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BY JOSEPH E. FAREWELL*

Abstract: Habitats are often divided by international borders, leaving ecosystems in varying states of protection, development, and danger. The California Floristic Province, which traverses the United States-Mexico border, is one such example.

This border, which divides a once-continuous ecological region, not only represents an international crossing, but also a shift in legal, land, and conservation regimes. These differences reveal particular vulnerabilities for California Floristic Province habitat on the Mexican side of the border region, showing that the ecosystem is in danger because of rapid real estate development pressures and unfavorable environmental laws.

Accordingly, this note recommends three main changes to Mexican environmental law, to bring it more into line with United States and Californian environmental law. The first is to provide for organizational standing a la *Lujan v. Defenders of Wildlife*, so that plaintiffs can file on the basis of group standing, where injuries can be more generalized. The second recommendation calls for the Mexican government to increase transparency in its environmental agencies and provide individuals the legal mechanisms, through citizen suits, to compel enforcement where it is lacking. Finally, this note recommends the Mexican government give protected status to its portion of the

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California Floristic Province and create a law like the California Environmental Quality Act ("CEQA") that forces developers in the region to perform environmental studies, provide for mitigation projects, and avoid environmental damage to the greatest extent possible.

I. INTRODUCTION

The California Floristic Province is an especially rich ecological region in western North America, featuring[1] towering redwood forests, fragrant carpets of chaparral, superlative "superblooms," and ancient pines that have stood for time immemorial. Because of the region's unique confluence of geography, climate, and topography, the California Floristic Province features extraordinary plant diversity, and "many plants and animals here are found nowhere else."[2] Indeed, the California Floristic Province is more than just an area of plants; it is a testament to our planet's ecological heritage.

But just as our planet has borders, so does the California Floristic Province. The Province includes the majority of California, as well as parts of Oregon, Nevada, and northern Baja California, and is geographically "defined by the Pacific drainages extending from the Klamath Mountains in Oregon, USA, to El Rosario, Baja California, Mexico."[3]

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1. James H. Throen et al., *Plant Diversity and Endemism in the California Floristic Province*, 63 MADROÑO 2, 4 (2016).

2. *Hotspot: California on the Edge*, NAT'L PARK SERV. (2005), https://www.nps.gov/goga/learn/management/upload/-1214-HOTSPOT-California-On-The-Edge-1.pdf (last visited Dec. 28, 2018); *California Floristic Province*, CRITICAL ECOSYSTEM PARTNERSHIP FUND (2018), https://www.cepf.net/our-work/biodiversity-hotspots/california-floristic-province (last visited Sep.7, 2019).

3. Alan B. Harper et al., *Plants of the Colonet Region, Baja California, Mexico, and a Vegetation Map of Colonet Mesa*, 29 ALISO: J. SYSTEMATIC AND EVOLUTIONARY BOTANY 25, 25 (2011); Laura Lukes, *Gardening Within Our Means*, https://www.ucanr.edu/blogs/dirt/index.cfm?tagname=Californiaclimate.

Map shows the California Floristic Province boundary. Data from the University of California at Berkeley Library, United States Census Bureau, and Dryad Digital Repository.

Geopolitical partitions mean that this special area enjoys varying legal protections across its territory, where continuous habitat may be protected in one country, state, or municipality, but be vulnerable mere miles across the border of another. Here, the California Floristic

Province's varying legal protections, degrees of major development, and resource extraction raise major questions about the legal protections for the plant habitats contained therein.[4] As explored below, this situation is particularly critical in the South Coast Ecoregion of California and northern Baja California.

The South Coast Ecoregion is one of the most species-rich (and human-rich) areas in the larger California Floristic Province.[5] Indeed, this densely populated area bears "the dubious distinction of being the most threatened hotspot of biodiversity in the [United States], with over 400 species of plants and animals considered at risk by government agencies and conservation groups."[6]

The Ecoregion includes the cities of Santa Barbara, Oxnard, Los Angeles, San Diego, San Bernardino, Tijuana, and Ensenada.[7] Here, an interface of dense population centers and sensitive habitat creates unique ecological pressures, where the unstoppable Southwestern growth complex consistently threatens plant populations.[8] Even now, the march into the wild continues: new cities, like Newhall Ranch and the eventual Centennial project, are still being raised in Southern California's wild lands, despite fierce legal opposition and sustainability commitments made by local governments.[9]

4. Michael D. White et al., *Designing and Establishing Conservation Areas in the Baja California-Southern California Border Region*, *in* 15 THE U.S. MEXICAN BORDER ENVIRONMENT: TRANSBOUNDARY ECOSYSTEM MANAGEMENT 191, 193 (Kelly Hoffman & Paul Ganster eds., 2006).

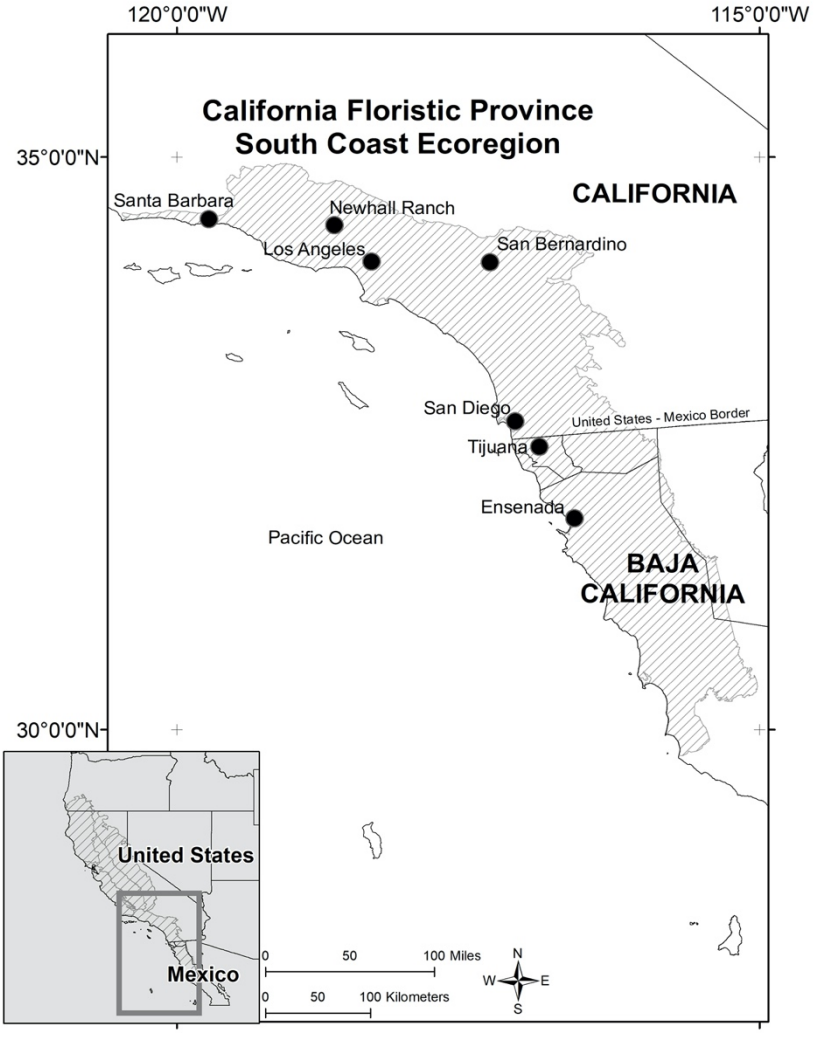
5. *Id*. at 198, 217.

6. Paul Beier, Kristeen Penrod, Claudia Luke, Wayne Spencer & Clint Cabanero, *South Coast Missing Linkages: restoring connectivity to wildlands in the largest metropolitan area in the USA*, *in* CONNECTIVITY CONSERVATION, 555, 555 (Kevin R. Crooks & M. Sanjayan ed., 2006).

7. White et al., *supra* note 4, at 194.

8. *Id*. at 217.

9. Nina Agrawal, *Building a vast new city on LA's Northern edges: A solution for region's housing crunch?* L.A. TIMES, (Aug. 26, 2018, 8:00 AM) https://www.latimes.com/local/lanow/la-me-ln-tejon-ranch-20180826-htmlstory.html.



Map shows the California Floristic Province South Coast Ecoregion boundary and encompassing cities. Data from the University of California at Berkeley Library, United States Census Bureau, and Dryad Digital Repository.

The California-Mexico border region lies within these larger ecological territories. Consistent with the larger South Coast Ecoregion and California Floristic Province, it contains exceptional biodiversity due to its unique combination of "topography, geology, climate, and

soils."[10] This border landscape presents as a hyper-concentrated version of the larger California Floristic Province, including a full range of gentle coastal mesas, rolling foothills, inland valleys, and sharp mountain ranges.[11] Indeed, great mountains sit mere miles away from classic Californian brushlands, and the desert drops precipitously from alpine peaks.[12] At once chaotic and beautiful, the landscape is a geological wonder – one which academic language fails to communicate. It is a special place.

As expected, the region's frenetic geography supports an equally superlative spectrum of plant life, from coastal sage scrub and grasslands between Camp Pendleton and Ensenada, to oak-filled valleys like the Santa Maria Valley and Valle de Guadalupe, to higher elevations with chaparral brush and conifer communities. Endemic plants that can be found in the region's unique places include Otay Mesa mint in vernal pools, Engelmann Oak on South Coast mesas, Tecate Cypress in metavolcanic formations, and Cuyamaca Cypress in higher elevation mountains.[13]

Numerous species in the region have been listed as threatened, endangered, or sensitive, and they face "dramatic reductions in population numbers and area during this century."[14] Researchers note that "[i]ncluded in the decreasing species are the larger mammals (such as the Mexican gray wolf and gray whale, pronghorn antelope, and bighorn sheep) . . .."[15] The problem largely consists of varying types of development pressure where "[t]he driving forces of land use change and habitat degradation have included the conversion of forests, grasslands, wetlands, and deserts to ranching, irrigated agriculture, and industrial and urban use; overexploitation of game species and high-value wood; eradication of predators; competition for water between

10. White et al., *supra* note 4, at 194.

11. NICOLE CALSBEEK ET AL., NAT'L GEOPHYSICAL DATA CTR., NAT'L OCEANIC & ATMOSPHERIC ADMIN., REVISED COASTAL RELIEF MODEL OF SOUTHERN CALIFORNIA: PROCEDURES, DATA SOURCES AND ANALYSIS 1, 10 (2013).

12. *Id*. at 1, 9-10.

13. White et al., *supra* note 4, at 198; *Sky Islands*, U.S. FOREST SERVICE, https://www.fs.fed.us/wildflowers/beauty/Sky_Islands/index.shtml (Last visited Apr. 6, 2019); James Henrich, *The Most Majestic Southern California Oak*, PACIFIC HORTICULTURE, Jan. 2012, https://www.pacifichorticulture.org/articles/the-most-majestic-southern-california-oak/.

14. Diana M. Liverman et al., *Environmental Issues Along The United States-Mexico Border: Drivers of Change and Responses of Citizens and Institutions,* 24 ANN. REV. ENERGY ENV'T. 607, 615 (1999); White et al., *supra* note 4, at 198.

15. *Id*. at 615.

human and ecosystem uses; and change and variability in climate."[16] Researchers, citing a wide variety of threats to the habitat and the animals that use it, thus confirm that the status quo is troubling and unsustainable.

The United States–Mexican border separates this once-continuous ecological region — because habitat, after all, does not divide itself with geopolitical barriers. This border not only represents an international crossing, but also a paradigmatic shift in legal, land, and conservation regimes.[17] This dissonance stems from critical distinctions between the two countries' legal systems, regional environmental laws, land ownership factors, and the stages of real estate development on either side of the border.[18] Such dissimilarities reveal particular vulnerabilities for California Floristic Province habitat on the Mexican side of the border region and invite comparative study.[19]

As explained below, the Californian habitat north of the U.S.-Mexico border enjoys significant protection, both from government ownership of land and the comprehensive nature of Californian and American environmental law. While this robust environmental regime is by no means perfect, it does offer a substantive check against environmental degradation. Nevertheless, due to the rapid development of California's southland, little undisturbed land remains, especially along the coast.[20] On the other hand, California Floristic Province habitat in Baja California suffers from underwhelming government protection – both from legislation and from the Mexican legal system as a whole – and yet has endured in a relatively undisturbed state, at least until recently.[21] Legal action should be taken to protect, or at least consider, the southernly extent of the California Floristic Province habitat while there is still time, because it faces immediate threat. As explained below, development pressures in Southern California have recently affected northern Baja California, with areas around Ensenada,

16. *Id.* at 615-16.

17. White et al., *supra* note 4, at 199.

18. *Id*.

19. *Id.* at 199-200.

20. W.A. Reynier et al., *Southern California Sage Scrub Habitats: Climate Change Vulnerability Assessment Summary,* ECOADAPT, http://www.climate.calcommons.org/sites/default/files/EcoAdapt_SoCal%20VA%20Synthesis_Sage%20Scrub_FINAL_10Mar2017.pdf (last visited Sept. 7, 2019).

21. Chris Pesenti & Kama S. Dean, *Development Challenges on the Baja California Peninsula: The Escalara Nautica*, J. ENV'T & DEV. 445 (2003); Ben Fox, *California Sprawl Spreads South Into Baja*, L.A. TIMES, https://www.latimes.com/archives/la-xpm-1999-nov-07-me-31018-story.html (Nov. 7, 1999).

Rosarito, and the Valle de Guadalupe seeing explosive development in beachfront property, hillside razing for wineries, and an associated increase in the planting of non-native species for use in gardens and landscaping. Moreover, census data shows that the population along the "coastal zone in Mexico has increased at a higher rate than the national average."[22]

Accordingly, this Note will perform a comparative analysis of environmental law in California and Northern Baja, as understood through its consequences for the California Floristic Province. In particular, it will explore available legal avenues for plaintiffs – such as litigation and regulatory agency enforcement – who wish to challenge environmentally-sensitive developments, as informed by their national legal frameworks, for protecting the unique California Floristic Province habitat within the two countries. It will also discuss notable environmental proceedings in the two countries, with particular focus on those that involve natural habitat.

Finally, this Note will make a recommendation for additional legal protections – involving changes to both laws and standing requirements – for the California Floristic Province in northern Baja California, in the vein of the California Environmental Quality Act ("CEQA"), in order to better safeguard the rare habitat that exists in the area.

II. BACKGROUND: THE CALIFORNIA FLORISTIC PROVINCE

This part will provide the proverbial 'lay of the land' for the California Floristic Province. Specifically, this part will discuss the science and aesthetics that make the Province the special place that it is, looking closely at the South Coast Ecoregion's particular characteristics and establishing a firm basis for why the area merits particular focus and protection. Then, this part will show the current land ownership regime in areas above and below the California-Baja California border.

22. Evelia Rivera-Arriaga & Guillermo Villalobos, *The Coast of Mexico: approaches for its management*, 44 OCEAN & COASTAL MGMT. 729, 740 (2001).

A. The California Floristic Province, South Coast Ecoregion, and Border Region: Regional Ecology and Land Ownership

1. Regional Ecology

The California Floristic Province ("CFP") is considered a "global-scale biodiversity hotspot."[23] This is not mere hyperbole; the CFP is one of only thirty-six areas on the planet to receive such a designation.[24] In fact, "of nearly 3,500 species of plants in the California hotspot, more than [sixty-one percent] are endemics," meaning that they cannot be found anywhere else.[25] This means that when a plant species goes extinct *here*, there is a greater than [fifty percent] chance that it has gone extinct *everywhere on the planet*.

Data represents just one way to characterize the richness of this area; superlative language is another. To wit, the California Floristic Province has produced plants that range from the colossal, like *Sequoiadendron giganteum*, commonly known as the Giant Sequoia or the largest tree by volume in the world, to the ancient, like *Pinus longaeva* – the Great Basin Bristlecone Pine, which is the oldest tree species in the world.[26] These two species, along with *Sequoia sempervirens*, the Coast Redwood, constitute the largest, tallest, and oldest trees on the planet – a host of superlatives without floristic equal.[27]

What makes this region's flora so distinct? And how have the conditions here produced such unique plants? Science shows that the region's unique plant life owes itself to a "Mediterranean-like climate of much of California coupled with a dynamic climatic and geological history, topographic complexity, and spatial environmental heterogeneity in general."[28] Mediterranean climates feature warm, dry summers and wet, cool winters, where rainfall is highly seasonal and it is not uncommon to go six months without precipitation.[29] Such

23. Bruce G. Baldwin et al., *Species Richness and Endemism in the Native Flora of California*, 104 AM. J. BOTANY 487, 488 (2017).

24. *Id.*; White et al., *supra* note 4, at 193.

25. NAT'L PARK SERV., *supra* note 2; *California Floristic Province,* CRITICAL ECOSYSTEM PARTNERSHIP FUND, *supra* note 2.

26. Anne-Marie Walker, *Big, tall and old: California's rich with landmark trees*, MARIN INDEP. J., (July 20, 2018), https://www.marinij.com/2018/07/20/big-tall-and-old-californias-rich-with-landmark-trees/.

27. *Id.*

28. Baldwin et al., *supra* note 22, at 488.

29. MARJORIE G. SCHMIDT AND KATHERINE L. GREENBERG, GROWING CALIFORNIA NATIVE PLANTS, 10 (2nd ed. 2012).

climates are rare and "only five regions have this climate type, representing less than two percent of the world's land area: California, central Chile, the Mediterranean Basin, Southwestern and South Australia, and the Cape Region of South Africa."[30] The classic Californian-type habitat *chaparral* can only be found within the above countries' borders.[31]

Plants in the California Floristic Province adapted accordingly to this *dry summer* regime, featuring distinct physical and underlying traits that help them survive in such an environment.[32] For example, many plants in the South Coast Ecoregion go "dormant" during the area's hot, dry summers.[33] Their roots effectively shut down, and the plants can actually die with anomalous and excessive summer moisture. Plants in other parts of the region have unique adaptations: redwoods collect moisture from the humid air of the North Coast's omnipresent marine layer, some wildflower seeds called *fire-followers* only germinate after being roasted by wildfire, and California buckeyes lose their leaves in the summer, in a reverse fall foliage, to better survive the region's long, dry summers.[34]

California's diverse topography plays a role in the Province's botanical richness and influences the "distribution of native vegetation" as "variations in temperature, rainfall, wind, and fog often occur within short distances, in California, creating numerous microclimates that influence vegetation patterns."[35] Drier slopes can contain chaparral habitat with plants like scrub oak, manzanita, ceanothus, toyon, and sugar bush, as well as the coastal sage scrub community, which includes plants like coyote brush, buckwheat, manzanita, sage, and sagebrush.[36] On the other hand, wetter, cooler slopes and valleys can support forests

30. *Id.*

31. *Chaparral Facts*, CAL. CHAPARRAL INST., http://www.californiachaparral.com/chaparralfacts.html (last visited Apr. 6, 2019).

32. SCHMIDT & GREENBERG, *supra* note 29, at 13.

33. *Id.*

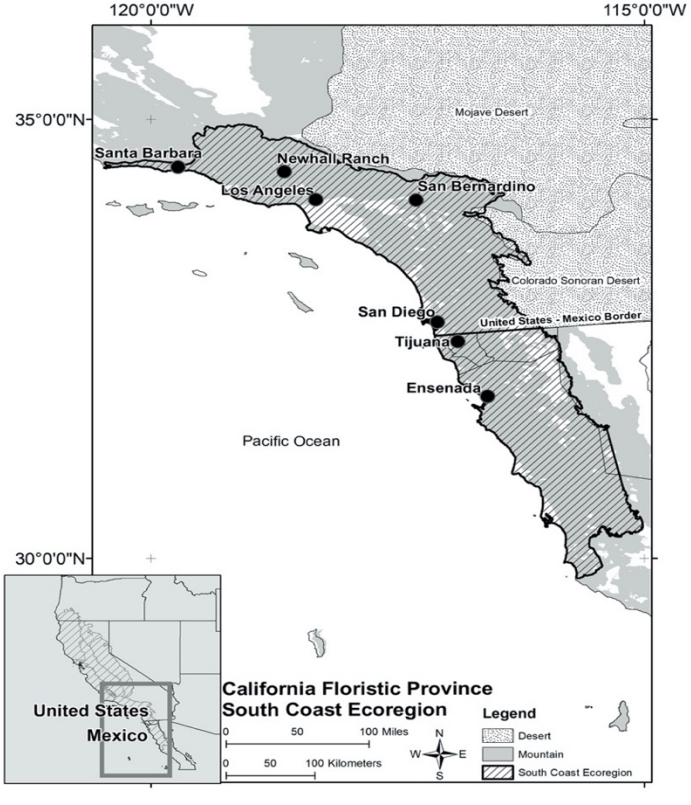
34. Michael Tennesen, *Clearing and Present Danger? Fog That Nourishes California Redwoods Is Declining*, SCIENTIFIC AM. (Dec. 9, 2010), https://www.scientificamerican.com/article/fog-that-nourishes-california-redwoods-declining/; Julie Sheer, *Blossoming Hillsides: Post-fire Areas Yielding Colorful Wildflowers*, L.A. TIMES (Apr. 3, 1994), https://www.latimes.com/archives/la-xpm-1994-04-03-me-41892-story.html; Constance Taylor, *California buckeyes know what to do in summer dry spell- hibernate*, BAY NATURE (July 8, 2013), https://www.baynature.org/article/california-buckeyes-know-what-to-do-in-summer-dry-spell-hibernate.

35. SCHMIDT & GREENBERG, *supra* note 29, at 10, 13.

36. Melvin George et al., *Vegetation Dynamics and Ecosystem Change, in* ECOLOGY AND MANAGEMENT OF ANNUAL RANGELANDS 95 (2016), http://www.rangelandarchive.ucdavis.edu/Annual_Rangeland_Handbook/Ecology/.

and woodlands, with species like oaks, sycamores, pines, cottonwoods, alders, willows, hummingbird sage, and coffeeberry.[37] Grasslands and oaks, in turn, can occupy drier valleys and foothills.[38] In all, the region encompasses vast mountain ranges, oaken valleys, vibrant grasslands, lush wetlands, and surprisingly active deserts.[39]

The South Coast Ecoregion extends from Santa Barbara to northern Baja California, encompassing land "to the west of the Sonoran and Mojave deserts and south of the Santa Ynez and Transverse Ranges."[40]



Map shows the South Coast Ecoregion South Coast Ecoregion boundary and encompassing cities. Data from the University of California at Berkeley Library, United States Census Bureau, Data.gov, United States Geological Survey (USGS), and Dryad Digital Repository.

37. *Id.*
38. *Id.*
39. *Id.*
40. Beier et al., *supra* note 6, at 1.

As explained above, the South Coast Ecoregion – and border region in particular – enjoys the same Mediterranean climate as the larger California Floristic Province, although the "Mexican part of the CFP has lower rainfall than areas to the north, transitioning to desert at about [thirty degrees north]," just south of Ensenada.[41] Area rainfall varies from approximately nine inches along the coast to over thirty-three inches in certain mountain locations.[42] For example, San Diego only receives around ten inches of rainfall annually, while Palomar Mountain in inland San Diego County receives over twenty-eight inches per year.[43]

Further, the border area itself features significant microclimates, as "temperature and precipitation patterns vary significantly throughout the region."[44] Similar to the California Floristic Province as a whole, "lower elevations within the border region support coastal scrub and grassland communities whereas higher elevation areas support chaparral; conifer, oak, and cypress forests; and woodlands."[45] Then, in river and stream basins, "[w]illows and cottonwoods dominate . . . where water is abundant, and sycamores and oaks populate dryer areas."[46] Finally, in the eastern, more arid parts of the region, "draining streams and oases often support native palms."[47] These diverse ecosystems, in turn, support an exceptional array of endangered animal species, including rare butterflies, fairy shrimp, pond turtles, cactus wrens, as well as mammals like mountain lions, badgers, bighorn sheep, and the Least Bell's Vireo.[48] Such species require protected habitat in order to survive and many of them cannot survive without extensive open lands.[49]

Much of the border region falls into the coastal scrub category identified above. Indeed, a large percentage of the area is "broadly classified as consisting of three scrub communities." The different "scrub" communities include the following:

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41. Harper et al., *supra* note 3, at 25.

42. White et al., *supra* note 4, at 197-98.

43. *PALOMAR MOUNTAIN OBSERVATORY, CALIFORNIA (046657)*, WESTERN REG'L CLIMATE CTR., https://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca6657 (last visited Sept. 7, 2019).

44. White et al., *supra* note 4, at 197.

45. *Id*. at 198.

46. *Id*.

47. *Id*.

48. *Id*. at 199.

49. *See Mountain Lion*, LOS PADRES FOREST WATCH, https://www.lpfw.org/our-region/wildlife/mountain-lion/ (last visited Sept. 7, 2019).

> (1) Coastal sage scrub [that] consists of a mixture of evergreen and summer-deciduous species and is a common coastal community from Santa Barbara County, California, to Santo Tomas, Baja California . . . (2) Maritime succulent scrub (also known as succulent coastal matorral) [that] is the common coastal community to the south of coastal sage scrub and consists of a higher proportion of succulent species, often widely spaced; maritime succulent scrub can be found in southern San Diego County, California, and extends to the southern limit of the Province . . . (3) Chaparral characterized by evergreen sclerophyllous shrubs, [that] is primarily an inland community, but is also found in isolated patches on the coast, for example at Torrey Pines State Park in San Diego County, where it is called maritime chaparral.[50]

Why does this categorization of scrub habitat matter? Quite simply, it can help governments and citizens realize the ecological value of the land under their feet – or that of the bulldozers. To wit, we know that "among the scrub communities of the southern CFP, plant species diversity is highest in the maritime succulent scrub of Baja California, with a peak in the southern part of this community from [thirty-one to thirty degrees north]."[51] This means that the coastal scrub habitat in northern Baja California is particularly rich in life and supports a distinctly wide range of species.

Further, as a peripheral extent of the California Floristic Province, the South Coast Ecoregion – particularly its Baja California portion – warrants special attention.[52] In general, peripheral plant habitats exhibit exceptional hardiness and diversity to survive conditions on the edge of their environmental range.[53] In the Baja California region of the California Floristic Province, such conditions include increased heat from the nearby desert, decreased precipitation, and extended dry-seasons (as compared to the dry-season in areas further north).[54] Plant species have, in the face of such environmental extremes, adapted to survive and even thrive on the edge of habitat possibility. Such adaptations make peripheral plant communities unique and endangered

50. Harper et al., *supra* note 3, at 25-26.

51. *Id*. at 26.

52. Gordon Leppig & Jeffrey W. White, *Conservation of Peripheral Plant Populations in California*, 53 MADROÑO 264, 272 (2006).

53. Sula E.Vanderplank, et al., *Vegetation patterns in the Mediterranean-desert ecotone of Baja California, Mexico*, 8 J. BOTANICAL RES. INST. TEX. 565, 566 (2014).

54. *Id*.

in a rapidly changing climate – and perhaps especially valuable for their genetic hardiness in a warming world.

2. Land Ownership

Southern California and northern Baja California exhibit markedly different rates of private land ownership, population density, and conservation areas.[55] These distinctions can be dispositive for both the conservation of native plant habitat and the means available to challenge threats to habitat.

First, Southern California and northern Baja California differ largely in their respective rates of private ownership of undeveloped land.[56] On the U.S. side of the border region, approximately sixty-one percent of land is government-owned and thus insulated from development.[57] While certain industries can access natural resources on the land – especially in national forests (distinct from national parks) and Bureau of Land Management ("BLM") land – they must, as explained below, do so after the federal government has undergone an extensive environmental process, which includes a comment period, environmental impact statements, and potential biological assessments of the area to be developed.[58] Additionally, many agencies must show that they have considered alternatives to the proposed action and created mitigation plans to ameliorate the potential damage.[59] This means that it can be much more difficult to disturb habitat on government land than private land, which can be more readily sold and developed for business interests. Additional land is controlled by Native American tribes in reservations.[60] While Native American groups do develop their land, they also work to maintain the natural habitat and cultural resources contained in their open spaces of ownership.[61] Lastly, remaining private land parcels are regulated by local counties municipalities.[62]

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55. White et al., *supra* note 4, at 199-205.

56. *Id.* at 199.

57. *Id*.

58. *Federal CEQA Project Review*, CAL. DEP'T FISH & WILDLIFE, https://www.wildlife.ca.gov/Conservation/CEQA/Federal-Review (last visited Sept. 7, 2019).

59. *Id*.

60. *California Indian Tribal Homelands and Trust Land Map*, CAL. DEP'T WATER RES., https://www.water.ca.gov/-/media/DWR-Website/Web-Pages/About/Tribal/Files/Maps/California-Indian-Tribal-Homelands-and-Trust-Land-Map.pdf (last visited Sept. 7, 2019).

61. *See generally* M. KAT ANDERSON, TENDING THE WILD: NATIVE AMERICAN KNOWLEDGE AND THE MANAGEMENT OF CALIFORNIA'S NATURAL RESOURCES (2005).

62. *A Citizen's Guide to Planning*, GOVERNOR'S OFF. PLAN. & RES., (Jan. 2001), https://www.acgov.org/sustain/documents/CitizensGuidetoLandUsePlanninginCalifornia.pdf.

In northern Baja, on the other hand, very little land is under government control.[63] According to one study, only "1% (5,000 hectares [ha]) of undeveloped land in the border region of Mexico is publicly owned."[64] This stands in stark contrast to the United States' percentage of government ownership, and has massive implications for land use in Baja California.

There are different kinds of private land ownership in Baja California. They include "*ejidos*, *comunidades*, *pequeñas propiedades*, and *títulos colonias*."[65] The lands known as *ejidos* involve urban parcels, individual estates, and areas that are maintained by communal entities.[66] Entire communities can "privatize and become *ejidos*."[67] In turn, "lands that are part of a *comunidad* are collectively worked, usually by indigenous people."[68] "*Ejidos* and *comunidades* can make decisions on appropriate land uses within their boundaries."[69] "A 1992 constitutional change allows *ejidos* to sell individual parcels under the Programa de Certificación de Derechos Ejidales y Titulación de Solares Urbanos (PROCEDE) process" which has contributed to increasing development of rural areas.[70] This overwhelmingly private – either by individuals or communities – nature of northern Baja land ownership means that the region's undeveloped land, which hosts the plant habitats indicated above, is extremely vulnerable to development. Private parties have significant freedom to develop land, as they can develop without regulatory oversight.[71] While, as discussed below, development is not necessarily fatal to habitat, it is nonetheless crucial for vulnerable habitats in privately-owned land that development is checked by proper regulation, municipal planning, and potential petitioner action.

There are also large differences in population density north and south of the border. While population figures are high on both immediate sides of the border – especially in urban areas like San Diego and Tijuana – development has been extremely extensive along the

63. White et al., *supra* note 4, at 200.
64. *Id*.
65. *Id*.
66. *Id*.
67. *Id*.
68. *Id*.
69. *Id*.
70. *Id.*
71. Sandra Dibble, *U.S., Mexico Struggle to Save Baja Town,* CHI. TRIB. (Apr. 25, 2004), https://www.chicagotribune.com/news/ct-xpm-2004-04-25-0404250242-story.html.

coast in the Southern Californian extent of the South Coast Ecoregion.[72] Indeed, Orange County and San Diego County exhibit high degrees of coastal development, as most of the coast-adjacent sage scrub in these areas has been developed or otherwise impacted.[73] In other words, much of the immediate coastal region above the border has been developed and the habitat contained therein has largely been lost forever.

Lands in northern Baja California, on the other hand, contain a much higher percentage of undisturbed habitat.[74] Much of the coastal foothills and plains region between Tijuana and Ensenada lack development which allows species like California sagebrush, buckwheat, dudleya, and various sages to flourish.[75] Accordingly, the undeveloped areas along the coast in northern Baja California merit special attention, as their counterparts north of the border have long been compromised.[76] As discussed below, such areas represent unique opportunities for both development *and* habitat protection.

The scope of conservation differs dramatically from Southern California to northern Baja California. On the California side of the border, over 150,000 acres have been protected by federal and state governments as public open space in the border region and more than 5,000 acres of land have been further protected by county and municipal governments.[77] In northern Baja, however, "only 5,828 ha in Mexico (5,009 ha at Parque Constitución de 1857 and 819 ha at Rancho Cuchumá) are currently protected within the border region."[78] This discrepancy means that significant acreage of native plant habitat is vulnerable to development and possible destruction. Further, "[n]o part of the coastal CFP in Baja California has been given legal protection under federal or local laws."[79]

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72. Garrison Frost, *Rare Coastal Sage Scrub Habitat Provides a Home for Threatened Gnatcatcher and Many Other Species*, AUDUBON SOC'Y (Apr. 7, 2019), http://www.ca.audubon.org/news/rare-coastal-sage-scrub-habitat-provides-home-threatened-gnatcatcher-and-many-other-species.

73. *See generally,* Caroline Lemke & Marla Cone, *Coastal Sage: A Vanishing Habitat*, L.A. TIMES (Mar. 14, 1993), https://www.latimes.com/archives/la-xpm-1993-03-14-me-959-story.html.

74. RICHARD A. MINNICH & ERNESTO FRANCO VIZCAINO, LAND OF CHAMISE AND PINES: HISTORICAL ACCOUNTS AND CURRENT STATUS OF NORTHERN BAJA CALIFORNIA'S VEGETATION 9 (1998).

75. *Id*.

76. *Id*.

77. White et al., *supra* note 4, at 200.

78. *Id*.

79. Harper et al., *supra* note 3, at 26.

Put simply, the uniquely undisturbed coastal Baja habitat is vulnerable to further development. And furthermore, the existing conservation areas do not receive substantial funding for administration and management, which might lead to environmental degradation, in the form of invasive species spread, unlicensed logging and harvesting of flora, and other potentially harmful activities such as ATV use. However, while there is a lot of land that *has not* been conserved in northern Baja, there are certain areas that are under indigenous control and consequently more protected.[80] For example, the Kumeyaay tribe has community territory in the coastal mountains and foothills.[81] These above-mentioned land use considerations, combined with the important California Floristic Province ecologies contained within the border region, merit immediate attention to the governing environmental laws and potential issues therein.

Accordingly, the following analysis will review, compare, and contrast environmental law regimes in Baja California and Southern California, paying particular attention to available legal remedies for regional petitioners. Then, as a conclusion, this Note will return to the vulnerabilities in the northern Baja environmental regime and make legal recommendations on how to best protect sensitive peripheral habitat in the South Coast Ecoregion, while also considering the land developments that the local populations need to improve their quality of life.

III. ANALYSIS

The South Coast Ecoregion – and border region therein – contains valuable floristic habitats in dramatically variable states of development and protection on either side of the California-Baja California border. This has massive repercussions for this delicate southern extent of the California Floristic Province because much of the undeveloped portion of the region – especially the coastal sage scrub habitat adjacent to the ocean – is currently sitting unprotected in northern Baja California.

These immediate and arresting vulnerabilities invite an examination of the existing legal frameworks in Mexico and California, because such systems can facilitate (or hinder) environmental conservation, depending on factors such as government agency

80. Debra Utacia Krol, *Borders and Baskets: How the Creation of Borders Changed Kumeyaay Life*, KCET, (Apr. 25, 2018), https://www.kcet.org/shows/artbound/borders-and-baskets-how-the-creation-of-borders-changed-kumeyaay-life.

81. *Id*.

accountability, provisions for citizenship enforcement, and the power of the judiciary. As relevant here, we see significant differences in the means by which petitioners in the areas north and south of the border can use existing environmental laws to challenge environmentally damaging projects.

Section A below will discuss environmental law in Mexico and explore the relevant federal and regional laws. This section will also analyze the history, impact, and challenges of Mexico's environmental regime and will pay special attention to issues relating to standing, feasibility of lawsuits, and government enforcement of environmental law. Section B will then discuss environmental law in California by reviewing the federal, state, and local regulations and requirements that affect projects in the larger South Coast Ecoregion. This section will highlight the greater comparative protections that Californian environmental law affords California Floristic Province Habitat.

A. Mexican Environmental Law

Mexico, as a federal Republic, has a legal system that is a "mixture of constitutional theory, modeled after the United States, and civil law traditions."[82] The Republic includes a federal government and thirty-one individual states, including Baja California.[83]

The Mexican federal government contains executive, legislative, and judicial branches.[84] The executive branch is particularly powerful in that the Mexican Constitution empowers it to initiate federal legislation and "all legislation of any consequence" tends to start within it.[85] Mexico's federal judiciary, like that of the United States, features a three-tier system with district courts, mid-level appellate courts, and a Supreme Court.[86] Compared to the state courts, Federal courts possess a "much larger share of the judiciary and the cases considered."[87] Mexico's Supreme Court has the final appellate jurisdiction over all federal and state courts. Then, below the Supreme Court are the circuit

82. Terzah N. Lewis, *Environmental Law in Mexico*, 21 DENV. J. INT'L L. & POL'Y 159, 160 (1992); *Mexican Legal System*, UNIV. OF ARIZ., http://www.libguides.library.arizona.edu/law-library/mexicanlaw/legalsystem (last updated Dec. 6, 2018).

83. *Mexican Political System*, SECRETARIA DE RELACIONES EXTERIORES, https://www.globalmx.sre.gob.mx/index.php/en/democracy-and-rule-of-law/mexican-political-system (last visited Mar. 7, 2019).

84. *Mexican Legal System*, UNIV. OF ARIZ., *supra* note 82.

85. *Id*.

86. *Id*.

87. Katie Pearson Klein, *Overview of Mexican Courts*, TXCLE ADVANCED FAM. L., 18-II (2018).

courts, which possess appellate jurisdiction, and below the circuit courts are the federal district courts.[88]

However, unlike the United States, Mexico has a system of case law that does not establish precedential value because *stare decisis* is not a feature of the civil law system.[89] Cases are decided according to the code at hand, not interpreted in accordance with higher level decisions. Accordingly, "case law is not widely circulated in Mexico."[90] Nonetheless, the Mexican legal concept does feature a quasi-*stare decisis* model, "*jurisprudencia*," which can only be established "when the Supreme Court and the federal collegiate courts issue five consecutive and consistent decisions on a point of law."[91]

Mexican states, in turn, have a substantial degree of autonomy, not unlike the United States, and can also pass state legislation and civil codes.[92] When passing legislation, Mexican states must avoid "main areas exclusively reserved to the central government," which includes "macroeconomic policy; currency; national debt; taxation of customs, oil, natural resources, financial institutions, electric energy, tobacco, and alcoholic beverages; foreign and interior policy; military defense; resolution of disputes among component states; labor; financial services; citizenship; communication; and national security."[93] In other fields, such as education, health, and, as especially pertinent here, the environment, states have more freedom to craft their own laws and regulations. Nonetheless, "the central government has the power to issue general regulations distributing competences among its own jurisdiction, the component states, and the municipalities."[94] Only then, at least within these particular fields, do constituent Mexican states have the ability to "legislate within the established federal framework."[95]

As indicated above, Mexican state courts have considerably less power than the federal courts, due in part to their inability to hear *amparo* claims, which are discussed below. [96] They are largely modeled after the federal system, however, and have three tiers of courts: 1) the

88. *Id*.
89. *Id.*
90. *Id*.
91. *Mexican Legal System,* UNIV. OF ARIZ., *supra note* 82.
92. *Id.*
93. Oscar Echenique Quintana et al., *Federalism and Legal Unification in Mexico*, *in* FEDERALISM AND LEGAL UNIFICATION: A COMPARATIVE EMPIRICAL INVESTIGATION OF TWENTY SYSTEMS 339, 341 (Daniel Halberstam & Mathias Reimann eds., 2014).
94. *Id*.
95. *Id*. at 341.
96. Lucio A. Cabrera, *History of the Mexican Judiciary*, 11 MIAMI L.Q. 439, 446 (1957).

highest appellate court, 2) intermediate-level state courts, which have ordinary jurisdiction, and 3) limited jurisdiction lower courts.[97] Further, local law can establish the structure and function of the state courts. For example, in 2010, Baja California shifted its state justice system from a written, closed-door justice system to a more open justice system featuring oral arguments, in a departure from the system used in most of the country.[98]

In the environmental domain, Mexico draws heavily from the U.S's system. Its chief environmental statute, *Ley General de Ecologia Equilibrada y Proteccion Ambiental* (or the "General Law of Ecological Equilibrium and Protection"), was heavily influenced by the strictness of U.S. environmental policy and has been found to be "broadly comparable to U.S. legislation."[99] This centralized environmental legislation: in one far-reaching action – unlike the earlier, more piecemeal process utilized by the United States – "vested the Secretariat of Social Development '(SEDESOL) with the authority to serve as the centralized environmental enforcement agency of Mexico, thus creating a regime where SEDESOL is essentially the Mexican equivalent of the EPA.'"[100] The legislation's text is ambitious and it "establishes the basis for determining the principles of policies on ecology, preservation, restoration, and environmental improvement; it also establishes guidelines for the best use of natural resources and protected areas."[101] The legislation also "promotes air, water, and land pollution control and prevention, as well as the coordination of any institution required to achieve these goals."[102]

As in the U.S., this larger body of legislation gave rise to a multi-tiered environmental regime promulgated to achieve the legislation's policy objectives. In addition to SEDESOL, the *Ley General* created a Secretariat of Environmental and Natural Resources and Fisheries

97. Klein, *supra* note 86; Robert M. Kossick, Jr., *Litigation in the United States and Mexico: A Comparative Overview,* 31 U. MIAMI INTER-AM. L. REV. 23, 27 (2000).

98. Jean Guerrero, *Baja California's Judicial Reform Celebration Comes to Tijuana,* KPBS, (Aug. 13, 2015), https://www.kpbs.org/news/2015/aug/13/baja-californias-judicial-reform-celebration-comes/.

99. Nicholas Peters, *NAFTA and Environmental Regulation in Mexico*, 12 LAW & BUS. REV. AM. 119, 120 (2006); Katherine M. Bailey, *Citizen Participation in Environmental Enforcement in Mexico and the United States: A Comparative Study*, 16 GEO. INT'L ENVTL. L. REV. 323, 330 (2004).

100. *Id.* at 120.

101. Evelia Rivera-Arriaga & Guillermo Villalobos, *The Coast of Mexico: approaches for its management*, 44 OCEAN & COASTAL MGMT. 729, 740 (2001).

102. *Id*.

(SEMARNAP) to develop and implement policy, develop regulations and standards, produce environmental impact reports, and conduct research.[103] Then, under SEMARNAP, the Federal Environmental Protection Agency (PROFEPA) was established which acts as an enforcement agent for the former's proffered standards.[104]

Facially, this structure makes sense; distinct agencies were tasked with rulemaking, research, and enforcement. As indicated below, the U.S. features a similar system in which the American legislature successfully delegated regulatory authority and enforcement to administrative agencies like the EPA, the Department of the Interior, the U.S. Fish and Wildlife Service, and many others.[105] However, a number of serious issues have arisen regarding Mexico's environmental regime. Some of these issues have to do with the government's approach, but others involve shortcomings in the Mexican legal system.

First, Mexico's environmental system "stressed a preventive or planning approach to environmental amelioration instead of enforcement."[106] In other words, the regime did not set out to stringently hold offenders accountable for environmental damage, but to advocate for a symbolic obligation to improve the environment. While a preventative approach is appealing, the reality is that developers and industry will generally act according to what is best for the bottom line.[107] In some cases, public companies even have a legal obligation – as here in the U.S. for example, to their shareholders – to maximize corporate profits at the potential expense of the environment. In turn, smaller businesses such as winemakers, farmers, and local developers have substantial incentives to favor their own business at the expense of a healthy aquifer or a rare plant habitat.[108] This reality, in short, creates

103. Bailey, *supra* note 99, at 330.

104. *Id.*

105. Robinson Meyer, *How the U.S. Protects the Environment, From Nixon to Trump,* ATLANTIC, (Mar. 29, 2017), https://www.theatlantic.com/science/archive/2017/03/how-the-epa-and-us-environmental-law-works-a-civics-guide-pruitt-trump/521001/.

106. Stephen P. Mumme et al., *Political Development and Environmental Policy in Mexico*, 23 LATIN AM. RES. REV. 7, 14 (1988).

107. John Alexander, *Environmental Sustainability Versus Profit Maximization: Overcoming Systemic Constraints on Implementing Normatively Preferable Alternatives*, 76 J. BUS. ETHICS 155 (2007).

108. Jackie Bryant, *Water Into Wine,* ROADS & KINGDOMS, (Dec. 19, 2016), https://www.roadsandkingdoms.com/2016/water-into-wine/; *see generally* Berkley Hudson, *Kratka Crunch: Ski Facility's Snow-Making Project is Snagged by Five-Inch Frog,* L.A. TIMES (Nov. 28, 1993), https://www.latimes.com/archives/la-xpm-1993-11-28-ga-61731-story.html. (showing how local business owners will prioritize their interests over sensitive conservation matters when there is a conflict between them).

the necessary predicate for proper administrative enforcement of private action that violates environmental laws or procedures.

Unfortunately, compelling government enforcement is a particularly difficult task in Mexican environmental law.[109] Plaintiffs struggle in holding administrative agencies accountable "stems from the unchallenged power of the executive and its agencies."[110] In Mexico, because enforcement of environmental laws and regulations fall under executive discretion, citizens are not allowed to participate or monitor in enforcement.[111] Unsurprisingly, the *Colegio de Mexico* has concluded that administrative law in Mexico is "hermetic and secret."[112] This is a problem because, like the U.S., Mexico does significant environmental regulation through administrative agencies.[113] And when those agencies do not provide transparency into their deliberations, stakeholder meetings, and internal procedures, they deny citizens the ability to ensure that their executive agencies are properly performing their legislatively assigned duty.

As explained below, this stands in stark contrast to the American system of environmental law, where citizens can report violations to pertinent agencies, offer public comment on administrative actions, and sue to compel agency action when enforcement is needed.[114] California's environmental agencies also provide a point of contrast. The South Coast Air Quality Management District, for example, provides numerous opportunities to give input on new rules, responds to air-related citizen complaints with possible injunctions or other legal action, and provides internal documents in response to California Public Records Act ("CPRA") requests.[115]

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109. Bailey, *supra* note 99, at 335.

110. *Id*.

111. *Id*.

112. Lucio C. Acevedo, *Past and Possible Future of the Collective Amparo Process (Amparo Colectivo)*, 6 U.S.-Mex. L. J. 35, 38 (1998).

113. Bailey, *supra* note 99, at 329-30.

114. *Report Environmental Violations*, U.S. ENVTL. PROT. AGENCY, https://www.echo.epa.gov/report-environmental-violations (last visited Sept. 7, 2019); *see generally*, Marc B. Mihaly, *Citizen Participation in the Making of Environmental Decisions: Evolving Obstacles and Potential Solutions Through Partnership with Experts and Agents*, 27 PACE ENVTL. L. REV. 121 (2009); Kelli Hayes, *Sue and Settle: Forcing Government Regulation Through Litigation*, 40 U. DAYTON L. REV. 105, 107 (2015).

115. *Rules*, S. COAST AIR QUALITY MGMT. DIST., http://www.aqmd.gov/home/rules-compliance/rules (last visited Sept. 7, 2019); *Complaints*, S. COAST AIR QUALITY MGMT. DIST., http://www.aqmd.gov/home/air-quality/complaints (last visited Mar. 7, 2019); *Public Records,* S. COAST AIR QUALITY MGMT. DIST., https://www.aqmd.gov/nav/online-services/public-records (last visited Mar. 7, 2019).

Another issue is the lack of remedies for plaintiffs in Mexico. Indeed, "administrative and judicial remedies are not as effective in Mexico as they are in the United States," and this is definitely true in the environmental sector.[116] This is partly due to the types of claims that one can bring in Mexico and the way in which courts deal with those claims.

The first type of claim is the *amparo*, which is a regular feature of the Mexican judicial system.[117] The *amparo* suit is a Mexican institution, which has no real equivalent in American law.[118] *Amparo*, which "means favor, aid, protection, or shelter[,]" encompasses several concepts such as habeas corpus, injunction, error, and mandamus.[119] In other words, the *amparo* process initiates a "type of suit that provides an injured party direct access to courts."[120] Overall, an *amparo* can be brought by direct suit in the Supreme Court or collegiate circuit courts, or indirect, which is initiated in a district court and brought on appeal to the collegiate circuit courts or Supreme Court.[121] *Amparo* claims are limited to individuals who have been directly injured by another party.[122]

A*mparo* suits have major limitations in the environmental arena. First, as explained above, Mexican court cases do not have precedential value, which limits the ability of plaintiffs to achieve far-reaching legal victories and new environmental norms.[123]

Second, unlike in the United States (and by extension, California), environmental organizations have great difficulty establishing standing because all plaintiffs must show "actual, individualized harm" to sue.[124] This is in sharp contrast to American environmental law, where organizations ranging from the Sierra Club to local neighborhood groups can bring a suit on behalf of one of their members, as long as that member is "himself among the injured" and not merely interested

116. Bailey, *supra* note 99, at 326.

117. *Mexican Legal System*, UNIV. OF ARIZ., *supra* note 82.

118. *Id*.

119. *Id*.

120. Bailey, *supra* note 99, at 336.

121. *Mexican Legal System*, UNIV. OF ARIZ., https://www.lawlibrary.arizona.edu/research/mexican-legal-system (last updated Dec. 16, 2014) [hereinafter *Legal System of Mexico]* (*quoting* FRANCISCO A. AVALOS, THE MEXICAN LEGAL SYSTEM: A COMPREHENSIVE RESEARCH GUIDE (3rd ed. 2013)).

122. Bailey, *supra* note 99, at 336.

123. *Legal System of Mexico, supra* note 121.

124. Bailey, *supra* note 99, at 336.

"in a problem."[125] In other words, organizations in the U.S. can sue "where the record shows that the organization's *individual members themselves have standing to bring those claims.*"[126]

Organizations in Mexico struggle to meet the individualized threshold for harm due to the 'collective' nature of environmental harm.[127] There are signs, however, that this is changing. A recent Mexican Circuit Court decision did depart from traditional standing limitations by giving standing to a neighborhood group that was fighting the destruction of its parks.[128] This effectively constituted organizational standing, in that a neighborhood group was able to establish standing by virtue of the impact all of its members had suffered, even though it is unlikely that each member suffered the same degree of injury as the other. Over time, it is possible that similar circuit court decisions (or perhaps a Mexican Supreme Court decision) could expand and shift the Mexican standing paradigm, thus opening the door for more environmental groups to file lawsuits over destructive projects or processes.

Civil suits in Mexico represent another option for environmentalists but they also involve substantial limitations.[129] Plaintiffs can only sue other private parties, not administrative agencies. Standing also poses difficulty here, as a person may sue "if the plaintiff's person or property was harmed," but may not assert "generalized harm to the environment."[130] For example, Mexican plaintiffs cannot bring a civil suit against a polluter if their land, property, or person was not harmed from that pollution.

Environmental lawsuits in Mexico face other significant challenges. The first is cost because "individuals rarely have the money to pay for litigation."[131] While environmental lawsuits in the U.S. are certainly expensive, successful plaintiffs know that their victories will be enforced and that some precedent might be established. Furthermore, in California, prevailing environmental plaintiffs can recoup their legal

125. *Sierra Club v. Morton,* 405 U.S. 727, 735, 739 (1972).
126. *Pa. Prison Soc'y v. Cortes*, 508 F.3d 156, 163 (3d Cir. 2007).
127. Bailey, *supra* note 99, at 336.
128. Acevedo, *supra* note 112, at 40.
129. Bailey, *supra* note 99, at 338.
130. *Id*.
131. *Id.*

fees from the opposing party.[132] This likely encourages plaintiffs to take a chance on environmental issues when the law is clearly on their side.

Furthermore, judicial corruption also takes its toll on the process through lack of political independence and other possible factors like bribes or intimidation.[133] While Mexico has successfully implemented a range of judicial reforms, political corruption remains a problem in the country, especially with regard to drug cartel influence on the executive branch.[134]

The totality of these factors leaves plant habitat in northern Baja California vulnerable to development. While certain avenues for challenging large-scale environmental projects, such as oil refineries along the coast, do exist, Mexico's environmental framework does not give plaintiffs sufficient opportunity to stem the proverbial death by a thousand cuts of small-scale development. This is where important plant and animal habitat is adversely affected, or even completely developed, parcel by parcel and block by block. As indicated below, the Californian environmental field does offer a substantively different playing field for environmental activists.

B. Environmental Law in California

Californian environmental law is informed by a wide spectrum of federal laws, promulgated agency rules, state laws and regulations, and various county and municipal requirements. Though complicated, this multifaceted system of laws helps to protect Californian environmental habitats in a way that Baja California's environmental laws do not.

To understand environmental law in California, one must first understand the general federal scheme. In the U.S., the "environmental law regime features an active and powerful court system, central to the country's common law tradition, overlaid with strong administrative regulation and a detailed legal code, typical of a civil law system."[135] Indeed, while the U.S. is first and foremost a common law country, the environmental field is largely governed by administrative agencies and

132. *See generally,* Steven P. Shaw & V. Vasquez, *State of California clarifies uncertainties regarding attorneys' fees*, PLAINTIFF MAG., Feb. 2009, https://www.plaintiffmagazine.com/recent-issues/item/vasquez-v-state-of-california-clarifies-uncertainties-regarding-attorneys-fees.

133. *See generally,* Alicia Ely Yamin & Pilar Noriega Garcia, *The Absence of the Rule of Law in Mexico: Diagnosis and Implications for a Mexican Transition to Democracy*, 21 Loy. L.A. INT'L & COMP. L. REV 467, 468, 495 (1999).

134. *Id*. at 473, 504.

135. Bailey, *supra* note 99, at 340.

their promulgated rules.[136] Also, unlike in Mexico, American court rulings have heavy weight, both within the immediate adversarial context and through *stare decisis.*[137] One feature of the American common law system is that that higher court opinions are binding on lower courts and can thus greatly affect those who are not parties to the lawsuit but have similar legal issues.

Because the environmental faction of the U.S. legal system works as a hybrid model of court-created common law and statute-derived environmental law, administrative agencies can promulgate rules that regulate industry, development, and numerous other activities that affect the environment. Accordingly, these rules have the effect of law and are enforced through the court system or through adjudicative proceedings within the agency context.[138] For example, where "environmental activities are regulated by the executive branch's Environmental Protection Agency (EPA)…citizens may challenge enforcement problems through administrative channels; and many statutes create the right of citizen suits, whereby parties who have not suffered direct harm may sue third parties to force compliance."[139] This represents a paradigmatic distinction from the Mexican agency-citizen interface, where individuals are unable to use citizen suits to hold agencies accountable for improper action or problematic inaction.

Relevant federal laws include the National Environmental Policy Act ("NEPA"), the Endangered Species Act ("ESA"), and the Clean Water Act ("CWA").[140] The NEPA serves to ensure that all government branches consider environmental factors before they perform actions that significantly affect the environment.[141] The ESA, for its part, "provides a program for the conservation of threatened and endangered plants and animals and the habitats in which they are found."[142] Further, it generally prohibits actions that create a "taking" of a listed endangered species or its habitat. [143] The CWA's main objective is to eliminate the discharge of pollutants into waterways and other bodies of

136. *Id*. at 335.

137. James F. Smith & Aureliano Gonzalez-Baz, *Confronting Differences in the United States and Mexican Legal Systems in the Era of NAFTA*, 1 U.S.-MEX. L. J. 85, 89 (1993).

138. Bailey, *supra* note 99, at 335.

139. *Id.* at 325.

140. *Main US Environmental Laws*, CARNEGIE MELLON UNIV., http://www.environ.andrew.cmu.edu/m3/s7/us_laws.shtml (last accessed Aug. 26, 2019).

141. *Id.*

142. *Id*.

143. *Summary of the Endangered Species Act*, U.S. ENVT'L. PROT. AGENCY, (last updated July 5, 2019), https://www.epa.gov/laws-regulations/summary-endangered-species-act.

water.[144] It also aims to "restore and maintain" water quality in such areas.[145] Of the federal laws, the ESA has proven extremely useful for petitioners seeking to challenge projects.[146]

Federal agencies and state agencies alike hold power in California and promulgate rules accordingly. State laws include the hyper-litigated California Environmental Quality Act ("CEQA"), the California Endangered Species Act, and the Natural Community Conservation Planning Act. [147] Sometimes federal and state regulation can overlap in California, such as in the domain of endangered species, where the field is governed jointly by the federal ESA and the state's own regime.[148]

Specific areas and municipalities also have their own additional laws, such as the County of San Diego Biological Mitigation Ordinance and Resource Protection Ordinance, City of San Diego Environmentally Sensitive Lands Regulations and Resource Protection Ordinances, and other zoning ordinances.[149]

Petitioners can file lawsuits pertaining to compliance to the above laws and regulations. The U.S. judicial system allows "private plaintiffs to sue both the government for lack of enforcement and the alleged violators for breaking the law."[150] In California, this can be done because "development projects are subject to environmental review under CEQA and must comply with a host of other environmental regulations and permitting requirements."[151] However, in order to file lawsuits, petitioners must establish standing – which often occurs in an organizational context – and show the basic elements thereof (proximate cause, harm, and redressability).[152] In other words, "to prove an injury, a plaintiff organization would have to show 'that it or its members would be affected in any of their activities or pastimes,' should the act or omission not be redressed."[153] This kind of standing gives

144. *Main US Environmental Laws,* CARNEGIE MELLON UNIV., *supra* note 140.

145. *Id*.

146. *See generally* SARAH MATSUMOTO ET AL., CITIZENS' GUIDE TO THE ENDANGERED SPECIES ACT 43 (2003), http://www.earthjustice.org/sites/default/files/library/reports/Citizens_Guide_ESA.pdf.

147. *California Laws Protecting Native Plants*, CAL. DEP'T FISH & WILDLIFE, https://www.wildlife.ca.gov/Conservation/Plants/Laws (last visited Sept. 7, 2019).

148. White et al., *supra* note 4, at 211.

149. *Biological Mitigation Ordinance*, SAN DIEGO COUNTY PLAN. & DEV. SERVICES, (last visited Sept. 7, 2019); SAN DIEGO, CAL., MUN. CODE, ch. 14, art. 3, div. 1 §143.0101 (2018).

150. Bailey, *supra* note 99, at 353.

151. White et al., *supra* note 4, at 211.

152. *Lujan v. Defs. of Wildlife*, 504 U.S. 555, 561-62 (1992).

153. Bailey, *supra* note 99, at 351.

environmental organizations in the U.S. (and, by extension, California) much more flexibility in establishing standing than they would enjoy in Baja California.

In California, petitioners can also file lawsuits under CEQA to challenge aspects of the actor's statute-mandated Environmental Impact Report ("EIR") or other violations of the statute.[154] Under CEQA, "[p]rojects that may cause significant adverse impacts to natural resources or that may jeopardize the continued existence of state listed endangered or threatened species must mitigate these impacts by modifying the project or by providing long-term conservation and management of natural resources that the project affects."[155] EIRs lay out the basis for calculations of significant effects, environmental damage, alternatives, and potential mitigation measures.[156] Successful lawsuits can lead to changes in development plans, potential increases in mitigation lands to compensate for environmental damage, or requirements to renew or revise EIRs.[157] In the light of such requirements, developers sometimes abandon their plans entirely, or at least revise them significantly.[158] Thus, by filing lawsuits under CEQA and other ordinances, plaintiffs can ameliorate substantial environmental damage from projects or even prevent it. While CEQA lawsuits certainly do not represent an environmental panacea, they do provide an invaluable tool for environmental interests.

County and city ordinances are also impactful. For example, the County of San Diego Biological Mitigation Ordinance ("MSCP") sets "criteria for avoiding impacts to important resource areas and it outlines mitigation requirements for all discretionary permit projects."[159] Further, the ordinance takes effect in "unincorporated areas where the MSCP has not yet been adopted," which means that it is also active in rural and sparsely populated areas within the county that have not formally accepted it.[160] The ordinance "establishes development controls on environmentally sensitive lands, including wetlands, floodplains, steep slopes, and sensitive biological habitats (which are

154. *A Summary of the California Environmental Quality Act (CEQA)*, CAL. DEP'T FISH & WILDLIFE, https://www.wildlife.ca.gov/Conservation/CEQA/Purpose (last visited Sept. 7, 2019).

155. White et al., *supra* note 4, at 211.

156. CAL. CODE REGS. tit. 14, § 15121(a).

157. David Waite & Alexander DeGood, *Does a CEQA Lawsuit Stop Your Project? It Depends*, WESTERN REAL EST. BUS., Mar. 2018, at 1.

158. *Id*.

159. White et al., *supra* note 4, at 213.

160. *Id*.

habitats that support rare or endangered species or function as a wildlife corridor)."[161]

California's environmental history is replete with examples of how environmentalists have used the legal system in California to successful effect in protecting native habitat. These examples include the use of federal, state, and common law. One prominent common law example is *National Audubon Society v. Superior Court*, where the California Supreme Court held, under the public trust doctrine, that California's Mono Lake, an inland body of water and invaluable bird habitat set within the Eastern Sierra region of the Sierra Nevada, along with its "beds, shores and waters," constituted a protected navigable waterway to be shielded "from harm caused by diversion of non-navigable tributaries."[162] This seminal court decision prohibited the Los Angeles Department of Water and Power from drawing unsustainable amounts of water from Mono Creek, one of the main feeder streams into Mono Lake.[163] Through this action, plaintiffs were able to effectively rebuke a government entity – here, the Los Angeles Department of Water and Power – through an organizational lawsuit that sought the remedy of enforcement of existing common law.[164] Because Mexico's system is a civil one, such common law arguments are unavailable to plaintiffs there. Furthermore, Mexican plaintiffs would seriously struggle to employ the standing successfully used in *National Audubon Society* because of the aforementioned limitations on organizational standing in Mexican law.

There are countless other examples of successful environmental challenges in California. For example, in May 2018, a Los Angeles Superior Court suspended the approval of a "8.2-acre mixed-use development in the Santa Monica mountains" because the project featured "inadequate environmental review under the California Environmental Quality Act (CEQA), a violation of the City's Oak Tree Ordinance, and the potential for irreparable impact to an identified prehistoric archaeological site."[165] Plaintiffs, the California Native Plant Society and STACK, a neighborhood conservation group, were able to

161. *Id.*

162. *Nat'l Audubon Soc'y v. Super. Ct.*, 33 Cal.3d 419, 435, 437 (1983).

163. Mono Lake Comm., *The Mono Lake Story,* https://www.monolake.org/about/story (last visited Sept. 7, 2019).

164. *Id*.

165. *Los Angeles Superior Court Sends Agoura Hills Back for Full Environmental Review*, CAL. NATIVE PLANT SOC'Y (May 30, 2018), https://www.cnps.org/news-releases/los-angeles-superior-court-sends-agoura-hills-development-back-for-full-environmental-review-10697.

challenge the project through organizational standing and an appeal of Agoura Hills' initial approval through its Planning Commission.[166] In this instance, the plaintiffs used the judicial system to compel the City of Agoura Hills to follow its own laws, procedures, and environmental obligations. This kind of citizen enforcement does not exist in Mexican environmental law, which deprives plaintiffs of opportunities to force relevant environmental agencies to do their assigned duties.

Similarly, the Center for Biological Diversity sued in 2018 to challenge "Tejon Ranch Corp.'s plan to develop 8,000 acres at the foot of the Grapevine" in Kern County.[167] The Court agreed with the Center, ruling that the "report prepared for its Grapevine project failed to reflect how much outside traffic would actually be traveling through it[,]" and mandated that the report be revised.[168] Here, the plaintiffs' victory was largely procedural; once Tejon Ranch revises its report, it might very well achieve an approval.

While these successful challenges are not necessarily permanent victories over development projects on the specified parcels, they do nonetheless delay those projects, providing windows for further legal action or potential parcel purchase. That is exactly what happened to 24,000 acres of land on Point Conception, a prominent Southern California peninsula containing coastal streams, chaparral, and over a million native oak trees, where environmental pressures delayed business interests from developing sensitive Californian habitat.[169] Eventually, the developers sold the property to the Nature Conservancy, who purchased the land with funds donated by a wealthy couple.[170]

This multifaceted network of federal, state, county, and municipal laws all provide effective guidelines for more responsible development. They encourage actors in both business and government to mitigate damage or even avoid it completely. At the same time, the laws and the courts that enforce them give petitioners the opportunity to see that these standards and requirements are met. While environmentalists would likely want to see environmental laws that go further, the laws do, at the very least, represent a bulwark against completely unfettered

166. *Id*.

167. Jim Holt, *Grapevine Project Suffers Setback in Ct.*, SANTA CLARITA V. SIGNAL (Aug. 3, 2018), https://www.signalscv.com/2018/08/grapevine-project-suffers-setback-in-court/.

168. *Id*.

169. James Fallows, *A Historic Gift of Pristine Land to Inspire Tech's Elite,* ATLANTIC (Dec. 22, 2017), https://www.theatlantic.com/science/archive/2017/12/bixby-ranch-dangermond-land-donation-in-california/548849/.

170. *Id*.

development or agency inaction. This stands in stark contrast to Mexico's environmental protections and their implications for Baja California.

IV. RECOMMENDATION FOR BAJA CALIFORNIA

While the California Floristic Province has a Baja California problem, it *also* has a Baja California opportunity. As to the former, the development threats that the California Floristic Province habitat faces in northern Baja California are serious and immediate. Increases in population and development means there will be greater competition for water and natural resources in a dry, demanding environment.[171] For example, groundwater, which refers to underground stores of water in natural aquifers, is being steadily depleted by explosive agricultural growth in northern Baja's wine country.[172] Such rapid depletion threatens the massive old-growth oaks and sycamores that rely on groundwater for surviving the area's long, hot summers and frequent droughts.[173]

Other forms of growth are happening too, as "the driving forces of land use change and habitat degradation have included the conversion of forests, grasslands, wetlands, and deserts to ranching, irrigated agriculture, and industrial and urban use."[174] Housing development, in turn, has increased along the coast, as Southern California's coastal real estate market has boomed to unreasonable heights for new buyers.[175] Developers have also been lured by Baja California's rare coastal beauty, and some want to turn the state's rugged coast into something more akin to Hawaiian or Caribbean luxury resorts.[176]

These pressures strain habitats on the southerly extent of the California Floristic Province, but the burden is not untenable. Instead, the situation provides the Mexican government an impetus to amend its

171. *See generally* Liverman et al., *supra* note 14, at 638.

172. Bryant, *supra* note 108; Maddie Oatman, *The Promise & Peril of Mexico's Wine Revolution*, MOTHER JONES, (Oct. 5, 2018). https://www.motherjones.com/food/2018/10/valle-de-guadalupe-wine-hugo-dacosta-drew-deckman-natalia-badan-mogor/.

173. *See generally* D.C. Lewis & R.H. Burgy, *The Rel. between Oak Tree Roots and Groundwater in Fractured Rock as Determined by Tritium Tracing*, 69 J. GEOPHYSICAL RES. 2579 (1964).

174. Liverman et al., *supra* note 14, at 615.

175. *See generally* Fox, *supra* note 21.

176. *See generally* Kevin Brass, *More Dev. Comes to S. Baja Cal. Coastline*, NY TIMES (Dec. 2, 2016), https://www.nytimes.com/2016/12/02/business/more-development-comes-to-southern-baja-california-coastline.html.

environmental regime and protect these valuable ecosystems in the process.

To do so, this Note recommends that the Mexican government push forward three main legal changes. The first is to provide for organizational standing a la *Lujan v. Defenders of Wildlife*, so that environmental groups can not only sue on behalf of an individual, but file lawsuits through a looser definition of incurred harm, where injuries can be more generalized (i.e. damage to one's area of study or recreation, rather than destruction of one's literal property).[177] The second change is that the Mexican government must increase transparency for its environmental agencies and provide citizens the judicial mechanisms to compel enforcement where it is lacking. Finally, the Mexican government must give protected status to its share of the California Floristic Province and create a northern Baja California Environmental Quality Act ("BCEQA") that forces developers in the region to perform environmental studies, provide for mitigation projects, and avoid environmental damage to the greatest extent possible. To be effective, this BCEQA must provide for judicial relief through an *amparo*-like process in the federal courts, by which individuals can hold developers accountable. While a BCEQA would not be a panacea, it would both draw developers' attention to the importance of the region's floristic resources and inform the public about the natural and rare beauty at their doorstep.

If implemented in the next decade, these changes can safeguard the most sensitive aspects of the California Floristic Province's southerly extent, while allowing for responsible development in a region that needs economic progress. Indeed, these two ideals are not mutually exclusive; in the *Valle de Guadalupe*, for example, sustainable lodgings have proved immensely popular, as the eco-friendly units nestle into hillsides among coastal scrub, chaparral, and coyotes.[178] A singular instance, perhaps, but the message is clear: Mexico can both protect a plant paradise and make a living in it too.

177. *Lujan*, 504 U.S.

178. Archana Ram, *Mexico has Its Own Wine Country – and It's Amazing*, FORBES (Aug. 8, 2016), https://www.bloomberg.com/news/articles/2016-08-08/valle-de-guadalupe-baja-travel-guide-mexico-s-wine-country.