viewing at stations – some have blinds and some have benches. The stations offer interpretive panels that describe different species of birds that are often seen at the preserve. Brochures are available with a list of birds seen at the preserve.

#### TIPS

Make the blinds observation “stations” where the visitor can feel comfortable, easy access to wildlife viewing and interpretive materials so they will spend time there and in the area.

The streams in the upland area attract birds, but blinds are not useful for those areas. Place blinds where wildlife concentrates.

## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS

### CALIFORNIA

#### KLAMATH BASIN NATIONAL WILDLIFE REFUGES WATER BIRD PHOTO BLINDS

##### CONTACT

Dave Menke  
Klamath Basin National Wildlife Refuges  
4009 Hill Road  
Tulelake, CA 96134  
Phone: (530) 667-2231  
Email: dave\_menke@fws.gov  
Website: [www.fws.gov/klamathbasinrefuges](http://www.fws.gov/klamathbasinrefuges)



Photo: Robert Mutch for USFWS use

##### FEATURED SPECIES

Dabbling and diving ducks, Canada geese and white-fronted geese, western/Clark's grebe, great blue heron, great egret, eared grebe, American white pelican, Forster's tern, Caspian tern, sora, Virginia rail, American avocet, black-necked stilt, spotted sandpiper, pied-billed grebe, Bonaparte's gull, muskrat

##### FEATURED HABITATS

Water/marsh edge on Tule Lake (Blind 1) and Lower Klamath National Wildlife Refuges (Blinds 5 and 6)

##### NUMBER OF BLINDS AND TYPE (VIEWING OR PHOTOGRAPHY)

Two, single-person blinds and one Two/three person blind; photography; morning light; Highly recommend tripod and telephoto (300 - 600 mm range).

##### DESCRIPTION

Klamath Basin Refuges attract a high level of interest from wildlife photographers. From December through February, the refuges (Tule Lake and Lower Klamath) are home to the largest congregation of bald eagles in the lower 48 states, as well as enormous numbers of migratory waterfowl, as many as 1 million birds. To meet photographers' needs, the

refuge provides 8 photography blinds – 5 on Tule Lake Refuge and 3 on Lower Klamath Refuge. *(Note: the staff is not recommending blind #3 on Tule Lake, because currently the photography opportunities are not worthwhile.)*

Write-ups for the blinds are divided by the featured species. All blinds are oriented for morning light.

**#1: The Hill Road Marsh and Waterbird Blind** (capacity 2-3) faces Tule Lake, oriented north/northwest. The blind is a short walk (700 feet) on a dike. The plywood blind is covered in "fastgrass," typically used by hunters to transform boats into hunting blinds, and is available through hunting supply companies. The 2-3 person blind had 4 lens ports and is wheelchair accessible.

**#5: The Lower Klamath Marsh Waterbird Blind** is well concealed and sits low to the water. Dense vegetation has grown around the one-person, fiberglass, cylinder blind, creating an ideal spot for photographing secretive rails, as well as dabbling ducks and muskrat that come as close as 12 to 50 feet. Best times are May through September.

**#6 The Lower Klamath Marsh and Waterbird Blind II** is tucked close to the first lone tree photographers encounter. Facing west, the one-person, fiberglass, cylinder blind offers excellent opportunities for photographing waterfowl in the channel in front of the blind, from spring through fall. Pelicans, herons, egrets also visit the blind area.

*Note on blinds #5 and #6: The one person blinds are made from "recycled" portable toilets; all have the tank and toilet seat portion removed (i.e. cut out so that only the portion above the toilet seat remains). A new floor is installed and photoport is cut into one side. A low bench is located in each blind so they're reasonably comfortable to use with the inside of the Fiberglass blind providing a "back rest."*

##### GOAL

Enhance wildlife photography opportunities on refuges

##### TARGET VISITORS

Serious amateur and professional wildlife photographers



Photo: Robert Mutch for USFWS use

## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS



Blind #1 Hill Road Marsh and Waterbird Blind Photo: USFWS

### BLIND DESIGN/CONSTRUCTION

**Design:** Fiberglass (#5 and 6); Wood (#1)

**Placement/orientation:** Morning photo angle

**Materials:** Fiberglass or Wood

**Other special features?** Stool/s provided; Vermin resistant

**Cost to build (approx.):** The partnership observation walkway and blind for #1 were constructed through a matching grant – \$22,100 in grant funds, matched by \$22,100 in local funds.

**Partnerships/Volunteers involved?** Yes, constructed entirely by a refuge volunteers. Boardwalk and photo blind #1 developed with a grant jointly funded by the National Fish and Wildlife foundation and Wild Birds Unlimited in 2001.

**Plans available?** No

### APPROACH TO THE BLIND

Blind #1 is fully accessible for wheelchairs via a 700 ft level fiber walkway. Other blinds are located via a 100 ft walk (Blind 5) and 700 ft (blind #6). There is no screening on the approaches – important to arrive before sunrise.

### RULES FOR USE

Advance reservations and payment required. A \$25 annual pass covers use of all refuge photo blinds.

### TIPS AND LESSONS LEARNED

Photographers should contact the refuge before making plans; the blinds are highly seasonal for target species. During waterfowl hunting season, few birds are visible from blind #1, because of hunter use of the boat ramp area. Managers highly recommend photographers come equipped with tripod and telephoto lens (300-600 mm range).

More detailed list of photographable species, seasonal opportunities and directions for finding each blind are available in a leaflet provided by the refuges by mail or on the refuge web site.



#6 Lower Klamath Marsh and Waterbird Blind II Photo: USFWS

## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS

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### CALIFORNIA

#### KLAMATH BASIN NATIONAL WILDLIFE REFUGES UPLAND BIRD PHOTO BLIND

##### CONTACT

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Klamath Basin National Wildlife Refuges  
4009 Hill Road  
Tulelake, CA 96134  
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Email: dave\_menke@fws.gov  
Website: [www.fws.gov/klamathbasinrefuges](http://www.fws.gov/klamathbasinrefuges)

##### FEATURED SPECIES

spotted towhee, California towhee, California quail, juniper/oak titmouse, rufous hummingbird, Bewick's wren, sage thrasher, song sparrow, white-crowned sparrow, golden-crowned sparrow, Lincoln's sparrow, Townsend's solitaire.

##### FEATURED HABITAT

Juniper/sagebrush upland habitat

##### DESCRIPTION

The Hill Road Upland Bird Blind (#4 of 8 photo blinds on the refuges), on Tule Lake Refuge, is a one-person, permanent blind facing a small watering pool that attracts passerine birds to branches and rocks that are spaced 15 to 25-feet from the blind. While available year-round, the best viewing seasons are spring and fall. The blind was constructed in 2004.

##### GOAL

Enhance wildlife photography opportunities on refuge

##### TARGET VISITORS

Serious amateur and professional wildlife photographers

##### BLIND DESIGN/CONSTRUCTION

**Design:** Portable toilet recycled for secondary use

**Placement:** Morning photo angle

**Materials:** Fiberglass

**Other special features?** Stool provided

**Cost to build:** \$46.25

**Partnerships/Volunteers involved?** Yes, constructed entirely by a refuge volunteer

**Plans available?** No

##### APPROACH TO THE BLIND

Steep roadside berm, approximately 100 feet from parking to blind.

##### RULES FOR USE

Advance reservations and payment required.  
A \$25 annual pass covers use of all refuge photo blinds.

##### TIPS

This blind has a feeding station and water to attract birds, which requires consistent dedication by staff or volunteers.

A more detailed list of photographable species, seasonal opportunities and directions for finding each blind are available in a leaflet provided by the refuges by mail or on the refuge web site.

## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS

### CALIFORNIA

#### KLAMATH BASIN NATIONAL WILDLIFE REFUGES EAGLE/RAPTOR PHOTO BLINDS

##### CONTACT

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Website: [www.fws.gov/klamathbasinrefuges](http://www.fws.gov/klamathbasinrefuges)

##### FEATURED SPECIES

bald eagle, red-tailed hawk, rough-legged hawk, northern harrier, common raven

##### FEATURED HABITATS

Lake edge tree perches for raptors

##### DESCRIPTION

Klamath Basin Refuges attracts a high level of interest from wildlife photographers. From December through February, the refuges (Tule Lake and Lower Klamath) are home to the largest congregation of bald eagles in the lower 48 states, as well as enormous numbers of migratory waterfowl, as many as 1 million birds. To meet photographers' needs, the refuge provides 8 photography blinds—5 on Tule Lake Refuge and 3 on Lower Klamath Refuge. (*Note: the staff is not recommending blind #3 on Tule Lake, because currently the photography opportunities are not worthwhile.*) Write-ups for the blinds are divided by the featured species.

The three eagle/hawk photo blinds are permanent blinds holding one photographer each, oriented to take advantage of the morning light. The peak season for raptor viewing is winter (mid-December to mid-March). Eagles and hawks will come within 40-80 feet of the blind to land on perches. Refuge volunteers constructed the blinds in various years from 1998 to 2004. Blinds #2 and #8 are on Tule Lake Refuge and Blind #7 is on Lower Klamath Refuge.



Blind #2 with 2 bald eagles perched above it  
Photo: USFWS

**#2:** To reach the Tule Lake Sump Raptor Blind, photographers leave the main auto tour road to a private location, 1/4 mile down a road for Authorized Vehicles Only. Here, they park and walk 200 yards across the grassland to the blind, which faces north toward a tree where eagles often perch.

**#7:** The Lower Klamath Eagle Snag Blind is just 100 yards beyond a waterbird blind (#6, see waterbird photo blind write-up). A 600-yard hike along a dike takes photographers to the fiberglass blind facing a dead tree with raptor perches – 75 feet from the blind.

**#8:** The Tule Lake Eagle Blind faces a willow tree frequented by raptors in winter.

##### GOAL

Enhance wildlife photography opportunities on refuge

##### TARGET VISITORS

Serious amateur and professional wildlife photographers

##### BLIND DESIGN/CONSTRUCTION

**Design:** Portable toilets recycled for secondary use

**Placement (orientation, camouflage):** Morning photo angle

**Materials:** Fiberglass

**Other special features?** Stool provided; Vermin resistant

**Cost to build:** \$46.25 each

**Partnerships/Volunteers involved?** Yes, constructed entirely by a refuge volunteer

**Plans available?** No

##### APPROACH TO THE BLINDS

1/10 to 1/4 mile from parking to blind. No screening. Important to enter in dark.

##### RULES FOR USE

From December through March, the blinds must be entered before 7 a.m. Advance reservations and payment required. To use the blinds, contact the refuge to make a reservation. A \$25 annual pass covers use of all refuge photo blinds.

##### TIPS

Photographers should contact the refuge before making plans; the blinds are highly seasonal for target species. Managers highly recommend photographers come equipped with tripod and telephoto lens (300-600 mm range).

To facilitate photography, the blinds are oriented to the best potential places to see perched raptors. Blind #8 on Tule Lake faces a willow trees favored for raptor perching during the winter.



Bald eagle photographed from blind #8 on Tule Lake  
Photo: USFWS

## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS

### COLORADO

#### BLUFF LAKE NATURE CENTER BLUFF LAKE VIEWING BLIND

##### CONTACT

Steve Norris, executive director  
Bluff Lake Nature Center  
7350 E. 29th Ave. #300  
Denver, CO 80238  
Phone: (303) 468-3241  
Email: snorris@stapletoncorp.com  
Website:  
www.blufflakenaturecenter.org

##### FEATURED SPECIES

Waterfowl and shorebirds, Hawks and eagles (winter), swallows, diversity of songbirds

##### FEATURED HABITATS

Lake, freshwater marsh, willow

##### DESCRIPTION

An attractive, permanent wood blind serves as part of an outdoor classroom for elementary students within the 123-acre natural area, managed by the nonprofit Bluff Lake Nature Center. The blind's viewing portal is carved in the shape of a flying bird. Inside the blind, a solar-powered bird call speaker system gives instructors the opportunity to play the bird calls for children to learn as they watch. The blind is open year round and is accessible. Water birds will come within 50 feet of the blind when lake levels are high enough (dependent on storm water flows). The nature center also features a boardwalk where visitors have close views of waterfowl as well.

##### GOAL

Teaching, appreciation and enjoyment

##### TARGET VISITORS

Elementary school groups, families, birders and casual visitors.

##### BLIND DESIGN/CONSTRUCTION

**Built:** 1997

**Design:** viewing portal in v-shape of bird flying, elevated and able to hold a group of about 10

**Placement:** nestled in trees at one end of lake

**Materials:** wood

**Other special features:** Speaker that plays bird calls; solar powered and operated by our teachers

**Cost to build (approx.):** N/A



Photo: Bluff Lake Nature Center

**Partnerships/Volunteers involved?** Volunteers for Outdoor Colorado (VOC) recruited the volunteers who built the bird blind and supplied crew leaders.

**Plans available?** No

##### APPROACH TO THE BLIND

50-foot approach off main trail

##### RULES FOR USE

The small natural area does not allow dogs, bicycles, motorized vehicles, horses, food or drink (beyond the Bluff), fishing, hunting, or sledding. Visitors are asked to stay on trails, walk quietly and not to harass wildlife.

##### INTERPRETATION

Two panels for identifying birds and the bird call system noted above; we had mounted binoculars but they were vandalized and not replaced.

##### TIPS

Keep it simple – binoculars were destroyed and a storage box vandalized. Both were removed. The audio system for the bird calls is concealed and only used by the instructors.

## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS

### COLORADO

#### CITY OF FORT COLLINS CATHY FROMME PRAIRIE NATURAL AREA OBSERVATION FACILITY

##### CONTACT

Edith Felchle, City of Fort Collins  
P.O. Box 580, Fort Collins, CO 80522  
Phone: (970) 221-6311  
Email: [efelchle@fcgov.com](mailto:efelchle@fcgov.com)  
Website: [www.fcgov.com/naturalareas](http://www.fcgov.com/naturalareas)

##### FEATURED SPECIES

Prairie dog, bald eagle, ferruginous hawk

##### FEATURED HABITAT

Shortgrass prairie

##### DESCRIPTION

This concrete, cave-like observation blind is built into a hill with native grasses growing on the roof, blending well with the surrounding shortgrass prairie. Here, visitors have a chance to experience the Fort Collins landscape before settlement. The blind looks out over a prairie dog colony, home also to horned lizards, ground-nesting songbirds, butterflies, rabbits, coyotes, rattlesnakes and foxes.

An accessible curved trail leads to the blind, which ideally holds 10-15 viewers with a maximum of 25. Inside, viewers



View of blind and approach, showing how structure blends into the hillside.  
Photo: CDOW

will discover attractive carved silhouettes of raptors, interpretive panels, a recorded prairie dog alarm call (push button system) and concrete seating shaped like logs. Prairie dogs and raptors sometimes come very close to the blind. Viewers can be seen and heard within the opening, but the low unobtrusive profile of the structure reduces disturbance and allows excellent views of prairie dog and other wildlife interactions. There's no fee and the blind is open year-round. A free permit is required for group events of 15 or more.

##### GOAL

- Educate the public and students about prairie wildlife.
- Provide opportunities to observe wildlife interactions in a non-disruptive manner

##### TARGET VISITORS

General public, students



View from inside blind—note innovative features of carved stumps for seating and presentations, and engraved raptors on wall.  
Photo: City of Fort Collins

##### BLIND DESIGN/CONSTRUCTION

**When built:** 1998

**Design:** Dug into the side of a small hill, so there is no appearance of a “building” to break the view of the landscape. Prairie grasses grow on top of the facility

**Placement:** Opening is to the south, southwest – toward where wildlife is likely to be seen. The facility is “cave like.” Therefore, movement or sound in the facility can be perceived by nearby wildlife.

**Materials:** Concrete

**Cost to build (approx.):** ~\$90,000

**Partnerships/Volunteers involved?** No

**Plans available?** No

##### APPROACH TO THE BLIND

Paved trail spur from the main trail. Main trail goes some distance behind the facility to minimize disturbance.

##### RULES FOR USE

No roaming outside the facility, except on trail.

##### INTERPRETATION

Interpretive panels on the inside walls feature wildlife species visitors will likely see and hear; an audio system allows visitors to push a button to hear a recorded prairie dog warning call, so they can better identify the “yip yip” calls around them. Volunteer Master Naturalists available by appointment for group interpretive presentations. A site brochure describes prairie habitat, wildlife, and safety.

##### TIPS

The facility opening is oriented away from the main trail: advantages include a sense of seclusion to enjoy wildlife; disadvantage is that it invites serious vandalism.

The uniqueness of the design drove up engineering and construction costs. We didn't want a “building,” so engineers had to develop plans from scratch. It had to be able to safely support the weight of soil on top of the facility in a quantity thick enough for grasses and forbs to grow.

# CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS



All Photos: John Koshak

## COLORADO

### COMANCHE NATIONAL GRASSLANDS CAMPO PRAIRIE CHICKEN LEK VIEWING/PHOTO BLIND

#### CONTACT

Comanche National Grasslands – USFS  
Carrizo Unit  
27204 US Hwy 287  
P.O. Box 127  
Springfield, CO 81073  
Phone: (719) 523-6591  
Fax: (719) 523-4861  
Website: [www.fs.fed.us/r2/psicc/coma](http://www.fs.fed.us/r2/psicc/coma)

#### FEATURED SPECIES

Lesser prairie-chicken

#### FEATURED HABITATS

High plains grasslands with sand sage habitat

#### DESCRIPTION

The lesser prairie chicken can be viewed from a vehicle in the parking area or from the observation blind. A permanent blind is at the lek, which can accommodate up to four people. An accessible blind can be set up upon request to accommodate handicapped birdwatchers at the viewing area. The main viewing season is March, April. Displaying birds come very close. No fee. Reservations required for the blind. Most viewers watch from their vehicles, although some choose the blind for viewing. Photographers mostly prefer the blind to get much closer for photos.

#### GOAL

Provide photography and viewing opportunities for rare lesser prairie-chicken while they are dancing on the lek or breeding grounds.

#### TARGET VISITORS/USE

Birdwatchers, photographers, nature tourists

#### BLIND DESIGN/CONSTRUCTION

**Design:** Square structure, built low to ground. A bench is provided. The blind is painted a light tan color to reflect sunlight and remain cool. No camouflage

**Placement:** Blind is located very near the edge of the lek. Blind floor level is below ground level with viewing aperture from ground level up.

**Materials:** Concrete floor and foundation. Plywood framed sides and top.

**Other special features?** Rattlesnakes sometimes present

**Cost to build (approx.):** N/A

**Partnerships/Volunteers involved?** USFS, CDOW and birding watching groups partnered to provide this blind.

**Plans available?** No



# CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS

## APPROACH TO THE BLIND

To prevent disturbance, viewers are requested to arrive at the parking area before dawn.

## RULES FOR USE

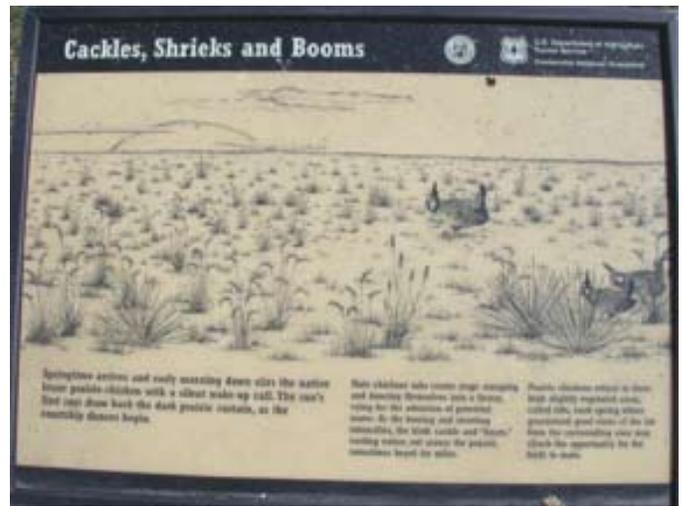
- 1 Arrive at the lek no later than 1 hour before sunrise. Vehicles arriving after daylight may disturb the birds as well as others who arrived earlier to view the birds.
- 2 Be prepared for cold weather.
- 3 Bring binoculars, spotting scope, camera and/or field guides.
- 4 Observe birds as long as you like.
- 5 Please sign register at the viewing area entrance.
- 6 Remain in vehicle at all times.
- 7 Park in the designated parking area only.
- 8 Please keep noise to a minimum.
- 9 No overnight camping within 1 mile of viewing area.
- 10 Leave pets at home.
- 11 It is preferred that no vehicles leave the area until 1 hour after sunrise. If you must do so, drive out of the area as quietly and discreetly as possible.

## INTERPRETATION

Two Forest Service panels, located at the turn in to the parking area, describe the habitat and the biology of the lesser prairie-chicken.

## TIPS AND LESSONS LEARNED

It can be difficult to monitor the arrival and departure of vehicles at the blind to minimize disturbance to the prairie chickens and other viewers.



# CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS

## COLORADO QUEENS STATE WILDLIFE AREA GRAIN BIN VIEWING BLIND

### CONTACT

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CDOW Lamar Service  
Center  
2500 S. Main St.  
Lamar, CO 81052  
Phone: (719) 336-6600  
Email: john.koshak@  
state.co.us  
Website:  
www.wildlife.state.co.us

### FEATURED SPECIES

Raptors, waterbirds, waterfowl and shorebirds.

### FEATURED HABITATS

Playa lake with high plains short-grass grassland

### DESCRIPTION

This blind is constructed from an old farm grain bin that was recycled from the Two Buttes State Wildlife Area to its use as a blind at Mud Lake. The blind was moved to its present location and put up on a ridge at the edge of the playa lake to provide visitors with closer viewing opportunities for the shorebirds, waterfowl, raptors and other birds that frequent the area when the lake is wet.



Blind after relocation to Mud Lake Blind with viewing ports and leg supports installed.  
All Photos: John Koshak, CDOW



Interior of blind, note species ID signs

When dry, the area is primarily short-grass prairie located at the edge of nearby farm fields. While few water-loving species are found then, the species which use prairie habitat can be viewed during dry months, seasons or years.

This award-winning viewing blind is a great example of a blind that fits with the culture of the area – in this case farming on the plains.

In 2004, CDOW moved the 1960s-era grain bin from another site to this viewing point above a playa (a natural depression that fills with water). They converted the grain bin into a permanent viewing blind that's accessible, free and holds 15 people. Wildlife comes within 25 yards of the blind. Best viewing is March through October.

### GOAL

To offer wildlife viewers an unusual opportunity to view playa wildlife from within a converted grain bin.

### TARGET VISITORS/USE

Birders, casual wildlife viewers, school classes

### BLIND DESIGN/CONSTRUCTION

**Design:** Recycled used steel grain bin

**Placement:** On a small ridge above a playa lake.

**Materials:** Concrete foundation slab and floor, reinforced steel grain bin

**Other special features?** Trail with interpretation and stone benches leads from parking area to blind

**Cost to build (approx.):** \$25,000

**Partnerships/Volunteers involved?** No

**Plans available?** No



Playa interpretive sign along trail.



Blind blends in with local agriculture.



Trail with sandstone bench, blind in background

# CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS

## APPROACH TO THE BLIND

A trail hugs the north side of a small sandy ridge that screens visitors from the playa lake. to the south. As viewers near the blind, a line of shrubs offers more screening up to the door of the grain bin. The trail features a natural stone bench for viewing and resting at the top of the ridge farthest from the blind near the parking area.

## RULES FOR USE

Same rules as for State Wildlife Area. No camping, use between dawn and dusk. Keep vehicles on roads.

## INTERPRETATION

A panel at the parking area trailhead interprets the significance of playa lakes in the high plains to wildlife for water, habitat, breeding and feeding.



Inside of grain bin with ID panels visible

## TIPS AND LESSONS LEARNED

Severe drought in SE Colorado has dried up this playa and caused problems at many of the other nearby lakes in the State Wildlife Area. When drought conditions abate, there will be more opportunities for viewers at this blind.



Species ID Signs mounted in blind

In the blind, there are several small identification panels featuring common birds.

## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS

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Original location of grain bin



Blind seen from dry playa bed



CDOW – Bryant Will and John Koshak



Cut-out portals are trimmed to prevent injury



Using the grain bin blind

## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS

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### COLORADO

#### SAN LUIS LAKES STATE PARK PORTABLE WILDLIFE VIEWING BLINDS

##### CONTACT

San Luis Lakes State Park  
P.O. Box 175  
Mosca, CO 81146

San Luis Lakes State Park Phone: (719) 378-2020

Lathrop State Park Phone: (719) 738-2376

##### FEATURED SPECIES

Raptors, waterfowl, waterbirds, shorebirds, songbirds, elk, mule deer, coyote

##### FEATURED HABITATS

Wetlands, lakeshore, riparian, rabbitbrush and greasewood flats, alkaline grasslands

##### DESCRIPTION

Six portable blinds were constructed for use at the San Luis Lakes State Wildlife Area, adjacent to San Luis Lakes State Park. The canvas blinds selectively are designed to be placed on existing wood decks (not accessible) to offer viewing opportunities in a variety of habitats and different areas, as water levels increase and decrease in wetlands. Access is summer, fall and winter. A blind holds 4 viewers. Wildlife will come within 50 feet.

Hunters also invited to use blinds in season.

Uses are separated.

*Note: Use of these blinds is pending some redesign (see tips/lessons learned).*

##### GOAL

To provide access for wildlife viewing. To give viewers a safe, comfortable location out of the prevailing wind to watch, photograph and hunt waterfowl and other wildlife.

##### TARGET VISITORS

Wildlife viewers, photographers, waterfowl hunters

##### BLIND DESIGN/CONSTRUCTION

**Design:** Canvas rectangular structure with metal poles for structure. Zip open windows, ports and roof to provide viewing from the blind. This structure would be set on a permanent wooden deck and attached to the deck via webbing fasteners and clips. A portable bench is provided in each blind for viewer/hunter comfort.

**Placement (orientation, camouflage):** Placement depends upon changing water levels in wetlands and along lake shore. All blinds will be securely fastened to wooden deck structure with webbing and fasteners. Opening ports and roof could be placed facing toward water and wetlands areas to provide viewing.

**Materials:** Canvas, metal poles, zippered windows, roof and ports, nylon webbing – placed on a treated wooden deck raised about 18" above ground level.

**Other special features?** Multi-purpose (viewing as well as hunting)

**Cost to build (approx.):** \$1,000 each

**Year built:** 1998

**Partnerships/Volunteers involved?** CDOW, State Parks, Great Outdoors Colorado, Youth Crew deck construction.

**Plans available?** Yes (see next page)

##### APPROACH TO THE BLINDS

Depending upon the blind location, there may be some natural screening from the wetlands, pond areas where the blinds would be located by large shrubs like rabbitbrush, saltbush and greasewood. Also, some could be screened from view by their location adjacent to small sand dunes which dot the area.

##### RULES FOR USE

To serve both hunters and viewers, blinds would be reserved for separate uses, located in different parts of the preserve. For most of the year, the blinds would only be used for viewing.

##### INTERPRETATION

Interpretation provided in adjacent state park, none on site at blinds.

##### TIPS AND LESSONS LEARNED

The zippers were placed on the outside of the blinds, instead of the inside as specified. Walking in front of the blind to open them would disrupt wildlife. As of 2006, the zippers still need to be changed before the blinds can be used.

# CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS

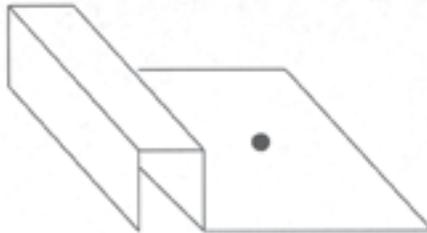
San Luis Lakes State Park  
**PORTABLE WILDLIFE VIEWING BLINDS**



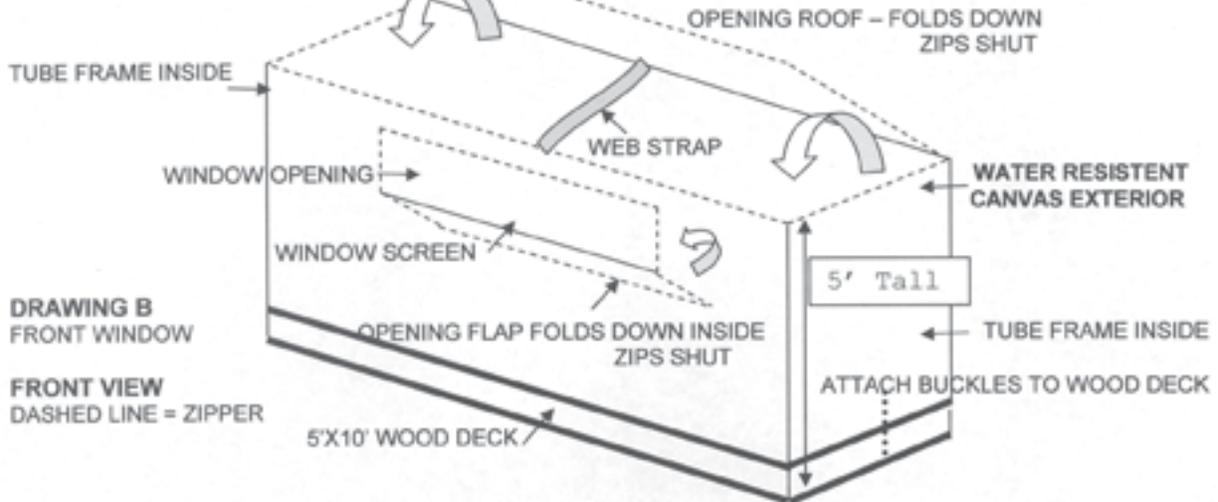
## COMBINATION VIEWING AND WATERFOWL HUNTING BLIND

Dimensions: 5' WIDE X 10' LONG X 5' TALL

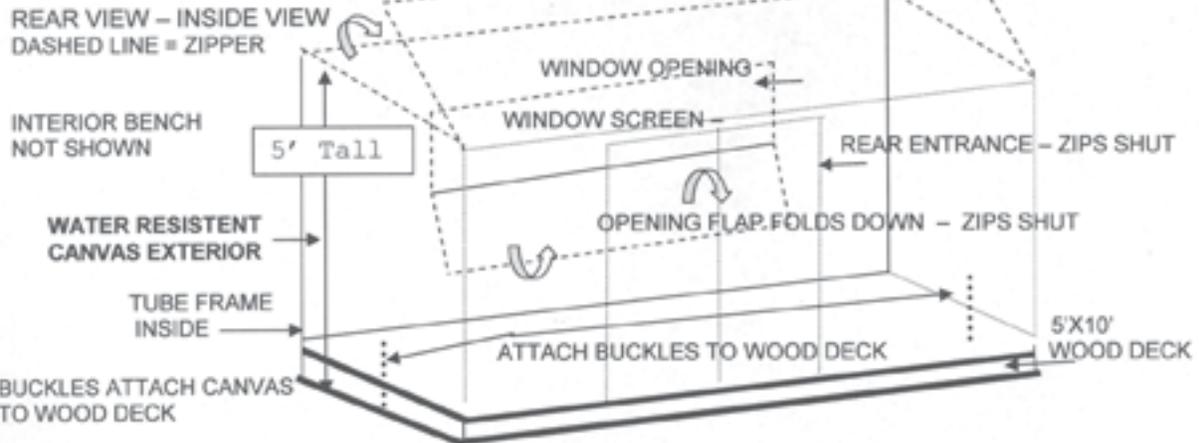
**DRAWING A**



U-CHANNEL FASTENER  
 ATTACHES TUBE FRAME TO WOOD DECK



**DRAWING C**  
 FRONT WINDOW  
 REAR VIEW - INSIDE VIEW  
 DASHED LINE = ZIPPER



## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS



All Photos: Skot Latona

### COLORADO

#### SOUTH PLATTE PARK WILLIAM F. PEACOCK MEMORIAL VIEWING BLIND

##### CONTACT

Skot Latona, Interpretation Specialist  
South Platte Park  
3000 W. Carson Dr.  
Littleton, CO 80120  
Phone: (303) 730-1022  
Email: skotlato@hotmail.com  
Website: [www.sspr.org/nature](http://www.sspr.org/nature)

##### FEATURED SPECIES

Great blue heron, black-crowned night heron, sora, Virginia rail, up to 15 species of diving and dabbling ducks (all 3 teal, widgeon, redhead, ringneck, scaup, hooded merganser, wood duck, etc) during peak migration times (late Sept – Nov before freezing; mid-Feb – April), muskrat and snapping turtle seen occasionally; warblers, red-winged blackbirds common

##### FEATURED HABITATS

Five habitats visible: willow shrub thicket, deep water wetlands, cattail/bulrush marsh, shallow water wetlands, and cottonwood gallery forest.

##### DESCRIPTION

This permanent, accessible blind, shaped like a half-hexagon, will hold up to 30 people. While open year-round sunrise to sunset, spring and fall offer best viewing of open waters. The blind, set 15 yards from the water's edge and 10 feet above the wetlands, gives viewers a great view of a prime duck feeding area (75 yards away). Six interpretive panels in the blind enhance the educational message. Recycled plastic lumber in the interior has proved to be low-maintenance and effective for reducing sound when people are moving within the blind.

##### GOAL

Provide an opportunity for non-personal interpretation of the Park's habitats through interpretive signage at a wildlife-intensive location in the Park. Educate viewers about appropriate wildlife viewing ethics. Build excitement of the wildlife in this semi-urban park. Create a blind that is effective and inviting, yet safe and easy for law-enforcement officials to observe.

##### TARGET VISITORS

Destination birdwatchers and general wildlife interest hikers in South Platte Park and Carson Nature Center, primarily adults and local neighbors; some visitation from regional bike trail visitors seeking a rest area. Occasional use with wildlife ecology field trips.



##### BLIND DESIGN/CONSTRUCTION

**When built:** 1996 (approx.)

**Design:** half-hexagon, open on one side, horizontal viewing slits.

**Placement:** faces north, with open side to the south for warmth of sunlight and to block prevailing winds. The blind is positioned on a high service road overlooking a shallow lake and wetland. (A deeper small lake, a former gravel pit, is on the other side of the road, but does not receive as much wildlife use). Plantings – climbing vines and shrubs – around the structure and along the access road disguise human approach to the blind.

**Materials:** exterior is stained wood, interior is recycled plastic lumber, and roof is sheet steel

**Other special features:** Six sets of viewing windows, horizontally oriented at 3 different heights for wheelchair, youth, and adult use; each with flip-down windows to block sound, movement and wind; southern exposure to provide warmth during winter viewing months. Each set of windows has a full-color interpretive panel with a diagram of the habitat and what feature animals to search for. Recycled plastic lumber is low maintenance and quieter.

## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS



**Cost to build (approx.):** \$14,000, plus \$3000 for interpretive signage

**Partnerships/Volunteers involved?** Volunteers helped with plantings, and finish work; donation from the local community.

**Plans available?** No

### APPROACH TO THE BLIND

Crusher fine level service road of approximately 100 yards off a regional concrete bike/walking trail. First 70 yards are along forested edge, then last 30 are heavily planted with large rabbitbrush, cherry, and plum shrubs to conceal human approach to the blind.

### RULES FOR USE

Groups need to contact the Park in advance to avoid conflicting with park activities, scheduled work projects, or school programs. Individual users have open access sunrise to sunset with just common courtesy and park rules in effect.

### INTERPRETATION

Six interpretive panels each show above and below-water views of wildlife to expect, along with viewing highlights and ethics (photos provided). Future phase to include seasonal detailed ID of species.



### TIPS/LESSONS LEARNED

Other than 1 or 2 minor vandalism issues and biannual sealing of the wood, this structure is self-sustaining. Viewing improved after four years of shrub growth helped disguise the approach trail. Flip down windows probably cause as much or more disturbance than just having open slots due to the movement and sound if people drop them or kids slam them. Recycled lumber is very low maintenance. One of the six habitats (upland/prairie) has become almost totally obscured by maturing vegetation. Blind has become a location for geocache.



# CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS



All Photos: John Koshak, CDOW

## COLORADO

**TOWN OF LIMON  
COLORADO DIVISION OF WILDLIFE  
COLORADO DEPARTMENT OF TRANSPORTATION  
LIMON WETLANDS DOG-EARED PICKET BLIND**

### CONTACT

John Koshak, CDOW  
Limon Wetlands  
Colorado Division of Wildlife  
4255 Sinton Rd.  
Colorado Springs, CO 80907  
Phone: (719) 227-5221  
Email: john.koshak@state.co.us  
Website: www.wildlife.state.co.us

### FEATURED SPECIES

Waterbirds, Waterfowl, Shorebirds

### FEATURED HABITATS

Wetlands surrounded by short-grass prairie

### DESCRIPTION

The Limon Wetlands picket viewing blind offers the chance to view water birds within a short walk from the town of Limon. The permanent blind, built inexpensively by a youth crew, is free, open year-round, holds 8 people, and is not accessible. The drop-down picket design partially screens viewers, and allows children to see over the top. Even with only partial screening, wildlife comes within 100 feet of the blind. The position of the blind on top of a berm puts viewers above the wetlands – elevation appears to help the birds tolerate viewers nearby. Viewing is good in all seasons, except when the wetlands freeze over. The site also features a gazebo that visitors come to first – offering both viewing and six interpretive panels.



Front wall – dog-eared picket viewing blind



Steps up earth berm to blind



Steps up berm to blind, trail at bottom left



Wildlife watcher using blind



Wildlife watcher using gazebo as blind

# CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS



Youth Crew placing vertical posts



Youth Crew with Warren Cummings from DOW

### GOAL

To provide local residents and visitors the chance to view wildlife and appreciate the first wetlands mitigation bank for the Colorado Dept. of Transportation – constructed from old sewage lagoons.

### TARGET VISITORS/USE

Birders, casual wildlife watchers, tourists, hikers.

### BLIND DESIGN/CONSTRUCTION

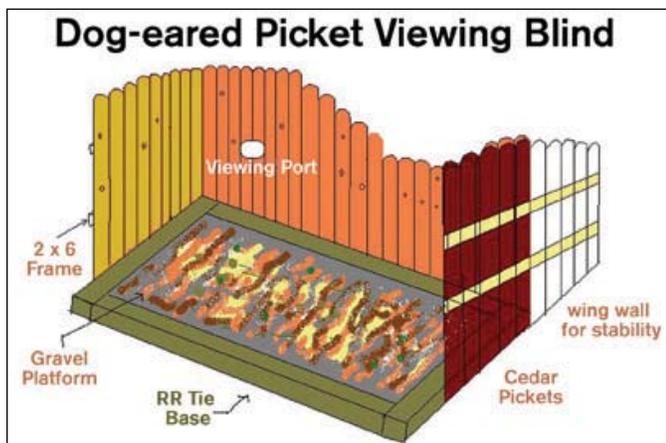
**Design:** Picket fence, 3-sided

**Placement:** Placed along the berm at the west side of the wetlands area, this blind provides viewing for the entire site.

**Materials:** Railroad ties for floor and steps in the trail, 2X lumber for frame and 1X4 cedar fence pickets for the walls of the blind

**Other special features?** Very simple construction

**Cost to build (approx.):** \$400



**Year built:** 1993

**Partnerships/Volunteers involved?** Partners include the Town of Limon, Colorado Youth Conservation Corps – Range Riders, local Eagle Scout Troop and CDOW.

**Plans available?** sketch design



Limon Wetlands Gazebo

### APPROACH TO THE BLIND

The gravel trail follows the west edge of the wetlands along the foot of a tall berm, left from the construction of the wetlands area. By walking along the foot of the berm, visitors can climb steps up into the blind, so that they are not exposed to the wetlands as they access the blind.

### RULES FOR USE

No Camping

### INTERPRETATION

The gazebo features 6 panels covering three topics – wetlands, wildlife and habitat. One panel gives visitors a chance to measure their arm against the wingspan of a goose. Another challenges people to try their wildlife detective skills.

### TIPS AND LESSONS LEARNED

**Partnerships:** As in many partnerships, the construction of the gazebo, trail and blind were accomplished, slowly. However, by working together, each partner was able to stretch their budgets, provide more time and money, and make the entire

# CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS



On site interpretive panel installation

project happen. The youth crew built both the trail and blind – also building ownership and local pride in the project.

**Design:** The picket design works well in this setting, and could be built with fewer pickets to provide more gaps for viewing. The porthole in the plan (see diagram) was not included in the final construction. Extra railroad ties (donated for the project) made it possible to build a floor with ties, instead of gravel as planned.

**Use:** CDOW hopes to increase visibility and use of the site by adding binocular signs. Currently, the site is lightly used and mostly by residents of the small town of Limon.



Cattail detail metalwork on sign frames



Visitor with Canada goose Wingspan



Welcome to Limon Wetlands Panel



Wetlands habitat sign



What are Wetlands sign



Wildlife Detective Interactive sign



Bird Wingspan Interactive Sign



Wildlife History sign

## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS



All Photos: Trinidad State Park

### COLORADO

#### TRINIDAD LAKE STATE PARK LONGS CANYON WILDLIFE VIEWING BLIND

##### CONTACT

Trinidad Lake State Park  
32610 Highway 12  
Trinidad, CO 81082  
Phone: (719) 846-6951  
Email: trinidad.lake@state.co.us  
Website: www.parks.state.co.us



##### FEATURED SPECIES

Waterfowl, shorebirds, raptors, songbirds, beaver, coyote, deer, elk, reptiles and amphibians

##### FEATURED HABITATS

Ponds, riparian, wetlands, short-grass prairie, pinyon-juniper foothills, foothills canyon

##### DESCRIPTION

Two attractive rock structures blend well into the dry, rocky landscape and offer welcome shade and room for breezes to circulate. Blinds are elevated above two ponds on the floor of Longs Canyon, offering spectacular viewing opportunities. The sizable blinds hold 20 plus viewers. The blinds are not

accessible. Wildlife will come within 50 yards of the blind. Spring, summer and fall are the peak seasons.

##### GOAL

To provide shelter and screened viewing for visitors to the Longs Canyon Wildlife Viewing Area.

##### TARGET VISITORS/USE

Birdwatchers, day-hikers, casual wildlife viewers



##### BLIND DESIGN/ CONSTRUCTION

**Design:** Natural stone with timber roof framing

**Placement (orientation, camouflage):**

Natural stone blends into environment. Placement high above ponds provides good viewing opportunities.

**Materials:** Concrete, natural stone and wood.

**Other special features?**

Large viewing blinds

Cost to build (approx.): \$7,500 each

**Partnerships/Volunteers involved?** Youth crew members built blinds with supervision from Park staff.

**Plans available?** No

**When constructed:** 1998

##### APPROACH TO THE BLIND

The trail that leads to the blinds winds along the creek, around the hills and through the pinyon-juniper forest. The trail enters into the blinds from below, effectively screening viewers from wildlife.



## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS



### RULES FOR USE

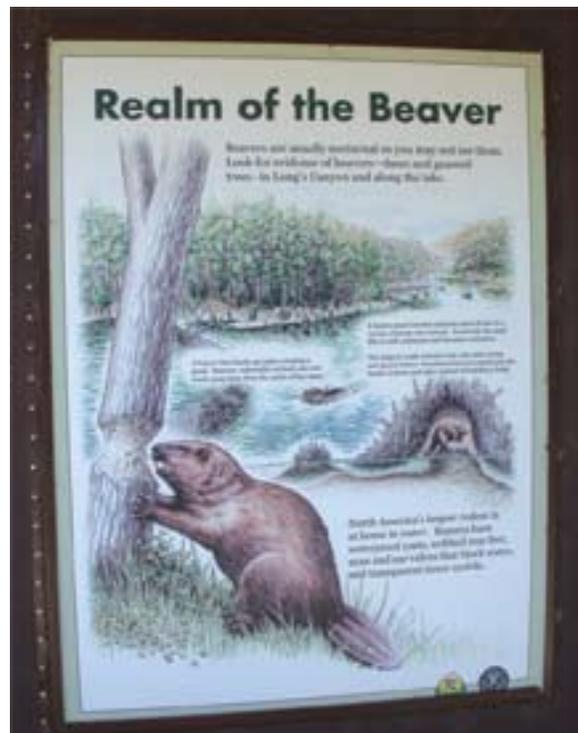
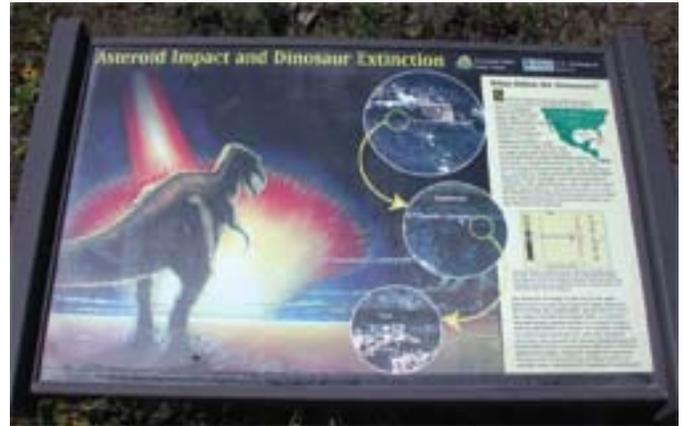
Viewers are welcome to visit year round with a parks pass purchase.

### INTERPRETATION

The trail passes through a geological area that exposes the great unconformity in layers along the canyon wall. An interpretive sign features this geologic phenomenon and its importance to the study of geology and the timeline of the earth.

### TIPS

Natural materials have held up extremely well.



## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS

### DELAWARE

#### PRIME HOOK NATIONAL WILDLIFE REFUGE WATERFOWL/WADING BIRDS PHOTOGRAPHY BLIND

##### CONTACT

Prime Hook National Wildlife Refuge  
11978 Turtle Pond Road  
Milton, DE 19968  
Phone: (302) 684-8419  
Email: fw5rw\_phnwr@fws.gov

##### FEATURED SPECIES

Waterfowl, wading birds, raptors

##### FEATURED HABITAT

Freshwater impoundment and marshes

##### DESCRIPTION

Located on the west shore of Delaware Bay, the refuge conserves key wetland habitats along the Atlantic Coast. The fully enclosed blind offers visitors a chance to photograph and view waterfowl, wading birds and an occasional raptor. A boardwalk extends across wetlands to the blind, a partnership project with North America Nature Photography Association.



Photos: USFWS



View from blind

##### GOAL

To enhance opportunities for wildlife photography and wildlife observation, which are two of the Big Six priority wildlife dependent recreational uses on national wildlife refuges.

##### TARGET VISITORS

Wildlife viewers and photographers.

##### BLIND DESIGN/CONSTRUCTION

**When constructed:** 2002

**Design:** Shed-like with a boardwalk approach. Includes six viewing portals at different heights.

**Placement:** Faces the south overlooking a pond.

**Materials:** Wood frame construction with Tyvek siding and Trex decking; shingled roof.

**Cost to build (approx.):** \$1,700 material cost

**Partnerships/Volunteers involved?** North America Nature Photography Association Refuge Volunteers, Friends of Prime Hook National Wildlife Refuge

**Plans available:** No

##### APPROACH TO THE BLIND

The 0.3 mile trail to the blind starts from the refuge office. The lack of screening surrounding the blind makes the chance for startling waterfowl probable upon initial arrival.

##### RULES FOR USE

First come, first served

##### INTERPRETATION

None at the blind – Limited information available on trail maps at Refuge kiosks

## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS



All Photos: Andrews WMA

### FLORIDA

#### ANDREWS WILDLIFE MANAGEMENT AREA FOREST WILDLIFE VIEWING BLIND

##### CONTACT

Jayde Roof  
9550 NW 160th Street  
Fanning Springs, FL 32693  
Phone: (352) 493-6020  
Website: [MyFWC.com/recreation](http://MyFWC.com/recreation)

##### FEATURED SPECIES

White-tail deer, turkey, white-eyed vireos, gopher tortoises

##### FEATURED HABITAT

Opening surrounded by upland hardwood forest

##### DESCRIPTION

Tucked into the hardwood forest, this ADA accessible, year round blind can hold approximately 10 viewers at a time. The blind faces an old clearing that the Wildlife Management Area staff mows periodically. The clearing attracts wildlife, from deer to wild turkeys and gopher tortoises. The emphasis on accessible features makes this blind popular with wheelchair users. Inside the blind, a park bench offers some seating. The openings are set at three levels to offer viewing for users in wheelchairs, children and adults. Overall, visits to this wildlife management area and the blind are fairly low. The low visitor numbers and careful management of hunts have made it possible for the viewing blind to double as a hunting blind during two-day youth deer hunts and other special hunts in the fall.

##### GOAL

Meet the needs of local communities and recreational groups by providing a fully accessible viewing blind to watch wildlife at all times of year. The blind fulfills a part of the state wildlife management area's 10-year plan.

##### TARGET VISITORS

Visitors with special needs, wheelchair users, as well as families, local communities, youth, wildlife viewers, birdwatchers and hunters.

##### BLIND DESIGN/CONSTRUCTION

**When constructed:** December 2005

**Design:** 10'x24' with multiple window openings, ADA accessible from adjoining ADA concrete slab (plan on next page)

**Placement:** Faces Northeast predominately but also has viewing openings to the North and East. Roof is positioned so water runoff will not obscure views (rain is frequent here).

**Materials:** Frame with Hardiboard siding, concrete floors.

**Cost to build (approx.):** \$6,000

**Partnerships/Volunteers involved?** In-house construction

**Plans available?** Yes

##### APPROACH TO THE BLIND

Gravel road and also a trail spur; parking area fenced to shield wildlife from approaching cars.

##### RULES FOR USE

Daylight hours only

##### INTERPRETATION

Interpretive panels on the inside wall feature wildlife species visitors will likely see or hear. An area brochure describes Andrews Wildlife Management Area

##### TIPS/LESSONS LEARNED

The blind is off a main area road; follow the map and signs.





## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS

### FLORIDA

#### FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION

#### CAPO CREEK TOWER AND LAKE PONTE VEDRA TOWER

##### CONTACT

Matthew Hortman  
440 Guana River Rd,  
Ponte Vedra Beach, FL 32082  
Phone: (904) 825-6877  
Email: Matthew.Hortman@myFWC.com  
Website: www.myFWC.com

##### FEATURED SPECIES

**Capo Creek Tower:** roseate spoonbill, wood stork, hooded merganser, rail species, little blue heron, great blue heron, great egret, snowy egrets and other marsh, wading and shore birds, osprey, bald eagle

**Lake Ponte Vedra Tower:** roseate spoonbill, wood stork, rail species, little blue heron, great blue heron, great egret, snowy egrets and other marsh, wading and shore birds, green-winged and blue-winged teal, scaup, ring-necked duck, redhead, greater yellowlegs, osprey, bald eagle

##### FEATURED HABITAT

**Capo Creek Tower:** Tidal salt marsh, adjacent to mesic pine flatwoods and xeric hammock (a sandy, dry soil, closed canopy hardwood forest)

**Lake Ponte Vedra Tower:** Brackish water impoundment, adjacent to scrub, xeric hammock and fresh water impoundments

##### DESCRIPTION

**Capo Creek Tower:** The 3-story tower is located on an island of Capo Creek, which flows into the Tolomoto River, also known as the Intercoastal Waterway. Viewers overlooking the marsh and forests have the opportunity to see raccoons, deer, wild pigs, and other animals foraging in the marsh. Birds of all types can be seen from a "bird's eye" view.

**Lake Ponte Vedra Tower:** This 3-story tower faces Lake Ponte Vedra, a 2200-acre brackish impoundment with fluctuating water levels. The lake provides numerous recreation opportunities, from hunting and fishing to kayaking and wildlife observation. The tower offers a unique vantage point for observing wintering waterfowl. Other wading and shorebirds use the area year round for foraging and loafing. Viewers may spot American alligators sunning on the top of marsh grass.

##### GOAL

To educate the public about the management activities and the wildlife uses of several habitats

##### TARGET VISITORS

General public, students, birders

##### BLIND DESIGN/CONSTRUCTION

**When constructed:** 1990

**Design:** Two, 3-story towers built to overlook different habitat types

**Placement:** Capo Creek tower was placed on a small island on Capo Creek connected to mainland by a short boardwalk. The Lake Ponte Vedra Tower was placed over the water to get the observers out over the lake, via a short boardwalk, to see the entire 2600-acre impoundment.

**Materials:** Originally constructed of pressure treated lumber; both updated in 2007 with Trex board decking material.

**Cost to build (approx.):** \$70,000 each if built today.



Capo Creek Tower Photo: Florida Fish & Wildlife Conservation Commission

## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS

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### Partnerships/ Volunteers involved?

N/A

**Plans available:** Yes

### APPROACH TO THE BLIND

*Capo Creek tower* is about a 2½ mile hike from the parking area at the Guana River Dam (\$3.00 entrance fee). Visitors walk through xeric hammock, past managed fresh water impoundments, through scrubby flatwoods and finally through maritime hammock, before emerging onto the salt marsh. A small boardwalk leads to the 2-acre island the tower was built on.

*Lake Ponte Vedra tower*, in the middle of the Guana River Wildlife Management Area, is about a 6 mile walk, bike, or horseback ride from either Guana Dam (the South entrance with a \$3.00 entrance fee), or Roscoe road extension (the North entrance). From the north, visitors approach through old pine plantation, mesic flatwoods, scrub and hammock. From the south, visitors pass through mostly xeric hammock, with some scrub and pine flatwoods. A kayak dock may be added to this structure in the future to allow kayakers to pull up to the tower as well.

### RULES FOR USE

Stay on designated trails/roads. Check brochure for hunting season. When WMA is open to hunting, North entrance is closed, but during this season viewers can drive to the towers.



Lake Ponte Vedra Tower

Photo: Florida Fish & Wildlife Conservation Commission

### INTERPRETATION

Both towers have interpretive signs at every level, showing the visitor what to look for and a little about the surrounding habitat.

### TIPS/LESSONS LEARNED

We converted to Trex because it does not splinter and should be more durable in the marine environments. Trex does drive the initial cost higher, but managers are hopeful that Trex will last longer than standard materials.

## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS

### FLORIDA

#### FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION

#### CHINSEGUT NATURE CENTER MAY'S PRAIRIE BLIND

##### CONTACT

Kristin Wood  
23212 Lake Lindsey Road  
Brooksville, FL 34601  
Phone: 352-754-6722  
Email: Kristin.wood@myfwc.com  
Website: MyFWC.com/Chinsegut

##### FEATURED SPECIES

Wading birds (sandhill cranes, white ibis, little blue heron, wood duck, hooded merganser, American bittern, pied-billed grebe, ring-necked duck, green heron); frogs (gopher frog, barking treefrog, etc.)

##### FEATURED HABITAT

Marsh

##### DESCRIPTION

The wooden blind is within the grounds of the state-owned Chinsegut Nature Center where visitors take a spur trail off one of the main nature trails to view and listen to wildlife of the marsh called May's Prairie. Wading birds feed in the shallow waters that are home to plentiful amphibians. The sound of courting gopher frogs (species of special concern in Florida) resonate from the prairie after heavy fall and winter rains. The blind is enclosed on three sides and will hold approximately 5-6 people comfortably. They watch through slats placed at two levels, either standing or while sitting on a bench. Interpretive signs within the blind feature common wetland birds.

##### GOAL

To allow people to view wetland wildlife without disturbing them and to take pictures.

##### TARGET VISITORS

Nature center visitors, hikers, casual wildlife viewers, birdwatchers

##### BLIND DESIGN/CONSTRUCTION

**When constructed:** about 2004

**Design:** Wooden blind with metal roof with short wooden walkway leading up to it

**Placement:** Edge of marsh in saw palmetto/gallberry thicket

**Materials:** pressure treated lumber

**Cost to build (approx.):** materials were about \$500

**Partnerships/Volunteers involved?** none

**Plans available?** No



Photos: Florida Fish & Wildlife Conservation Commission

##### APPROACH TO THE BLIND

A short pine needle/oak leaves spur trail comes off the main nature trail and leads to the wooden walkway that visitors follow into the east-facing blind. The saw palmetto/galberry thicket grows close on either side of the approach, helping to screen visitors as they walk into the blind.

##### RULES FOR USE

Visitors asked to be quiet; open 7 days a week, free access

##### INTERPRETATION

Interpretive signs on walls of blind describe some of the common wetland birds found in the marsh

##### TIPS/LESSONS LEARNED

Early morning and evening best time for viewing. Blind looks to the east. The manager suggests that if she had a chance to improve the blind, she would like to mount a spotting scope in the blind and add more interpretation on marsh life in addition to birds.



## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS

### FLORIDA

#### FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION

#### DIEGO POND VIEWING BLIND

##### CONTACT

Matthew Hortman  
440 Guana River Rd  
Ponte Vedra Beach, FL 32082  
Phone: (904) 825-6877  
Email: Matthew.Hortman@myFWC.com  
Website: www.myFWC.com

##### FEATURED SPECIES

wood stork, rail, little blue heron, great blue heron, great egret, snowy egrets and other marsh, wading and shore birds; belted kingfisher, green-winged and blue-winged teal, American wigeon, gadwall, greater yellowlegs, osprey, bald eagle

##### FEATURED HABITAT

Brackish water impoundment within mesic hammock

##### DESCRIPTION

This blind is about two miles from Guana River WMA's northern entrance off of South Roscoe Extension. This blind overlooks a 30-acre brackish water impoundment that is managed to grow wigeon grass, an aquatic vegetation favored by waterfowl. The shallow pond is usually low to empty in the spring/summer months and flooded in the late fall/winter months. This provides optimal growth conditions for the submerged vegetation and allows wintering waterfowl to feed on the vegetation. The blind's hinged viewing ports open or close to allow as much or as little visibility as desired. The walk to the blind is through old pine plantation, and mesic hammock (a closed canopy hardwood forest). Once in the blind, watch for deer, wild pigs, and raccoons feeding along the edges of the impoundment. Scan the water to see waterfowl and other birds which are in the area looking for an easy meal.

##### GOAL

To educate the public about the management activities and the wildlife uses of the habitats.

##### TARGET VISITORS

General public, students, birders



Photo: Florida Fish & Wildlife Conservation Commission

##### BLIND DESIGN/CONSTRUCTION

**When constructed:** 2007

**Design:** Single story structure, with short boardwalk, three sides, and 16 hinged viewing ports.

**Placement:** Built on a 300-acre brackish water impoundment, facing north/northeast.

**Materials:** Made of pressure treated lumber, trex board hand rails, and wire mesh below railing.

**Cost to build (approx.):** \$15,000

**Partnerships/Volunteers involved?** No

**Plans available:** yes

##### APPROACH TO THE BLIND

Viewers walk to the blind down a mowed trail through mesic hammock, approaching the blind from the rear. The trail was laid out to be far enough away from the impoundment that the viewers quietly can reach the blind with minimal disturbance to the wildlife using the area.

##### RULES FOR USE

Stay on designated trails. Check brochure for hunting season. When WMA is open to hunting the north entrance is closed; however, you can drive to a parking area a few hundred yards from the blind.

##### INTERPRETATION

Interpretive signs featuring the habitat are inside the blind.

##### TIPS/LESSONS LEARNED

So far the hinged viewing ports open quietly, but may require maintenance to open silently as they begin to rust and wear over time.

## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS



Observation Tower All Photos: USFWS

### FLORIDA

#### PELICAN ISLAND NATIONAL WILDLIFE REFUGE THE CENTENNIAL TRAIL & OBSERVATION TOWER

##### CONTACT

Joanna Webb  
Pelican Island National Wildlife Refuge  
1339 20th Street  
Vero Beach, FL 23960  
Phone: (772) 562-3909  
Email: pelicanisland@fws.gov (Joanna\_webb@fws.gov)  
Website: www.fws.gov/pelicanisland

##### FEATURED SPECIES

**Birds:** Brown pelican, wood stork, great blue heron, great egret, snowy egret, little blue heron, tri-colored heron, reddish egret, green heron, white ibis, roseate spoonbill, black-crowned night heron, yellow-crowned night heron, anhinga, double crested cormorant, osprey, loggerhead shrike, turkey and black vulture, American kestrel, mottled duck, magnificent frigatebird

**Winter:** white pelican, blue-wing teal, greater and lesser scaup, hooded mergansers, greater and lesser yellowlegs, bald eagle

**Mammals:** Bobcat, marsh rabbit, raccoon, northern river otter, cotton rat

**Snakes:** Black racer

**Butterflies:** over 33 species

##### FEATURED HABITAT

Transitional maritime hammock, lakes, ephemeral ponds, tidal marsh and the Indian River Lagoon, natural mangrove islands including Pelican Island.

##### DESCRIPTION

The observation tower is more than a tower for spotting wildlife. It's part of an experience for visitors following the paved Centennial Trail through transitional maritime hammock and wetland areas to an ADA accessible boardwalk that features all 548 national wildlife refuges engraved on the planks. The boardwalk gently ascends to the 18-foot covered tower where 10-15 people can comfortably read the two interpretive panels, and view the Indian River Lagoon and Pelican Island through the two mounted spotting scopes (one is ADA accessible). Best time of the year to visit is from October through May. Best wildlife viewing times are morning and late afternoon.

##### GOAL

To provide a public land-based access to view the nation's first national wildlife refuge. To educate the public about their national wildlife refuge system.

##### TARGET VISITORS

Tourists, locals, families, school groups; visitors using the Indian River Lagoon Scenic Byway; birdwatchers following the Great Florida Birding Trail; historians interested in the Nation's first national wildlife refuge and National Historic Landmark



##### BLIND DESIGN/CONSTRUCTION

**When constructed:** 2002

**Design:** 18-foot observation tower overlooking the very scenic Indian River Lagoon

**Placement:** Placed on the fringe of the Indian River Lagoon at the closest viewing distance from Pelican Island. Observation tower is the culmination of a .36 mile interpretive trail.

**Materials:** Pressure treated wood, Fiberforce Structured Plastic Weathered boardwalk planks (engraved planks), tin roof for the observation tower.

**Cost to build (approx.):** \$350,000 including boardwalk trail, kiosks, interpretive waysides, spotting scopes.

## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS



**Partnerships/Volunteers involved:** Indian River County, ConocoPhillips, Wild Birds Unlimited Pathways to Nature Program, National Fish and Wildlife Foundation, Florida Power and Light, St. Johns River Water Management District, Florida Inland Navigation District, Pelican Island Preservation Society, U.S. Fish and Wildlife Service.

**Plans available:** Yes

### APPROACH TO THE BLIND

The Centennial Trail is .72-mile round-trip hike that begins from a parking area with 25+ parking spots. A trailhead sign welcomes visitors as they walk on a paved trail that leads to an orientation kiosk (with bench) situated by a lake and a volunteer maintained butterfly garden. The trail continues around the lake and leads to another kiosk (featuring the National Wildlife Refuge System) at the head of the boardwalk. The boardwalk guides visitors back in time through the history of the Refuge System as they gradually elevate to 18 feet above the ground. Visitors on the Centennial Trail boardwalk are normally looking down at the engraved planks on their approach to the observation tower. As they begin to climb above the mangrove fringe, the scenic view of the Indian River Lagoon unfolds. Once at the observation tower, visitors are welcomed with a breeze under a covered roof and an expansive view of the lagoon with Pelican Island directly in front of them.

### RULES FOR USE

No visitor fees. Open from dawn to dusk. No bikes or dogs permitted on the trail.

### INTERPRETATION

Kiosk #1 interpretation focuses on orientation: history, Pelican Island, partners in land acquisition and habitat restoration, visitor information. Interpretation along the paved part of the trail includes: habitat restoration, mammals of the refuge. Interpretation at kiosk #2 focuses on an introduction and map to the National Wildlife Refuge System to prepare visitors for the walk back in time on the boardwalk. The boardwalk interprets the first 100 years of the national wildlife refuge system and includes engraved planks of all 548 refuges in reverse chronological order, supported by interpretive waysides on: Alaska wilderness, prairie pothole region, duck stamp and waterfowl conservation, President Theodore Roosevelt and the history of the establishment of the first refuge at Pelican Island. The observation tower displays a large attractive panel on birds and an orientation map to the view from the tower.

### TIPS/LESSONS LEARNED

Do not engrave on composite (50% lumber/50% plastic) boardwalk planks. The plank engravings eroded away within 2 years and we had to purchase new planks and have them engraved again. We switched to a 100% recycled plastic plank.



## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS

### KANSAS

#### CIMARRON NATIONAL GRASSLAND LESSER PRAIRIE-CHICKEN VIEWING BLINDS



Photo: USFS

#### CONTACT

Andrew Chappell  
Cimarron National Grassland  
242 E. Hwy 56  
P.O. Box 300  
Elkhart, KS 67950  
Phone: (620) 697-4621  
Email: atchappell@fs.fed.us  
Website: [www.fs.fed.us/r2/psicc/cim/cim\\_lpc.shtml](http://www.fs.fed.us/r2/psicc/cim/cim_lpc.shtml)

#### FEATURED SPECIES

Lesser prairie-chickens; the east blind is on a prairie dog town, so associated species can be found too.

#### FEATURED HABITATS

Sandsage Prairie

#### DESCRIPTION

Cimarron National Grassland is one of the premier public lands for viewing the lesser prairie-chicken and today offers two blinds (east and west) for birdwatchers and photographers to observe their booming displays on leks without disturbing the birds, from March through May.

Two old metal meter houses donated by an oil and gas company, then retrofitted to become viewing blinds, now hold up to 4 people on a first-come, first-serve basis. Depending on the time of year, the birds come within 10 feet to 50 yards of the blind. The west blind was replaced in March 2006 and the east blind replaced in March of 2005. The blinds are free and do not require reservations, except for commercial birding groups.

#### GOAL

To provide visiting public a place to view lesser prairie-chickens

#### TARGET VISITORS

Bird watchers

#### BLIND DESIGN/CONSTRUCTION

**Design:** Old meter house used in oil and gas production

**Placement (orientation, camouflage):** Front of blind faces the majority of booming birds on the lek

**Materials:** Concrete floor, metal frame with metal siding and roof; 2 drop down windows cut in the side

**Cost to build (approx.):** Donated by oil and gas company

**Partnerships/Volunteers involved?** See above

**Plans available?** Not from us



Photo: USFS

#### APPROACH TO THE BLIND

Trail from parking area

#### RULES FOR USE

- Arrive at the blind one hour before sunrise and depart no sooner than one hour after sunrise.
- Commercial bird groups are limited to one per day at each blind.
- Good birding ethics; be kind to other users that may be there.

#### INTERPRETATION

Brochures are available at the District Office or online

# CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS

## KENTUCKY

### KENTUCKY DEPARTMENT OF FISH AND WILDLIFE RESOURCES

#### BEAVER DAM SLOUGH VIEWING PLATFORM

##### CONTACT

Charlie Wilkins  
Ballard Wildlife Management Area  
864 Wildlife Lodge Road  
LaCenter, KY 42056  
Phone: (270) 224-2244  
Email: charlie.wilkins@ky.gov  
Website: fw.ky.gov

##### FEATURED SPECIES

Wintering waterfowl, wintering and nesting bald eagles, shorebirds, wading birds, grassland songbirds, white-tailed deer, wild turkeys

##### FEATURED HABITAT

Oxbows, beaver sloughs, bottomland hardwood forest, managed wetlands, and agricultural lands

##### DESCRIPTION

The wildlife viewing loop trail at Ballard Wildlife Management Areas provides access to Beaver Dam Slough, bottomland hardwood forest and adjacent native grassland habitat. A spur from the main trail leads to the walkway and viewing platform into Beaver Dam Slough, where viewers may observe nesting wood ducks in summer, migrating waterfowl in fall, winter and early spring, as well as nesting and wintering bald eagles. The viewing platform is ADA accessible. The platform can accommodate 10-15 viewers at a time.

##### GOAL

Educate the public about the wildlife of bottomland hardwood forest and sloughs and provide opportunities to observe wildlife and their habitats.

##### TARGET VISITORS

General public

##### BLIND DESIGN/CONSTRUCTION

**When constructed:** 2004

**Design:** Metal platform with railing

**Placement:** The platform is situated within buttonbush to camouflage viewers. It also allows viewing opportunities of a pair of nesting bald eagles.

**Materials:** The walkway and viewing platform are constructed of steel pipe driven into the bottom of the slough to the depth of 20+ ft, angle iron and expanded metal

**Cost to build (approx.):** \$30,000

**Partnerships/Volunteers involved?** Funds to develop the site came from a WCRP grant

**Plans available?** No

##### APPROACH TO THE BLIND

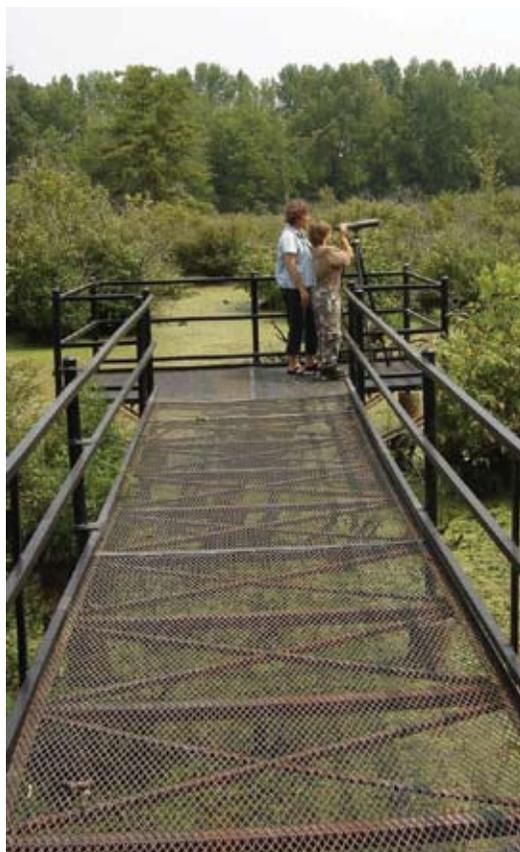
The trail spur leading to the walkway and viewing platform is curved to camouflage viewers.

##### RULES FOR USE

Open to the public year round, sunrise to sunset.

##### INTERPRETATION

Interpretive map and brochure



Photos: Kentucky Dept. of Fish and Wildlife

## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS

### KENTUCKY

#### LOUISVILLE NATURE CENTER BIRD BLIND NONPROFIT ORGANIZATION

##### CONTACT

Kathy Morris  
3745 Illinois Ave.  
Louisville, KY 40213  
Phone: 502-458-1328  
Email: [Inc@bellsouth.net](mailto:Inc@bellsouth.net)  
Website: [www.louisvillenaturecenter.org](http://www.louisvillenaturecenter.org)

##### FEATURED SPECIES

More than 150 varieties of Kentucky resident and migratory birds

##### FEATURED HABITAT

Beargrass Creek State Nature Preserve

##### DESCRIPTION

The wheelchair-accessible bird blind holds approximately fifteen people comfortably. Just outside the viewing window, a water feature and many types of feeders attract a variety of birds and other wildlife against a backdrop of the preserve's forest. Birds are seen at all times of the day and in all seasons with some species visible only in certain seasons.

##### GOAL

To provide nature education and encourage stewardship in an urban forest.

##### TARGET VISITORS

Students, nature enthusiasts, bird watchers, artists, teachers, families, hikers, senior citizens, and general public

##### BLIND DESIGN/CONSTRUCTION

**When constructed:** Approximately 1984

**Design:** Rectangular shed-like structure; would like to add a second story and, possibly, air conditioning to the bird blind when funds become available.

**Placement:** At the edge of the Beargrass Creek State Nature Preserve

**Materials:** Wood

**Cost to build (approx.):** N/A

**Partnerships/Volunteers involved?** Funded by Fleur De Lis Grant of Louisville Board of Alderman; enhancements (sound system, heater, water feature) funded by Beckham Bird Club and Louisville Audubon Society

**Plans available?** No



Photos: David Catlin

##### APPROACH TO THE BLIND

No screened approach is necessary – door at back leads into blind.

##### RULES FOR USE

The birds can hear noise as well as vibrations. It's important to sit back from the window and to limit noise and movement as much as possible.

##### INTERPRETATION

Visitors can peruse educational materials located in the bird blind. In addition, the nature center can schedule a small group presentation upon request. Staff or volunteers will give a brief educational session along with bird ID.

## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS

### LOUISIANA

#### CAMERON PRAIRIE NATIONAL WILDLIFE REFUGE PINTAIL WILDLIFE DRIVE PHOTO BLIND

##### CONTACT

Diane Borden-Billiot  
1428 Highway 27  
Bell City, LA 70665  
Phone: (337) 598-2216  
Email: [diane\\_borden\\_billiot@fws.gov](mailto:diane_borden_billiot@fws.gov)  
Website: <http://www.fws.gov/swlarefugecomplex>

##### FEATURED SPECIES

White-fronted and snow geese; great blue heron, great egret, black-necked stilts and other marsh, wading and shorebirds; green-winged and blue-winged teal; mottled ducks; northern shovelers, American widgeon, gadwall

##### FEATURED HABITAT

Managed freshwater wetland



All Photos: Cameron Prairie NWR

##### DESCRIPTION

This blind is approximately a mile north of the Gulf-intra-coastal waterway and 15 miles north of the Gulf of Mexico. It is located with a moist soil unit managed to grow food for wintering waterfowl. This blind is best for geese and other waterfowl from November through mid-January. Two people can fit into the blind comfortably.

##### GOAL

To provide photographers or bird watching enthusiasts an opportunity to observe birds from a relatively close proximity

##### BLIND DESIGN/CONSTRUCTION

**When constructed:** 2005

**Design:** Single story viewing structure, 8' long by 4' wide with multiple hinged viewing ports

**Placement:** The blind is set within a 263-acre moist soil unit at the edge of a site where grit sand is provided throughout the winter for geese.



**Materials:** Treated 2x4's and plywood, with painted exterior.

**Cost to build (approx.):** \$1,200

**Partnerships/  
Volunteers involved?**  
Built by Friends of SW LA NWR Complex and Wetlands

**Plans available?** No

##### APPROACH TO THE BLIND

Viewers walk to the blind along a mowed levee trail through a freshwater moist soil unit. Viewers approach the blind from the south side of the blind. During the winter when geese are present, viewers must enter the blind before sunrise to prevent bird disturbance.

##### RULES FOR USE

Call refuge office to ensure availability and check on site conditions. Park in designated blind parking area. Stay on trail to blind. During winter months enter blind 30 minutes before sunrise and stay within blind until geese leave the grit site.

##### INTERPRETATION

Site interpretation is located within the Cameron Prairie visitor center 3 miles north of the blind site.

##### TIPS/LESSONS LEARNED

Initial photo ports were too small for large professional lenses and insect proofing has been impossible. Ports are in the process of being enlarged and regular maintenance is essential to keeping insects to a minimum.

## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS

### MARYLAND

#### BLACKWATER NATIONAL WILDLIFE REFUGE PHOTO BLIND AND OBSERVATION PLATFORM ON BLACKWATER NWR WILDLIFE DRIVE

##### CONTACT

Maggie Briggs  
Visitor Services Manager  
Blackwater NWR  
2145 Key Wallace Drive  
Cambridge, MD 21613  
Phone: )410) 228-2677  
Email: Maggie\_briggs@fws.gov  
Website: <http://fws.gov/blackwater>

##### FEATURED SPECIES

A wide variety of migrating waterfowl, wading shore birds, eagles, herons, turtles, muskrat, deer and Delmarva fox squirrels.

##### FEATURED HABITAT

Marsh and pond

##### DESCRIPTION

Located off the popular Wildlife Drive, the rectangular-shaped blind is built on pilings over the edge of a small pond surrounded by woods and marsh vegetation. Visitors walk on a straight, wood boardwalk with railings across wetlands to the blind. Both the boardwalk and blind are accessible for wheelchairs. Viewers and photographers can choose among seven openings at the front facing the pond and 5 openings on each end at various heights. The structure can probably hold 25 people, but 17 allow each viewer a viewing window. The back side of the blind where visitors enter has a plank seating on each side of the back door. The blind is open year-round. This blind is featured in Chapter 3 (p. 20) to show how natural vegetation post-construction can grow in and provide screening, so the blind blends with nature, and visitors walking up to the blind are well screened.

##### GOAL

Provide an accessible observation area and photo blind for the general public and photographers, and an educational tool for students.

##### TARGET VISITORS

Photographers, students and general public



Photo: Blackwater NWR

##### BLIND DESIGN/CONSTRUCTION

**When constructed:** 2002

**Design:** Universally accessible boardwalk, photo blind and observation platform

**Placement:** On Blackwater NWR Wildlife Drive

**Materials:** Wood

**Cost to build (approx.):** \$30,000

**Partnerships/Volunteers involved?** Friends of Blackwater, Waterfowl Festival Foundation, Bank of America

**Plans available?** Yes

##### APPROACH TO THE BLIND

A boardwalk (wood, 2'X8" decking) across the marsh leads to the blind

##### RULES FOR USE

First come, first serve. There is no fee. However, to access the blind, visitors must first pay \$3 per vehicle or \$1 per biker/hiker to enter the Wildlife Drive.

##### INTERPRETATION

None at this time

##### TIPS/LESSONS LEARNED

The facility opening is oriented facing the Wildlife Drive and surrounded by vegetation that helps shield the visitors from the wildlife. We did find that we needed to cover the openings with a camouflage material to help shield the photographer or viewer.

## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS



### MASSACHUSETTS

#### MASS AUDUBON – DANIEL WEBSTER WILDLIFE SANCTUARY VIEWING BLINDS

##### CONTACT

Sue MacCallum  
Director, Mass Audubon  
South Shore Sanctuaries  
2000 Main St.  
Marshfield, MA 02050  
Phone: (781) 837-9400 ext. 7901  
Email: smacallum@massaudubon.org

##### FEATURED SPECIES

Hérons, egrets, shorebirds, swallows, red-winged blackbirds, muskrats, turtles

##### FEATURED HABITATS

Shallow wetland

##### DESCRIPTION

Two spacious and popular observation blinds on opposite ends of a shallow pond offer close-up views and photography within a 500+-acre complex of forests, grasslands and water. The Sanctuary used a design from the Royal Society for the Protection of Birds in England for the blinds. The two orientations offer photographers a choice for morning vs. afternoon photography – assuring light coming in from behind the blind. The afternoon blind features large tree branches for perches placed about 25 to 30 feet in front, offering places for birds to land for enhanced viewing and photography. Inside the blind are special plates for mounting cameras as an alternative to a tripod. Viewers and photographers can sit comfortably on benches and view, while referring to bird identification signs. Best times of year are April through late July, with some opportunities August through October. Each blind can comfortably hold 10 people. Plans are in the works to retrofit the first blind to accommodate better access and viewing from wheelchairs.



All Photos: Shawn P. Carey

##### GOAL

To offer consistent viewing and photography of birds and other wildlife within the sanctuary

##### TARGET VISITORS

Birders, photographers, and nature lovers of all experience levels

##### BLIND DESIGN/CONSTRUCTION

**Design:** Property staff constructed the identical wooden blinds. A ramp leads up to the entrance door. Benches are stationary and placed in front of a ledge that holds bird ID panels. Plexiglas windows can be lowered for better viewing or raised for protection from the weather.

## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS

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Photo: Shawn P. Carey

**Placement:** One blind faces east, the other west

**Materials:** Wood, Plexiglas windows

**Year built:** Approx. mid-1980s

**Partnerships:** none

### **APPROACH TO THE BLINDS**

A short walk from the parking lot leads to the pond. The entrance to both blinds is screened with a berm that is covered with native shrubs.

### **RULES FOR USE**

Dawn to dusk only during sanctuary hours. No smoking or pets are allowed on the sanctuary.

### **INTERPRETATION**

Bird identification signs are located below each viewing window.

### **TIPS/LESSONS LEARNED**

Photographers enhanced the site by moving a partially submerged log and branch to slightly deeper water for attracting green herons. Additional perches at different heights attract various birds. Photographers also help maintain perches and recently helped clear out invasive Phragmites from the pond. Maintenance of pond is ongoing to manage silt buildup and encroachment of plants that block viewing.

## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS



All Photos: Shawn P. Carey

### MASSACHUSETTS

#### MASS AUDUBON – WELFLEET BAY WILDLIFE SANCTUARY VIEWING AND PHOTOGRAPHY BLIND

##### CONTACT

Bob Prescott  
Sanctuary Director  
291 State Highway, Route 6  
Wellfleet, MA 02667  
Phone: (508) 349-2615  
Email: wellfleet@massaudubon.org

##### FEATURED SPECIES

green heron, snowy egret, great egret, great blue heron, red-winged blackbird, belted kingfisher, spotted and solitary sandpiper, yellowlegs, black-bellied plover

##### FEATURED HABITATS

Shallow pond



##### DESCRIPTION

Located on Cape Cod, Wellfleet Bay features 1,100 acres of salt marsh, sandy beach, pine woodlands, freshwater pond and rare heathland. The small blind (holds up to three people) overlooks Goose Pond. The enclosed blind is tucked in the woods, and has three small portals for viewing and photography. A bench inside the blind rests on a plywood floor. The blind is too small for tripods. Photographers bring beanbags for resting lenses on the window ledges. Logs and branches placed strategically in the pond offer perch spots for birds. Best times and seasons for viewing are mornings, May through August, Water levels drop in late summer, offering habitat for shorebirds. The Sanctuary also features green architecture at its nature center – with passive solar heating, composting toilets and gray water planter beds.



## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS

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### GOAL

To offer viewing and photography of birds and other wildlife within the sanctuary

### TARGET VISITORS

Birders of all experience levels

### BLIND DESIGN/CONSTRUCTION

**Design:** Simple four-sided structure with wood shakes on outside.

**Placement:** Pond and tidal flats edge

**Materials:** Wood

**Cost to Build:** Unknown

**Year built:** around 1985

**Partnerships:** No

**Plans available?** No



All Photos: Shawn P. Carey

### APPROACH TO THE BLINDS

A short walk from the parking lot leads to the pond. The approach is partially screened by natural vegetation.

### RULES FOR USE

None

### INTERPRETATION

None

### TIPS/LESSONS LEARNED

Photographers worked with this sanctuary to remove invasive phragmites that blocked visibility from the blind and was damaging the pond – a two year project. Today, the blind once again offers excellent views of birds. Phragmites removal will be a yearly project for the blind to continue to offer views and photography.

## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS



All Photos: Shawn P. Carey

### MASSACHUSETTS

#### MASS AUDUBON – MASS AUDUBON VISUAL ARTS CENTER BIRD PHOTOGRAPHY BLIND

##### CONTACT

Amy Montague, Director  
Mass Audubon Visual Arts Center  
963 Washington St.  
Canton, MA 02021  
Phone: 781-821-8853  
Email: [visual-arts@massaudubon.org](mailto:visual-arts@massaudubon.org)  
Website: [www.massaudubon.org/visualarts](http://www.massaudubon.org/visualarts)

OR

Shawn P. Carey  
Migration Productions  
Email: [scarey@avfx.com](mailto:scarey@avfx.com)

##### FEATURED SPECIES

Feeder birds: chickadees, titmouse, nuthatch, goldfinch, and cardinal, blue jay

##### FEATURED HABITAT

Small field with bird feeders and perches

##### DESCRIPTION

Located within the only Audubon sanctuary created to promote the arts in nature (photography, sculpture, etc.), the blind serves as an ideal extension for visitors inspired by bird photography to spend time learning how to observe and photograph common birds. The focus on feeder birds that are habituated to human presence made it possible to situate the blind in a busy setting – next to the visitor center and gallery, and across the street from a high school.

Boy scouts built the simple four-sided wooden blind (with a back door entry) in a day, as an Eagle Scout badge award project. Designed by professional photographer Shawn Carey,



it holds four photographers to take photos through the four holes in the camouflage-colored burlap. Staff from the center keep feeders filled. Photographers bring tripods or attach cameras to plates provided in the blind. Most stand up inside, but stools are provided for longer teaching workshops. The perches near the blind are movable, and give photographers a chance to take photos of birds off the feeders on more natural settings. The best seasons for photography are spring and early summer (end of March through end of June) when the sun angles are best for photography.

##### GOAL

Offer a blind specifically for photographing common birds and for bird photography workshops

##### TARGET VISITORS

Photographers – beginning and advanced

## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS



### BLIND DESIGN/CONSTRUCTION

**When constructed:** 2004

**Design:** 4-sided wooden structure 16' wide x 8' deep x 8' high.

**Placement:** Northwest – morning location to shoot

**Materials:** Wood, camouflage burlap (with holes for camera lenses)

**Cost to build (approx.):** Most donated

**Partnerships/Volunteers involved?** Boy scouts

**Plans available?** No

### APPROACH TO THE BLIND

Photographers walk in from the back through a door with a latch. The feeder birds are habituated.

### RULES FOR USE

Open to the public. Mass Audubon suggests users make a donation or join the nonprofit group.

### INTERPRETATION

None in the blind – but provided within the adjacent visitor center and gallery.

### TIPS/LESSONS LEARNED

After building the basic blind, we later added two steps and a floor that adds stability for tripods. The burlap camouflage with holes cut in for lenses need maintenance about every three years (putting on new camouflage material). We're seeking a couple people who live close by to maintain the blind and promote its use throughout the year.

## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS

### MONTANA

#### BENTON LAKE NATIONAL WILDLIFE REFUGE GROUSE HOUSE VIEWING BLIND

##### CONTACT

Bob Johnson  
Benton Lake National Wildlife Refuge  
922 Bootlegger Trail  
Great Falls, MT 59404  
Phone: (406) 727-7400 ext. 26  
Email: bob\_f\_johnson@fws.gov  
Website: <http://bentonlake.fws.gov>

##### FEATURED SPECIES

Sharp-tailed grouse

##### FEATURED HABITATS

Short-grass Prairie

##### DESCRIPTION

Just 14 miles north of Great Falls, a four-person, fully-enclosed observation blind (built in 1998) near the dancing ground provides an opportunity to witness this unforgettable sight and sound experience. Up to 45 male sharp-tailed grouse have used this dancing ground on spring mornings to dance, spar and cackle to attract females to the site. Viewers may see grouse as close as 25-feet away from the blind. "Grouse house" is available by reservation at no cost.

##### GOAL

Provide opportunity for visitors to see an active sharp-tailed grouse lek

##### TARGET VISITORS

Anyone interested in observing an active lek

##### BLIND DESIGN/CONSTRUCTION

**Design:** 8x10, Door in Rear, Three viewing slits in front, sloped roof

**Placement:** Looks west

**Materials:** Wood

**Other special features?** Unheated, chairs provided

**Cost to build (approx.):** \$500

**Partnerships/Volunteers involved?** Constructed by a volunteer

**Plans available?** No



Photos: USFWS



##### APPROACH TO THE BLIND

Approximately ¼ mile walk across prairie

##### RULES FOR USE

To reduce the level of disturbance and still provide viewing opportunities the blind is available from Friday through Sunday mornings in April and May. The remainder of the week is reserved strictly for the birds. Persons wishing to reserve the blind must be prepared to enter the blind one to one-and-a-half hours before sunrise and remain in the blind for at least two hours. There is no fee charged for use of the blind.

##### TIPS

The location of the lek can move short distances, which requires moving the blind closer to the lek each year prior to the period that it's used. The blind was constructed on skids, and is easy to move with an ATV or pickup.

A fully enclosed blind is important for grouse viewing – the birds would flush if there was a partially enclosed blind. It's critical that viewers are in the blind before sunrise and the birds are not aware of their presence.

*Note: Currently, a local Eagle Scout is constructing a photography blind that will be placed on the edge of one of our marsh units. It will be the same basic design as the grouse house and will be available year round on a first come, first served basis.*

## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS

### MONTANA

#### LOLO NATIONAL FOREST SEELEY LAKE WILDLIFE VIEWING BLIND

##### CONTACT

Seeley Lake Ranger District  
3583 Highway 83

Seeley Lake, MT 59868

Phone: (406) 677-2233

Website: [www.fs.fed.us/r1/lolo/resources-natural/wildlife/viewing/index.htm](http://www.fs.fed.us/r1/lolo/resources-natural/wildlife/viewing/index.htm)

##### FEATURED SPECIES

Waterfowl migration stopover site in April, Canada goose, tundra swan (breeding season & nesting); common loon, yellow-headed blackbird, common yellowthroat, sora rail, American bittern, sandhill crane, bald eagle & northern harrier, as well as dozens of ducks and songbirds

##### FEATURED HABITATS

Old-growth spruce, larch and ponderosa pine; willow-lined, cattail marsh.

##### DESCRIPTION

A 10-minute walk to the viewing blind from the Seeley Lake Ranger District takes visitors first through old-growth western larch and spruce where they may see forest birds such as pileated woodpeckers and Townsend's warblers. The permanent, wooden viewing blind (large enough for 15 people) sits at the edge of a marsh where migrating waterfowl stop in early spring. Songbirds come within 5-10 feet of the blind, while waterbirds and raptors are further off in the marsh – binoculars provide best viewing.

The blind is free and open year-round, but is snowy in winter. Best viewing is during the waterfowl migration in April, and in May-June when water levels are higher. The blind is accessible (with permission to use an administrative road to drive to the blind instead of the trail).

##### GOAL

To provide visitors with a unique, close-up view of birds and other wildlife while minimizing disturbance to wildlife.

##### TARGET VISITORS/USE

The blind attracts all kinds of visitors, from beginning birdwatchers to hot-shot birders. It's used by school groups and for teacher training workshops.



Photo: Deborah Richie Oberbillig

The blind also offers a special place to pause and watch birds for canoeists who have completed their wildlife viewing paddle on the Clearwater Canoe Trail, and then are walking the one-mile return trail back to their vehicles. (The blind is part way along the trail).

##### BLIND DESIGN/CONSTRUCTION

**Design:** 3-sided wooden walls with 16 viewing windows at various heights

**Placement (orientation, camouflage):** Tucked into the tree-line that edges the marsh

**Materials:** Cedar and pressure-treated wood

**Cost to build (approx.):** \$10,000

**Year built:** 1991

**Partnerships/Volunteers involved?** Summit Independent Living provided advice on accessibility.

**Plans available?** Yes

##### APPROACH TO THE BLIND

The 10-minute walk from the Ranger District through an old-growth spruce and western larch forest is not only scenic, it can serve to build suspense and to put visitors in a quieter, viewing mode. Placing the blind away from cars and roads also assures the experience will be quiet and wild. A straight wooden boardwalk with waist-high solid wood rails provides some screening as visitors walk to the blind.

##### RULES FOR USE

Approach quietly and respect other users and wildlife

##### INTERPRETATION

An interpretive sign (3'x4' silk-screen, full-color print embedded in fiberglass) at the entrance to the boardwalk gives viewers the chance to slow down and consider the special place they are entering. The sign is titled "Wetlands: Rich as a Rainforest," with a focus on the importance of wetlands to wildlife and people.

## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS

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### TIPS AND LESSONS LEARNED

Engineers played a major role, working with biologists and recreation planners, in the design and construction of the blind. The involvement of wheelchair users assured the blind would serve their needs well. While there was some concern early on of over-engineering, the blind is holding up extremely well after 15 years and requires little maintenance.

The positioning of the blind is farther from open water than would be ideal for exciting up-close viewing of loons, ducks and swans. However, the surrounding willows and other marsh vegetation is home to so many songbirds that the close-up viewing of warblers and other smaller birds is extremely rewarding.



Photo: USFS

# CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS



Photos: Rowe Sanctuary

## NEBRASKA

### LILLIAN ANNETTE ROWE SANCTUARY NATIONAL AUDUBON SOCIETY ROWE SANCTUARY SANDHILL CRANE VIEWING BLINDS

#### CONTACT

Director  
Lillian Annette Rowe Sanctuary  
National Audubon Society  
44450 Elm Island Road  
Gibbon, NE 68840  
Phone: (308) 468-5282  
Email: rowe@nctc.net  
Website: www.rowesanctuary.org

#### FEATURED SPECIES

Sandhill cranes

#### FEATURED HABITATS

Platte River

#### DESCRIPTION

Four accessible blinds offer viewers a breathtaking opportunity to view and hear thousands of sandhill cranes on the Platte River each March and April. The cranes come within 30-100 yards of the blinds. The blinds hold from 14 to 36 people, who reserve well in advance and pay \$20 per person. The blinds were constructed from the late 1980s through the early 1990s.

#### GOAL

- To provide viewers with up-close viewing of the Platte River sandhill crane migration, while protecting the cranes from disturbance.
- To offer a guided interpretive experience that encourages conservation and ethical behavior.

#### TARGET VISITORS/USE

- Birders who reserve ahead for the blinds
- 2,500 – 3500 visitors in March (peak numbers)

#### BLIND DESIGN/CONSTRUCTION

**Design:** Rectangular enclosed wooden blind with row of portholes at staggered heights, benches, unheated. Carpeted to reduce noise.

**Placement (orientation, camouflage):** Faces N and S; largest blind has been camouflaged with paint, others were constructed with treated lumber and have been allowed to weather.

**Materials:** treated lumber for all exterior

**Other special features?** Benches, unheated

**Cost to build (approx.):** \$2,500 each  
(today closer to \$10,000 - \$15,000)

**Partnerships/Volunteers involved?** Volunteers used for some of the construction.

**Plans available?** No

SW Blind Interior



SW Blind and fencing approach photos

#### APPROACH TO THE BLIND

1/4 to 1/2 mile walk to blinds; a visual barrier was installed near two of the blinds for the final approach

#### RULES FOR USE

**Morning:** Guide takes group to blind in pre-dawn. Walk in total silence. Group remains in blind for approximately two hours.

**Evening:** Enter blind in daylight before cranes arrive to roost. Leave after dark.

#### INTERPRETATION

Guides quietly interpret crane natural history and conservation from within the blind.

#### TIPS AND LESSONS LEARNED

Few problems, maintenance probably the biggest issue as blinds age with the weather.

# CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS

## NEW JERSEY

### NATIONAL PARK SERVICE SANDY HOOK NATIONAL RECREATION AREA

#### NIKE POND BLIND

##### CONTACT

Bruce Lane  
PO Box 530  
Fort Hancock, NJ 07732  
Phone: (732) 872-5931  
Email: bruce\_lane@nps.gov  
Website: www.nps.gov/gate

##### FEATURED SPECIES

Black-crowned night herons, painted turtles

##### FEATURED HABITAT

Freshwater pond

##### DESCRIPTION

Ideally situated along the coastal New Jersey Atlantic flyway, Sandy Hook offers birdwatchers the opportunity to observe many migrant bird species as well as resident birds. The blind faces a freshwater pond that originally constructed by the military for recreation when the site once served as a coastal defense fort. The pond is close to a former Nike surface to air missile launch site. The three-sided blind without a roof can comfortably hold 4 persons with tripods, and serves both viewers and photographers.

##### GOAL

Provide a variety of recreational opportunities in the park and encourage visitors to go beyond the bathing beaches to experience some of the park's wildlife.

##### TARGET VISITORS

Both experienced nature enthusiasts and first time birdwatchers.

##### BLIND DESIGN/CONSTRUCTION

**When constructed:** 2006

**Design:** 12' X 8' open top deck accessed by a 100', 3' wide boardwalk

**Placement:** On the edge of the pond

**Materials:** pressure treated wood lumber

**Cost to build (approx.):** \$7,000.00 materials and labor



Photo: NPS

**Partnerships/Volunteers involved?** Funds donated by Sandy Hook Foundation

**Plans available?** Yes (Sketch plans and wetlands permit info.)

##### APPROACH TO THE BLIND

Access to the blind is from a paved multi-use trail or foot trail and then to the boardwalk. After invasive phragmites was removed from the area, there's not much screening for viewers as they approach the blind – walk quietly and slowly to avoid disturbance.

##### RULES FOR USE

Be respectful of others. All park regulations apply.

##### INTERPRETATION

Future waysides planned.

##### TIPS/LESSONS LEARNED

Many birders suggested the top be left uncovered to allow a view of birds flying overhead. Make access boardwalk wider. Should be at least 4 feet.

## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS

### NEW YORK

#### MONTEZUMA NATIONAL WILDLIFE REFUGE PHOTO BLIND

##### CONTACT

Andrea VanBeusichem  
Montezuma NWR  
3395 US Route 20 East  
Seneca Falls, NY 13148  
Phone: (315) 568-5987  
Email: Andrea\_VanBeusichem@fws.gov  
Website: www.fws.gov/r5mnwr

##### FEATURED SPECIES

**Waterfowl:** black duck, mallards, American widgeon, gadwall, ruddy duck, canvasback, redheads, green and blue-winged teal, pintail, Canada geese, snow geese; shorebirds; other water birds: American coot, common moorhen, pied-billed grebe;

**Wading birds:** great blue heron, green heron, American bittern;

**Songbirds:** red-winged blackbird, various sparrows;

**Raptors:** bald eagle, northern harrier;

**Other wildlife:** mink, white-tailed deer, red fox.

##### FEATURED HABITAT

Freshwater emergent marsh

##### DESCRIPTION

This camouflaged photography blind overlooks the refuge's Main Pool – 2,500 acres of open water, emergent marsh and forest. Located off the Wildlife Drive auto tour route, the blind is located at the end of short trail that leads through field, cattails and phragmites (an invasive species that the refuge is working to control). Visitors walk up a short ramp into the blind, and look through hinged viewing ports that are positioned at several angles and heights for photographing, as well as viewing wildlife. April and October offer the best times for photographing larger numbers of birds, while May and June feature nesting birds and nestlings. Best lighting for photography is in the early morning.

##### GOAL

To offer high quality wildlife photography opportunities to visitors

##### TARGET VISITORS

Photographers (amateur and professional), general audience, students, birders

##### BLIND DESIGN/CONSTRUCTION

**When constructed:** 2005

**Design:** Single story structure with four sides, a doorway (covered with black heavy mesh fabric) and hinged viewing ports. The outer walls are painted with a cattail design to help it blend into the surroundings, while wings are attached to the

entry wall to provide extra screening for approaching viewers. The blind was reinforced with skids on the bottom so it could be easily moved from the water's edge in the off-season or during duck banding.

**Placement:** Located on the refuge's Main Pool, open water & emergent marsh

**Materials:** Pressure treated lumber and plywood, heavy mesh fabric to cover door opening

**Cost to build (approx.):** \$7,000

**Partnerships/  
Volunteers involved?**

Made possible through a grant sponsored by the Friends of the Montezuma Wetlands Complex

**Plans available?** Yes

##### APPROACH TO THE BLIND

Visitors park in a small lot (two-car limit) just off of the Wildlife Drive auto tour route and walk a short trail to the blind. Along the way, they are screened by cattail and phragmites. The wing-like extensions off the back wall of the blind furthers conceal the visitors' approach.

##### RULES FOR USE

The blind is open for use ½ hour before sunrise to ½ hour after sunset April 1 to December 1 weather permitting (and may be closed in September during duck banding). The parking area for the blind can hold two cars. When there are two cars parked, the blind is full. Visitors must stay on the trail and/or in the blind, not going in front of the blind or past any Area Closed signs.

##### INTERPRETATION

None

##### TIPS/LESSONS LEARNED

The blind and its approach must be well-maintained for it to remain effective. Blind placement is crucial and area photographers should be consulted for blind placement. Early morning lighting is ideal.



## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS



Photos: USFS

### OREGON

#### DESCHUTES AND OCHOCO NATIONAL FORESTS CABIN LAKE VIEWING BLIND

##### CONTACT

Jim Lowrie, District Biologist  
Bend-Ft. Rock Ranger District  
1230 NE 3rd, A-262  
Bend, OR 97701  
Phone: (541)383-4713  
Email: [jlowrie@fs.fed.us](mailto:jlowrie@fs.fed.us)  
Website: [www.fs.fed.us/r6/centraloregon/wildlife/sites/05-cabinlake.shtml](http://www.fs.fed.us/r6/centraloregon/wildlife/sites/05-cabinlake.shtml)

##### OR: Chris Carey

Oregon Dept. of Fish and Wildlife  
Phone: (541) 388-6363.

##### FEATURED SPECIES

Lewis's woodpecker, white-headed woodpecker, northern flicker, pine grosbeak, pinyon jay, Steller's jay, Clark's nutcracker, Brewer's sparrow, red crossbill, gray flycatcher, Audubon's warbler, Cassin's finch, sage sparrow, chipping sparrow, loggerhead shrike, pygmy nuthatch, white-breasted nuthatch, mountain chickadee, western and mountain bluebird, western tanager, green-tailed towhee, purple finch, white-crowned sparrow, great gray owl, small mammals, bats, mule deer.

##### HABITATS

Sagebrush, ponderosa pine, juniper

##### DESCRIPTION

Where ponderosa pine and sagebrush habitats converge, so do the birds. Add a water guzzler to the arid land plus two rustic viewing blinds (dating to the 1960s) 300 feet apart, and the site becomes an outstanding place to observe and photograph songbirds, from 15 to 30 feet away. The blinds hold three people apiece, and offer views of unusual birds from 15 to 30 feet away. While the blinds are open year-

round without reservations required, the best viewing is from April to December, depending upon snow depth. Oregon Department of Fish and Wildlife (ODFW) helps maintain this blind. For best viewing and habitat conditions, livestock are excluded by fencing. This is a remote site that's 10 miles from the nearest services and 50 miles from Bend. However, the road is good and a nearby campground (no water or garbage facilities) offers birdwatchers a convenient place to stay.

##### GOAL

To provide a unique viewing opportunity of the birds of sagebrush and ponderosa pine habitats.

##### TARGET VISITORS

Bird watchers of all ages

##### BLIND DESIGN/CONSTRUCTION

**Design:** 8'x12' roofed huts (2), veiled wall openings

**Placement:** Full view of water basins

**Materials:** weathered wood

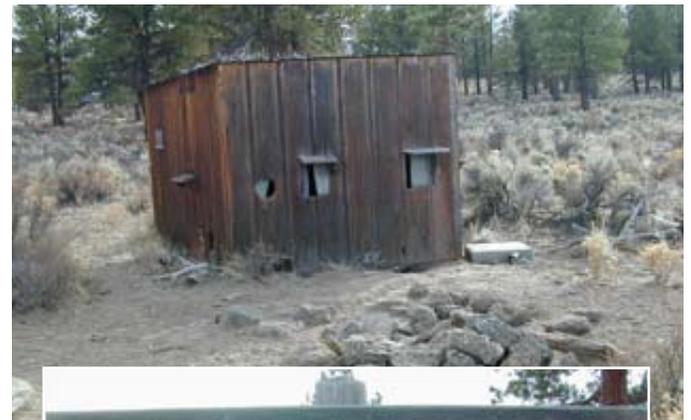
**Other special features?** Rough seating

**Cost to build (approx.):** Unknown for blinds. Replacement cost of guzzlers/aprons in 2005~\$6,000 each.

**Partnerships/Volunteers involved?** Oregon Department of Fish and Wildlife

**Plans available?** No

**When built:** 1960s



## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS

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### **APPROACH TO THE BLIND**

Short walk from parking area through a wooden pole fence for upper site. Approximately 300' walk through sage-brush with slight slope to lower site through a barb wired fence. This blind is not visible from parking area due to slope.

### **RULES FOR USE**

No pets within viewing area. Limit stay if other visitors are waiting. Park as far away from upper blind as possible. Contact the Forest Service or ODFW if problems are noted with the facilities. Visitors are cautioned that this is a remote site. Bring your own drinking water. Closest services are 10 miles away. Road conditions may quickly deteriorate with snow fall.

### **INTERPRETATION**

Minimal. Entrance sign only. Forest species list available. Web site with additional information.

### **TIPS AND LESSONS LEARNED**

Other than the web site, the FS has not promoted this site. Volunteers have not been solicited for maintenance. In dry years the guzzlers may not have water and visitors are asked to bring jugs of water for the basins.



## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS

### TEXAS

#### BALCONES CANYONLANDS NATIONAL WILDLIFE REFUGE SHIN OAK OBSERVATION DECK

Endangered Black Capped Vireo Viewing

#### CONTACT

Rob Iski or Chuck Sexton  
Balcones Canyonlands National Wildlife Refuge  
24518 FM 1431, Box 1  
Marble Falls, TX 78654  
Phone: (512) 339-9432  
Email: fw2\_rw\_Balcones@fws.gov  
Website: <http://southwest.fws.gov/refuges/texas/balcones/index.htm>

#### FEATURED SPECIES

black-capped vireo, painted bunting, yellow-breasted chat, Northern cardinal

#### FEATURED HABITATS

Shin oak, juniper and other shrublands.

#### DESCRIPTION

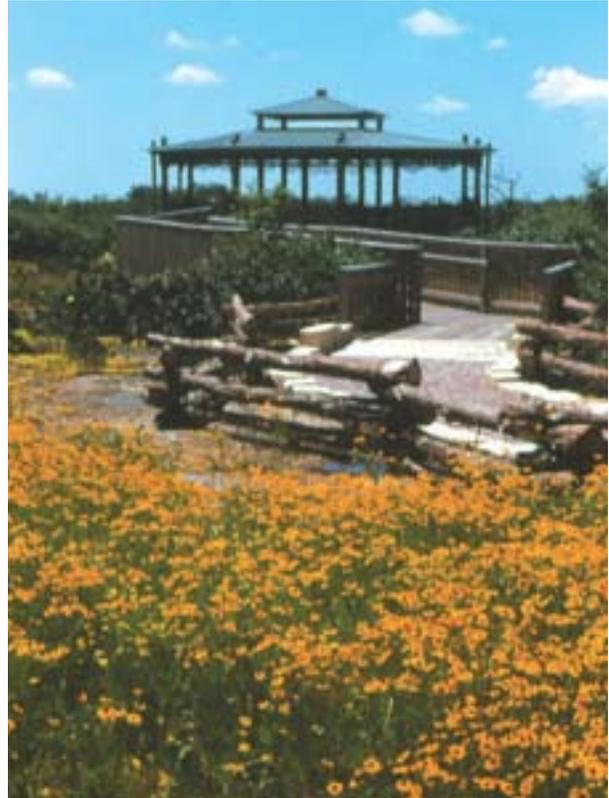
The octagon-shaped, accessible viewing deck, screened by shrubs and vertical railings, offers birdwatchers the chance to view the endangered black-capped vireo not much more than an arm's length away. The deck, constructed in 1998-1999, holds 20 people. Peak months for viewing are the second half of April and May.

#### GOAL

- 1 Provide the only public opportunity on this refuge to hear or observe the endangered Black-capped Vireo in its habitat.
- 2 To provide interpretive opportunities regarding birding, conservation, and ethics.

#### TARGET VISITORS/USE

Birders, general public, interpretation, wildlife observation, photography, hundreds of visitors a year



Shin Oak Viewing Deck for vireos Photo: USFWS

#### BLIND DESIGN/CONSTRUCTION

**Design:** metal roof with vent to dissipate heat, relatively open deck with waist high cedar post fencing. Gaps between juniper posts for air flow and breaking human silhouette.

**Placement:** 360-degree viewing.

**Materials:** treated wood, juniper branch fencing

**Other special features?** Elevated gazebo, octagon-shaped. Juniper posts used to blend in with the juniper trees in the adjacent habitat. One accessible bench.

**Cost to build (approx.):** \$35,000

**Partnerships/Volunteers involved?** Americorps (National Civilian Community Corps), volunteers

**Plans available?** No

#### APPROACH TO THE BLIND

The path and boardwalk snakes its way to the deck.

## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS

### RULES FOR USE

Day use only, pets and horses not permitted. Foot and wheelchair access only. Picnic facilities are not available. Playing of bird tapes to attract birds is strictly forbidden. Deck is closed to the public for about three weeks around early April to allow the Black-capped Vireos to establish their nesting territories without human disturbance.

### INTERPRETATION

- 1 Just past the trailhead, a three panel kiosk interprets the natural history of the Black-capped Vireo and how to observe wildlife. Also, there is some information about the Fish and Wildlife Service and its mission.
- 2 Mid-way to the deck, a one panel interpretive wayside exhibit discusses resource management efforts to protect the Black-capped Vireo and its habitat.
- 3 Six individual bird identification panels are spread out under the deck with limited text about each bird species. (Black-capped Vireo, Painted Bunting, Northern Cardinal – female, Yellow-breasted Chat, Field Sparrow, and Northern Mockingbird.)
- 4 Occasional guided walks and informal interpretation at deck are offered during the spring.



Black-capped Vireo Photo: Greg Lasley, USFWS

### TIPS/LESSONS LEARNED

Volunteers and staff perform the maintenance tasks.

A few area residents use the facility after dark and use the deck for inappropriate reasons. Signs, bike racks, sign in registration boxes, 3-panel kiosk, and sound station has been stolen. Some fencing has been broken. Unfortunately the refuge is not a contiguous piece of property with one public entrance. This isolated deck facility is located just off a public road and is located at the opposite end from the Refuge Headquarters. Thus it is not easily accessible to open and close the facility manually on a daily basis. When funds are appropriated, timer gates will be installed to keep the public out during the night.

## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS

### TEXAS

#### BALCONES CANYONLANDS NATIONAL WILDLIFE REFUGE SUNSET DECK

Golden-Cheeked Warbler Viewing

#### CONTACT

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Balcones Canyonlands National Wildlife Refuge  
24518 FM 1431, Box 1  
Marble Falls, TX 78654  
Phone: (512) 339-9432  
Email: fw2\_rw\_Balcones@fws.gov  
Website: <http://southwest.fws.gov/refuges/texas/balcones/index.htm>

#### FEATURED SPECIES

Golden-cheeked warbler, scrub jay

#### FEATURED HABITAT

Oak-Juniper Woodland

#### DESCRIPTION

Constructed in 2005, Sunset Deck offers viewers the chance to hear or see endangered golden-cheeked warblers and other birds. As many as 20 people can gather on the deck, where birds may be visible just adjacent to the deck and up to 100 yards away. Peak months are March, April and May. The deck is free to the public, open year-round, and connected to hiking trails.

#### GOAL

To provide visitors an accessible opportunity to view Golden-cheeked Warblers and their habitat.

#### TARGET VISITORS/USE

Birders, general public/hundreds/year

Used occasionally during guided nature walks on adjacent nature trail.



Location for new  
Sunset Deck, on  
edge of bluff  
Photo: USFWS



Golden-cheeked  
Warbler  
Photo: USFWS

#### BLIND DESIGN/CONSTRUCTION

**Design:** Square gazebo

**Placement:** Deck faces Lake Travis, but viewing opportunities on all 4 sides. Waist high treated spaced vertical lumber to partially conceal viewers.

**Materials:** treated lumber and recycled plastic deck with metal roof, Reinforced concrete and reinforcing steel supports.

**Other special features?** Deck overhangs cliff, bench

**Cost to build (approx.):** \$139,000

**Plans available?** Yes

#### APPROACH TO THE BLIND

Paved short trail from parking lot. Boardwalk with vertical treated boards to help conceal visitors.

#### RULES FOR USE

Open during daylight hours. For hikers and wheel-chair users only. no pets. Tape recordings to attract birds are strictly prohibited.

#### TIPS

Maintenance performed by staff and volunteers. Location for the new Sunset Deck, on edge of bluff

## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS



Photos: USFWS

### TEXAS

#### SANTA ANA NATIONAL WILDLIFE REFUGE SANTA ANA SONGBIRD PHOTO BLIND

##### CONTACT

Humberto Rodriguez  
Santa Ana NWR  
Rt. 2 Box 202A  
Alamo, TX 78516  
Phone: (956) 784-7500  
Website: [www.fws.gov/southwest/refuges/texas/santana.html](http://www.fws.gov/southwest/refuges/texas/santana.html)

##### FEATURED SPECIES

Green Jay, Altamira Oriole, Chachalaca, White-tipped Dove, Golden-fronted Woodpecker, Olive Sparrow

##### FEATURED HABITAT

Subtropical woodland

##### DESCRIPTION

This permanent photo blind, constructed in 2003, features viewing of woodland birds close-up, as an addition to the popular observation deck overlooking a wetland. The blind holds 1-3 photographers and up to 8 wildlife viewers. The blind is popular with birdwatchers as well. Peak seasons are November to April. The blind is wheelchair accessible in most weather conditions. Birds come within 6-10 feet of the blind. Refuge staff spread bird seed once a day in one location by the blind to attract birds. Currently there is no fee, but the refuge may add a fee in 2007 of \$5 per person for four hours.

##### GOAL/OBJECTIVES

Provide opportunities for wildlife photographers to use photo blind, developed and maintained primarily for nature photography

##### TARGET VISITORS

Target visitors are those specifically looking for wildlife photography opportunities at a National Wildlife Refuge. Secondary target group is wildlife watchers, if there is no demand from photographers.

##### BLIND DESIGN/CONSTRUCTION

**Design:** Wood frame, cement floor, angled construction (inverse V), floor-to-ceiling windows with burlap flaps.

**Placement (orientation, camouflage):** Windows face northeast and northwest

**Materials:** Wood, cement

**Cost to build (approx.):** \$5,000

**Plans available?** No, it was sketched out for Refuge maintenance workers, who built it without plans.



Approach, wall as screen

##### APPROACH TO THE BLIND

Dirt trail leads to back of blind, where a 7-foot wall is erected to screen the rear open door to the blind from approaching visitors.

##### RULES FOR USE

Rules have not been established at present time. The goal is to install posts and gate at entrance to photo blind trail informing visitors if photographers have reserved the blind, and for information about future access.

##### TIPS AND LESSONS LEARNED

So far, use is heaviest by wildlife watchers, and there has been low interest by serious nature photographers. Part of the explanation may be that there are a number of professional photo blinds in this area that cater to wildlife photographers, and these private ranches offer outstanding facilities, access, portable blinds, and access at times unavailable on a National Wildlife Refuge. The end result to date is that while we built this blind specifically for photographers, we decided to open it to birders and other viewers to maximize use and viewing opportunities.



Photo blind interior

## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS



Photos: Virginia Dept. of Game & Inland Fisheries

### VIRGINIA

### COUNTY OF NORTHAMPTON WILLIS WHARF VIEWING PLATFORM

#### CONTACT

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Watchable Wildlife Program  
Virginia Department of Game and Inland Fisheries  
3909 Airline Blvd.  
Chesapeake, VA 23321  
Phone: (757) 465-6868  
Email: [stephen.living@dgif.virginia.gov](mailto:stephen.living@dgif.virginia.gov)  
Website: <http://www.dgif.virginia.gov/vbwt/site.asp?trail=1&loop=CES&site=CES10>

#### FEATURED SPECIES

Black-bellied plover, marbled godwit, short-billed dowitcher, whimbrel, dunlin, red knot, willet, and semipalmated plover

#### FEATURED HABITAT

Salt-marsh, Tidal flat, Tidal Creek

#### DESCRIPTION

Located at the marina in the Village of Willis Wharf, this platform integrates wildlife viewing with a traditional working waterfront community on Virginia's Eastern Shore. This deck provides exceptional views of great shorebird habitat. Parting Creek is a pristine water body that supports huge numbers of shorebirds during the spectacular fall migration. With mounted 10X optics any user can scan for wildlife. The platform is entirely accessible with ADA compliant ramps leading to the platform. While fall is the prime viewing season for this location, excellent wildlife viewing exists through the year. In summer, viewers can watch birds such as black skimmers, American oystercatchers as well as a variety of long-legged waders, gulls and terns.

This deck is approximately 60'x20' and can accommodate upwards of 30. A staggered railing offers some partial screening. The site is part of the Virginia Birding & Wildlife trail, a network of wildlife viewing sites linked by roads.

#### GOAL

To provide wildlife viewing resource that supports enhances sustainable tourism opportunities in the community

#### TARGET VISITORS

Birders, local residents, marina users

#### BLIND DESIGN/CONSTRUCTION

**When constructed:** 2008

**Design:** open deck

**Placement:** adjacent to Parting Creek on a berm between marina and wetland

**Materials:** Treated lumber for structural components, all decking from recycled plastic

**Cost to build (approx.):** \$40,000

**Partnerships/Volunteers involved?** Virginia Coastal Zone Program, Village of Willis Wharf, County of Northampton, Accomac-Northampton Planning District Commission, Virginia Department of Game and Inland Fisheries

**Plans available?** Yes (plans altered on site by contractor to conform to site conditions)

#### APPROACH TO THE BLIND

Parking in marina parking lot. Platform accessed by either stairs or ramp.

#### RULES FOR USE

Open dawn to dusk year round, no fee

#### INTERPRETATION

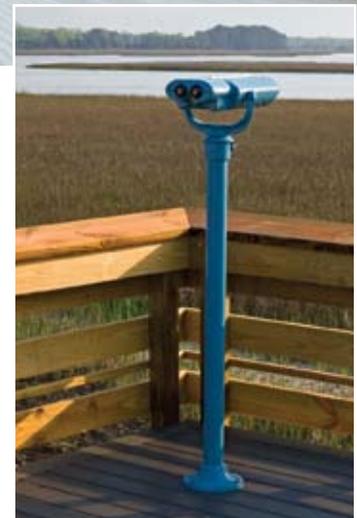
Panels to be installed summer 2008 highlighting marsh and shorebird ecology

#### TIPS/LESSONS LEARNED

While partnerships bring invaluable expertise and viewpoints to a project, they also increase the time required for coordination.



Staggered railing on deck breaks up visitor profiles to provide some screening.



## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS



Photos: USFWS

### VIRGINIA

#### U.S. FISH AND WILDLIFE SERVICE EASTERN SHORE OF VIRGINIA NATIONAL WILDLIFE REFUGE

#### VISITOR CENTER OBSERVATION WINDOW

##### CONTACT

Dorie Stolley  
Visitor Services Manager  
Eastern Shore of Virginia National Wildlife Refuge  
5003 Hallett Circle  
Cape Charles, VA 23310  
Phone: (757) 331-2760  
Email: [dorie\\_stolley@fws.gov](mailto:dorie_stolley@fws.gov)  
Website: <http://www.fws.gov/northeast/easternshore/>

##### FEATURED SPECIES

Migrating Neotropical and temperate migrants, including yellow-rumped warbler, red-winged blackbird, tree swallow, and monarch butterfly.

##### FEATURED HABITAT

Freshwater pond filled each fall.

##### DESCRIPTION

An indoor viewing area, for small groups up to 10 people, overlooks a freshwater pond and surrounding vegetation. The arena is supplied with binoculars and two spotting scopes. When viewed from the outside in, the one-way windows reflect only a mirror image so wildlife are unaware of human presence. The windows are placed at a downward slope, to reflect the ground rather than the sky, reducing birds striking the windows. Wildlife can be seen year round with the best viewing during the fall migration. The building is accessible.

##### GOAL

To provide wildlife viewing opportunities with an emphasis on educating the public about the critical role the Delmarva Peninsula serves for Neotropical and temperate migratory birds and migrating monarch butterflies.

##### TARGET VISITORS

General public

##### BLIND DESIGN/CONSTRUCTION

**When Constructed:** 1994

**Design:** One-way windows allow visitors to view nature without alerting wildlife to human presence.

**Placement:** Encompassing the southeast facing portion of the visitor center, the observation window overlooks the adjacent freshwater pond.

**Materials:** Steel mounted glass frames in wood framed building.

**Cost to Build (approx.):** Unknown

**Partnerships/Volunteers Involved?** No

**Plans Available?** Yes

##### APPROACH TO BLIND

From within the  
Visitor Center

**RULES FOR USE**  
General Refuge  
regulations

**INTERPRETATION**  
Reader rail with  
common species;  
refuge staff  
nearby to answer  
questions and  
provide informa-  
tion.

**TIPS/LESSONS LEARNED**  
Redesign of base flashing  
needed to prevent leaks.



Downward sloping windows  
reduce birds striking them.

## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS



Photos: USFWS

### VIRGINIA

#### U.S. FISH AND WILDLIFE SERVICE EASTERN SHORE OF VIRGINIA NATIONAL WILDLIFE REFUGE WETLAND PHOTOGRAPHY BLIND

##### CONTACT

Dorie Stolley  
Visitor Services Manager  
Eastern Shore of Virginia National Wildlife Refuge  
5003 Hallett Circle  
Cape Charles, VA 23310  
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Email: [dorie\\_stolley@fws.gov](mailto:dorie_stolley@fws.gov)  
Website: <http://www.fws.gov/northeast/easternshore/>

##### FEATURED SPECIES

Migrating Neotropical and temperate migrants including yellow-rumped warbler, red-winged blackbird, tree swallow, and monarch butterfly.

##### FEATURED HABITAT

Freshwater pond, filled each fall

##### DESCRIPTION

The 3-4 person blind is set among cedar trees to break up its appearance and the gravel footpath leading up to it is angled so the approaching visitors are obstructed. The blind is a wooden structure with slit-like windows. A spotting scope is supplied within the blind. Wildlife can be seen year round with the best viewing during the fall migration. The trail is compacted stone dust with a slight elevation.

##### GOAL

To provide wildlife viewing opportunities with an emphasis on educating the public about the critical role the Delmarva Peninsula serves for Neotropical and temperate migratory birds and migrating monarch butterflies.

##### TARGET VISITORS

General public

##### BLIND DESIGN/CONSTRUCTION

**When Constructed:** 1996

**Design:** A low-profile wooden structure with slit-like windows

**Placement:** Set among cedar trees atop a hill overlooking the pond.

**Materials:** Textured 1-11 plywood with corrugated steel roof

**Cost to Build (approx.):** \$1,000

**Partnerships/Volunteers Involved?** No

**Plans Available?** No



## CHAPTER 7: VIEWING AND PHOTOGRAPHY BLINDS

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### **APPROACH TO THE BLIND**

Stone dust trail leading to the blind is screened with vegetation.

### **RULES FOR USE**

General Refuge regulations

### **INTERPRETATION**

Brochures and birding list available at Visitor Center.

### **TIPS/LESSONS LEARNED**

Slope of roof is not sufficient for installation of asphalt shingles.



# APPENDIX

## NATIONAL ASSOCIATION OF NATURE PHOTOGRAPHERS REFUGE BLIND PROGRAM

### NANPA REFUGE BLIND PROGRAM

Since 1998, NANPA has been working in partnership with the U.S. Fish & Wildlife Service to build photo blinds in the National Wildlife Refuges. The program offers NANPA Infinity Foundation funds to individuals and/or groups interested in building new or refurbishing existing photo blinds.

Do you want to take part in this successful project? If you are interested in building or coordinating the production of a photo blind in a National Wildlife Refuge, here are the steps to take.

- 1 Contact Deborah Moore at the US Fish & Wildlife Service. [Deborah\\_Moore@fws.gov](mailto:Deborah_Moore@fws.gov). She will be able to talk you through the approval process.
- 2 Once approved by the USFWS, send your estimate to NANPA at 10200 W. 44th Avenue, Suite 304 Wheat Ridge, CO, 80033.
- 3 NANPA will send you a check.
- 4 Once the blind is complete, send photos of the completed blind, including photos taken from the blind itself, to NANPA.

### PHOTO REFUGE BLIND CRITERIA

Under the MOU that the North American Nature Photography Association and the NANPA Foundation have with the U.S. Fish and Wildlife Service, NANPA has committed through the Foundation to building photographic blinds on the U.S. National Wildlife Refuges. This project is governed by the following considerations.

- 1 The Refuge is suitable for nature photography.
- 2 The Refuge Staff and the USFWS desire that a blind be constructed on the particular property.
- 3 A suitable location on the Refuge is available for this purpose. This means a spot with photographic potential, away from heavy traffic areas and dedicated solely to photography.
- 4 If the Refuge Staff desires help in siting the blind for maximum use of early and late light, NANPA will assist in identifying the site.
- 5 NANPA will provide plans for a blind if the Refuge so desires. If a plan other than NANPA's is to be used, NANPA reserves the right of approval.
- 6 The refuge Staff, its Friends Group or other volunteer supporters will get price quotes for all necessary materials or will solicit donations of goods from local vendors and submit this itemized list to NANPA and the NANPA Infinity Foundation.

- 7 NANPA will forward needed funds to the Refuge manager or "Friends of" groups or whomever is constructing the blind.
- 8 The Refuge will recruit the labor force from their Friends Group or other volunteers.
- 9 A set of progress pictures will be taken and forwarded to both NANPA and the USFWS headquarters for news releases, publicity and historical archives.
- 10 The blind will be maintained and repaired as required by the volunteer group. NANPA and the NANPA Infinity Foundation will raise and administer funds for such approved repairs. (This suggests on-going maintenance costs.)
- 11 Regulation and scheduling use of the blind will be done by Refuge personnel.
- 12 NANPA, USFWS and other sponsors (e.g. memorials) will get appropriate recognition at each site.

#### NANPA BLINDS AS OF JUNE 14, 2006

Bear River, UT (#1)	Morris Wetland Management District, Morris, MN
Bear River, UT (#2)	Ft. Niobrara-Valentine NWR, Valentine, NE (#2)
Cameron Prairie, LA	Black Bayou Lake NWR, Monroe, LA
Ruby Lake, NV	Humboldt Bay NWR, Loleta, CA
Sonny Bono Salton Sea, CA (#1)	Cibola NWR, Cibola, AZ
Sonny Bono Salton Sea, CA (#2)	Tishomingo NWR, Tishomingo, OK
Buenos Aires, AZ	St. Marks NWR, St. Marks, FL
Moosehorn, ME	John Heinz, Philadelphia, PA
Seney, MI	Turnball NWR, WA
Shiawassee, MI	Agassiz NWR, MN
Minnesota Valley, MN	Montezuma NWR, Seneca Falls, NY
Blackwater, MD	Modoc NWR, Altrus, CA
Quivira, KS	Stillwater NWR, Fallon, NV
Prime Hook, DE	
St. Catherine Creek NWR, Sibley, MS	<b>IN PROGRESS (FUNDS SENT)</b>
Willapa National Wildlife Refuge, Ilwaco, WA	Huron WMD, SD
DeSoto NWR, Desoto, IA	Rocky Mountain Arsenal NWR, Commerce City, CO
Ft. Niobrara-Valentine NWR, NE (#1)	Sacramento NWR, CA

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# CHECKLISTS

## CHECKLIST

### SHOULD WE BUILD A BLIND?

Building a blind may be a great idea if you answer yes to most of the following:

- A viewing facility will help us meet our site objectives.
- Wildlife species require, or will benefit from, protection from disturbance.
- Wildlife viewing opportunity is fairly consistent and reliable.
- A blind serves as a management tool;
  - ✓ facility and approach needed for resource protection
  - ✓ facility can direct or separate visitor user groups
- A blind will enhance visitor experience:
  - ✓ wildlife viewer or photographer demand (visitors want a blind!)
  - ✓ blind will provide new perspective on nature/wildlife
  - ✓ interpretive media can increase knowledge/appreciation
  - ✓ blind facility can protect visitors from elements
- Our agency/organization has resources to sustain a safe and satisfying viewing opportunity.

## CHECKLIST

### PLANNING A BLIND TO INCLUDE INTERPRETATION

Invite an interpretive specialist to help you plan, and ask yourself:

- Should you include interpretive media?
- What should it look like?
- Will you use staff for “personal” interpretation?
- Will you use interpretive media for non-personal interpretation?
- Can you incorporate media for multiple senses? (e.g. audio or touch).
- What messages will you communicate?
- Can you *design* the facility to help communicate a message?

## CHECKLIST

### CHOOSING A BLIND

Which kind of blind may work best for your site and visitors?

- Photography blinds may be best when:
  - ✓ wildlife use of site is relatively predictable
  - ✓ high interest level from photographers
  - ✓ need to protect wildlife from photographer disturbance
  - ✓ need to separate users (by offering both photography and viewing blinds)
- Permanent blinds may be best when:
  - ✓ need fully enclosed, concealed blind and approach
  - ✓ wildlife is sensitive to disturbance
  - ✓ wildlife use of habitat is consistent or year-round
  - ✓ visitor use is consistent or substantial
  - ✓ blind is compatible with site
  - ✓ managers can maintain blind
- Temporary blinds (seasonal, mobile, portable) may be best when:
  - ✓ wildlife viewing opportunity is seasonal or short-term
  - ✓ visitor use is seasonal or inconsistent
  - ✓ managers desire less impact to site (to habitat or to view)
  - ✓ maintenance resources are limited or site remote
  - ✓ funds are limited (temporary may mean cost savings)
- Observation decks or platforms may be best when:
  - ✓ elevation will provide better viewing experience
  - ✓ wildlife is habituated to human activity; it's not necessary to fully conceal viewers
  - ✓ prompting visitors to observe, or guiding visitor traffic is your primary goal; decks and platforms invite visitors to stop and observe
- Towers may be best when:
  - ✓ elevation is needed for better viewing
  - ✓ visitors need protection from wildlife (e.g., bear viewing)
  - ✓ goal is to offer a unique perspective

# CHECKLISTS

## CHECKLIST

### BLINDS THAT BLEND WITH NATURE

When designing your blind, consider the following ideas. They may help support a positive viewing experience *and* communicate a sense of place.

- Keep site disturbance to a minimum.
- Restore native plants around the site.
- Allow vegetation to grow in close to the approach and the blind (but avoid blocking the view).
- Build a blind into a hillside or berm.
- Create an approach trail or boardwalk that winds around trees, rocks and other natural features.
- Build a blind with materials native to that area.
- Camouflage a traditional blind with paintings, or native materials.
- Design a blind to mimic natural features of the landscape: trees, hills, mounds etc.
- Design a blind to mimic wildlife homes (i.e. beaver lodge, bird's nest).
- Cut viewing ports in bird or plant shapes; use an artistic approach to communicate the essence of your site.

## CHECKLIST

### BLINDS THAT BLEND WITH CULTURE

When designing your blind, consider the following ideas.

- Look for structures already on site or on adjoining properties.
- Ask yourself which features tell a story about your place.
- Once you pick a feature, consider how it needs to be modified to serve as a blind; how can you provide a safe and satisfying experience for viewers?
- If your site interprets cultural history, you may be able to consider structures from another time or society. Your blind facility, viewed from a distance, may help visitors picture something from the past. *Be sure to work with your heritage interpretive staff, or with local historians – as tempting as it may be, don't add a structure that doesn't belong on your site.*

## CHECKLIST

### VIEWING BLIND IDEAS BASED ON FINDINGS

- Create something new and different to meet the unique needs of your site.
- Build something with an organic and interesting shape.
- Build a blind to blend with the natural landscape.
- Design a blind to complement local cultural features.
- Build a semi-permanent blind so you can adjust its position (e.g., for a grouse lek).
- Look at hunting blinds for more ideas.
- Build your blind into a hillside and give visitors a from-the-ground view.
- Use an observation tower to provide a new perspective and to see across a flat landscape.
- Build a convertible viewing and photography blind.
- Incorporate universal design.
- Invite community involvement.
- Use your new facility to promote your site: start a BLOG site to track the blind's progress, and hold an open-house and press event to commemorate a new blind.
- Enhance the site to attract wildlife.
- Increase visitor satisfaction and educational opportunity by adding interpretive panels at the approach and/or within the blind.
- Develop a realistic budget for your project, and don't forget to plan for maintenance.
- Seek grants, partnerships and volunteer help.
- Be creative – do something new and interesting! Let us know how it works out!

# CHECKLISTS

## CHECKLIST

### GOING A LITTLE DEEPER INTO PLANNING

Now that you are getting serious, a quick review and a few new thoughts:

**WILDLIFE NEEDS:** When considering the needs of wildlife at your site, ask yourself:

- Is research available to guide us in planning our site to minimize impact?
- Do we need to hide visitors completely, or just provide a safe place to view wildlife that has habituated to human presence?
- Can we build an approach that will get visitors to the blind without disturbing wildlife?
- Is wildlife use seasonal? (Could a mobile or portable blind be sufficient?)
- When can we schedule construction to minimize negative impacts?
- Even with a blind, do we need staffing to manage visitor use to best protect wildlife from disturbance?

**VISITOR NEEDS:** You'll want to consider not only your current visitors, but potential visitors. Ask yourself:

- Who are the visitors that come to the site now? Are they general nature enthusiasts? Beginning birders from the local area? Local school groups? Or serious and experienced birders from around the world?
- Are there other audiences you hope to attract? Are there visitor groups we don't have now that might come to see/use a new facility?

- Which visitors will be the *target* of your planning efforts? (Note: it's likely you can't design for "everyone" and okay to have a target group in mind).
- What other facilities exist nearby? How should the presence of that facility influence your planning and design?
- If you want a blind for general viewers, will you need a second observation blind to meet photographer needs?
- Will it help to enhance the habitat near the blind with plantings, water, or feeders?

**SUSTAINABILITY:** Wildlife viewing facilities should be safe, satisfying and sustainable. What does that mean at your site? Ask yourself:

- Is the viewing experience likely to be reliable for the future or is the habitat changing? (The answer may help you choose between a permanent or temporary structure.)
- Can you design a structure or manage visitors to lessen future maintenance needs?
- What environmentally responsible choices can we make to design and construct a "green" blind? For example, can you:
  - use recycled materials
  - use "certified" products
  - use locally produced materials and/or
  - minimize waste?
- Can we design a blind made of native materials to blend with the landscape or complement local cultural features?

## CHECKLIST

### APPROACH

Be sure that the approach to the blind integrates with the blind design; ask yourself:

- Do you need to design an approach to protect wildlife from disturbance (and ensure that they don't flush before visitors arrive)?
- What elements of universal design are essential?
- Do you need screening? If so, how much?
- How will you "screen" sounds?

## CHECKLIST

### PLANNING FOR VISITOR MANAGEMENT

Invite an interpretive specialist to help you plan, and ask yourself:

- How will we manage visitor use?
- Do we need to plan way-finding/directional signage?
- Should we manage use through a reservation system?
- Should we provide more than one alternative experience?
- What site management or patrol do we need to do to ensure that the blind is a safe place to visit? How can we plan to minimize vandalism and use of the site for inappropriate activities?
- Are there opportunities for community involvement that may benefit the site?

# CHECKLISTS

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## CHECKLIST

### DESIGN

- How big does it need to be?
- What elements of universal design are essential?
- How much screening do you need?
- How else can you minimize wildlife disturbance?
- What creature comforts will enhance the experience?
  - Should there be seating with backrests?  
By the portals?
  - Will you need arm rests?
- How will people of different sizes each be able to see out? How many viewing portholes are needed at what heights?
- Is there room for a tripod? Two?
- Is there adequate ventilation and natural light, but not too much?
- How can the blind blend with the landscape or complement local culture?
- How will the approach be integrated into the design? (see next section)
- Should you plan for interpretive media now? (see next section)

## CHECKLIST

### PLANNING MAINTENANCE

- Manage the vegetation around the blind so it doesn't obscure the view. We've seen several wetland viewing sites that looked amazing when they opened, but were soon overtaken by cattails.
- Maintain the approach to the blind, especially on universally accessible trails where you want to minimize lumps and bumps. Walkways and approaches can get weedy, brushy or washed out.
- If you have wooden decks or blinds, finish construction to minimize the re-emergence of nails or screws that can trip or cut someone. Also, consider using a plastic/wood composite material (e.g., TREX). This product lasts longer and doesn't seem to splinter as much, requiring less upkeep of handrails and benches.
- Keep signage in place (and clean) to help your site make a good impression. Be sure to ask sign panel fabricators for up-to-date information on how to clean their products. Spray paint and other materials can be cleaned from most sign materials with the right cleansing agent.

# CHECKLISTS

## CHECKLIST

### PLANNING A PHOTOGRAPHY BLIND

#### PICKING THE BEST LOCATION:

- Blinds must be designed and placed so that photographers can go in and out without disturbing wildlife.
- Blinds need to be placed to frame the picture photographers have come for. Scenic foregrounds and backgrounds are important. Avoid cluttered backgrounds and eyesores like power lines.

#### ORIENTING FOR THE RIGHT LIGHT:

- Orient the blind to take advantage of the best light.
- Often a photographer wants early morning or early evening light on the subject. Photographers call the ½ hour before sunrise or sunset to the ½ hour after – the “golden hour.”
- To keep light *on* the subject, a northern orientation is best. For the best early morning pictures, orient the blind to the northwest; for blinds featuring sunset light, face them toward the northeast.
- Consider multiple portals that can be opened and closed depending on the time of day (location of light source).
- Ideally, provide blinds for sunrise and sunset photography; this may require multiple portals.
- If the site hosts a highly desired wildlife species only at a particular time of day, be sure to orient the blind so the featured species can be seen.

#### DESIGNING THE APPROACH:

- Make the approach as *invisible* as possible; take advantage of topography and vegetation. (This is different from the public viewing blind which requires a fairly obvious and inviting approach).
- Establish rules for approaching and leaving the blind to minimize disturbance to wildlife. For example, you may require people to arrive 30 minutes before sunrise or permit only one entry and exit per day.
- Learn from your visitors' requests, and help them where possible. For example, some photographers will ask to bring a companion to the blind, and then have them leave the site. Why? They've found that hawks and eagles are pretty smart; they notice people entering a blind and will wait for someone to leave before returning to natural behaviors. Photographers can “trick” the birds by bringing a friend as a decoy; when the friend departs, the raptors may think the blind is empty.

#### HABITAT ENHANCEMENT:

- Most wildlife photographers prefer to photograph natural settings. Natural habitat enhancement may be a welcome, but bird feeders and other artificial elements are not needed.



### Montezuma National Wildlife Refuge, New York

The interior of this photography blind features heavy fabric flaps over openings. The outside is painted with cattails to blend in with the wetlands. Photo: USFWS

- Do consider manipulating the natural environment to attract wildlife *in a natural way*. For example, providing structure at the edge of a pond, an island in a wetland, or a rock or log in a stream can invite wildlife to rest, sun or preen. A fallen tree may be the perfect structure if left lying where it fell. In wetlands the structure may entice waterfowl to preen or turtles to come out of the water and sun. A rock or log in a stream may offer a resting place for a dipper.

#### MAINTENANCE:

- Keep the vegetation trimmed in front of the blind to assure a clear view of wildlife through the portholes.

#### DESIGN AND COST:

- Make sure the blind is enclosed on all sides, so animals cannot see movement within the blind.
- Add carpeting to the floor to keep noises down.
- Make the blind comfortable for photographers, who often spend several hours waiting for the best shot. Consider providing a swivel chair with a backrest that's adjustable in height; be sure it isn't squeaky.
- Create openings big enough for a telephoto lens (8 to 9 inches in diameter) with room to tilt up and down.
- Camouflage the blind so it blends well into the environment.
- At many sites, where the best photography opportunities vary from year to year, a photography blind should not be designed for permanence, but for effectiveness. Consider portable or semi-permanent blinds.
- Costs will vary, but managers may not have to invest as heavily in photography blinds as in permanent viewing blinds. Photographers are more interested in the effectiveness and usefulness of the blind, and less in the creative features.