

Speaking Up for the Swamp

Revealing Persistent Oil and Gas Impacts in
Big Cypress National Preserve





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I

Executive Summary



Executive Summary

Amidst the incredible expanse of wetlands and subtropical diversity of the Greater Everglades ecosystem, Big Cypress National Preserve stands as an enduring testament to nature’s resilience—a haven woven of lush, wild landscapes and stunning biodiversity. More than six years have elapsed since controversial seismic explorations for oil and gas reverberated through a vast remote area within Big Cypress, leaving unprecedented damage that persists today. As we approach the preserve’s 50th anniversary, this report illustrates the repercussions of that hunt for oil. This report casts a spotlight on the impact of prior oil exploration and marshals an urgent call to action to both restore those damages and oppose new industrial oil drilling ventures.

Amidst the rustling foliage and murmuring waterways, Burnett Oil Company bulldozed through the trees to conduct seismic surveys in 2017 and 2018. What is a seismic survey? “Seismic surveys” in this case were the ultra-damaging activities carried out to hunt for oil deposits in the preserve. These seismic surveys used industrial heavyweight (up to 33 ton) vehicles driven through largely roadless areas in about 110 square miles of the preserve. Burnett’s machinery cut down hundreds of cypress trees and many state-listed endangered species, leaving miles of destroyed and disturbed habitat in their wake. If you unpacked those damaged seismic “lines” cut across the preserve and laid them end-to-end, they would reach across the entire southern peninsula of Florida from Naples to Miami; an alarmingly vast area inside Big Cypress was impacted. Since those damaging seismic surveys were carried out, independent ecologists, botanists, photographers, and advocates have borne witness to the aftermath.

This report reflects upon what has been learned about the previously pristine wetlands that were damaged by the oil and gas explorations of 2017 and 2018 and presents an overview of where Big Cypress stands today. This report is based upon an ensemble of documents and scientific surveys that spanned from 2016 to 2023—meticulous records that unfurl the tale of seismic activities, and field surveys that documented the scars etched upon landscapes and the intricate web of life in this vital area of the Greater Everglades ecosystem. Six years after those scars were made, we as park advocates find ourselves poised on the cusp of an important anniversary, a juncture that underlines our collective commitment to safeguarding Big Cypress’ integrity.

With the preserve’s 50th anniversary on the horizon, we must honestly and accurately tell the story of the

enduring negative impacts this seismic activity had on Big Cypress. In this report, the state of the preserve today is compared to the conditions and assumptions outlined in the permits that authorized the seismic surveys. Standing at this juncture, the persisting damage caused by seismic exploration serves as a cautionary tale. It is a testament to the fragility of these vital Everglades wetlands. It is a rallying cry for park advocates to defend our nation’s first preserve.

One year prior to the preserve’s golden anniversary, this report articulates a twofold call to action: restore the seismic-damaged areas and prevent new oil development.

Let’s forge a future that safeguards Big Cypress through the mending of past wounds and the prevention of fresh scars. We hope you will join us.



If you unpacked the damaged seismic “lines” cut across the Preserve (in an area estimated to be at least 110 square miles) and laid them end-to-end, they would reach across the entire southern peninsula of Florida from Naples to Miami.

II

Introduction



Introduction

Big Cypress National Preserve

Established in 1974, Big Cypress is an irreplaceable part of the Greater Everglades ecosystem and South-west Florida's estuaries. Big Cypress was established by Congress "[i]n order to assure the preservation, conservation, and protection of the natural, scenic, hydrologic, floral and faunal, and recreational values of the Big Cypress Watershed." 16 U.S.C. § 698f(a). The National Park Service "envisions the preserve as a nationally significant ecological resource" and "a primitive area where ecological processes are restored and maintained and where cultural sites are protected from unlawful disturbance." Furthermore, the preserve is designated an Outstanding Florida Water, affording it the highest protection under Florida law. Notably, Big Cypress was the first national preserve established in the United States.

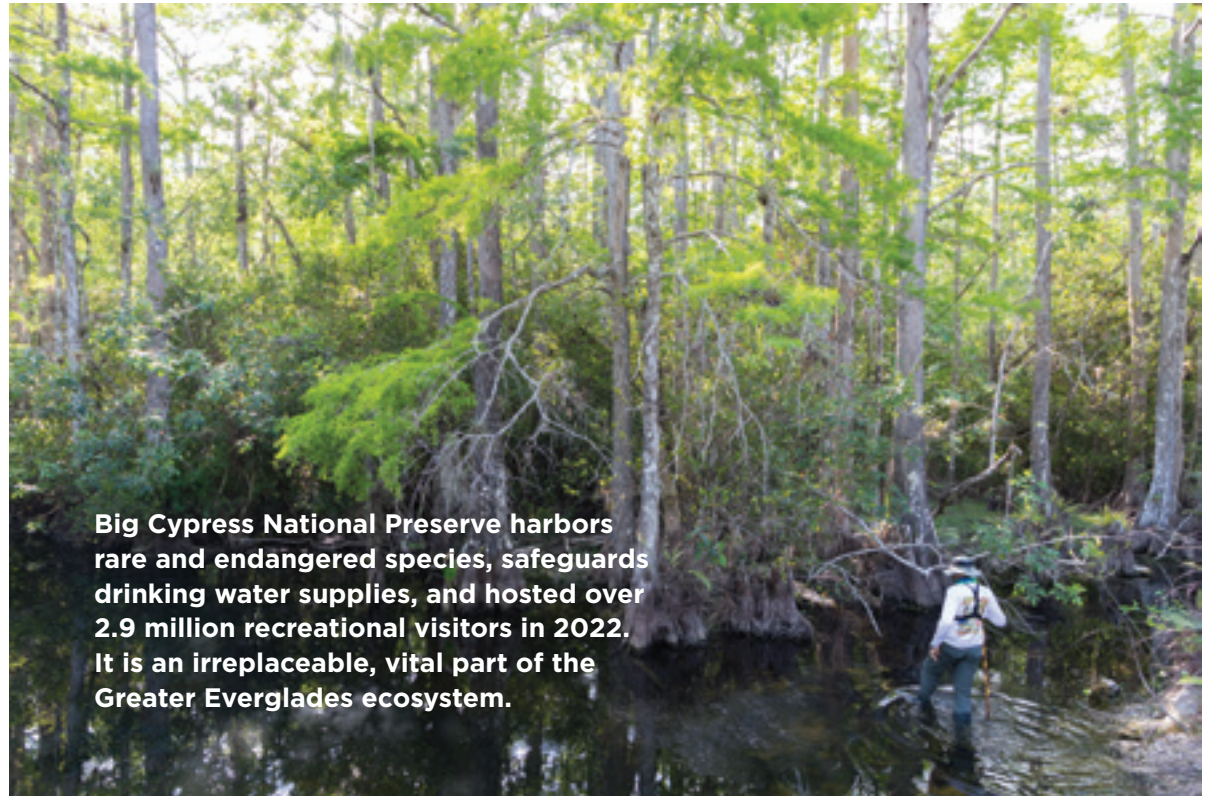
Encompassing over 720,000 acres (about the area of Yosemite National Park) of a water-dependent ecosystem in southwestern Florida, the preserve blankets much of the western Everglades. The Big Cypress basin channels more than 40 percent of the water flowing into Everglades National Park, constituting a sprawling hydrologic network—one of the few remaining largely untouched in south Florida. Water journeys across the surface in marshes and sloughs and meanders below the surface through porous substrates in aquifers. These wetlands serve as pivotal water recharge zones, replenishing aquifers that provide vital drinking water to nearby communities.

The preserve also shelters an array of iconic and important species, including the Florida panther—one of the most endangered mammals in the country—as



well as the Florida black bear, Florida bonneted bat, Eastern indigo snake, wood stork, red-cockaded woodpecker, many species of wading birds, and

imperiled plants like the ghost orchid. The preserve also offers cherished outdoor recreation opportunities. In 2016, the preserve welcomed 1.1 million recreational visitors. Although the number of visitors declined during the first phase of Burnett Oil Company's oil exploration in 2017 and 2018, it rebounded to 1.1 million in 2020 and soared to 2.9 million in 2022—translating to Big Cypress hosting the most visitors of all the national park units in South Florida, and more than double that of Everglades National Park. The popularity of Big Cypress brings significant positive economic impacts to communities, registering over \$261 million in local visitor spending in 2022 alone.



Big Cypress National Preserve harbors rare and endangered species, safeguards drinking water supplies, and hosted over 2.9 million recreational visitors in 2022. It is an irreplaceable, vital part of the Greater Everglades ecosystem.

Oil and gas threatens Big Cypress

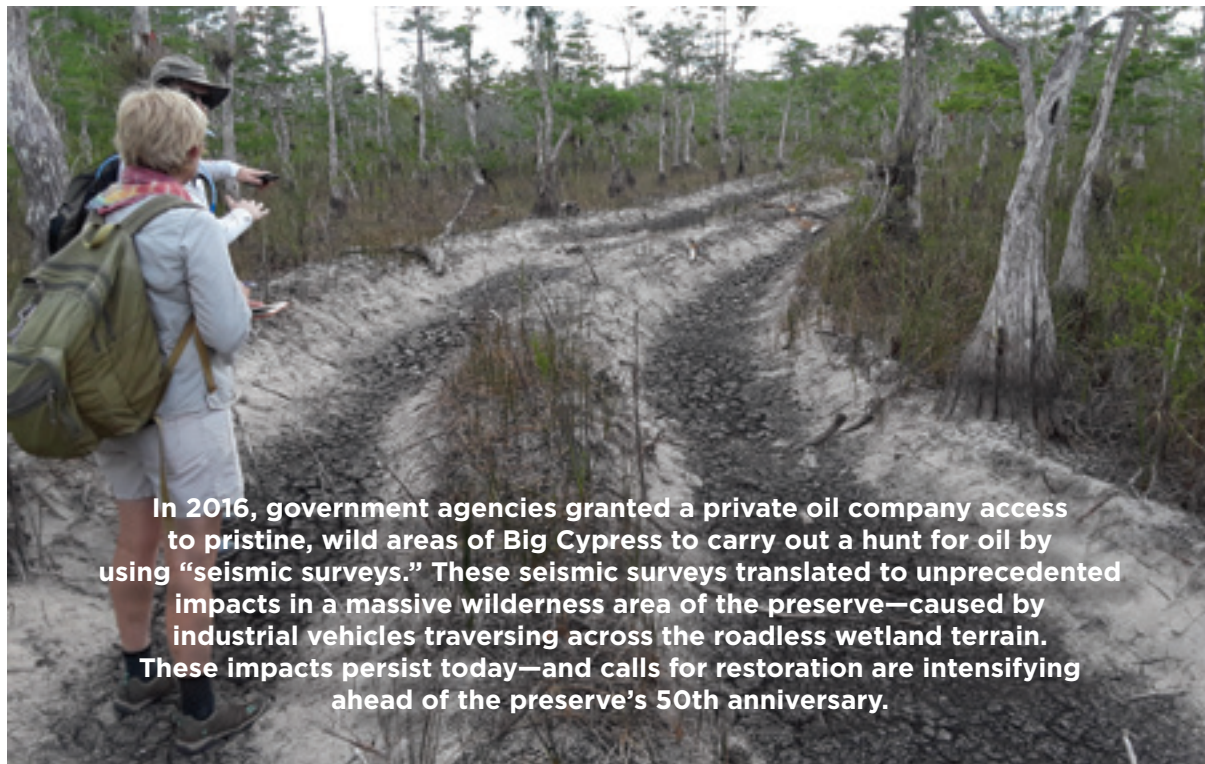
How could an industrial oil company receive authorization to hunt for oil within a unit of our national park system? Big Cypress is one of approximately 10% of our nation's national park units that face the potential peril of oil exploration and development. The vulnerability to drilling arises from the "split estate" scenario, where the federal government owns the surface lands while private entities retain some mineral rights beneath (and in this case, Burnett Oil has leased the privately-held mineral rights below areas of Big Cypress). This predicament poses a

potential conflict, as private companies seek to extract minerals while the National Park Service endeavors to preserve parks and uphold its legal mandate to leave parks "unimpaired for the enjoyment of future generations."

The National Park Service granted Burnett Oil an access permit for the first phase of oil exploration, permitting an off-road seismic survey across 110 square miles (70,454 acres) of the preserve. This endeavor involved the use of 33-ton "vibroseis" trucks and other industrial vehicles off the beaten path, resulting in the creation of approximately

110 miles of new disturbances, though recent studies estimate this damage might extend to around 169 miles. The size, magnitude, and survey technology used by Burnett Oil was unprecedented in the preserve.

The areas that were damaged by the hunt for oil within the preserve occur in wetlands nestled in the heart of the Everglades ecosystem. A fraction of these impacted wetlands lies in proximity to the Florida National Scenic Trail—a prominent recreational trail and access point—while being squarely ensconced within otherwise pristine wilderness areas.



In 2016, government agencies granted a private oil company access to pristine, wild areas of Big Cypress to carry out a hunt for oil by using "seismic surveys." These seismic surveys translated to unprecedented impacts in a massive wilderness area of the preserve—caused by industrial vehicles traversing across the roadless wetland terrain. These impacts persist today—and calls for restoration are intensifying ahead of the preserve's 50th anniversary.



Left: Area of Big Cypress damaged by seismic surveys for oil, areas now referred to as "seismic lines." ©Quest Ecology **Right:** Aerial view of existing "legacy" oil infrastructure at Raccoon Point, Big Cypress Natl. Preserve ©Lighthawk | NPCA



In the upcoming section of this report, insights gleaned from meticulous field studies in the damaged regions are covered in detail. The stark reality of the persistent damage within the preserve today is also examined against the assumptions and conditions that initially accompanied the authorization of the seismic survey.

Furthermore, it is crucial to acknowledge the current state of the preserve, which stands at a crossroads facing a new and pressing threat. Active proposals loom for industrial oil development in two separate sites within Big Cypress. Astonishingly, one of these sites lies within the very area already scarred by the seismic surveys (a wilderness area of the preserve), while the other stands a stone's throw away from the sacred lands of the Miccosukee Tribe of Indians of Florida. This imminent threat underscores the urgency of our twofold call to action—restoring the ecological balance of the damaged areas and thwarting the encroachment of new oil drilling. The time has once again come for united and determined efforts to safeguard Big Cypress National Preserve for generations to come.



III

Unveiling Ecological Impacts: Discoveries in Seismic-Damaged Areas



Unveiling Ecological Impacts: Discoveries in Seismic-Damaged Areas

Let's delve into the ecological impacts caused by the seismic activities. These discoveries shed light on the altered landscapes resulting from the seismic surveys, where the impacts ripple through various aspects of the environment. Upon exploring these findings, a clear pattern emerges: the scars left by the seismic hunt for oil persist, influencing factors like water levels within channelized disturbed areas, the regrowth (and lack thereof) of vegetation, and the persistent visible evidence of vehicular movement through a previously pristine area. These insights demonstrate that there have not been authentic restoration efforts made in these disturbed areas, nor has just "leaving nature alone to regrow" been a successful approach. The facts on display challenge us to reassess the Park Service's approach to date—and to call for concrete restoration actions that adequately address the enduring imprint of seismic exploration on the preserve's landscape.

Survey methods

First, let's take a detour to provide an overview of the methods employed to assess the seismic-damaged areas within Big Cypress National Preserve. These methods, consistently applied over multiple years by expert ecologists and botanists, offer a way to glean understandings of the extent of damage and ecological changes. The ecological consultants that conducted the field surveys to document the status of the seismic-damaged areas initiated their assessment by accessing the preserve via the Florida National Scenic Trail from Mile Marker 63. This was repeated every time that a field survey was conducted. They navigated



Through assessments of the ecological damage caused by the oil hunts, a clear pattern emerges: the scars left by the seismic hunt for oil persist.

an area now known as Seismic Survey Line B, which was initially selected randomly from among several of the seismic survey lines that were relatively accessible on foot. Random points along Seismic Survey Line B were selected to become "photo stations" where photos were taken at the same place spanning across the years, to help tell a more complete visual story of how the landscape has been altered. Utilizing geo-rectified aerials and field maps, the ecologists conducted qualitative and quantitative evaluations, including measuring variables such as water depths, estimating vegetation and periphyton cover, and making additional observations at each photo station.

This rigorous approach offered insights into the state of the seismic-damaged areas. The first field survey was conducted in 2019, and the most recent field survey was completed in February of 2023. Unfortunately, nearly the entire area where the seismic hunt for oil took place is in a remote, difficult-to-access area of the preserve—not to mention an immense area in terms of the size of total area impacted—and therefore, independently surveying the full extent of damages was simply not possible. Nonetheless, the data collected during these field surveys of one of the impacted areas gives a representative snapshot of the extent and persistence of the damage caused by the seismic exploration activities that were carried out in 2017 and 2018.

Findings

A sobering reality emerges when reviewing the results of the field surveys conducted over the past years: the weight of the vibroseis and other industrial trucks that pressed mercilessly on the soft, water-soaked soils of Big Cypress left indelible marks. The landscape bears lasting impressions of adverse impacts: soil compaction, deep twisting furrows in the ground, ancient dwarf cypress trees felled with almost zero natural regrowth, and out-of-place plant communities taking root in the unnatural trenches that now channel across the landscape. Profound differences remain between the

seismic lines created and the adjoining untouched wetlands: revealed in the contours of tracks and ruts, the enduring specter of ancient dwarf pond cypress stumps, shifts in groundcover species and abundance, and physical soil changes. The most recent field survey, from 2023, revealed an alarming fact—that the most basic features of the wetland systems impacted by the seismic survey activities have not been restored.

Next, by examining key aspects of the impacted wetland ecosystem, we'll dig into specific findings that elucidate these facts.

Marked impacts to ground elevation and water depths

The issuance of permits to disrupt vast stretches of the Big Cypress National Preserve's wetland terrain for oil exploration were apparently founded upon unsubstantiated assumptions. The complex soil properties and significant topographic alterations brought about by the seismic track lines, situated in remote and wild areas of the swamp, were thought to be controllable through manual interventions using shovels and rakes, as outlined by the permit conditions made by the regulatory agencies that granted permission for the seismic surveys. And by July 1, 2020, all initial reclamation activities employing these basic tools had gained approval from the Florida Department of Environmental Protection and the National Park Service. However, the current report highlighting evaluations of the affected areas is sparking renewed scrutiny and demands for comprehensive restoration and mitigation.

Marked impacts to ground elevations and water depths persist in the seismic damaged areas of Big Cypress. A concise overview of water depths, observed during the 2023 field survey, at every designated photo station along Seismic Survey Line B is presented in the following table. This data compilation reflects water depths recorded from the bottom of the soil rutting caused by the seismic operations. It also includes readings from neighboring, unaltered areas situated within a 5-foot proximity to the seismic line edge. Discrepancies in water depths between the seismic-impacted and undisturbed areas ranged from 0 to 8 inches, averaging at 2.85 inches.

Writing about the wilderness within the Everglades ecosystem, the National Park Service has summarized what ecologists know well about this landscape: that it "is a subtle place where earth, water and sky blend

Subtle shifts in surface water depths significantly impact plant communities.



in a low green landscape, where mere inches of elevation produce substantial changes in vegetation, and where a great wealth of birds and other wildlife find refuge.”

Mere inches matter in the Everglades. Even though the impacted areas where these measurements were recorded were considered by the Park Service to have been “reclaimed” by the oil company since 2019, profound impacts to the ground elevation and soils persist. (No substantive reason for why the agency approved the areas as being “reclaimed,” despite the unauthorized persistent elevation differences, has been provided.) Between 2019 and 2023, the average depth differential between vehicle ruts and adjacent undisturbed ground surfaces from photo stations A to T has diminished from 3.64 inches to 2.85 inches; however, this outcome appears to be a consequence of fine particulates gradually settling into depressional areas, leading to unconsolidated sediments that markedly differ from native undisturbed soils. In other words, it is not indicative of real recovery. Certain inspected locations along Seismic Survey Line B still exhibit depth differentials of up to eight inches. These lasting changes in ground elevations bear negative implications for the natural recruitment of native plants within the seismic survey lines.

In an ecosystem where subtle shifts in surface water depths significantly impact plant communities, the persisting depth difference is anticipated to dramatically alter the composition and structure of the naturally regenerating vegetation community. (See the next section that articulates findings on the impacts on the plant community.) This is particularly relevant

Right: Table adapted from 2023 Seismic Survey Inspection Report by Quest Ecology, online at www.savebigcypress.org/reports

Differences in Water Depths between Seismic Survey Line B and Adjacent, Undisturbed Habitats (February 2023)

Photo Station	Water Depths in Seismic Line (inches)	Water Depths Adjacent to Seismic Line (inches)	Difference in Water Depths (Seismic Line minus Adjacent, in inches)
A	1	.5	.5
B	.5	.5	0
C	1	2	0
D	5	2	3
E	8	3	5
F	7	2	5
G	5.75	3.25	2.5
H	10	2	8
I	5.25	3	2.25
J	4.5	2	2.5
K	6.25	3.5	2.75
L	5.25	3	2.25
M	3.5	1	2.5
N	6.5	4.5	2
O	7	5.5	1.5
P	6	3.5	2.5
Q	7	5	2
R	8	4.25	3.75
S	8	4.5	3.5
T	10	4.5	5.5

2023 Mean Depth Differential = 2.85 inches



CHECK IT OUT: View video taken from inside a seismic vehicle as it mows down cypress trees inside the preserve



In the Everglades ecosystem, mere inches in ground elevation matter and translate to profound differences in plant communities. Surveys clearly demonstrate evidence of persisting, unauthorized changes to the natural contour of the wetlands as a result of the seismic surveys for oil.

for keystone species such as dwarf pond cypress, which rely on contact with bare, native mineral soils for germination. Dwarf pond cypress germination within Seismic Survey Line B has been almost zero, which implies that the necessary conditions for germination, including receding surface waters exposing bare mineral soil, are not being met.

Additionally, the disturbed, unconsolidated sediments might not favor the recruitment of the preserve's namesake cypress trees or the recovery of the diverse floral communities that once lived in the impacted areas. Altered soil depth and composition could hamper the growth and survival of trees, including dwarf pond cypress. Furthermore, the vehicle ruts within Seismic Survey Line B might impede the production of marl soil, a process critical to the preserve's ecology. The elevation disparity between the survey line and adjacent intact habitats could potentially disrupt the annual dry period necessary for marl production, hindering this process for an extended duration.

It's crucial to note that the U.S. Department of the Interior's National Park Service permit conditions, stipulated in a 2016 Finding of No Significant Impact document, mandated the restoration of ruts and vehicle tracks to their original contour conditions during daily seismic survey operations. No differences or deviations in contour whatsoever were permitted to occur; therefore, there is clear evidence of lack of compliance with this permit condition and no apparent remedy or enforcement action that has been considered in response.

Left: This is an image of a "seismic line," still devoid of cypress trees over six years after seismic vehicles plowed through. The yellowish vegetation is spikerush, one species that has largely replaced the previously diverse habitat. ©Sam Cook | Quest Ecology

Impacts to the Plant Community

Plant communities are considered by many to be the backbones of a habitat; they provide vital shelter for wildlife, help sustain the web of life within an ecosystem, and impart ecological stability. A comprehensive assessment of the plant community within Seismic Survey Line B reveals dramatic disparities in species composition, structure, and abundance compared to adjacent undisturbed habitats unaffected by seismic survey activities. Areas that were once untouched and thriving have undergone discernible changes. Notably, *Taxodium ascendens* (dwarf pond cypress), the primary

tree species in the impacted area and the preserve's namesake tree, is almost absent within Seismic Survey Line B. While cypress trees typically cover up to 50% of adjoining undisturbed communities, they constitute less than 1% of the areas impacted by the hunt for oil. The few surviving cypress within Seismic Survey Line B are primarily stem sprouts from small diameter saplings that managed to survive in the central ridge area (between where the tires of the vibroseis vehicles passed), or cypress seedlings that germinated within cypress stumps; in other words, there is a notable lack of new natural growth of cypress in the soils of the

impacted areas. This sharply contrasts with adjacent undisturbed habitats, which host a diverse range of cypress tree size classes and comparatively abundant young seedlings.

Despite more than six years passing since the initial seismic damages, in essence, the surveys have not documented cypress trees growing back naturally. This is likely because of factors like the difference in ground elevations and soil changes, as discussed in the prior section, as well as other factors caused by the seismic damages. The prolonged flooding within the



Left: Conservancy of Southwest Florida staff carry out a site visit to the seismic-impacted areas in 2023 ©Conservancy of Southwest Florida **Center:** The area still has not recovered and remains barren, more than six years after seismic vehicles damaged the area. ©Conservancy of Southwest Florida **Right:** A Park Service hat and toolbox occupy a seismic line—for scale to show the depth of the impact shortly after the seismic vehicle first passed through in 2017. ©NPS via FOIA

reclaimed seismic lines, compared to the neighboring areas, hampers the growth of cypress seedlings. These young trees need specific conditions to sprout, including direct contact with the soil. However, the altered hydrology in these areas can disrupt the natural germination process. This situation exacerbates the toll that was directly taken on cypress trees during the hunt for oil, when more than 500 cypress trees were documented by the Park Service to have been cut down to make way for the seismic survey vehicles to pass through previously pristine terrain.

Focusing beyond the cypress trees to the full plant community, let's examine the findings regarding the groundcover species. The groundcover community is also drastically different in the affected seismic areas in comparison to the nearby untouched areas. One prominent species in Seismic Survey Line B is *Eleocharis baldwinii*, known as Gulf Coast spikerush, which (while native) is an aggressive colonizer that can form dense monocultures in disturbed areas where water pools. Six years post-impacts, preserve visitors are witnessing areas that were once covered in a wide range of diverse native species—from butterfly-attracting milkweeds to colorful ground orchids to a vibrant mix of dozens of grass species like sawgrass and pink muhly grass—now replaced by predominantly one species. It's possible that the disturbance caused by the vibroseis trucks affected the water conditions, creating a habitat where the spikerush thrives. It is uncertain whether it is possible for the impacted areas to ever recover the species richness they once held. Further, while these findings are based on data collected by expert ecologists and botanists, a degree in botany is not required to see the alarming loss of diversity—it is easily visible in the striking visual contrast between many seismic-impacted areas and the nearby undisturbed plant communities.



Bottom: The stark contrast between the seismic-damaged habitat and healthy cypress habitat is clear. The seismic line on the **left** has only cypress stumps remaining, and is dominated by a near monoculture of spikerush—in contrast to the diverse, healthy cypress habitat on the **right**. ©Sam Cook | Quest Ecology (left) • ©Haniel Pulido | Falcon Shots (right)

Misleading Assessments and Unresolved Concerns

Further investigation unveiled substantial additional concerns, especially with the way the oil company's consultants characterized the impacts in their monitoring reports (which were submitted to both the Florida Department of Environmental Protection and the National Park Service). In the oil company's assessments, alterations to the ground elevation of less than 3 inches were not deemed impactful, yet no justification for this assumption was provided—and this report has already discussed how mere inches of difference do make a real impact in the Everglades ecosystem. Furthermore, this skewed assessment clearly deviated from the standards set by the National Park Service's and the Florida Department of Environmental Protection's permit conditions. Overall, the oil company's consultant's reports failed to accurately capture the ecological aftermath. Their reports trivialized the removal of ancient dwarf cypress trees, downplayed the presence of nuisance/exotic plant species, and optimistically projected the revival of groundcover vegetation.

This rosy outlook in the oil company's 2020 Reclamation Monitoring Report aligns with the lenient standards they established by loosely defining 'reclamation goals,' the misrepresentative ground elevation profile drawings, and the practice of sampling plants from the least affected parts of the seismic pathways. The oil company found that the impacts of their seismic surveys are "temporary;" but other experts with backgrounds in ecology and wetlands science disagree. There is no robust evidence to back up these claims from Burnett. The ecosystem's sensitivity to subtle water level changes is well-known. Soil chemistry and natural horizons have been disrupted, influencing vegetation growth, and altering the overall habitat in impacted areas.

Furthermore, the tree planting obligations outlined

in their Mitigation Summary Report raise persisting questions. While Burnett Oil Company is currently obligated to plant 1,527 bald cypress trees as replacements for the trees cut down during their seismic survey, there was a lack of clarity on the methodology behind the 3:1 replacement ratio, and documentation for the 509 cut trees was missing. In the original permit, it was stipulated that the oil company was expected to avoid cutting down native plants and trees taller than 36 inches or with a diameter exceeding 4 inches.

However, during field investigations, it became evident that numerous instances had occurred where vegetation removal exceeded these dimensions. For instance, a dwarf cypress tree stump with a diameter of around 40 inches was discovered, and a range of dwarf cypress tree stumps measuring from six inches to about two feet in diameter were observed—far greater than the permitted 4-inch diameter guideline. In many cases the trees that were cut clearly surpassed the 36-inch height limit.



Endangered plant species—such as the cardinal air-plant—were overlooked in oil company reports, despite clear evidence existing of these rare plants being wiped out during the seismic surveys.

Additionally, the issue of endangered plant species—such as *Tillandsia fasciculata*, the cardinal air-plant—was also overlooked in both oil company reports and mitigation plans, despite clear evidence existing of these plants being wiped out during the seismic surveys. Endangered species affected by the seismic survey were simply not addressed. There is also the issue of potential impacts on other listed species that are more challenging to detect than well-known species like air plants; these other endangered species live in the diverse wet prairie groundcover communities and are difficult to see during non-flowering seasons. This lack of comprehensive consideration for endangered species raises additional concerns about the ecological implications of the seismic exploration.

Other technical concerns related to the assessment methods and conclusions presented in the oil company's reports have also been identified. For those who are interested to explore detailed evaluations of these problematic monitoring reports and insufficient mitigation plans, please visit savebigcypress.org/reports.

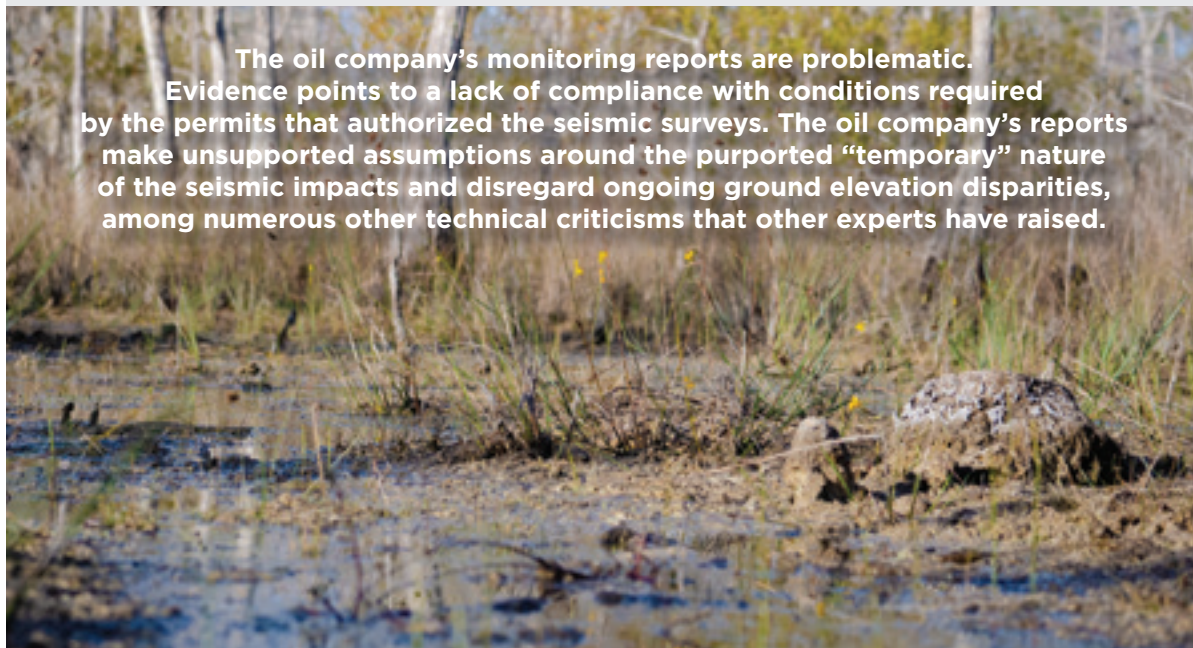
The divergence between the rosy conclusions made in the oil company's reports and the observed realities speaks to the need for heightened scrutiny and a more rigorous approach to addressing the impacts of seismic exploration on the preserve's delicate ecosystem. Our country's first designated national preserve deserves protection and restoration under the highest standard afforded by law.

“The agencies must hold Burnett accountable to resolve these lasting wounds evident in our precious Preserve.”

— AMBER CROOKS
Conservancy of
Southwest Florida



CHECK IT OUT: View the seismic surveys plowing down cypress trees in this video taken during the oil hunt in Big Cypress.



The oil company's monitoring reports are problematic. Evidence points to a lack of compliance with conditions required by the permits that authorized the seismic surveys. The oil company's reports make unsupported assumptions around the purported “temporary” nature of the seismic impacts and disregard ongoing ground elevation disparities, among numerous other technical criticisms that other experts have raised.



Thousands of people are speaking up in support of protecting Big Cypress from any new oil development, and are continuing to call for restoration of the wild lands damaged by the oil explorations of 2017–2018.

“Endangered panthers, bats, and orchids need a fully restored Big Cypress safeguarded from more drilling.”

— ELISE PAUTLER BENNETT

**Center for
Biological Diversity**

“Nature has the right to exist and thrive. It’s our responsibility to keep oil and gas development out of the Big Cypress.”

— BETTY OSCEOLA

Miccosukee Tribal Member

IV

Call to Action



Call to Action | Conclusion

It is unsettling that the scars etched into the landscape by the seismic impacts remain today, evidence of changed hydrology and an altered ecosystem amidst the cherished dwarf cypress prairies of the preserve—a key national park unit and vital part of the Greater Everglades ecosystem. There is resounding public demand, echoed in the voices of bipartisan elected officials, calling for the National Park Service (NPS) to confront the profound damage inflicted upon Big Cypress by the private oil company. The seismic impacts took place within an area that has special wilderness protections, and the Park Service has an obligation to ensure that both authentic restoration of the seismic-damaged lands as well as adequate mitigation is required of the oil company.

To right this obvious wrong, including the loss of more than 500 cypress trees caused by oil exploration and the disheartening absence of cypress regrowth in the impacted area, experts and advocates alike are calling upon the Park Service to use its clear authority (i.e. from its 2016 permit conditions as well as other Park Service policies) to require that Burnett Oil embarks on an earnest campaign of replanting cypress trees in the damaged areas. Native cypress trees should be grown from seeds from the preserve, cultivated to adequate height to improve their chances of survival in the damaged landscape, and should be meticulously matched in number to fit in to the unspoiled surroundings. Planting methods should use extreme care to avoid further damage to the habitat (i.e. heavy machinery should not be used), and vigilant monitoring and long-term care are imperative to ensure a successful replanting effort. In addition to restoring the damaged areas, as required by the permit that authorized the seismic surveys, compensatory wetlands mitigation needs to be increased to an adequate level. At the time

of writing this report, the total amount of mitigation that should be required is conservatively estimated to range from ~680 acres to ~1127 acres (depending on the type of mitigation), as opposed to the meager ~270 acres currently proposed by the Park Service.

Embedded within the foundation of the preserve's enabling legislation, the Park Service carries the mantle of perpetual stewardship of its natural and ecological integrity. This stewardship extends to the agency's responsibility to restore damaged landscapes and to prevent future oil related damages from occurring

in the preserve. Today, we stand at a crossroads—reflecting back on the damages caused by the seismic surveys, we are demanding full accountability in the form of restoration and mitigation; looking ahead, we are calling for protection of Big Cypress from any new future oil and gas development. On the eve of its 50th anniversary, the preserve needs its stewards to both restore and safeguard it. We hope you will join us in these calls to action. Let's continue to raise our collective voices, speaking up for the swamp to be protected and stewarded as a vital sanctuary—the heart of the western Everglades



We are calling for full restoration and mitigation of the damages caused by the prior hunt for oil, and protection of Big Cypress from any new oil and gas development.

Big Cypress by the Numbers

509

Number of mature cypress trees cut down during the seismic survey, counted by the National Park Service

0

Number of cypress trees replanted by Burnett Oil Company in the habitat that was damaged

100+

Number of organizations, businesses and elected leaders that are calling for restoration and protection of Big Cypress

110–169

Number of miles (estimate) of habitat damaged by the seismic survey – for scale, there are 111 miles from Naples to Miami

388 million

Economic output generated by preserve visitors in local economies in 2022 (in dollars)

1

Number of national park sites where the rare ghost orchid is found



Clockwise, from top left: Ghost orchid © Haniel Pulido | Falcon Shots • Florida Panther ©fotoguy22 | iStock • Air plant in Big Cypress ©Francisco Blanco | Dreamstime • Florida bonneted bat ©Enwebb | Wikimedia Commons • Big Cypress fox squirrel ©Haniel Pulido | Falcon Shots

To view the full suite of reports and other references that were utilized in the preparation of this report, please visit www.savebigcypress.org/reports, or www.savebigcypress.org/resources

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Credits

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