ConCord

AMERICAN RIVER PARKWAY

CASE STUDY

Pacific Northwest NATIONAL LABORATORY

U.S. DEPARTMENT of ENERGY

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PNNL-39000

American River Parkway

Enhancing pollinator habitats and supporting ecological resilience through integrated vegetation management

April 2026

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Cover Page: Transmission infrastructure and right-of-way in the American River Parkway (Photo by Kerry Abernethy-Cannella).

Summary

The American River Parkway in Sacramento County, California, was selected as an optimal site by the Utility Arborist Association to study the effects of integrated vegetation management (IVM) on pollinator communities within transmission rights-of-way (ROWs). Inspired by long-term monitoring efforts at the Pennsylvania State Game Lands 33 (SGL 33) Research and Demonstration Area evaluating the effects of IVM on game species, there was a strong interest in establishing a similar long-term environmental monitoring site to assess different vegetation management approaches in an actively managed transmission corridor in the western United States. The Parkway presented an opportunity to evaluate traditional vegetation management approaches against IVM approaches since there are multiple utilities with transmission infrastructure passing through the area that practice different vegetation management practices.

For this project, multiple organizations came together, including two utilities with transmission assets in the Parkway, Pacific Gas & Electric (PG&E) and the Sacramento Municipal Utility District (SMUD), as well as the Pollinator Partnership, Sacramento County Regional Parks, and the American River Parkway Foundation. PG&E and SMUD implement IVM in their ROWs within the Parkway, focusing on the suppression of nonnative invasive plant species, the promotion of low-growing native plant species, wildfire fuel reduction, and improvements to habitat opportunities for pollinator species. The project is noteworthy as it is the first long-term field study in the western United States to conduct comparative monitoring to evaluate different vegetation management approaches in a transmission ROW (Palmer 2016).

The American River Parkway is an informative case study that demonstrates enhanced ecological outcomes in transmission corridors where vegetation is managed more holistically. A three-year monitoring study of the site, led by the Pollinator Partnership, set out to monitor pollinator abundance and habitat usage within transmission corridors in the Parkway. In corridors where IVM was implemented, the area had more native plants, resulting in higher rates of bee species use (Wojcik 2013). In corridors where standard mowing was implemented, the areas were dominated by plant species that do not benefit pollinators (Wojcik 2013). Monitoring efforts concluded that sites where IVM was implemented and pollinator habitat was restored had twice as many pollinator species, three times the bee abundance, and 30% higher bee nesting rates (Wojcik, Beesley, et al. 2016).

Aside from demonstrating the benefits of IVM, another motivation of this effort was to create educational signage and platforms to share information with the public about pollinators, environmental stewardship, wildlife habitat, and restoration efforts happening within the transmission corridors. Benefits of pollinators to ecosystem productivity and agricultural productivity are significant. Pollinating insects in the U.S. provide over $34 billion in economic value to agricultural crops annually (U.S. Fish and Wildlife Service n.d.). Recognizing that pollinator populations are in decline (e.g., North American bumblebees have fallen nearly 50 percent since 1974 (U.S. Fish and Wildlife Service n.d.)) and that managed honey bee colonies have decreased from 5 million in the 1940s to approximately 2.68 million in 2023 (United States Department of Agriculture, National Agricultural Statistics Service 2023), it is an opportune time to consider how utilities could serve as land stewards that contribute to the recovery of pollinator species.

Overall, the American River Parkway case study highlights opportunities to enhance ecological outcomes in transmission corridors within greenways, where transmission infrastructure and treasured environmental, recreational, and cultural resources coexist. Transmission corridors

create large areas of pollinator habitat, and when managed effectively, present a promising and more abundant future for pollinators.

Acronyms and Abbreviations

ConCord – Connecting Transmission Corridors Initiative
ESA – Endangered Species Act
IVM – Integrated Vegetation Management
NWSRA – National Wild and Scenic Rivers Act
PG&E – Pacific Gas & Electric
ROW – Right(s)-of-Way
ROWSC – Right-of-Way Stewardship Council
SMUD – Sacramento Municipal Utility District
UAA – Utility Arborist Association
USFWS – United States Fish and Wildlife Service
WAPA – Western Area Power Administration
WSR – Wild and Scenic River

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1.0 Connecting Transmission Corridors Initiative

The Connecting Transmission Corridors (ConCord) Initiative seeks to characterize the benefits of multifunctional transmission corridors, with a specific focus on recreation, conservation and restoration, and wildfire mitigation. This initiative outlines options and identifies best practices for providing public benefits in transmission corridors while also identifying models, tools, and resources for evaluating benefits in existing and future transmission infrastructure and transmission planning paradigms.

Case studies serve as informative examples of multifunctional transmission corridors and provide valuable lessons learned on land and vegetation management. The American River Parkway Case Study is one of several completed within the ConCord Initiative to highlight and characterize existing efforts within transmission corridors. These case studies focus on land and/or vegetation management to enhance ecosystem services as well as recreation and the development of multi-use trails within transmission corridors. Each case study was developed through a combination of desk-based research and interviews with key informants affiliated with the project. In the following sections, background information on the American River Parkway Pollinator Partnership Project is presented, as well as details on project development and key takeaways. There are also three appendices that detail the measures implemented, the spatial scale, and timeline for the project.

2.0 American River Parkway Pollinator Partnership Project

2.1 Background and Context

In 2010, the Utility Arborist Association (UAA) set out to identify sites in western states where integrated vegetation management (IVM) techniques in transmission corridors and associated benefits to wildlife could be demonstrated. The American River Parkway in Sacramento County, California was deemed a promising location for such a demonstration project. As the country's longest linear uninterrupted park, the Parkway extends 23 miles from Nimbus Dam to the confluence with the Sacramento River, following the American River, a State and National Wild and Scenic River (WSR) (Figure 1). This 23-mile stretch of the American River received federal WSR designation in 1981 to protect their outstanding fisheries and recreation values. After the American River Parkway Plan was approved and incorporated into state law, the Parkway was extended by an additional six miles past Nimbus Dam, extending over Lake Natoma to Folsom Dam.

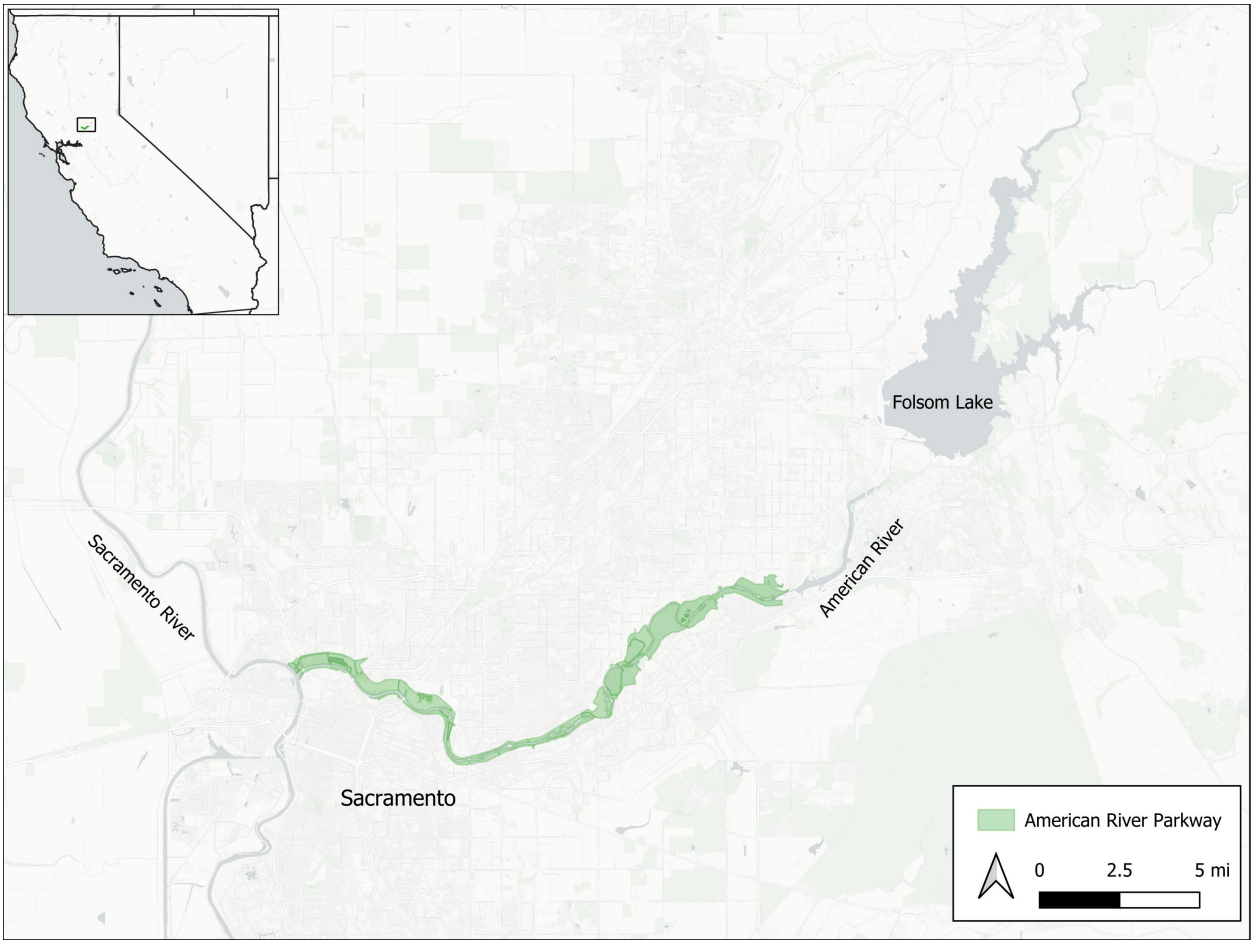

Figure 1. The American River Parkway in Sacramento, California. The Parkway follows the path of the American River and ends at the confluence with the Sacramento River. This stretch shows the lower 23 miles of the Parkway that are managed by Sacramento County Regional Parks.

Often referred to as the “Jewel of Sacramento,” the Parkway offers a natural setting for neighboring urban and suburban communities and provides uninterrupted habitat for wildlife in an urban environment. The Parkway is home to multiple ecosystem types, including oak woodlands, riparian habitats, and meadows that support diverse flora and fauna. The vital urban habitat supports diverse wildlife, such as deer, salmon, and raptors, and native plants, such as oaks, willows, and cottonwoods. The Parkway also functions as a travel corridor for urban wildlife, making it ecologically valuable (interview, October 3rd, 2025). In total, the Parkway provides valuable habitat to 40 species of fish, 220 species of mammals, and hundreds of different plant species (County of Sacramento 2008).

Due to the natural amenities of the Parkway, the site is popular among birdwatchers, recreationalists, and nature enthusiasts, attracting millions of visitors per year. There are more than a dozen different access points throughout the Parkway that connect to multi-use trails and areas with public amenities (e.g., picnic sites, playgrounds, river access for fishing or kayaking, campsites). Given the popularity of the American River Parkway, balancing conservation, recreational use, and public access presents unique opportunities and challenges. The American River Parkway Foundation, a nonprofit organization dedicated to the conservation of the Parkway, plays an important role in ensuring that the Parkway continues to be a natural inspiration and destination for the community.

Invasive plant species in the Parkway are a significant management concern, especially yellow starthistle (*Centaurea solstitialis*) and broom varieties (Spanish, French, Scotch) (Figure 2). These plants threaten biodiversity by outcompeting native plants for resources. Their prolific growth and flammability are also cause for concern among transmission operators and the Parkway’s resource managers. The area has experienced multiple fires caused by arsonists, fireworks, and homeless encampments. These fires pose a threat to the public and put critical infrastructure, such as transmission towers and lines at risk. IVM was seen as an effective means to manage invasive plants and curb wildfire risk in transmission ROWs in the Parkway while promoting the establishment of native plant species (interview, October 3rd, 2025).

Figure 2. Yellow starthistle and broom species, including Spanish Broom pictured here, are invasive plant species in the Parkway that are managed through IVM. Photos are from American River Parkway Foundation.

Aside from the natural features of the Parkway, there are multiple aboveground and underground utilities, pipelines, water lines, telecommunications lines, and electric lines that pass through the Parkway. Pacific Gas & Electric (PG&E), Sacramento Municipal Utility District (SMUD), and the Western Area Power Administration (WAPA) all have transmission infrastructure that passes through the Parkway. SMUD is a community-owned utility that serves the Sacramento County region and parts of the neighboring Placer County. PG&E is an investor-owned utility based out of Oakland that provides electricity and natural gas to much of the state, covering a territory between Santa Barbara County and Bakersfield to the state's northern border. WAPA is one of four power marketing administrations within the U.S. Department of Energy that markets hydropower from hydroelectric dams operated by the Bureau of Reclamation, United States Army Corps of Engineers, and the International Boundary and Water Commission.

2.2 Objectives and Scope

Given the transmission infrastructure in the Parkway as well as the area's ecological and recreational value and popularity, attracting more visitors than Yosemite National Park (Wojcik 2011), the Parkway presented a unique setting with high visibility to demonstrate the benefits of IVM on pollinator habitat in a transmission corridor (interview, October 3rd, 2025). The primary motivation for the American River Parkway Pollinator Partnership Project was to establish a long-term monitoring site to evaluate the effects of IVM in an actively managed transmission corridor. The objectives of this effort focused primarily on land management and IVM techniques to manage invasive species and wildfire risk while enhancing pollinator habitat. Specific objectives of the American River Parkway Pollinator Project as described in Wojcik, Beesley, et al. (2016) included:

- fostering land management techniques that support reliable utility service and land stewardship,
- testing various methods of vegetation management,
- identifying best practices for enhancing pollinator habitat, and
- supporting wildfire fuel reduction (i.e., removal of vegetation with low moisture content).

The project aimed to increase the diversity of the plant community in the ROW through active management (interview, October 9th, 2025). Establishing low-growing early successional habitat was a priority for providing habitat to pollinators, and this management action also served the purpose of reducing wildfire risk (interview, October 9th, 2025). Meadow, grassland, and prairie habitats are important early successional habitats that are increasingly under threat due to development and land use changes, and ROWs provide unique opportunities to foster productive pollinator habitats.

The geographic scope of the project was a section of the Parkway where SMUD and PG&E have transmission lines (Figure 3). While much of the effort focused on management of the corridor, there were also efforts to showcase pollinator habitat demonstration gardens in some areas. This served as a good educational opportunity for members of the public to learn about utility vegetation management in an open setting (interview, October 3rd, 2025). Demonstration gardens and educational signage were placed near the Parkway's bike trail near Cal Expo and helped to communicate with the public about land management and opportunities for pollinator habitat in the Parkway.

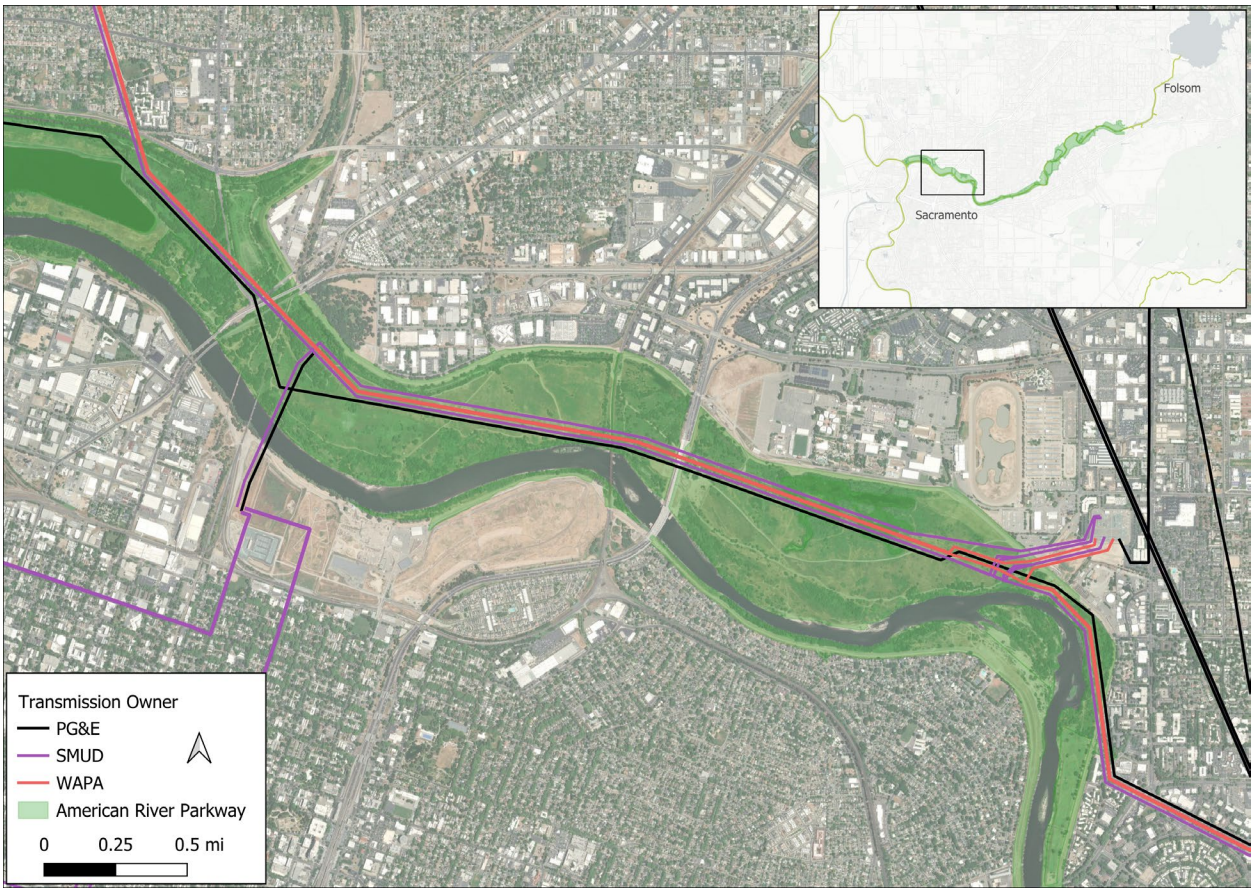

Figure 3. The location of the project is within a section of the Parkway where PG&E and SMUD have transmission lines passing through.

2.3 Governance and Setting

Most of the land in the Parkway is owned by the County of Sacramento, with Sacramento County Department of Regional Parks managing the land on the lower 23 miles of the Parkway. Some sections are owned by other entities, including State and Federal agencies. The Parkway is governed by the American River Parkway Plan, which is approved by the State Legislature upon recommendation of the Sacramento County Board of Supervisors, and endorsement of the Sacramento City Council and Rancho Cardova City Council (County of Sacramento 2008). The purpose of the plan is to provide guidance on land use decisions that may affect the Parkway.

The Department of Regional Parks is responsible for annual vegetation management in the Parkway. The agency is primarily interested in reducing the risk of wildfire and protecting resources and conservation interests within and surrounding the Parkway. There are also flood control agencies (e.g., American River Flood Control District and the U.S. Army Corps of Engineers) that contribute to vegetation management in the Parkway by maintaining levees through mowing and herbicide application in the Parkway.

The designation of the American River near the Parkway as a WSR under the National Wild and Scenic Rivers Act (NWSRA) results in additional protections and considerations for management of the Parkway. At a regional level, management of the Parkway focuses on local

recreational uses, land-use planning, and floodplain preservation. Federal protections under the NWSRA ensure long-term environmental stewardship and the provisioning of community-oriented benefits such as trails, parks, open space, and habitat conservation close to a metropolitan area. With these additional protections and interests in multi-use planning, as well as presence of utility infrastructure, the American River Parkway was uniquely suited to serve as a demonstration site.

For the American River Parkway Pollinator Partnership Project, the right-of-way (ROW) is jointly managed by PG&E, SMUD, and Sacramento County Department of Regional Parks. PG&E and SMUD share an electrical corridor where they own and operate high-voltage transmission that passes through the Parkway. While WAPA has an electric transmission line in the Parkway that runs parallel to PG&E and SMUD's transmission assets, WAPA was not involved in the Pollinator Partnership Project. Each utility is responsible for their respective ROWs and managing vegetation. PG&E and SMUD typically implement IVM within their ROWs to encourage stable, low-growing native plant communities, whereas WAPA implements more traditional vegetation management approaches.

Permitting and compliance processes involve coordination across utilities, local parks, and state and federal agencies. Similarly, ongoing maintenance requires regular and consistent communication and collaboration, recognizing that each organization brings different capabilities and expertise to the table. For this project, responsibilities for vegetation management (e.g., mowing, herbicide application, prescribed burns) and habitat monitoring were divided across agencies, and negotiation was required when priorities conflicted.

If there are new activities being considered within SMUD's transmission corridors, there is a dedicated transmission consent team within SMUD that evaluates proposed activities. This team meets monthly with multiple utility divisions, including vegetation management, to discuss proposed activities within electric transmission corridors, such as walking trails or mountain bike trails, and their potential approval (interview, October 3rd, 2025). SMUD uses regular consent agreements or consent discussions when making decisions. If there are conflicts, alternate plans or moving things around within the ROW are considered (interview, October 3rd, 2025).

2.4 Project Development

The Pollinator Partnership Project commenced in 2010, after the site was selected by UAA as a promising demonstration site. Shortly after this, multiple entities, including SMUD and PG&E, as well as Sacramento County Parks and DOW, the chemical suppliers, came together to evaluate IVM in a transmission corridor and effects on pollinator habitat development (Wojcik 2013). Both PG&E and SMUD have well-developed sustainability and environmental management programs and are actively interested in improving benefits to wildlife through vegetation and land management.

Each of the organizations involved had slightly different management goals when the effort commenced. For SMUD, the primary concerns were ensuring the safe and reliable delivery of affordable energy to their community member-owners in a responsible and environmentally sound way, which goes hand-in-hand with ensuring wildfire risk reduction and additional benefits to habitat and wildlife (interview, October 3rd, 2025). Similarly, PG&E was primarily concerned with safety and reliability while also being interested in opportunities to enhance benefits to wildlife and pollinators in transmission corridors. The Pollinator Partnership brought extensive knowledge on pollinator habitats and pollinator ecology to the project. The American

River Parkway Foundation's focus was on recreation, open-space use, wildlife benefits, and wildfire risk reduction. Sacramento County Parks was primarily interested in recreational use, wildlife benefits, and wildfire risk reduction.

Management commenced with the removal of trees within the transmission ROW followed by the establishment of annual and perennial herbs to attract pollinators (Wojcik 2011). This vegetation provided multiple benefits – food to pollinators and reducing the presence of taller hazardous plant species. Vegetation along the ROW border was also maintained to add structural elements, which are important for nesting habitat. Additional nesting sites were provided along the ROW by utilizing snags resulting from tree removal as well as through the addition of wooden nest boxes.

3.0 Barriers and Constraints

There were several challenges that emerged over the duration of the project. Some of these concerned more practical aspects of the project, whereas others were related to public perceptions. One of the reasons that the Pollinator Partnership first became involved with this project was due to public backlash against the utilities for removing trees and using herbicides in their ROWs (interview, October 9th, 2025). Public perceptions on utility actions can be tough to navigate, especially when it concerns the removal of large trees or other measures that the public may deem concerning, such as herbicide application. The public may not be aware of the reasons for a particular utility practice, even if it is necessary to maintain the safety and reliability of electric transmission lines; this is especially problematic if it is perceived as being harmful to the environment. Situations such as this one make educational signage important because it can help to address some misconceptions about utility vegetation management and effects on the environment.

There were management and execution complexities due to operating in an area where there is an Endangered Species Act (ESA)-listed species. The presence of elderberry bushes in the corridor presented difficulties, especially since elderberry is the host plant to the federally threatened (under the ESA) Valley Elderberry Longhorn beetle (*Desmocerus californicus dimorphus*) (Figure 4) (interview, October 9th, 2025). The Parkway is listed as critical habitat for this beetle, and project partners had to secure a permit from the U.S. Fish and Wildlife Service (USFWS) as research was being done in and around this critical habitat.

Figure 4. The Valley Elderberry Longhorn Beetle (*left*) is a federally threatened insect that can be found in the Parkway. It relies on its host plant, elderberry plants (*right*). Images are from U.S. Fish and Wildlife Service, Pacific Southwest Region (*left*) and U.S. Forest Service (*right*).

Another hurdle encountered by the project partners was logistical and associated with scheduling of vegetation management activities, since the utilities were on different cycles for vegetation management. Regular communication across project partners and utilities helped to alleviate this. While there are typically well-defined roles when it comes to ROW management, the extent of shared authority is not always explicit in public documents, and this may make it challenging to consider how to enhance ROWs for conservation or recreation benefit.

Nearby landscape changes outside the control of the project also impacted the monitoring study (interview, October 9th, 2025). An unforeseen complication in this project was pollinator habitat disappearing due to miscommunications between management plans (interview, October 9th,

2025). Part of the monitoring study included the designation of multiple areas, two treatment sites, and a control site. However, it was not possible to leave any kind of structure or permanent marker designating where the treatment plots were (interview, October 9th, 2025). This made it difficult to restrict access or limit physical disturbances to the monitoring sites. While the proximity of multiple ROWs and differences in vegetation management allowed for a comparison of traditional and integrated vegetation management, it was hard to isolate control sites. There were two instances of wildfire burns in the parkway from fireworks, one of which was quite severe and burned down a notable amount of the control site (interview, October 9th, 2025).

Throughout the project there were instances where management practices that were technically correct ended up not leading to the desired outcomes, given the specific circumstances of the project. For example, the Pollinator Partnership aimed to use trap nests to gauge which pollinator species were present, and there are recommended locations and heights to mount these (interview, October 9th, 2025). Mounting the nests to fences is a good technique, but in their absence, using stakes in the ground can be used. However, stakes are potential hazards if emergency mowing is necessary, so they are not allowed. To resolve this, the trap nests had to be placed on existing vegetation.

4.0 Outcomes and Impacts

The American River Parkway Pollinator Partnership Project is considered a flagship project as it helped to showcase utility vegetation management in a transmission corridor within a parkway and informed best practices for IVM (interview, October 3rd, 2025). Demonstrating the effectiveness of IVM approaches necessitated an ongoing monitoring study of the transmission ROWs in the American River Parkway. With three separate entities having transmission ROWs passing through the Parkway, there were opportunities to compare IVM approaches within PG&E's and SMUD's transmission ROWs with more traditional management approaches implemented in WAPA's transmission ROWs (Figure 5). Monitoring of the site took place over three years and compared the outcomes of different vegetation management approaches, traditional and integrated.

Data were collected on nest usage and floral visitation counts to characterize bee species occurrence (Wojcik 2013). Through these monitoring efforts, the project partners observed seven native bee types as well as honey bees visiting flowering plants along the Parkway (Wojcik, Beesley, et al. 2016). The areas that were managed using standard mowing were dominated by plant species that do not benefit pollinator species (Wojcik 2013). In treatment areas where there were targeted herbicide application and prescribed burns, the plant communities had more native plants and as a result, had higher rates of bee species use (Wojcik 2013). Comparison of sites where IVM approaches were used (e.g., selective herbicide application) against conventionally managed sites (e.g., mowing) within the Parkway found that the sites where IVM was implemented and pollinator habitat restored had twice as many pollinator species, three times the bee abundance, and 30% higher bee nesting rates (Wojcik, Beesley, et al. 2016). Looking just at the occurrence of native pollinator species (excluding honey bees), their richness and abundance were greater at IVM sites (Wojcik 2013).

Furthermore, areas that were managed with targeted herbicide application and with prescribed burns had more of a native plant community (Wojcik 2013). Recognizing the benefits of IVM in transmission corridors in the Parkway, the American River Parkway Foundation's Final Strategic Plan encourages collaboration with utilities to establish and enhance pollinator habitats under easements (American River Parkway Foundation 2021). While there may be public concerns around herbicide application, targeted vegetation removal, and prescribed burns, demonstrating the importance of wildfire reduction for improved plant community health is key. It was not uncommon for there to be more concerns around removal of trees when compared to less charismatic flora, such as shrubs, grasses, and brush (interview, October 9th, 2025).

Making decisions about land management in this context with pollinators – a broad suite of species that have adapted to unpredictable conditions, worlds, and situations – means balancing multiple objectives along with significant unknowns (interview, October 9th, 2025). With the complex nature of multiple entities managing various parts of the transmission ROW, the Parkway management strategy had to manage both habitat losses and gains. Nuances and best-case scenario management strategies can get lost in translation when they reach the public (interview October 9th, 2025). Thus, outreach plans and the development of best management guidelines informed by data are critical for supporting the broader adoption of IVM within ROWs.

With the successful outcomes associated with IVM, both utilities became accredited as Right-of-Way Stewards by the Right-of-Way Stewardship Council (ROWSC) for sustainable IVM implemented in transmission ROWs. Of the two utilities, SMUD continues to be accredited by the ROWSC.

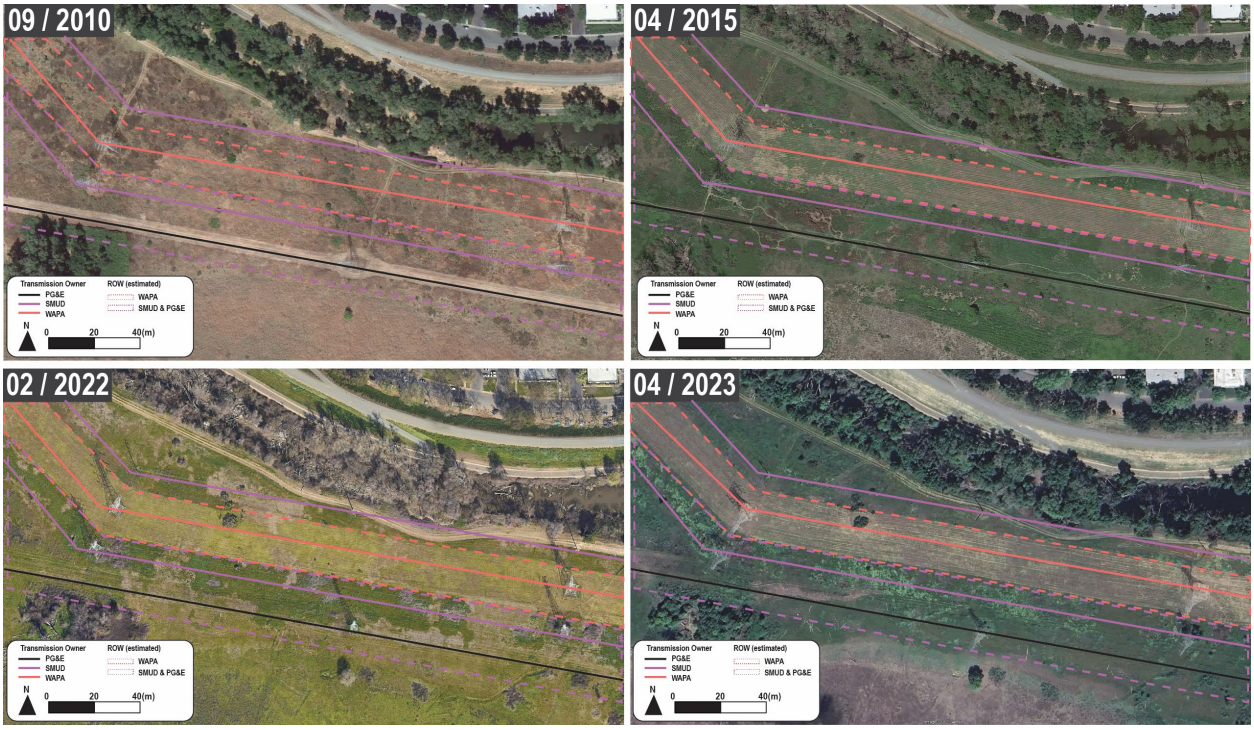

Figure 5. SMUD and PG&E share a transmission corridor in the Parkway, and WAPA, a federal entity, has a parallel transmission corridor. Utilities implement different management practices in their ROWs as demonstrated here, where mowing is used to remove vegetation in WAPA's corridors, whereas IVM is implemented in SMUD and PG&E's corridors, as evidenced by the low-growing vegetation.

5.0 Key Takeaways

IVM approaches enable the safe and reliable delivery of electricity and create valuable early successional habitat. These projects are critical for demonstrating the effectiveness of IVM and how it contributes to pollinator abundance. Areas that are more traditionally managed through mowing tend to have vegetation that does not benefit pollinators. More evidence of the effectiveness of IVM on land management (e.g., wildfire fuel risk reduction, pollinator habitat), especially over large areas, could help shift practices around vegetation management and could encourage other utilities or land managers to implement IVM over traditional vegetation management to produce greater wildlife benefits.

Effective collaborations and partnerships are crucial to ensure the success of large-scale projects that span various stakeholders. Groups such as the ROWSC provide a great foundation that allows for validation with technical experts that can provide feedback for improvements and adjustments (interview, October 3rd, 2025). It is important to get all stakeholders on board through collaborative projects and working groups (interview, October 9th, 2025). With numerous partners coming together there are many things that could go off-course and a variety of needs. The Pollinator Partnership has utilized networks to connect with different entities involved in this work (interview, October 9th, 2025).

There are very few long-term research studies on ecological aspects of transmission corridors, and the ones that have been done may not have transferable outcomes. The Pollinator Partnership has been involved in other research studies aiming to replicate the Pennsylvania State Game Lands 33 research project that commenced in 1953 in response to concerns of the impacts of vegetation management on wildlife habitat (interview, October 9th, 2025). There are few long-term studies on transmission infrastructure, vegetation management within ROWs, and how ROWs function as habitat. It is difficult because results and trends may be location dependent and not applicable to other areas.

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Appendix A – Measures Implemented

Table 1. This table describes measures implemented to prepare, restore, and maintain the American River Parkway transmission corridor as a pollinator habitat. Information on specific measures was informed by Wojcik (2011).

ID	Measure	Description
M1	Invasive species removal	Invasive plant species such as Yellow starthistle and broom species were cleared from the right-of-way
M2	Tree removal	Tree removal within the transmission zone
M3	Establish low-growing vegetation	Establish annual and perennial herbs in the transmission zone
M4	Provide structures for nesting habitat	Maintain border vegetation to add structure for nesting habitat
M5	Integrated vegetation management	PG&E and SMUD implemented IVM approaches to maintain the site
M6	Follow-on monitoring research	Pollinator Partnership monitored pollinator abundance at the site. PG&E also funded Sonoma State University to do additional research on potential benefits of IVM on oak woodland communities

Appendix B – Scale Table

Table 2. This table displays the project footprint and adjacent infrastructure context. (Linear corridor length is not specified in project materials.)

Item	Value
Corridor length affected	~3.5 miles: Approximate based on project footprint within American River Parkway between Cal Expo and the park boundary adjacent to the junction of Garden Highway and Arden Garden Connector; exact linear measurement not specified in available sources
Key assets affected	High-voltage transmission facilities; recreational amenities

Appendix C – Timeline Table

Table 3. This timeline of key milestones, from project approval through implementation and current operational status.

Milestone	Date	Attribution
Site Identification	2010	The Utility Arborist Association engaged stakeholders and sought to establish IVM demonstration sites in western states and to explore potential wildlife benefits. The American River Parkway was identified as an optimal location.
Implementation start	2010	The Pollinator Partnership began working with PG&E and SMUD, chemical suppliers (DOW), and Sacramento County Parks to evaluate the effects of IVM on pollinator habitat.
Site assessment	2011	A site assessment was conducted in summer 2011 to identify microhabitats and their potential for pollinators. Pollinator Partnership worked with landscape architect firm to develop a planting scheme to benefit native pollinators and migratory monarch butterflies.
Major phase(s)	2011	Installed three wood drilled nests and cardboard nests near planned plots and monitored habitat use by wood-nesting bees
	2012	Six control (mowed) and six selective herbicide plots were established in the Parkway near utility towers
	2012-2015	Mowing and treatment on the six plots From 2012 through 2013, bee visitation counts were monitored. In 2014, an additional management area where multiple techniques were implemented (e.g., mowing, planting, selective herbicide application) was established near educational signage. This is the habitat garden. Monitoring at the habitat garden was conducted from May through August 2025.
Current status		Utilities continue to practice IVM in corridor

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