

# VAIL HOMEOWNERS ASSOCIATION

## Can the Bighorn Sheep be Saved?

February 25, 2019

This report addresses the plight of the East Vail bighorn sheep herd. In the latest community survey, protection of the natural environment and wildlife was rated as a high priority (ranked no. 1 for financial prioritizing and a strong no. 2 as a community issue). Now as attention has focused on the herd, it has become apparent that these majestic animals are on the brink of extinction. The herd can be saved but whether that happens depends on the steps taken by the TOV. How that plays out in the coming months and year will have much to say about the future of Vail.



**The East Vail Bighorn Sheep herd grazing on the hillside.  
Does the Vail community care enough to save them from development?**

## Can the Big Horn Sheep be Saved?

**At a Tipping Point.** [As concerns mount for the survival of the East Vail bighorn sheep](#) local wildlife experts have been weighing in and the situation seems even direr than [VHA originally reported](#). The local experts point out that the East Vail herd is very small, and that it will not take much to push them over the edge to extinction.

While Triumph's biologist places their number at 55, there is good reason to believe that they may have already declined into the 40s. Whatever the actual number, it is small enough that if there is much more decline, there will be little that can be done to save them. Unfortunately, the East Vail Employee Housing project may be the catalyst for that decline.

That is because bighorn sheep are easily stressed by human activity, and this project would place a great deal of activity in the sheep's winter range. Even small disturbances where the sheep run off for a few yards add up over the course of the winter in calories burned. The project will also impact the sheep's feeding time and, for bighorns during the winter, that can have serious effects. Winter is a time of starvation for bighorns, so any reduction in the available feeding periods can impact their survival. In addition, ewes are pregnant during the winter, and any impacts to their overall health impacts the unborn lambs. Lambs that are born subpar are at a greater risk of not surviving their first year. If the ewes do not regain their overall health, they will not breed the next year. So the impacts from one winter can impact the population for 2 or more years, and impacts from continuous human activities will be forever.

It seems that Triumph is positioning to claim that uphill mitigation can offset those effects and save the herd, but what is being proposed by Triumph's biologist is seriously flawed and no panacea for the herd. A "mitigation-is-a-cure-all" approach does not bode well for the East Vail herd, especially if done in small batches and, even more especially, if it is used as an excuse to displace the herd from key parts of its winter range. Local wildlife experts make the point that if the project is built, uphill mitigation may only prolong the sheep's existence but not save the herd in the long-term. Once again this raises the question, why is not the TOV embracing this natural wonder and making the protection of the herd a community priority?



**Vail Big Horn Sheep--Tracks in snow show herd movement on the area of Triumph's proposed building.**



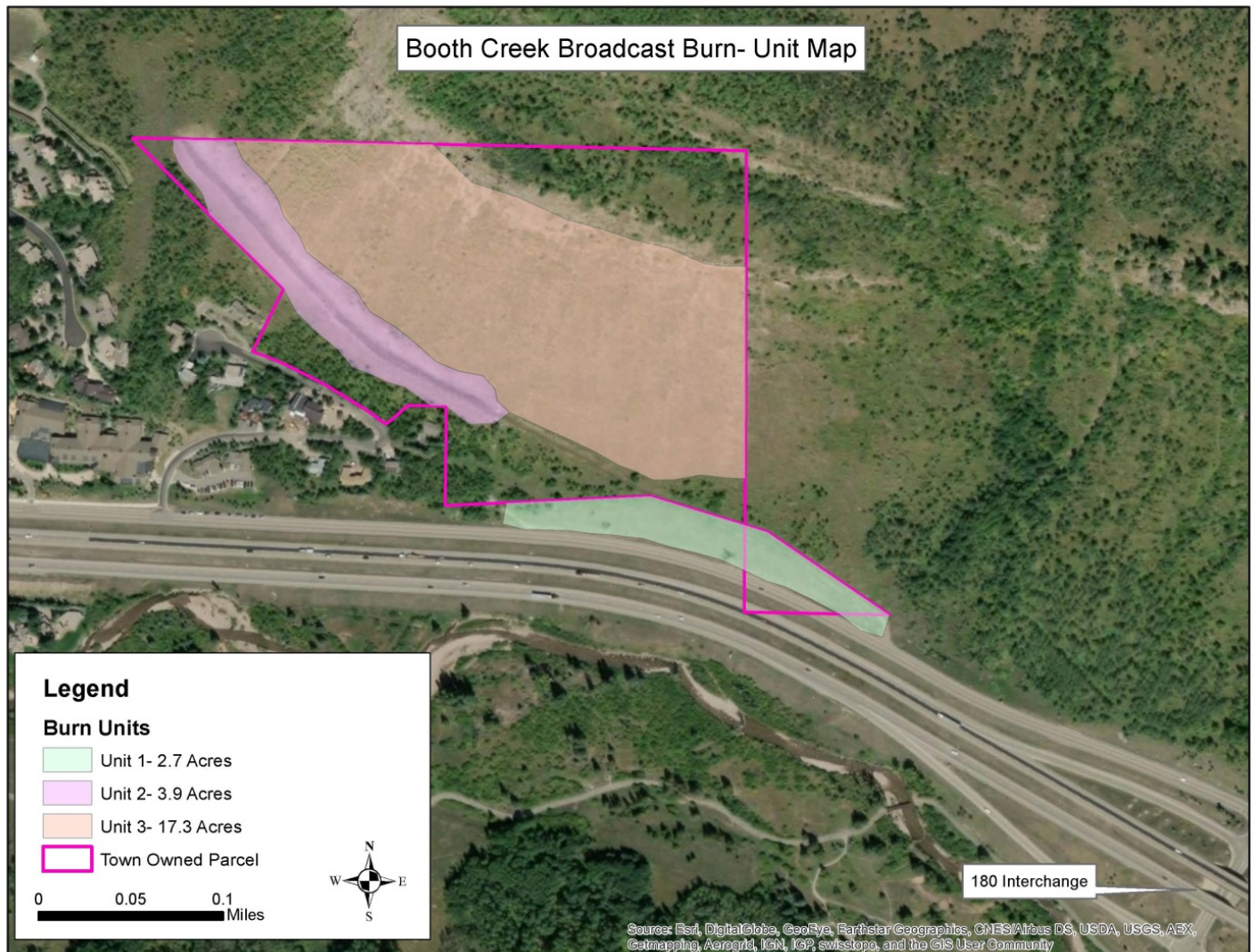
**Cause For Concern.** The East Vail bighorn sheep population had a serious decline after the hard winter of 2007-2008. That reduction was predictable due to the winter that year, but the fact that the herd has not recovered in the 10 year since is the cause of great concern. The failure of the herd to bounce back was not due to disease as some have questioned. While bighorns are susceptible to several diseases, the herd has been tested and has not shown the signs of disease. There have been 2 sheep in recent years that have been found dead on the hillside, and they were sent to the Colorado Parks and Wildlife health lab, but no disease issues were noted.

The most likely cause for the herd's decline is habitat deterioration. It is well known that the winter range of the bighorn sheep has been slowly shrinking due to development and deterioration due to fallen trees and excess overgrowth. Now the herd is facing more habitat loss by the potential construction of the East Vail housing project. And, it will not be just the area of the project; its noise, light and odor effects, as well as other human impacts, will extend far beyond the boundaries of the project as was shown when the Buzzard Park employee housing was added at the Vail maintenance facilities in the late 1990s. The impact from those residents quickly pushed the sheep out of that area. There is no reason to believe that the same will not be the case if the East Vail housing project is built.

**Serious Errors in Analysis.** The local experts also point out that Triumph's biologist is flat wrong when he claimed that bighorn sheep are mostly nocturnal to support the conclusion that impacts from the construction of the project will be minimal. In fact, bighorn sheep are diurnal (active during the day). See Fitzgerald et al., *Mammals of Colorado*, ("Mountain sheep are gregarious, social mammals. They are diurnal, with two to five foraging bouts interspersed with periods of rest, play..."). The major defense bighorns have against predators is their keen eyesight and the ability to detect movement at great distances; nocturnal active would reduce the ability of bighorns to detect predators. Anyone who has observed the East Vail herd has noted that they are extremely active during the day. That does not mean that bighorns are never active at night just that the characterization that construction activities during the day will avoid impacts to bighorns is incorrect.

The local experts also questioned basing any conclusions on observations from just one year (actually more like 10 months), especially when that period—the winter of 2017-2018—was as mild as it gets. Lamb survival rates then would expectedly be high. Using those survival rates to predict future outcomes would be like the TOV using the revenue from a big snow year for their baseline budget each year.

Putting aside that wildlife officials have been trying to get mitigation done for over 30 years (but neighborhood concerns over necessary controlled burns and cost issues have prevented it from happening), it is very doubtful that uphill restoration can save the herd if the housing project is built. That is because the housing project sits astride the herd's winter habitat and, if built, will block access to the CDOT right-of-way which the herd needs for salt intake. Clearly, uphill mitigation could help, but local wildlife experts also point out that the "small batch" approach recommended by Triumph's biologist is wrong. "Small batch" restoration only leads to overgrazing in the treated areas which can reduce the overall success of the treatment. To prevent overgrazing by the sheep and other species (such as deer and elk which can easily out compete bighorn sheep) there needs to be large-scale restoration. And, local experts also note that proper mitigation is not a one-shot process as Triumph's biologist seems to think. To be successful, habitat mitigation must be ongoing, not just something that the developer does once and walks away from.



#### Areas to be burned

**Controlled Burns this Spring.** Apparently, relying solely on Triumph’s biologist’s “small batch” mitigation theory, the TOV is planning controlled burns on four acres: 2.2 acres (in the pink zone) immediately above the Booth Creek home area and Mountain School campus and 1.8 acres (in the green zone) adjacent to the Frontage Road between the Mountain School and the I-70 East Vail interchange.

These burns are planned for just a couple of months from now in either April or May 2019. Burns for the rest of the area, an area in excess of 100 acres that includes both TOV owned land and USFS land, will have to await the spring of 2020 or longer. In addition, the USFS land (located to the east of the town owned land on the map above) introduces the need for scientific planning, multiple approvals and an environmental impact study as the USFS has more rigorous standards than the TOV, causing them to thoroughly study the procedures and effects of habitat changes.

**More Show than Help.** These two initial parcels were apparently chosen for ease of access, but those burns will do little to help the sheep. Together they comprise only a very small fraction of the sheep’s habitat and will have little impact on available forage. That is because the Booth Creek parcel is not frequented by the sheep due to the adjacent human impacts, the CDOT parcel is not clogged so as to prevent foraging and, in any event,

these are “small batch” burns with the attendant issues discussed above. Rather than rush into this effort, more planning and scientific input could have produced a meaningful change.

**Other Issues.** Even though the Town Council has green-lighted the present 4 acre plan, there are several problems that, so far, have not been addressed. First, these burns have limited value due to the small area involved. It will only be area-wide work that will have real effects. Then, there is the question of giving proper assurances that the proposed burns can be safely conducted. The two parcels were chosen because they have minimal fuel loading, are mostly thatch and have roads above and below so that the burns can be easily controlled. That is not true of the rest of the area which has years of accumulated fuel and no easy access for control. And, there is the issue of properly preparing the area for burns. Without proper preparation, burns have limited value. There needs to be pre-burn prep work to clear out overgrowth and to cut and stack fallen trees.

Then, there is the matter of the cost of the mitigation. The TOV is going to foot the bill for these burns, estimated to cost several thousands of dollars. There is no estimate on the cost to properly prep the areas or what it will cost to mitigate the entire area (see above), although it is easy to see that just burns for the entire area could exceed \$100,000. Clearing and cutting overgrowth will be labor intense and much more expensive. Whatever those costs turn out to be, the TOV should insure that they are all paid for by the land owner and/or developer (since it is their project that is going to impact the sheep).

**No Guarantees.** There is also the fact that there are no guarantees that the mitigation will be successful. For the protection of the herd, mitigation of the entire area should be completed before any approvals for construction are issued so that its success can be gauged and taken into account in the approval process. If after the entire area has been mitigated the herd does not bounce back and increase in numbers, the housing project should not be approved. And, if the herd does recover and construction of this project is to be allowed, to protect the herd from its impact, construction should not be allowed during the winter months when the herd is occupying the area.

**What Needs to be Done Now.** If the herd is truly going to be helped, it is past time to get busy. Area-wide mitigation will have to be a joint effort of both the TOV and the USFS. Because of the recent government shutdown, it could take a year or longer to get approval for burns on the USFS portion of the land. Reportedly the TOV is already in communication with the USFS, and it should pursue getting interim approval for some work in advance of area-wide burns. As soon as conditions permit, crews should begin the process of trimming overgrown foliage and cutting and stacking fallen trees. Doing that work this coming summer will improve safety for burns in 2020 or later and will have the advantage of a partial mitigation for the winter of 2019-2020. Beyond that, VHA urges that planning for the sheep should be informed by the best available scientific input, not just limited to what Triumph’s biologist has to say.

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