Laurie Domler

06/26/02 07:28 AM MDT

To: Ken McMullen/PAIS/NPS@NPS, Arlene Wimer/PAIS/NPS@NPS
cc: Chris Turk/DENVER/NPS@NPS, Linda Dansby/SANTAFE/NPS@NPS, Jock Whitworth/PAIS/NPS@NPS
Subject: EA comments - Lemon-Lemonseed units

Ken and Arlene-

Here are consolidated comments on the Lemon-Lemonseed units EA/Plan of Operations. Also attached is an example of a methodology section that the DSC and IMDE now use to describe intensity levels for each impact topic. If you should have any questions, please feel free to call me or Linda Dansby. Thanks,



PAIS EA - Lemon-Lemonseed Units.ld.c



examples of methodology sections.dc

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NPS DOCUMENT # 591

June 24, 2002

Memorandum

To: Superintendent, Padre Island
Attention: Chief, Resource Management and Science

From: Chris Turk, Regional Environmental Quality Officer, IMDE-PE

Subject: Review of Environmental Assessment for BNP's Plan of Operations to Drill And Produce the Lemon/Lemon Seed Unit Wells No. 1-1000S and No. 1-1008S within Padre Island National Seashore

We have completed our review of the subject environmental assessment (EA). Review comments on the EA were provided by Regional Minerals Coordinator Linda Dansby, and NEPA/106 Specialist Laurie Domler of my staff.

We understand that the EA was released for public review in April 2002; however, in response to review comments received, substantive changes have been made to the EA and that you intend to re-issue the EA for a second 30-day public review.

Our review resulted in identifying many areas for improvement. We recommend that you send the EA back to us for a follow-up review once you have revised the EA to address our comments, below.

1. Page i, Summary, 2nd paragraph, line 9. Change "soils" to "geology and soils."
   - End of line 12, beginning of line 13, change "stabilize this area" to "stabilize the cut."
   - We didn't find a summary statement describing the impact conclusion for state and federallyprotected species. We suggest you insert "state and federally-protected species" following "wildlife" in line 10.

2. Page i, Public Comment, end of line 3 and beginning of line 4. "Replace "The Notice of Availability published…" with "A Notice of Availability will be published…"
   - Change the period after *Corpus Christi Caller Times* to black rather than red.
   - Beginning of 6th line, change "you name.." to "your name…"
   - We suggest the line showing as a footer at the bottom of the page be extended to the right margin or at minimum cover the underlying text "Seashore."

3. Table of Contents, page iii, we assume that section 3.9, Threatened and Endangered Species within Padre Island National Seashore, will be changed to "State and Federally-Protected Species" when the Table is updated. We understand that the ESA guides us to prepare a BA specific to federally-listed or federally-proposed species; but because the NPS Management Policies guide us to manage state-protected species also, the EA could be more inclusive; thus, the suggested titled "State and Federally-Protected Species.".

4. Section 1.0, Purpose and Need, page 1, 4th paragraph. The analysis area is described too generally. If it is possible to define a common geographic area, then

NPS DOCUMENT # 591

the description of the analysis area could remain here. We provide the following description of the analysis area for your consideration:

"The analysis area in this EA for evaluating direct and indirect impacts includes:

- The direct area of impact would include the access road from the park entrance via paved Park Road 22, along 12.5 miles on the Gulf beach vehicle corridor to a proposed cut through the foredunes, and then along a proposed xxx-foot long caliche access road to the wellpad; and the footprint for constructing the 4.17-acre well/production pad and a 0.8-mile long by 25 to 50-foot wide corridor for a flowline.
- The indirect area of impact for each park resource or value could vary for each impact topic; but generally would not extend beyond 1500 feet (we've selected the analysis area for natural soundscapes but other impact topics could increase the distance up to a ½ to ¾ mile radius – a description why the specified radius distance should be provided).
- For State and Federally-Protected Species, the analysis area for direct and indirect impacts is defined for each species in the Environmental Consequences section of this EA.
- For the impact topic, "Nonfederal Oil and Gas Development," the analysis area includes the effect on BNP and the mineral owner to meet NPS permitting requirements (including cost and time involved for BNP to prepare a plan of operations and contractor efforts, increased mitigation measures and reclamation requirements inside an NPS unit, the effect of proceeding or not proceeding to drill and produce the wells), and the effect of drilling and producing the 2 wells on the domestic energy supply.

The analysis area for evaluating cumulative impacts on park resources and values may extend beyond the boundaries of the park.

Another option is to describe the analysis area for each park resource or value. If you choose this option, it would be better to describe the analysis area under the pertinent topic in the Environmental Consequences section following the description of the affected environment, and to not include a description under the Purpose and Need section. A good example is how we can define a 1500-foot radius around the well/production pad for natural soundscapes. Refer to the park's Oil and Gas Management Plan/FES (February 2000), figure 3-10 to see that a 1500-foot radius would include the distance that elevated noise during well drilling/workover operations would approach 40 decibels. Elevated noise would also result from construction and intermittent maintenance activities along the flowline, but noise would fall to background levels well within 1500 feet. Are the back-island locations that Dr. Foch collected sound measurements – specifically the PanAm Road and the Grasslands Nature Trail – similar to ambient sound levels for the proposed project area?

Please move Figure 1 to Page 2, and insert the following sentence at the end of the 4th paragraph: "Figure 1 is a Region/Vicinity Map."

5. Page 2, NPS Organic Act and General Authorities Act – Prevention of Impairment, last paragraph. Remove the full justification. Also, merge the text under item 3 – there seems to be a hard return separating the words "…relevant - NPS planning documents.".

NPS DOCUMENT # 591

6. Page 3, insert a space between the 1st and 2nd paragraphs and remove the full justification.

7. Page 4, 1st line, spell out National Seashore.

8. Page 4, top of the page,, change "with" to "will then immediately notify……"
   - Last paragraph beginning "An Oil and Gas Management…" and extending onto page 5 through the paragraph beginning "During the scoping…" should all be shown in the font reflecting this is new text.

9. Page 5, please insert a space between the paragraph beginning "Table 1, below…" and the title for the table.

10. Page 8, Section 1.3, Issues and Impact Topics Evaluated. Consider adding a sentence at the beginning of the paragraph to explain that state and federally-protected species has been added to the list of park resources and values evaluated in this EA. We suggest something like: "Based on public review of the plan of operations, environmental assessment and draft statements of findings (enter dates of public review period), NPS has included State and Federally-Protected Species to the list of impact topics evaluated in the EA." While "threatened and endangered species" was included in the list of issues and impact topics evaluated in the April EA, and issue statements were provided, the topic was not evaluated further in the EA.

11. Page 6, Table 2, Issue Statements, Nonfederal Oil and Gas Development, please replace the 2nd issue statement with the following: "Production of the nonfederal mineral interest would contribute hydrocarbon resources to meet the nation's domestic energy demands."
    - Under Air Quality, insert a bullet for the 2nd issue statement beginning "Maintenance activities, including the application of herbicides for…"
    - Also under Air Quality, under the 2nd issue statement, 6th line, please change "parks" to "park."
    - The pitch size for "Wetlands" seems larger compared to the other impact topics.

12. Page 11, Section 1.4, Issues and Impact Topics Eliminated from Further Analysis. We suggest for your consideration to include "Sensitive Resource Areas (SRAs)" with the following discussion: "The O&GMP for the park (March 2001) identified SRAs as "locations of particularly rare and/or vulnerable resources. As a result of selecting a location that requires the wells to be directionally drilled, the following SRA's were avoided: seagrass beds, algal flats, and trees (relict oak mottes). Therefore, there would be no impact on these park resources, and these issues were dismissed as impact topics in this EA."

13. Page 11, Cultural Resources Change the survey "was be" submitted.

14. Page 12, Section 2.2, Alternative B, Proposed Action, Location of the Well. Please add a sentence to the end of the paragraph to the effect:
    Additional maps include:

NPS DOCUMENT # 591

Figure 2: General location of the proposed Lemon/Lemon Seed Unit in relation to Padre Island National Seashore boundaries.
Figure 3: Proposed location of the Lemon/Lemon Seed Units, 12.5 mile marker on Padre Island National Seashore. Depicts location of access road, pad/production site, proposed pipeline, and wetland area.
Figure 4: Surface and bottom hole locations of Lemon/Lemon Seed Units,wells No. 1-1000S and No. 1-1008S.
Figure 5: Close-up of wetland area within the 25-foot work corridor marked.

- Figure 3 - could you show the analysis area boundaries on this map? Also, insert a reference to this figure in the description of the analysis area (Purpose and Need section, 4th paragraph; or the Environmental Consequences section should the description of the analysis areas be moved there).
- Figure 4 – could Gulf of Mexico state tract boundaries be shown on the map?
- Figure 5 – we suggest the green-coloring only be within the 25-foot corridor.

15. Page 19, Surface Location of Well Pad, beginning of line 5, change "will" to "would."

16. Page 20, Use of Water for Drilling, line 1: change "BNP proposes to drill temporary" to "BNP proposes to drill a temporary…"
    - Line 3 – spell out "PAIS."
    - Line 6 – change "BNP will" to BNP would."
    - Line 9 – change "operator will" to "operator would."
    - 2nd paragraph – line 5 – First time we've seen "TNRCC." Spell out "Texas Natural Resource Conservation Commission" and place the abbreviation in parentheses.
    - Lines 9 and 10, change to read: "…needed water: pump water or fill water trucks from the Dunn-Murdock #1 location to the Lemon/Lemon Seed location; or, obtain…"

17. Page 21, Pipeline, 2nd line, suggest changing from "…operates an inactive…" to "…owns a currently-inactive…"
    - Lines 9 and 10 – change "50 feet" and "25 feet" to "50-foot" and "25-foot."
    - Last sentence – if the 25-foot construction corridor in wetlands is an NPS stipulation, we suggest this sentence be revised to read: "The NPS stipulation of a 25-foot…" If the reduced corridor is not being stipulated by NPS as a mitigation technique, then please explain who is requiring it.
    - 2nd paragraph, lines 6 and 7 – please change "will" to "would."
    - Line 8 – change "…released on to the…" to "…released onto the…"
    - Lines 9 and 10 – change "…hauled to an approved disposal site. " to …hauled to a State-approved disposal site outside the park."

18. Page 21, Reclamation. We suggest replacing the first 2 sentences with: "As soon as possible after completion of approved operations but no later than six (6) months thereafter unless a longer period of time is authorized by the Regional Director, BNP would initiate reclamation. [36 CFR 9.39(a)(2)]" Reclamation would follow both the drilling and production phases of operations. After drilling the wells, and if the wells are placed in production, the well pad size would be reduced for the production phase, as described above under "Production Facility."

NPS DOCUMENT # 591

- Please insert the following opening sentence to the 2nd paragraph: At the completion of production operations, the wells would be plugged, and all above ground structures, equipment, and other man-made debris resulting from operations would be removed; and any contaminating substances would be removed or neutralized. [36 CFR 9.39(a)(2)]

19. Page 21, last paragraph. We recommend a heading "Mitigation Measures" be placed above this paragraph. We like what you've done to further improve the mitigation table by incorporating a column to show the phase of operations the mitigation measure would be applied. Because there are so many mitigation measures, it would also be helpful if you would insert a first column to sequentially number each measure.
    - 1st mitigation measure – for consistency with the Summary, we suggest the first line be changed to read: "Direct impacts to wind-tidal algal flats, seagrass beds, trees, and…"
    - 3rd mitigation measure – replace "people" with "visitors."
    - 4th mitigation measure – we suggest adding in the 1st line: "In accordance with Padre Island National Seashore's approved…"
    - 4th mitigation measures – change "…BNP will…" to "…BNP would…"
    - 4th mitigation measures – please include a description what this mitigation measure would avoid or mitigate impacts on – we suggest something like: "In the event of a hurricane, this mitigation measure is intended to result in protecting human life and property, reducing flood hazards, and protect natural floodplain values." We suggest you review all the mitigation measures to ensure they explain what benefits they are intended to derive.
    - Please consider adding the following mitigation measure that would apply to all phases of BNP's proposed operations: "The Superintendent of Padre Island National Seashore, or his representative, shall have reasonable access to the operations as is necessary to properly monitor and insure compliance with the conditions of the plan of operations under the provisions of 36 CFR §9.37(f)."
    - Mitigation measure 10 – remove the capitalization on "Construction." We suggest deleting the word "briefly" and inserting the following text at the end of the 2nd sentence: "…over the short-term until restoration of wetlands is successfully achieved within 1 growing season."
    - Mitigation measure 13 – we recommend the 2nd line be changed to read: "…over the road during the term of…"
    - We suggest the 2nd sentence under Mitigation measure 13 be split to form a new mitigation measure 14.
    - Mitigation measure 15 ("Gate would be installed…") . Move the fragment of sentence from the row above (in mitigation measure 14) to this mitigation measure.
    - Mitigation measures 9 (For all releases…", 31 (Source of water…"), and 44 (Should Lemon/Lemon Seed…") do not have references – if these are not included in BNP's plan of operations and are being added as mitigation measures by NPS in the EA, then they belong under the next heading "Conditions of Approval."
    - Mitigation measure 21 (After leveling the access road…") we suggest changing the last line to read: "…through the soil from reaching the ground water."

NPS DOCUMENT # 591

- Mitigation measure 23, 2nd to last line, we suggest changing to read: "…fence would be installed around the production facilities of a design specified by the Superintendent."
- Mitigation measure 28 ("To prevent accumulation…"), 7th line, change "supply" to "supplies."
- Mitigation measure 31 ("Source of water and annular injection:"), end of 2nd sentence, we recommend adding: "…have to purchase water from the park, or haul water via water trucks along the Gulf beach."
- Mitigation measure 35 ("If the well were…"), change to read: "If the wells were produced,…"
- Mitigation measure 45 ("The well would be plugged…"), we suggest adding a sentence that reads: "These standards ensure protection of useable quality aquifers."
- See our comments below regarding combining the mitigation measure tables 9 and 10 from the Affected Environment and Environmental Consequence's section, Visitor Use and Experience into Table 3.

20. Page 27, Conditions of Approval. We suggest opening this section with the following:
"The Regional Director has authority to attach conditions to plans of operations under the NPS's Nonfederal Oil and Gas Rights Regulations (36 CFR 9B)."
    - We suggest that you number the COAs under this heading.
    - Please also refer to our comment #18 above regarding mitigation measures 9 (For all releases…", 31 (Source of water…"), and 44 (Should Lemon/Lemon Seed…").
    - Last paragraph, beginning "Damage to paved surfaces…" Please change the last sentence to read: "Price would be determined based upon wear to the road."
    - Also, if mitigation measures from tables 9 and 10 are being attached by the NPS and are not included in BNP's plan of operations, they would belong under this heading and not in Table 3.

21. Alternatives Considered but Dismissed from Further Analysis. We suggest you consider adding the following alternative:

    NPS Acquisition of the Mineral Rights that are Part of BNP's Proposal
    In the event that a proposed operation cannot be sufficiently modified to prevent the impairment of park resources and values, the NPS may seek to extinguish the associated mineral right through acquisition, unless otherwise directed by Congress. With respect to the BNP proposed Plan of Operations, mitigation measures were identified and applied, which substantially reduced the potential for adverse impacts to park resources and values. As a result, the acquisition of mineral rights was not evaluated in the EA.

    - Page 30, Alternative Well Access, line 13 – The following discussion is pertinent to this alternative considered but dismissed from further consideration, and also for the environmental consequences on wetlands under the Proposed Action. While there are no known freshwater wetland mitigation sites within the park, the park's Oil and Gas Management Plan/FES, pages 2-59 – 2-60, describes in priority order how wetlands compensation may be met. While we understand the Superintendent may decide not to require wetlands compensation for the 0.032

NPS DOCUMENT # 591

acres of direct wetlands impacts because the park has no available disturbed wetlands sites to serve as a compensation site, and the acreage is so small, we encourage the park to reconsider its option to have BNP compensate for the wetlands impacts by contributing towards the printing of a park brochure, producing a wayside exhibit, or constructing a portion of an interpretive wetlands boardwalk that would help park visitors learn about the importance of wetlands. The park's O&GMP is precedent-setting in paving the way for this type of innovative mitigation when compensation acreage would be too small to merit a restoration project, and there are no disturbed sites to restore in the park.

- Page 29, Gulf of Mexico Alternative, 2nd paragraph. Linda and Ed Kassman (GRD) commented on this paragraph while reviewing the Biological Assessment. The Resource Management Codes (RMCs) are not mandatory requirements. Ed's understanding is that the RMCs are intended to notify potential lessees of likely stipulations that may apply to an operation within the leased tract. The RMCs purpose is to give potential lessees full and fair notice of what to expect. As such, the RMC provide a modicum of cover to the state, should a lessee claim a diminution of value of their property right via application of a specific stipulation. Neither the State of Texas, nor the NPS enforces the RMCs under any statute or regulation. We suggest this paragraph be revised.
- Page 30, Alternative Seasonal Closure, 2nd paragraph, 1st sentence, "The beach is also considered a roadway by the Texas Open Beaches Act, which allows unrestricted public vehicle access to the Gulf of Mexico." Linda and Ed Kassman (GRD) commented on this sentence while reviewing the Biological Assessment. We recommend you to replace the 2nd, 3rd and 4th paragraphs in under this heading with the revised text provided by Ed:

The nonfederal mineral owners hold a right of reasonable access across the federal surface to explore for and develop their mineral interest. The NPS, however, has the right under federal law to reasonably regulate access to protect park resources and values. While federal law is supreme to and supplants state law that is in conflict with it, Congress has recognized the exercise of oil and gas rights at Padre Island N.S. The NPS has neither found, nor has it been presented with data that would support a decision for a seasonal beach closure applied to oil and gas operators. The NPS will attach reasonable mitigation measures to an oil and gas operator's access, e.g. speed limits, monitors, that are designed to provide protection against harm to park resources an values. A seasonal closure may also require that the drilling rig(s) to be demobilized and moved repeatedly up and down the beach, or to have more than one rig operating at a time. Impacts associated with the repeated mobilization of the drilling rig and associated equipment would increase impacts to visitors, other non-sea turtle species of concern, vegetation habitats, and increase the operating costs to the contractor. Such a closure would result in a concentration of impacts over a shorter amount of time, and may not allow for natural recovery of the beach and associated access routes between operations.

Some benefits may occur to shoreline species, e.g. Piping Plover, that utilize the beach to nest, forage, or loaf during a closure. The public would not be subjected to the type of traffic volume during high visitation periods, and the risk of crushing or impacting nesting sea turtles, their nests, or any hatchlings left on the beach would be somewhat reduced. There would, however, still be potential impacts from public use and recreation of the beach during this seasonal closure.

NPS DOCUMENT # 591

Even though there are added benefits to sea turtles and summer visitors, the potential for greater impacts due to heavier concentration of oil and gas activities created by the seasonal window outweighed the potential benefits.

Based on the lack of data supporting a sesonal beach closure as applied to oil and gas operator access in particular, the greater concentration of impacts in the short-term, the increased risk to equipment and personnel, the health and safety issues related to hurricanes, the potential impact to Piping Plovers and other protected and non-protected species of shorebirds, and the expected increase in economic costs associated with more frequent or repeated mobilization of the drilling rig and associated equipment, this alternative was dismissed.

22. Section 2.4, Environmentally Preferred Alternative, page 31, 2nd paragraph. Please delete the 3rd sentence as it repeats what has already been described under section 2.1. Replace the 3rd, 4th and 5th sentences with: "Under Alternative A, No Action, the wells would not be drilled; however, 12 existing gas wells and pipelines would continue to operate. Routine maintenance of the 12 existing operations would include daily access by pickup-sized trucks and periodically larger trucks along the Gulf beach. Larger trucks would include pumper trucks used to periodically remove "condensate" from storage tanks."

- Page 32 – delete "oil and gas operations or subsequent" from the next sentence.

- We suggest that No Action would meet criteria 1 through 4 and 6; and the Proposed Action would meet criteria 1,2,4 and 5.

23. We suggest the last paragraph under Section 2.4, Environmentally Preferred Alternative, would be better placed under a new heading: "NPS Preferred Alternative" and be replaced with:
"The environmentally preferable alternative is the Alternative A because it surpasses Alternative B in realizing the full range of national environmental policy goals as stated in §101 of NEPA. However, because the enabling legislation of Padre Island National Seashore respects the exercise of oil and gas rights, the environmentally preferred alternative was not selected as the NPS preferred alternative. The NPS preferred alternative is the proposed action (AlternativeB). The NPS believes this alternative would fulfill its mandates and direction, giving due consideration to environmental, economic, technical, and other factors."

24. Table 4, Extent that Each Alternative Meets Objectives, page 32 – we noticed the text in the 2nd and 3rd rows for the 2nd and 3rd objectives is slightly indented.

25. Table 6, Comparative Summary of Impacts, pages 33 through 36. The table should be composed of the conclusion statements copied and pasted in from the Environmental Consequences (EC) section. In many cases, the summaries in the table do not match the impact analysis described in the EC section.
    - Summary of impacts on water resources and floodplains under Alternative B, Proposed Action – summary (and the conclusion statement) should disclose that there is no practicable alternative to siting the proposed project within the 100-year floodplain.
    - Include a summary for State and Federally-Protected Species.

NPS DOCUMENT # 591

26. Page 35, Methodology. Please use impact thresholds that are specific to the impact topic being considered. Please see the attached for examples of the latest thresholds being used in the DSC and the Intermountain Region. The thresholds should relate to each resource category and should be specific to the project.

    Page 35, Methodology. Please define the terms localized and widespread.

    Page 35, Methodology. Please describe the terms short-term and long-term more clearly. Is Long-term three years to 20 years? Many construction activities can have long-term impacts. Also, many projection operations can have short-term impacts. I would suggest removing these general statements about duration

27. Page 36, Section 3.0, Environmental Consequences
    - We suggest the title of this section be changed to "Affected Environment and Enviornmental Consequences.
    - We noticed that you didn't have a definition for cumulative impacts. Here's a definition you may paste in after the 2nd paragraph:

      Cumulative Impacts: The Council on Environmental Quality (CEQ) regulations, which implement the National Environmental Policy Act of 1969 (42 U.S.C. 4321 *et seq.*), require assessment of cumulative impacts in the decision-making process for federal projects. Cumulative impacts are defined as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions" (40 CFR 1508.7). Cumulative impacts are considered for both the no-action and preferred alternatives and were determined by combining the impacts of the proposal with other past, present, and reasonably foreseeable future actions.

    - We also suggest you insert, after the conclusion section the following definition for "Impairment":

      Impairment: a major, adverse impact to a resource or value whose conservation is: 1) necessary to fulfill a specific purpose identified in the establishing legislation of Padre Island National Seashore; 2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or 3) identified as a goal in the park's general management plan or other relevant NPS planning documents.

    - A dash is missing between the term "negligible" and its definition.
    - Section 3.1, Impacts on Nonfederal Oil and Gas Development. GRD and IMR recently refined the impact analysis for this topic in the EA covering Ross Davis's directional drilling application at Big Thicket. We encourage you use this template; the impacts would be similar. We have included it as Enclosure 1 to this memo.
      We suggest the description of the RFD-projected drilling and production of 18 wells be supplemented with the following statement: "During April-June 2001, BNP completed drilling the Dunn-Murdock #1 well."

NPS DOCUMENT # 591

- Impacts are not described consistently. All impact analyses need to include the following components: context (localized within the project area, parkwide, or regional), duration (short-term up to 3 years, or long-term up to 20 years or longer), intensity (negligible, minor, moderate or major) and type (adverse or beneficial) of impacts.
- Existing impacts are sometimes described in the discussion of "Impacts of Alternative A or B" and at other times they are included in the Cumulative Impact analysis. We suggest using the following format to provide consistency:
  - 1st paragraph: Under Alternative A, No Action, the wells would not be drilled, resulting in no new impacts on (insert the park resource or value).
  - 2nd paragraph: Existing impacts on (insert the park resource or value) would be caused by (describe the activities or developments), resulting in (context, duration, intensity and type) impacts on (insert the park resource or value). If there are no existing impacts you can simply add the following sentence after the 1st:: "There are no existing impacts on (insert the park resource of value) in the project area." If this is the case, we recommend that you switch this sentence to appear first, followed by the one above, as it flows better.
- Conclusions are also inconsistently described. Each Conclusion must include 1) a summary of impacts under the alternative, 2) summary of cumulative impacts under the alternative, and 3) for all park resources and values evaluated (all impact topics except Nonfederal Oil and Gas Development), end with an impairment analysis/statement.
- Page 38. Impacts on Geology and Soils. Affected Environment. What is the affected environment of the project area? The description appears to be parkwide.
- Page 41, Impacts of Alternative B, Proposed Action, on Water Resources and Floodplains. The analysis should also include a discussion related to the foredunes providing protection from hurricanes and tropical storms for the island's backcountry and Texas mainland. We suggest the proposed cut through the foredunes would be a negligible (?) adverse impact on the barrier island's role as a defense to prevent or slow hurricanes from approaching the mainland.
- Page 42, Impacts on Wetlands, Affected Environment. Suggest an opening sentence to describe wetlands parkwide – for example, "Approximately 60% of the park is comprised of wetlands, including wind tidal flats, emergent wetlands, and seagrass beds."
- Page 43, line 12 and Page 43, 2nd paragraph – please clarify if NPS is requiring the reduced 25-foot corridor within wetlands.
- Page 43, Impacts of Alternative B, Proposed Action, on Wetlands. The first sentence is a fragment.
- Section 3.9, page 49 – retitled to "State and Federally-Protected Species." Line 10 and also on page 50, first line, "Table 3" should be changed to read "Table 7." Because the analysis includes some species that are not actually "listed" we sugggest the title throughout the EA be changed to "State and Federally-Protected Species." We understand the BA includes federally-listed T/E species, but the EA may include a broader focus.
- Texas horned lizard, page 51, 3rd, 4th and last paragraphs. The 3rd paragraph states "Texas horned lizards have been found on Padre Island north of the park, but have not been documented in the park." The 4th paragraph describes impacts of No Action on the Texas horned lizard: "As discussed earlier, existing gas operations and flowlijnes once impacted habitat that could be used by the

NPS DOCUMENT # 591

Texas horned lizard." (We aren't sure what text this statement is referred to.) The last paragraph on the page describes impacts under the Proposed Action: "However, since this species has not been documented within the park, and current literature suggests that it occurs only in the western third of the state (Bockstanz, UT), it is not likely that this project will directly or indirect affect this species." These statements seem to be inconsistent. As described, the Texas horned lizard has been document north of the park, and because suitable habitat exists within the park, there is potential that the species to migrate into the park over time.

- Texas Indigo Snake, pages 52 and 53 – under the Affected Environment, 2nd paragraph, "This species ranges from southern Texas southward along the Gulf coast into Veracruz and Hidalgo, Mexico…" On page 53, under Impacts of Alternative B, Proposed Action, there seems to be an inconsistency with the statement "…current literature suggests that it occurs only in the western third of the state (Bockstanz, UT),…"
- Page 55, Kemp's ridley sea turtle, Impacts of Alternative A, No Action. There should be no impact on the turtles because the wells would not be drilled. No Action should not result in a "a beneficial indirect impact on sea turtles." We suggest the first 2 sentences be replaced with a statement: "Under No Action, the wells would not be drilled, resulting in no effects on this species." The discussion should continue with the 3rd paragraph, ending with the last 2 sentences remaining from the 1st paragraph. Move the 2nd paragraph to the top of Page 57 so the discussion about lighting can be packaged together. Artificial lighting on the drill rig would result in "direct" not "indirect" impacts on sea turtles.
- In the T/E section, should the commitment of the park to perform biological field surveys of the project area for State and Federally-Protected Species prior to and during construction be included in the Table of Mitigation Measures? In the past, our practice in the 9B program has been to instruct the prospective oil and gas operator to contract qualified biologists to perform such surveys. We are puzzled that BNP was not instructed to hire qualified biologists to perform biological survey(s) prior to selecting the proposed project site and preparing the plan of operations. If the proposed project site was found to have suitable habitat for state and federally-protected species, and particularly for listed species, would we not have relocated the proposed project rather than "physically remove the individual and relocate it to an adjacent undisturbed location" ? Are park staff recognized as "qualified biologists" as defined on page 2-53 of the O&GMP/FES? Do park staff have time to do these surveys? Seems like a lot of work, time and responsibility is being taken on when the option exists to guide BNP to contract these surveys under NPS and FWS oversight.
- Mitigation 2 in the last paragraph on page 55 is not included in the Tables of Mitigation Measures (either 3, 9 or 10).
- Page 57, last sentence, "Future research in this area is called for to better understand the compaction, sand component, and vehicle threshold effects." Please delete this sentence as it was also removed from the BA.
- Page 58, "Nesting activity for 2002 seem to support the idea that existing traffic levels (approximately) 500,000 vehicles annually) do not currently have a large negative impact on nesting sea turtles." We suggest "large negative impact" be replaced with "measurable effect."
- Conclusion on page 58 – This statement mistakenly describes impacts under the proposed action. We suggest rephrasing this sentence to read: "There is a

NPS DOCUMENT # 591

moderate possibility for vehicle use along the Gulf beach associated with the continuing operation of 12 existing oil and gas wells and pipelines to adversely impact Kemp's ridley sea turtles; however, with the continuing application of mitigation and conservation measures, the No Action alternative is not likely to adversely affect the Kemp's ridley sea turtle."

28. Throughout the document, we suggest that "PAIS," "Padre Island NS," and "the national seashore," be changed to either "Padre Island National Seashore" or "the park."

29. Page 64, Impacts of Alternative A, No Action [on the Eastern Brown Pelican], 1st paragraph, 1st sentence. We like the description of the analysis area including 12.5 miles of Gulf beach and how the Affected Environment discussion supports it. In the 2nd paragraph, the last sentence, "There are no construction, drilling, or production activities included in this alternative" is not accurate. We also notice that there are at least 2 different ways of describing existing operations under the Impacts of Alternative A, No Action, throughout the State and Federally-Protected Species section. The continuing operation of the 12 oil and gas wells and pipelines would also involve occasional construction activities required in uncovering and inspecting and if needed, replacing sections of pipeline; performing well workovers; and plugging and reclamation. Reclamation would involve the removal of large volumes of imported caliche that form the elevated well/production pads and access roads once reclamation and abandonment of plugged wells occurs, and recontouring the area to natural contours. While traffic volumes would increase above routine day-to-day activity levels, and some heavy equipment would be transported along the Gulf beach, the volume would be substantially lower compared to drilling a well. This sentence should be revised. Further, we recommend a consistent description of continuing operations should be used in all sections describing Impacts of Alternative A, No Action, in the State and Federally-Protected Species section.

30. Page 66, Impacts of Alternative A, No Action [on Interior Least Tern], first sentence. The access includes 15 miles of Gulf beach – should it be 12.5 miles?

31. Throughout the description of the No-Action, Proposed Action, and the impact analyses, use "would" in place of "will."

32. Page 76, 2nd paragraph. Good observation that oil and gas facilities, particularly those that would provide a high perch, could be used by peregrines, a beneficial impact.

33. Page 77, Impacts of Alternative A, No Action [on White-tailed Hawk]. Change the last sentence to read: "Under No Action, the wells would not be drilled; therefore, there would be no new impacts on upland habitat. As a result, there would be no effect on the White-tailed Hawk."
    - We suggest the impact analysis include a discussion of mitigation measure 42 (maintenance) from Table 3 – "BNP would plant native willow shrubs or trees around the production facility to minimize visual impacts to visitors. Plantings of native trees or shrubs would also provide and perpetuate habitat for migratory birds." While White-tailed Hawks may not perch in these trees while BNP workers are within close proximity at the operations area, nevertheless, we

NPS DOCUMENT # 591

suggest that this mitigation measure would result in a localized, negligible, long-term, beneficial impact on this species.

34. Page 79 Conclusion to Impacts of Alternative A, NO Action [on Loggerhead Shrike], first sentence. As commented on numerous times, No Action would not result in beneficial impacts – there would be no effect.
    - Under Impacts of Alternative B, Proposed Action, mitigation measure 42, described above, could also result in negligible, long-term beneficial impacts on the Loggerhead Shrike by perpetuating habitat for this species and providing perches.

35. Page 82, Table 8. We suggest the table belongs in the discussion of the Proposed Action in the Alternatives section of the EA. It support multiple discussions of impacts including Air Quality, Geology and Soils, Natural Soundscapes, Wildlife, T/E, and Visitor Use and Experience.

36. Page 82, Impacts of Alternative A, No Action, on Visitor Use and Experience, 2nd sentence. Suggest changing to read: "However, impacts on visitor use and experience could result from vehicle traffic along 12.5 miles of the Gulf beach associated with the continuing operation of 12 oil and gas wells and pipelines." Much of the impact analysis describes parkwide impacts that belongs in the cumulative impact section. Impacts from the continuing operation of 12 oil and gas wells and pipelines should only include those operations and activities located within the analysis area for the proposal.
    - The Conclusion under Alternative B, includes two impairment analyses. We suggest deleting the first and retaining the second.
    - Under Impacts of Alternative B, Proposed Action, on Visitor Use and Experience, we recommend the first sentence be replaced with: "Under Alternative B, Proposed Action, Impacts on visitor use and experience from the continuing operation of 12 oil and gas wells and pipelines, particularly vehicle traffic along 12.5 miles of the Gulf beach, would be similar to the No Action alternative, with short to long-term, minor to moderate, adverse impacts localized along the Gulf beach. In addition, drilling and production of the Lemon/Lemon Seed Unit Wells would result in construction and maintenance of the access road, and well/production pad, resulting in the direct loss of 4.17 acres of hummocky uplands. …"
    - Last sentence – if the wells were unproductive, and the area would be reclaimed, impacts would be short-term, not long-term. We also suggest impacts would range from negligible to moderate.
    - We suggest the mitigation measures in Tables 9 and 10 be combined with those in Table 3. Mitigation measures belong with the description of the Proposed Action. They could be simply tacked onto the existing table so that the header "resource concern" differentiates these mitigation measures from the operational phases. We suggest table 10 be tacked on first, followed by table 9, so that the presentation is consistent with the presentation and analysis of impact topics.

37. Section 4.0, Consultation and Coordination, 1st paragraph. Include "draft" in front of Floodplains Statement of Findings, and Wetlands Statements of Findings to denote they are not yet signed.

NPS DOCUMENT # 591

- Section4.0, Consultation and Coordination, 1st paragraph should be changed to read: "A Notice of Availability for the Plan of Operations, EA, and draft Floodplains and Wetlands Statements of Findings will be published in the local newspaper (*Corpus Christi Caler Times*)."
  You are not required under 9.52(b) to republish a NOA in the FR when you've done that once; and DO-12 does not require you to do so.

38. Section 4.1, Individuals and Agencies Consulted. Please add to the list:
    Edward Kassman, Regulatory/Policy Specialist, National Park Service, Geologic Resources Division, Denver, Colorado
    Laurie Domler, NEPA/106 Specialist, National Park Service, Office of Environmental Quality, Intermountain Region, Denver, Colorado

39. Section 5.0, Bibliography, page 90. We suggest the park's GMP/DCP/EA be included under the "heading Padre Island National Seashore."

We appreciate the opportunity to provide these comments on the EA. Should you have any questions or need any assistance, please feel free to contact us.

Enclosure

cc:
Linda Dansby, Regional Minerals Coordinator, IMSF-RMO, w/c of encl.

NPS DOCUMENT # 591

Enclosure 1: Impact Analysis for Nonfederal Oil and Gas Development from BITH Ross Davis Directional Drilling EA.

3.2 Impacts on Nonfederal Oil and Gas Development

3.2.1 Affected Environment

Within the Jack Gore Baygall Unit, 33 wells have been drilled from 1954 to 1997. Today, surface disturbances remain on 130 acres (1.2 percent of the Unit) from 33 well pads, one production pad, access roads, and six transpark oil and gas pipelines (Radian Corporation, 1984). Currently, three wells and five transpark oil and gas pipelines remain active.

A three-dimensional (3-D) seismic survey covering almost the entire Jack Gore Baygall/Neches Bottom Unit and part of the Lower Neches River Corridor Unit (300 square miles in parts of Newton, Jasper, and Hardin Counties) was conducted during 1998-1999 (see Figure 1).

In 2000, the NPS prepared a reasonably foreseeable development (RFD) scenario to project future oil and gas development based on an assessment by the U.S. Geological Survey of remaining hydrocarbons beneath Big Thicket National Preserve (DOI 2000). The RFD provides a reasonable assumption of future development of nonfederal oil and gas for park planning purposes and to provide a basis to measure potential environmental impacts. The RFD projects that initially 3-D seismic surveys would be conducted throughout the entire Preserve and would be used to delineate oil and gas drilling prospects. It was assumed that approximately 29 additional wells would be drilled over the next 15-20 years to produce the estimated 1.21 million barrels of oil, 70.11 billion cubic feet natural gas, and 1.02 million barrels natural gas liquids from Tertiary and Upper Cretaceous-age reservoirs underlying the Preserve. Of the projected 29 exploratory wells, 19 wells are anticipated to be commercially successful. The NPS acknowledges that the RFD is based solely on available production data and that fewer or more wells could be drilled.

3.2.2 Impacts of Alternative A, No Action, on Nonfederal Oil and Gas Development

Under Alternative A, No Action, the well would not be drilled. The impact on the domestic energy supply would depend on whether the exploratory well would have discovered hydrocarbons that were producible. If so, not drilling and producing the well would result in a no impact on domestic energy supplies. There could be moderate to major adverse impact on Davis due to lost revenues invested in collecting data, preparing an application, and not being permitted to develop its private mineral interests at this location.

Figure 1. Seismic exploration in Jack Gore Baygall/Neches Bottom Unit.

Cumulative Impacts of Alternative A, No Action, on Nonfederal Oil and Gas Development

NPS DOCUMENT # 591

Under Alternative A, No Action, the result of one exploratory well not taking place out of the 29 anticipated under the NPS RFD scenario would result in a minor adverse impact on nonfederal oil and gas development within the Preserve. However, if not drilling the well could affect Davis's decisions to proceed with additional exploration and development, there could be a moderate to major adverse impact on Davis.

NPS DOCUMENT # 591

Conclusion

Under Alternative A, No Action, the well would not be drilled or developed, resulting in a no impact on domestic energy supplies, and a moderate to major adverse impact on Davis due to uncertainty about future exploration and development.

3.2.3 Impacts of Alternative B, Proposed Action, on Nonfederal Oil and Gas Development

Under Alternative B, Proposed Action, the well would be drilled, and if hydrocarbons are discovered and produced, would result in a negligible beneficial impact on domestic energy supplies. If a commercial field is discovered, the financial impacts on Davis and the associated mineral owners could range from minor to moderate beneficial impacts, depending on the quality of the discovery. Costs and time Davis has invested with preparing an application result in a minor adverse impact.

Cumulative Impacts to Nonfederal Oil and Gas Development

Under Alternative B, Proposed Action, if the proposed well is not produced, the cumulative impact on nonfederal oil and gas development would be similar to cumulative impacts under the no-action alternative. Should additional exploration and development wells anticipated under the NPS RFD scenario be drilled, production of petroleum resources underlying the Preserve would increase available petroleum products to the domestic energy supplies, resulting in a minor beneficial impact. Davis's investment in preparing an application would be a minor adverse impact.

Conclusion

Under Alternative B, Proposed Action, the well would be drilled, and if developed, would result in a negligible beneficial impact on domestic energy supplies, and a minor adverse impact on Davis due to costs and time invested in preparing an application.

NPS DOCUMENT # 591

Examples of Methodology Sections for Impact Topic Analyses

ARCHEOLOGICAL RESOURCES

Intensity Thresholds

Certain important research questions about human history can only be answered by the actual physical material of cultural resources. Archeological resources have the potential to answer, in whole or in part, such research questions. An archeological site(s) can be eligible to be listed in the National Register of Historic Places if the site(s) has yielded, or may be likely to yield, information important in prehistory or history. An archeological site(s) can be nominated to the National Register in one of three historic contexts or levels of significance: local, state, or national (see National Register Bulletin #15, *How to Apply the National Register Criteria for Evaluation*). For purposes of analyzing impacts to archeological resources, thresholds of change for the intensity of an impact are based upon the potential of the site(s) to yield information important in prehistory or history, as well as the probable historic context of the affected site(s):

Negligible: the impact is at the lowest levels of detection - barely measurable with no perceptible consequences to archeological resources.

Minor: the impact affects an archeological site(s) with little or no potential to yield information important in prehistory or history. These archeological resources are generally ineligible to be listed in the National Register.

Moderate: the impact affects an archeological site(s) with the potential to yield information important in prehistory or history. The historic context of the affected site(s) would be local or state.

Major: the impact affects an archeological site(s) with the potential to yield important information about human history or prehistory. The historic context of the affected site(s) would be national.

HISTORIC STRUCTURES/BUILDINGS

Definitions Of Intensity Levels

In order for a structure or building to be listed in the National Register of Historic Places, it must be associated with an important historic context, i.e. possess significance – the meaning or value ascribed to the structure or building, *and* have integrity of those features necessary to convey its significance, i.e. location, design, setting, workmanship, materials, feeling, and association (see National Register Bulletin #15, *How to Apply the National Register Criteria for Evaluation*). For purposes of analyzing potential impacts to historic structures/buildings, the thresholds of change for the intensity of an impact are defined as follows:

Negligible: Impact(s) is at the lowest levels of detection - barely perceptible and not measurable. For purposes of Section 106, the determination of effect would be *no adverse effect.*

Minor: **Adverse impact** - impact would not affect the character defining features of a National Register of Historic Places eligible or listed structure or building. **Beneficial impact** - stabilization/ preservation of character defining features to

NPS DOCUMENT # 591

maintain existing integrity of a structure or building. For purposes of Section 106, the determination of effect would be *no adverse effect.*

Moderate: **Adverse impact** - impact would alter a character defining feature(s) of the structure or building but would not diminish the integrity of the resource to the extent that its National Register eligibility is jeopardized. **Beneficial impact** – rehabilitation of a structure or building to make possible a compatible use of the property while preserving its character defining features. For purposes of Section 106, the determination of effect would be *no adverse effect.*

Major: **Adverse impact** - the impact would alter a character defining feature(s) of the structure or building, diminishing the integrity of the resource to the extent that it is no longer eligible to be listed in the National Register. For purposes of Section 106, the determination of effect would be *adverse effect.* **Beneficial impact** – restoration to accurately depict the form, features, and character of a structure or building as it appeared during its period of significance. For purposes of Section 106, the determination of effect would be *no adverse effect.*

CULTURAL LANDSCAPES

Definitions Of Intensity Levels

Cultural landscapes are the result of the long interaction between people and the land, the influence of human beliefs and actions over time upon the natural landscape. Shaped through time by historical land-use and management practices, as well as politics and property laws, levels of technology, and economic conditions, cultural landscapes provide a living record of an area's past, a visual chronicle of its history. The dynamic nature of modern human life, however, contributes to the continual reshaping of cultural landscapes; making them a good source of information about specific times and places, but at the same time rendering their long-term preservation a challenge.

In order for a cultural landscape to be listed in the National Register, it must possess significance (the meaning or value ascribed to the landscape) *and* have integrity of those features necessary to convey its significance. The character defining features of a cultural landscape include spatial organization and land patterns; topography; vegetation; circulation patterns; water features; and structures/buildings, site furnishings and objects (see *The Secretary of the Interior's Standards for the Treatment of Historic Properties With Guidelines for the Treatment of Cultural Landscapes*, 1996). For purposes of analyzing potential impacts to cultural landscapes, the thresholds of change for the intensity of an impact are defined as follows:

Negligible: Impact(s) is at the lowest levels of detection - barely perceptible and not measurable. For purposes of Section 106, the determination of effect would be *no adverse effect.*

Minor: **Adverse impact** - impact would not affect the character defining features of a National Register of Historic Places eligible or listed cultural landscape. **Beneficial impact** – preservation of character defining features to maintain existing integrity of the cultural landscape. For purposes of Section 106, the determination of effect would be *no adverse effect.*

Moderate: **Adverse impact** - impact would alter a character defining feature(s) of the cultural landscape but would not diminish the integrity of the landscape to the extent that its National Register eligibility is jeopardized. **Beneficial impact** – rehabilitation of a landscape or its features to make possible a compatible use of

NPS DOCUMENT # 591

the landscape while preserving its character defining features. For purposes of Section 106, the determination of effect would be *no adverse effect.*

Major: **Adverse impact** - impact would alter a character defining feature(s) of the cultural landscape, diminishing the integrity of the resource to the extent that it is no longer eligible to be listed in the National Register. For purposes of Section 106, the determination of effect would be *adverse effect.* **Beneficial impact** – restoration to accurately depict the features and character of a landscape as it appeared during its period of significance. For purposes of Section 106, the determination of effect would be *no adverse effect.*

ETHNOGRAPHIC RESOURCES

Definitions Of Intensity Levels

Certain important questions about human culture and history can only be answered by gathering information about the cultural material of cultural resources. Ethnographic resources have the potential to address questions about contemporary peoples or groups, their identity, and heritage. The ethnographic linkage is vested in specific places of traditional use with cultural meaning. Ethnographic resources can be eligible for inclusion in the National Register of Historic Places if they meet National Register criteria for traditional cultural properties (TCPs). To those for whom the resources hold cultural meaning, impacts to ethnographic resources range from barely perceptible, slight but noticeable, apparent, and strikingly obvious. Respectively these impacts correlate with the terms *negligible*, *minor*, *moderate*, and *major*. For purposes of analyzing potential impacts to ethnographic resources, the thresholds of change for the intensity of an impact are defined below.

Negligible: **Adverse impact** - impact(s) would be barely perceptible and would neither alter resource conditions, such as traditional access or site preservation, nor the relationship between the resource and the affiliated group's body of beliefs and practices. **Beneficial impact** – there would be no change to a group's body of beliefs and practices. For purposes of Section 106, the determination of effect on TCPs would be *no adverse effect.*

Minor: **Adverse impacts** - impact(s) would be slight but noticeable and would neither appreciably alter resource conditions, such as traditional access or site preservation, nor the relationship between the resource and the affiliated group's body of beliefs and practices. **Beneficial impact** - would allow traditional access and/or facilitate a group's traditional practices or beliefs. For purposes of Section 106, the determination of effect on TCPs would be *no adverse effect.*

Moderate: **Adverse impact** - impact(s) would be apparent and would alter resource conditions, such as traditional access, site preservation, or the relationship between the resource and the affiliated group's beliefs and practices, but the group's beliefs and/or practices would survive. For purposes of Section 106, the determination of effect on TCPs would be *adverse effect.* **Beneficial impact** - would accommodate a group's beliefs and practices. For purposes of Section 106, the determination of effect on TCPs would be *no adverse effect.*

Major: **Adverse impact** - impact(s) would alter resource conditions, such as traditional access, site preservation, or the relationship between the resource and the affiliated group's body of beliefs and practices, to the extent that the survival of a group's beliefs and/or practices would be jeopardized. For purposes of Section 106, the determination of effect on TCPs would be *adverse effect.* **Beneficial**

NPS DOCUMENT # 591

impact - would *encourage* a group's beliefs or practices. For purposes of Section 106, the determination of effect on TCPs would be *no adverse effect.*

BIOTIC COMMUNITIES

Methodology

All available information on known natural resources was compiled. Where possible, map locations of sensitive resources were compared with locations of proposed developments and modifications of existing facilities. Predictions about short- and long-term site impacts were based on previous studies of visitor impacts to natural resources and recent monitoring data from the Flagstaff Area National Monuments. Sociological studies comparing the deterrent effects of signs versus ranger presence on sites were also considered in this analysis.

The thresholds of change for the intensity of an impact are defined as follows:

Negligible: an action that could result in a change to a population or individuals of a species or a resource, but the change would be so small that it would not be of any measurable or perceptible consequence.

Minor: an action that could result in a change to a population or individuals of a species or a resource. The change would be small and localized and of little consequence.

Moderate: an action that would result in some change to a population or individuals of a species or resource. The change would be measurable and of consequence to the species or resource but more localized.

Major: an action that would have a noticeable change to a population or individuals of a species or resource. The change would be measurable and result in a severely adverse or major beneficial impact, and possible permanent consequence, upon the species or resource.

THREATENED, ENDANGERED, CANDIDATE SPECIES and SPECIES OF SPECIAL CONCERN

Methodology

Information on possible threatened, endangered, candidate species and species of special concern was gathered from….. Information from prior research at (park) was also incorporated. Map locations of habitat associated with threatened, endangered, candidate species and species of special concern were compared with locations of proposed developments and modifications of existing facilities. Known impacts caused by road and trail construction and visitor use were also considered.

The thresholds of change for the intensity of an impact are defined as follows:

Negligible: an action that could result in a change to a population or individuals of a species or designated critical habitat, but the change would be so small that it would not be of any measurable or perceptible consequence. The change would result in a *no effect* opinion from the U.S. Fish and Wildlife Service.

NPS DOCUMENT # 591

Minor: an action that could result in a change to a population or individuals of a species or designated critical habitat. The change would be measurable but small and localized and of little consequence, and result in a *may effect* opinion from the U.S. Fish and Wildlife Service.

Moderate: an action that would result in some change to a population or individuals of a species or designated critical habitat. The change would be measurable and of consequence but result in a *not likely to adversely effect* opinion from the U.S. Fish and Wildlife Service.

Major: an action that would result in a noticeable change to a population or individuals of a species or resource or designated critical habitat. The change would result in a *likely to adversely effect* opinion from the U.S. Fish and Wildlife Service.

GEOLOGICAL RESOURCES

Methodology

All available information on geological resources in the park was compiled. The information is based on (site park plan's, studies, etc.).

The thresholds of change for the intensity of an impact are defined as follows:

Negligible: An action that could result in a change to a natural physical resource, but the change would be so small that it would not be of any measurable or perceptible consequence.

Minor: An action that could result in a change to a natural physical resource, but the change would be small and localized and of little consequence.

Moderate: An action that would result in a change to a natural physical resource; the change would be measurable and of consequence.

Major: An action that would result in a noticeable change to a natural physical resource; the change would be measurable and result in a severely adverse or major beneficial impact.

VISITOR USE and EXPERIENCE

Methodology

Visitor surveys and personal observation of visitation patterns combined with assessment of what is available to visitors under current management were used to estimate the effects of the actions in the various alternatives. The impact on the ability of the visitor to experience a full range of monument resources was analyzed by examining resources mentioned in the monument significance statement.

Impacts are described in terms of type (are the effects beneficial or adverse?), context (are the effects site-specific, local, or even regional?), duration (are the effects short- or long-term?), and intensity (are the effects negligible, minor, moderate, or major?). The thresholds of change for the intensity of an impact are defined as follows:

Negligible: the impact is barely detectable, and/or will affect few visitors.

NPS DOCUMENT # 591

Minor: the impact is slight but detectable, and/or will affect some visitors.

Moderate: the impact is readily apparent and/or will affect many visitors.

Major: the impact is severely adverse or exceptionally beneficial and/or will affect the majority of visitors.

SOCIOECONOMIC ENVIRONMENT

Methodology

Issues were identified through the scoping process, and concerns covered by this section include effects on adjacent landowners and nearby towns or agencies, economic contribution of monument to local economies, traditional land uses external to monument boundaries, and possible conflicts between the proposed action and local, state, or Indian tribal land use plans, policies, or controls.

The thresholds of change for the intensity of an impact are defined as follows:

Negligible: the impact is barely detectable, and/or will not affect adjacent landowners and nearby towns or agencies.

Minor: the impact is slight but detectable, and/or will affect a minority of adjacent landowners and nearby towns or agencies.

Moderate: the impact is readily apparent and/or will affect many adjacent landowners and nearby towns or agencies.

Major: the impact is severely adverse or exceptionally beneficial and/or will affect the majority adjacent landowners and nearby towns or agencies.

PARK OPERATIONS

Methodology

Park operations, for the purpose of this analysis, refers to adequacy of the staffing levels and quality and effectiveness of the infrastructure used in the operation of the park in order to adequately protect and preserve vital resources and provide for an effective visitor experience. This includes an analysis of existing and needed staffing levels and of the condition and usefulness of the facilities and developed features used to support the operations of the park. Facilities include the roads that are used to provide access to and within the park (both administrative and visitor use), housing used for staff required to work and live in the park, visitor orientation facilities (visitor centers, developed and interpreted sites, and other interpretive features), and the necessary administrative buildings (office and workspace for park staff), garages, shops, storage buildings, and yards used to house and store the equipment, tools, and materials used to maintain the constructed facilities and features that support the operations of the park. This also includes the presence of utilities such as phones, sewer, water, and electric and other constructed features used to facilitate the operations of the park.

In addition to the above, discussion of impacts to park operations focuses on (1) employee and visitor health and safety, (2) ability to protect and preserve resources, (3) staff size, whether staffing needs to be increased or decreased, (4) existing and needed facilities, (5) communication (e.g., telephones, radio, computers, etc.), and (6) appropriate utilities (sewer, electric, water).

NPS DOCUMENT # 591

Park staff knowledge was used to evaluate the impacts of each alternative and is based on the current description of park operations presented in the Affected Environment section of this document. Definitions for levels of impacts to monument operations efficiency are as follows:

Negligible: an action that could change the operations of the monument, but the change would be so small that it would not be of any measurable or perceptible consequence.

Minor: an action that could change the operations of the monument but the change would be slight and localized with few measurable consequences.

Moderate: an action that would result in readily apparent changes to monument operations with measurable consequences.

Major: a severely adverse or exceptionally beneficial change in monument operations.

NPS DOCUMENT # 591

Linda Dansby
06/25/02 03:53 PM MDT

To: Laurie Domler/DENVER/NPS
cc:
Subject: Another change to Lemon/Lemon Seed Review memo

Laurie: I finally found a minute to run downstairs to the library and look for the Padre Island GMP/DCP - it was in fact done with an EA.

When you do get around to looking at my comments there will be 2 changes:

Page 2 - comment #8 - keep the page reference but delete the first comment questioning if the GMP/DCP was done with an EIS or an EA.

Page 11, comment #37 - please delete "EIS or (?)"

Many thanks
Linda

NPS DOCUMENT # 591

Linda Dansby
06/25/02 11:10 AM MDT

To: Laurie Domler/DENVER/NPS@NPS
cc: Chris Turk/DENVER/NPS@NPS
Subject: Addendum to PAIS's Lemon/Lemon Seed EA

Laurie: Sorry for this after-the-fact comment but I just received a call-back from Ed Kassman. He agrees that the the NPSs nonfederal oil and gas rights regulations (36 CFR 9B), section 9.52(b), that requires the Superintendent to publish a notice of availability of the plan of operations in the FR, which we've traditionally included the availability of the EA and SOFs, does not require Supt. Whitworth to re-publish a NOA because of re-issuance of the EA for a 2nd 30-day review. The park published a NOA in the FR back in April when the first EA was made available; therefore, the 9B's won't require the park to publish a NOA in the FR again. But, we do encourage publication of the NOA in local newspaper(s).

In terms of NEPA policy, whether the park should publish the NOA in the FR to re-issue the EA for a 2nd 30-day review is for you and Chris to make. If you agree that the park would not need to publish a NOA in the FR, then the review memo needs to be amended to include:

Section4.0, Consultation and Coordination, 1st paragraph should be changed to read:
"A Notice of Availability for the Plan of Operations, EA, and draft Floodplains and Wetlands Statements of Findings will be published in the local newspaper (*Corpus Christi Caler Times*)." You are not required under 9.52(b) to republish a NOA in the FR when you've done that once; and DO-12 does not require you to do so.

Linda

NPS DOCUMENT # 591

Linda Dansby
06/25/02 10:44 AM MDT

To: Laurie Domler/DENVER/NPS@NPS
cc: Chris Turk/DENVER/NPS@NPS
Subject: Draft review memo for PAIS BNP Lemon/Lemon Seed EA2

Hi Laurie: Attached are my review comments on the EA. There are some comments (in red) that I especially wanted you and Chris to look at and revise as needed.
Let me know if I can help you further with compiling comments, etc. on this one.



PAIS BNP Lemon and Lemon Seed EA Review.(

NPS DOCUMENT # 591

L3025(IMDE-PE)

June 24, 2002

Memorandum

To: Superintendent, Padre Island
Attention: Chief, Resource Management and Science

From: Chris Turk, Regional Environmental Quality Officer, IMDE-PE

Subject: Review of Environmental Assessment for BNP's Plan of Operations to Drill And Produce the Lemon/Lemon Seed Unit Wells No. 1-1000S and No. 1-1008S within Padre Island National Seashore

We have completed our review of the subject environmental assessment (EA). Review comments on the EA were provided by Regional Minerals Coordinator Linda Dansby, and Environmental Quality Specialist Laurie Domler of my staff.

We understand that the EA was released for public review in April 2002; however, in response to review comments received, substantive changes have been made to the EA and that you intend to re-issue the EA for a second 30-day public review.

Our review resulted in identifying many areas for improvement. We recommend that you send the EA back to us for a follow-up review once you have revised the EA to address our comments, below.

1. Page i, Summary, 2nd paragraph, line 9. Change "soils" to "geology and soils."
   - End of line 12, beginning of line 13, change "stabilize this area" to "stabilize the cut."
   - We didn't find a summary statement describing the impact conclusion for state and federally-listed threatened and endangered species. We suggest you insert "state and federally-protected species" following "wildlife" in line 10.

2. Page i, Public Comment, end of line 3 and beginning of line 4. "Replace "The Notice of Availability published…" with "A Notice of Availability will be published…"
   - Change the period after *Corpus Christi Caller Times* to black rather than red.
   - Beginning of 6th line, change "you name.." to "your name…"
   - We suggest the line showing as a footer at the bottom of the page be extended to the right margin or at minimum cover the underlying text "Seashore."

3. Table of Contents, page iii, we assume that section 3.9, Threatened and Endangered Species within Padre Island National Seashore, will be changed to "State and Federally-Protected Species" when the Table is updated. We understand that the ESA guides us to prepare a BA specific to federally-listed T/E species; but because the NPS Management Policies guide us to manage state-listed species also, the EA could be more inclusive.

NPS DOCUMENT # 591

4. Section 1.0, Purpose and Need, page 1, 4th paragraph. The analysis area is described too generally. If it is possible to define a common geographic area, then the description of the analysis area could remain here. We provide the following description of the analysis area for your consideration:

   "The analysis area in this EA for evaluating direct and indirect impacts includes:
   - The direct area of impact would include the access road from the park entrance via paved Park Road 22, along 12.5 miles on the Gulf beach vehicle corridor to a proposed cut through the foredunes, and then along a proposed xxx-foot long caliche access road to the wellpad; and the footprint for constructing the 4.17-acre well/production pad and a 0.8-mile long by 25 to 50-foot wide corridor for a flowline.
   - The indirect area of impact for each park resource or value could vary for each impact topic; but generally would not extend beyond 1500 feet (we've selected the analysis area for natural soundscapes but other impact topics could increase the distance up to a ½ to ¾ mile radius – a description why the specified radius distance should be provided).
   - For State and Federally-Protected Species, the analysis area for direct and indirect impacts is defined for each species in the Environmental Consequences section of this EA.
   - For the impact topic, "Nonfederal Oil and Gas Development," the analysis area includes the effect on BNP and the mineral owner to meet NPS permitting requirements (including cost and time involved for BNP to prepare a plan of operations and contractor efforts, increased mitigation measures and reclamation requirements inside an NPS unit, the effect of proceeding or not proceeding to drill and produce the wells), and the effect of drilling and producing the 2 wells on the domestic energy supply.

   The analysis area for evaluating cumulative impacts on park resources and values includes the entire park.

   Another option is to describe the analysis area for each park resource or value. If you choose this option, it would be better to describe the analysis area under the pertinent topic in the Environmental Consequences section following the description of the affected environment, and to not include a description under the Purpose and Need section. A good example is how we can define a 1500-foot radius around the well/production pad for natural soundscapes. Refer to the parks Oil and Gas Management Plan/FES (February 2000), figure 3-10 to see that a 1500-foot radius would include the distance that elevated noise during well drilling/workover operations would approach 40 decibels. Elevated noise would also result from construction and intermittent maintenance of the flowline, but noise would fall to background levels well within 1500 feet. Are the back-island locations that Dr. Foch collected sound measurements – specifically the PanAm Road and the Grasslands Nature Trail – similar to ambient sound levels for the proposed project area?

   - We recommend that you move Figure 1 to Page 2, and insert the following sentence at the end of the 4th paragraph: "Figure 1 is a Region/Vicinity Map."

5. Page 2, NPS Organic Act and General Authorities Act – Prevention of Impairment, last paragraph. Remove the full justification. Also, merge the text under item 3 – there seems to be a hard return separating the words "…relevant - NPS planning documents.".

6. Page 3, insert a space between the 1st and 2nd paragraphs and remove the full justification.

7. Page 4, 1st line, spell out National Seashore.

8. Page 4, Section 1.2.4., Approved Park Planning Documents, 2nd paragraph, last sentence. Are you sure the park's 1983 GMP/DCP was completed along with an EA or was it an EIS?

NPS DOCUMENT # 591

- Last paragraph beginning "An Oil and Gas Management…" and extending onto page 5 through the paragraph beginning "During the scoping…" should all be shown in the font reflecting this is new text.

9. Page 5, please insert a space between the paragraph beginning "Table 1, below…" and the title for the table.

10. Page 8, Section 1.3, Issues and Impact Topics Evaluated. Consider adding a sentence at the beginning of the paragraph to explain that state and federally-protected species has been added to the list of park resources and values evaluated in this EA. We suggest something like: "Based on public review of the plan of operations, environmental assessment and draft statements of findings (enter dates of public review period), NPS has included State and Federally-Protected Species to the list of impact topics evaluated in the EA." While "threatened and endangered species" was included in the list of issues and impact topics evaluated in the April EA, and issue statements were provided, the topic was not evaluated further in the EA.

11. Page 6, Table 2, Issue Statements, Nonfederal Oil and Gas Development, please replace the 2nd issue statement with the following: "Production of the nonfederal mineral interest would contribute hydrocarbon resources to meet the nation's domestic energy demands."
    - Under Air Quality, insert a bullet for the 2nd issue statement beginning "Maintenance activities, including the application of herbicides for…"
    - Also under Air Quality, under the 2nd issue statement, 6th line, please change "parks" to "park."
    - The pitch size for "Wetlands" seems larger compared to the other impact topics.

12. Page 11, Section 1.4, Issues and Impact Topics Eliminated from Further Analysis. We suggest for your consideration to include "Sensitive Resource Areas (SRAs)" with the following discussion: "The O&GMP for the park (March 2001) identified SRAs as "locations of particularly rare and/or vulnerable resources. As a result of selecting a location that requires the wells to be directionally drilled, the following SRA's were avoided: seagrass beds, algal flats, and trees (relict oak mottes). Therefore, there would be no impact on these park resources, and these issues were dismissed as impact topics in this EA."

13. Page 12, Section 2.2, Alternative B, Proposed Action, Location of the Well. Please add a sentence to the end of the paragraph to the effect:
    Additional maps include:
    Figure 2: General location of the proposed Lemon/Lemon Seed Unit in relation to Padre Island National Seashore boundaries.
    Figure 3: Proposed location of the Lemon/Lemon Seed Units, 12.5 mile marker on Padre Island National Seashore. Depicts location of access road, pad/ production site, proposed pipeline, and wetland area.
    Figure 4: Surface and bottom hole locations of Lemon/Lemon Seed Units, wells No. 1-1000S and No. 1-1008S.
    Figure 5: Close-up of wetland area within the 25-foot work corridor marked.

    - Figure 3 - could you show the analysis area boundaries on this map? Also, insert a reference to this figure in the description of the analysis area (Purpose and Need section, 4th paragraph; or the Environmental Consequences section should the description of the analysis areas be moved there).
    - Figure 4 – could Gulf of Mexico state tract boundaries be shown on the map?
    - Figure 5 – we suggest the green-coloring only be within the 25-foot corridor.

14. Page 19, Surface Location of Well Pad, beginning of line 5, change "will" to "would."

NPS DOCUMENT # 591

15. Page 20, Use of Water for Drilling, line 1: change "BNP proposes to drill temporary" to "BNP proposes to drill a temporary…"
    - Line 3 – spell out "PAIS."
    - Line 6 – change "BNP will" to BNP would."
    - Line 9 – change "operator will" to "operator would."
    - 2nd paragraph – line 5 – First time we've seen "TNRCC." Spell out "Texas Natural Resource Conservation Commission" and place the abbreviation in parentheses.
    - Lines 9 and 10, change to read: "…needed water: pump water or fill water trucks from the Dunn-Murdock #1 location to the Lemon/Lemon Seed location; or, obtain…"

16. Page 21, Pipeline, 2nd line, suggest changing from "…operates an inactive…" to "…owns a currently-inactive…"
    - Lines 9 and 10 – change "50 feet" and "25 feet" to "50-foot" and "25-foot."
    - Last sentence – if the 25-foot construction corridor in wetlands is an NPS stipulation, we suggest this sentence be revised to read: "The NPS stipulation of a 25-foot…" If the reduced corridor is not being stipulated by NPS as a mitigation technique, then please explain who is requiring it.
    - 2nd paragraph, lines 6 and 7 – please change "will" to "would."
    - Line 8 – change "…released on to the…" to "…released onto the…"
    - Lines 9 and 10 – change "…hauled to an approved disposal site. " to …hauled to a State-approved disposal site outside the park."

17. Page 21, Reclamation. We suggest replacing the first 2 sentences with: "As soon as possible after completion of approved operations but no later than six (6) months thereafter unless a longer period of time is authorized by the Regional Director, BNP would initiate reclamation. [36 CFR 9.39(a)(2)]" Reclamation would follow both the drilling and production phases of operations. After drilling the wells, and if the wells are placed in production, the well pad size would be reduced for the production phase, as described above under "Production Facility."
    - Please insert the following opening sentence to the 2nd paragraph: At the completion of production operations, the wells would be plugged, and all above ground structures, equipment, and other man-made debris resulting from operations would be removed; and any contaminating substances would be removed or neutralized. [36 CFR 9.39(a)(2)]

18. Page 21, last paragraph. We recommend a heading "Mitigation Measures" be placed above this paragraph. We like what you've done to further improve the mitigation table by incorporating a column to show the phase of operations the mitigation measure would be applied. Because there are so many mitigation measures, it would also be helpful if you would insert a first column to sequentially number each measure.
    - 1st mitigation measure – for consistency with the Summary, we suggest the first line be changed to read: "Direct impacts to wind-tidal algal flats, seagrass beds, trees, and…"
    - 3rd mitigation measure – replace "people" with "visitors."
    - 4th mitigation measure – we suggest adding in the 1st line: "In accordance with Padre Island National Seashore's approved…"
    - 4th mitigation measures – change "…BNP will…" to "…BNP would…"
    - 4th mitigation measures – please include a description what this mitigation measure would avoid or mitigate impacts on – we suggest something like: "In the event of a hurricane, this mitigation measure is intended to result in protecting human life and property, reducing flood hazards, and protect natural floodplain values." We suggest you review all the mitigation measures to ensure they explain what benefits they are intended to derive.
    - Please consider adding the following mitigation measure that would apply to all phases of BNP's proposed operations: "The Superintendent of Padre Island National Seashore, or his representative, shall have reasonable access to the operations as is necessary to properly

NPS DOCUMENT # 591

monitor and insure compliance with the conditions of the plan of operations under the provisions of 36 CFR §9.37(f)."

- Mitigation measure 10 – remove the capitalization on "Construction." We suggest deleting the word "briefly" and inserting the following text at the end of the 2nd sentence: "...over the short-term until restoration of wetlands is successfully achieved within 1 growing season."
- Mitigation measure 13 – we recommend the 2nd line be changed to read: "...over the road during the term of..."
- We suggest the 2nd sentence under Mitigation measure 13 be split to form a new mitigation measure 14.
- Mitigation measure 15 ("Gate would be installed...") . Move the fragment of sentence from the row above (in mitigation measure 14) to this mitigation measure.
- Mitigation measures 9 (For all releases...", 31 (Source of water..."), and 44 (Should Lemon/Lemon Seed...") do not have references – if these are not included in BNP's plan of operations and are being added as mitigation measures by NPS in the EA, then they belong under the next heading "Conditions of Approval."
- Mitigation measure 21 (After leveling the access road...") we suggest changing the last line to read: "...through the soil from reaching the ground water."
- Mitigation measure 23, 2nd to last line, we suggest changing to read: "...fence would be installed around the production facilities of a design specified by the Superintendent."
- Mitigation measure 28 ("To prevent accumulation..."), 7th line, change "supply" to "supplies."
- Mitigation measure 31 ("Source of water and annular injection:"), end of 2nd sentence, we recommend adding: "...have to purchase water from the park, or haul water via water trucks along the Gulf beach."
- Mitigation measure 35 ("If the well were..."), change to read: "If the wells were produced,..."
- Mitigation measure 45 ("The well would be plugged..."), we suggest adding a sentence that reads: "These standards ensure protection of useable quality aquifers."
- See our comments below regarding combining the mitigation measure tables 9 and 10 from the Affected Environment and Environmental Consequence's section, Visitor Use and Experience into Table 3.

19. Page 27, Conditions of Approval. We suggest opening this section with the following: "The Regional Director has authority to attach conditions to plans of operations under the NPS's Nonfederal Oil and Gas Rights Regulations (36 CFR 9B)."
    - We suggest that you number the COAs under this heading.
    - Please also refer to our comment #18 above regarding mitigation measures 9 (For all releases...", 31 (Source of water..."), and 44 (Should Lemon/Lemon Seed...").
    - Last paragraph, beginning "Damage to paved surfaces..." Please change the last sentence to read: "Price would be determined based upon wear to the road."
    - Also, if mitigation measures from tables 9 and 10 are being attached by the NPS and are not included in BNP's plan of operations, they would belong under this heading and not in Table 3.

20. Alternatives Considered but Dismissed from Further Analysis. We suggest you consider adding the following alternative:

    NPS Acquisition of the Mineral Rights that are Part of BNP's Proposal
    In the event that a proposed operation cannot be sufficiently modified to prevent the impairment of park resources and values, the NPS may seek to extinguish the associated mineral right through acquisition, unless otherwise directed by Congress. With respect to the BNP proposed Plan of Operations, mitigation measures were identified and applied, which substantially reduced the potential for adverse impacts to park resources and values. As a result, the acquisition of mineral rights was not evaluated in the EA.

NPS DOCUMENT # 591

- Page 30, Alternative Well Access, line 13 – The following discussion is pertinent to this alternative considered but dismissed from further consideration, and also for the environmental consequences on wetlands under the Proposed Action. While there are no known freshwater wetland mitigation sites within the park, the park's Oil and Gas Management Plan/FES, pages 2-59 – 2-60, describes in priority order how wetlands compensation may be met. While we understand the Superintendent may decide not to require wetlands compensation for the 0.032 acres of direct wetlands impacts because the park has no available disturbed wetlands sites to serve as a compensation site, and the acreage is so small, we encourage the park to reconsider its option to have BNP compensate for the wetlands impacts by contributing towards the printing of a park brochure, producing a wayside exhibit, or constructing a portion of an interpretive wetlands boardwalk that would help park visitors learn about the importance of wetlands. The park's O&GMP is precedent-setting in paving the way for this type of innovative mitigation when compensation acreage would be too small to merit a restoration project, and there are no disturbed sites to restore in the park.
- Page 29, Gulf of Mexico Alternative, 2nd paragraph. Linda and Ed Kassman (GRD) commented on this paragraph while reviewing the Biological Assessment. The Resource Management Codes (RMCs) are not mandatory requirements. Ed's understanding is that the RMCs are intended to notify potential lessees of likely stipulations that may apply to an operation within the leased tract. The RMCs purpose is to give potential lessees full and fair notice of what to expect. As such, the RMC provide a modicum of cover to the state, should a lessee claim a diminution of value of their property right via application of a specific stipulation. Neither the State of Texas, nor the NPS enforces the RMCs under any statute or regulation. We suggest this paragraph be revised.
- Page 30, Alternative Seasonal Closure, 2nd paragraph, 1st sentence, "The beach is also considered a roadway by the Texas Open Beaches Act, which allows unrestricted public vehicle access to the Gulf of Mexico." Linda and Ed Kassman (GRD) commented on this sentence while reviewing the Biological Assessment. We recommend you to replace the 2nd, 3rd and 4th paragraphs in under this heading with the revised text provided by Ed:

  The nonfederal mineral owners hold a right of reasonable access across the federal surface to explore for and develop their mineral interest. The NPS, however, has the right under federal law to reasonably regulate access to protect park resources and values. While federal law is supreme to and supplants state law that is in conflict with it, Congress has recognized the exercise of oil and gas rights at Padre Island N.S. The NPS has neither found, nor has it been presented with data that would support a decision for a seasonal beach closure applied to oil and gas operators. The NPS will attach reasonable mitigation measures to an oil and gas operator's access, e.g. speed limits, monitors, that are designed to provide protection against harm to park resources an values. A seasonal closure may also require that the drilling rig(s) to be demobilized and moved repeatedly up and down the beach, or to have more than one rig operating at a time. Impacts associated with the repeated mobilization of the drilling rig and associated equipment would increase impacts to visitors, other non-sea turtle species of concern, vegetation habitats, and increase the operating costs to the contractor. Such a closure would result in a concentration of impacts over a shorter amount of time, and may not allow for natural recovery of the beach and associated access routes between operations.

  Some benefits may occur to shoreline species, e.g. Piping Plover, that utilize the beach to nest, forage, or loaf during a closure. The public would not be subjected to the type of traffic volume during high visitation periods, and the risk of crushing or impacting nesting sea turtles, their nests, or any hatchlings left on the beach would be somewhat reduced. There would, however, still be potential impacts from public use and recreation of the beach during this seasonal closure. Even though there are added benefits to sea turtles and summer

NPS DOCUMENT # 591

visitors, the potential for greater impacts due to heavier concentration of oil and gas activities created by the seasonal window outweighed the potential benefits.

Based on the lack of data supporting a sesonal beach closure as applied to oil and gas operator access in particular, the greater concentration of impacts in the short-term, the increased risk to equipment and personnel, the health and safety issues related to hurricanes, the potential impact to Piping Plovers and other protected and non-protected species of shorebirds, and the expected increase in economic costs associated with more frequent or repeated mobilization of the drilling rig and associated equipment, this alternative was dismissed.

21. Section 2.4, Environmentally Preferred Alternative, page 31, 2nd paragraph. Please delete the 3rd sentence as it repeats what has already been described under section 2.1. Replace the 3rd, 4th and 5th sentences with: "Under Alternative A, No Action, the wells would not be drilled; however, 12 existing gas wells and pipelines would continue to operate. Routine maintenance of the 12 existing operations would include daily access by pickup-sized trucks and periodically larger trucks along the Gulf beach. Larger trucks would include pumper trucks used to periodically remove "condensate" from storage tanks."

    - Page 32 – delete "oil and gas operations or subsequent" from the next sentence.

    - We suggest that No Action would meet criteria 1 through 4 and 6; and the Proposed Action would meet criteria 1,2,4 and 5.

22. We suggest the last paragraph under Section 2.4, Environmentally Preferred Alternative, would be better placed under a new heading: "NPS Preferred Alternative" and be replaced with: "The environmentally preferable alternative is the Alternative A because it surpasses Alternative B in realizing the full range of national environmental policy goals as stated in §101 of NEPA. However, because the enabling legislation of Padre Island National Seashore respects the exercise of oil and gas rights, the environmentally preferred alternative was not selected as the NPS preferred alternative. The NPS preferred alternative is the proposed action (AlternativeB). The NPS believes this alternative would fulfill its mandates and direction, giving due consideration to environmental, economic, technical, and other factors."

23. Table 4, Extent that Each Alternative Meets Objectives, page 32 – we noticed the text in the 2nd and 3rd rows for the 2nd and 3rd objectives is slightly indented.

24. Table 6, Comparative Summary of Impacts, pages 33 through 36. The table should be composed of the conclusion statements copied and pasted in from the Environmental Consequences (EC) section. In many cases, the summaries in the table do not match the impact analysis described in the EC section.
    - Summary of impacts on water resources and floodplains under Alternative B, Proposed Action – summary (and the conclusion statement) should disclose that there is no practicable alternative to siting the proposed project within the 100-year floodplain.
    - Include a summary for State and Federally-Protected Species.

25. Section 3.0, Environmental Consequences, page 36.
    - We suggest the title of this section be changed to "Affected Environment and Enviornmental Consequences.
    - We noticed that you didn't have a definition for cumulative impacts. Here's a definition you may paste in after the 2nd paragraph:

      Cumulative Impacts: The Council on Environmental Quality (CEQ) regulations, which

NPS DOCUMENT # 591

implement the National Environmental Policy Act of 1969 (42 U.S.C. 4321 *et seq.*), require assessment of cumulative impacts in the decision-making process for federal projects. Cumulative impacts are defined as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions" (40 CFR 1508.7). Cumulative impacts are considered for both the no-action and preferred alternatives and were determined by combining the impacts of the proposal with other past, present, and reasonably foreseeable future actions.

- We also suggest you insert, after the definition for "Cumulative Impacts" the following definition for "Impairment":

  Impairment: a major, adverse impact to a resource or value whose conservation is: 1) necessary to fulfill a specific purpose identified in the establishing legislation of Padre Island National Seashore; 2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or 3) identified as a goal in the park's general management plan or other relevant NPS planning documents.

- A dash is missing between the term "negligible" and its definition.
- Section 3.1, Impacts on Nonfederal Oil and Gas Development. GRD and IMR recently refined the impact analysis for this topic in the EA covering Ross Davis's directional drilling application at Big Thicket. We encourage you use this template; the impacts would be similar. We have included it as Enclosure 1 to this memo.
  - We suggest the description of the RFD-projected drilling and production of 18 wells be supplemented with the following statement: "During April-June 2001, BNP completed drilling the Dunn-Murdock #1 well."
- Impacts are not described consistently. All impact analyses need to include the following components: context (localized within the project area, parkwide, or regional), duration (short-term up to 3 years, or long-term up to 20 years or longer), intensity (negligible, minor, moderate or major) and type (adverse or beneficial) of impacts.
- Existing impacts are sometimes described in the discussion of "Impacts of Alternative A or B" and at other times they are included in the Cumulative Impact analysis. We suggest using the following format to provide consistency:
  - 1st paragraph: Under Alternative A, No Action, the wells would not be drilled, resulting in no new impacts on (insert the park resource or value).
  - 2nd paragraph: Existing impacts on (insert the park resource or value) would be caused by (describe the activities or developments), resulting in (context, duration, intensity and type) impacts on (insert the park resource or value). If there are no existing impacts you can simply add the following sentence after the 1st: "There are no existing impacts on (insert the park resource of value) in the project area." If this is the case, we recommend that you switch this sentence to appear first, followed by the one above, as it flows better.
- Conclusions are also inconsistently described. Each Conclusion must include 1) a summary of impacts under the alternative, 2) summary of cumulative impacts under the alternative, and 3) for all park resources and values evaluated (all impact topics except Nonfederal Oil and Gas Development), end with an impairment analysis/statement.
- Page 41, Impacts of Alternative B, Proposed Action, on Water Resources and Floodplains. The analysis should also include a discussion related to the foredunes providing protection from hurricanes and tropical storms for the island's backcountry and Texas mainland. We suggest the proposed cut through the foredunes would be a negligible (?) adverse impact on the barrier island's role as a defense to prevent or slow hurricanes from approaching the mainland.

NPS DOCUMENT # 591

- Page 42, Impacts on Wetlands, Affected Environment. Suggest an opening sentence to describe wetlands parkwide – for example, "Approximately 60% of the park is comprised of wetlands, including wind tidal flats, emergent wetlands, and seagrass beds."
- Page 43, line 12 and Page 43, 2nd paragraph – please clarify if NPS is requiring the reduced 25-foot corridor within wetlands.
- Page 43, Impacts of Alternative B, Proposed Action, on Wetlands. The first sentence is a fragment.
- Section 3.9, page 49 – retitled to "State and Federally-Protected Species." Line 10 and also on page 50, first line, "Table 3" should be changed to read "Table 7." Because the analysis includes some species that are not actually "listed" we sugggest the title throughout the EA be changed to "State and Federally-Protected Species." We understand the BA includes federally-listed T/E species, but the EA may include a broader focus.
- Texas horned lizard, page 51, 3rd, 4th and last paragraphs. The 3rd paragraph states "Texas horned lizards have been found on Padre Island north of the park, but have not been documented in the park." The 4th paragraph describes impacts of No Action on the Texas horned lizard: "As discussed earlier, existing gas operations and flowlijnes once impacted habitat that could be used by the Texas horned lizard." (We aren't sure what text this statement is referred to.) The last paragraph on the page describes impacts under the Proposed Action: "However, since this species has not been documented within the park, and current literature suggests that it occurs only in the western third of the state (Bockstanz, UT), it is not likely that this project will directly or indirect affect this species." These statements seem to be inconsistent. As described, the Texas horned lizard has been document north of the park, and because suitable habitat exists within the park, there is potential that the species to migrate into the park over time.
- Texas Indigo Snake, pages 52 and 53 – under the Affected Environment, 2nd paragraph, "This species ranges from southern Texas southward along the Gulf coast into Veracruz and Hidalgo, Mexico…" On page 53, under Impacts of Alternative B, Proposed Action, there seems to be an inconsistency with the statement "…current literature suggests that it occurs only in the western third of the state (Bockstanz, UT),…"
- Page 55, Kemp's ridley sea turtle, Impacts of Alternative A, No Action. There should be no impact on the turtles because the wells would not be drilled. No Action should not result in a "a beneficial indirect impact on sea turtles." We suggest the first 2 sentences be replaced with a statement: "Under No Action, the wells would not be drilled, resulting in no effects on this species." The discussion should continue with the 3rd paragraph, ending with the last 2 sentences remaining from the 1st paragraph. Move the 2nd paragraph to the top of Page 57 so the discussion about lighting can be packaged together. Artificial lighting on the drill rig would result in "direct" not "indirect" impacts on sea turtles.
- In the T/E section, should the commitment of the park to perform biological field surveys of the project area for State and Federally-Protected Species prior to and during construction be included in the Table of Mitigation Measures? In the past, our practice in the 9B program has been to instruct the prospective oil and gas operator to contract qualified biologists to perform such surveys. We are puzzled that BNP was not instructed to hire qualified biologists to perform biological survey(s) prior to selecting the proposed project site and preparing the plan of operations. If the proposed project site was found to have suitable habitat for state and federally-protected species, and particularly for listed species, would we not have relocated the proposed project rather than "physically remove the individual and relocate it to an adjacent undisturbed location" ? Are park staff recognized as "qualified biologists" as defined on page 2-53 of the O&GMP/FES? Do park staff have time to do these surveys? Seems like a lot of work, time and responsibility is being taken on when the option exists to guide BNP to contract these surveys under NPS and FWS oversight.
- Mitigation 2 in the last paragraph on page 55 is not included in the Tables of Mitigation Measures (either 3, 9 or 10).

NPS DOCUMENT # 591

- Page 57, last sentence, "Future research in this area is called for to better understand the compaction, sand component, and vehicle threshold effects." Please delete this sentence as it was also removed from the BA.
- Page 58, "Nesting activity for 2002 seem to support the idea that existing traffic levels (approximately) 500,000 vehicles annually) do not currently have a large negative impact on nesting sea turtles." We suggest "large negative impact" be replaced with "measurable effect."
- Conclusion on page 58 – This statement mistakenly describes impacts under the proposed action. We suggest rephrasing this sentence to read: "There is a moderate possibility for vehicle use along the Gulf beach associated with the continuing operation of 12 existing oil and gas wells and pipelines to adversely impact Kemp's ridley sea turtles; however, with the continuing application of mitigation and conservation measures, the No Action alternative is not likely to adversely affect the Kemp's ridley sea turtle."

26. Throughout the document, we suggest that "PAIS," "Padre Island NS," and "the national seashore," be changed to either "Padre Island National Seashore" or "the park."

27. Page 64, Impacts of Alternative A, No Action [on the Eastern Brown Pelican], 1st paragraph, 1st sentence. We like the description of the analysis area including 12.5 miles of Gulf beach and how the Affected Environment discussion supports it. In the 2nd paragraph, the last sentence, "There are no construction, drilling, or production activities included in this alternative" is not accurate. We also notice that there are at least 2 different ways of describing existing operations under the Impacts of Alternative A, No Action, throughout the State and Federally-Protected Species section. The continuing operation of the 12 oil and gas wells and pipelines would also involve occasional construction activities required in uncovering and inspecting and if needed, replacing sections of pipeline; performing well workovers; and plugging and reclamation. Reclamation would involve the removal of large volumes of imported caliche that form the elevated well/production pads and access roads once reclamation and abandonment of plugged wells occurs, and recontouring the area to natural contours. While traffic volumes would increase above routine day-to-day activity levels, and some heavy equipment would be transported along the Gulf beach, the volume would be substantially lower compared to drilling a well. This sentence should be revised. Further, we recommend a consistent description of continuing operations should be used in all sections describing Impacts of Alternative A, No Action, in the State and Federally-Protected Species section.

28. Page 66, Impacts of Alternative A, No Action [on Interior Least Tern], first sentence. The access includes 15 miles of Gulf beach – should it be 12.5 miles?

29. Throughout the description of the No-Action, Proposed Action, and the impact analyses, use "would" in place of "will."

30. Page 76, 2nd paragraph. Good observation that oil and gas facilities, particularly those that would provide a high perch, could be used by peregrines, a beneficial impact.
31. Page 77, Impacts of Alternative A, No Action [on White-tailed Hawk]. Change the last sentence to read: "Under No Action, the wells would not be drilled; therefore, there would be no new impacts on upland habitat. As a result, there would be no effect on the White-tailed Hawk."
    - We suggest the impact analysis include a discussion of mitigation measure 42 (maintenance) from Table 3 – "BNP would plant native willow shrubs or trees around the production facility to minimize visual impacts to visitors. Plantings of native trees or shrubs would also provide and perpetuate habitat for migratory birds." While White-tailed Hawks may not perch in these trees while BNP workers are within close proximity at the operations area, nevertheless, we suggest that this mitigation measure would result in a localized, negligible, long-term, beneficial impact on this species.

NPS DOCUMENT # 591

32. Page 79 Conclusion to Impacts of Alternative A, NO Action [on Loggerhead Shrike], first sentence. As commented on numerous times, No Action would not result in beneficial impacts – there would be no effect.
    - Under Impacts of Alternative B, Proposed Action, mitigation measure 42, described above, could also result in negligible, long-term beneficial impacts on the Loggerhead Shrike by perpetuating habitat for this species and providing perches.

33. Page 82, Table 8. We suggest the table belongs in the discussion of the Proposed Action in the Alternatives section of the EA. It support multiple discussions of impacts including Air Quality, Geology and Soils, Natural Soundscapes, Wildlife, T/E, and Visitor Use and Experience.

34. Page 82, Impacts of Alternative A, No Action, on Visitor Use and Experience, 2nd sentence. Suggest changing to read: "However, impacts on visitor use and experience could result from vehicle traffic along 12.5 miles of the Gulf beach associated with the continuing operation of 12 oil and gas wells and pipelines." Much of the impact analysis describes parkwide impacts that belongs in the cumulative impact section. Impacts from the continuing operation of 12 oil and gas wells and pipelines should only include those operations and activities located within the analysis area for the proposal.
    - The Conclusion under Alternative B, includes two impairment analyses. We suggest deleting the first and retaining the second.
    - Under Impacts of Alternative B, Proposed Action, on Visitor Use and Experience, we recommend the first sentence be replaced with: "Under Alternative B, Proposed Action, Impacts on visitor use and experience from the continuing operation of 12 oil and gas wells and pipelines, particularly vehicle traffic along 12.5 miles of the Gulf beach, would be similar to the No Action alternative, with short to long-term, minor to moderate, adverse impacts localized along the Gulf beach. In addition, drilling and production of the Lemon/Lemon Seed Unit Wells would result in construction and maintenance of the access road, and well/production pad, resulting in the direct loss of 4.17 acres of hummocky uplands. …"
    - Last sentence – if the wells were unproductive, and the area would be reclaimed, impacts would be short-term, not long-term. We also suggest impacts would range from negligible to moderate.
    - We suggest the mitigation measures in Tables 9 and 10 be combined with those in Table 3. Mitigation measures belong with the description of the Proposed Action. They could be simply tacked onto the existing table so that the header "resource concern" differentiates these mitigation measures from the operational phases. We suggest table 10 be tacked on first, followed by table 9, so that the presentation is consistent with the presentation and analysis of impact topics.

35. Section 4.0, Consultation and Coordination, 1st paragraph. Include "draft" in front of Floodplains Statement of Findings, and Wetlands Statements of Findings to denote they are not yet signed.

36. Section 4.1, Individuals and Agencies Consulted. Please add to the list:
    Edward Kassman, Regulatory/Policy Specialist, National Park Service, Geologic Resources Division, Denver, Colorado
    Laurie Domler, NEPA/106 Specialist, National Park Service, Office of Environmental Quality, Intermountain Region, Denver, Colorado

37. Section 5.0, Bibliography, page 90. We suggest the park's GMP/DCP/EIS or EA (?) be included under the "heading Padre Island National Seashore."

NPS DOCUMENT # 591

We appreciate the opportunity to provide these comments on the EA. Should you have any questions or need any assistance, please feel free to contact us.

Enclosure

cc:
Linda Dansby, Regional Minerals Coordinator, IMSF-RMO, w/c of encl.

NPS DOCUMENT # 591

3.2 Impacts on Nonfederal Oil and Gas Development

3.2.1 Affected Environment

Within the Jack Gore Baygall Unit, 33 wells have been drilled from 1954 to 1997. Today, surface disturbances remain on 130 acres (1.2 percent of the Unit) from 33 well pads, one production pad, access roads, and six transpark oil and gas pipelines (Radian Corporation, 1984). Currently, three wells and five transpark oil and gas pipelines remain active.

A three-dimensional (3-D) seismic survey covering almost the entire Jack Gore Baygall/Neches Bottom Unit and part of the Lower Neches River Corridor Unit (300 square miles in parts of Newton, Jasper, and Hardin Counties) was conducted during 1998-1999 (see Figure 1).

In 2000, the NPS prepared a reasonably foreseeable development (RFD) scenario to project future oil and gas development based on an assessment by the U.S. Geological Survey of remaining hydrocarbons beneath Big Thicket National Preserve (DOI 2000). The RFD provides a reasonable assumption of future development of nonfederal oil and gas for park planning purposes and to provide a basis to measure potential environmental impacts. The RFD projects that initially 3-D seismic surveys would be conducted throughout the entire Preserve and would be used to delineate oil and gas drilling prospects. It was assumed that approximately 29 additional wells would be drilled over the next 15-20 years to produce the estimated 1.21 million barrels of oil, 70.11 billion cubic feet natural gas, and 1.02 million barrels natural gas liquids from Tertiary and Upper Cretaceous-age reservoirs underlying the Preserve. Of the projected 29 exploratory wells, 19 wells are anticipated to be commercially successful. The NPS acknowledges that the RFD is based solely on available production data and that fewer or more wells could be drilled.

3.2.2 Impacts of Alternative A, No Action, on Nonfederal Oil and Gas Development

Under Alternative A, No Action, the well would not be drilled. The impact on the domestic energy supply would depend on whether the exploratory well would have discovered hydrocarbons that were producible. If so, not drilling and producing the well would result in a no impact on domestic energy supplies. There could be moderate to major adverse impact on Davis due to lost revenues invested in collecting data, preparing an application, and not being permitted to develop its private mineral interests at this location.

Figure 1. Seismic exploration in Jack Gore Baygall/Neches Bottom Unit.

Cumulative Impacts of Alternative A, No Action, on Nonfederal Oil and Gas Development

Under Alternative A, No Action, the result of one exploratory well not taking place out of the 29 anticipated under the NPS RFD scenario would result in a minor adverse impact on nonfederal oil and gas development within the Preserve. However, if not drilling the well could affect Davis's decisions to proceed with additional exploration and development, there could be a moderate to major adverse impact on Davis.

NPS DOCUMENT # 591

Conclusion

Under Alternative A, No Action, the well would not be drilled or developed, resulting in a no impact on domestic energy supplies, and a moderate to major adverse impact on Davis due to uncertainty about future exploration and development.

3.2.3 Impacts of Alternative B, Proposed Action, on Nonfederal Oil and Gas Development

Under Alternative B, Proposed Action, the well would be drilled, and if hydrocarbons are discovered and produced, would result in a negligible beneficial impact on domestic energy supplies. If a commercial field is discovered, the financial impacts on Davis and the associated mineral owners could range from minor to moderate beneficial impacts, depending on the quality of the discovery. Costs and time Davis has invested with preparing an application result in a minor adverse impact.

Cumulative Impacts to Nonfederal Oil and Gas Development

Under Alternative B, Proposed Action, if the proposed well is not produced, the cumulative impact on nonfederal oil and gas development would be similar to cumulative impacts under the no-action alternative. Should additional exploration and development wells anticipated under the NPS RFD scenario be drilled, production of petroleum resources underlying the Preserve would increase available petroleum products to the domestic energy supplies, resulting in a minor beneficial impact. Davis's investment in preparing an application would be a minor adverse impact.

Conclusion

Under Alternative B, Proposed Action, the well would be drilled, and if developed, would result in a negligible beneficial impact on domestic energy supplies, and a minor adverse impact on Davis due to costs and time invested in preparing an application.

NPS DOCUMENT # 591