




Midpeninsula Regional
Open Space District

Memorandum

DATE: July 8, 2020

MEMO TO: Board of Directors

THROUGH: Ana Ruiz, General Manager 

FROM: Julie Andersen, Senior Resource Management Specialist
Kirk Lenington, Natural Resources Manager
Jane Mark, Planning Manager

SUBJECT: Alma Bridge Road Newt Mortality Update

SUMMARY

In response to a newt mortality issue along Alma Bridge Road, Midpeninsula Regional Open Space District (District) staff have participated in ongoing conversations with newt advocacy groups (Sierra Club and Audubon) and researchers (US Geologic Survey and US Davis Road Ecology Center). District staff are also coordinating with partners, including Santa Clara County Roads and Airports (County Roads), Santa Clara County Parks (County Parks), Santa Clara Valley Water District (Valley Water), the California Department of Fish and Wildlife (CDFW), and Peninsula Open Space Trust (POST). To date, over 10,000 dead newts have been documented by volunteers on Alma Bridge Road since monitoring began in 2017. District staff reviewed an infrastructure project proposed by newt advocates and researchers to reduce roadkill with County Roads, County Parks, and Valley Water staff. As a result of these discussions, the District is currently working with POST to develop an additional study for review by the stakeholder agencies. Further study will characterize the road mortality relative to long term subpopulation viability and help determine the appropriate scale of any roadway modifications. In addition, staff is evaluating how the Beatty Parking Lot and Trail Connections Project will interface with the studies and future actions to address the newt mortality issue along Alma Bridge Road.

DISCUSSION

In November 2017, District staff were notified by a District trail patrol volunteer that she had observed ongoing newt roadkill (numbering in the hundreds) along Alma Bridge Road near Sierra Azul Open Space Preserve. Staff responded that although concerning, Alma Bridge Road is not owned or managed by the District and therefore our ability to implement actions to address this issue was limited and would require participation of additional partners. Staff discussed the issue with the volunteer to clarify that this work to monitor the roadkill along the roadway is not part of an official District study and contacted local agencies to advise them of the issue. To date, over 10,000 dead newts have been documented by volunteers on Alma Bridge Road since monitoring began in 2017.

California newt (*Taricha torosa*) and rough-skinned newt (*Taricha granulosa*) are closely related species, are present in the area, and have both been identified among roadkill on Alma Bridge Road. Neither of the newt species have special protection in this area. The California newt is listed as a California Species of Special Concern in the southern portion of its range (Monterey County and south), which does not include Santa Clara County or District preserves. The rough-skinned newt has no special protection. In

November 2018, POST began to further investigate the issue by working with a consultant biologist to analyze existing volunteer data. That effort found that additional study is needed to estimate the adult newt breeding population size and percentage of the population being killed by vehicle strikes. This information was shared with newt advocates, researchers, and agency stakeholders.

In February 2019, the Audubon Society and the Loma Prieta Chapter of the Sierra Club sent a letter to Supervisor Wasserman and the Santa Clara County Board of Supervisors requesting road closures, efforts to reduce traffic (e.g. vehicle shuttles), installation of signage on Alma Bridge Road, and the development of educational materials (see Attachment 1). County Roads responded to this letter indicating they will install signage on Alma Bridge Road, that road closures are not feasible, and that County Parks will educate park users about newt crossings (Attachment 2). Supervisor Simitian's office also discussed the issue with District Natural Resources (NR) staff. County Roads followed up and has installed numerous newt crossing signs on Alma Bridge Road.

The District developed a Frequently Asked Questions document (Attachment 3) to convey our knowledge of and ongoing involvement in raising awareness about the newt mortality issue. This information is available on the District website.

In January 2020, the District held a Planning and Natural Resources (PNR) Committee meeting onsite for the Beatty Parking Lot and Trail Connections Project (Beatty Project) and heard comments from Audubon Society regarding concerns about ongoing newt mortality on Alma Bridge Road. District NR staff subsequently participated in a meeting with POST, the newt advocacy groups (Audubon, Sierra Club), and researchers (UC Davis Roadkill Ecology Center, USGS) to discuss data collection, potential mitigation options, and process. Shortly after, in February 2020 the researchers sent a proposal for the use of an elevated roadway and directional fencing to offset newt mortalities in identified roadkill hotspots along Alma Bridge Road. They sent this proposal to County Roads, County Parks, CDFW, Valley Water, the District, and POST.

In April 2020, the District met with County Roads, County Parks, and Valley Water to discuss the proposal and intersection with the Beatty Project. During discussions, County Parks and Valley Water indicated they are supportive of a more systematic study of the newt population and noted that multiagency collaboration is needed. The County does not believe it is appropriate to propose changes to the built environment, roadway, or operation and maintenance of the roadway until the effects of mortality on species population can be understood with more clarity. County Roads is not willing to maintain the infrastructure as currently proposed and the General Manager does not recommend the District taking on maintenance responsibility of a county road structure. Valley Water is also interested in additional studies and defining a clear project lead before undertaking any proposals that may impact their operations.

In June 2020, UC Davis submitted a pre-proposal to the Wildlife Conservation Board for Proposition 68 funding in the amount of \$1,040,000 for the following work:

Phase 1 - Develop a plan and mitigation design to reduce herpetofauna mortality within three (3) hotspot areas of Alma Bridge Road, next to Lexington Reservoir, by preventing access to the road surface and allow herpetofauna access to mating habitat in the Reservoir through existing bridge and culvert crossings.

Phase 2 - Contingent upon the County's acceptance of the plan and design, build mitigation within the hotspots and experimentally determine the effectiveness of the approach in order to inform subsequent mitigation phases.

Herpetofauna is a catch all phrase that includes reptiles and amphibians, but the mortality of concern is limited to newts. After discussions with District staff, the General Manager recommends continuing to work collaboratively with stakeholder agencies to secure an outside consultant to develop a more focused and systematic study that quantifies impacts of roadkill to the newt population. A research proposal is currently in development for review by the District, POST, Valley Water, County Roads and County

Parks prior to an upcoming Planning and Natural Resources Committee Meeting where it will be discussed. If recommended by the Committee, award of funds for a District contribution to the study will then be brought to the full Board.

The District is also supportive of continuing to work with the newt advocacy groups and researchers to discuss solutions to the newt roadkill issue. Further study that demonstrates with greater clarity the need and beneficial outcomes of major roadway modifications to protect newts is needed for agencies to consider contributing significant funds towards and/or being willing to install and maintain such roadway modifications in the future. Implementation will require significant funds, equipment, and ongoing staff time to provide environmental review, multi-agency collaboration, ongoing effectiveness monitoring, inspection and maintenance. The General Manager has directed staff to work with stakeholder agencies to explore funding a collaborative multi-agency study for determining the level of impact to the local newt population, and the appropriate scale of roadway modifications needed to ameliorate the ongoing roadkill. Depending on the cost, a future funding agreement may come to the full Board for review and approval at a later date.

In addition to ongoing coordination, District has added a newt migration page to the District website, distributes an annual rainy season email to all staff and social media posts to the public asking them to drive slowly during wet weather in areas of newt migration and report any additional areas of observed roadkill. Staff has also provided information on the District grantmaking program and provided permits and information to help support newt research efforts. Furthermore, staff anticipates presenting an update of the Beatty Project to the PNR Committee this summer, 2020.

Attachments:

1. February 2019 letter from Audubon Society and the Loma Prieta Chapter of the Sierra Club to Supervisor Wasserman and the Santa Clara County Board of Supervisors
2. March 2019 Santa Clara County Roads and Airports response to Attachment 1
3. District Frequently Asked Questions document for Alma Bridge Road Newts



February 11, 2019

via email

Supervisor Wasserman and Board of Supervisors
Santa Clara County

Re: Newt Mortality At Alma Bridge Road

Dear Supervisor Wasserman and members of the Santa Clara County Board of Supervisors

Thousands of Pacific newts have been killed by vehicles on Alma Bridge Road, which borders on Lexington Reservoir in the Santa Cruz Mountains. This road cuts between the newts' upland habitat and the vernal streams and ponds in which they reproduce. The newts must cross this road twice – once on their migration to the ponds to mate, and then again when they return to the highlands. A single vehicle driving along this road can crush dozens of these slow-moving creatures¹.

The Santa Clara Valley Audubon Society and the Sierra Club Loma Prieta Chapter have been alerted to this carnage by our members, who are very concerned and very upset. We write to provide you with information and with the hope that you help identify and implement short-term remedies while exploring long-term solutions.

Figure 1: Pacific Newts, Alma Bridge Road (photos by Anne Parsons)



Roadkill Counts: Citizen scientists have been counting the newt roadkill on Alma Bridge Road since November 2017. Roadkill counts are being uploaded to the iNaturalist.org database on a bi-weekly basis: <https://www.inaturalist.org/projects/pacific-newts-all-lexington-reservoir-area> As many as 457 carcasses have been counted on a single day! Since our volunteers do not count every day, we have reasons to believe these numbers under-represent the full carnage on Alma Bridge Road.

Figure 2: Wildlife Mortality on Alma Bridge Road

Total Dead:	3,001	
This season (Fall 2018 to Feb. 10):	2,530	22 data collection days
Last season (Fall-Winter 2017-2018):	471	3 data collection days
Other roadkill:	16	10 species: deer, frogs, toads, voles, moles

Figure 3: Newt mortality by month through February 10, 2019.

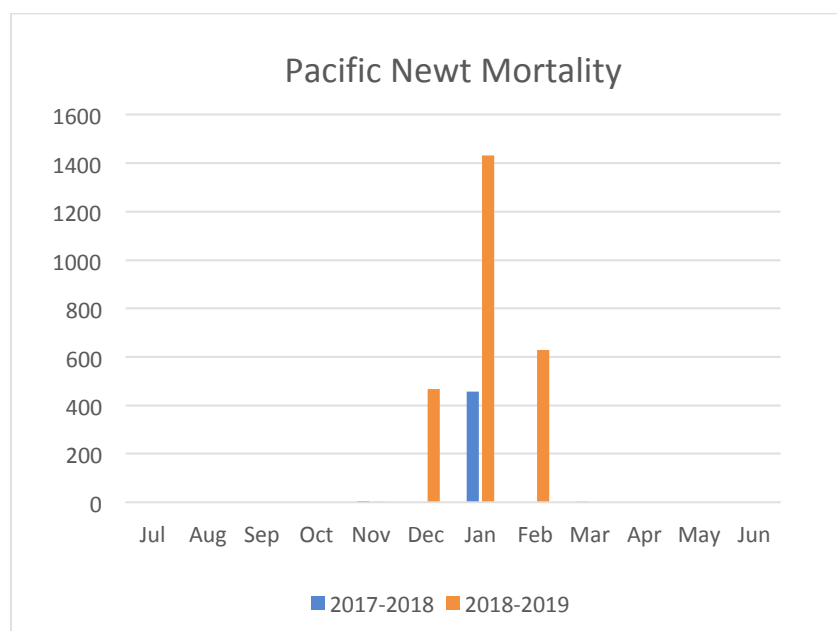
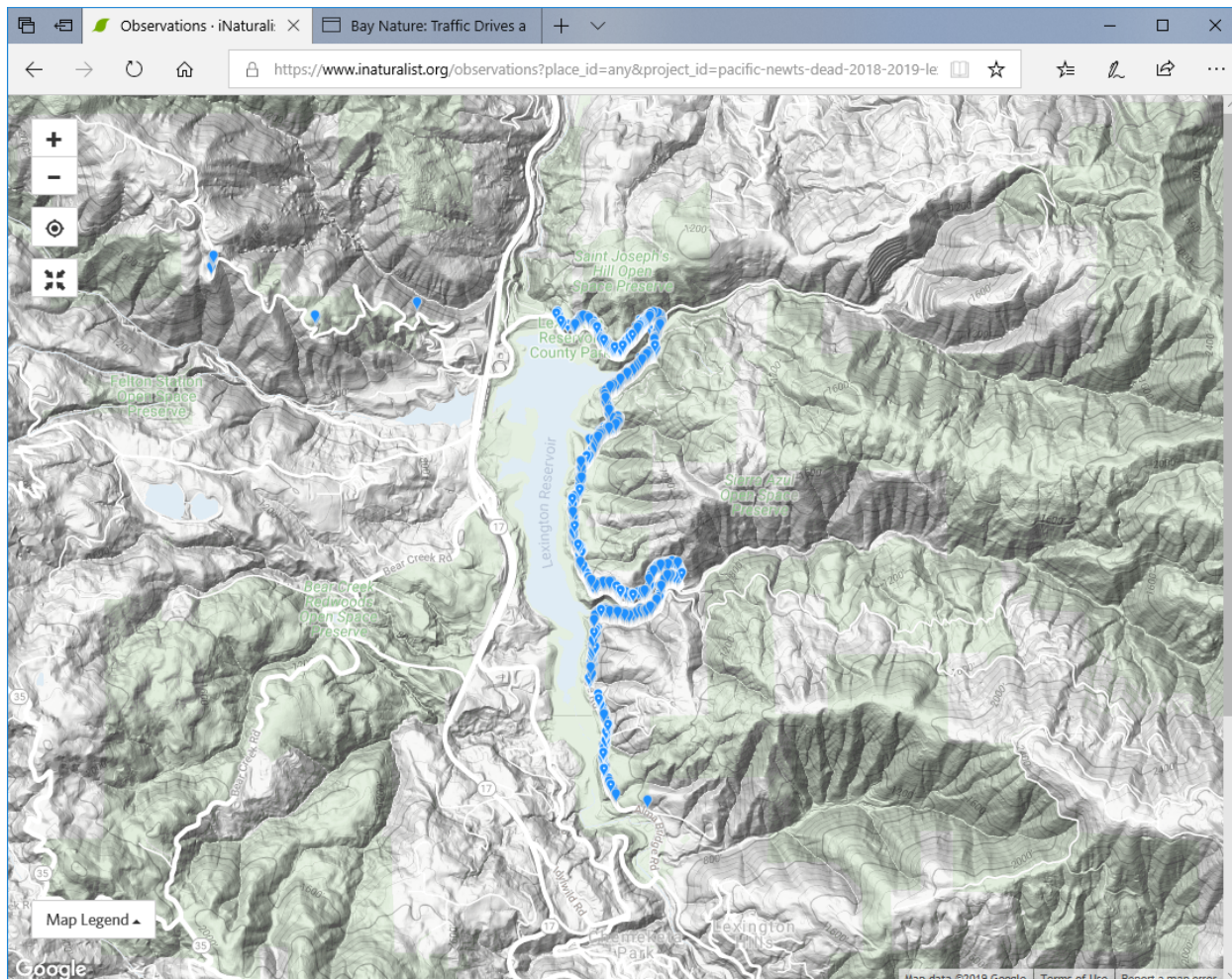


Figure 4: iNaturalist data: Each blue dot indicates a dead newt and the location where its carcass was found.



The map (Figure 4) shows the extent of the problem: newts are being killed all along the eastern side of the reservoir – on miles of Alma Bridge Road.

While we do not know what the impact of this level of road kill on the newt population of the region, our members care! Pacific newts have a lifespan of 14 years, and so extremely high mortality rates over time could affect our local population negatively. In Southern California, the California Newt (*Taricha torosa*) has been listed as a species of special concern where similar conversion of land to human uses has resulted in habitat degradation and massive roadkillⁱⁱ. We believe the same may be happening here. Furthermore, even if the impacts to the population were insignificant, we should be doing all we can to reduce this carnage.

Who uses Alma Bridge Road? Our observations show the following users: residents of local homes, hikers, bikers, boaters, equestrians, PG&E, Vulcan Materials Co., San Jose Water Co., Los Gatos Rowing Club, Santa Clara County Parks rangers and maintenance staff, Midpeninsula Regional Open Space District (MROSD) rangers, UCSC Puma Project.

Long-term solutions: The Peninsula Open Space Trust is considering a study of population impacts and looking for long term solutions. Other CA communities have faced similar situations and come up with their own solutions (Santa Cruz Countyⁱⁱⁱ, Tilden Park^{iv}, Stanford^v). Lessons learned from these projects suggest it could take time to do the analysis and implement appropriate mitigations.

Therefore, we ask the County to identify and implement Short-term solutions: We ask for critical, immediate relief until long-term solutions are found. Here are a few suggestions:

- We think Alma Bridge Rd. could be closed at night (5pm-7am) from Highway 17 to Soda Springs Road on a temporary basis from December through March. A gate can be installed for emergency vehicle access. Residents have an alternate route to get to their homes.
- Explore ways to reduce vehicle traffic to County Park and to the Rowing Club (for example, shuttles).
- Install signage and develop education materials for users of the road

We thank you for your attention. For additional information or if you have questions, please contact Shani Kleinhaus at 650-868-2114.

Respectfully,

Shani Kleinhaus, Ph.D.
Environmental Advocate
Santa Clara Valley Audubon Society

Katja Irvin
Conservation Committee co-chair
Sierra Club Loma Prieta Chapter

ⁱ Traffic is Driving a Newt Massacre in the Santa Cruz Mountains, (Bay Nature, 2/8/2019) <https://baynature.org/2019/02/06/traffic-is-driving-a-newt-massacre-in-the-santa-cruz-mountains/>

ⁱⁱ *Taricha torosa*, the California newt, is currently a species of California Special Concern in southern CA (IUCN Red List Species Account): https://amphibiaweb.org/cgi/amphib_query?where-genus=Taricha&where-species=torosa&account=iucn

ⁱⁱⁱ Hobbs, Michael Thomas, "Amphibian Mortality on Roads: A Case Study in Santa Cruz Long-toed Salamander Habitat" (2013). *Master's Theses*. 4389. https://scholarworks.sjsu.edu/etd_theses/4389

This study recommended measures to reduce road mortality to the Santa Cruz long-toed salamander by (1) restricting vehicular traffic on roads dissecting salamander habitats, (2) installing structures to protect the animals while crossing roads, and (3) potentially assisting animals crossing roads at nighttime during the breeding migrations. For a synopsis, see Discussion (p. 45) and Recommendations (p.50).

^{iv} South Park Drive in Tilden Park closed for 5 months to protect newts:

<https://www.berkeleyside.com/2018/11/08/south-park-drive-in-tilden-park-closed-for-5-months-to-protect-newts>

^v Tunnel of love for Stanford's salamanders / Breeding amphibians offered way to escape commuters' cars:

<https://www.sfgate.com/bayarea/article/Tunnel-of-love-for-Stanford-s-salamanders-2883540.php>

CC:

Neal Sharma, Peninsula Open Space Trust
Terris Kasteen, California Department of Fish and Wildlife
Julie Andersen, Midpeninsula Regional Open Space District
Anne Parsons, Citizen Science Volunteer
Santa Clara Valley Audubon Society staff and volunteers
Sierra Club Loma Prieta Chapter staff and volunteers



County of Santa Clara

Roads and Airports Department

101 Skyport Drive
San Jose, California 95110-1302
1-408-573-2400

March 8, 2019

Shani Kleinhaus, Ph.D.
Environmental Advocate
Santa Clara Valley Audubon Society

Katja Irvin
Conservation Committee co-chair
Sierra Club Loma Prieta Chapter

Re: Newt Mortality on Alma Bridge Road

Dear Ms. Kleinhaus and Ms. Irvin,

This is in response to your letter dated February 11, 2019 to Supervisor Wasserman and the members of the Santa Clara County Board of Supervisors regarding newt mortality on Alma Bridge Road. We appreciate the commitment of the Audubon Society and the Sierra Club to effectuate a long-term solution to this issue and look forward to working with your organizations to that end.

Your letter recommends a number of short-term solutions for the County to consider. Our response is as follows:

- Signage and educational material – We have developed a customized sign and propose to install it as shown on the enclosed map. We would appreciate if your organizations could take the lead on development of educational material that we can disseminate to the road users.
- Nighttime closure of Alma Springs Road – Unfortunately, the road closure is not feasible as a short-term solution. Legal issues, operational capacity of the County staff to open and close the road, coordinating with property owners and public safety concerns would all need to be addressed prior to considering any access restrictions.
- Reduction of traffic to the park and Rowing Club – We have coordinated this response with our County Parks Department, and they have committed to educating the Rowing Club and park users regarding an awareness of newt movements and crossings. The newt crossing signs and educational materials will help with general awareness of the public and park users.

We appreciate your efforts in bringing this matter to our attention and hope your plan to study a long-term solution will yield a course of action that we can partner to implement. If you have any questions, please don't hesitate to call me.

Best Regards,



Harry Freitas

Director of Roads & Airports

CC:

Neal Sharma, Peninsula Open Space Trust

Terris Kasteen, California Department of Fish and Wildlife

Julie Andersen, Midpeninsula Regional Open Space District

Anne Parsons, Citizen Science Volunteer

County of Santa Clara Board of Supervisors



Alma Bridge Road Newts Frequently Asked Questions

1. Is Midpen aware of the newt mortality issue on Alma Bridge Road?

Yes. Although Midpen is not the underlying landowner of Alma Bridge Road, we are aware of and concerned about the issue. We are supportive of volunteer and outside organizations and agencies efforts to collect data and study the road mortality issue. Midpen will utilize this information during California Environmental Quality Act review of projects occurring near Alma Bridge Road.

2. What is Midpen doing to alleviate the issue?

When Midpen was notified of the issue, Midpen reached out to the following organizations and agencies to raise awareness of the issue:

- Peninsula Open Space Trust (POST), Wildlife Linkages Program Manager
- California Department of Fish and Wildlife, Regional Biologist and Statewide Reptile and Amphibian Coordinator
- Santa Clara County Parks, Natural Resources Program and Director
- Santa Clara Valley Water District Regional Biologists and Water Utility Manager
- Santa Clara County Roads and Airports, Transportation Planner

In addition, Midpen staff has shared information with the Santa Clara County Board of Supervisors office on the issue.

Midpen also maintains a newt migration webpage: www.openspace.org/newts

3. What studies are being conducted?

An outside biological consultant has been retained to study the issue. In 2019, the consultant will be working on assessing available citizen science data, attempting to better understand the local newt population, potential reproduction, and how observed mortality may affect the population.

4. What is the protection status for local newts?

Roadkill newts on Alma Bridge Road have been identified to the genus (*Taricha*, within which are four identified species, all occurring in the western coastal region of North America). The Alma Bridge Road newts have not been identified to species and are either California newt (*Taricha torosa*) or rough skinned newt (*Taricha granulosa*) as the two species appear very similar. The California newt is listed as a California species of special concern in the southern portion of its range, which does not include Santa Clara County and the rough skinned newt has no special protection.

5. What can I do to help local newts?

Do not attempt to pick up and relocate newts crossing the road; it is dangerous for you and other drivers for you to be on the roadways. Newts also secrete a powerful neurotoxin in their skin that can cause death if ingested. Do not handle newts. Stay off wet roads especially during the breeding season (November to March) and if you must drive, minimize your number of trips, drive slowly and carefully. Alert your friends and neighbors to slow down and drive carefully on Alma Bridge Road when newts are on the move between November and March. If feasible, please reduce the driving occurrences on Alma Bridge Road during these times.

Report observations of large newt migrations and/or mortality events using iNaturalist:

<https://www.inaturalist.org/projects/midpen-biodiversity-index>



Photo credit: California Newt, Karl Gohl.