



## U.S. Fish & Wildlife Service

# Salt Plains

## National Wildlife Refuge Selenite Crystal Digging

### Welcome

The salt flats are a large expanse of soil covered with a thin layer of salt in north-central Oklahoma. These salt flats are the largest in the central lowlands at around 12,000 acres. Tribes and early pioneers collected and used salt from this area.

The salt flats cover roughly one-third of Salt Plains National Wildlife Refuge. Established in 1930, the refuge is an important feeding and resting area for migratory waterfowl and endangered species such as the Whooping Crane.

### Selenite Crystal Digging

- When: Open April 1 through October 15 from sunrise to sunset
- Where: Drive to the gate at 66003 Garvin Road, Cherokee OK 73728. Then drive one mile through the gate to the Dig Area marked with bright orange signs. Crystal Digging is only allowed in the Dig Area.
- Bring: A shovel or something to dig with, protection from the sun (hat, sunglasses) and water to drink and clean off after.
- Cost: free, no passes required.

### Observation Deck

An observation deck is located at the entrance of the selenite crystal digging area. The tower is open year-round from sunrise to sunset. While on the deck, overlook the salt flats and learn more about wildlife and past military history.

### How to Dig for Selenite Crystals

1. Use a shovel to dig a hole that is a max of two feet deep.
2. Pour water on the edges and bottom of the hole to find them more easily.
3. Carefully use your hands to collect crystals.
4. Lay the crystals in the sun to dry out.

### Crystal Digging Tips and Tricks

A single crystal is called a blade. A cluster is made up of several attached blades and is more rare. Blades can be found on the surface, but larger clusters are deeper.

Avoid having crystals sit in water, they will dissolve.

Be careful! They can be fragile and sharp.

Don't worry about filling in your holes, they help wildlife and fill in naturally.

Remember to rinse the salt off your vehicle to protect it.

### Crystal Digging Rules and Regulations

Drones are not allowed.

Your pets are welcome but must be on a leash.

Only the dig area, marked by bright orange signs, is open. Walking, driving, digging for crystals, or accessing outside of the signs is not allowed.

A special use permit is required and available to access outside the orange signs for research or commercial photography/filming. Contact the refuge for more information.

Selling crystals is not allowed.

Each person can collect up to ten pounds and one large cluster per day.



This is a unit of the National Wildlife Refuge System, a network of lands and waters managed for the benefit of wildlife and people.

**Salt Plains National Wildlife Refuge**  
Visitor Center  
71189 Harper Road  
Jet, OK 73749-4953

(580) 626-4794  
[fws.gov/refuge/salt-plains](https://fws.gov/refuge/salt-plains)

### **Wildlife on the Salt Flats**

Hundreds of thousands of shorebirds and waterbirds use the salt flats. Many species such as the Snowy Plover, a small shorebird, even nest there.

The salt flats are critical habitat for the endangered Whooping Crane. Whooping Cranes are the tallest bird in North America, standing at five feet tall with a six-foot wingspan.

To protect these species and more, crystal digging is closed for half of the year.

### **More about Selenite Crystals**

Selenite is a crystallized form of gypsum. Chemically, it is a hydrous calcium sulfate. Gypsum is a common mineral that takes on a variety of crystal forms and shapes. These selenite crystals form just below the salt surface. Most are not found deeper than two feet.

These crystals take on the characteristics of their environment--the finer the soil, the clearer the crystals. Iron oxide in the soil gives them their chocolate brown color. In this area only they form a unique "hourglass" shape.

Selenite crystals only form in certain parts of the salt flats that have enough gypsum and saline. When temperature and brine conditions are ideal, the crystals may form very rapidly. Selenite crystals may also dissolve during extremely wet conditions.

### **Military Influences on the Salt Flats**

The United States Army Air Corps used these salt flats as a practice bombing and gunnery range from 1942-1946 for WWII. This defense training site was once known as the Great Salt Plains Bombing Range. Bombers were sent from Oklahoma City, Enid, Pratt, Dodge City and Army Bases for target practice.

Glass vials from the Chemical Agent Identification Sets (CAIS) were found in the dig area in 2007. These sets were used by the military until the 1960's to train soldiers to identify chemical agents but were not lethal.

These vials were removed, and studies have been completed to locate any further military vials or munitions. For your safety, only dig and access the dig area. Other areas may not be safe.

Continue to watch out for glass vials, metal objects and remember the 3R's:

Recognize: This does not belong and could be dangerous.

Retreat: Do not touch, disturb or move it.

Report: Call 580/626-4794 or 911

The U.S. Fish and Wildlife Service is encouraging people who may have collected CAIS vials or military munitions as souvenirs from the Salt Flats to notify their local law enforcement agency, so they can be safely recovered and destroyed. Having these items places you, your family and your neighbors at risk.

To protect yourself, your family and your neighbors, do not keep these as souvenirs.

# Salt Plains National Wildlife Refuge

