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Comments: Comments on El Yunque National Forest Land and Resource Management Plan Draft, and Draft Environmental Impact Statement.

Land and Resource Management Plan Draft

Page 27, 28; Management Area 3, Desired conditions should be more explicit.

How will the facilities energy efficient standards be attained, evaluated and measured?

Will energy efficiency apply to their communications services or to their building structure, or to both? How will the known and documented effects of light pollution be minimized or eliminated at these facilities? Will technology and infrastructure improvements be required continually from communication sites such as to minimize visual presence and impartment of recreational values? Will communication establishments/facilities located on Road 10 be required to have continuous maintenance for safety and visual compliance to scenic recreational goals?

How will the following statement be evaluated? [ldquo]The Forest accommodates communication uses that cannot be met off-Forest; however, communication sites will occupy the same or reduced areas on the peaks.[ldquo] If communication sites will indeed become energy efficient, then reduced area occupation should be expected and achieved.

Why is the primary objective of Management Area 3 communications facilities and not recreational and scenicvalue protection? When was this objective determined? Have the original needs of this objective been re-evaluated? There is overlap between the Communications and Recreation Management Areas that occur along road 10 and trails that lead to various landmark scenic and recreation sites and communication facilities. This seems to be in conflict with the desired conditions statements to [ldquo]provide special protection to species-at-risk, and for the most limited and unique forest types such as the Montane Rain Cloud Forest[rdquo].

How is rainwater management integrated into these goals and desired conditions? There seem to be limited pluvial water management structures (to reduce erosion) associated to the communication facilities, including roads, in this management area 3 and in the discussion of Management Area 9, for the Scenic Byway Management Area of PR Route 186.

p.46, 47; 3.1.2 Terrestrial Ecosystem: Vegetation

There is overlap between the Communications and Recreation Management Areas and unique forest types such as the Montane Rain Forest and the Montane Rain Cloud Forest. Access to recreational settings along road 10 provide unique scenic and natural experiences, this should not only be maintained, but also improved. How will this be achieved?

Under the section of Goals the statement -

[ldquo]Evaluate ecological vegetation composition and ecological functions of the Plantation/Secondary Montane Wet Forest and Plantation/Secondary Submontane Moist Forest, to apply the appropriate management

strategy.[rdquo]

Knowledge on ecological vegetation composition and ecological functions should be used to categorize the existing forest communities and ecosystems. The areas identified as [ldquo]Plantation/Secondary Montane Wet Forest and Plantation/Secondary Submontane Moist Forest[rdquo] are not actively managed Plantations, nor are they the only secondary forests in El Yunque. Many of the other forest types described/named contain and are Mature Secondary forests. Therefore the currently used naming convention may lead to the erroneous idea that only these two categories [ldquo]Plantation/Secondary Montane Wet Forest and Plantation/Secondary Submontane Moist Forest[rdquo] contain Secondary forests. Different from the classification name given, the forest land areas under these two classifications contain a unique and novel combination of elements beyond those implied in their given name.

Knowledge about these forests types points towards their conservation value. There is a significant amount of area under this classification, and the sustainable and adaptive management strategies applied to these lands must be in accordance with their unique values, functions and novel conditions. In addition, many of these forest lands are the edge and buffer at lower elevations, where visitors and community stakeholders experience the forest (Map page 57). Therefore, the scientific, cultural and interpretative resources presented about these forest lands must be in accordance with available information on their novel conditions.

NOTE: Page 90. Cloud elevation shifts instead of cloud [ldquo]evaluation[rdquo] shifts.

Comments on Draft Environmental Impact Statement

The section 3.3.5.1 Affected Environment: Watersheds, Conditions and Trends of the Current Land Management Plan Moving Toward the Desired Future Conditions could benefit from integrating the pertinent information available in Heartsill-Scalley and L[oacute]pez Marrero 2014 (PDF link provided below).

Section 3.4.2.1 Affected Environment, Page 102,

These is no mention of the need of sustaining hydrologic connectivity for many of the aquatic species in the rivers of El Yunque. This is critical to maintain El Yunque[rsquo]s aquatic resources in light of droughts and land cover change occurring outside of forest boundaries. The freshwater shrimp species need to migrate to saline and brackish waters to complete their life cycles. These shrimp species are amphidromous, they live in freshwater during their adult life but during early life stages they live estuarine or coastal/marine waters. There are many sources for this information, including Pringle, C. M. 2000. Threats to U.S. public lands from cumulative hydrologic alterations outside of their boundaries. Ecological Applications, 10(4):971-989

Resources suggested for watersheds, riparian and stream sections;

Land-cover composition, water resources and land management in the watersheds of the Luquillo Mountains, northeastern Puerto Rico https://www.treesearch.fs.fed.us/pubs/49358

https://data.fs.usda.gov/research/pubs/iitf/ja_iitf_2014_Heartsill001.pdf

Effects of drought and hurricane disturbances on headwater distributions of palaemonid river shrimp in the Luquillo Mountains, Puerto Rico https://www.treesearch.fs.fed.us/pubs/30048

https://www.fs.fed.us/global/iitf/pubs/ja_iitf_2006_covich001.pdf

Tree species distributions in relation to stream distance in mid-montane wet forest, Puerto Rico

https://www.treesearch.fs.fed.us/pubs/39463

https://data.fs.usda.gov/research/pubs/iitf/ja_iitf_2009_heartsill005.pdf

Vegetation https://www.treesearch.fs.fed.us/pubs/53155

https://data.fs.usda.gov/research/pubs/iitf/bc_iitf_2012_Hearstill001x.pdf