



# OREGON HERITAGE TREE PROGRAM NOMINATION FORM

## NAME OF TREE

Type of tree: Jeffrey Pine *Pinus jeffreyi*

Name: Smokejumper Tree

## LOCATION OF THE TREE

Josephine County

Historic Siskiyou Smokejumper Base,  
Illinois Valley Airport, 4.5 miles south of  
Cave Junction, Oregon.

Lat/Long: 42.103574,-123.681357

The red dot on the map to the right  
indicates the site of the tree.



## Detail map

The perimeter of the historic Siskiyou Smokejumper Base is marked with a dotted line with the runway seen near the top of the photo and Highway 199 out of sight along the bottom edge.



## OWNERSHIP

The tree is located on land owned and managed by Josephine County.

## PUBLIC ACCESS

The tree is situated adjacent to Smokejumper Way, the primary access road for Illinois Valley Airport. The site is located adjacent to the airport tarmac, which makes the site accessible to pilots and owners of general aviation aircraft.

Approximately one million travelers pass this site annually on Highway 199. This is the main travel route from the redwood coast of California to Interstate 5 where they might continue to Crater Lake National Park.

Wheelchair accessibility at this site is fair and considerable effort has been invested in improving accessibility. A wheelchair accessible, self-guided tour was recently completed in June 2011 as part of this effort. The self-guided tour route passes the Smokejumper Heritage Tree and a concrete pad would be installed to make the OTE plaque wheelchair accessible if this tree is selected to be included in the program.

## PHYSICAL DESCRIPTION

Age:	Approximately 150 years
Date planted (if known):	This was part of the natural landscape that was retained as a landscape tree when the smokejumper base was constructed.
Circumference:	Approximately six feet at breast height
Height:	Approximately 50 feet
Crown spread:	Approximately 30 feet diameter
Health and condition:	Very good health

## HISTORY AND SIGNIFICANCE OF THE TREE

The Smokejumper Tree meets three of the four nomination criteria.

**ASSOCIATED WITH EVENTS CONTRIBUTING TO OREGON HISTORY:** World War II incendiary attacks

The tree is located on the grounds of Oregon's first Aerial Firefighter Base, which was also one of the first four bases established when the smokejumping program began in the early 1940s. The base was established about 20 miles from the site where a Japanese airplane dropped an incendiary bomb near Brookings, Oregon in September 1942 (see OTE Bombing Tree Site). Forest fires require significant manpower and equipment to control and the realization that Japan intended to wage war on American soil by starting fires may have been one of the contributing factors for establishing a base at this location. Concerns heightened with the balloon bomb attacks from 1944-1946 (see OTE Mitchell Monument Shrapnel Tree).

The Cold War raised a new wave of concerns about nuclear attacks on American soil. This was the era of air raid drills and backyard fallout shelters. The Siskiyou Smokejumper Base was upgraded with construction of new buildings and increased crew size. Many trees were removed but the Smokejumper Tree was spared.

The Aerial Firefighter Program, later to be known as smokejumping, involved the use of aircraft to carry firefighters into remote regions where they used parachutes to access wilderness fires that were most often started



*Siskiyou Smokejumper Base, 1948.  
Photo by Al Boucher*

by lightning. In this way a small crew of 2-4 individuals could put out a fire while it was small and easy to control. This prevented fires from growing into a size that required hundreds of firefighters, tons of equipment, and tens of thousand of dollars to control. It was an extremely low cost fire control strategy.

The Siskiyou Smokejumper Base is now the only one of the original four bases that is still standing in its original location with its original buildings to include the oldest smokejumper parachute loft in the nation. This is a nationally significant historic site.

ASSOCIATED WITH A GROUP OF HISTORIC SIGNIFICANCE: Conscientious objectors

When the Siskiyou Smokejumper Base was first established, the majority of “able-bodied” men were over seas fighting the war. The only individuals available who could step up to the rigorous physical demands of fire fighting were conscientious objectors, most of which were Mennonites. The largest number of these were farm boys and many of them had never been in an airplane prior to being accepted into the smokejumper program. Food and basic needs for shelter and sanitation were provided for them but if they wanted spending money they had to do odd jobs in the community. When the war ended, smokejumper jobs were given to returning veterans, most of which were airborne paratroopers.



*The Siskiyou Smokejumper program began in 1943 during World War Two when most “able bodied” men were in overseas battlefields. The only workforce capable of the rigors of firefighting were conscientious objectors, mostly Menonites, and these individuals are the ones who started Oregon’s first smokejumper program. Photo: Photographer unknown, circa 1943.*

The Siskiyou Smokejumper Base also has connections to individuals who were important in history. Stuart Roosa, the astronaut who carried tree seeds to the moon on Apollo 14, worked here in the early 1950s (see OTE Moon Tree). Danny On was the first Asian American smokejumper who began at this base in 1946. Allen “Mouse” Owen is the smallest smokejumper in history and started at this base in the early 1960s. Willie Unsoeld, a famous mountain climber, also worked a season at this base before climbing Mt Everest.

REPRESENTS A UNIQUE ENTITY IN A COMMUNITY: The “Gobi Desert”

The Siskiyou Smokejumper Base is located on the Rough & Ready Creek alluvial fan, a geologic feature that is unique in the state of Oregon and likely the United States.

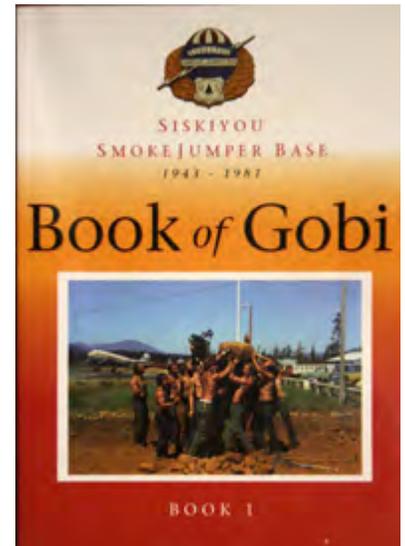
The Rough & Ready Creek alluvial fan is unusual because the watershed that feeds it is contained entirely within one of the largest mantle rock\* outcrops in the united States. For this reason, the alluvial fan is composed

*\*Mantle rock (peridotite) was uplifted in this region along with a large slab of ocean crust around 150 million years ago. As these rocks were uplifted, water made its way down cracks and hydrated the mantle rock under high temperatures and pressure. Hydrated mantle rock is called serpentine and you will often hear many people refer to the mantle rock outcrops of this region as the “serpentine region”, even though serpentine rock is not necessarily the prevalent rock to be found in this area. However, this term has become the vernacular and is used in this nomination to align with the language of other literature. The most important thing to keep in mind is the chemical makeup of peridotite and its serpentinized variants is essentially identical.*

almost entirely of this type of rock, which is very low in essential plant nutrients and contains relatively high concentrations of heavy metals such as chrome and nickel.

Artificial arid conditions are created by the deep deposits of rock and gravel, which are ineffective at holding water from annual winter rain storms. About 60 inches of rain falls in this region annually.

The combination of artificial arid conditions and poor nutrients are what create the desert-like conditions that prompted smokejumpers to give the base and its surrounding landscape the nickname of “Gobi Desert”. The book cover (right) is from one of three publications documenting memoirs of Siskiyou Smokejumper Base crew members and helps to illustrate the importance of the base’s “Gobi” nickname to the culture of this base. The term “Gobi” has been adopted by many local residents who grew up in the valley or have lived here for an extended time.



The connection of the “Gobi” to Jeffrey pine ecology is relevant to this nomination because it highlights the tree’s tolerance to both arid conditions and the nutrient poor soils created by mantle rock.

#### SPECIES SIGNIFICANCE - Jeffrey pine

In Oregon, Jeffrey pine is found only in the state’s southwest corner. It is tolerant of arid conditions, nutrient deficient soils, and high concentrations of chrome and nickel--conditions that define the serpentine alluvial deposits of the Rough & Ready Creek alluvial fan. Jeffrey pine is commonly the dominant tree in serpentine soils. At this time, there is no Jeffrey pine in the Heritage Tree program.

#### INTERESTING SIDE NOTES

This the site also has a significant connection to another Oregon Heritage Tree, the Apollo 14 Moon Tree that grows on the capital grounds in Salem. The moon tree seeds were taken on their lunar voyage by a smokejumper who worked at the Siskiyou Smokejumper Base prior to becoming an astronaut. The Siskiyou Smokejumper Base is the place where the moon tree story begins. The Jeffrey pine woodland within view of the base may have been partly responsible for inspiring Stuart Roosa to carry the seeds to the moon and give the world a lasting living legacy of America’s accomplishments in aerospace history.

The Smokejumper Heritage Tree may be the only tree in Oregon that will be located on an airport where pilots and private plane owners from all over the nation can walk from their planes to enjoy.



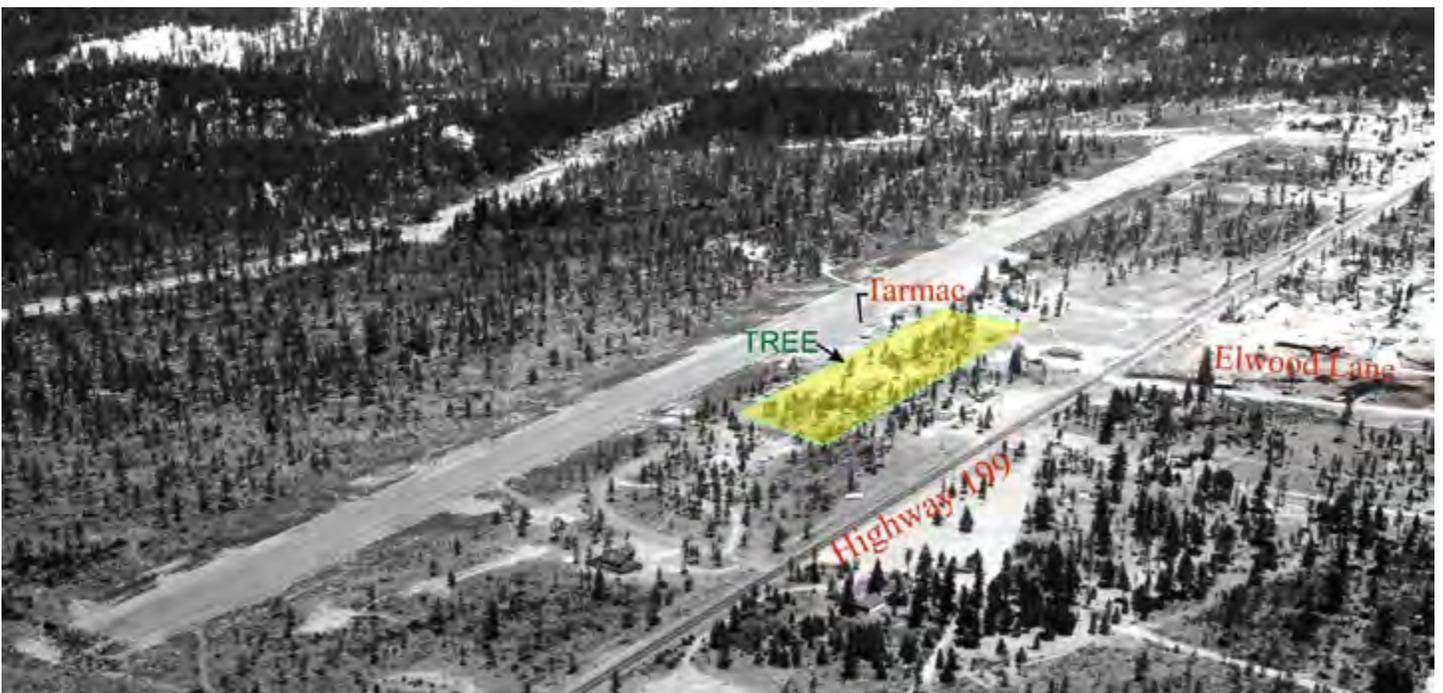
*The Smokejumper Heritage Tree is located at a site with unimpaird visibility to the north and south thanks to runway clearance standards. This offers an opportunity to use the tree as a point where the public can learn about the nation’s largest mantle rock outcrops (all the mountains seen on the horizon) and the Rough & Ready Creek alluvial fan.*

## AN AERIAL VIEW OF THE TREE'S HISTORY

The following three photos show the changes in the landscape as the base was developed.



*The airport was constructed in 1940 and the photo above shows the area where the smokejumper base would be constructed. Note there is a significant number of trees in this area. A pair of access roads near Elwood Lane go to the tarmac very near to the location of the proposed heritage tree. Photo: Unknown photographer, circa 1940.*



*By 1959, about 20 years later, many of the trees and vegetation in the base have been removed for the construction of buildings and training area. Trees on the other side of the runway (left) appear to have remained undisturbed. An arrow points to the proposed Smokejumper Heritage Tree. Photo: Al Boucher, 1959*



*In the early 1970s additional native pine trees have been removed from the grounds of the base. The trees marked by “1” are on private land outside of airport property. The trees marked by “2” were removed in the 1980s and the trees marked by “3” were removed in 2006. The proposed Smokejumper Heritage Tree is pointed out with an arrow. It eventually became the only tree from the original forest left standing in the main operation area of the base. Photo: Doug Beck, circa 1970*

### **WHY WAS THE TREE RETAINED?**

There is no documentation to explain why this tree was not removed along with other trees over the course of the base’s history.

One possibility might be the tree was retained for shade or as a landscape feature.



*The proposed Smokejumper Heritage Tree was located near the entrance to the mess hall, which was installed around 1948. The bath house and barracks (visible on far right) can be seen in the background. This photo was taken around 1954 when the new mess hall was constructed (visible on far left). Photo: Jim Allen, Base Commander*

(Why was tree retained (continued))

A telephone insulator near the top of the tree (circled in photo right) indicates the tree was used as a telephone pole in the earliest years of the base. A telephone was set up at the airfield when smokejumper operations began in 1943 (Heintzeman, 1943) and it is likely the line was installed directly from the Forest Service office in Cave Junction. Phone service in the valley was still limited at that time. It is understandable that the phone lines were strung from tree to tree rather than digging holes to install telephone lines because digging in the rocky soil of the alluvial fan can be extremely difficult. Crews from Camp Oregon Caves (see OTE Camp Oregon Caves Tree) were noted as installing phone lines in different parts of the valley around this same time (Illinois Valley News, 1940) and may have helped with the installation of this line.



*Smokejumper base mess hall circa 1952 looking northeast with parachute loft on right and proposed Smokejumper Heritage Tree pointed out with an arrow. There appear to be powerlines coming in from the right (A), the direction of Highway 199, and another power wire goes in the direction of the barracks. There is no visible wire coming from the heritage tree and it is assumed that by the time this photo was taken, the wire in the tree had been replaced by the wires visible in this image. Photo: USFS archives, circa 1952*

## **FORMAL RECOGNITION OF THE TREE**

The significance of the historic smokejumper base was unrecognized until 2004. At this time, efforts began to get the facility listed on the Register of National Historic Sites and while working on the nomination, many historic photos of the base were obtained. It was from these historic photos that the tree was recognized and used as a landmark to identify the location of historic buildings from the earliest part of the base's history. There has been no previous effort to call attention to the proposed Smokejumper Heritage Tree.

## **SUPPORTING DOCUMENTATION**

Borgias, Darren and Barbara Ullian, 1994. Rough & Ready Creek. Kalmiopsis, Vol. 4: 1994. Native Plant Society of Oregon

Brandt, Roger, 2011. Interview with Al Boucher, base cook in 1947 and smokejumper into the late 1950s. Discussed phone system at base in late 40s.

Brandt, Roger, 2005. Nomination to place Siskiyou Smokejumper Base on the National Register of Historic Places. <http://www.highway199.org/unique-places/siskiyou-smokejumper-base-museum/resources/>

Burns, R.M.; B.H. Honkala, 1990. "Pinus Jeffreyi". Silvics of North America. U.S. Department of Agriculture. Agriculture Handbook 654. [http://www.na.fs.fed.us/pubs/silvics\\_manual/Volume\\_1/pinus/jeffreyi.htm](http://www.na.fs.fed.us/pubs/silvics_manual/Volume_1/pinus/jeffreyi.htm).

Heintzelman, Jack, 1943. Annual Report Smokejumper Project, Region 6, Siskiyou National Forest, Cave Junction, Oregon

Illinois Valley News, 1940. Southern lads accustom selves to CCC Life in the west, Illinois Valley News, May 9, 1940, Pg 3.

Photographs: US Forest Service archives and private collections of former smokejumper crew members to include: Al Boucher, Jim Allen, Doug Beck, Gary Buck

## **TREE OWNERSHIP & PROTECTION STATUS**

Josephine County is the present owner of the property where the tree is located.

## **OWNER SUPPORT**

Support letter attached

## **CURRENT PROTECTION MEASURES**

Please check the current protection measures in place at time of nomination.

### Easements

There are no known or foreseeable public easement issues that threaten the tree.

### Conservation

This is a recreational site. There is no expectation that the tree will require any special conservation measures.

## **NOMINATION PREPARED BY:**

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Date Submitted: November 2, 2011

## RECENT PHOTOS OF THE SMOKEJUMPER TREE



*This recent photo of the proposed Smokejumper Heritage Tree was taken near the front door of the visitor center. The self guided, wheelchair accessible loop route can be seen going to the white-colored parachute loft in the distant right. The main part of the museum will be in the parachute loft. The airport tarmac can be seen behind the sign near the center of the photo. This tree may be unique in the Heritage Tree Program because it will be accessible by both drivers on Highway 199 and pilots visiting from major metropolitan areas of the western states.*



*Photo above left looks northeast taken from Smokejumper Way with the historic parking area seen in the foreground and visitor center (historic mess hall) in the right background. The arrow points out the proposed Smokejumper Heritage Tree. The image on the right shows the tree from a different angle looking almost due east with the visitor center in the background.*

## PHOTOS FOR IDENTIFICATION

Jeffrey Pine, *Pinus jeffreyi*, Grev. & Balf. 30–80 ft (10–25 m) in height; thick, straight trunk; crown spreading but symmetrical, branches widely spaced, thickening with age; bark thick, reddish brown (darker than Ponderosa Pine), deep furrows with typically narrow plates, inner surface pink to brown, vanilla odor; three needles per fascicle, blue-green, 4.5–7 in (12–18 cm) long, visible rows of stomates; male catkins 1 in (2–3 cm) long; female cones subterminal, 4.5–6 in (12–15 cm) in length, inturned prickles on needle scales, young cones purple, turning russet brown when ripe, long oval; seeds 3–4.5 in (8–12 cm) long, with wings 1 in (2–3 cm) in length. Hall, Clarence A., 1991. *Natural history of the White-Inyo Range*, University of California Press, Los Angeles. pg 97. <http://publishing.cdlib.org/ucpressebooks/view?docId=ft3t1nb2pn&chunk.id=d0e7991&toc.depth=1&brand=eschol>



*Cones from the nominated tree: Spines point inward*



*Needles and catkins from nominated tree.*