

University of San Diego

Digital USD

---

Environment

Caster Family Center for Nonprofit and  
Philanthropic Research

---

4-2019

## 2019 Collaborative Species and Habitat Conservation Efforts in San Diego County: A Systematic Needs Assessment to Guide the San Diego End Extinction Initiative

Tessa Tinkler

*Caster Family Center for Nonprofit & Philanthropic Research, University of San Diego*

Michelle Ahearne

*Caster Family Center for Nonprofit & Philanthropic Research, University of San Diego*

Mary Jo Schumann

*Caster Family Center for Nonprofit & Philanthropic Research, University of San Diego*

Follow this and additional works at: <https://digital.sandiego.edu/npa-environment>



Part of the [Environmental Sciences Commons](#), and the [Nonprofit Administration and Management Commons](#)

---

### Digital USD Citation

Tinkler, Tessa; Ahearne, Michelle; and Schumann, Mary Jo, "2019 Collaborative Species and Habitat Conservation Efforts in San Diego County: A Systematic Needs Assessment to Guide the San Diego End Extinction Initiative" (2019). *Environment*. 1.

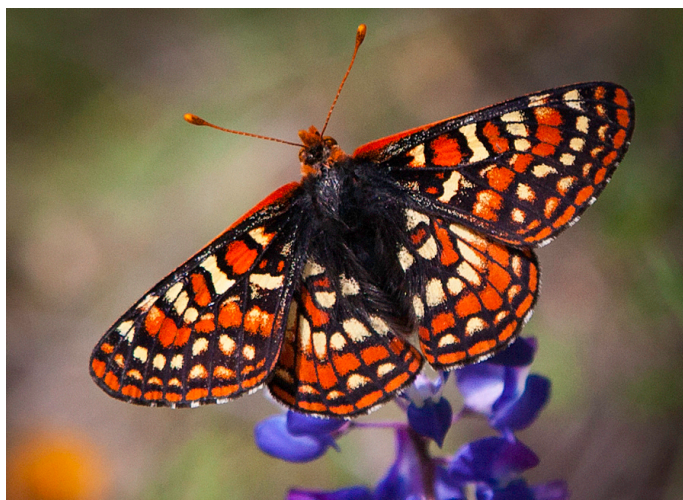
<https://digital.sandiego.edu/npa-environment/1>

This Report is brought to you for free and open access by the Caster Family Center for Nonprofit and Philanthropic Research at Digital USD. It has been accepted for inclusion in Environment by an authorized administrator of Digital USD. For more information, please contact [digital@sandiego.edu](mailto:digital@sandiego.edu).



**COLLABORATIVE SPECIES AND HABITAT  
CONSERVATION EFFORTS IN SAN DIEGO COUNTY:  
A Systematic Needs Assessment  
to Guide the *San Diego End Extinction* Initiative**

April 2019



**Presented by:**  
Caster Family Center for Nonprofit and  
Philanthropic Research

 University of San Diego  
**SCHOOL OF LEADERSHIP  
AND EDUCATION SCIENCES**  
THE NONPROFIT INSTITUTE



### **About San Diego Zoo Global**

The mission of San Diego Zoo Global (SDZG) is to save species worldwide by uniting our expertise in animal and plant care and conservation science with our dedication to inspiring passion for nature. Using our family of brands to differentiate our campuses, projects, and initiatives, we strive to be at the forefront of wildlife conservation and education.

### **About San Diego End Extinction**

San Diego End Extinction (SDEE) was launched in 2017 as a regional initiative to proactively prevent the extinction and/or extirpation of San Diego County's native plants and animals within a framework of community sustainability and viability. SDEE was born out of a shared recognition that preserving San Diego County's unique biodiversity is essential to maintaining the region's economic and environmental value.

### **About the Nonprofit Institute's Caster Family Center for Nonprofit and Philanthropic Research**

The Caster Center is housed within The Nonprofit Institute in the School of Leadership and Education Sciences at the University of San Diego. The mission of the Caster Center is to provide research, evaluation and consulting services that build the leadership and strategic and evaluative-thinking capacity of local nonprofits, as well as to be the leading source of information, data and research on the local nonprofit sector.



### **Cite As**

Tinkler, T., Schneider, M., & Schumann, M.J. 2019. *Collaborative Species and Habitat Conservation Efforts in San Diego County: A Systematic Needs Assessment to Guide the San Diego End Extinction Initiative*. San Diego, CA: The Nonprofit Institute, University of San Diego.

### **Acknowledgements**

The Nonprofit Institute's Caster Center would like to acknowledge SDZG's leadership team including Robin Keith, Tricia Campanella, Mendel Stewart, and Doug Myers for their ongoing cooperation and support. Additionally, NPI would like to acknowledge The San Diego Foundation as a contributing funder, FM3 Research for their public polling support, and all interview participants and San Diego survey respondents.

### **Project Team**

Mary Jo Schumann, PhD  
Director of Research, NPI Caster Center

Tessa Tinkler, PhD  
Senior Research Associate, NPI Caster Center

Michelle Schneider, MA, CNP  
Doctoral Research Assistant, NPI Caster Center

Christiana DeBenedict, MBA  
Director, NPI Environment Leadership Initiatives

Katelin Maatz, BA  
Research Assistant, NPI Caster Center

Connelly Meschen, MArch  
Administrative Coordinator, NPI

Copyright © 2019  
All Rights Reserved  
Caster Family Center for Nonprofit and  
Philanthropic Research  
The Nonprofit Institute  
School of Leadership and Education Sciences  
University of San Diego  
[www.sandiego.edu/npresearch](http://www.sandiego.edu/npresearch)

Cover Images (top three):  
Margie Mulligan

# TABLE OF CONTENTS

---

Executive Summary .....	i
Overview and Background .....	3
San Diego End Extinction Initiative.....	3
Collective Impact Framework .....	4
Objective 1: Defining The Common Agenda .....	6
Methodology .....	6
Interview Participant Profile .....	6
Why San Diego County? .....	7
SDEE's Common Agenda Draft.....	8
SDEE's Common Agenda Levers and Goals .....	8
Collaboration as a Lever for Advancing the Common Agenda .....	9
Funding as a Lever for Advancing the Common Agenda .....	10
Priority Goal 1: Increased Public Engagement .....	11
Priority Goal 2: Thriving and Resilient Habitats.....	13
Potential Barriers to Success.....	15
Objective 2: Identifying San Diego County's Assets for a Regional Species and Habitat Conservation Initiative .....	16
Methodology .....	16
Assets of SDEE Partners.....	16
San Diego County's Existing Organizations and Initiatives .....	17
Objective 3: Understanding the San Diego Public .....	19
Methodology .....	19
Survey Design .....	19
Survey Respondents.....	20
Survey Results.....	21
Knowledge .....	21
Self-Efficacy .....	22
Identity Tied to Species and Habitat Conservation .....	23
Environmental Values .....	24
Pro-Environmental Behaviors .....	25
Conservation Priorities .....	26
Survey Implications.....	27
SDEE's Ongoing Progress .....	28
NPI Recommendations for Next Steps.....	29



# EXECUTIVE SUMMARY

---

San Diego County is one of the most biologically rich and biologically threatened counties in the continental United States with approximately 200 imperiled plants and animals. While efforts to protect the region have been underway for decades, there was a formal reprise in 2017 when San Diego Zoo Global (SDZG) spearheaded a collaborative initiative, called San Diego End Extinction (SDEE), aimed at preventing the extinction and/or extirpation of San Diego County's native plants and animals. SDEE was born out of a shared recognition that preserving San Diego County's unique biodiversity is essential to maintaining the region's economic and environmental value. SDZG convened a group of stakeholders representing key land-owning/regulatory agencies and organizations in San Diego County and invited them to become the founding partners of SDEE.

In April 2018, SDEE commissioned The Nonprofit Institute's Caster Family Center for Nonprofit and Philanthropic Research at the University of San Diego to conduct a systematic needs assessment to help SDEE align its goals and priorities with San Diego County's existing strengths and gaps in order to proactively prevent the loss of native plants and animals. The needs assessment drew on recent research on successful cross-sector collective impact initiatives. The three objectives of the needs assessment are summarized below, along with a synopsis of the findings for each.

## **Objective #1: Define what SDEE wants to accomplish, including purpose, goals, and a common agenda for the SDEE initiative**

NPI researchers conducted semi-structured interviews with 26 SDEE founding partners and action partners between June and August 2018 to understand: 1) what they believed the purpose and goals of SDEE should be; 2) their perceptions of San Diego County's conservation assets and gaps; and 3) potential barriers to SDEE's success.

Overall, participants felt San Diego County is ideal for an initiative such as SDEE because it is a biodiversity hotspot, has a long history of conservation planning and a multitude of environmental organizations, and SDZG has a good reputation and cache in the community.

While participants were enthusiastic about SDEE and expressed a desire to be involved, they also identified the following barriers to SDEE's success: 1) lack of consensus about what conservation approach to take; 2) fear of reinventing the wheel; 3) SDZG's limited role in local conservation; 4) inherent tensions between economic development vs. conservation efforts; and 5) balancing the necessity to limit human access to vulnerable habitats vs. maintaining public access for people to develop a connection to the unique landscape.

In the spirit of a collective impact framework, a draft of SDEE's Common Agenda was derived from four primary gaps that participants identified as being necessary to address for the SDEE initiative to be successful. Specifically, participants identified gaps in relationships, resources, public engagement, and habitat management. Participants also offered potential strategies and practices for filling these gaps.

## **Objective #2: Identify and document San Diego County's assets for regional species and habitat conservation**

NPI researchers compiled a database of local conservation organizations and initiatives actively involved in local species and habitat conservation efforts, including each organization's areas of focus, key programs, type of organization, and contact information. This information was gathered from the interviews and by searching websites and nonprofit databases, such as GuideStar.



A total of 191 independent organizations operating 218 programs that directly or indirectly address species and habitat conservation were identified, representing primarily nonprofit organizations and government agencies. Approximately one-quarter of these organizations were either already involved or very closely tied to SDEE's network and mission, while 60 percent were not currently involved but could probably support the initiative in some way. In terms of strengths that the founding partners and action partners bring to SDEE, both groups bring expertise in habitat management and planning, have a strong reach and reputation in the community, already collaborate with many local partners, and have access to land – all of which highlight the strong potential that SDEE has for influencing systems change.

### **Objective #3: Understand what the San Diego public know, think, feel, and do in relation to species and habitat conservation**

In November 2018, 600 San Diego County voters completed a telephone survey consisting of questions about their knowledge, efficacy, identity, values, environmental priorities, and behaviors related to species and habitat conservation. The survey was developed, in part, using the Tripartite Integration Model of Social Influence (TIMSI) Framework, which has been used in research on educating the public about climate change. It provides a model for explaining how knowledge alone does not predict changes in people's environmental behaviors, but when knowledge is mediated by a sense of efficacy (I can act to prevent species extinction), an identification with the cause (I identify as someone who cares about conservation), and shared values (I value the environment and believe humans have a responsibility for protecting it), people are more likely to change their behaviors.

Overall, results showed that San Diegan's knowledge about the problems facing native plants and animals is low, self-efficacy and identity is moderate, and environmental values are high. These findings, and more specific data summarized in this report, can be used by SDEE action teams as they strategize and move forward in the future.

### **In Conclusion**

The new SDEE initiative is off to a solid start by using a collective impact framework to develop a common agenda, articulate the specific responsibilities of SDZG as the backbone organization, establish communication systems, and ensure the right individuals will be at the table to move this initiative forward. By commissioning NPI to conduct this systematic needs assessment, SDEE has demonstrated its commitment to using data to continually inform the initiative's work.

Some of SDEE's achievements in the first 12 months of this project include: 1) creating a sense of community and partnership with key players; 2) hiring a part-time dedicated coordinator who has worked in the conservation field in San Diego County for many years and has strong existing relationships with many of the founding partners; 3) transforming the initial founding partner group into a new governing body called the Leadership Table; 4) sharing progress of the initiative with a group of key SDZG stakeholders and integrating their feedback into this report; 5) formalizing a group charter for the Leadership Table and SDZG as the backbone organization; and 6) discussing plans and strategies for next steps.

Moving forward, the challenge for SDEE will be to build on the history and lessons learned from species and habitat conservation efforts in San Diego County while also inviting new voices and innovative ideas to the table.

# OVERVIEW AND BACKGROUND

---

## *San Diego End Extinction Initiative*

In 2017, San Diego Zoo Global (SDZG) spearheaded a collaborative initiative, called San Diego End Extinction (SDEE), to prevent the extinction and/or extirpation of San Diego County's native plants and animals. SDEE was born out of a shared recognition that preserving San Diego County's unique biodiversity is essential to maintaining the region's economic and environmental value. SDZG convened a group of stakeholders representing the largest land-owning/regulatory agencies and organizations in San Diego County and invited them to become the founding partners of SDEE.

The founding partners met multiple times in 2017 and began to develop a governing structure and articulate some of their primary goals for the initiative. Given the diverse skills and interests of the founding partners and the limited time and resources available to devote to SDEE, the founding partners felt they needed more information to guide the initiative. In April 2018, SDEE commissioned The Nonprofit Institute's Caster Family Center for Nonprofit and Philanthropic Research (Caster Center) at the University of San Diego to conduct a systematic needs assessment to help SDEE align its goals and priorities with San Diego County's existing strengths and gaps in order to proactively prevent the loss of native plants and animals. The needs assessment was designed to address three objectives:

### **Guiding Research Objectives**

1. Define what SDEE wants to accomplish
2. Identify San Diego County's assets for regional species and habitat conservation
3. Understand what the San Diego public know, think, feel, and do in relation to species and habitat conservation

This report outlines the findings from the needs assessment and offers recommendations for SDEE's next steps in its work to develop a systems change approach to habitat conservation in San Diego County. This report begins with a description of the Collective Impact Framework that guided this study and is then organized by the three research objectives.



## Collective Impact Framework

In recent years, communities have begun to recognize cross-sector collaboration as fundamental to solving complex social problems. While it intuitively makes sense that people can do more together than apart, collaboration among partners who may have divergent interests and goals can be challenging and group conflict can sometimes disrupt the potential impact of an initiative. A collective impact approach is appropriate for societal challenges that are complex, do not have a simple solution, and cannot be accomplished with the limited resources of a single organization. In other words, collective impact initiatives are focused on systems change, where policies and social structures need to transform in order for goals to be reached. SDEE's goal to prevent the loss of native plant and animal species in San Diego County is complex, requires cross-sector collaboration and systems change, and thus could benefit from a collective impact approach.

Recent research on cross-sector collaboratives have identified conditions and principles that are present in successful collective impact initiatives. This study draws on Kramer and Kania's Collective Impact Framework.<sup>1</sup> As Figure 1 illustrates, **successful collective impact initiatives share five key elements.**

Figure 1: Collective Impact Framework<sup>1</sup>

Common Agenda	<ul style="list-style-type: none"><li>• <b>Common understanding</b> of the problem</li><li>• <b>Shared vision</b> for change</li></ul>
Shared Measurement	<ul style="list-style-type: none"><li>• <b>Collecting data</b> and <b>measuring results</b></li><li>• Focus on <b>performance management</b></li><li>• <b>Shared accountability</b></li></ul>
Mutually Reinforcing Activities	<ul style="list-style-type: none"><li>• <b>Differentiated approaches</b></li><li>• Willingness to <b>adapt individual activities</b></li><li>• <b>Coordination</b> through joint plan of action</li></ul>
Continuous Communication	<ul style="list-style-type: none"><li>• <b>Consistent</b> and <b>open communication</b></li><li>• Focus on <b>building trust</b></li></ul>
Backbone Support	<ul style="list-style-type: none"><li>• Separate organization(s) with <b>staff</b></li><li>• Resources and skills to <b>convene</b> and <b>coordinate</b> participating organizations</li></ul>

<sup>1</sup> Kramer, M & Kania, J. Collective impact. (2011). *Stanford Social Innovation Review*.  
[https://ssir.org/articles/entry/collective\\_impact#](https://ssir.org/articles/entry/collective_impact#)

In addition to these five elements, more recent research on a study of 25 collective impact projects that have demonstrated success in reaching their goals has identified an **additional eight principles that guide successful collective impact initiatives**.<sup>2</sup> Note that one of these collective impact projects was an environmental project to restore the health of a river.

As indicated below, successful initiatives prioritize equity, foster trusting relationships among cross-sector partners and community members, use data for continuous learning, and focus on systems change.

- Design and implement the initiative with priority on **equity**
- **Include community** members in the collaborative
- Recruit and co-create with **cross-sector** partners
- Use **data** to continuously learn, adapt, and improve
- Cultivate leaders with unique **system leadership** skills
- Focus on **program and system strategies**
- Build a culture that fosters **relationships, trust, and respect** across participants
- Customize for **local** context

SDEE is in its infancy as a collective impact initiative and thus the collective impact framework and principles are an effective model for assessing SDEE's early activities. Specifically, this framework was used to inform SDEE's work to develop a common agenda, articulate the specific responsibilities of SDZG as the backbone organization, establish communication systems, and ensure the right individuals were at the table to move this initiative forward.

---

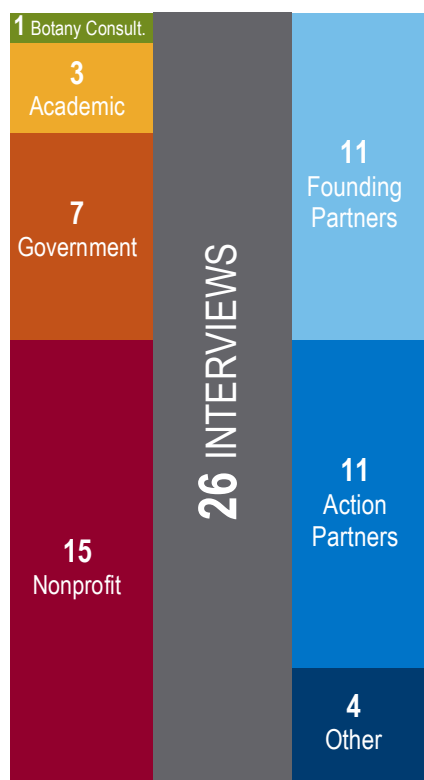
<sup>2</sup> ORS Impact. (2018). *When collective impact has an impact. A cross-site study of 25 collective impact initiatives*. ORS Impact and Spark Policy Institute.  
Full report: [http://orsimpact.com/DirectoryAttachments/10262018\\_111513\\_477\\_CI\\_Study\\_Report\\_10-26-2018.pdf](http://orsimpact.com/DirectoryAttachments/10262018_111513_477_CI_Study_Report_10-26-2018.pdf)  
Executive summary: [http://orsimpact.com/DirectoryAttachments/10102018\\_33801\\_97\\_CI\\_Study\\_Executive\\_Summary\\_October\\_2018.pdf](http://orsimpact.com/DirectoryAttachments/10102018_33801_97_CI_Study_Executive_Summary_October_2018.pdf)

# OBJECTIVE 1: DEFINING THE COMMON AGENDA

## Methodology

The first step in utilizing a collective impact model, is to define a common agenda. In order to help SDEE identify its purpose and goals, NPI researchers conducted semi-structured interviews with 26 SDEE founding partners and action partners (i.e. local conservation leaders who SDZG staff had identified as important sources of information) between June and August 2018. The objectives of the interviews were to gather information about: 1) what stakeholders believed the purpose and goals of SDEE should be; 2) their perceptions of San Diego County's conservation assets and gaps; and 3) potential barriers to SDEE's success. Interviews were analyzed using content analysis, a method for identifying common themes.

## Interview Participant Profile



### Founding Partner Organizations Interviews:

- Navy / Department of Defense
- San Diego County Farm Bureau
- San Diego County Parks & Recreation
- San Diego Foundation
- San Diego Zoo Global
- San Diego Association of Governments (SANDAG)
- San Diego National Wildlife Refuge Complex
- U.S. Fish and Wildlife
- United States Geological Survey (USGS)
- United States Forest Service – Cleveland National Forest

### Action Partner Organization Interviews:

- California Native Plant Society
- Endangered Habitats Conservancy
- Endangered Habitats League
- International Community Foundation
- San Diego Canyonlands
- San Diego Natural History Museum
- San Diego River Park Foundation
- San Diego State University, Conservation Ecology Lab
- San Dieguito River Valley Conservancy
- University of California, San Diego, Division of Biological Science
- Wildcoast

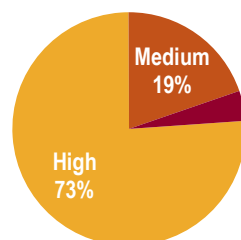
### Other - Preliminary Interviews:

- Botanist Consultant
- Climate Science Alliance
- University of San Diego, Energy Policy Initiatives and The Nonprofit Institute

### Critical Voices Missing

- Native American Tribes
- Building Industry Association
- Elected Officials

### Mission Alignment with Conservation



**Low** = Mission minimally or not at all related to conservation

**Medium** = Mission has a conservation component

**High** = Mission directly tied to conservation

## Why San Diego County?

In order to understand why the founding and action partners felt this collective impact conservation initiative was important, participants were asked to contextualize species and habitat conservation within the San Diego landscape. Participants felt San Diego County has some unique characteristics that make it ideal for an initiative such as SDEE to successfully slow down or prevent the loss of native plant and animal species. These are summarized below.

<b>San Diego County as a Biodiversity Hotspot</b>	The most frequently cited reason was San Diego County's unique biodiversity. San Diego County is located in the California Floristic Province, one of 25 biodiversity hotspots worldwide. <sup>3</sup> A biodiversity hotspot is a region with rich biodiversity <i>and</i> many threatened plant and animal species. San Diego County's diverse landscape is in part a result of the region's numerous climates and geographies spanning the relatively short distance from mountains to sea. <sup>4</sup>
<b>San Diego County's History of Conservation Planning</b>	San Diego County is recognized as one of the first in the nation to enact a habitat conservation plan that streamlines the permitting process for developers, while preserving large connected areas of land to protect vulnerable species. The plan, called the Multiple Species Conservation Program (MSCP), has three subarea plans: 1) South County, which was approved in 1998; and 2) East County and 3) North County, which are still in development. <sup>5</sup> The San Diego Management and Monitoring Program (SDMMP), funded through SANDAG, supports the management and monitoring of conserved land.
<b>SDZG's Cache in the Community</b>	Many participants were enthusiastic about SDZG taking the lead in the SDEE initiative because they recognize the solid reach and reputation it has within the community. SDZG is recognized as having one of the largest zoo memberships in the world.
<b>San Diego County's Multitude of Environmental Organizations</b>	Participants also felt the sheer number of environmental organizations whose primary mission is aligned with protecting species and habitats in the region could serve as a major strength.

<sup>3</sup> Myers, N., Mittermeier, R. A., Mittermeier, C. G., da Fonseca, G. A. B. & Kent, J. (2000). Biodiversity hotspots for conservation priorities. *Nature* 403, 853–858.

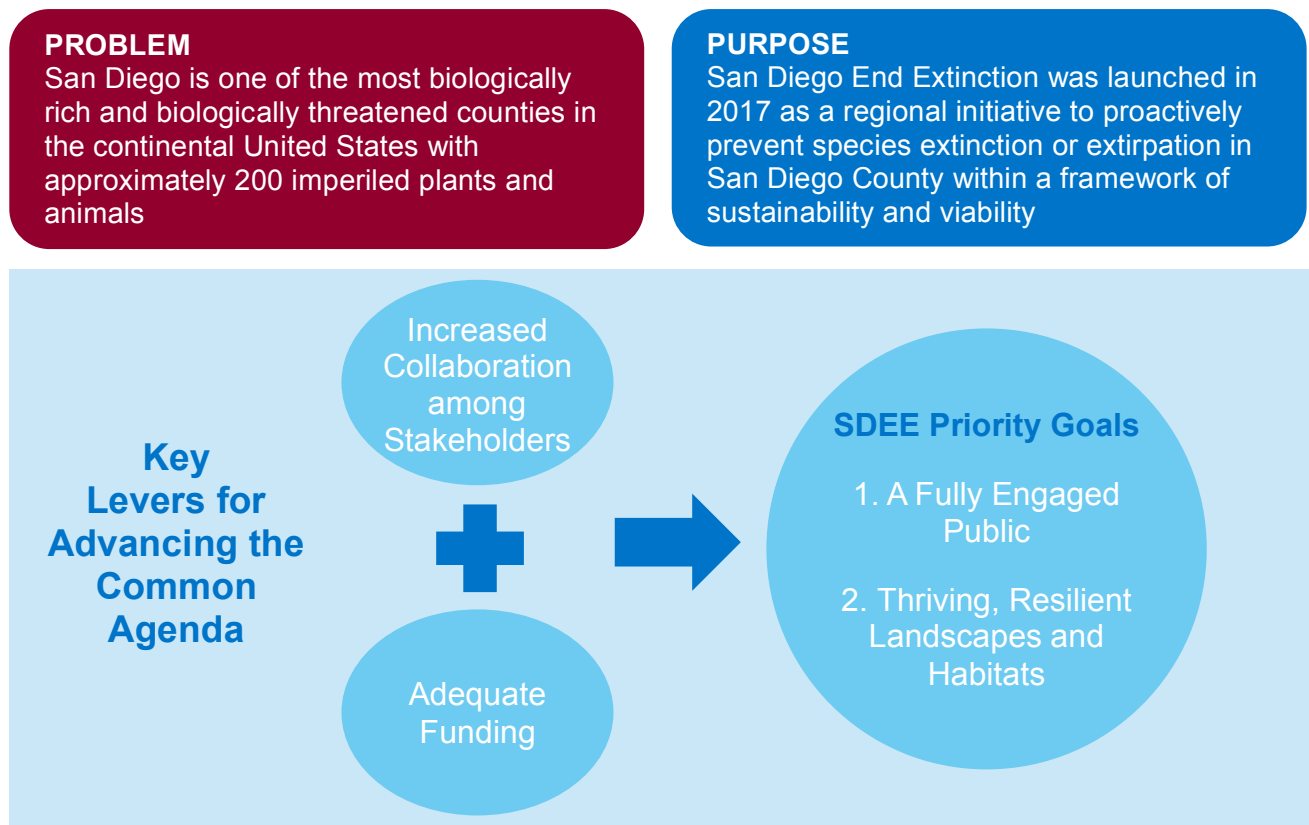
<sup>4</sup> Jennings, M. K., Cayan, D., Kalansky, J., Pairis, A. D., Lawson, D. M., Syphard, A. D., Abeysekera, U., Clemesha, R. E. S., Gershunov, A., Guirguis, K., Randall, J. M., Stein, E. D., & Vanderplank, S. (San Diego State University). (2018). *San Diego County ecosystems: Ecological impacts of climate change on a biodiversity hotspot*. California's Fourth Climate Change Assessment, California Energy Commission.

<sup>5</sup> <https://www.sandiegocounty.gov/content/sdc/pds/mscp/faqs.html>

## SDEE's Common Agenda Draft

In any collective impact initiative, the first step is to collaboratively define the common agenda around which all initiative activities should align. Participants were asked to identify what they felt the purpose of SDEE should be, and what success would look like. Figure 2 summarizes participants' priority goals, which served as a draft for SDEE's Common Agenda. Based on the interviews, participants identified increased collaboration among stakeholders and adequate funding as being necessary "levers" for advancing their priority goals. The priority goals for SDEE are: 1) engaging the public in species and habitat conservation so there is increased awareness and commitment to protecting San Diego's unique biodiversity; and 2) proactively preserving and managing habitats through a framework of sustainability and viability so that San Diego County's landscapes and habitats are thriving and resilient.

Figure 2: SDEE's Common Agenda Draft



## SDEE's Common Agenda Levers and Goals

Participants identified four primary gaps that need to be addressed in order to prevent native plant and animal loss, and these gaps were the foundation of the key levers and goals in SDEE's Common Agenda draft. Specifically, participants identified **gaps in relationships, resources, public engagement, and species and habitat management**. Participants also offered potential strategies and practices they believed could be successful in filling these gaps. Additionally, in February 2018, NPI researchers shared SDEE's Common Agenda draft with a group of SDZG staff to gather their input on strategies and practices that SDEE should consider. This section is organized by the two levers and two priority goals, and summarizes the identified gaps and strategies to fill these gaps.

## Collaboration as a Lever for Advancing the Common Agenda

Participants felt that in order for SDEE to be successful, stakeholders across sectors must work together; yet they recognized there were some tensions within and outside of the conservation community that had the potential to constrain progress.

### Relationship Gaps

- Lack of coordination within and outside of conservation community
- Missing new and different voices, including those that represent diversity in age, gender, and ethnicity, and socioeconomic status
- Loss of trust among stakeholder groups that historically collaborated on conservation planning
  - Particularly between developer and conservation communities

*“For the most part, the environmental movement has been exclusive. We have missed out on a large group of people with environmental values but they just don’t call it that... If you want to change the conversation you have to switch up the people having it.”*

*“[Someone] described the founding partners as ‘a loosely knit group of warring factions.’ Have groups with competing interests (counties, federal, and development) understand and appreciate the importance of large-scale habitat planning.”*

### Strategies for Fostering Collaboration

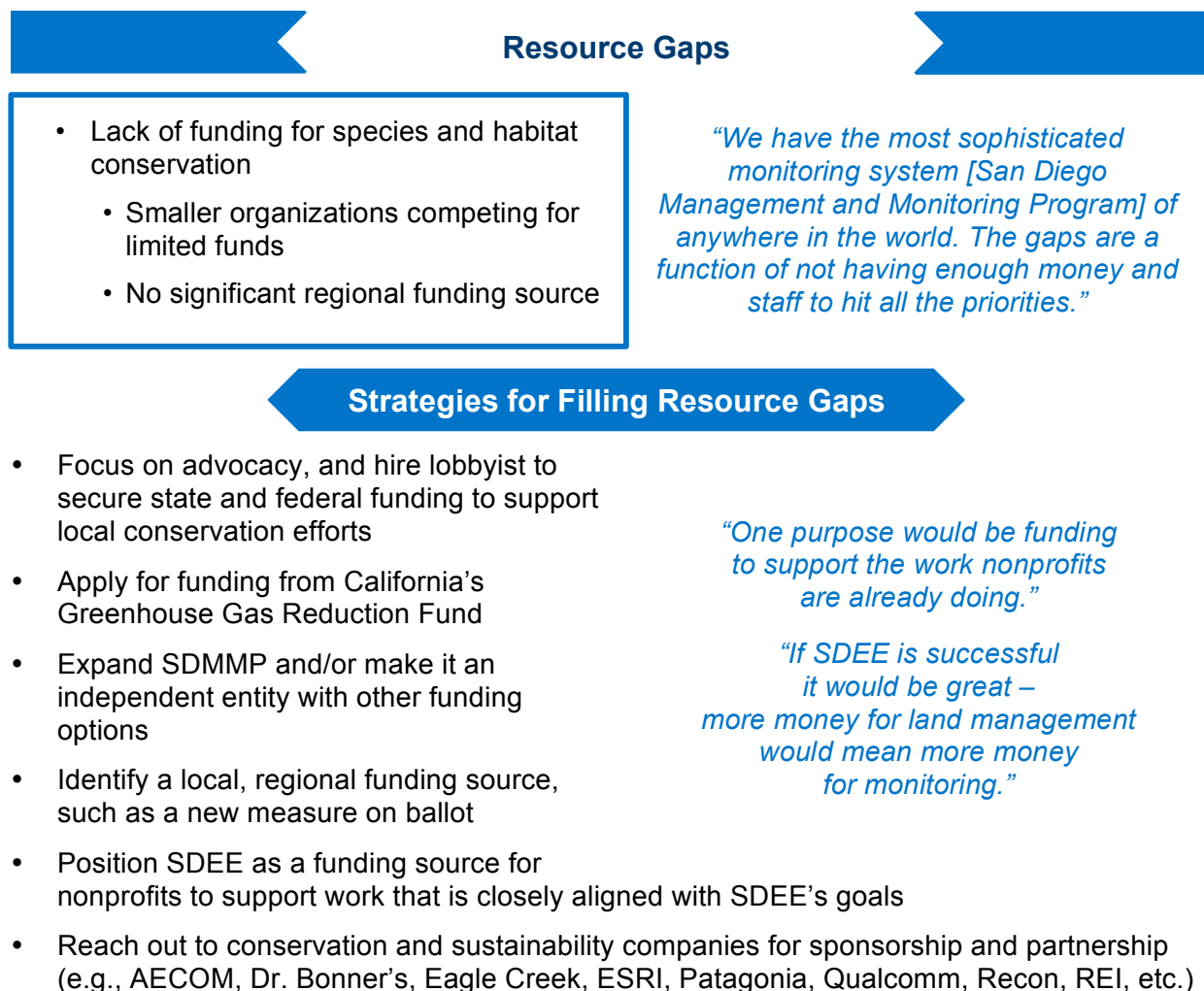
- Include multitude of stakeholders because “conservation depends on our ability to work together.” For example,
  - San Diego County government and the Building Industry Association, including staff-level movers and shakers (vs. only senior leaders) who can engage in useful and important ways
  - Nonprofit and community leaders who are already trusted by the public but not currently at the SDEE table, who could help to bridge conservation with other critical community concerns
  - Native American organizations that are advancing conservation efforts by integrating traditional ecological knowledge and land uses
  - Other communities of color who have historically been excluded from conservation community and have strong traditions around conservation
  - Artists who can inspire the public
  - Local media partners who can help to elevate the profile of the region’s unique natural beauty and conservation needs
- Incentivize private landowners to survey their property and/or engage in restoration and conservation
- Encourage SDZG to get more involved in promoting conservation and science, even if controversial



- Gather and document history and institutional knowledge from previous players who were involved in developing the MSCP (e.g., What was attempted in the past and what decisions were made, why, how, and by whom? What lessons have been learned and what should be avoided going forward?)
- Have all SDEE members and affiliates sign and abide by a proclamation that “This is what we want to do together” instead of “This is how we’re going to do it”

## **Funding as a Lever for Advancing the Common Agenda**

Not surprisingly, participants identified a lack of funding as a large challenge to enacting sustainable species and habitat conservation efforts.



## Priority Goal 1: Increased Public Engagement

Participants believed that the San Diego public is not aware of the problems facing native plants and animals and are, therefore, minimally engaged in protecting habitats.

### Knowledge Gaps

- Lack of awareness among the public and elected officials about the problems facing native plants and animals

*“San Diego’s lack of familiarity with the biodiversity... San Diegans like the outdoors, [but] they do not have a lot of familiarity with the biodiversity of the region.”*

*“Politicians who supported and approved [original] plans are rapidly disappearing. Probably a dozen left. If you poll politicians today, open space is not high [priority].”*

### Strategies for Filling Knowledge Gaps

- **Engage leaders**

- Convene community leaders from different sectors and backgrounds to discuss San Diego’s conservation and economic development efforts
- Create executive committee that includes and increases connectivity with elected officials

*“Success looks like a community that explicitly supports conservation. That includes more government involvement in conservation. A community that explicitly values the biodiversity of our region.”*

- **Education programs**

- Create local traveling exhibit to tell the history of conservation in area museums, nature centers, the San Diego International Airport, and other public venues
- Elevate a conservation ethic in the community
- Expand San Diego’s brand to include natural assets, rich biodiversity, ecotourism, etc.
- Invest in education programs that help raise awareness so public will support ballot measure for conservation funding
- Emphasize community-based, hands-on education about native plant and animal species, watersheds, pollutants, what areas could look like if they were restored, etc.
- Partner with organizations focused on getting youth outdoors to deepen connections with local plants and animals
- Find opportunities for alignment of conservation efforts with outdoor access for beach activities, hiking, cycling, horseback riding, hunting/fishing, etc.
- Create and share common messages across the multitude of educational programs

- Leverage existing resources, for example:
  - Thrive Outside
  - Neighborhood “Friends of” groups
  - Citizen science program for data collection/monitoring
  - City Nature Challenge <http://citynaturechallenge.org/>
  - Sixth Grade Camp Programs with local schools
- **Regional (vs. place-based) planning and promotion**
  - Provide a framework of what is at stake for the greater San Diego region, how it connects to our local values, and strategize at a regional level in a collaborative and engaging way
  - Connect species protection directly to the legacy of our region, and our values and sense of pride as a region
- **New voices**
  - Include communities that are underrepresented; focus on equity
  - Hire from within underrepresented communities, someone that understands San Diego culture, who is trusted and believable
- **Public relations media campaign with multiple communication channels**
  - Create campaign to promote what is working
    - Be positive to instill pride and hope
    - Leverage what already has been accomplished
  - Establish an emotional connection to a critter that SDZG could highlight, such as the Quino Checkerspot butterfly
    - Similar to “Give a Hoot, Don’t Pollute” campaign from the 1980’s
  - Focus on plant and animal loss (vs. discussion about land) to help raise awareness for decision makers
  - Help the public understand how protecting nature helps to enhance our region’s resilience to rising sea levels (restored wetlands can better buffer storms) and wildfires (protecting wildfire prone areas from further development)
  - Develop a branding and marketing campaign to promote the value of conservation to leaders and the public
    - Leverage the successful models used for climate change such as Climate Education Partners (<https://www.sandiego.edu/climate/>)
  - Educational video and/or campaign to help public understand, relate, and care vs. ignore or disengage

*“Everyone thinks that the efforts to prevent species extinction has been a complete failure. But it’s the complete opposite. We have saved almost everything without even trying. If we talk to people about that, it really changes people’s perception. The power to change the perceptions of people who aren’t going to be persuaded by other arguments. Talking about the good news of it is pretty powerful.”*

## Priority Goal 2: Thriving and Resilient Habitats

Participants felt there was a need for improved land management and increased land acquisition in order to protect vulnerable species.

### Species/Habitat Management Gaps

- Limited species and habitat monitoring
- Lack of baseline data
- Limited and uncoordinated data gathering, sharing, and use

*"It always comes down to data – [you] only know what you know; the areas that are mapped are mapped well but most of county is not mapped; a lot of the data is [in] someone's brain."*

### Strategies for Filling Species/Habitat Management

- **Smart Development**
  - Build in places that won't drive plants/animals towards extinction
  - Direct development towards existing communities
- **Land**
  - Stay at 100,000-foot level and let SDMMP do the hands-on, tactical work
  - Collaborate rather than compete with SDMMP to get some quick and easy wins for good publicity
  - Focus on preservation, restoration, and acquisition of land
    - Build capacity within the land trust community, including qualified staff
    - Engage players around ecological restoration using San Diego River watershed (see Cleveland National Forest plan)
    - Pool funding to buy land
      - Emphasize sustainable land use and land connectivity vs. focusing on specific species
  - Include coastal ecosystems, and partner with organizations working to protect coastal areas (e.g., San Diego Audubon Society's ReWild Mission Bay project)
- **Data and research**
  - Conduct and/or translate practical, applied, consumable scientific research
  - Conduct biological surveys to see what is thriving
  - Collect benchmark data about status of species
  - Establish monitoring plan for species
  - Create unified and common metrics that assess if our natural systems are becoming more resistant to climate change or if ecosystems are less management reliant
    - Advocate for data access and data sharing

- **Policy and planning**
  - Recommit to regional habitat plans
  - Develop East County Plan and approve North County Plan
    - Ensure land development codes are in synch with conservation efforts
    - Prioritize county government protection for rare natives; does not have to be federally protected to be listed (e.g., see Ventura County's local rare natives policy)
- **Plant and animal species**
  - Prioritize species list
    - Narrow focus to six species that are surrogate or representative of others going extinct
    - Address invasive species
    - Develop plant and animal species insurance collections
    - Establish peer-sharing process (e.g., day-long workshop) for key scientists to discuss existing species list

## ***Potential Barriers to Success***

Participants were enthusiastic about SDEE and expressed a desire to be involved. However, they also identified some potential barriers to SDEE's success, which included:

- **Lack of consensus on conservation approach among both founding and action partners:** Among partners with a scientific background, there was a concern that SDEE's approach would focus on species instead of habitats. This was a concern primarily because of perceptions that SDZG as an institution has traditionally focused on species in their own conservation activities. However, they also acknowledged that focusing on particular species as a public relations strategy may be very effective. Scientists also expressed some concern that the name San Diego End Extinction was scientifically inaccurate.
- **Fear of reinventing the wheel:** A number of the participants had been involved in species and habitat conservation for decades and there was a concern that SDEE would replicate past mistakes or not integrate or build on current efforts already underway, such as SDMMP and the regional habitat plans.
- **SDZG's role:** Although participants affirmed that SDZG has a very strong reputation in San Diego County, they were perceived as historically having a very limited role in local conservation. Some participants were apprehensive about such a powerful organization leading a group with a lot of historical and institutional knowledge. Moreover, smaller organizations were concerned SDEE could create competition for funding.
- **Economic development vs. conservation:** There is an inherent tension between development and conservation, and participants expressed that this tension is only going to increase as developers feel more pinched from the real lack of housing in San Diego County.
- **Preservation vs. public access:** Participants were divided in their beliefs about the necessity to limit human access to vulnerable habitats vs. maintaining public access in order for people to develop a connection to the unique landscape.



## OBJECTIVE 2: IDENTIFYING SAN DIEGO COUNTY'S ASSETS FOR A REGIONAL SPECIES AND HABITAT CONSERVATION INITIATIVE

---

### *Methodology*

During the partner interviews, participants were asked about the assets they bring to SDEE, and to provide a list of any conservation organizations and initiatives they partner with or know about as key players. Based on this information, a database of San Diego County's assets was developed. The database includes organizations and initiatives actively involved in local species and/or habitat conservation efforts and documents each organization's areas of focus, key programs, type of organization, and contact information. This information was gathered from the interviews and searching websites and nonprofit databases, such as GuideStar. Organizations were continually added to the database until no new organizations were identified, and only organizations with an explicit focus on species and/or habitat conservation were included. For example, if an organization focused exclusively on climate change, it was not included in the database. This database and separate lists sorted by area(s) of focus was delivered electronically to the SDEE coordinators at SDZG and will be useful for SDEE's efforts going forward.

### *Assets of SDEE Partners*

Participants were asked what strengths they felt their organizations could bring to the initiative. Figure 3 illustrates the strengths of the Founding Partners and Action Partners and where there was overlap. The Founding Partners represented a group with more access to funding and operational expertise in executing initiatives, while the action partners brought more scientific expertise and an important connection to Baja, CA that allows for the potential protection of species that cross-national borders. Together, both groups bring expertise in habitat management and planning, have a strong reach and reputation in the community, already collaborate with many local partners, and have access to land. The overlapping strengths highlight the strong potential that SDEE has for influencing systems change.

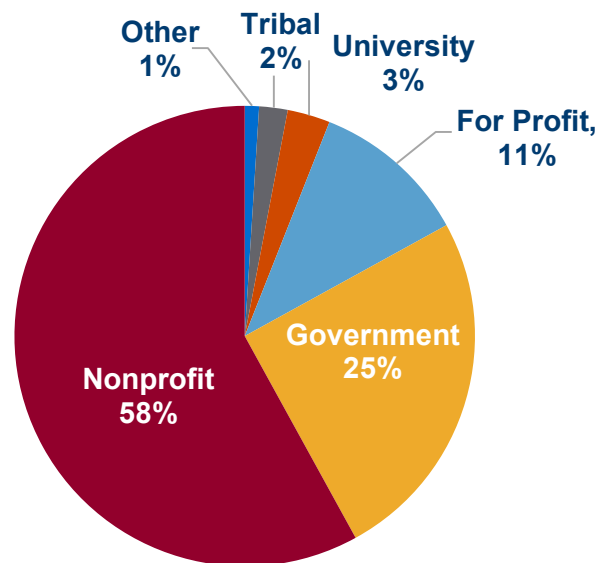
**Figure 3: SDEE's Assets**



## San Diego County's Existing Organizations and Initiatives

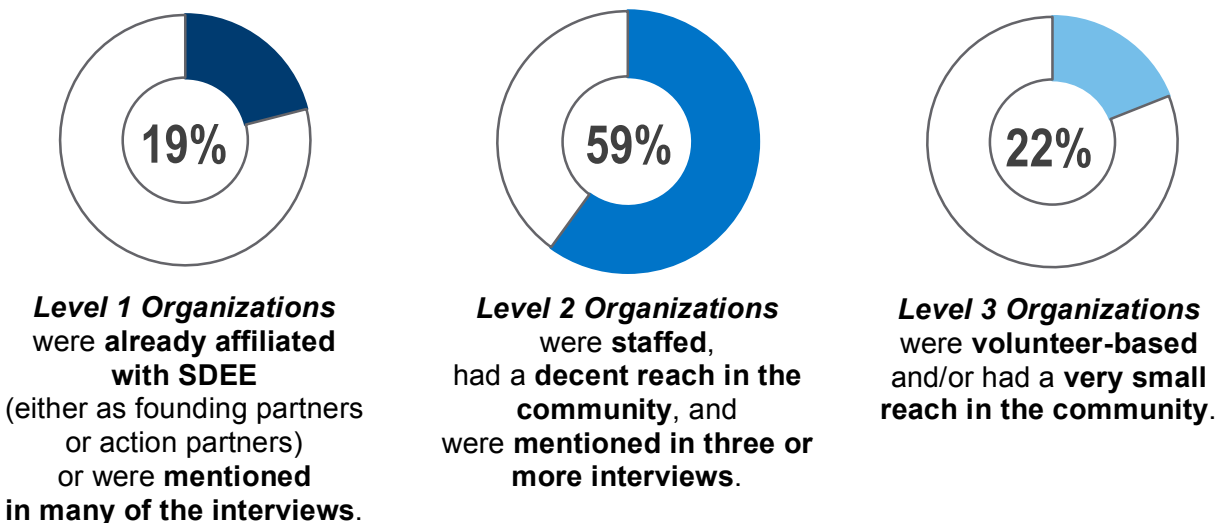
NPI researchers identified 191 independent organizations operating 218 programs that directly or indirectly address species and/or habitat conservation. As Figure 4 shows, more than one-half (58%) were nonprofits, one-quarter (25%) were government agencies, and the remaining were either for-profits, universities, tribal, or other.

**Figure 4: San Diego County Species/Habitat Conservation Organizations/Programs by Type (n=191)**



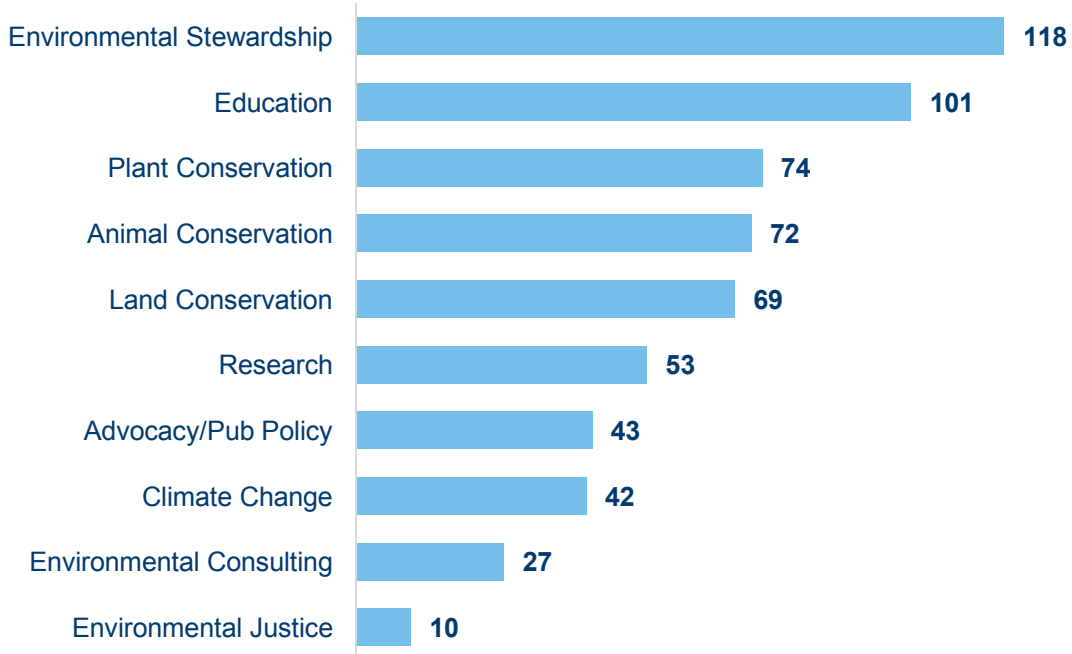
In order to make it simple for SDEE partners to identify the organizations most relevant to the initiative, NPI researchers categorized each organization into one of three levels based on its priority to SDEE. As Figure 5 shows, two out of ten (19%) organizations in San Diego County were either already involved or very closely tied to SDEE's network and mission, while six out of ten (59%) organizations were not currently involved but could probably support the initiative in some way.

**Figure 5: Organizations' Level of Priority to SDEE (n=191)**



NPI researchers also coded each organization by their areas of focus. As Figure 6 shows, the largest number of organizations currently operate programs focused on environmental stewardship and education. Fewer organizations specifically focus on environmental justice or consulting, climate change, and advocacy/public policy. Note that many organizations have multiple focus areas; therefore, the counts total more than the number of organizations.

**Figure 6: Number of Organizations Involved in Each Conservation Area (n=218)**



## OBJECTIVE 3: UNDERSTANDING THE SAN DIEGO PUBLIC

---

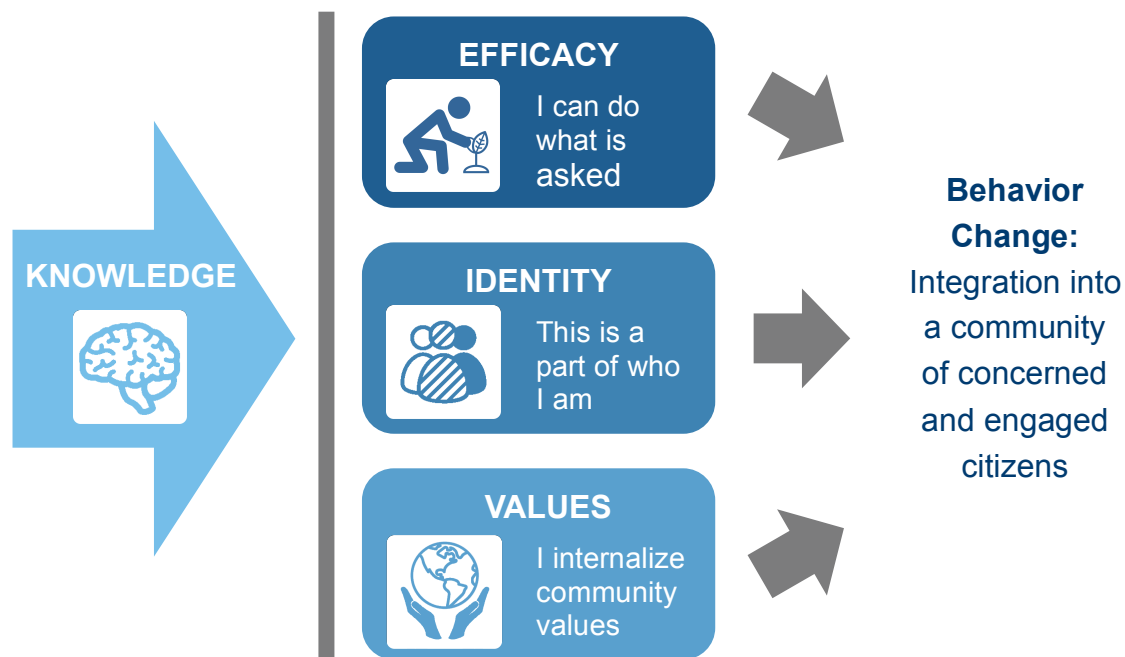
### Methodology

In order for SDEE to successfully prevent the further loss of native plants and animals, the founding partners recognized the need to engage the public. As a first step, NPI researchers designed a public opinion survey and in November 2018, a California-based polling firm conducted telephone surveys with 600 San Diego County voters in order to gauge their knowledge, perceptions, and behaviors around species and habitat conservation.

### Survey Design

The survey consisted of 24 questions and was developed, in part, using the Tripartite Integration Model of Social Influence (TIMSI) Framework. The TIMSI framework has been used in research on educating the public about climate change.<sup>6</sup> As Figure 7 illustrates, it provides a model for explaining how knowledge alone does not predict changes in people's environmental behaviors, but when **knowledge** is mediated by a **sense of efficacy** (I can act to prevent species extinction), an **identification with the cause** (I identify as someone who cares about conservation), and **shared values** (I value the environment and believe humans have a responsibility for protecting it), people are more likely to change their **behaviors**. The survey asked questions about residents' knowledge, efficacy, identity, values, environmental priorities, and behaviors related to species and habitat conservation.

Figure 7: TIMSI Framework



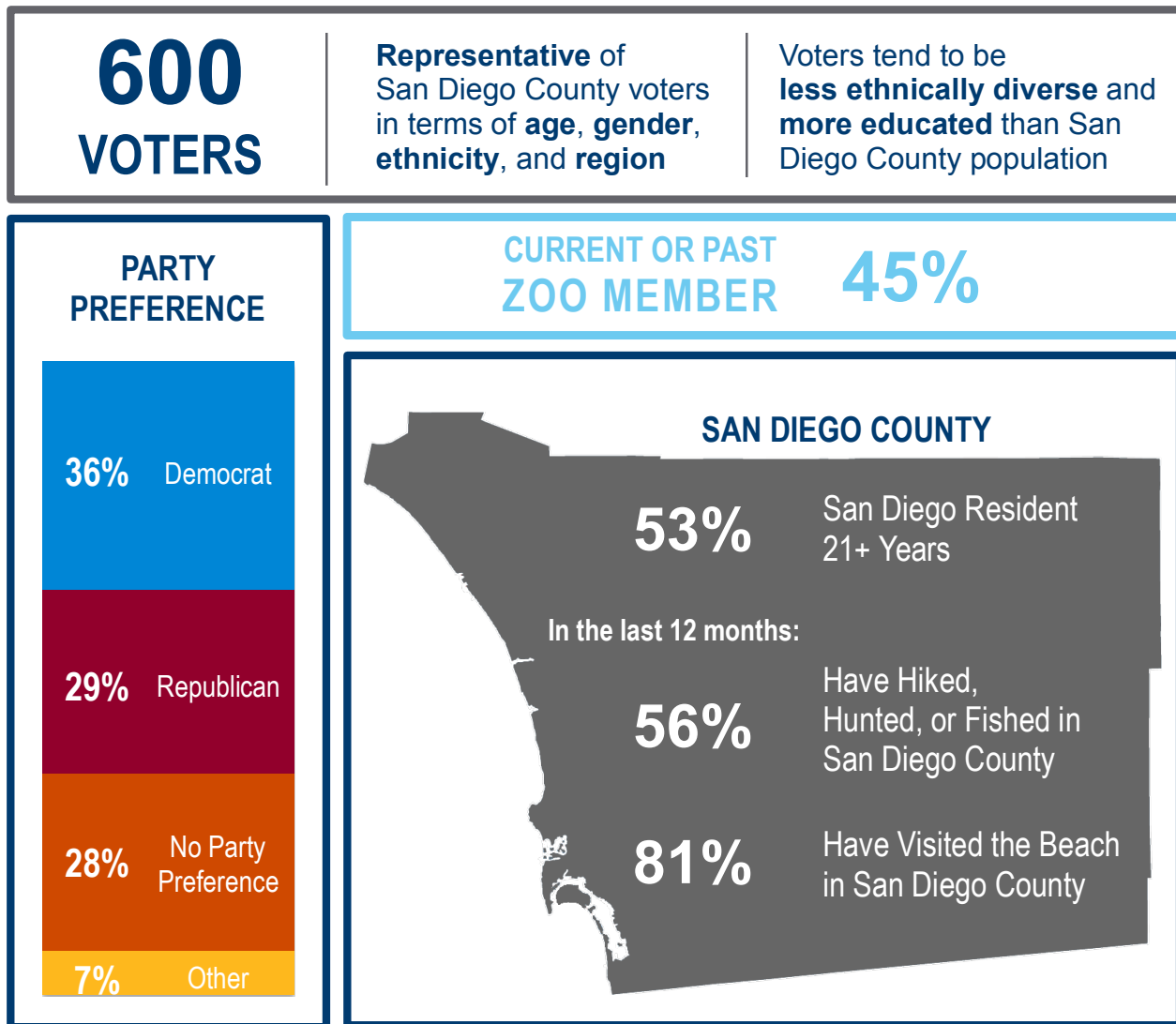
<sup>6</sup> Estrada, M., Schultz Wesley, P. Silva-Send, N. & Boudrias, M.A. (2017). The Role of Social Influences on Pro-Environment Behaviors in the San Diego Region. *Journal of Urban Health*, 94, 170-179.

See National Science Foundation funded project, Climate Education Partners, as an example of the TIMSI Framework informing climate education for community leaders. <https://www.sandiego.edu/climate/>

## Survey Respondents

Figure 8 summarizes the demographic profile of the 600 respondents who completed the telephone survey. Although they were representative of voters in terms of age, gender, ethnicity, and region, it is important to note that voters tend to be less ethnically diverse and more educated than the San Diego County population overall.

**Figure 8: Survey Respondent Profile**



## Survey Results

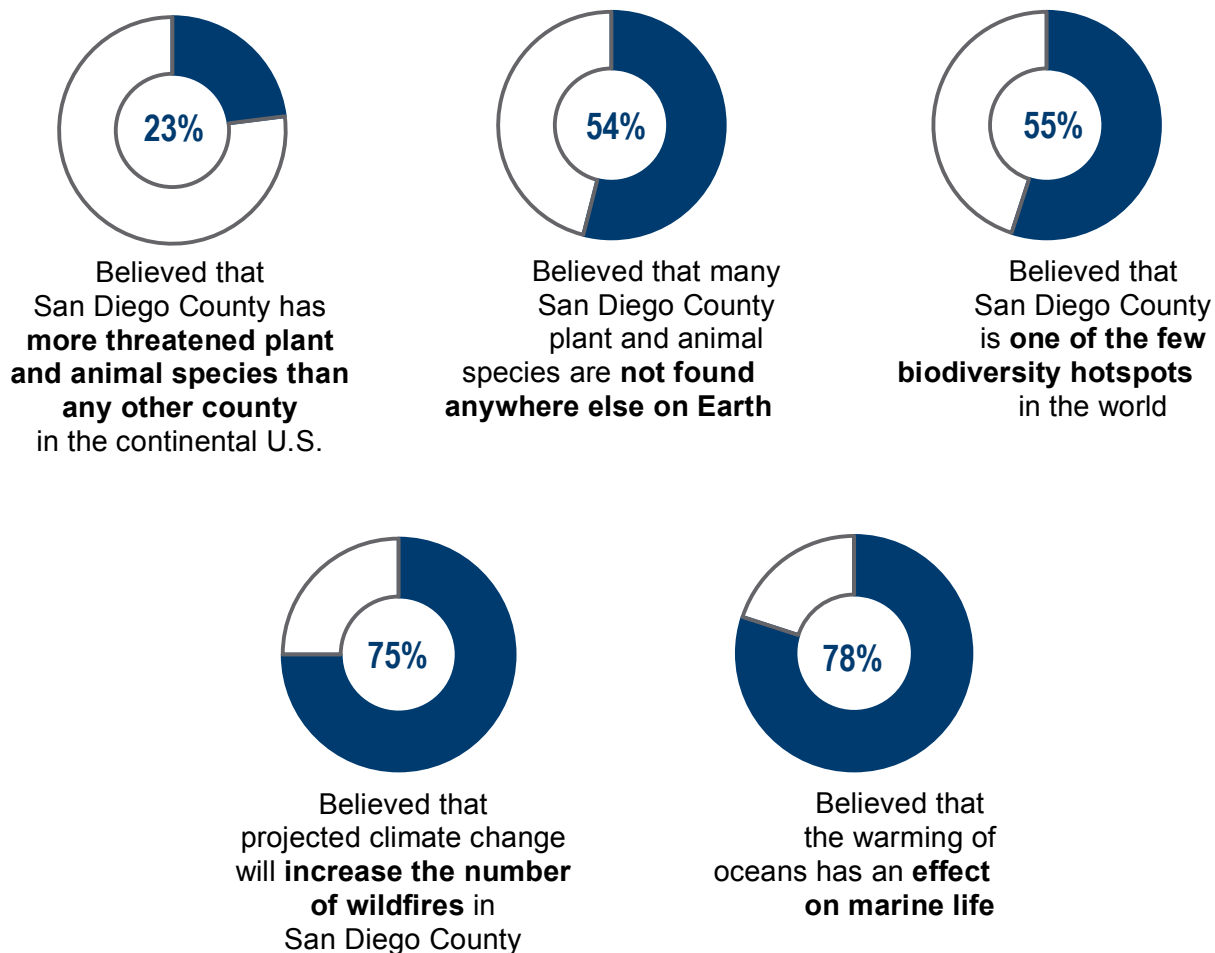
### Knowledge

Respondents had **limited knowledge** about the **problems facing native plants and animals**. As Figure 9 shows, less than one-quarter (23%) knew that San Diego County had more threatened plants and animals than any other county in the Continental U.S., and slightly more than one-half knew that San Diego County was a biodiversity hotspot (55%) and had many unique plant and animal species (54%). In contrast, at least three-quarters of respondents correctly answered questions about the impact of climate change.

# 71%

Reported they were not knowledgeable about the problems facing San Diego's plants and animals<sup>6</sup>

Figure 9: Percent Correct on True/False Questions



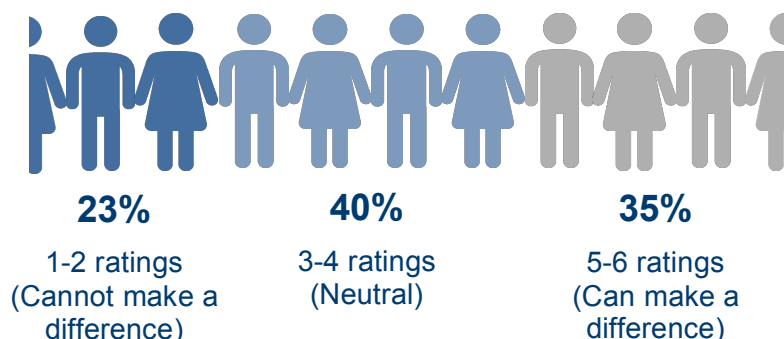
<sup>7</sup> Percent includes respondents who reported 1-3 ratings on a 1-6 scale where 1="not knowledgeable at all" and 6="very knowledgeable"



## Self-Efficacy

Respondents' self-efficacy in being able to prevent the loss of native plants and animals varied. As Figure 10 shows, four out of ten (40%) respondents rated their self-efficacy in the middle of the scale, one-quarter (23%) rated their self-efficacy low, and one-third (35%) rated their self-efficacy high.

**Figure 10: “How much of a difference can you make in preventing the loss of local plants and animals in San Diego County?”** (Percent who responded on a 6-point scale)



Respondents were also asked how much of a difference they believed other entities could make in preventing the loss of native plants and animals. Figure 11 shows that respondents believed nonprofits and the government could do more than they could as individuals to prevent the loss of native plants and animals

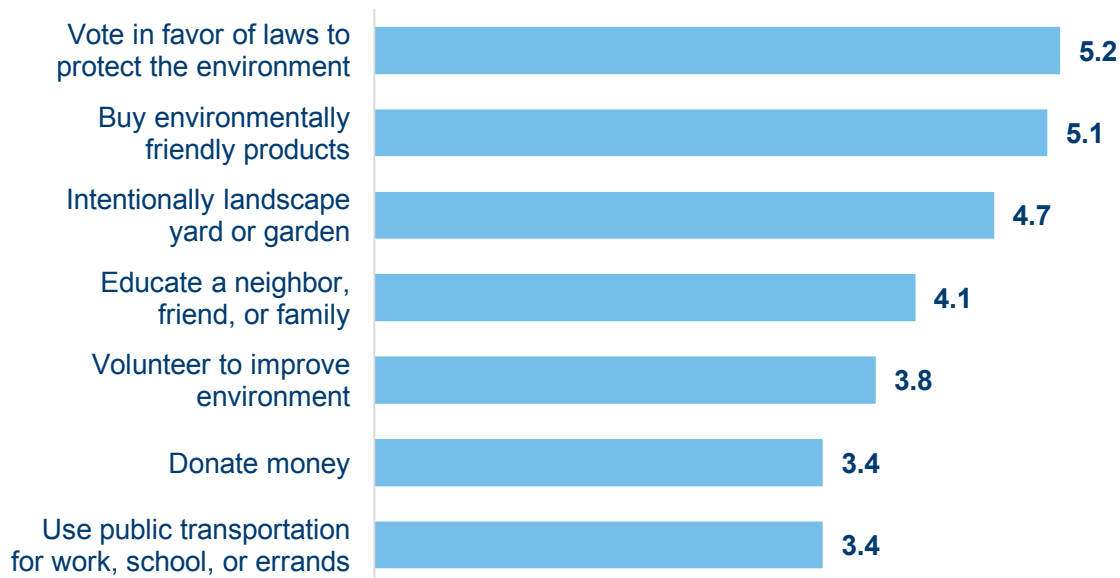
**Figure 11. Extent to which the following can make a difference in preventing the loss of local plants and animals in San Diego County**

(Average on a 6-point scale where 1=“Definitely cannot” and 6=“Absolutely can”)



Respondents were asked to what extent they felt they could do certain environmental behaviors taking into consideration where they live and their life experiences. Figure 12 shows that, on average, respondents felt they were better **able to protect the environment through their vote and purchasing power** and less able to donate money or use public transportation. It is not surprising that few felt they could use public transportation regularly given the large geographic area of the region and the limited public transportation infrastructure. However, it is noteworthy that respondents with the lowest income (<\$25,000/year) were more likely to say they could use public transportation, presumably because lower income communities are less likely to own a car and more dependent on public transportation.

**Figure 12: To what extent do you feel you can do each of the following?**  
*(Average on a 6-point scale where 1=“Definitely cannot” and 6=“Absolutely can”)*

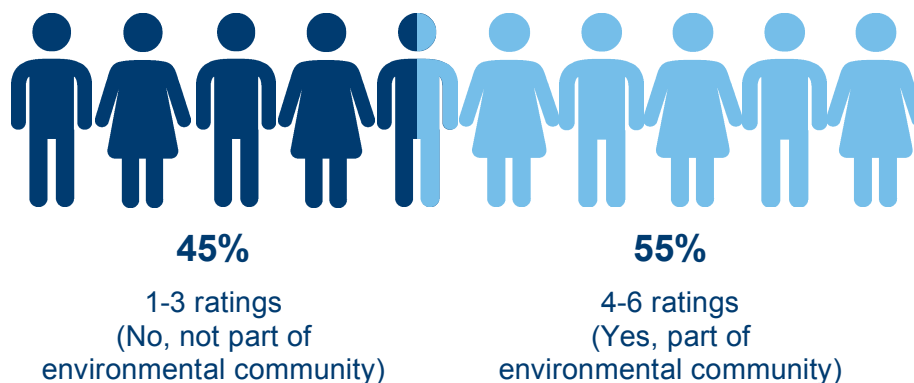


### **Identity Tied to Species and Habitat Conservation**

Respondents' identification with the environmental community was divided. Figure 13 illustrates that slightly more than one-half (55%) identified themselves as part of a community concerned about the loss of native plants and animals while slightly less than half did not. Respondents who identified as Democrats or Independents were more likely to identify themselves as part of a “concerned community” than Republicans were.

**Figure 13: “Do you identify yourself as a part of the local community that is concerned about the loss of local plant and animal species?”**

*(Percent who responded on a 6-point scale)*

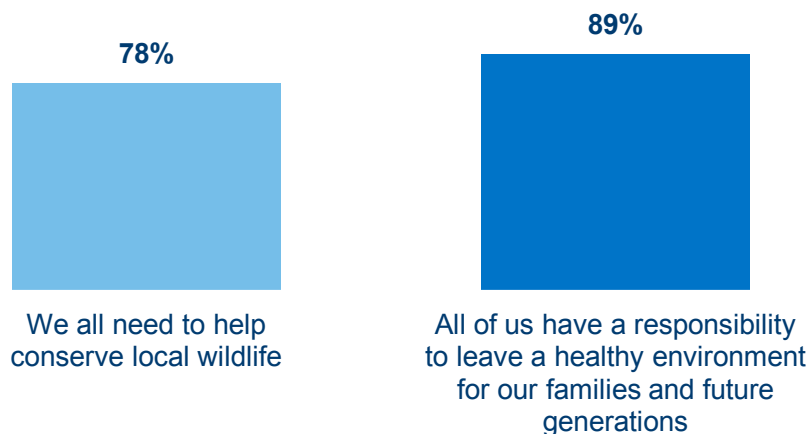


## Environmental Values

Respondents shared **strong environmental values**. As shown in Figure 14, eight out of ten (78%) respondents believed humans have a responsibility to protect wildlife and the environment.

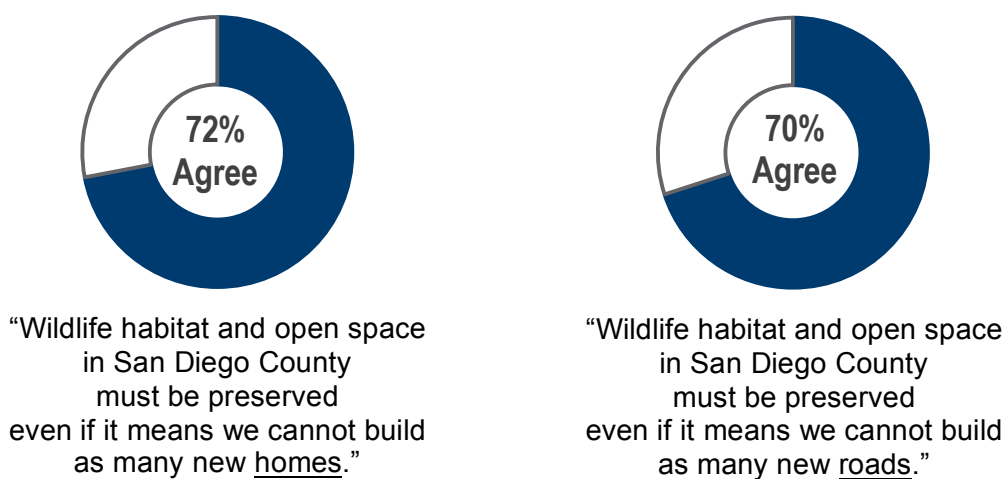
**Figure 14: I believe...**

*(Percent of 5-6 ratings on a 6-point scale where 1="Not at all true for me" and 6="Absolutely true for me")*



Respondents were also asked (in two different questions) to choose between two statements, one of which favored preserving open spaces and one of which favored development. As Figure 15 shows, seven out of ten chose the statements that favored preserving wildlife habitat and open spaces. Despite the current congested roads and lack of housing in San Diego County, there is still a strong value placed on preserving the region's natural landscape.

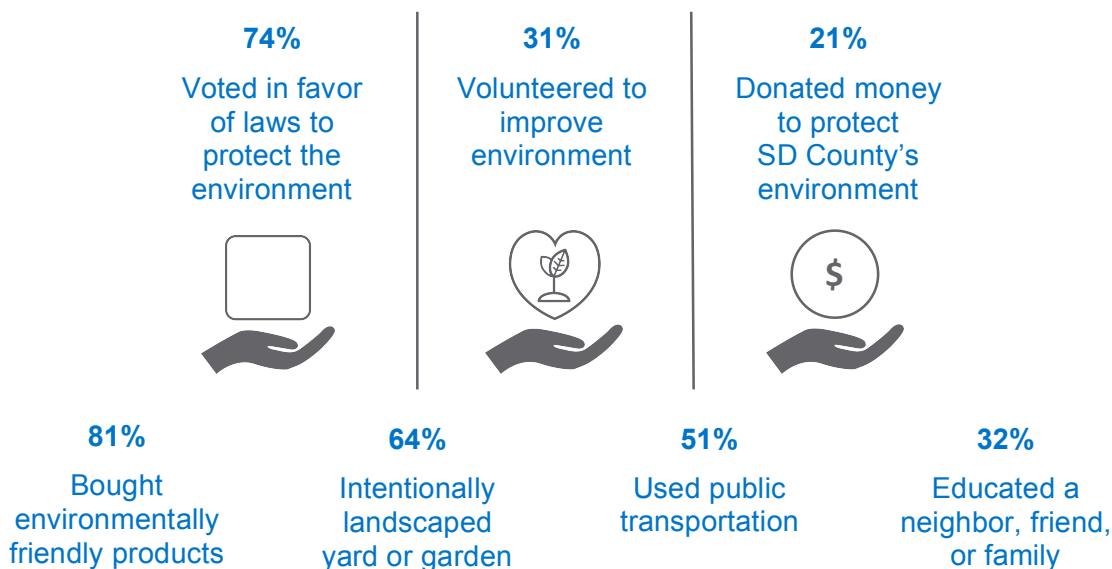
**Figure 15: Percent of Respondents that Selected Pro-Wildlife Preservation Statement**



## Pro-Environmental Behaviors

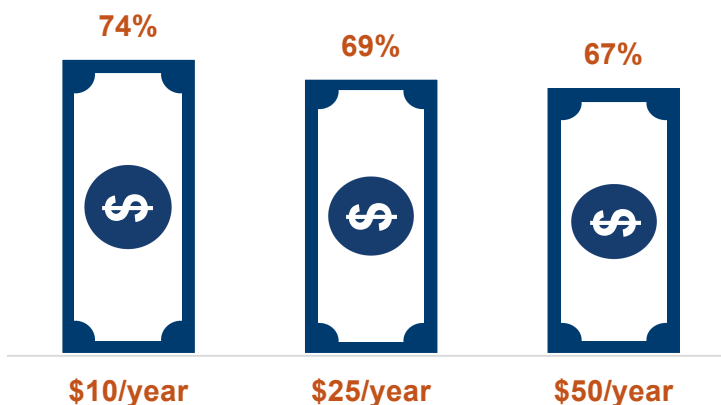
Although there is still room to grow as a community, overall, respondents **reported taking regular actions to protect the environment**. Figure 16 shows that in the last 12 months, three-quarters (74%) of respondents voted in favor of laws to protect the environment, one-third (31%) volunteered to improve the environment, and almost one-quarter (21%) donated money to protect San Diego County's environment. Additionally, eight out of ten respondents bought environmentally friendly products.

**Figure 16: In the past 12 months have you...? (Percent who responded "Yes")**



Respondents were also asked if they would be willing to pay taxes to protect the environment. As illustrated in Figure 17, approximately seven out of ten respondents were willing to **pay additional local taxes** to protect the environment. The fact that the majority of respondents were also willing to pay up to \$50/year is promising evidence that San Diego voters may be willing to support a ballot measure. For comparison, in the Bay Area in 2016, voters approved a \$12/year parcel tax to restore wetlands.<sup>8</sup>

**Figure 17: Percent Willing to Pay Local Taxes to Protect SD County's Environment**



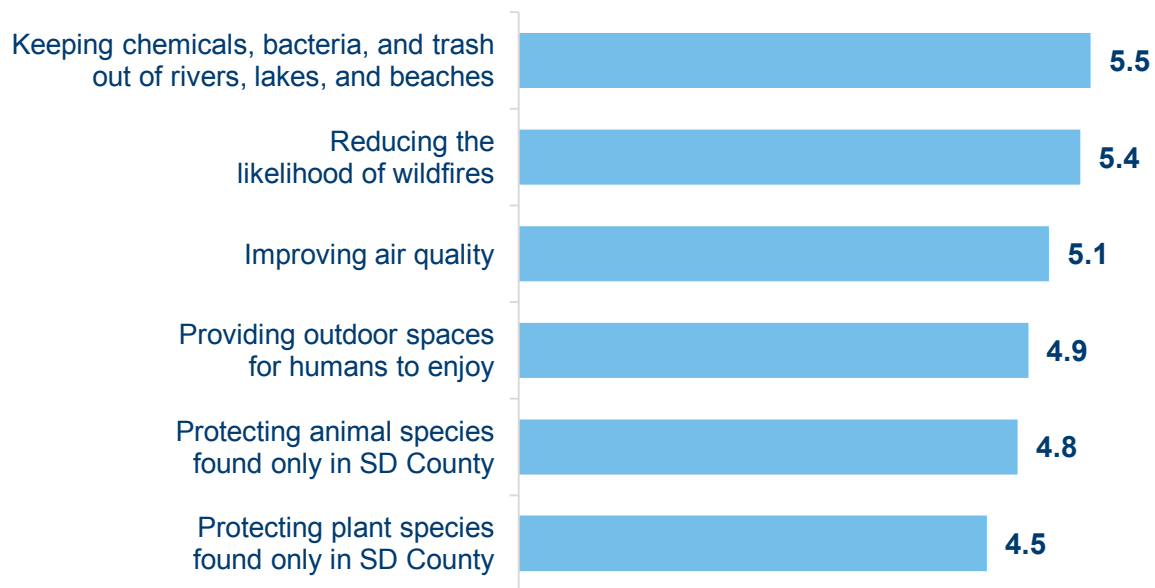
<sup>8</sup>[http://sfbayrestore.org/docs/1\\_PAGER\\_What\\_is\\_the\\_San\\_Francisco\\_Bay\\_Restoration\\_Authority-12.pdf](http://sfbayrestore.org/docs/1_PAGER_What_is_the_San_Francisco_Bay_Restoration_Authority-12.pdf)

## Conservation Priorities

To better understand the environmental issues that San Diegans care most about, respondents were asked to rate how much of a priority six key environmental issues affecting San Diego County were to them. As Figure 18 shows, **water quality** and **wildfires** were the issues that resonated most with respondents. On average, all issues were rated as a high priority, but protecting plant and animal species was lowest. Therefore, issues such as water quality and wildfires may serve as a way to connect people to the importance of protecting native plants and animals.

**Figure 18: How much of a priority is each issue to you?**

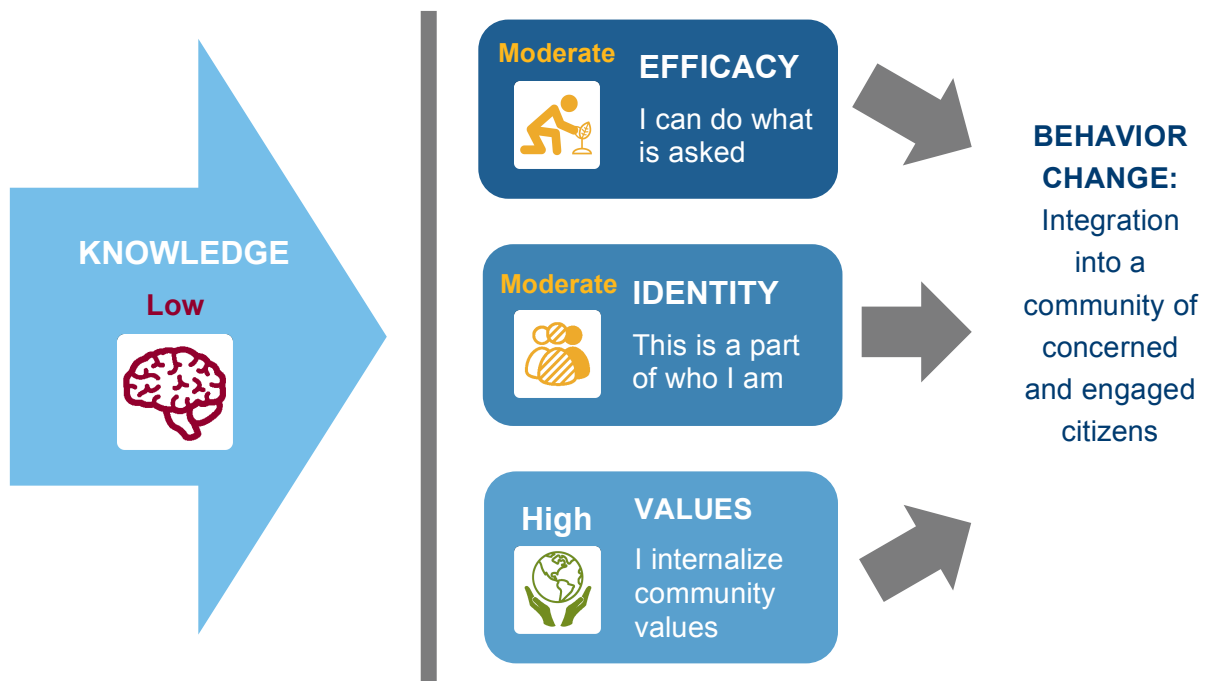
*(6-point scale where 1=“Definitely not a priority” and 6=“Definitely a priority”)*



## Survey Implications

Returning to the TIMSI Framework, the survey results potentially provide some important information on how SDEE can prioritize its public engagement goals. As Figure 19 illustrates, knowledge about the problems facing native plants and animals is low, self-efficacy and identity is moderate, yet values are high. Although social behavioral research tells us that focusing on knowledge alone will not change behavior, it is a crucial ingredient to behavior change particularly when it is coupled with tangible ways of increasing residents' self-efficacy and identification with the problem. These survey results can be used as a baseline, and as SDEE moves forward, periodic polling of San Diego voters could be used as one indicator for assessing changes in public engagement.

**Figure 19: Summary of Survey Results based on the TIMSI Framework**





## SDEE'S ONGOING PROGRESS

---

NPI researchers have provided ongoing data and information to SDEE staff and partners throughout the year of data collection in order to ensure that feedback could inform the initiative's progress in a timely and proactive manner. As such, SDEE has made some important progress to date, including:

- Hiring a part-time dedicated coordinator who has worked in the conservation field in San Diego County for many years and has strong existing relationships with many of the founding partners.
- Transforming the initial founding partner group into a new governing body called the Leadership Table. Leadership Table members make a signed commitment for one year to attend all meetings and participate in working groups. All founding partners were invited to join the Leadership Table, and SDEE-dedicated staff also revised their initial recruitment practices to proactively invite new members.
- Sharing current progress of the initiative (including common agenda draft, survey results, and SD County Assets data) with a group of key SDZG stakeholders, as well as soliciting and integrating their feedback.
- Formalizing a group charter that outlines the roles and responsibilities of the backbone organization and the Leadership Table members, decision-making processes, structure of working groups, and frequency of meetings.

# NPI RECOMMENDATIONS FOR NEXT STEPS

---

SDEE has made great progress in its early stages as a collective impact initiative. By commissioning NPI to conduct this systematic needs assessment, SDEE has demonstrated its commitment to using data to continually inform the initiative's work.

Moving forward, SDEE has some necessary work to do to ensure success of its initiative.

1. SDEE will need to ensure the Leadership Table includes the right group of partners to advance the common agenda. Specifically, NPI recommends that the Leadership Table:
  - Include representatives from all key stakeholder groups including the Building Industry Association, San Diego County government, and Native American tribes
  - Reflects the diverse demographics of San Diego County in terms of ethnicity, socioeconomic status, age, and gender
2. Species and habitat conservation have a long history in San Diego County and it will be crucial that SDEE builds on previous and current work.
3. Using the five elements of successful collective impact initiatives, NPI researchers offer the following additional recommendations:

## Common Agenda

- Seek input from all new Leadership Table members and formally ratify Common Agenda

## Shared Measurement

- Develop metrics and logic model for measuring progress toward the key levers (funding and collaboration) and priority goals (public engagement and thriving habitats)
- Develop metrics and logic model for measuring progress toward collaborative goals (e.g. building trust between partners, developing action plans for working groups, etc.)

## Mutually Reinforcing Activities

- Using the strategies already identified by SDEE partners and SDZG staff, assemble working groups to prioritize tactics around the four area of focus which build on strengths of partner organizations

## Continuous Communication

- Coordinate and follow through with ongoing and meaningful internal and external communications

## Backbone Support

- Make SDZG the face of the initiative
- Formalize job description of dedicated coordinator