



RECEIVED  
11/3/10

November 2, 2010

Hon. Gary Locke  
Secretary of Commerce  
Department of Commerce  
1401 Constitution Avenue Northwest  
Washington, DC 20230-0002

cc:

Dr. Jane Lubchenco, Administrator  
National Oceanic and Atmospheric Administration  
1401 Constitution Avenue, NW, Room 5128  
Washington, DC 20230

Jim Lecky, Director  
National Oceanic and Atmospheric Administration  
National Marine Fisheries Service (NOAA Fisheries)  
Office of Protected Resources  
1315 East-West Highway  
Silver Spring, MD 20910

Dear Secretary Locke:

The attached petition requests the Departments of Commerce to take action to protect leatherback sea turtles by designating as critical habitat the waters offshore of one of the most important nesting beaches in U.S. jurisdiction. It is being filed on behalf of the Sierra Club, whose headquarters address is:

85 Second St., Second Floor  
San Francisco, CA 94105

And whose D.C. mailing address, to which correspondence should be addressed, is:

408 C St SE  
Washington, DC, 20002  
You can reach us by phone at (202)-548-4597.

Thank you for considering this petition, and for taking prompt action to protect the leatherback and its habitat.

Sincerely,

A handwritten signature in blue ink, appearing to read "Craig Segall".

Craig Segall  
Sierra Club Environmental Law Program  
Craig.Segall@sierraclub.org  
(202)-548-4597  
(202)-547-6009 (fax)

Before the Secretary of the United States Department of Commerce, the  
Administrator of the National Oceanic and Atmospheric Administration,  
and the Director of the National Marine Fisheries Service

**Petition to Revise Critical Habitat for the Endangered Leatherback Sea  
Turtle**

November 2, 2010

**Sierra Club**

85 Second St., Second Floor

San Francisco, CA 94105

(202)-548-4597

**Petitioner.**

## INTRODUCTION

The Sierra Club hereby petitions the Department of Commerce, the National Oceanic and Atmospheric Administration ('NOAA'), and the National Marine Fisheries Service ('NMFS', also known as 'NOAA Fisheries') to revise the critical habitat of the leatherback sea turtle (*Dermochelys coriacea*), codified at 50 C.F.R. § 226.207, to include the waters of the Northeast Ecological Corridor of Puerto Rico. This petition supplements, and incorporates by reference, the Sierra Club's February 22, 2010 petition, which was denied on July 16, 2010. See 75 Fed. Reg. 41,436. That denial turned in large part upon what NOAA viewed as insufficient data in the original petition. This petition presents additional data.

The Sierra Club is the nation's oldest and largest grassroots environmental organization. Its mission is to explore, enjoy, and protect the planet. The 1,350 members of the Puerto Rico chapter recreate, explore, relax, and take aesthetic and intellectual pleasure in the Northeast Ecological Corridor of Puerto Rico and its vibrant leatherback turtle nesting sites. The chapter leads hikes into the Corridor, helps coordinate an annual leatherback festival that ushers in nesting season in the Corridor, and has made protecting the Corridor one of its central campaign and advocacy efforts.

This petition is based upon both Section 4(b)(3)(D) of the Endangered Species Act ('ESA'), 16 U.S.C. §1533(b)(3)(D) and Section 553 of the Administrative Procedure Act ('APA'), 5 U.S.C. §553(e).

This petition is proper under the ESA. See 16 U.S.C. §§ 1532(15), 1533(a)(1)&(2). "[a]ny interested person" may petition to revise a critical habitat designation. 50 C.F.R. § 424.14(a) & (c); see also 50 C.F.R. § 424.12 (designation criteria). Under the ESA, FWS generally has jurisdiction over terrestrial species, while NMFS has jurisdiction over marine species. Sea turtles use both environments, so the two agencies have formalized their duties in a 1977 Memorandum of Understanding, with NMFS taking "sole jurisdiction over sea turtles . . . when in the marine environment" and FWS taking jurisdiction "when [the turtles are] on land."<sup>1</sup> This petition requests critical habitat revisions in the marine environment and so is addressed to NMFS and its parent agencies, which we will collectively refer to as "NOAA." The joint ESA regulations govern the response to this petition. See generally 50 C.F.R. 424.01 *et seq.*

---

<sup>1</sup> See Memorandum of Understanding Defining the Roles of the U.S. Fish and Wildlife Service and the National Marine Fisheries Service in Joint Administration of the Endangered Species Act of 1973 as to Marine Turtles (July 18, 1977). Please note that this document, like many others cited below, is attached as an exhibit to Sierra Club's initial petition. That petition, and its exhibits, are being re-filed with this document. All exhibits are included on an attached CD. Please contact us for paper copies, should they be required.

Under those regulations, and the ESA itself, submission of this petition triggers definite response requirements for NOAA.<sup>2</sup> First, NOAA must “acknowledge in writing receipt of [this] petition . . . within 30 days.” 50 C.F.R. § 424.14. Then, “to the maximum extent practicable,” NOAA must “within 90 days after receiving the petition . . . make a finding as to whether the petition presents substantial scientific or commercial information indicating that the revision may be warranted” and “promptly publish” this finding in the Federal Register. 16 U.S.C. § 1533(b)(3)(D)(i); *see also* 50 C.F.R. § 424.14(c). FWS must also, within 12 months of receipt, “determine how it [intends to proceed]” and “promptly publish” that determination in the Federal Register. 15 U.S.C. § 1533(b)(3)(D)(ii); *see also* 50 C.F.R. § 424.14(c). Because “the final determination must be made within twelve months, the only logical conclusion is that the initial [90-day] determination must be made within that time as well.” *Biodiversity Legal Foundation v. Badgley*, 309 F.3d 1166, 1175 (9<sup>th</sup> Cir. 2002).

Under the APA, “an interested person [has] the right to petition for the issuance, amendment, or repeal of a rule,” including a critical habitat revision. *See* 5 U.S.C. § 553(e). NOAA must take “prompt action” on matters before it, and likewise must give “prompt notice” of the denial of any petition, including ‘a brief statement of the ground for denial.’ 5 U.S.C. § 555; *see also Forest Guardians v. Babbitt*, 154 F.3d 1261, 1272 (10<sup>th</sup> Cir. 1998) (under the APA, an agency must act upon a petition within a “reasonable time”).

We therefore petition NOAA under both the APA and the ESA to:

(1) Make all critical habitat-related determinations regarding the leatherback on the basis of the “best scientific data available.” *See* 16 U.S.C. § 1533(b)(2). These scientific data are set out below and in the February 22, 2010, petition and include, in addition to the documents listed in that petition:

- (A) The tracking and telemetry data set out in this supplemental petition
- (B) M. Lutcavage et al., *Internesting Leatherback Sea Turtles*
- (C) M. Lutcavage et al., *Long Range Migrations of Leatherback Sea Turtles* (Oct. 2006),
- (D) B.J. Worton, *Kernel Methods for Estimating the Utilization Distribution in Home-Range Studies*, 70 *ECOLOGY* 164 (1989)
- (E) B.J. Worton, *A Review of Models of Home Range for Animal Movement*, 38 *ECOLOGICAL MODELING* 277 (1987)

---

<sup>2</sup> Both the ESA and its regulations apply these requirements without variation for species listed prior to the 1982 ESA amendments which established the revision petition timeline. Indeed, at the time of those amendments, Congress made clear that any proposals to “designate critical habitat for a species that was determined before [the 1982 amendments to the ESA] to be endangered or threatened shall be subject to the [revision of critical habitat procedures of § 1533(b)]”. Pub. L. 97-304 § 2(b)(2) (Oct. 13, 1982).

(F) National Research Council, Committee on Sea Turtle Population Assessment Methods, *Assessment of Sea-Turtle Status and Trends: Integrating Demography and Abundance* (2010)

2) At the earliest possible time, not later than 90 days from receiving this petition, find that this petition presents substantial scientific information indicating that revision of the critical habitat determination for the leatherback, as described in this petition, may be warranted, and promptly publish that finding in the Federal Register. See 16 U.S.C. § 1533(b)(3)(D)(i).

(3) At the earliest possible time, not later than 12 months from receiving this petition, determine how NOAA intends to proceed with the requested revision of critical habitat and publish notice of that intention in the Federal Register. See 16 U.S.C. § 1533(b)(3)(D)(ii).

(4) At the earliest possible time, give notice of intent to issue a regulation:

(A) Designating as critical habitat for leatherback sea turtles sufficient offshore waters to allow for safe and timely passage and access to/from/within nesting sites at San Miguel, Paulinas, and Convento Beaches in the Northeast Ecological Corridor of Puerto Rico, and to protect reproductive activities offshore of these sites.

(B) Shaping any critical habitat designation to, at a minimum, protect three principal constituent elements:

(i) Migratory pathway conditions to allow for safe and timely passage and access to/from/within nesting sites at San Miguel, Paulinas, and Convento Beaches in the Northeast Ecological Corridor of Puerto Rico

(ii) Migratory pathway conditions and open ocean conditions to allow for safe and timely passage and access to/from/within breeding sites offshore of the nesting sites at San Miguel, Paulinas, and Convento Beaches in the Northeast Ecological Corridor of Puerto Rico.

(iii) Water quality to support normal growth, reproduction, development, viability, and health.

(C) Designating as critical habitat at least the area bounded by the following coordinates:

(i) 65.807° W, 18.425° N

(ii) 65.697° W, 18.601° N

(iii) 65.489 ° W, 18.581 ° N

(iv) 65.435 ° W, 18.400 ° N

(v) 65.631 ° W, 18.276 ° N

and publish this proposed regulation in the Federal Register. See 16 U.S.C. § 1533(b)(5).

(5) At the earliest possible time, publish this final critical habitat regulation in the Federal Register and implement that regulation. See 16 U.S.C. § 1533(b)(6).

## DISCUSSION

### I. Introduction

This supplemental petition builds upon Sierra Club's February 22, 2010 petition,<sup>3</sup> requesting that NOAA protect the offshore waters of the Northeast Ecological Corridor of Puerto Rico. As the prior petition discussed in detail, the Corridor, located near the towns of Luquillo and Fajardo, represents one of the most important leatherback nesting sites in the United States. It is also, according to the U.S. Fish and Wildlife Service, "the only pristine nesting habitat for the species extensive enough to allow for future recovery of the species in Puerto Rico."<sup>4</sup> This pristine habitat has seen marked nesting increases over the past two decades, and now sees between 200 and 400 nest sites every year.<sup>5</sup>

Leatherbacks are, of course, a marine species. Adults using the nesting beaches must, therefore, pass through adjacent waters, as must juveniles dispersing from the Corridor beaches. There is also substantial evidence that leatherbacks mate not far offshore of their nesting beaches. Disturbances to these migration and mating patterns – ranging from fishing activities to permanent structures to degraded water quality – therefore necessarily have the potential to degrade or destroy high quality nesting areas.

Because these offshore waters are critical to the conservation of U.S. leatherbacks, the Sierra Club petitioned NOAA to revise the leatherback's slim critical habitat (which is presently limited to a single swath of ocean near St. Croix) to include these waters as critical habitat. Specifically, the petition requested that NOAA designate as critical habitat:

---

<sup>3</sup> Attached as Ex 1.

<sup>4</sup> USFWS letter submitted to the Commonwealth of Puerto Rico Tourism Company on the San Miguel Resort. (Nov. 13, 2001).

<sup>5</sup> Where not otherwise cited, data on leatherback nesting on the Corridor beaches is drawn from the Puerto Rico Department of Natural and Environmental Resources' monitoring, which has been coordinated by Hector C. Horta Abraham. Mr. Horta has presented this data in abstracts and posters, including Horta Abraham et al., *17 Years of Monitoring and Management of Leatherback Sea Turtle Nesting Population[s] in the Northeast Coast of Puerto Rico (1986-2002)* and Hector C. Horta Abraham, *20 Years of Monitoring and Management of Leatherback Sea Turtle Nesting Population in the Northeast Coast of Puerto Rico*, Puerto Rico Department of Natural and Environmental Resources.

The waters off the coastline of the Northeast Ecological Corridor of Puerto Rico, sufficient to protect leatherbacks using the Northeast Ecological Corridor, and extending at least to the hundred fathom contour, or 9 nautical miles offshore, whichever is further, and including the existing marine extensions of the Espiritu Santo, Cabezas de San Juan, and Arreceifes de la Cordillera Nature Reserves.

NOAA missed response deadlines for this petition and then, unfortunately, denied it. *See* 75 Fed. Reg. 41,436 (July 16, 2010).

NOAA denied our petition because it determined that the petition did not “present substantial information indicating that the petitioned action may be warranted.” 75 Fed. Reg. at 41,436. It so determined on two grounds.

First, NOAA stated that it understood the petition to request designation for “all of the space that leatherback sea turtles could theoretically occupy between the shore and the 9 nautical mile or 100 fathom boundary.” *Id.* at 41,437. It stated that this space lacked a “scientific/ecological basis” without some “parameters or values for physical or biological features” for protection. *Id.*

Second, NOAA stated that even if the petitioned area could be viewed as a “tangible physical feature,” the petition did not present information “to indicate that the successful conservation of leatherback sea turtles requires including this open space feature” in critical habitat.” *Id.* at 41,437-38. NOAA pointed out that a 2007 report by its Turtle Expert Working Group described “North Caribbean stock, which includes Puerto Rico, as increasing,” and concluded that because Atlantic populations were therefore unlikely to “follow the [dire] Pacific population trajectory,” protecting their habitat was not necessary. *Id.* at 41,438.

NOAA therefore denied the petition. This decision effectively ignores the best available scientific evidence, which indicates that the Corridor and its offshore waters are essential to American leatherback conservation, as the U.S. Fish and Wildlife Service has determined.

Nonetheless, the Sierra Club is responding to NOAA’s denial by once again petitioning to designate certain Corridor waters. Since the first petition was submitted, the Sierra Club has obtained additional data demonstrating how leatherbacks use these waters, which will be germane to NOAA’s analysis, and, with this supplemental petition submits that data to NOAA.

By submitting this supplemental petition, the Sierra Club in no way waives its rights arising from its initial petition. To the contrary: NOAA’s determination of the Sierra Club’s initial petition was contrary to its legal mandates and the relevant scientific evidence. Again, that initial petition, and all of its exhibits, are attached to this petition, and are incorporated by reference.



## II. Information on Leatherbacks in Corridor Waters

Contrary to NOAA's determination, there is ample scientific evidence that leatherbacks using the vital Corridor beaches use certain portions of the ocean near the Corridor. From 1998 to 2003, researchers led by Dr. Molly Lutcavage, now of the University of Massachusetts at Amherst, and the Puerto Rico Department of Natural Resources, tagged sea turtles on the Corridor beaches. Those tracking tags allowed the researchers to define how leatherbacks use these waters, and, importantly, address NOAA's concern that it lacked data on leatherback use patterns.<sup>6</sup>

As NOAA acknowledges, leatherback mating behavior "seems to occur, at least in part, in areas adjacent to nesting beaches." 75 Fed. Reg. at 41,437. This behavior, and other interesting behavior, does, indeed, occur near the beaches, as the tracking data confirms. Thus, this region is both a resting and access zone, and a reproductive zone.

The data was collected using two sorts of tracking devices. Pop-up satellite tags ('PSATs') use light-based geolocation to estimate position; time-depth recorders ('TDRs'), by contrast, obtain satellite fixes via the ARGOS satellite system. Table 1 shows the number of deployed leatherback tags, which were split roughly evenly between

PSATs and the somewhat more accurate TDRs.

	TDR	PSAT	Year Total
1998	1		1
1999	2		2
2000			0
2001	6	3	9
2002		5	5
2003	1	4	5
<b>Total</b>	10	12	22

Table 1: Summary of Deployed Leatherback Turtle Tags<sup>7</sup>

<sup>6</sup> This research is described generally in M. Lutcavage et al., *Internesting Leatherback Sea Turtles*, attached as Ex. 2.

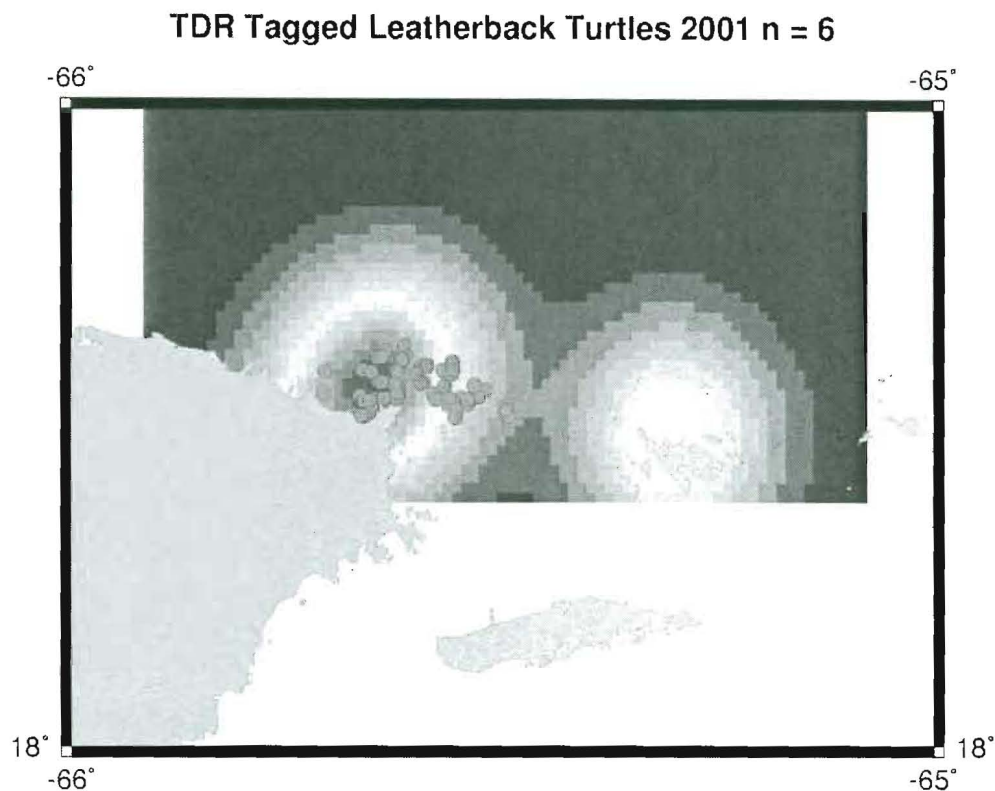
<sup>7</sup> These and related data are drawn from unpublished data, unless otherwise noted, and are used with permission of Dr. Molly Lutcavage.

The research team used this information to calculate utilization distribution for the leatherbacks in the region. Such distributions are essentially probability maps, which produce estimates of animal ranges based upon individual sightings.<sup>8</sup> To ensure that these distributions were reliable, the team only used TDR location information that was reported with a resolution of 1500 meters or better.

These distributions consistently show that a discrete area of the sea near the Corridor is regularly used by leatherbacks using the Corridor beaches.

TDR data from 6 sea turtles in 2001, the most intensive monitoring year shows a high utilization distribution immediately surrounding the Corridor and extending north and east towards the island of Culebra, as Figure 1 demonstrates.<sup>9</sup>

*Figure 1: Large Scale Utilization Distribution Near the Corridor*



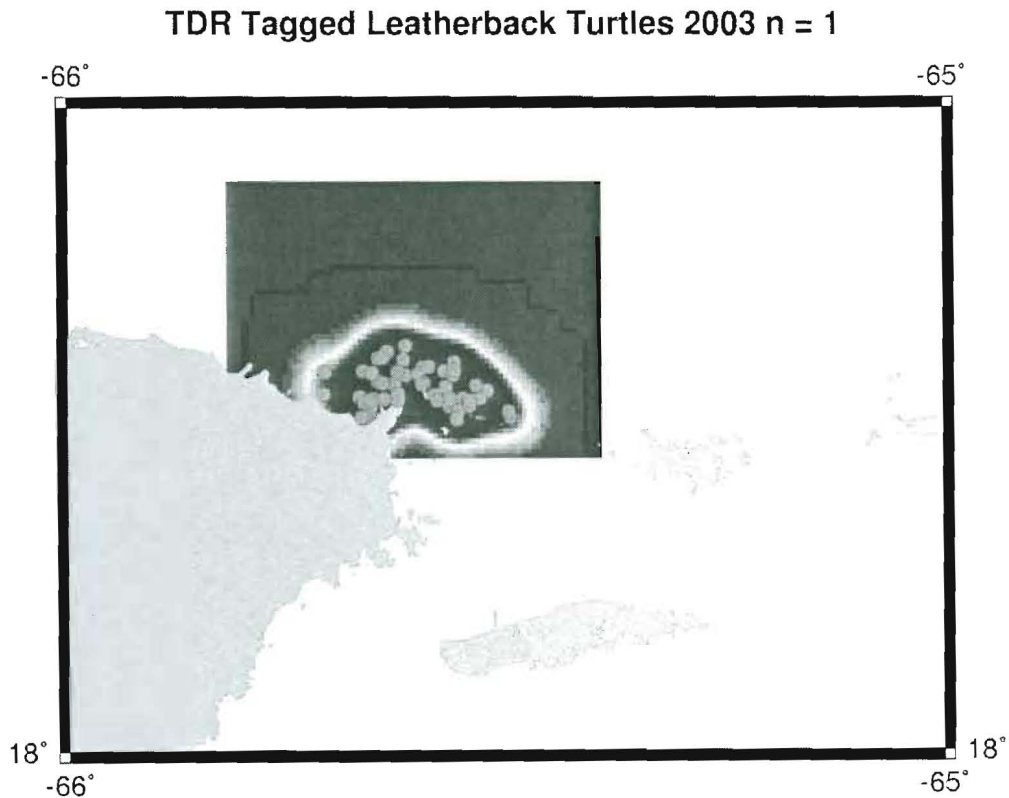
<sup>8</sup> See, e.g., B.J. Worton, *Kernel Methods for Estimating the Utilization Distribution in Home-Range Studies*, 70 *ECOLOGY* 164 (1989) (describing these methods and explaining that they are of "great importance in home-range studies"), attached as Ex 3; B.J. Worton, *A Review of Models of Home Range for Animal Movement*, 38 *ECOLOGICAL MODELING* 277 (1987) (explaining the derivation of these approaches), attached as Ex 4.

<sup>9</sup> Indeed, because nesting and monitoring data shows that leatherbacks shift between the Corridor and Culebra beaches, the utilization area is probably broader than this data suggests, extending to embrace both regions. The Sierra Club petitions NOAA to consider whether a broader designation is therefore appropriate.

The color gradient represents 0-100% utilization (blue to red) based upon observed points (green dots). Thus, the bright orange and red area immediately off the Corridor coast shows a region which is particularly heavily trafficked by leatherbacks.

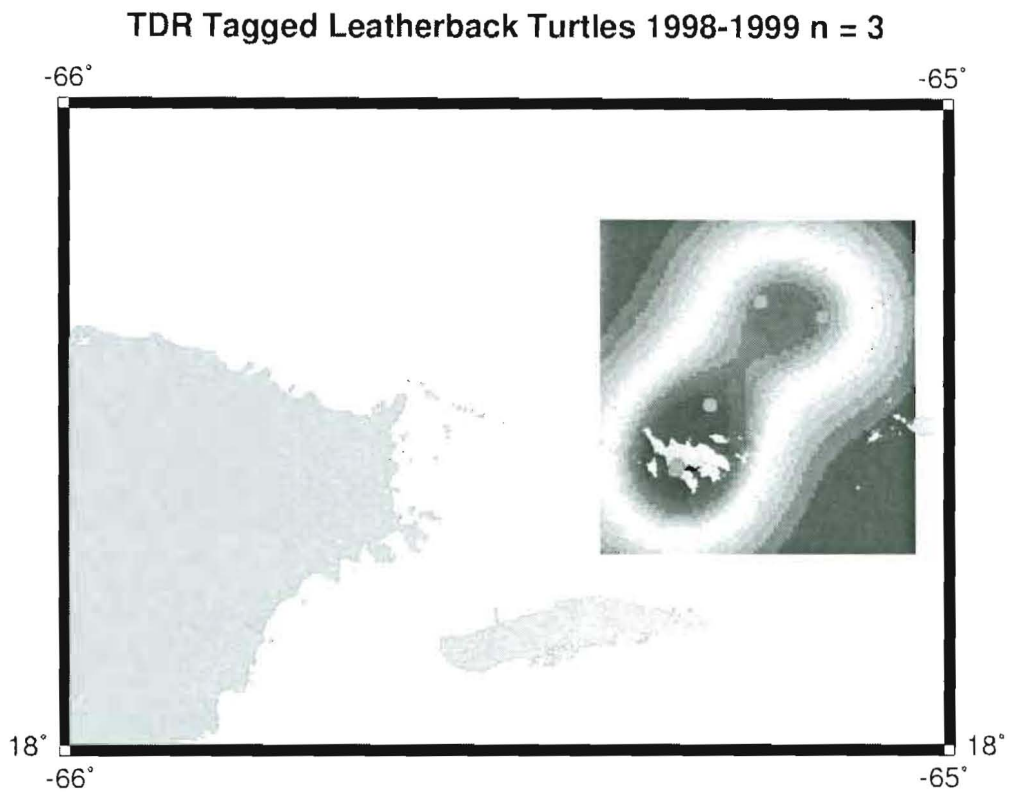
Data from 2003's monitored turtle shows a very similar pattern, as Figure 2 records.

*Figure 2: Leatherback Utilization Distribution Results from 2003*



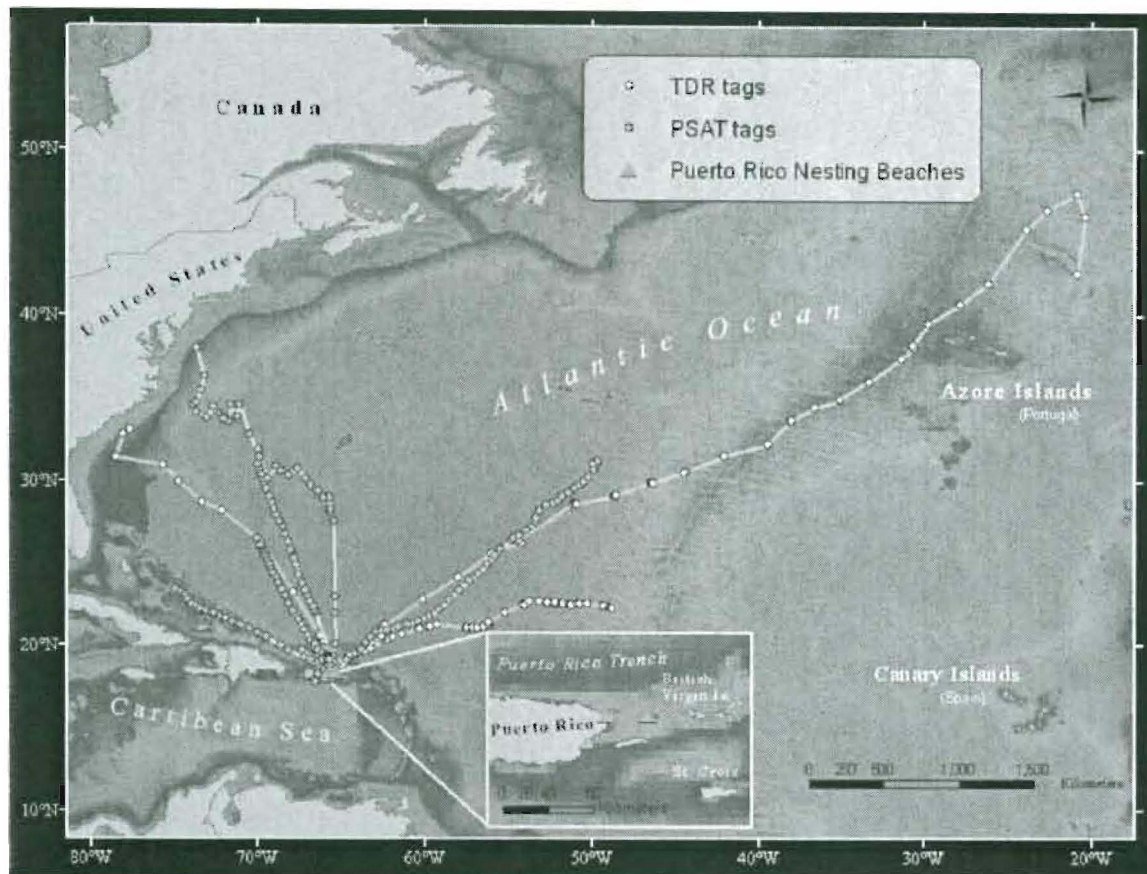
There is significant evidence that leatherbacks use the waters surrounding Culebra, a population which is linked to the Corridor population, as Figure 3 shows.

Figure 3: Leatherback Internesting Waters Near Culebra



Finally, this monitoring data shows that the Corridor beaches support the larger Atlantic leatherback population, as turtles from these beaches migrate throughout the basin. Figure 4 records migrations up the eastern seaboard, east in to the Mid-Atlantic, and even as far as the Azore Islands.

Figure 4: Long Distance Migrations by Puerto Rican Leatherbacks<sup>10</sup>



The bottom line is that data from monitored turtles confirms that the Corridor beaches contribute to an Atlantic-wide population, and that turtles use the local waters of the Corridor heavily. The utilization distributions presented above indicate the areas of this open water which are particularly important to protect to serve conservation goals. As we later discuss, this data leads the Sierra Club to modify its critical habitat designation request, allowing it to more precisely delineate the boundaries of the appropriate habitat.

### III. Critical Habitat Revisions in the Pacific and the Atlantic

The Sierra Club's initial petition requested that NOAA designate "[t]he waters off the coastline of the Northeast Ecological Corridor of Puerto Rico, sufficient to protect leatherbacks using the Northeast Ecological Corridor." It went on to suggest a particular designation, encompassing all nearby Puerto Rican waters. NOAA characterized this request as one for undifferentiated "open space," lacking sufficient detail to support a

<sup>10</sup> From M. Lutcavage et al., *Long Range Migrations of Leatherback Sea Turtles* (Oct. 2006), attached as Ex. 5.

designation. NOAA erred, as a close examination of its contemporary action to protect critical habitat for Pacific leatherbacks demonstrates.

Initially, the Sierra Club did not simply request that NOAA protect “open space.” Instead, it asked for a designation “sufficient to protect leatherbacks” using the Corridor. This distinction is important, because NOAA has proposed leatherback critical habitat in the Pacific which uses essentially an identical formulation, and so has no grounds for dismissing it as somehow nebulous in this context.

In September 2007, a group of environmental petitioners requested NOAA to designate as critical habitat a vast swath of California and Oregon coastal waters to protect the Pacific leatherback population.<sup>11</sup> NOAA responded by proposing to designate 70,600 square miles of this area. *See* 75 Fed. Reg. 319, 330 (Jan. 5, 2010).<sup>12</sup> Because NOAA is to focus on the “principal biological or physical constituent elements within the defined area that are essential for the conservation of the species,” such as “feeding sites” or “spawning sites,” *see* 50 C.F.R. § 424.12(b), NOAA identified two “primary constituent elements” to protect: the presence of jellyfish aggregations sufficient to support leatherbacks at feeding sites, and (2) “Migratory pathway conditions to allow for safe and timely passage and access to/from/within high use foraging areas.” 75 Fed. Reg. at 324.

This second “primary constituent element” is, for all intents and purposes, identical to the area “sufficient to protect leatherbacks using the Northeast Ecological Corridor” which the Sierra Club identified. As with the Pacific designation, the Sierra Club identified a geographically fixed site of conservation importance to leatherbacks – there, feeding sites, here, nesting and mating<sup>13</sup> sites – and then sought to protect access to that site. NOAA should act consistently by protecting access in both instances.

Notably, in its Pacific critical habitat proposal, NOAA did not deem it necessary to narrowly define particular migratory pathways, but instead recognized, sensibly, that leatherbacks require large areas of ocean to reach their feeding areas. For instance, the critical habitat review team stated that feeding zones generally occurred in “ocean frontal zones” created by currents “anchored at coastal promontories” on the California coast, but to ensure access to these areas, NOAA proposed to designate that entire region of the coast, rather than isolated feeding areas.<sup>14</sup>

---

<sup>11</sup> Petition of the Center for Biological Diversity, Oceana, and Turtle Island Restoration Network (Sept. 26, 2007), attached as Ex. 6.

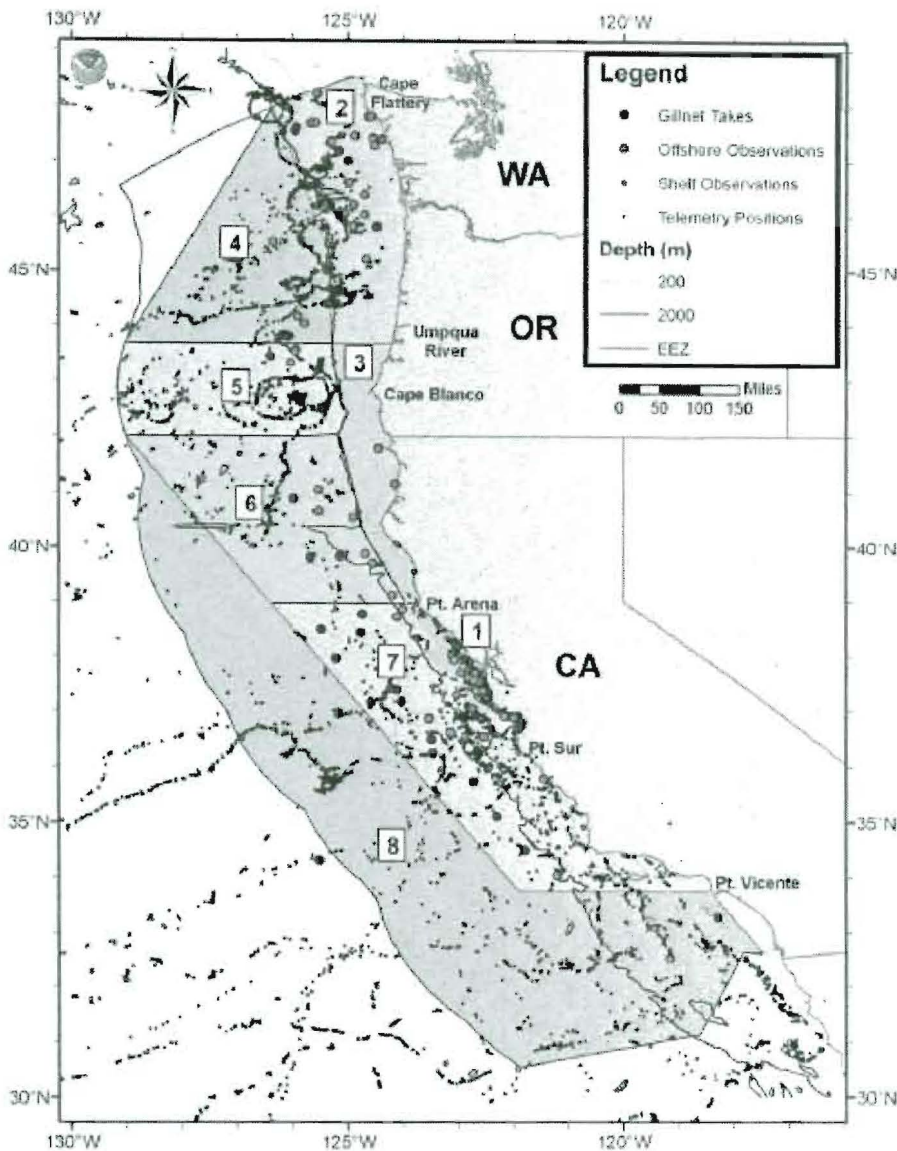
<sup>12</sup> Attached as Ex. 7.

<sup>13</sup> “Spawning,” though a generic term for mating used in the regulations, is referred to as “mating” in the sea turtle literature.

<sup>14</sup> *See* NMFS Office of Protected Resources, *Revision of Critical Habitat for Leatherback Sea Turtles: Biological Report* (Nov. 2009), attached as Ex. 8

To be sure, telemetry and tracking data shows that leatherbacks use these migration areas, but the designation nonetheless contains large areas of ocean where leatherbacks have not been directly observed, as Figure 5 shows.

Figure 5: Pacific Critical Habitat Proposal – Proposed Regions



Note, in particular, that while leatherbacks unquestionably do use and depend upon the 46,100 square miles of area 7, for instance, or the 21,800 square miles of area 2, NOAA has direct observational data for only some discrete points within each region. Nonetheless, NOAA, correctly, considers each region to be “occupied,” and defined each region based on its “best estimate of where these turtles transition from foraging to migrating or where prey composition or abundances change.” 75 Fed. Reg. at 324.

Put differently, NOAA sought to base its designation on “the best scientific data available,” 16 U.S.C. § 1533(b)(2) (emphasis added), as the Endangered Species Act (“ESA”) requires. Actuated by its charge to “use all methods and procedures which are necessary” to conserve endangered species, *id.* § 1532(3), it sought to preserve ample space for migrating and feeding leatherbacks. It did not insist, as it did here, on assembling still more data to justify protecting these regions.

NOAA departed from this sensible approach when considering the Sierra Club’s petition. The initial petition established conclusively that leatherback nesting beaches in the Corridor are central to the survival and recovery of U.S. leatherback populations in the Caribbean. It showed that these beaches have hosted nearly four thousand nests over the last two decades. It showed that the scientists of the International Sea Turtle Society recognize the Corridor as “one of the Caribbean’s last great unprotected areas, containing one of the most important nesting grounds for the leatherback sea turtle in areas under the United States['] jurisdiction,” and is considered an “index beach” for the Caribbean population.<sup>15</sup> It showed that the Corridor, as the Society determined, contains “the only beach left in Puerto Rico under a natural condition able to sustain a large leatherback nesting population.”<sup>16</sup> It showed that the Fish and Wildlife Service believes that “the long term protection of Caribbean leatherback populations is vital to ensure the continued existence of the species”, and that the beaches of the Corridor are among the most important conservation sites remaining in the region.<sup>17</sup> And yet, despite all this, NOAA determined that there was no good reason to protect access to these beaches – or, indeed, even to consider the Sierra Club’s petition further.

To say the least, NOAA’s actions in the Pacific and Atlantic cases are inconsistent. In both cases, petitioners presented NOAA with areas which federal agencies had recognized as vital to leatherback conservation and requested that NOAA protect access to these areas. In both instances, data shows sustained leatherback use. In both instance, this use occurs across a wide area of the ocean (although the Puerto Rico

---

<sup>15</sup> International Sea Turtle Society, *Resolution: Designation of Puerto Rico’s Northeast Ecological Corridor as a Nature Reserve* (Apr. 7, 2006)

<sup>16</sup> *Id.*

<sup>17</sup> See USFWS letter to the PR Tourism Company, regarding the PR Northeastern Coast Conceptual Development Plan (Dec. 28, 1994); USFWS letter submitted to the Commonwealth of Puerto Rico Environmental Quality Board, with comments to the Preliminary Environmental Impact Statement for the San Miguel Resort. (Apr. 20, 1999); USFWS letter submitted to the Commonwealth of Puerto Rico Planning Board, with comments to the siting consultation for the Dos Mares Resort. (Oct. 12, 2001); USFWS letter submitted to the Commonwealth of Puerto Rico Tourism Company on the San Miguel Resort. (Nov. 13, 2001); USFWS letter to the Commonwealth of Puerto Rico Planning Board, with comments to the Environmental Impact Statement of the Dos Mares Resort. (May 28, 2002); USFWS letter to the Commonwealth of Puerto Rico Planning Board, with comments to the Final Environmental Impact Statement of the Dos Mares Resort. (July 19, 2004); USFWS Letter to the Commonwealth of Puerto Rico Environmental Quality Board (Jan. 30, 2002); USFWS Letter to the Department of Natural and Environmental Resources (Nov. 13, 2008).



designation the Sierra Club requests is far more limited than those at issue in the Pacific – it would fit handily within a small portion of area 1 in Figure 5). Yet, in the Pacific case, NOAA proposed designating habitat covering much of the west coast. In the Caribbean, NOAA dismissed a focused designation of a small region off Puerto Rico’s nesting beaches as addressing such an impossibly “varied and undefined” swath of water that no designation is possible. See 75 Fed. Reg. at 41,437. This divergent policy is unsupportable.<sup>18</sup>

In fact, NOAA is required to protect “[s]pace for individual and population growth, and for normal behavior,” areas which provide “food, water, air, light,” or other requirements, and, critically, “[s]ites for breeding, reproduction, [and] rearing of offspring.” 50 C.F.R. § 424.12(b), and is specifically to focus on “nesting grounds” and “spawning sites,” *id.* The Sierra Club’s initial petition focused on precisely these areas. Granting it would have been consistent with NOAA’s actions in the Pacific and with governing law.

Nonetheless, in view of the newly available tracking data, and NOAA’s analysis in the Pacific petition, the Sierra Club has amended its critical habitat request, as we next discuss.

#### **IV. Critical Habitat Request**

The Sierra Club again petitions NOAA to protect as critical habitat the waters of the Northeast Ecological Corridor of Puerto Rico, the most important unprotected leatherback nesting and breeding site under U.S. control. The Sierra Club specifically requests that NOAA protect the following areas and physical constituent elements.

As does the Pacific critical habitat proposal, this petition focuses on protecting migration space, here to allow leatherbacks to reach the Corridor nesting beaches. Because, as NOAA acknowledges, leatherbacks appear to mate “in areas adjacent to nesting beaches,” 75 Fed. Reg. at 41,437, it also seeks to protect space for these activities. See 50 C.F.R. § 424.12(b) (NOAA “shall consider” “[s]ites for breeding, reproduction, [and] rearing of offspring” as critical habitat”).

Consistent with governing regulations, the Sierra Club therefore defines three physical constituent elements, *see id.*, characterizing this habitat. First, taking language directly from NOAA’s Pacific proposal, we identify:

- (1) Migratory pathway conditions to allow for safe and timely passage and access to/from/within nesting sites at San Miguel, Paulinas, and Convento Beaches in the Northeast Ecological Corridor of Puerto Rico

---

<sup>18</sup> Indeed, the *entire* 3,500 square mile island of Puerto Rico – not just the small area at issue in this petition -- could fit into just a small portion of the proposed Pacific critical habitat.

Second, again taking the language largely from the Pacific proposal, we identify:

(2) Migratory pathway conditions and open ocean conditions to allow for safe and timely passage and access to/from/within breeding sites offshore of the nesting sites at San Miguel, Paulinas, and Convento Beaches in the Northeast Ecological Corridor of Puerto Rico.

Finally, we define a third principal constituent element, focused on water quality. In the Pacific case, NOAA considered including an element focusing on “water quality to support normal growth, development, viability, and health,” which would have addressed, for instance, “bioaccumulation of contaminants in prey and subsequent accumulation in leatherbacks as well as direct ingestion and contact with contaminants and pollutants. *See* 75 Fed. Reg. at 324. NOAA ultimately opted not to do so, in part because of limited information on pollutants’ effects on prey species, and in part because it felt these issues could be addressed in other ways. *Id.*

The nearshore waters at issue here suggest such an element would be appropriate in this context. Agricultural runoff, urban sewage discharges, and drifting debris are more likely to appear in relatively high concentrations immediately offshore of the settlements of Puerto Rico than they are well off the Pacific coastline. Indeed, NOAA notes that 27 necropsies of turtles in U.S. Atlantic waters found “plastics or persistent marine debris,” 14 found plastic ingestion, and 5 found balloons.<sup>19</sup> Similarly, though data is preliminary, “[o]rganochlorine contaminants, cadmium, copper, zinc, and toxic metals have been identified in leatherbacks” and one researcher has found “high levels of organochloride pesticides in the sand of a French Guiana nesting beach, which may explain low hatching success on this beach.”<sup>20</sup>

Indeed, although NOAA’s Pacific proposal ultimately took a different course, NOAA there, too, recognized that water quality is a significant concern. As it explained “[p]ollution from point sources . . . ; runoff from agricultural pesticide use; [and] oil spills . . . [have the potential to affect the [principal constituent elements] by altering prey abundance, prey contamination levels, and free passage between and within specific areas.” 75 Fed. Reg. at 327.

We therefore identify, as a third constituent element, again borrowing NOAA’s own language:

---

<sup>19</sup> NOAA, Expert Turtle Working Group, *An Assessment of the Leatherback Turtle Population in the Atlantic Ocean* (Apr. 2007) at 84, attached as Ex. 9.

<sup>20</sup> NMFS Office of Protected Resources & U.S. Fish and Wildlife Service, *Leatherback Sea Turtle 5-Year Review: Summary and Evaluation* (Aug. 2007) at 37, attached as Ex. 10.

(3) Water quality to support normal growth, reproduction, development, viability, and health.

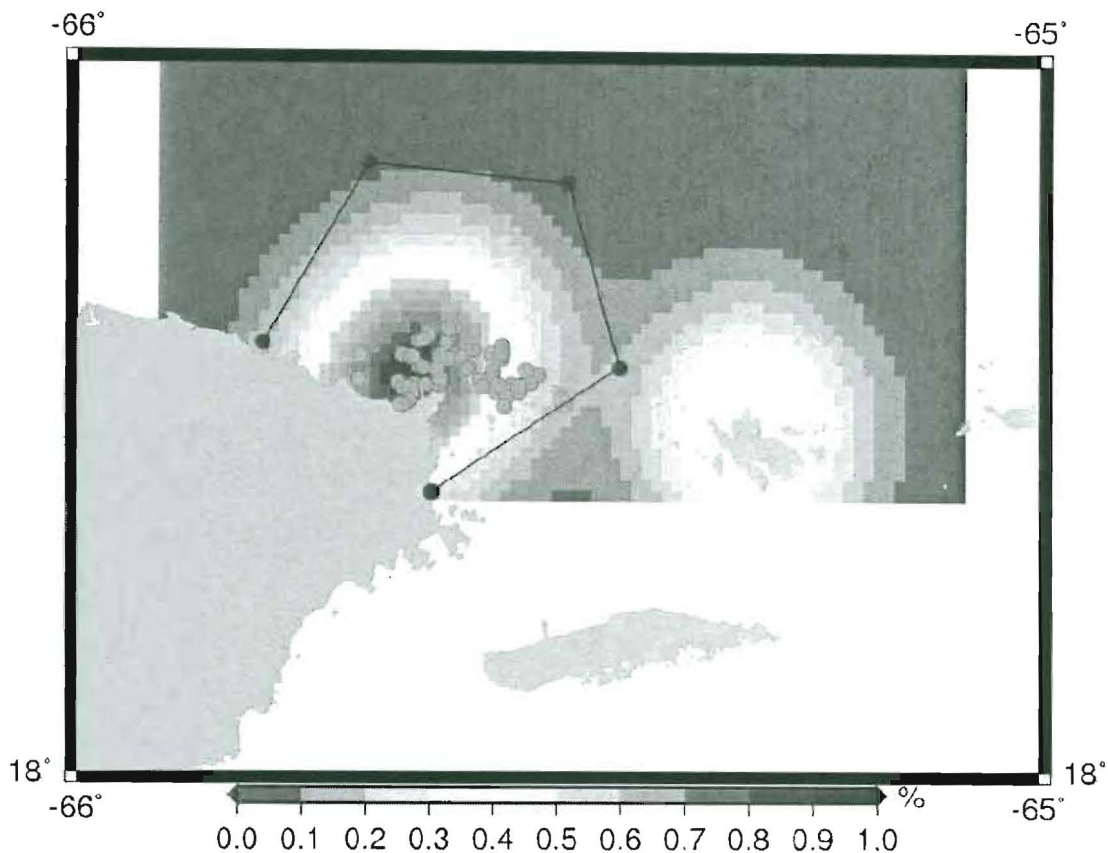
We petition NOAA to protect the waters off the Northeast Ecological Corridor which contain these three constituent elements, or any one of these elements. Doing so will protect areas essential to the conservation of leatherbacks, and which require sustained special management considerations and protection to ensure that they continue to function unimpaired.

Within this primary request, we have attempted to define a region of these waters which likely contains these elements. Leatherback usage is likely the best guide to suitable habitat. If leatherbacks are frequently using a given area, it contains characteristics that support that use. The telemetry data makes defining this area possible.

In keeping with the Pacific proposal, which drew polygons around areas defined by telemetry data, we petition NOAA to designate, at a minimum, the area in Figure 6. Figure 6 was generated by using the telemetry data to define an utilization distribution containing all areas off the Corridor beaches which leatherbacks have at least a 10% chance of using, and containing essentially all areas in which leatherbacks have been directly observed.

Figure 6: Minimum Proposed Critical Habitat

**TDR Tagged Leatherback Turtles 2001 n = 6**



This polygon is defined by the following latitude and longitude coordinates:

- (A) 65.807° W, 18.425° N
- (B) 65.697° W, 18.601° N
- (C) 65.489° W, 18.581° N
- (D) 65.435° W, 18.400° N
- (E) 65.631° W, 18.276° N

Protecting this area as critical habitat will maintain leatherbacks' ability to use the nesting grounds in the Corridor, protect reproductive activities in these waters, and help protect dispersing juveniles.

In sum, then, the Sierra Club petitions NOAA to:

- (1) Designate as critical habitat for leatherback sea turtles sufficient offshore waters to allow for safe and timely passage and access to/from/within nesting sites at San Miguel, Paulinas, and Convento Beaches in the Northeast Ecological Corridor of Puerto Rico, and to protect reproductive activities offshore of these sites.

(2) To shape any critical habitat designation to, at a minimum, protect three principal constituent elements:

(A) Migratory pathway conditions to allow for safe and timely passage and access to/from/within nesting sites at San Miguel, Paulinas, and Convento Beaches in the Northeast Ecological Corridor of Puerto Rico

(B) Migratory pathway conditions and open ocean conditions to allow for safe and timely passage and access to/from/within breeding sites offshore of the nesting sites at San Miguel, Paulinas, and Convento Beaches in the Northeast Ecological Corridor of Puerto Rico.

(C) Water quality to support normal growth, reproduction, development, viability, and health.

(3) Designate as critical habitat at least the area bounded by the following coordinates:

(A) 65.807° W, 18.425° N

(B) 65.697° W, 18.601° N

(C) 65.489 ° W, 18.581 ° N

(D) 65.435 ° W, 18.400 ° N

(E) 65.631 ° W, 18.276 § N

Common sense, the best available science, and all available data support this designation. NOAA should move forward with this proposal, rather than, again, suggesting more data should be gathered. “[A]gencies, including the Service, cannot hide behind uncertain scientific data to shirk their duties under the Act.” *Miccosukee Tribe of Indians v. U.S.*, 566 F.3d 1257, 1267 (11<sup>th</sup> Cir. 2009).

## V. This Designation is Warranted

In its denial decision, NOAA suggested that protecting the Corridor waters was not appropriate because it lacked “substantial scientific or commercial education to indicate that this feature is essential to the conservation of leatherback sea turtles.” 75 Fed. Reg. at 41,438. NOAA erred.

The Sierra Club’s initial petition demonstrated at length that independent scientists, the Puerto Rico Department of the Environment and Natural Resources, and the U.S. Fish and Wildlife Service all believe the Corridor to be critically important to the leatherbacks. As the U.S. Fish and Wildlife Service put it, “[t]he loss of [this] important nesting habitat may jeopardize the continued survival and recovery of the species.”<sup>21</sup>

---

<sup>21</sup> USFWS letter submitted to the Commonwealth of Puerto Rico Planning Board, with comments to the siting consultation for the Dos Mares Resort. (Oct. 12, 2001) at 2-3.

The initial petition also demonstrated that development in the Corridor threatens the region and its offshore waters. It should be uncontroversial that protecting the marine portions of this critical site is crucial to the species' survival and recovery.

Nonetheless, NOAA declined to do so, apparently on the ground that the Puerto Rican population is increasing and the Atlantic population, overall, appears to be stable or increasing. *See* 75 Fed. Reg. at 41,438. NOAA's determination suggests that there is no need to protect Atlantic habitat unless Atlantic populations follow "the Pacific population trajectory" of steep decline. *Id.*

Initially, NOAA appears to have misunderstood its legal obligations. The ESA does not require it to wait until a species appears to be heading towards extinction before designating sufficient critical habitat. On the contrary, critical habitat is designed to protect space both for survival and *recovery* – it is designed to help bring endangered species "to the point at which the measures provided [by the ESA] are no longer necessary." *See* 16 U.S.C. § 1532(2), (5). Congress expressed it to generally be designated "concurrently" with a species listing, not as a last resort. *See* 16 U.S.C. § 1533(a)(3)(A)(i).

As one prominent Senator put it, "[i]t may well be the case . . . that the designation of critical habitat is more important than the designation of an endangered species itself. In many cases, it will not be until habitat is declared to be critical to the continued existence of an endangered species that it will have impacts in the real world." A LEGISLATIVE HISTORY OF THE ENDANGERED SPECIES ACT OF 1973, 1108-09, (U.S. G.P.O. 1982) (statement of Senator Garn).<sup>22</sup> Congress expected that NOAA would almost always designate critical habitat. *See Sierra Club v. U.S. Fish and Wildlife Service*, 245 F.3d 434, 443 (5<sup>th</sup> Cir. 2001).

Moreover, although the population may now be fairly healthy, threats to the Corridor habitat are increasing, as the Sierra Club's initial petition demonstrates. Increasing use of the region, coupled with growing development threats and persistent infrastructure and water treatment challenges continue to imperil Puerto Rico's coast, including the Corridor region. Without the federal oversight critical habitat provides, these threats,

---

<sup>22</sup> The legislative history of the ESA and its amendments is filled with affirmations of the importance of critical habitat. *See, e.g.*, 119 Cong. Rec. 30,162 (1973) ((Rep. Sullivan: "[T]he principal threat to animals stems from the destruction of their habitat. . . . [the ESA] will meet this problem by providing funds for acquisition of critical habitat . . ."); 119 Cong. Rec. 30,166-67 (1973) (Rep. Annunzio) ("Our experience in wildlife management has taught us that the availability of habitat is a key factor in protection and restoration."); 124 Cong. Rec. 21,147 (1978) (Sen. Chafee: "widespread disturbance of habitats and overexploitation of the environment are the major causes of [the accelerating rate of extinction]. But we can avoid many of these extinctions . . . by protecting a relatively small area of critical habitat and by careful development of land and water-use projects"); 124 Cong. Rec. (July 19, 1978), reprinted in A Legislative History of the Endangered Species Act of 1973, 1111, (U.S. G.P.O. 1982) (Sen. Nelson: "I certainly agree that whenever the habitat can be identified, it should be; because if you are going to protect it, you must know where the habitat is located")

coupled with climate change impacts, may well push the region over a ‘tipping point’, after which it will be unable to support healthy leatherback populations, or may support no turtles at all, as has occurred in the Pacific region.

Thus, NOAA’s apparent refusal to designate habitat without data demonstrating that leatherbacks – throughout the entire Atlantic ocean – will begin to vanish without such a designation, is badly in error. NOAA may not rely on any alleged lack of clarity as to whether ignoring the Corridor would precipitate declines. *See, e.g., Center for Biological Diversity v. U.S. Bureau of Land Management*, 422 F. Supp. 2d 1115, 1133 n.15 (“to allow NOAA to make a critical assumption when the scientific data is unclear or simply not available ‘would eviscerate Congress’ intent to ‘give the benefit of the doubt to the species.’ ‘ *Conner v. Burford*, 848 F.2d 1441, 1454 (9th Cir.1988) (quoting legislative history of Endangered Species Act).”

Rather than waiting for a species to be on death’s door before implementing basic ESA protections, NOAA should be protecting remaining healthy populations and their habitats – before they are badly threatened or impaired. Unsurprisingly, NOAA has concluded as much in its own scientific documents.

In its Recovery Plan for the leatherback sea turtle in the Caribbean and Atlantic, for instance, NOAA emphasizes that, to allow leatherbacks to recover, it was critical to “[i]dentify and ensure long-term protection of important nesting beaches” and to “[p]rotect marine habitat” to “ensure long-term protection.”<sup>23</sup> It noted, in particular, that “[i]ncreased industrial and urban development in the U.S. Caribbean is creating an industrial waste and sewage disposal problem” imperiling leatherbacks,<sup>24</sup> and that mesh net fishing in Puerto Rican waters could entangle sea turtles.<sup>25</sup> In view of these threats, and importance of remaining breeding sites, the recovery plan’s first priority is to “[p]rotect and manage habitats.”<sup>26</sup>

Similarly, NOAA’s recent 5-year review for leatherbacks, affirms that the Recovery Plan remains a “valid conservation planning tool” and emphasizes that “[t]here are increasing impacts to the nesting and marine environment that affect leatherback turtles.”<sup>27</sup>

In fact, even the 2007 Turtle Expert Working Group evaluation of the Atlantic leatherback population, on which NOAA largely relies, emphasizes caution, even in the face of an increasing population.<sup>28</sup> The report discusses the possibility of an “artificial demographic” in the population—caused by accelerating anthropogenic stresses

---

<sup>23</sup> NOAA & U.S. Fish and Wildlife Service, *Recovery Plan for Leatherback Turtles (Dermochelys coriacea) in the U.S. Caribbean, Atlantic, and Gulf of Mexico* (1992), attached as Ex 11 at 21-23.

<sup>24</sup> *Id.* at 23.

<sup>25</sup> *Id.* at 15.

<sup>26</sup> *Id.* at 19.

<sup>27</sup> Ex 10, *supra* n.,20 at 40, 32.

<sup>28</sup> *See* Ex. 9, *supra* n.19.

combined with steady nesting numbers, which would maintain raw population numbers while significantly shifting population structure.<sup>29</sup> In essence, older turtles may die at increased rates, while younger turtle populations boom, stabilizing the population but removing older generations from the population. Thus, superficially increasing populations do not necessarily suggest that threats are not present.

We also observe that NOAA's claim that that study determined that "inter-nesting threats throughout the North Caribbean" are "generally 'low'" is somewhat misleading. This subjective ranking system also determined that the *overall* threat level to North Caribbean leatherbacks, including beach development threats, is generally "medium," not low.<sup>30</sup> These conclusions also, of course, were not offered to justify stinting on conservation actions. To the contrary, relatively healthy populations are worth protecting to ensure that they stay that way.

Finally, it is worth noting that very recent work from the National Research Council's Committee on Sea Turtle Population Assessment Methods casts doubt on leatherback population figures. Observing that population counts are weighted too heavily towards observations at nesting beaches, the report posits that further surveys and demographic data of turtles at other life stages are needed to more accurately characterize leatherback dynamics and risk.<sup>31</sup> As a result, NOAA should be wary of relying on apparent population increases to justify denying Puerto Rican leatherbacks appropriate critical habitat.

The situation, in short, remains clear: leatherbacks face a wide variety of threats to their habitat. The Northeast Ecological Corridor, in particular, for the reasons discussed in the Sierra Club's initial petition, confronts substantial development and degradation threats. Nonetheless, it continues to support one of the most important leatherback nesting sites under NOAA's jurisdiction. Protecting the region, including offshore waters used by the leatherbacks, is essential to the survival and recovery of the species. Failing to offer the area such special management considerations, by contrast, leaves it open to serious threat, and is contrary to NOAA's basic responsibilities under the ESA. *See, e.g.*, 16 U.S.C. §§ 1531(c), 1532(2),(5), 1533b(2).

We emphasize, finally, that taking action will benefit the Corridor region's peoples, as well as its wildlife. Designating the Corridor beaches and offshore waters as critical habitat would also serve important economic development goals. *Cf.* 16 U.S.C. § 1533(b)(2) (allowing the Service to consider "the economic impact" and "any other relevant impact" of "specifying a particular area as critical habitat"). As the Sierra Club's

---

<sup>29</sup> *Id.* at 94-95.

<sup>30</sup> *Id.* at 91.

<sup>31</sup> *See generally* National Research Council, Committee on Sea Turtle Population Assessment Methods, *Assessment of Sea-Turtle Status and Trends: Integrating Demography and Abundance* (2010), attached as Ex. 12.



initial petition explained,<sup>32</sup> The Corridor is uniquely suited for profitable eco-tourism ventures, both because of its turtle beaches and its rich terrestrial ecosystems, which link El Yunque National Forest's rainforest to the sea. Such locally-driven economic development is a major benefit of Corridor conservation, and will benefit from, and be secured by, NOAA's actions to protect the leatherbacks' critical habitat.

## V. Conclusion

For the reasons set forth in this petition, and in the Sierra Club's initial petition and which is incorporated in full, by reference, the Sierra Club petitions NOAA to revise the leatherback's critical habitat as we have discussed above.<sup>33</sup>

On behalf of the Sierra Club,



Craig Segall  
Sierra Club Environmental Law Program  
408 C St. NE,  
Washington, DC, 20003  
(202) 548-4597  
Craig.Segall@sierraclub.org

---

<sup>32</sup> See Ex 2 at 35-36.

<sup>33</sup> A broad coalition supports this request. See Ex 13, attached.