January 11, 2021

Sent via email

Karen Holman
President, Board of Directors
Midpeninsula Regional Open Space District
330 Distel Circle
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clerk@openspace.org

Re: Beatty Parking Area and Trail Connections

Dear President Holman and Board of Directors,

On behalf of the Center for Biological Diversity ("Center"), we are writing to urge the Board of Directors (Board) to place the Beatty Project on hold until connectivity is improved for newts and other wildlife on Alma Bridge Road. The Project site is located along a 4-mile stretch of road where approximately 5,000 roadkill newts have been documented by community scientists every year for the past couple of years, and over 1,100 dead newts have been documented so far this breeding season (generally November to May). In addition to the two species of newts (California newts, [*Taricha torosa*] and rough-skinned newts [*T. granulosa*]), roadkill of about 85 other species, including other amphibians, reptiles, birds, small mammals, insects, and invertebrates have been documented on the road. Unless issues of wildlife connectivity and the high numbers of newt deaths are also addressed, a project that would further constrain wildlife movement in the area by increasing traffic volume and human activity would go against the mission of Midpeninsula Open Space District (Midpen) to "protect and restore the natural environment, and provide opportunities for ecologically sensitive public enjoyment and education."

Should the Board decide to move forward with the Beatty Project, the Center recommends that seasonal road closures and/or wildlife crossings be implemented on Alma Bridge Road as an integral part of the project and no additional parking should be provided. Ensuring habitat connectivity could help strengthen resilience to the many threats (*e.g.*, habitat loss, disease, invasive species, chemical contaminants, climate change, etc.) these newts face.

One of the 1,100+ newts that were killed on the road since mid-November 2020 was painted over when Santa Clara County Roads painted the center lines on the newly repaved road sections on December 16, 2020 (left). This left a permanent silhouette of a dead newt on the road (right).
Photos by Stacie Wolny, a community scientist who was conducting the roadkill survey that day.

Background on the Center

The Center for Biological Diversity ("Center") is a non-profit, public interest environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center has over 1.7 million members and online activists throughout California and the United States. The Center and its members have worked for many years to protect imperiled plants and wildlife, open space, air and water quality, and overall quality of life for people in Bay Area.

Roads have significant impacts on wildlife movement and habitat connectivity.

Roads create barriers that lead to habitat loss and fragmentation, which harms native wildlife, plants, and people. As barriers to wildlife movement, roads can affect an animal's behavior, movement patterns, reproductive success, and physiological state, which can lead to significant impacts on individual wildlife, populations, communities, landscapes, and ecosystem function (Mitsch and Wilson 1996; Trombulak and Frissell 2000; van der Ree et al. 2011; Brehme et al. 2013; Haddad et al. 2015; Marsh and Jaeger 2015; Ceia-Hasse et al. 2018). For example, habitat fragmentation from roads and traffic has been shown to cause mortalities and harmful genetic isolation in mountain lions in southern California (Ernest et al. 2014; Riley et al. 2014; Vickers et al. 2015), increase local extinction risk in amphibians and reptiles (Cushman 2006; Brehme et al. 2013; Brehme et al. 2018), cause high levels of avoidance behavior and mortality in birds and insects (Benítez-López et al. 2010; Loss et al. 2014; Kantola et al. 2019), and alter pollinator behavior and degrade habitats (Trombulak and Frissell 2000; Goverde et al. 2002; Aguilar et al. 2008). Habitat fragmentation also severely impacts plant communities (Damschen et al. 2019). In addition, connectivity between high quality habitat areas in heterogeneous landscapes is important to allow for range shifts and species migrations as climate changes (Heller and Zavaleta 2009; Cushman et al. 2013; Krosby et al. 2018). Loss of wildlife connectivity decreases biodiversity and degrades ecosystems.

Community scientists have documented high levels of wildlife road mortalities.

The impacts to connectivity due to traffic on Alma Bridge Road are clear. Community scientists have documented over 10,000 dead newts in the last two breeding seasons[1] (newts are more active on the surface when the rains trigger breeding season, generally November to May). According to UC Davis road ecology expert Dr. Fraser Shilling, about 5,000 newt roadkill per year is the second highest rate of mortality for herpetofauna ever recorded in the world. This current breeding season, which started in mid-November, the community scientists have documented over 1,100 dead newts in a season with much less rain compared to the previous two years, and it is likely many more will be killed by May. California newts and rough-skinned newts have been identified as very-high and high risk of negative road-related impacts, respectively (Brehme et al. 2018), and the community science data illustrate this. There are other herps that have been documented in the area that are also high or very-high risk of negative road impacts, including California giant salamanders, western pond turtles, garter snakes, and striped racers (Brehme et al. 2018).

The community scientists have documented numerous other taxa killed on the road, including other amphibians, reptiles, birds, mammals, insects, and invertebrates. Almost 12,000 dead animals representing about 87 species have been documented on this 4-mile stretch of road in just over two years, and, frighteningly, these numbers are likely an underestimate. Animals may not die immediately after being hit and can move off the road before succumbing to their injuries; small carcasses might stick to

[1] See community scientist project, Pacific Newt Roadkill – Lexington Reservoir Project, on iNaturalist: https://www.inaturalist.org/projects/pacific-newt-roadkill-lexington-reservoir

tires or be moved off the road by them; carcasses disintegrate over time, which can hasten when it is raining or when many cars run them over; and sometimes people might not see the carcass during surveys. But given these astounding numbers, there is no question that the traffic on this road is impacting connectivity for the newts and likely many other species in the area. The Center is concerned that placing a project along Alma Bridge Road without any improvements to wildlife connectivity will attract more human activity and vehicular traffic, which could drive these roadkill numbers even higher until populations start visibly declining.

Amphibians are extremely vulnerable and in decline.

Amphibians are the most threatened vertebrate group with more than 40% of species threatened (IUCN 2016) and approximately 200 species collapsing to or near extinction since the 1970s (Stuart et al. 2004; Alroy 2015). According to researchers at the U.S. Geological Survey (USGS), amphibian populations in the U.S. are declining at an alarming rate of almost 4% per year (Grant et al. 2016), and roads increase local extinction risk in amphibians (Cushman 2006; Brehme et al. 2018). Amphibians are important in many terrestrial and aquatic ecosystems because they play key roles in the food chain and carbon cycle (Best and Welsh 2014; Semlitsch et al. 2014; Arribas et al. 2015; Rowland et al. 2016). They face numerous threats, including habitat loss and degradation, invasive species, chemical contaminants, disease, roads, and climate change (*e.g.*, Riley et al. 2005; Hayes et al. 2006; Yap et al. 2015; Brehme et al. 2018; Bucciarelli et al. 2020). We must do more to protect these populations before it is too late.

The Center appreciates Midpen's Planning and Natural Resource Committee's concern and consideration of the newt mortalities and Midpen's engagement with Peninsula Open Space Trust and ecological consultant H.T. Harvey and Associates to study the population level effects of these high newt mortalities. However, USGS herpetologist and road ecology expert Dr. Cheryl Brehme has commented that it is not a question of *if there is an effect*, rather it is a question of *how big is the effect and how long before these newt populations become extirpated*. Santa Clara County Roads repaved the road this past summer (2020) without implementing any mitigation measures; this was a missed opportunity for a collaborative, more cost-effective strategy to make the road safer for people and wildlife while advancing our understanding of how to make roads more permeable for wildlife. Instead, increased traffic volume and higher driving speeds due to the repaved road will likely increase roadkill numbers over time, though at some point roadkill will become less common as populations get wiped out.

There are existing mitigation measures that could improve connectivity for newts and other small critters on Alma Bridge Road.

The Center requests that as an initial matter, no new projects be implemented on Alma Bridge Road until impacts to connectivity are fully addressed. However, should the Board decide to move forward with the Project, the Center strongly urges the Board to have the Project only include trails that connect to the existing Miller Parking Lot and forego creating an additional parking lot that would further increase capacity and traffic volume while extending habitat loss and edge effects. In addition, the Project should include seasonal road closures and/or wildlife crossings on Alma Bridge Road as part of its design and implementation. Ensuring habitat connectivity could help strengthen resilience to the many threats these newts face.

Road closures to protect wildlife connectivity have been implemented with significant success elsewhere. For example, East Bay Regional Parks District closes South Park Drive to all motor vehicle traffic from November to April every year to protect active newts during the rainy season. It has been closed throughout the pandemic, and newts seem to be doing well. On a rainy night in late December 2020 I personally observed over 90 newts on a half-mile section of the closed road within two hours. Temporary closure of the road or limited access at night during the winter months would significantly

reduce newt mortalities, since newts are most active at night. The Center understands that Santa Clara County Roads would need to be involved in this decision-making but urges the Board to strongly push for road closures now.

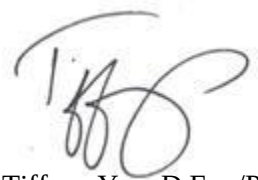
If closing the road seasonally is not feasible, wildlife crossings have also been shown to reduce road mortalities. For example, in a pilot study conducted in Yosemite, an elevated section of road allowed Yosemite toads and other small critters, including snakes, rodents, and lizards, to safely migrate (Brehme and Fisher 2020). Amphibian undercrossings embedded in the road with grated tops, cattle guard crossings, and upgraded culverts (and associated fencing) are other potential mitigation measures that have had some success when appropriately designed and could be explored for this site. The crossings should be designed and implemented in collaboration with road ecology experts, like Dr. Brehme, as an essential component of the Project.

Conclusion

Midpen has been a conservation leader in the Bay Area. The growing mosaic of Midpen Preserves is a testament to that. The Center urges Midpen to continue its leadership in pushing for improved connectivity among and between protected lands to conserve the area's diverse wildlife, from newts to mountain lions. Given the high newt mortalities and documented impacts on connectivity on Alma Bridge Road, the Center urges the Board to defer the Beatty Project until these impacts are adequately addressed.

Thank you for the opportunity to submit comments on the Beatty Project. Please include the Center on your notice list for all future updates to the project and do not hesitate to contact the Center with any questions at the email listed below.

Sincerely,



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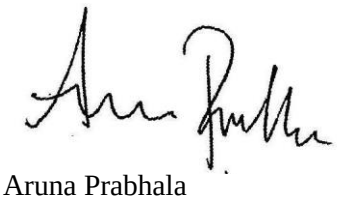

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(*Provided via OneDrive*)

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