



Midpeninsula Regional
Open Space District

Memorandum

DATE: October 28, 2020

MEMO TO: Midpeninsula Regional Open Space District Board of Directors

THROUGH: Ana Ruiz, General Manager *aruiz*

FROM: Matt Sharp Chaney, Resource Management Specialist II

CC: Kirk Lenington, Natural Resource Manager
Jay Lin, Engineering & Construction Manager
Jane Mark, Planning Manager
Tanisha Werner, Senior Capital Project Manager

SUBJECT: La Honda Creek White Barn Bat Habitat

The La Honda Creek White Barn (White Barn) is a structure and landscape feature at upper La Honda Creek Open Space Preserve representing a long history of ranching and mid-19th century vernacular architecture. Although its original construction date is unknown, a records search revealed that it was an integral part of cattle rangelands between 1860 and 1973. The site is located in the upper reaches of the Preserve where access is limited to 10 visitor permits per day. The White Barn is access off Allen Road, approximately 1.5 miles to the east of the intersection of Bear Gulch Road and Allen Road. Allen Road is a private road with traffic generally limited to area residents. The surrounding landscape is characterized by rich vegetation, rolling grasslands, and wooded areas. The White Barn is rectangular with redwood framing, a metal roof, and a wood floor.

In June 2019, Swaim Biological conducted a wildlife survey for the structure. Three bats were observed roosting in its interior. The area surrounding the structure provides suitable bat habitat. The White Barn is presumed to serve as a maternity roost site. Signs of woodrats were not observed in the structure.

At the April 22, 2020 public meeting, the Board directed the General Manager to mothball the structure, with repairs made to the exterior and enhanced foundation work performed in accordance with the Secretary of the Interior standards, as well as install wildlife exclusionary measures, new interpretive signage, and plexiglass window covering to allowing public viewing of the interior architecture and craftsmanship of the structure. The Board also directed the General Manager to evaluate options for providing bat habitat replacement near the barn. Upon further evaluation of bat habitat options, staff concluded that while building new bat habitat near the White Barn is a feasible alternative, the barn itself provides optimal bat roosting habitat. In

particular, the White Barn provides maternity roosting habitat for bats that cannot be effectively replaced in kind without building a structure with similar characteristics to the existing barn. While the construction of stand-alone bat boxes in the area may provide roosting habitat, it is unlikely to support the successful reproduction of bats, or provide habitat for the same assemblage of bat species. A cost-effective solution may be to keep the bat habitat use inside the barn by installing interior bat boxes and openings for bat entry into the barn while protecting the historic and structural character of the building through regularly scheduled maintenance as described below.

BAT HABITAT USE INSIDE THE BARN

In 2000, the District's consultants from the Central Coast Bat Research Group completed a District-wide bat inventory identifying bat roosts and species composition at 13 representative locations across District preserves. Surveys took place during the maternity roost season, from April 15 through August 31, when many bats utilize roosting habitat to raise their young. This allowed for the identification of essential maternity roost habitats that play a significant role in the long-term population viability of bats in the region. The La Honda White Barn structure was included in this survey effort. Acoustic surveys detected 8 species of bats in the immediate area, including Townsend's big-eared bat, pallid bat, and western red bat, which are three California state species of special concern. In addition, surveys of the interior of the White Barn determined that the structure was being used as day-roosting habitat for Townsend's big eared bat, and a colony of over 10 long-eared myotis that were likely using the structure as a maternity roost. While long-eared myotis are not a species of special concern, the loss of maternity roosting habitat for any bat species would be considered an impact under the California Environmental Quality Act (CEQA).

The White Barn structure was re-surveyed for bat presence in July of 2019 by Swaim Biological Consultants (Attachment II). This survey found bat guano inside of the White Barn and identified three individuals of an unknown myotis species day-roosting in the rafters of the structure. This survey was limited in scope and did not include mist netting to capture and handle bats, or acoustic surveys, which would have allowed for species identification. This survey verified that the White Barn is still functioning as bat roost habitat.

The District has successfully managed bat habitat use in historic structures at Alma College in Bear Creek Redwoods Open Space Preserve, as well as at the historic Red Barn structure in lower La Honda Creek Open Space Preserve. At Alma College, the District worked with bat experts from H.T. Harvey and Land and Facilities crew to design and construct two new 10'x10'x16' cinderblock structures at the nearby Bear Creek Stables, and three alternative bat habitat structures in the former Alma College carport. These structures were designed to support multiple species of bats by maintaining consistent temperatures and providing both crevice roosting and cave roosting habitat, greatly improving the probability of use as maternity roosting habitat. At the La Honda Red Barn, the District has implemented best management practices to avoid disturbing the existing maternity colony of pallid bats, while continuing to maintain the structure and allow use by the current grazing tenant. With these prior successes and understandings on the limitations of pole-mounted bat boxes, District staff explored effective alternatives for continued bat use at the White Barn that also preserve the structure's historical character.

In September 2020, ZFA and Page & Turnbull assessed the feasibility of allowing bats to continue entering and using the White Barn as bat roost habitat. Several exterior entry points were evaluated for constructability, costs, and implications to the historic character of the

structure. The findings concluded that if the District were to proceed with providing bat roost habitat inside the barn, new openings at the exterior wall below the roof overhang is the recommended best option. Based on Page and Turnbull's assessment, the proposed openings are deemed consistent with the Secretary of Interior's Standards for the Treatment of Historic Properties since the alterations will be minimal and fully reversible with no significant alteration to the exterior character of the barn. While wildlife exclusion is generally recommended to protect structures, the proposed measures maintain bat habitat and protects the barn from impacts due to roosting bats.

RECOMMENDATIONS FOR CONTINUED BAT USE

The District's Resource Management Policies include wildlife policies that pertain to the bat roosting habitat found within the White Barn structure. These policies are listed below:

Wildlife Policy WM - Maintain and promote healthy and diverse native wildlife populations.

WM-2 Protect, maintain and enhance habitat features that have particular value to native wildlife

- Evaluate the wildlife habitat value associated with human-made structures before altering or removing them and avoid or mitigate any impacts.

Directed by these policies District staff worked with H.T. Harvey and Associates to develop the following recommendations for balancing the preservation of this historic structure with continued use by bat species, while allowing the public to admire and learn about local history (see also related cost estimates below).

- *Bat access:* remove two vertical side-boards from the gable area on the west side of the White barn to allow bats to continue accessing the structure. This would minimize any visual impact to the structure as there is already a horizontal cut along these-side boards, and this area is located on the opposite side from the primary public view of the structure. This location is over 10 feet off the ground, which is ideal for access by larger, slower-flying species like Townsend's big-eared bat. In addition, the eaves of the roof are directly above the proposed openings, offering added protection against weather intrusion.
- *Bat roosting structures:* Install four multi-chamber bat boxes on the interior east and west wall of the structure to provide bat roosting habitat and attempt to concentrate bat use to these areas for increased ease of maintenance in removing bat guano. These bat boxes would be placed away from identified historically-significant features and would be fully removable. ZFA has designed movable platforms that would keep guano off of the interior floor of the structure. Accumulation of guano is expected to be minimal and, with appropriate maintenance, would not negatively impact the integrity of the structure.
- *Maintenance:* H.T. Harvey has recommended a scheduled cleaning and maintenance of the interior of the structure every 10 years. The ZFA report recommends annual inspection of the interior of the structure to confirm whether it should be cleaned more frequently. Based on these reports the District is recommending annual inspections of the structure with cleaning as needed. Maintenance would include removal of accumulated guano and urine deposits on the movable platforms that would be installed under the bat

boxes, as well as in other areas where bats may continue to roost inside the building. Additionally, the H.T. Harvey report details health and safety recommendations for removal of bat waste that may require contracting with outside consultants experienced with biohazard cleanup.

- *Public viewing:* In order to limit light intrusion into the structure, which can reduce habitat suitability for certain bat species. H.T. Harvey has recommended limiting the number of plexiglass viewing windows to one.
- *Signage:* While some species of bats are extremely tolerant of disturbance, others like Townsend’s big-eared bat have been known to abandon young when disturbed by human activity. H.T. Harvey has recommended installing simple signage along the future access trail to the White Barn directing members of the public to minimize noise levels to avoid disturbing roosting bats.

Estimated Costs

<i>Item</i>	<i>Estimated Cost</i>
Bat Access	\$500
Bat Roosting Structure	\$1,700
Maintenance	\$300/year
Signage	\$400
Total	\$2600 + \$300/year for maintenance

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