



Linda Dansby

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To: Lisa Norby/DENVER/NPS

cc:

cc:

Subject: Revised L/LS issue statements with LD's comments

Good job on the issue statements.

I made a few minor edits but primarily inserted my comments in the left-hand column so you can see if you agree with them before revising the issue statements.

Linda



Lemon revised issue statements - ld's comments.doc

Impact Topic	Issue Statement
Nonfederal Oil and Gas Development	The NPS permitting process, regulatory requirements, and operating stipulations generally increase the cost to operate on parklands, compared to operating on non-NPS lands. These increased costs could reduce income to mineral owners (or mineral interest holders) and operators, and influence an owner's or operator's decision to defer, modify, undertake as planned, or not conduct certain nonfederal oil and gas operations.
	<u>The decision to drill oil and gas well(s) in the park and the outcome of the drilling operation(s) (whether it produces oil and gas) could contribute to the domestic energy supply.</u>
Air Quality <u>First line – I added “and maintenance” and last line I changed “park” to “operations.”</u>	- Construction <u>and maintenance</u> of roads, wellpads, production facilities, and pipelines; vehicle use on and off paved roads; and exhaust from combustion of gasoline and diesel-powered vehicles and equipment used for drilling and production operations would increase emissions of particulate matter which could affect air quality, including visibility in the general vicinity of the <u>operationspark</u>. - Maintenance activities, <u>including the such-as application use</u> of herbicides for vegetation control on and around operations sites; <u>would emit</u> pollutants, including nitrogen oxides, volatile organic compounds, carbon monoxide, sulfur dioxide, particulate matter, and objectionable odors. These emissions could degrade air quality within the parks and could contribute toward regional air quality degradation. Nitrogen oxides and volatile organic compounds are primary precursors to ozone formation, which, depending on ambient concentrations, can have damaging effects on some vegetation and on the health of humans and wildlife.
Geology and Soils <u>Lisa – suggest using a consistent way to measure impacts – acres</u> <u>Also, does PAIS actually have soil and not just sand?</u>	<u>Grading and leveling of approximately 790 linear feet of hummocky uplands and barrier foredunes for the oil and gas access road and 3.6 acres for the wellpad and the placement of nonnative materials (caliche) on the access road and wellpad would result in soil and sand compaction and loss of productivity for the duration of the oil and gas operation(s).</u>~~The construction of well/production pads and access roads require leveling surface contours and the import of nonnative materials (i.e. caliche).~~ <u>Construction of an oil and gas access road through the foredunes would modify the dune structure, alter eolian sand transport, and could result in water funneling through the dunes during extremely high tides.</u>~~The foredune terminus of the new road would have a southeast-northwest orientation. The elevation of the pass over the dunes would be left as high as feasible to allow for long industrial type vehicles to travel and still prevent “water funneling” through the dunes inn the event of extremely high tides.~~ - The release of hydrocarbons or other contaminating and hazardous substances from vehicles and equipment; <u>during</u> exploration and production operations; <u>and flowlines and pipelines</u> could alter the <u>soil and sands</u> chemical and physical properties <u>of the soil and sand</u>. Changes in the soil and sands properties could result directly, from contact with contaminants on-site, or indirectly, via runoff from contaminated areas. - Vehicle use along the Gulf <u>bBeach</u>, particularly from heavy vehicles transporting the drilling rig, water, and drilling muds for disposal outside the park, could cause <u>deep rutting and compaction</u>.
Water Resources and Floodplains	- Vehicle use; removal or modification of vegetation; and surface disturbance associated with construction, maintenance and use of <u>the oil and gas access</u> roads, wellpads, production facilities, and flowlines could alter surface drainage patterns in the vicinity of operations. - The release of hydrocarbons and contaminating or hazardous substances

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	from vehicles, equipment, or pipelines used for exploration and production operations could degrade water quality. ~~Degraded water quality could affect the growth and survival of vegetation, cause declines in wildlife populations, affect recreational uses, and threaten human health and safety.~~ ~~Reclamation of oil and gas sites could adversely affect water quality over the short-term. However, long-term benefits could occur when native vegetative communities and surface and subsurface water flow are re-established.~~ ~~There is no practical alternative to locating roads, wellpads, production facilities, and flowlines in or across floodplains. Because of the hydraulic and erosive forces of flooding, the above activities could potentially harm life, property, and floodplain resources, functions, values, and uses.~~ ~~The siting, maintenance, and use of the oil and gas access roads, wellpads, production facilities, and flowlines in the floodplains, or the release of hydrocarbons and contaminating or hazardous substances from these operations, could adversely affect floodplain functions, values and uses, including: the natural moderation of floods, water quality, sediment control, ground water recharge or discharge, fish and wildlife habitat, maintenance of biodiversity, recreational opportunities, and natural beauty.~~ ~~Reclamation activities that re-establish the contour of the area, restore surface and subsurface water flow, control non-native vegetation, and re-establish native vegetative communities could restore natural and beneficial functions, values, and uses.~~ ~~Reclamation of the oil and gas access road and wellpad could adversely affect water quality and floodplain functions, values and uses over the short-term. However, long-term benefits include the re-establishment of surface water flow, the control of non-native vegetation, and re-establishment of native vegetative communities.~~
Wetlands <u>Quantify the direct impact on emergent wetlands in acres</u>	~~A pipeline route was chosen that utilized hummocky uplands, except for an unavoidable 55.3 foot section that crosses an emergent wetland.~~ ~~Construction of the flowline pipeline through 55.3 feet of an emergent wetland would result in vegetation removal and alteration of the surface and hydrology of the site could adversely affect vegetation and hydrology for approximately one year over the short-term.~~ ~~Reclamation activities that re-establish the contours of the area, restore surface and subsurface water flow, control non-native vegetation, and re-establish native vegetative communities could restore natural and beneficial functions, values, and uses.~~
Vegetation	- Vegetation would be totally removed in areas for the construction of the oil and gas access roads, wellpads, production facilities, and flowlines. Vegetation removal could change the structure and composition of vegetative communities in the project area; alter wildlife habitat and species composition; increase storm runoff; and increase soil and sand erosion. - Construction and use of the oil and gas access roads, wellpads, production facilities, and flowlines could locally disrupt the surface water flow, which may adversely affect the localized water budget necessary to maintain vegetative communities. - The release of hydrocarbons and contaminating or hazardous substances could damage or kill vegetation directly, via contact with contaminants on-site, or indirectly, via pathways from contaminated areas. - Disturbances/removal of native vegetation could lead to the unintentional spread and establishment of non-native plant species transported in or on drilling and maintenance equipment.

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	Reclamation of the oil and gas sites could re-establish native vegetative communities and surface and subsurface drainage patterns necessary to support vegetative growth.
Natural Soundscapes	Vehicles and equipment used for construction and maintenance of the oil and gas -access roads, wellpads, production facility~~ies~~, and flowlinepipelines could result in increased noise, adversely affecting wildlife and visitor ~~uses and~~ experiences.
Wildlife	- Oil and gas activities, including vehicle use and the construction, maintenance, and use of the oil and gas access roads, wellpads, production facility~~ies~~, and flowlinepipelines, ~~could adversely affect wildlife. These activities~~ could increase wildlife predation in open areas; directly harm or kill wildlife; and disrupt wildlife feeding, denning, nesting, spawning/reproduction, and other behavior. Oil and gas activities could also result in avoidance of the area by wildlife due to increased noise and human presence. ~~Lighting can confuse birds, causing some mortality. Furthermore, open-topped tanks and/or~~ Liquids that collect in secondary containment features on production sites could attract, harm and possibly kill birds. - Loss or modification of wildlife habitat could occur from the construction of the oil and gas access roads, wellpads, production facility~~ies~~, and pipelines. These activities could increase edge effects, increase human access, and alter wildlife species, composition, and migration. - The release of hydrocarbons and hazardous or contaminating substances from vehicles, drilling and production equipment, and pipelines could injure wildlife. The adverse effects could become worse over time if wildlife species ingest the contaminants and are consumed by other wildlife species. - Heavy equipment used for reclamation operations could injure or kill wildlife and degrade water quality over the short-term. However, reclamation of oil and gas sites over the long-term could re-establish native vegetative communities and surface and subsurface water quality and quantity that support wildlife populations.
State and Federally Listed Threatened and Endangered Species Move 4th issue to become 3rd so the first 3 describe issues associated with vehicle use on the Gulf beach. Should there be an issue statement regarding T/E birds that utilize the beach corridor- vehicle collision with birds or reduction in available food due to heavy vehicle compaction and rutting?	Trucks (both commercial and private vehicles) driving along the Gulf beach could run over sea turtles, egg clutches and hatchlings. Trucks driving along the Gulf beach could compact the sand which would make it difficult for the sea turtles to dig a nest cavity. Noise and other night-time activities during drilling operations could interfere with the mating process of sea turtles and other T & E wildlife species. Deep ruts made from large commercial vehicles could be an obstacle to sea turtles during nesting and to hatchlings moving towards the sea. Hatchlings could become vulnerable to depredation, dessication, and exhaustion. Noise, odors, lighting, and vibrations could interfere with the imprinting process of the hatchling sea turtles. ~~Motor vehicle traffic on the Gulf beach is permitted on Padre Island throughout the year. BNP staff and contractors would be instructed to watch for and report sea turtles and their tracks to park staff.~~ ~~Monitors would be used should equipment need to be moved down the Gulf beach between April and September.~~ ~~Due to the wells proximity to the Gulf beach, the use of reduced or directionally hooded lighting maybe necessary, especially since drilling will occur during sea turtle nesting season.~~

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Visitor Use and Experience <u>How about adding to the 2nd bullet a specific statement about introduction of artificial light to the dark night sky?</u>	• ~~These mitigations are expected to prevent any impacts to sea turtles.~~ • Oil and gas operations could pose a threat to human health and safety from ~~a number of sources, including~~ the use of <u>the Gulf Beach roads</u> by commercial vehicles (particularly vehicles with less maneuverability and visibility); hazardous equipment at wells and production facilities; and ~~pipeline failure~~<u>the release of hydrocarbons and hazardous or contaminating substances</u>. Spilled or released hydrocarbons and contaminating ~~or~~ hazardous substances could be inhaled, absorbed, or ingested by human beings. • ~~The~~ <u>Oil and gas operations</u> could adversely affect air quality; alter scenic resources; <u>and</u> increase background sound levels <u>and could</u> ~~;~~ ~~and degrade water quality. These effects could~~ <u>degrade the quality of</u> ~~adversely affect or preclude~~ visitor uses and experiences.