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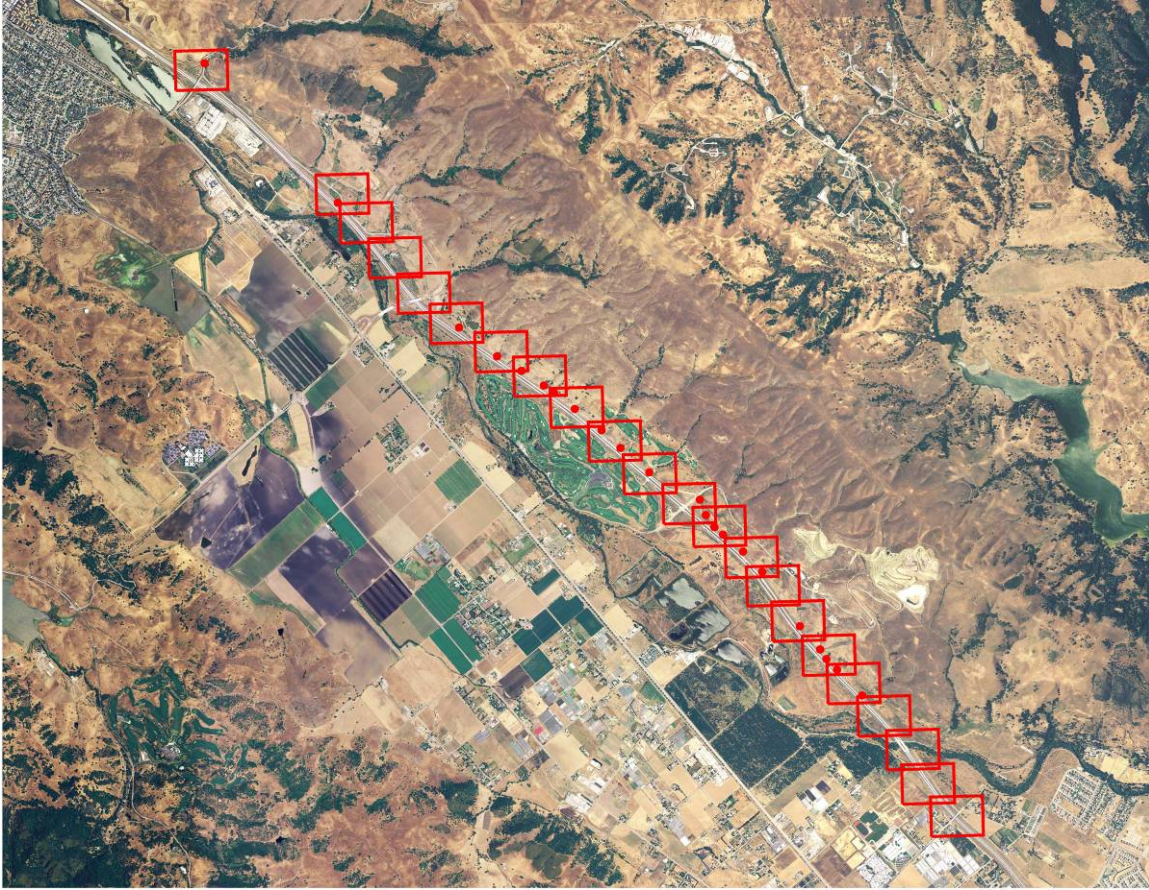
Dear David Johnston,

I am writing in response to your questions about the connectivity of Coyote Valley. As you may know I co-authored a report in 2002 called "A guide to Wildlands Conservation in the Central Coast Region of California". In that report, we examined the remaining suitable core locations for Mountain Lion (*Puma concolor*) in the central coast. I additionally have published an article 'Natural Areas Journal' (Thorne et al. 2006), a scientific, peer-reviewed publication, titled, "A conservation design for the central coast of California and the evaluation of mountain lion as an umbrella species". Both of these publications examined the question of connectivity for mountain lion in the Coyote Valley, among other places.

In the analyses, the mountains to either side of Coyote Valley showed up as containing large enough areas for mountain lion to still be present. The Santa Cruz Mountains in particular were of interest because, while suitable they are rapidly becoming isolated from the rest of state by strips of urban development, which if continued will cut the remaining connectivity. Specifically, there are only two connection options left: east across Coyote Valley to the Diablo Range, or south across the Pajaro River to the Gabilan Range (see section 8 of the report, pages 72-73). The crossing at Coyote Valley is under threat of being cut by expanding urban growth, which is progressing south from San Jose. The crossing at the Pajaro River is under threat from urban expansion coming from two directions: westward from Gilroy and eastward from Watsonville.

It is my understanding that a statement has been made that Highway 101 currently constitutes a complete barrier to animal movement between the Santa Cruz Mountains and the Diablo Range. Following that belief, the development of Coyote Valley will not be assumed to result in any impact to wildlife movement, since the highway already blocks that movement.

It is my opinion that this logic is incorrect. Specifically, there are at least 22 points along State Highway 101 where some type of culvert or overpass exist (Fig 1).



While the majority of these passages are culverts between 24 and 36 inches in size, there are at least three locations in area where the highway runs above the surface of the earth, and where a dispersing mammal might be able to make its way. While there are restricting fences in many places along the freeway, I do not believe that those chain link fences absolve development of mitigation responsibilities. In addition, no such fencing exists at the Coyote Creek opening, nor at the Coyote Creek Golf Course.

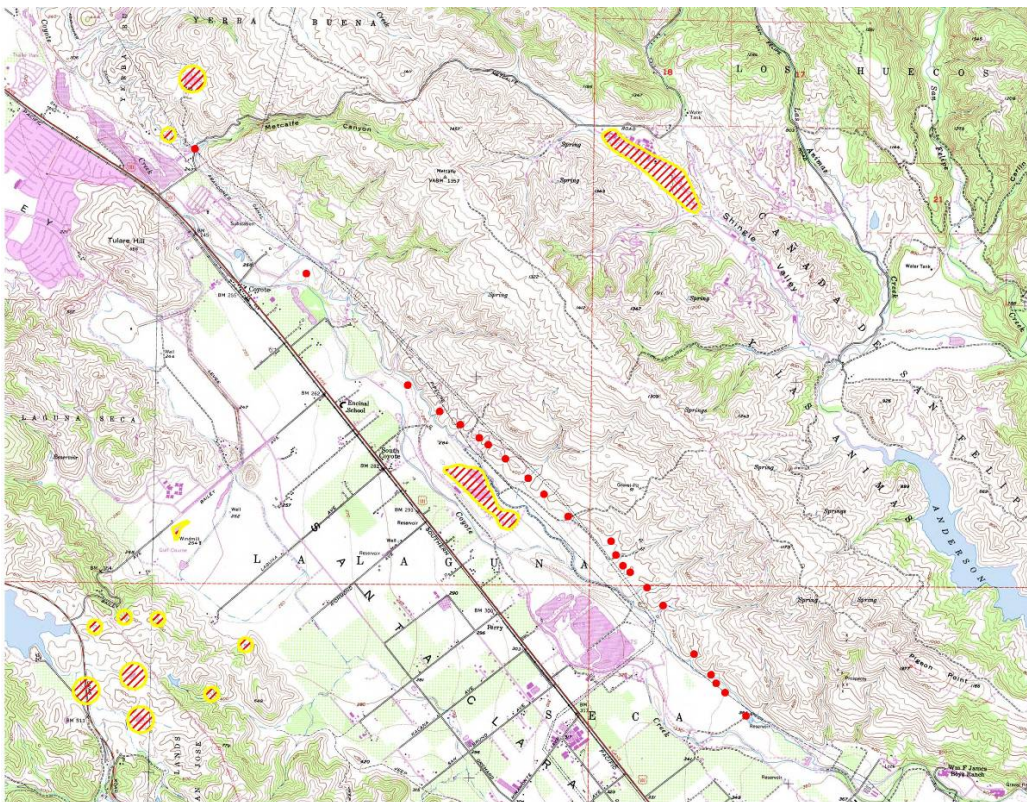
The locations of the three overpasses that might most realistically afford passage are areas that I think should be reviewed for suitability of corridor. The groups proposing development should be required to provide mountain lion crossing in at least one, if not two locations in Coyote Valley. The most compelling reason for this is because the Santa Cruz Mountains contain a population of mountain lion, but have too little habitat within them to support a self-sustaining population over long time periods without the occasional dispersal into the mountains of individuals from other parts of California. The Santa Cruz Mountains have become nearly entirely isolated from other suitable habitats due to growing urbanization and development, and there are few locations across the entire mountain range that remain as possible locations for connectivity. Losing the remaining connectivity would result in loss of genetic diversity for the mountain lion population which would effectively be trapped in the Santa Cruz Mountains.

I realize this is not a simple operation for the designers of the proposed developments. It requires that lands from the hills on one side of the valley be made permanently



accessible to lands on the other side of the valley. However, the planning for this type of infrastructure is no more difficult than the planning of urban green belts. In fact, if done correctly, the open areas would increase the value of the housing put in, as the houses would be less constricted, leading to a better quality of life. However, the designs of the corridors should not be thought of as parks, mountain lion will be much less likely to use such infrastructure if dogs are commonly walked there. If it were possible to exclude dogs from corridors widths of 50-200 meters it would likely make these areas more attractive to dispersing mountain lion.

Finally, please note that in addition to mountain lion, there is a herd of Tule Elk (*Cervus elaphus*) is found on the east side of the valley. In addition there are many other smaller animals for which reviews of potential impacts should be made. This list should include all threatened and endangered species in the region that have can be identified by from the CNDDDB data, and species of regulatory concern identified by agency biologists, state and federal. For example, the next image shows recent historical records of California tiger salamander in the region. Note that one area shown is quite near to some of the potential crossing locations (Fig.2).



This represents my professional opinion on the matter of connectivity for mountain lion in the Coyote Valley. If you have any questions, please do not hesitate to contact me.

Regards,

James H. Thorne, PhD.