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POINT REYES LIGHT

NEWS

Dark sky plan in motion for West Marin

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With the prevalence of artificial light, few people living in or near urban centers are lucky enough to see stars, yet alone the Milky Way. But in West Marin, where stargazing is still possible, a small coalition of residents and government officials is seeking to preserve the night sky.

Laura Arndt, who lives in downtown Point Reyes Station, has “always valued the dark,” but she says the quality of street lighting in her village has changed over the years. Her curiosity about light pollution led her to the dark-sky movement. She reached out to communities with dark sky designations and found they were a source of pride.

“All these ideas were going through my head on how we could improve the situation here,” she said.

Nighttime light pollution, or “the excessive or inappropriate use of outdoor artificial light,” has been shown to have adverse health effects. It’s costly, and it disrupts the lives of nocturnal and migratory animals. Preserving the ability to stargaze is a tenet of Point Reyes Station’s community plan, which is used by county planners to evaluate permits. Under the plan, exterior lighting is limited to the minimum necessary for safety and security, and light fixtures are supposed to be downward-facing and mounted at low elevations.

Although much of Marin’s development code meets the requirements of dark sky reserves, turning West Marin into an official reserve would require a widespread collaborative effort by the National Park Service, Marin County and the residents of West Marin. But such an effort, which could take a decade to realize, is already underway.

When Ms. Arndt, the treasurer of the Point Reyes Station Village Association, and other village association members began exploring dark skies, they caught the attention of local park service officials, who proposed taking the lead. “This initiative really gives a nod to all the previous conservation efforts in Marin. It could be the icing on the cake,” said Christine Beekman, a spokeswoman for the Point Reyes National Seashore. “After all, when visitors come to Point Reyes during the day, they’re only seeing half the park.”

The International Dark-Sky Association has received nominations for sites and awarded dark-sky status to locations around the world for 20 years. There are 23 Dark Sky Communities in the United States, but only 19 Dark Sky Reserves worldwide and only one in the U.S., in central Idaho’s Sawtooth Mountains. The rigorous application process for certification has three phases: an eligibility process, a process of meeting the application requirements, and a final review. It can take three to 10 years for a location to achieve official status.

Ashley Wilson, the director of conservation with the International Dark Sky Association and the lead for the Dark Sky Places Program, said a reserve—one of five categories certified by the association—makes the most sense for West Marin.

A Dark Sky Reserve consists of two regions: a core area that meets criteria such as the ability to view the Milky Way with an unaided eye, and a peripheral area that supports dark-sky values. In that zone, 80 percent of lighting must meet dark-sky standards. For the local effort, the core would be the seashore and the peripheral area would be all of West Marin. The reserve designation requires a minimum of 173,000 acres, including the peripheral zone. For comparison, the seashore is 71,000 acres; West Marin is 250,000 acres.

The peripheral area must adjust 10 highly visible public lighting fixtures per 5,000 residents. Given West Marin’s population, adjusting 20 lighting fixtures would meet the need. “Communities know where lighting needs to be addressed, so we’ve interpreted this ratio differently for West Marin by breaking up the requirement and spreading it out among the villages where it could best be applied,” Ms. Wilson said. She added, “Normally you just have one entity that’s interested, but in this case, everybody was coming together at the same time—the park, the village and the county.”

The park and the village association are working hand-in-hand, the park as the applicant and the village association tasked with public outreach. The application process is in the second phase, which involves writing a lighting management plan, measuring nighttime light fixtures using a spectrometer, installing dark-sky-friendly retrofits and holding outreach events. In the park, officials are identifying lighting fixtures, including at the visitor centers, park residences, ranches and commercial operations like the youth hostel.

So far, response to outreach has been positive, said Peggy Day, one of the association members who spearheaded the effort. She said a benefit of being a reserve, as opposed to a smaller Dark Sky Community, is the “heavy lifting will be done by the park.”

The county is also involved, since dark-sky designation would require the passage of an ordinance. The village association has proposed a revised lighting ordinance, and the county and seashore are working to map the reserve. Supervisor Dennis Rodoni said the initiative is exciting. “It’s certainly something I’m willing to support, primarily because it fits with the interest of the community,” he said.

Ms. Wilson says the initiative will depend on the villages making policy choices and commitments together. Lighting is like water, she said: “If you think of a watershed, water doesn’t stay within boundaries. It depends on the partnership of multiple local governments preserving a resource for future generations.”

Changing lighting rules can worry individuals and businesses, but Ms. Wilson said a dark sky does not necessarily mean a dark ground. The use of motion sensors and attention to lighting distribution and intensity is effective when it comes to safety measures such as sidewalk illumination and theft deterrence.

Ms. Day said talks with local businesses have shown that “we had some enthusiastic collaboration and some flat-out refusals.” But lighting is not one-size-fits-all, and the requirements and costs for an intersection, a business and a home differ. Lighting choices can alter the character of a place, and some residents feel the glare from new lighting diminishes the small-town feel they cherish.

“When you walk around town at night and you start looking at light fixtures, you think, ‘Oh that one looks so great!’ and you realize it’s because it has a shield,” Ms. Arndt said. “No one is talking about getting rid of lights forever, just focusing them downward and where you need them.”

Indeed, cultural heritage is tied to the night sky. For thousands of years people have told stories of the stars and passed them to the next generation. The stars were timekeepers, cueing the arrival of the seasons. Losing access to the night sky means losing some of our connection to past histories. “This is the same night sky that people have seen for thousands of years, and when we lose access to that night sky, we lose access to the richness of stories people have been telling for thousands of years,” Ms. Wilson said.

Don Jolley, who leads a monthly stargazing program in Point Reyes Station, said looking at the sky is a grounding experience. “[When you know] the stars intimately by name, where you can recognize them as individuals, the beauty of the sky isn’t a generic beauty anymore,” he said.

Daily, monthly and annual cycles dictate life on our planet. All creatures have evolved to adjust to seasonal darkness and the moon’s phases, but sleep is disrupted by the influx of artificial light, which studies have linked to increased risk of chronic illness and even cancers. Animals are affected by light pollution in myriad ways. Sixty-two percent of species are nocturnal and especially impacted by light pollution. Migrating birds use the stars and the moon to navigate, and prolonged exposure to bright light can affect amphibians’ hormones, skin coloration, thermoregulation and reproduction.

Mr. Jolley said to be this close to a major metropolitan area and have the capacity for dark skies is a gift. “We pride ourselves on the open spaces we revere here,” he said. “Well, the sky’s an open space, too.”