

THE

Highlander

Sept./Oct. 2023

The Rural Bonny Doon Association Newsletter

Bonny Doon Wildlife: Yesterday, Today and Tomorrow

Wednesday, September 13th, 7:30 p.m.

In Person at the Bonny Doon Elementary School Multi-Purpose Room

And

Virtually via the Internet (Zoom)

Dr. Grey Hayes's presentation about the diversity of wildlife in Bonny Doon, highlighted with wonderful photos and videos taken by Bonny Doon residents, will help us understand the species we live alongside and how we can and why we should help those species to persist for generations to come.

Dr. Hayes, a North Coast resident who has entertained and informed audiences at RBDA meetings in the past, will be discussing our wildlife neighbors past and present, covering the variety of animals, the changes that have taken place over time and how best to coexist with them.

We are so very fortunate to live amongst the multitude of mammals, birds, reptiles and insects, both large and small, common and not so common (even rare), that populate our mountain.

Virtual Meeting Login Instructions can be found on Page 4



Grey Hayes

Dr. Grey Hayes is an ecologist and group facilitator working to create a community for Nature in Santa Cruz County. He has published extensively, including in peer-reviewed scientific journals, natural history books and magazines, and online periodicals and blogs. Since 1989, Grey's group facilitation and organizing work has focused on helping people to better work together to restore natural vitality to California's landscape for many generations of humans and non-humans, alike. He strives to increase our understanding of the ecology of Santa Cruz County's North Coast and increase community investment in the restoration of that landscape's biodiversity.

People are invited to participate with Grey in this restoration through a variety of opportunities. To stay up-to-date on ecological observations and trends, follow Grey at greyhayes.net. To network into various restoration communities, drop Grey an email at coastalprairie@aol.com.



Justin Cummings

An Update from Supervisor Justin Cummings

Supervisor Cummings will also be joining us to provide the latest information on his work on our behalf. He's had a very busy summer.

What's Happening Around County District 3

Editor's Note: This article is an invited contribution from Supervisor Justin Cummings that will be appearing as a regular Highlander column

A lot has been happening in the Third District office since our last update and we would like to take the opportunity to share a few things with you that are related to Bonny Doon and the North Coast.

Road Maintenance

The Department of Community Development and Infrastructure is resurfacing numerous roads from August through September, weather permitting. The following road segments are under repair or have completed repairs:

- Alba Road from Empire Grade to Highway 9
- Empire Grade from McGovern Way to Quarry Bend Rd.
- Jamison Creek Road from Empire Grade to Highway 236
- Smith Grade between Empire Grade Rd. and Bonny Doon Rd

Sporadic road closures can be expected from 8:30 AM to 4:30 PM, Monday through Friday. Drivers can facilitate the repairs by using alternate routes during the repair work. Work will continue through September. You can find up-to-date information on county road closures online at <http://www.sccroadclosure.org>.

North Coast Facilities Management Group Update

In early August, the North Coast Facilities Management Plan Working group reconvened to discuss progress on the plan. Throughout the discussion, issues of traffic safety infrastructure, parking, trash, bathrooms, the rail trail, and the Cotoni Coast Dairies monument were raised among many others. We strongly advocated that these were some of our top priorities and advised that when the plan comes back for review it must have public safety included as one of the scoring criteria for prioritizing projects. A draft plan is expected to be released to the public in late October for comment with final adoption anticipated this winter.

Continued on page 4

Distributed Antenna Systems: What they are, What they do, and How they could be helpful to Bonny Doon

The RBDA has long supported efforts to improve cell and internet coverage on the mountain. To this end, The Highlander will be publishing occasional articles on the various technologies that have the potential to deliver a much more robust communication infrastructure.

During the series of presentations and discussions around CTI and AT&T's application for a large macro base station cell tower on the CTI-owned land on Summit Drive in Bonny Doon, several Dooners suggested that a Distributed Antenna System (DAS) could be a viable alternative with positive advantages. Given this interest, it is appropriate that the first article on communication infrastructure provides a layman's explanation of DAS, distilled from online research and input from DAS advocates.

Limited cell phone coverage negatively impacts Bonny Doon. Most Dooners can use their cell phones in their homes using Wi-Fi calling over the internet, but during internet outages, or once they leave their houses and are driving on mountain roads, they most likely have no cell coverage, which creates safety issues. If you experience car trouble, like a flat tire, an accident, an injury or a health emergency, you have no way to reach out for help. This is a problem for emergency service providers too. DAS can greatly extend overall coverage, including along major Bonny Doon roads, using low power mechanisms not dissimilar to cellphone Wi-Fi calling over the internet.

DAS systems have been used for many years in urban and rural settings, both in place of, and in conjunction with, traditional tall, macro cell towers, to address coverage gaps, boost signal strength, and overcome obstacles faced by cell phones in rural areas. There are several DAS installations currently in Santa Cruz County, including on Freedom Blvd. and on power poles along Highway 1 near Wilder and the Davenport area.

Understanding DAS

DAS is a network of small low power antennas that work together to enhance cellular coverage within a designated area. The antennas are strategically positioned throughout a region to provide comprehensive coverage in varied terrain that extends beyond the range of a single tower. Fiber Optic Cable typically provides the network connectivity offering massive data bandwidth.

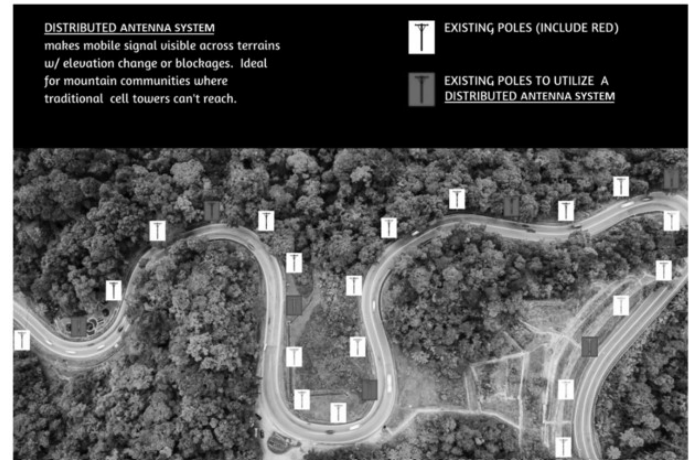
How DAS Works in Rural Communities

In rural areas like Bonny Doon, with many changes in elevation and terrain (hills, canyons and other obstacles), a traditional "line-of-sight" cell tower faces significant challenges that result in weak signals and limited coverage, even if the antenna arrays are maximally powered. DAS mitigates the line-of-sight problem by having many small, low power antennas distributed around problematic terrain. In so doing, the power requirement for the whole system is massively reduced and coverage improved.

The antenna nodes are typically located on street poles, utility poles and buildings. After the 2020 fire, new utility poles carrying fiber optic cable were installed around Bonny Doon, a perfect

situation for DAS.

DAS Benefits



Improved signal quality: DAS locally boosts cellular signals where needed, thereby increasing the reliability of connections even in remote locations at lower overall system power.

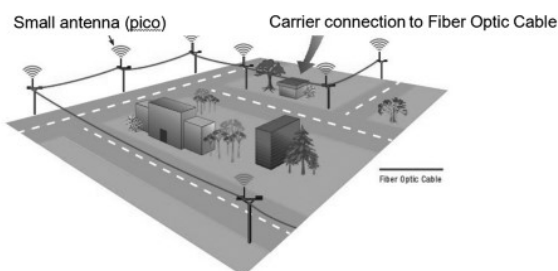
Broader coverage: The DAS architecture (see graphics above and below left) provides improved coverage around obstacles and difficult terrain.

Redundancy/Resiliency: The micro-cells are connected to a fiberoptic back plane: if one micro cell goes down there are still others. Low power usage makes for easy battery backup.

Seamless Integration: Distributed antenna systems can connect easily with existing cellular networks, allowing rural communities to benefit from the improved coverage without having to replace their current infrastructure.

Less radiation: Due to the technology used and the placement of the micro-based nodes, the radiation output of any individual antenna is many times (thousands) less than that of a large radio tower.

Less visible: Micro-cells are more aesthetically acceptable than



Distributed antennas make mobile signal visible across terrains and blockages.



Distributed Antenna Systems: What they are, what they do, and how they could be helpful to Bonny Doon

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macro towers. They have a much smaller footprint and lower profile. They are most often attached to public utility poles. (see photos on page 3 bottom right from Aptos area installations – the antenna is in the little cylindrical can, typically just a few inches in diameter). The smaller antennas can be positioned in convenient locations on utility poles with community discretion about which poles are used. The traditional negative aspects of radio transmitting equipment (power concerns, visual intrusion) are reduced and distributed among the community.

DAS Disadvantages

Higher Installation Cost: Each individual radio head needs to be connected to fiber optic cable in order for the system to work. The installation of the fiber optic cables and connection to the radio heads can be quite expensive.

System Complexity: Each of the DAS antennae requires fiber optic cable connection routed to it and connected to the hub. The installation process can be very involved.

Upgrades are Difficult: Cellular networks undergo periodic upgrades as new technologies come online. Normally this can be done remotely “over the air”. This cannot be done for DAS systems that can require modification of each radio head and even replacement of the base stations. This can turn into a slow, laborious and expensive process.

Low power of DAS radio heads: Because the power of individual DAS transmitters is low, their range is less than traditional cells. Consequently, homes or small roads that are located too far from main the roads where DAS is deployed will not be covered.

Resources

To learn more about DAS go online and search among the many commercial, government and private websites providing information on DAS, including those cited below:

https://en.wikipedia.org/wiki/Distributed_antenna_system

<https://www.fcc.gov/tags/distributed-antenna-system-das>

<https://www.everythingf.com/community/what-are-distributed-antenna-systems>

<https://daspedia.com/what-is-das>

<https://bbklaw.com/search?query=small+cell&filters=People%2CResources%2CPractices%2CLocations%2COther&filter=Resources&page=1> (legal issues)

RBDA Board Position Opening

Due to increasing time demands from his job, Russell Kliegel has resigned from the board. We thank Russell for his 4 years of service on the board—first as Treasurer and then as Corresponding Secretary. With Russell’s departure, the board is seeking a replacement to serve as Corresponding Secretary. If you are interested in volunteering or finding out what is involved, please contact the RBDA board at board@rbda.us. Service on the board is an important way to help improve vital services needed by the community, boost the resilience of Bonny Doon, and keep it the wonderful, unique place we love and treasure.

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RBDA, P.O. Box 551

Felton, CA 95018

RBDA MEMBERSHIP APPLICATION

Yearly dues are \$20/pp or \$15/pp for multiple members at same address.

Memberships expire on Jan. 31 of the next year. *

Number of Members _____ Number of years you are joining or renewing for _____

Multiply years times number of memberships. Checks only, please, made out to RBDA.

Amount enclosed for dues: \$ _____

I also wish to support the RBDA with an additional contribution of \$ _____

Total amount of enclosed check \$ _____

Name(s) _____

Address _____

Phone _____ E-Mail Address(es) _____

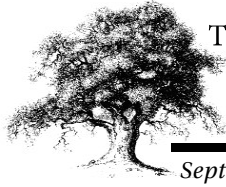
I certify that I (we) live or own property in the Bonny Doon Planning District.

Clip out and mail to RBDA, P.O. Box 551, Felton, CA 95018.

Dues mostly go for printing and mailing ***The Highlander***, your voice for keeping Bonny Doon rural and natural.

Additional contributions are gladly accepted and greatly appreciated!

*Dues paid after Nov. 30 count toward the next year.



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Advocating for a natural, safe, and sustainable future since 1957

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The Rural Bonny Doon Association Newsletter P.O. Box 551 • Felton, CA 95018

Bonny Doon's voice in preserving our special quality of life, The Highlander, is mailed free 6 times a year. RBDA Public Meetings are usually held the second Wednesdays of January, March, May, September and November. We encourage you to participate. Send correspondence to The Highlander at the above address.

Access the RBDA on the Internet at:

www.rbda.us

E-mail us at:

board@rbda.us

Facebook (RBDA Members Only):

RBDA, Rural Bonny Doon Association

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**Bonny Doon Resident
Santa Cruz, CA 95060**

Sept 13th RBDA Public Meeting: Bonny Doon Wildlife with Dr. Grey Hayes

What's Happening Around County District 3

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North Coast Traffic Safety

Due to increased popularity of North Coast beaches, traffic safety along Highway 1 has become a major concern. Amongst the many issues, the parking at Shark Fin Cove just south of Davenport is of particular importance. Our office had the opportunity to meet with representatives from CalTrans, State Parks, and California Highway Patrol (CHP) in early August to discuss parking issues and future parking options. CHP informed us that people are legally permitted to parallel park along Highway 1 near Shark Fin, which has been a major point of concern. Another issue with parking improvements at Sharks Fin is that CalTrans owns the right of way along Highway 1 on the ocean side and State Parks is the owner of Sharks Fin Cove. Given that neither agency is responsible for the parking along Highway 1, our office has expressed a strong interest in finding a way to partner with the two agencies to secure funding for planning and parking improvements at Shark Fin, and will continue working with them on this issue.

Wood Hauling

Earlier this summer, PG&E began efforts to haul downed wood from properties in Bonny Doon and on the North Coast. While biological surveys have halted some efforts, there has been significant progress. According to PG&E's contractor, of the 363 parcels participating in the hauling program, 339 parcels (93%) have been completed. In the Coastal Zone, 79 property owners participated with 61 parcels now complete (77%). Additional properties were added to the coastal development permit, which requires an amendment to be approved by the California Coastal Commission. As a result, PG&E is issuing a final request for residents to opt-in to the hauling program, and these additional parcels would be added to the Coastal Development Permit amendment pending approval. If you would like to be added to this permit, please contact Trina Barton (trina.barton@santacruzcounty.us) in our office for more information.

Newsletter

If you would like to learn more about what our office is doing, please subscribe to our monthly newsletter at:

<https://santacruz-03-county-ca.web.fireside21.app/forms/emailsignup/>

We appreciate your support. Please feel free to reach out to our office so that we can ensure that your concerns are being met.

Virtual Meeting Participation

Zoom (zoom.us) is a video conference platform that is free to use through either a web browser or application, and audio participation is possible through a dial-up connection on your phone. Zoom Meeting Instructions:

To join by internet:

- 1) go to <http://zoom.us/join>
- 2) Enter the Meeting ID. **987 3871 7843**
- 3) Click join
- 4) Enter passcode: **418702**

To join by phone:

- 1) Call **+1 669 900 6833**
- 2) When prompted enter the Meeting ID. **987 3871 7843**
- 3) When prompted enter passcode: **418702**