August 27, 2021

Shawn Hamilton, Interim Secretary
Florida Department of Environmental Protection
Via electronic mail to: Shawn.Hamilton@dep.state.fl.us

RE: Burnett Oil Company, Inc.’s Impact and Mitigation Summary for the Nobles Grade Seismic Exploration in Big Cypress National Preserve dated July 15, 2021

Dear Secretary Hamilton,

The undersigned organizations have repeatedly written to the Department and the National Park Service, regarding the need for Burnett Oil Company to provide compensatory mitigation for the impacts it caused to wetlands in conjunction with its Phase I geophysical oil exploration for the Nobles Grade 3-D Geophysical Seismic Survey in the Big Cypress National Preserve (Preserve).

As stated most recently in our February 3, 2021 letter, and, in other prior correspondence, we continue to have concerns about the success of the reclamation Burnett Oil has attempted thus far to reclaim the wetland damage caused by its seismic activities in the Preserve in 2017 and 2018, and the lack of compensatory mitigation for the loss of wetland function and endangered Florida panther habitat. Specifically, numerous issues remain with the oil company’s monitoring of and reporting on the reclamation, and compensatory mitigation remains incomplete as of the date of this letter.

We have shared numerous reports¹ written by our environmental consultants at Quest Ecology, Inc., which reviewed the 2020 Reclamation Monitoring Report (dated October 2020) prepared by

Turrell, Hall & Associates, Inc. (THA) on behalf of Burnett Oil Company. Quest Ecology continues to identify issues with the reclamation monitoring and proposed compensatory wetland mitigation. To date, we have not received a response regarding the issues with Burnett Oil Company’s monitoring raised by Quest Ecology. Today we write to share the most recent analysis by Quest Ecology of THA’s Impact and Mitigation Summary dated July 15, 2021. This analysis is attached hereto.

**Summary of Damage to the Preserve Caused by Burnett Oil Company’s Phase I Seismic Oil Exploration**

The following is a summary of the damage to the Preserve caused by Burnett Oil Company’s Phase I seismic survey, as documented by Quest Ecology:

- Wetland soils were severely altered due to rutting and compaction caused by vibroseis and other off-road vehicles driving over them and then re-disturbed by subsequent reclamation attempts. The 33-ton vibroseis vehicles compacted and deeply rutted soils due to their sheer weight. The soils ruts created were almost 2-feet deep and up to 15-feet wide in places;
- Despite their small size, dwarf cypress trees can range in age from 31 to 2,500 years. These trees provide important roosting sites and refuge from high water levels for birds and other wildlife. Nonetheless, dwarf cypress trees were cut or run over to make way for the vibroseis vehicles. Plant species and abundance within the representative seismic line inspected is significantly different from adjacent habitats not directly impacted by seismic survey activities—for example, dwarf cypress trees were observed in less than 1% of the seismic line, whereas these trees make up 50% of the plant cover in adjacent undisturbed habitats;
- Average total groundcover was around 5-10% within the seismic line inspected, as opposed to 40-60% in adjacent undisturbed habitats;
- Trees, shrubs, herbaceous species, and epiphytes (primarily consisting of Florida butterfly orchids and State-listed bromeliad species) were conspicuously absent within the seismic survey line observed compared to adjacent undisturbed habitats;
- Dwarf pond cypress tree stumps that were cut with chainsaws by oil company crews—many exceeding two feet in diameter—were abundantly observed in the seismic line inspected and were not re-sprouting;
- Desiccation (drying out) of bromeliads and Florida butterfly orchids on the edges of the seismic lines due to removal of the adjacent dwarf cypress tree canopy important for maintaining temperature and moisture levels;
- Dwarf pond cypress tree seedlings were rarely observed in the seismic line inspected, although they were frequently observed in adjacent undisturbed habitats;
- The extent of torpedograss, a Category I invasive plant species in Florida, appear to have increased since the seismic survey activities began;

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2*Id.*

3 Notably, “reclamation” requirements include re-grading the soil ruts, but not the replanting of cypress trees or other destroyed or damaged vegetation. Vegetation is supposed to naturally recruit on its own.
Two native, but potentially nuisance plant species with the potential to spread once established—common reed and Carolina willow—were observed within the seismic survey line observed, suggesting that conditions are favorable for their continued growth and spread into other parts of the Preserve;

Periphyton cover was significantly reduced within the seismic line observed compared to adjacent undisturbed habitats—periphyton is a critical component of the food web because it provides the primary food source for small consumers such as fish and invertebrates; and

The oil company’s initial reclamation attempts of ground elevations impacted by vibroseis vehicles resulted in a difference of up to seven inches in some locations—the differences in ground elevations will have adverse effects on the natural recruitment of desirable native plants.

Summary of Issues with Burnett Oil Company’s Reclamation Attempts

Despite Burnett Oil Company’s initial reclamation attempts, damage remains. Further, Quest Ecology identified problems with the representations made in the oil company’s initial monitoring report, many of which still remain, according to a second monitoring report, including:4

- The oil company is re-grading soils within 3 inches of adjacent undisturbed areas in places, as opposed to re-grading soil ruts to match original grade, as required by federal and state permits. Meaning, the Preserve is not the same as it was prior to the seismic testing, despite the oil company’s claims that there would be no long-term impacts;
- The number of monitoring stations within each designated reclamation area is not proportional to the length of the impacts caused by the oil exploration;
- The number and size of disturbed vegetation monitoring plots are insufficient to yield statistically significant results and do not include the full width of the seismic lines the oil company created;
- It’s unclear whether state and federal agencies will base the “success of the reclamation” on individual reclamation areas or the 110-square mile Phase I seismic survey area in its entirety;
- The center of the seismic line is the least disturbed area because it was located between the vibroseis vehicle tires, yet the disturbed vegetation monitoring is taking place there;
- The method for comparing the topographic elevations of adjacent undisturbed areas to reclaimed areas is “biased and inconsistent” with the oil company’s permits;
- Fundamental plant community attributes—such as species richness and diversity—between impacted and adjacent, undisturbed areas are not being disclosed, or used in the determination of successful reclamation; and
- Plant species are misidentified.

It is important for Burnett Oil Company to get the monitoring of the reclamation right from the start. Otherwise, subsequent years of monitoring will not be effective in identifying problems with

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the oil company’s reclamation attempts so they can be promptly corrected. In short, despite the oil company’s claims to the contrary, our scientific experts continue to conclude that long-term soil, hydrologic, and vegetation damage will persist as a result of Burnett Oil Company’s seismic survey activities.5

New Analysis of Burnett Oil Company’s Impact and Mitigation Summary (July 2021)

The primary purpose of this letter is to address Burnett Oil Company, Inc.’s Impact and Mitigation Summary (hereinafter, Mitigation Summary) for the Nobles Grade Seismic Exploration in Big Cypress National Preserve dated July 15, 2021. Unfortunately, this assessment continues to make unsupported assertions, including misguided or biased assumptions regarding the severity of wetland impacts that occurred in the Preserve, which now manifest in the form of compensatory wetland mitigation that falls short of compensating for the loss of wetland functions caused by the Phase I seismic survey, as outlined in the attached Quest Ecology report dated August 2021, and as further described below.

In the Mitigation Summary, the Uniform Mitigation Assessment Method (UMAM) adopted in Chapter 62-345, Florida Administrative Code, is used by THA to determine the loss of wetland functions resulting from Burnett Oil Company’s Phase I seismic oil exploration activities, as well as the functional gain from compensatory mitigation for that loss, and, consequently, the amount of mitigation required of Burnett Oil Company. Although deficiencies in the way UMAM was applied are noted in the attached Quest Ecology report, the following deficiencies seriously undermine the validity of the results contained in THA’s assessment.

A UMAM assessment cannot be conducted without mapping individual assessment areas within the overall impact area and establishing baseline vegetation and the suite of wildlife that utilize that assessment area in order to establish a baseline for the scoring of wetland functions and the degree of functional gain or loss above or below this baseline. In this case, Part I qualitative assessments were not included, and the un-mapped assessment area characterizations failed to adequately acknowledge the scrub cypress communities predominantly impacted. Further, the assessment excluded areas impacted from the clearing and cutting of seismic survey lines that were not traversed by vibroseis vehicles or reclaimed, and there was no assessment of secondary impacts to wetlands and associated wildlife as a result of habitat lost or the expectation of future losses. For example, there is a slow recovery period (40+ years) of vegetation regrowth after seismic surveys, leading to long-term fragmentation and changes in movement patterns and prey locating techniques in large mammals, such as the Florida panther.6 Further, we have not yet seen any mitigation for the loss of Florida panther habitat, such as Panther Habitat Units (PHUs).

In evaluating the loss of wetland function from the direct and immediate impact of seismic survey activities conducted in 2017 and 2018, THA estimates a mere 15.8 percent loss at the time of

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impact. This 15.8 percent loss is then further reduced by THA by assuming complete recovery of 89 percent of the impact area within five (5) years or less, despite most of these areas supporting centuries-old scrub cypress and the fact that recruitment of new trees in areas with soil rutting caused by the driving of off-road vehicles, including 33-ton vibroseis vehicles, through wetlands, is either not occurring, or is minimal, for over four (4) years following their loss. We also note that functional loss has been further downgraded by THA due to its determination of near-zero risk for recovery of impacted wetlands to their former functional level. This, despite observations documented in Quest Ecology reports, that vegetative species composition, diversity and richness have significantly changed in many areas impacted, an indicator that, indeed, risk of recovery to pre-impact conditions is substantial.

In the mitigation portion of THA’s UMAM assessment, the most obvious deficiency is the lack of information provided to determine the functional gain of mitigation. At a bare minimum, a wetland delineation, topographic surveying, and Part 1 qualitative assessments are necessary to determine existing conditions. More information is also needed to better assess historical conditions. Success criteria for the proposed mitigation, as well as a maintenance/monitoring plan, and enforceable contingencies to assure success are also lacking.

With the limited information provided, it would appear that the “with mitigation” UMAM scores assigned to wetlands being created or restored are far more optimistic than what should reasonably be expected. As is the case on the impact side, time lag and risk appear to be severely underestimated, particularly considering that there will be no cypress planting in the mitigation area, other than nursery-grown seedlings proposed to offset previous unauthorized cutting of around 500 large (>4” dbh) cypress trees that took place in both the traversed and non-traversed impact areas. It is recommended that the permittee plant the entire mitigation area with cypress from seed stock originating from the Preserve to reduce the amount of time lag and risk multipliers. Planting of cypress to compensate for the unauthorized cutting of older trees should be accounted for separately.

Conclusion and Formal Meeting Request

Based on the foregoing, we renew our request for a “time out” on further seismic testing, wetland filling, drilling, or other related activities so that the Department, in consultation with the National Park Service, and the U.S. Fish and Wildlife Service, can fully assess the existing damage caused by Burnett Oil Company’s Phase I seismic testing and require completion of scientifically-based reclamation, monitoring, and compensatory mitigation for the damage that has already occurred before considering permitting any further impacts in the Preserve. This is necessary for the Department to evaluate the full picture of the environmental damage already caused by Burnett Oil Company, and to analyze and disclose to the public whether the company can provide scientifically supported reasonable assurances to meet all applicable permit criteria for its proposed oil development activities.

We will continue to attempt to work with state and federal agencies to protect America’s first National Preserve, which provides immeasurable values to the Everglades, Tribal and other
frontline communities, public water supplies, tourism, wildlife, and the economy. To this end, we again respectfully request a meeting with you to further discuss our grave concerns with the adverse impacts that have already occurred to Preserve resources as a result of oil exploration, and the additional adverse impacts that would likely occur if the Department were to issue state Section 404 Clean Water Act and Environmental Resource Permits allowing more oil development. We understand that you have declined prior meeting requests due to litigation concerns; however, there is no pending litigation regarding Burnett Oil Company’s past or proposed activities.

Please do not hesitate to contact us if you have any questions. Thank you in advance for your consideration.

Sincerely,

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cc:

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