<u>The</u> 8,672-acre Las Vegas National Wildlife Refuge is one of more than 500 refuges throughout the United States managed by the Fish and Wildlife Service. The National Wildlife Refuge System is the only national system of lands dedicated to conserving our wildlife heritage for people today and for generations yet to come.

Welcome: Hawk
CountryA Swainson's hawk veers in the winds
above Las Vegas National Wildlife
Refuge. Where the Sangre de Cristo
Mountains meet the Great Plains,
hawks and eagles find easy gliding in
the mountain updrafts.

Las Vegas NWR rests on a plateau in the foothills of the Rocky Mountains. River canyon walls drop below the refuge on three sides. The Gallinas Nature Trail begins near crumbling rock home ruins and squeezes between cliffs ruled by prairie falcons. Las Vegas (Spanish for "the meadows") preserves both wildlife homes and a slice of New Mexico's rich cultural history.



Native grasses.

Photograph by John and Karen Hollingsworth Above the timbered canyons, the refuge encircles a series of ponds. Migratory birds following the Central Flyway rest and refuel here. Long-billed curlews, avocets, Canada geese, mallards, northern pintails, blue-winged and cinnamon teal, gadwall and ruddy ducks nest on the refuge. Sandhill cranes arrive in the

fall for a winter stay. A year-round, auto tour route and a special fall flight drive offer plenty of chances to see wildlife.

Wildlife: Where Mountains Meet Plains

Wherever two ecosystems intercept, you're bound to find more kinds of wildlife than in either ecosystem separately. Las Vegas NWR harbors animals, birds, and plants of both mountains and plains, and those that thrive in both.

Northern harriers hover over marshes in search of voles. Osprey plunge into lakes to snag fish in their talons. Wild turkeys wander the pinyon-juniper woodlands. Antelope blend into native prairies home to badgers and burrowing owls. Mule deer find shelter in timbered, sandstone canyons. Coyotes roam across every habitat.



Central Flyway Stop

Burrowing Owl, FWS photograph. Mixed-grass prairie. Photograph by John and Karen Hollingsworth Birds winging north and south along the Central Flyway add to the refuge bird wealth. The Las Vegas NWR bird list records 271 species, many that ebb and flow with the seasons. Out of the list, 80 species nest here and 50 of those are neotropical migrants, birds that spend winters south of the U.S. The refuge's 14 species of raptors glide through in a fall procession. Viewers might see three or four hawk species on a typical fall day visit.

Migrating shorebirds, like long-billed dowitchers and sandpipers, probe the mudflats in early fall and spring.



Some 20-50 bald eagles spend winters here, attracted by open waters and hundreds of ducks and geese. Mallards, canvasbacks, and wigeon peak in September and October. You'll find highest numbers of ruddy ducks, northern shovelers, northern pintails, and gadwalls in March and April. For best sandhill crane and Canada geese watching, visit in fall and winter.

Lending a Hand for Wildlife National wildlife refuges like Las Vegas appear as island oases in an ocean of developed lands, especially for birds that migrate thousands of miles north and south. Where once wildlife could range freely for food and shelter, today their choices are limited.

> That's why refuges often actively manage lands to make sure food, water, and shelter will be as productive as possible. At Las Vegas NWR, you'll see wheat, barley, corn, and peas planted for wildlife to harvest and hide among the stalks. The refuge lowers and raises water levels in the ponds to provide the best mix of feeding, nesting, and rearing habitats for waterfowl. Finally, don't be surprised if you notice some cattle on the grasslands between May and October. Careful grazing is rejuvenating native grasslands.

Refuge wetland with waterfowl. Photograph by John and Karen Hollingsworth

Wildlife Watching Tips

Dawn and dusk are the best times to see wildlife.

In warmer climates, little is moving on hot summer afternoons or on windy days.

Observe from the sidelines. Leave "abandoned" young animals alone. A parent is probably close by waiting for you to leave. Don't offer snacks; your lunch could disrupt wild digestive systems.

Cars make good observation blinds. Drive slowly, stopping to scan places wildlife might hide. Use binoculars or a long lens for a closer look.

Try sitting quietly in one good location. Let wildlife get used to your presence. Many animals that have hidden will reappear once they think you are gone. Walk quietly in designated areas, being aware of sounds and smells. Often you will hear more than you will see.

Teach children quiet observation. Other wildlife watchers will appreciate your consideration.

Look for animal signs. Tracks, scat, feathers, and nests left behind often tell interesting stories.

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History: Cultures Converge Early Peoples	Old world Indians inhabited the fertile valley of Las Vegas as early as 8,000 B.C. Pueblo Indians lived here during the 1100s until eventually forced out by drought and Apaches.
Spanish Influence	Coronado invaded and claimed the territory for Spain in 1540 as he searched for the legendary "Seven Cities of Cibola." Conquistadors and missionaries followed close on Coronado's heels and established Spanish rule. Nomadic tribes of Plains Indians and Comanches roamed through on their excursions west to raid pueblos and early Spanish settlements.
	The area's Spanish influence and culture are as prevalent today as more than 400 years ago. You'll still find rock corrals and division fences of the small <i>ranchitos</i> that dotted this country during that era.
Santa Fe Trail Old ranch buildings. Photograph by John and Karen Hollingsworth	The historic Santa Fe Trail and the railroad brought a brief wave of economic progress to the Las Vegas area at the turn of the century. Rangelands that gave way to farms and plows today have come full circle. Large ranches gradually displaced small ranches and cattle graze throughout this part of New Mexico.



Things to do at the Refuge

Take a Wildlife Drive and Hike



Drive the 8-mile auto tour through the heart of the refuge at any time of the year. The drive forms a horseshoe loop along State Highway 281 and County Road 23. You'll pass ponds, lakes, marshes, grasslands, brush thickets, and cottonwood groves. Be alert for wildlife at any point along the way. McAllister Lake Waterfowl Management Area, owned and managed by New Mexico Department of Game and Fish, lies within the refuge and forms the southern end of the tour loop.

During November, a 4 1/2-mile fall flight auto tour offers access to parts of the refuge closed the rest of the year to protect wildlife. This brochure interprets features you'll see on the flight tour (below) and along the Gallinas Nature Trail (page 13.)

Stop by the Refuge Office



Come by the refuge office to pick up bird lists and other leaflets. Sharpen your birdwatching skills by studying the waterfowl, shorebird, and raptor mounts. A native prairie grass display reveals the complexity of grasses that together make a prairie healthy. The staff welcomes your questions and comments. The headquarters, located on the state highway, is open Monday through Friday from 8 am to 4:30 pm.

A special 4 1/2 mile tour of the refuge's hidden ponds during fall bird migration is open from 1:00 pm to 4:30 pm on Sundays in November. The restricted times help give wildlife the space they need to rest and feed.

Please drive carefully. If you wish to stop along the roadside, park in a manner that will not obstruct traffic, and stay near your vehicle so that you do not frighten or disturb the wildlife.

Fall Flight Tour

Please observe the following rules and regulations:

- * Speed limit is 10 miles per hour and traffic is one way.
- * All pets must remain inside your vehicle.
- * No firearms or intoxicating substances are allowed.

The following guide interprets wildlife and habitats of ponds and lakes along the drive:

1. What's hiding in Do you feel like you're being watched? It's possible that a Virginia rail or sora might be peering at you from the shelter of the pond's bulrushes. Refuge staff planted the bulrush so that birds could find cover. The artificial island also gives a protected place for birds to nest and roost. As you drive on, watch for antelope cresting the horizon.

2. Special Water Delivery Bentley Lake

Water is life in a dry land. Without a good supply, you would not hear the chorus of honks and quacks across places like Bentley Lake. The refuge is the largest irrigator in the Storrie Project Water User Association, a local irrigation group. Water from Storrie Lake flows through a canal into Bentley Lake and then is distributed to other lakes, farm fields, and marshes. Driving to Goose Island Lake, notice the main canal and lateral ditches used to deliver water.



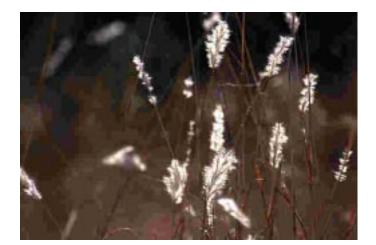
Wild Turkey, FWS photograph





the bulrush?

Melton Pond



3. Pondweed Cafe Goose Island Lake	Ducks and coots dabble in Goose Island Lake like diners in a favorite cafe. Their favorite fare is the pondweed you might see floating on the water. They also garnish their greens with snails, worms, and aquatic insects that together make this a healthy lake for wildlife.
4. Gadwall Watch Wallace Lake	Shallow waters at the south end of Wallace Lake attract dabbling ducks, especially gadwall. Don't be surprised if you see them "bottoms up" as they search for aquatic plants below the surface. This lake started out as a playa or natural surface depression that held water only in wet seasons. Natural playas flooded in years of plentiful water and during runoff. Dormant seeds and invertebrates grew rapidly in response to the seasonal water. Today, refuge staff manages Wallace Lake and other original playas as permanent wetlands.
5. Island Living Coyote Pond Prairie grasses. Photograph by John and	If coyotes and raccoons had it their way, they could do without the islands you see on Coyote Pond. The refuge staff drained the pond in 1988 and built the islands to provide nesting for ducks, geese, and other birds safely out of reach from such natural nest raiders. Island grasses and other plants shield the nests from birds like crows and black-crowned night herons, who look for eggs as
Karen Hollingsworth	part of a varied diet.

6. Waterfowl Bonanza Crane Lake

Crane Lake is a terrific place to see flocks of diving ducks loafing in the middle of the lake and dabbling ducks by the shore. Divers include redheads, ring-necked, bufflehead, and ruddy ducks. Mallards, gadwalls, wigeons, and shovelers feed near the shore. Sandhill cranes favor the lake banks. The west side of Crane Lake features an overlook that is open to the public in every season. Farm fields bracket the end of the tour. Watch for deer feeding in fields of wheat, peas, barley, and clover. Refuge crops are not harvested, but left as food for migratory birds and resident wildlife.

Gallinas Nature Trail



The sweet song of a canyon wren trails off somewhere above you. Cliff swallows dart out from sandstone bluffs towering 200 feet overhead. If you can, bring binoculars and a camera on this half-mile round-trip. You'll descend into a strikingly beautiful canyon, past several features profiled here. The trail is open only on weekdays. You must first pick up a permit at the refuge office between 8 am and 2 pm.



Gallinas Canyon.

Please stay on the trail and use caution. Snakes and old ruins can be a hazard. Children should never put their hands or feet in places they cannot see.

Photograph by John and Karen Hollingsworth



1. Even Rock Houses Don't Last Forever	At the trail parking area, notice the remains of rock homes built around 1920. Settlers labored to build these houses, quarrying nearby rock and cutting trees. The pine roof beams have since weathered away. Imagine the refuge in the early part of the twentieth century when two small communities, several farms, a church and a mission staked out a place to live below the Sangre de Cristo Mountains.
2. Box Canyons Made Corralling Livestock Easy	Stone walls once penned livestock in box canyons. Season after season, livestock owners returned to the same canyon corrals. Most early settlers raised cattle, while some bred sheep or goats. Box canyon corrals proved a cheap and efficient alternative to standard barbed wire enclosures.
3. Native Prairies One Grass is Not Like Another	What if lawns around people's homes bloomed with wildflowers and grasses ruffled in the winds like a sea? That's a far cry from our typical Kentucky bluegrass turf, but fits the description of a native prairie. The refuge lies at the meeting place of the Southern Rocky Mountains and Great Plains grasses.
	Every grass species has a role in

Every grass species has a role in this ecosystem. Here, there's strength in diversity. Blue grama and buffalo grass fall in a group called shortgrass. Bluestem, switch grass, Indian grass, and western wheatgrass form the tallgrass prairie. Sideoats grama falls in between. All these grasses are adapted to thrive without any water or fertilizing beyond what nature provides. They're also adapted to grazing from the bison and elk that once dwelled here. The refuge carefully grazes livestock to help keep the grasslands healthy. 4. Why are these mountains called Sangre de Cristo?



Bluebird, FWS Photograph

5. Springs and **Seeps Offer the Gift of Water**

6. Nature's **Sculptors** Nest in Cliffs

Sangre de Cristo translates from Spanish as blood of Christ. The aspen and scrub oak you see along the mountain sides transforms the range into a crimson vision each fall, fitting the name at least for one season.

Joining the scrub oak on slopes are tough, gnarled evergreens-piñon and juniper. Stately ponderosa pines line the canyon rims. Trees and canyons together form an ideal home for gray squirrels, as well as both canyon and rock wrens, Steller's jays, and mountain and western bluebirds.

Intermittent springs along the trail are actually seeps. The seeps result from water stored in McAllister Lake, refuge impoundments, and from irrigation of refuge crops. Water from seeps along the trail flows southwest to the Gallinas River. The river defines the western edge of the refuge. Vegosa Creek and its canyon form the eastern boundary.

Listen for the twitter of cliff swallows darting out from the cliffs. Look closely and you'll see their artful mud nests under rock outcroppings. Males and females daub mud against the rock faces, slowly building a platform, then molding a gourd-shaped nest. Some colonies resemble apartment complexes with thousands of individual residences. The swallows repair and reuse nests each year after returning from a winter in South America. Dress for mild summers with

Meeting Your Needs

Preparing for Your Visit



temperatures rarely above 90 degrees, thanks to the refuge high elevations, ranging between 6,000 and 6,500 feet. Summer thundershowers make up most of the 16 inches of annual precipitation. Bundle up for the November Fall

Flight Tour. Fall through spring weather can vary from pleasant 50s and 60s to below freezing.

of Las Vegas, where you'll find

The refuge is close to the community

motels, gas, grocery stores, and rest-

aurants. A state park in Las Vegas offers the closest camping. For those willing to drive about 20 miles,

Nearby Places for Food, Fuel, and Lodging



FWS law enforcement officer checking for steel shot. Photograph by John and Karen Hollingsworth national forests also offer camping. All refuge lakes and ponds are closed

Fishing



Hunting



to fishing. However, Lake McAllister Waterfowl Area, managed by the New Mexico Department of Game and Fish, stocks rainbow trout and offers seasonal angling. Regulations for this area are posted at the lake.

The refuge offers a limited dove and goose hunting season. Contact the refuge manager for drawing and permit information. To keep Las Vegas NWR a safe place



for wildlife and people, all firearms, fireworks, poisonous substances, and alcohol consumption are prohibited.

Please remember that all plants and animals are protected on national wildlife refuges.

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Pets must be on a leash or in a vehicle unless otherwise posted. The Refuge is 6 miles southeast of

Las Vegas NWR Facts

Where is it?	the City of Las Vegas, New Mexico. Refuge Headquarters can be reached from I-25 at exit 345; then east on State Highway 104 for 1.5 miles, then south on State Highway 281 for about 4 miles.
When was it established?	1965.
<i>How big is it?</i>	8,672 acres.
U	To provide wintering and migration
Why is it here?	habitat for ducks and geese of the Central Flyway, as well as other

migratory bird species.



Hunter orientation. Photograph by John and Karen Hollingsworth

Las Vegas National Wildlife Refuge Route 1, Box 339 Las Vegas, New Mexico 87701 505/425-3581/3582 505/454-8510 Fax

U.S. Fish and Wildlife Service 1 800/344-WILD

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Las Vegas National Wildlife Refuge

