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Dear Mr. Rivera, Mr. Carey, and Mr. Hight:

On behalf of our more than 6,400 supporting families, the Conservancy of Southwest Florida is providing comment on the Troyer Brothers Mine and application #292013-007. We are requesting a public hearing on the Troyer Brothers Mine. We oppose this project and are asking for you to deny the request for a Section 404 permit because the project will have unacceptable direct, indirect, and cumulative impacts on endangered and threatened species, wetlands and water resources, public lands, and other natural resources. Indeed, this controversial project is located between parcels of mitigation lands and public preserves, and had previously been identified by the Army Corps of Engineers (ACOE) as needing review under a contemplated

cumulative Environmental Impact Statement (EIS) under the National Environmental Policy Act (NEPA).[1]

Florida Department of Environmental Protection (FDEP) states, "[s]tate assumption of the 404 program will provide a streamlined permitting procedure within which both federal and state requirements are addressed by state permits. This will provide greater certainty to the regulated community, conserve resources of both applicant and regulator, and afford the state greater control over its natural resources while complying with federal law."[2] It is against this backdrop that we provide these comments to you.

FDEP issued the public notice for Troyer without receiving any feedback about listed species from US Fish and Wildlife Service (USFWS) nor from the Florida Fish and Wildlife Conservation Commission (FWC).[3] Without this input, FDEP cannot determine if permit issuance criteria can be met, if further avoidance and minimization measures are needed, and the public has no opportunity to provide comment on the potential permit conditions. The wildlife agencies should immediately indicate that they would like to reserve the right to comment on this development. Similarly, the US Environmental Protection Agency (EPA) should notify the FDEP that it would like to reserve the right to comment, object to, or make recommendations to this application.

Project Summary

The Troyer Brothers Mine involves the construction and excavation of a new limestone mine as well as associated rock processing and ancillary operations in Lee County. The project site - 1,803.5 acres resulting in a 781 acre mine pit[4]- is proposed in the heart of Lee County, Florida panther habitat and would sever flowways that sustain the Flint Pen Strand. As the Troyer site is surrounded by the Airport Mitigation Park, Sam Galloway Tract Preserve, Imperial Marsh Preserve, and the Corkscrew Regional Mitigation Bank, the project also jeopardizes adjacent public preserved and mitigation lands, as well as regional water resources.

Habitat/Listed Species issues

We have significant concerns regarding the impacts of this project on wildlife habitat, particularly related to listed species. According to Florida Administrative Code Rule 62-331,

> *No permit shall be issued for the following:*

[1] Army Corps of Engineers, 2010. Determination to Conduct an Environmental Impact Statement on Limestone Mining Adjacent to Regional Preserve Lands Within the Lee-Collier Limestone Resource Area.
[2] https://floridadep.gov/water/submerged-lands-environmental-resources-coordination/content/404-assumption
[3] Florida Department of Environmental Protection, 2021. State 404 Program Public Notice for Troyer Brothers Florida Inc. November 5, 2021.
[4] Troyer Brothers Farms Wetland Mitigation and Monitoring Plan, June 2021, p.2

> *Jeopardizes the continued existence of endangered or threatened species, or results in the likelihood of the destruction or adverse modification of a habitat which is determined by the Secretary of Interior or Commerce, as appropriate, to be a critical habitat for endangered or threatened species.*[5]

The Troyer Mine will likely adversely affect several listed species, and indeed may jeopardize these species with extinction. State and federal protected species that have been observed on the site include: crested caracara, bald eagle, wood stork, Florida sandhill crane, roseate spoonbill, little blue heron, snowy egret, tri-colored heron, and Big Cypress fox squirrel.[6] In addition, the site contains viable habitat for a number of additional listed species, including the Everglades snail kite, the Florida black bear, and the Florida panther.[7] Furthermore, this site is considered essential habitat for the critically endangered Florida panther (about 90% of the site is Primary Zone priority panther habitat, with the remainder being Secondary Zone panther habitat).

The mine is proposed adjacent to public lands which are also heavily utilized by the panther and other listed species. The project may adversely affect the panther and other federally-listed species listed under the Endangered Species Act (ESA). In fact, the ACOE previously determined a cumulative-area EIS was needed, in part due to the fact that this project may adversely affect endangered and threatened species, citing impacts to the Florida panther, wood storks, other species, and travel corridors within this part of the county.[8]

Florida Panther

The survival and recovery of the Florida panther are dependent upon maintaining, restoring, and expanding the panther population and its habitat in southern Florida. Specifically, the recovery of

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[5] Florida Administrative Code. 62-331.053(3)(a)(4) Additional Conditions for Issuance of Individual Permits.
[6] Secondary Impact Analysis, April 2021, Revised August 2021, pp. 19-21
[7] *Id*.
[8] Army Corps of Engineers, 2010. Determination to Conduct an Environmental Impact Statement on Limestone Mining Adjacent to Regional Preserve Lands Within the Lee-Collier Limestone Resource Area. "*The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.* All of the 4 project sites are located within the Florida panther focus area, and at least partially within the panther's primary zone, which supports the only known breeding population of Florida panthers in the world1. We do not know the full effects the post-mining land use (open water) will have on existing wildlife corridors used by the panther. All of the 4 project sites are located within the 18.6 mile core foraging area (CFA) of at least one wood stork rookery. All of the mines in Lee County are located within the CFA of the two large rookeries in Corkscrew Swamp, which are some of the largest rookeries in the United States. Changes to the hydroperiod of wetlands within the CFA may adversely affect these important rookeries2 . We do not know the full effects the post-mining land use (open water) will have on the hydroperiod of wetlands in the surrounding areas. Most of the remaining larger parcels conducive to mine development are located in less developed areas of Lee, where there is a greater presence of threatened or endangered plant or animal species and habitat. The proposed abutting mine projects may limit travel corridors for dispersing sub-adult male panthers and lead to increased intra-species aggression due to competition for limited habitat. Other federally listed threatened and endangered species including the eastern indigo snake, red-cockaded woodpecker, Florida scrub jay, and Audubon's crested caracara are routinely the subject of consultation requests to the U.S. Fish and Wildlife Service for projects in the general area."

the Florida panther population is dependent on maintaining the ability of the Primary, Secondary, and Dispersal Zones, as identified by expert panther biologists Kautz et al. (2006)[9] to contribute to a viable population. Habitat loss and fragmentation, and the risk of human-wildlife conflicts, are the greatest threats to the Florida panther. These threats primarily result from rapid population growth and conversion of natural habitats and agricultural lands to urban land use.[10]

Panthers are wide ranging, secretive, and occur at low densities. They require large contiguous areas to meet their social, reproductive, and energetic needs, a requirement that is being compromised by rapid development.[11] Panther habitat continues to be lost to urbanization, residential development, conversion to agriculture, and mining. Because of this, there is a need for land use planning that incorporates panther conservation and recovery. Protection of the remaining breeding habitat in south Florida is essential to the survival and recovery of the Florida panther. Further loss of adult panther breeding habitat is likely to reduce the prospects for survival of the existing population, and decrease the probability of natural expansion of the population into south-central Florida.[12]

The Conservancy is very concerned that the proposed Troyer Mine will negatively impact the endangered Florida panther and destroy some of its valuable habitat. Once the land is destroyed and carted off for profit, it cannot be utilized by the panther. The mine pit not only destroys panther habitat, but fragments the remaining habitat areas.

The proposed mining site is located entirely within Primary and Secondary Habitat Zones and 91% of the site is Adult Breeding Habitat for the Florida panther, an area, which as the USFWS acknowledges, "supports the breeding population of panthers" (Exhibit A).[13] Kautz et al. (2006)[14] is considered best available science and recognizes the habitat areas delineated in the study as crucial for Florida panther recovery.[15] The area defined as the Primary Zone is the minimum "space to support a population that is barely viable demographically as long as the habitat base remains stable" and therefore advocates for a "no net loss of landscape function or carrying capacity."[16] The delineated habitat zones are essential to long-term viability, survival, and recovery of the species, yet this project proposes to destroy hundreds of acres of habitat.

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[9] Kautz, R. et al, 2006. How much is enough? Landscape-scale conservation for the Florida panther, BIOLOGICAL CONSERVATION 130: 118 – 133.
[10] *Id.*
[11] US Fish and Wildlife Service, 2008. Florida Panther Recovery Plan. P. viii.
[12] Frakes RA, Belden RC, Wood BE, James FE (2015) Landscape Analysis of Adult Florida Panther Habitat. PLoS ONE 10(7): e0133044. https://doi.org/10.1371/journal.pone.0133044
[13] US Fish and Wildlife Service, 2009. Letter from US Fish and Wildlife Service to US Army Corps of Engineers regarding Troyer Mine. August 14, 2009. P. 2.
[14] Kautz, R. et al, 2006. How much is enough? Landscape-scale conservation for the Florida panther, BIOLOGICAL CONSERVATION 130: 118 – 133.
[15] US Fish and Wildlife Service, 2008. Florida Panther Recovery Plan, 3rd Revision.
[16] Kautz, R. et al, 2006. How much is enough? Landscape-scale conservation for the Florida panther, BIOLOGICAL CONSERVATION 130: 118 – 133.

Loss of habitat, particularly in the Lee-Collier area where fragmentation, isolation, and degradation of habitat have been occurring rapidly, could have devastating individual and cumulative effects.

Between 2014 and 2019 –a five year period- nearly 10,000 acres of Florida panther habitat was permitted away in eastern Lee County.[17] Now, FDEP must consider the fact that the Troyer Mine, if permitted, would present unacceptable individual, secondary, and cumulative impacts on remaining Florida panther habitat.

The Florida Panther Recovery Plan indicates that while loss and fragmentation of habitat is the leading threat to the survival of the species, panthers also "avoid areas within their home range with intensification of disturbance".[18] Being directly adjacent to heavily utilized wildlife habitat, this intensification of use has the potential to seriously impact both the function and value of these areas for the Florida panther and wildlife in general. We remind you that habitat loss from excavation is different than development. This land is being blasted and carted away. The reclamation plan is for a big lake to remain onsite. While panthers can swim, the lake will not be habitat for the Florida panther. If a permit is awarded, the applicant must be required to create new primary and adult breeding habitat for the Florida panther in excess of what they are destroying, as contemplated by the best available science.[19] The spatial extent of the primary panther zone as well as the adult breeding zone is essential to the survival and recovery of the Florida panther.

Glare and light trespass from the mine site will also be detrimental to established Florida panther habitat and the functionality of conservation lands for a variety of species, which is directly adjacent to the mine, as a panther corridor. Artificial lighting is known to have negative effects on wildlife behavior.[20] The application of this principle on as large a scale as the Troyer Brothers Mine suggests, the lights from the mine site may impact the panther's use of adjacent conservation habitat areas, especially given the possibility of the mine operating 24 hours, 7 days per week during emergency times or when contractually obligated and 6 am – 6 pm, Monday to Saturday at all other times.[21]

If permitted, these habitat impacts are the inevitable result of intensification and increased human activity of any mining operation and especially in this case where the mine proposes direct impacts to established panther habitat. We note that the panther is most active at dusk and dawn,

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[17]Review of US Fish and Wildlife Service Biological Opinions from 2014 to present. Cemex Alico3c 2,262 acres; Wildblue, 4,354 acres; The Place 1,361 acres; Corkscrew Crossing, 176 acres; Verdana Village 1,039 acres; Timbercreek, 518 acres; Florida Rock 2 modification, 218 acres. Totals 9,928 acres.
[18]US Fish and Wildlife Service, 2008. Florida Panther Recovery Plan. P. viii.,p.33
[19] Kautz, R. et al, 2006. How much is enough? Landscape-scale conservation for the Florida panther, BIOLOGICAL CONSERVATION 130: 118 – 133.
[20] https://myfwc.com/conservation/you-conserve/lighting/pollution/
[21] MEPD Resolution Z-18-022, Case No. DCI2016-00025, pp.3-4

both times the mine is scheduled to be operating,[22] and when the mine's associated traffic will be on nearby roads that are already deadly for the Florida panther and other wildlife.

Mining impacts such as blasting, equipment noise, dust, and bright lights could cause increased disturbance and the excavation of mine pits will result in direct and permanent habitat loss, fragmentation of established travel routes, and an increase in incidental vehicular deaths of this endangered species from truck and vehicle traffic generated by the project. The mine operation will significantly increase the number of trucks using SR82 creating a negative and incompatible impact on the existing residents in this area, as well as burden nearby roadways by adding an average of 1,160 truck trips daily.[23] While the only planned access point is onto SR82, using Google maps, we determined that it is approximately the same distance to I-75 to go west, taking SR82 and Daniels Parkway as going east, taking SR82 and Corkscrew Road. There is also nothing stopping the truck drivers from going east and taking SR82 to SR29 south to I-75. All of these roads have been identified by the Panther Recovery Implementation Team Transportation subteam as having hot spots, which are identified areas of multiple panther-vehicle collisions (Attachment I).

Compounding habitat and corridor impacts is the threat of panther-vehicle collisions, a major source of mortality for this species. There have been 330 documented panther deaths within a 25-mile action area radius of the Troyer site from 1980 to January 2021 (see Exhibit B).[24] Of these documented deaths, 239 (72%) are due to vehicle strikes. Increasing vehicle trips is the wrong choice to protect the panther. In fact, roadways in Lee County, particularly this part of Lee County, have been deadly for the Florida panther in 2021. There have been 8 panther-vehicle mortalities in eastern Lee County in 2021, with 1 on Corkscrew Road, 3 along SR82, and 4 mortalities along other local roadways near the Troyer site.[25]

Due to the large loss of habitat acreage proposed to be lost, and the effect of panther mortality due to increased traffic, the project should be denied as proposed. Loss of habitat, particularly in the Lee County area where fragmentation, isolation, and degradation of habitat have been occurring rapidly, will have a devastating individual and cumulative effect.

Florida Bonneted Bat

In the applicant's submitted survey reports, there is acknowledgement that there may be an endangered Florida bonneted bat roost on-site or in the vicinity.[26] The station for which these

[22] https://www.fws.gov/verobeach/MammalsPDFs/AGuideToLivingWithFloridaPanthers.pdf?spcode=A008
[23] Hearing Examiner's Recommendation, Lee County, Case DCI2016-00025, p.19
[24] https://geodata.myfwc.com/datasets/florida-panther-mortality/explore?location=29.176203%2C-82.799267%2C6.62
[25] Florida Fish and Wildlife Conservation Commission. Panther Pulse webpage. Accessed at < https://myfwc.com/wildlifehabitats/wildlife/panther/pulse/>.
[26] Troyer Brothers Mine, 2020. Florida Bonneted Bat Roost and Acoustic Survey. June, 2020.

calls showed a higher probability of a roost –a very important finding for the recovery of the species since there have been limited roosts documented through this species' entire range- was in the middle of the project site. Although the applicant states that this area would not be directly impacted by the project, we are concerned that secondary impacts on this potential roost from the light, noise, and activities associated with the mine, could result in take of the bat and potentially a roost.

Crested Caracara

The caracara is a federally threatened species found in south and south-central Florida.[27] It lives in dry or wet prairies with scattered palms and also uses improved or semi-improved pastures.[28] Habitat destruction, degradation, and fragmentation are the primary drivers of caracara declines, though they are also threatened by road mortality, pollutants, and low numbers and genetic isolation.[29]

The Conservancy is concerned about adverse impacts from the proposed Troyer Mine on crested caracaras, including an observation of a foraging caracara in the northern row crops near the entrance to Troyer Farms. While no nests were found onsite, individuals were observed on-site, and the property contains suitable habitat.

A caracara nest was located 1,300 ft west of the project boundary.[30] 1,300 ft. is less than 400 meters (396.24 meters), placing the project in the protective buffer area. FDEP, USFWS, and FWC need to require the applicant avoid and minimize impacts within the identified nesting buffer area.

A prime objective for caracara recovery is to "protect and enhance currently occupied habitat."[31] Likewise, the USFWS Species Conservation Guidelines require protection practices within the primary zone and secondary zone habitats, such as conservation of pasture and grassland habitats. Habitat loss within this area, as well as the disturbance from mining activities within the area, threaten to harm and harass caracaras. USFWS guidelines stipulate that "new construction [within the management zones] that will increase the level of disturbance may adversely affect caracaras."[32]

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[27] U.S. Fish and Wildlife Service. 1999. Multi-Species Recovery Plan for South Florida. at 4-219, available at https://ecos.fws.gov/docs/recovery_plan/sfl_msrp/SFL_MSRP_Species.pdf.
[28] *Id.* at 4-222
[29] *Id.* at 4-225.
[30] Secondary Impact Analysis, April 2021, Revised August 2021, pp. 19-21
[31] https://www.fws.gov/verobeach/msrppdfs/audubonscrestedcaracara.pdf, p. 4-233
[32] https://www.fws.gov/verobeach/BirdsPDFs/2004SpeciesConservationGuidelinesCaracaraALLINCLUSIVE.pdf?spcode=A003, p.3-4

Therefore, USFWS and FWC should determine that the project 'may adversely affect' the crested caracara and work with the applicant and FDEP to ensure impacts to nesting and foraging caracaras are avoided and minimized.

Wood Storks

The proposed Troyer Mine is also within the Core Foraging Area (CFA) of five active wood stork colonies (Exhibit C). Threatened wood storks rely on the hundreds of acres of freshwater marsh and hydric pine flatwoods within the proposed mine site and will be adversely affected by the proposed impacts to over 100 acres of wetlands on the site.

Not only will the project impact occupied habitat on-site, it will also create an ongoing disturbance impact with the dragline and blasting operating up to 24 hours a day, six days a week, with a total operation of 35 years.

Although the applicant is proposing to create littoral wetlands around the mining pits as part of their mitigation required by Lee County, the success of these created habitats and their ability to provide long-term and viable foraging habitat has been questioned by the USFWS in the past.[33] In fact, the USFWS states that this type of created habitat results in high fish numbers; however, these numbers are not a reliable indicator of quality foraging habitat for wading birds.[34] For these types of created habitats, efficacy is negatively affected by loss of organic muck, lack of emergent vegetation diversity, uniform surfaces that lack habitat refuge, and damaging wave energy, etc.[35] Impacts that may result in take, such as loss of wetlands, should be adequately compensated with tried-and-true and scientifically-supported measures. Thus, you may wish to withhold full compensatory credit until the time that these techniques are fully proven.

Additionally, the applicant should address each of the three core foraging areas separately and cumulatively; the applicant needs to ensure each colony will have adequate foraging habitat during the 35 year life span of the mine, accounting for the additional time needed for reclamation.

Florida Black Bear

The applicant briefly mentions that a Florida black bear was recorded approximately 3 miles south of the property in June 2015.[36] The applicant ignores the 110 bear calls within 5 miles of the property recorded by FWC with publicly available data sets, including a dead bear found at

[33] US Fish and Wildlife Service, 2009. Letter from US Fish and Wildlife Service to US Army Corps of Engineers regarding Troyer Mine. August 14, 2009. P. 7.
[34] *Id.*
[35] US Army Corps of Engineers, 2009. Final Supplemental Environmental Impact Statement on Rock Mining in the Lake Belt Region of Miami-Dad County, Florida, as cited in US Fish and Wildlife Service, 2009. Letter from US Fish and Wildlife Service to US Army Corps of Engineers regarding Troyer Mine. August 14, 2009. P.7.
[36] Troyer Brothers Mine, Secondary Impact Analysis, April 2021, Revised August 2021, P.20

the south end of the Troyer Brothers property in February 2021.[37] (Exhibit D) This indicates that the property is, in fact, used by Florida black bears, and FWC needs to consider how the proposed mine will impact the existing bear habitat and area corridors.

Water Resources

Mining within this area of Lee County creates many potential impacts to groundwater availability and impacts to natural areas. These potential impacts include increased evaporation for lakes created for mining, lowered water table, and adjacent wetlands being drained due to seepage from wetlands into the mines. Limerock mining does irreparable damage to groundwater and flowway patterns; and there are multiple flowways and wetlands within and adjacent to the Troyer site (Exhibit E), which can never be restored to original condition once a property is mined.

As explained above, the project will adversely impact listed species. The project will also have negative impacts on water resources as well, as explained below. Therefore, the applicant has not adequately avoided and minimized impacts, would have unacceptable secondary and cumulative impacts, and does not adequately met the requirements of Florida's 404 program.

Increased Evaporation
The applicant intends to create one 781 acre mining pit, representing 45% of the overall property. In the dry season when most evaporation occurs, the mine lake elevations decreases resulting in a much lower than normal water elevation.

For example, Bell Road Mine is about 1 mile east of the project site. Bell Road Mine has two lakes of approximately 30 feet in depth and is already impacting the adjacent landowners due to evaporation.[38] In the dry season, the Bell Mine lake elevation is lower than the groundwater which causes groundwater to be drawn towards it. The lowering of the lake elevation is caused by evaporation of the lake water being much greater than that from the soils above the aquifer in the area.[39]

The Troyer Mine pit is going to be 3.6 times deeper than the Bell Road Mine pits. This means the impact on the Lee County Density Reduction/Groundwater Resource (DR/GR) area and neighboring properties is also going to be greater. There is a legitimate reason to believe that the

[37] https://geodata.myfwc.com/datasets/black-bear-related-calls-in-florida/explore?location=28.197985%2C-83.745778%2C6.99
[38] Dannemiller, Gary (2018). Hydrologic Opinion Report on Impact of Proposed Troyer Mining Upon Adjacent Property, Lee County, Florida.p.9
[39] *Id.*

water table surrounding the project site will be lowered to an extent that their neighbor, Sakata Seed Research Farm, will no longer be able to continue their business.[40]

The Lee County funded 2009 DHI hydrology report looked at four different land use change scenarios which involved the impact of mining. On page 12 of the report it states:

> *This modeling has indicated, in general, that the annual averaged ET (evapotranspiration) rates from the DR/GR [Density Reduction/Groundwater Resource] Area would be higher with greater areal coverage of mining pits. The surface water outflow rate (runoff) from the DR/GR Area was lower in all the scenarios compared to the ECM (existing conditions model), which is likely related to the greater mining pit coverage. These results are expected due to the higher ET losses and the lower runoff from mining pits and its effects on the surface water flow in neighboring areas.*[41]

Decreasing water flow to the DR/GR area as predicted by this model would be detrimental. The evidence confirms that the larger Troyer mine lake will have a significant adverse impact to the adjacent land owners and conservation lands.

As discussed above, the Bell Road mine to the east is already having measurable impacts to the Sakata Seeds property with their two 30 ft. deep lakes. During the wet season, the applicant's modelers expect and modeled that water will flow over the Bell Road property southwest across the Sakata property.[42] That doesn't happen. Water continues to flow to the lowest point, the Bell mine lakes even during the wet season. Water seeks the lowest point; a huge lake on the southwest side (Troyer mine) will likely drain the Sakata property. This significant adverse impact to the Sakata Seed Research Farm is not based on hypothetical modeling projects but actual field data verification.[43] The change from agriculture to mining on the Troyer property will use 116.7 million gallons of water per year more than the existing agricultural use.[44]

Lowered Water Table

The Lee County funded report by DHI states that the creation of mine lakes will lower the dry season groundwater elevation around them and decrease the flow to the DR/GR area.[45] Creation of the mine lake will lower the areas groundwater elevation in the dry season greater than normal. This will greatly impact the ecology of the DR/GR; plants and animals which have

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[40] *Id.* p. 14
[41] DHI (2009).Comprehensive Hydrological Study of the Lee County Southeastern Density Reduction/Groundwater Resource (DR/GR) Area.
[42] Dannemiller, Gary (2018). Hydrologic Opinion Report on Impact of Proposed Troyer Mining Upon Adjacent Property, Lee County, Florida. P. 9
[43] *Id* .p.10
[44] *Id.* p. 14
[45] DHI (2009).Comprehensive Hydrological Study of the Lee County Southeastern Density Reduction/Groundwater Resource (DR/GR) Area., p.13

sensitive ecologic requirements during the dry season will also be greatly impacted. Construction of the mine may lower the water table 23 inches further than normal in the dry season in the north part of the property.[46] This finding is dramatically different than the picture the applicant paints in its submittal in which Troyer Mine claims to have minimal drawdown on adjacent properties.[47]

Impacts to Wetlands

A change of the water table by creation of mine lakes would have an adverse impact on the existing farm lands and wetland areas. The wetland ecosystem depends on the water levels not to go lower than three to six inches below the low point natural hydro-period.[48] Lowering the water table several inches by the mining lakes would have adverse impact upon the wetlands. [49]

The Troyer lands are adjacent to a number of conservation and mitigation bank tracts, and the proposed mining has the potential to disrupt and alter hydrology on the adjacent wetlands and uplands.

Besides the impact to the wetlands on adjacent conservation lands, the project is proposing to directly impact over 100 acres of wetlands. Although the applicant plans mitigation, they have not adequately demonstrated avoidance and minimization of the direct and secondary impacts. Further, we are concerned about the impact the direct removal of wetlands will have on wildlife, especially wading birds. As stated previously, no set of conditions can be crafted that will successfully mitigate for the damage caused by the proposed mine.

According to Florida Administrative Code Rule 62-331, "no permit shall be issued for the following…Causes or contributes to significant degradation of wetlands or other surface waters."[50] It is apparent that the Troyer proposed activities will degrade directly and indirectly the wetland ecosystem of the area.

Impacts to Water Quality

A water quality issue at the proposed Troyer mine lake has already been anticipated and "resolved" by approving a variance the applicant petitioned with the Bureau of Mining and Mineral Regulation, Department of Environmental Protection, State of Florida. The original petition for variance occurred on February 11, 2009 and it was approved on April 5, 2011. The projected future violation would be for not meeting the dissolved oxygen levels in the lower part of the proposed lakes as required by Sections 373.414(17) and 403.201(1)(a, F.S., and 62-

[46] Dannemiller, Gary (2018). Hydrologic Opinion Report on Impact of Proposed Troyer Mining Upon Adjacent Property, Lee County, Florida. P. 11
[47] Troyer Mine, 2021. Secondary Impact Analysis, April 221. Simulated Mining Drawdown Contour map.
[48] Dannemiller, Gary (2018). Hydrologic Opinion Report on Impact of Proposed Troyer Mining Upon Adjacent Property, Lee County, Florida. P. 7
[49] Richardson, Vepraskas. Wetland Soils, p 29
[50] Florida Administrative Code. 62-331.053(3)(a)(6) Additional Conditions for Issuance of Individual Permits.

302.530(31), F.A.C. These sections provide for minimum standards for the dissolved oxygen levels in surface waters made by the State of Florida. Creation of deep, large lakes (up to 110 feet deep) brings additional water quality problems.[51] This resolution, crafted nearly a decade ago, does not adequately address or solve the problems created by allowing these deep pits.

Impacts to Flowways

The applicant relies on removal of agricultural berms "to reconnect public conservation land" for mitigation.[52] The plan states that this is critical mitigation as the project is centrally located within the FDEP's "critical linkage area," and is "surrounded by several conservation and mitigation areas." In our view, these are the exact reasons why a new mining operation that will create a massive and deep mining lake, impact area hydrology, increase truck traffic, and destroy wildlife habitat and wetlands, is not acceptable in this location. Avoidance and minimization of these impacts should be prioritized.

Alternatives Analysis

Pursuant to 8.1 (a) of the 404 Handbook, [a] project shall not be administratively complete if the alternatives analysis required by subsection 62-331.053(1), F.A.C., has not been submitted.[53]

Section 8.3.1 further discusses that alternatives analysis, providing:

> *Some aspects of the alternatives analysis are similar to the requirements in Volume I, section 10.2.1 regarding elimination and reduction of impacts. The State 404 Program differs from ERP in that it requires more documentation (see subsection 62-331.053(1), F.A.C.), and allows the "No project alternative" (or "No action alternative") to be considered.*[54]

While the applicant has provided an alternatives analysis including alternative sites not owned by the applicant, there was no alternatives analysis that considered that USDOT – and likely, subsequently, FDOT – is moving away from limestone materials towards more sustainable options.[55] The entire impetus for destroying this land is to build more roads by providing materials to FDOT.[56] What if the best course of action for Lee County's DR/GR, endangered and threatened wildlife, and water resources is to stop catering to automobile centered development, focus on renewable and sustainable materials as well as public and multi-modal

[51] Dannemiller, Gary (2018). Hydrologic Opinion Report on Impact of Proposed Troyer Mining Upon Adjacent Property, Lee County, Florida. P. 23
[52] Troyer Brothers Florida, 2021. Mitigation Hierarchy Analysis, April 2021. P. 10.
[53]404 Applicant's Handbook, Section 8.1(a), p. 31.
[54] 404 Applicant's Handbook, Section 8.3.1., p.33.
[55] https://bylt.news/asphalt-alternatives-and-cool-pavement/
[56] Public Notice Permit Application No. ST404_292013-007, published November 5, 2021

transportation? These types of alternatives were not considered, and the long term impact and demand for the product should be required for mining projects as part of the alternatives analysis.

Another shortcoming of the applicant's alternatives analysis was the failure to identify which sites where aggregate is available is located is not in primary panther habitat, adult panther breeding habitat, or adjacent to conservation lands. We do know, based on shapefiles provided by DOT that 388,207 acres of aggregate area in southwest Florida are outside of primary panther habitat and adult breeding habitat (See Exhibit F).

Cumulative and secondary effects of project

The Troyer property is located within Lee County's 83,000 acre DR/GR area. Although this planning area designation is a local one, the DR/GR aims to reduce density, preserve wildlife habitat, and protect vital groundwater resources, which supply over 80% of Lee County's public drinking water and also make up the headwaters of the Estero River, Flint Pen Strand, and the Imperial River/Spring Creek Watersheds. This is a significant environmentally-sensitive area with thousands of acres of preserved lands, and critical natural resources.

As of the date of this letter, the cumulative and secondary effects of this project have not been adequately addressed and remediated. The 404 Applicant's Handbook requires that cumulative and secondary effects must be addressed:

> *Cumulative effects attributable to dredge or fill activities in wetlands and other surface waters should be predicted to the extent reasonable and practical… information shall be documented and considered during the decision-making process concerning the evaluation of individual permit applications and monitoring and enforcement of existing permits.*[57]
>
> and;
>
> *Information about secondary effects on aquatic ecosystems shall be considered and documented during the decision-making process concerning the evaluation of individual permit applications… the CWA requires secondary impact analysis on the following categories: Sanctuaries and refuges… [and] Human use characteristics.*[58]

Impacts to Area Water Resources

As discussed in more detail above, there are substantial impacts to water resources both onsite and within the greater DR/GR wetland ecosystem. They run the gamut from lowered water table,

[57] 404 Applicant's Handbook. 8.3.5 Cumulative Effects. Dec. 22, 2020.
[58] 404 Applicant's Handbook. 8.3.6 Secondary Effects. Dec. 22, 2020.

altered hydrology, loss of wetlands, degradation of the greater ecosystem, to fragmentation of flowways.

There does exist evaporation data from a deep mine lake north of Miami that is a good fit for the Troyer mine lake because they are similar in depth and in location. This lake is considered a good comparison for evaporation analysis because the two lakes are located at the approximate same latitude. This means that the environmental climate conditions that play a part in evaporation are similar for both lakes. This study found an actual evaporation rate of **63 inches a year**. This report is in the Geological Society of America Special paper 404, pp. 219-234 by Bacchus, S. 2006. It is titled Nonmechanical Dewatering of the Regional Florida Aquifer System.[59]

When lake elevation is lowered by evaporation what occurs is the surrounding land groundwater will move into the lake from the higher water table beneath the land via the bedrock aquifer to equalize the pressure differential. The water table under the land will be lowered by the lower lake elevation in the dry season.[60] Mining lakes do provide additional water volume storage, but this extra volume does not prevent it from sucking groundwater from the surrounding land in the dry season.[61]

The Troyer Mine poses a substantial risk to adjacent wetland ecosystems due to evaporation, drawdown, and the domino effect that would result on area hydrology. Because the DR/GR area of Lee County also supports the area's drinking water resources and contains public wellfields, this is of particular concern.

Impacts to Surrounding Public and Conservation Lands

The DR/GR area also contains several significant publicly-owned lands and conservation lands. The proposed project site itself is surrounded by several regionally significant conservation lands. The site is bounded to the west by the Sam Galloway Tract at the Imperial Marsh Preserve (a 400-acre preserve), and to the east by the Corkscrew Regional Mitigation Bank (a 632-acre preserve), and the Airport Mitigation Park (a 6,000-acre preserve which also connects south to the Flint Pen Strand Preserve and the Corkscrew Regional Ecosystem Watershed) (Exhibit G).

The Conservancy is concerned that the location of this project will jeopardize the functionality of these preserves, both in regards to disturbance affecting its value as wildlife habitat, as well as the hydrological impacts of the mine on these wetland areas. Together with the permanent physical barrier created by the mining lakes and intensified activity, the proposed project will create a barrier between the preserve lands that surround it.

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[59] Dannemiller, Gary (2018). Hydrologic Opinion Report on Impact of Proposed Troyer Mining Upon Adjacent Property, Lee County, Florida. P. 13
[60] *Id*. P. 2
[61] *Id*.. P. 3

Impacts to Surrounding Rural Residential Communities
In addition to public lands, there are a number of rural residential communities in close proximity to the proposed mine (See Exhibit H). The impacts from locating a mine site so close to these small, rural communities adjacent to the property and along Corkscrew Road is inappropriate and will result in negative impacts to those communities which could change the character of these rural communities. Outside of the DR/GR, but adjacent to the northern boundary of the proposed site, the Lehigh Acres residential community is a more urbanized area, but will be subject to similar impacts like increased truck traffic and noise pollution. Due to the location of the mine and the impacts of its truck traffic, the mine is highly controversial, and also poses a threat to public health and safety.

5-year time limit

We note that the June 9, 2021 First Request for Additional Information sent by FDEP Item #8 states:

> *The proposed project appears to contain more work than can be completed within 5 years. State 404 Program permits are limited in duration to 5 years and may contain no more than 5 years-worth of work. If your project is expected to take more than 5 years to complete, please divide the project into 5-year phases and submit information as described in section 5.3.2 of the 404 Handbook – "Long-Term Conceptual Planning for Projects that will Take More Than One Phase to Complete". If your project will not take more than 5 years to complete, please submit an estimated project schedule and information demonstrating that the project can be completed within 5 years.*

Submittals to Lee County for Troyer indicate that the mine operation is for much longer than 5 years. According to the testimony presented to Lee County and reported in the Hearing Examiner decision, the mine operations consists of five primary phases.[62] The applicant anticipates it will take approximately five years to complete the first phase.[63] Phase I mainly entails site preparations required by the Mine Development Order. These preparations include excavation necessary to construct the water management system, foundation pads for buildings and other structures, roads, and the settling pond.

The second phase begins in year six.[64] Phase II entails a key cut ditch, construction of a trapezoidal ditch 110 feet deep, and installation of the main electric conveyor system to transport mined material from the pit to the processing plant. Applicant anticipates it will take two and a half years to construct the conveyor system.[65] The conveyor system will transport overburden

[62] Hearing Examiner's Recommendation, Lee County, Case DCI2016-00025, p.7
[63] *Id.*
[64] *Id.*
[65] *Id.*

and limerock from the key cut ditch to the processing plant. Once processed, the material will be available for commercial sale.

Commercial excavation continues in the third phase with removal of material from the southern portion of the mine – this is anticipated to last for at least nine years.[66]

The applicant replied on September 7, 2021 that "[a]ll of the proposed federally jurisdictional wetland impacts will be completed within 5 years of the 404 permit issuance".[67] This seems unlikely unless the applicant is no longer following the plan that was provided to and approved by Lee County.

Later, in the documents provided to FDEP, titled "Troyer Brothers Farms Wetland Mitigation and Monitoring Plan"[68] the applicant states, "[t]he proposed 781 acres mine pit will be mined over 35 years".[69] In review of these discrepancies regarding the anticipated timeline for the development and the 5-year limitation of permits, the applicant needs to work with FDEP to ensure compliance with the 404 program requirements if this project is to receive a permit.

Environmental Protection Agency Should Federalize to Allow for Anticipated EIS Review

The mine will have impacts not just at the site, but also on adjacent landowners and regionally-significant natural resources. As mining will permanently impact the landscape and hydrology of the area, these impacts are immediate, as well as long-lasting. In all of these contexts, the affect is severe: public health and safety is compromised through truck traffic and water resource changes, farmlands and wetlands and ecologically critical areas will be impacted, the proposed project is controversial, the effect of post-mining land use on water resources and wildlife is not known, and listed species under the ESA are adversely affected.

We want to bring to EPA's attention that this project site was identified by the ACOE as contributing to significant and intense cumulative impacts that would have triggered an EIS under NEPA, particularly in conjunction with other proposals that FDEP is also considering (the FFD development an additional proposed 404 permit just west of Troyer Mine).[70]

In the ACOE's EIS determination announcement, they cite that limestone mining near preserves in this area of Lee County may have a significant impact on the human environment. This is largely due the deep mining pits near drinking water resources, the impact of mining traffic on infrastructure and public safety, the proximity of the mining to rural areas, the loss of regional wildlife corridors and endangered species habitats, area hydrology, and how mining would

[66] *Id.*
[67] Troyer Brothers, 2021. Letter to Zachariah Shely, FDEP, from DexBender. September 7, 2021. P.1.
[68] Troyer Brothers, 2021. Wetland Mitigation and Monitoring Plan. June 2021.
[69] Troyer Brother Farms Wetland Mitigation and Monitoring Plan, June 2021, p.1
[70] Army Corps of Engineers, 2010. Determination to Conduct an Environmental Impact Statement on Limestone Mining Adjacent to Regional Preserve Lands Within the Lee-Collier Limestone Resource Area.

impact downstream receiving waters.[71] Most notably, the ACOE noted that changes in this area of Lee County's DR/GR may also impact important conservation lands, and in particular areas that have been utilized as mitigation for other wetland functional losses.[72]

Similarly, the USFWS is also in the process is conducting an EIS regarding development and mining (proposed by the Eastern Collier Property Owners through the Eastern Collier Multiple Species Habitat Conservation Plan) just across the county line in Collier County.

The planned ACOE EIS that would have included the Troyer site was never completed, due to the projects withdrawing, suspending, or delaying their federal applications. Now that Troyer has returned for its Section 404 authorization, we believe that it would be appropriate for the EPA to 'federalize' the Troyer Mine project to allow for the completion of these necessary processes under NEPA.

Additionally, it is unclear if concerns raised by the Miccosukee Tribe have been resolved[73], and as neither FWC nor USFWS have provided comments on the Troyer Mine project at this time[74], we believe that intervention by EPA is also necessary.

Conclusion

Thank you for considering our comments and we hope that this will help the agencies to look exhaustively at the impacts of the Troyer Brothers Mine that would impact water resources and listed species forevermore in southwest Florida. The direct, secondary, and cumulative impacts of the proposed project require denial of the requested permit.

Please note that we contend that the assumed program does not meet the letter of the law, however, FDEP, the wildlife agencies, and the US EPA, need to utilize every latitude afforded in the framework to review, require modifications, and in this case, object to the Troyer proposal.

If you have any questions, please feel free to contact me at (239) 262-0304x252 or juliannet@conservancy.org. Thank you for considering our comments.

Sincerely,

---

[71] Army Corps of Engineers, 2010. Determination to Conduct an Environmental Impact Statement on Limestone Mining Adjacent to Regional Preserve Lands Within the Lee-Collier Limestone Resource Area.
[72] *Id.*
[73] Letter from Billy Cypress on behalf of the Miccosukee Tribe of Indians to Benjamin Melnick dated January 29, 2021
[74] Florida Department of Environmental Protection, 2021. State 404 Program Public Notice for Troyer Brothers Florida Inc. November 5, 2021.

Julianne Thomas, Senior Environmental Planning Specialist

Amber Crooks, Environmental Policy Manager

Enclosures:

1. Dannemiller, Gary (2018). Hydrologic Opinion Report on Impact of Proposed Troyer Mining Upon Adjacent Property, Lee County, Florida.
2. Army Corps of Engineers, 2010. Determination to Conduct an Environmental Impact Statement on Limestone Mining Adjacent to Regional Preserved Lands Within the Lee-Collier Limestone Resource Area. Text and map.

cc:
Zachariah Shely, FDEP
John Truitt, FDEP
Larry Williams, USFWS
Jose Rivera, USFWS
Jeaneanne Gettle, US EPA
Kathy Hurld, US EPA

Exhibit A

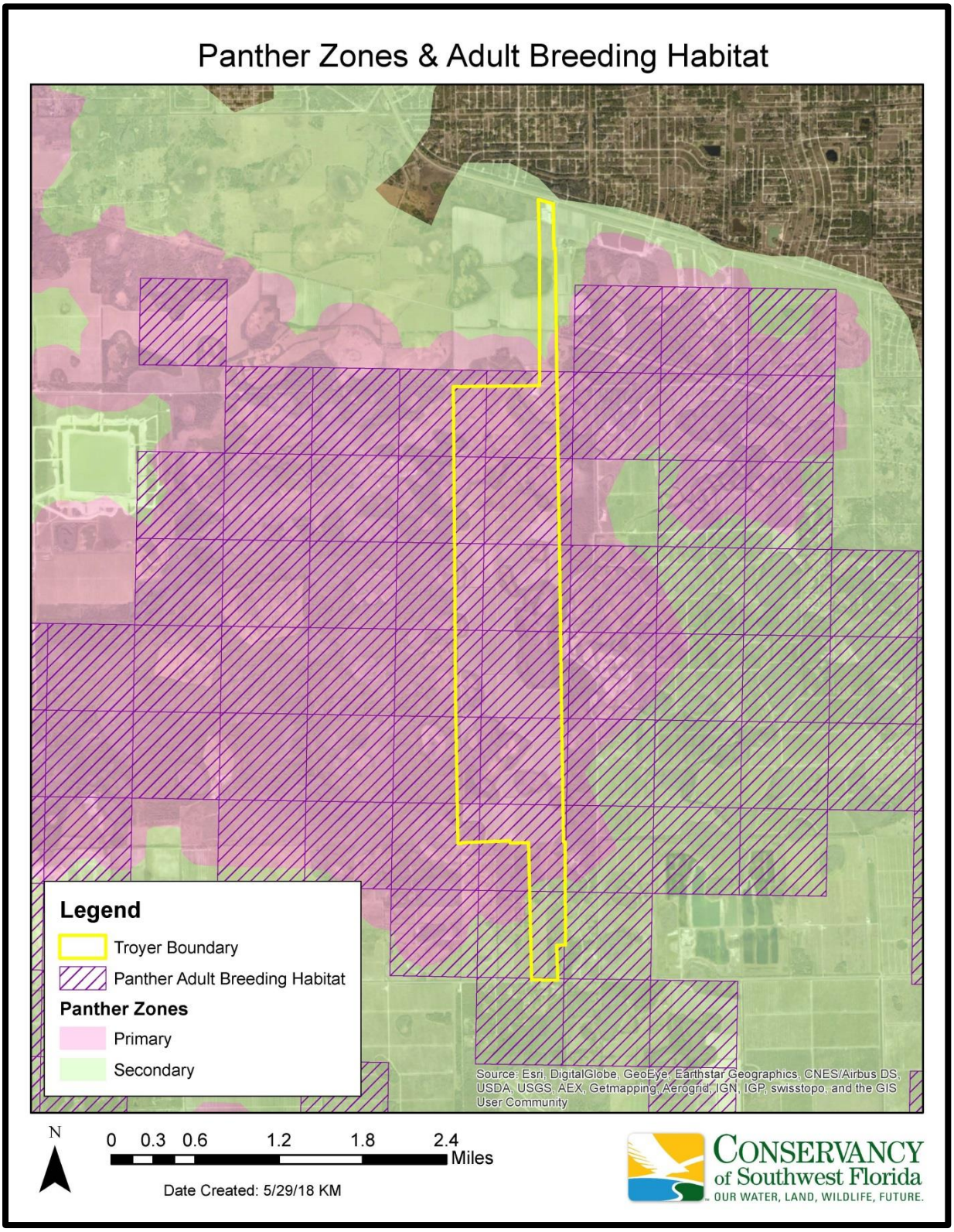

Panther Zones & Adult Breeding Habitat
Legend
Troyer Boundary
Panther Adult Breeding Habitat
Panther Zones
Primary
Secondary
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
N
0 0.3 0.6 1.2 1.8 2.4
Miles
Date Created: 5/29/18 KM
CONSERVANCY of Southwest Florida
OUR WATER, LAND, WILDLIFE, FUTURE.

Exhibit B

Date: 10/1/2021

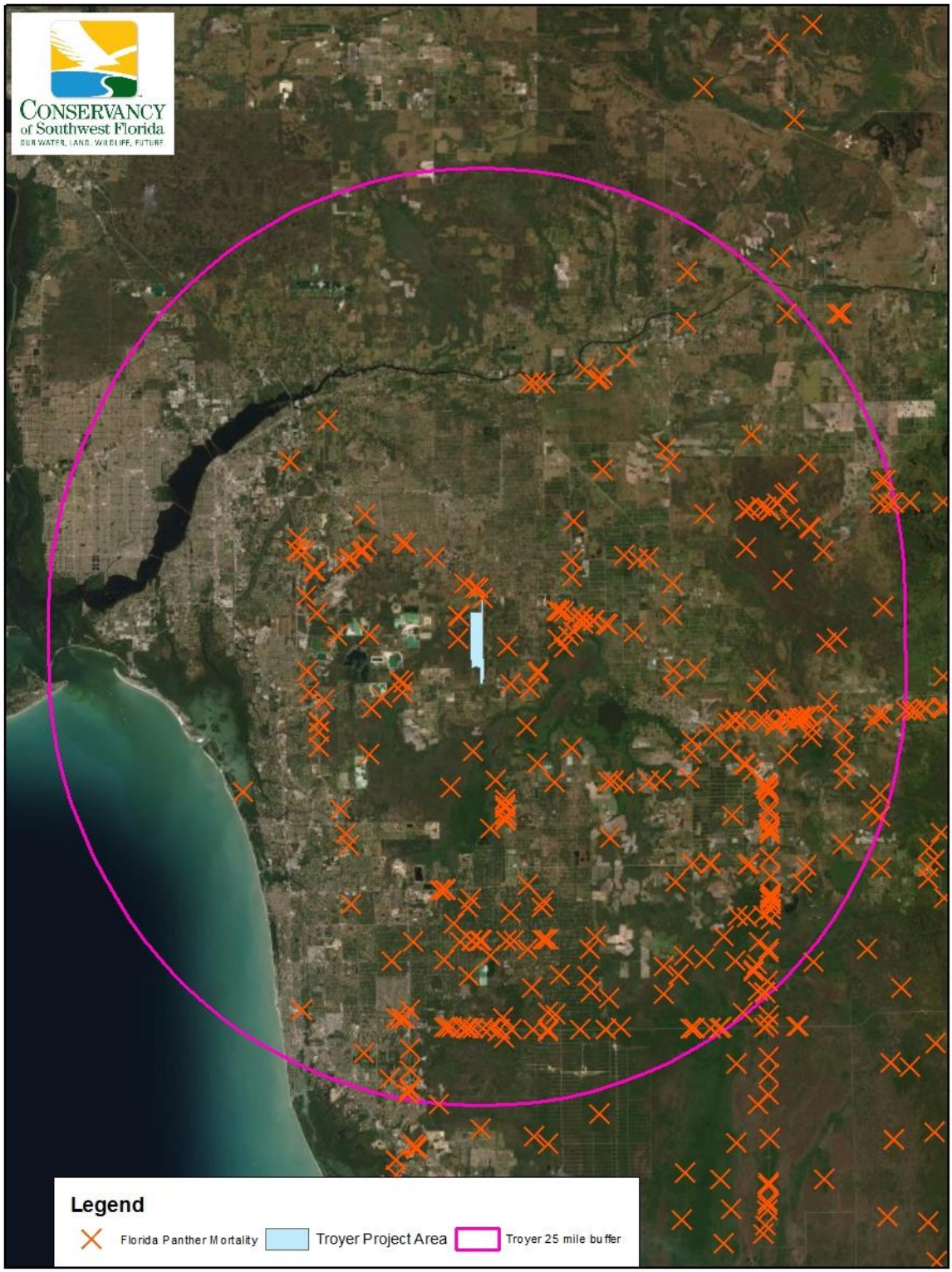
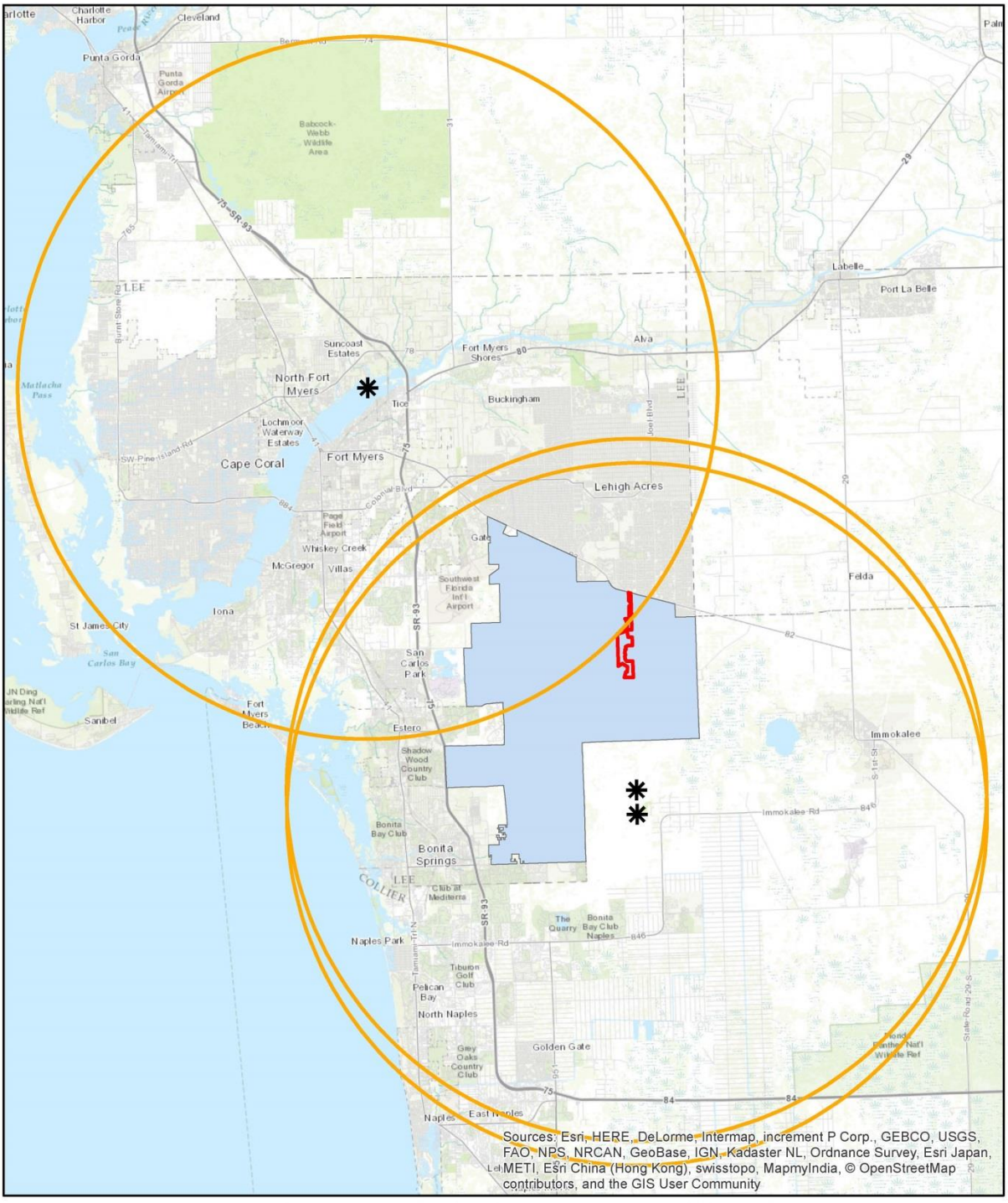


Exhibit C



Map 7. Wood Stork Colony Foraging Areas (18 sq. mi.)

Exhibit D

Bear Calls to FWC in a 5 mile radius from the Troyer Site

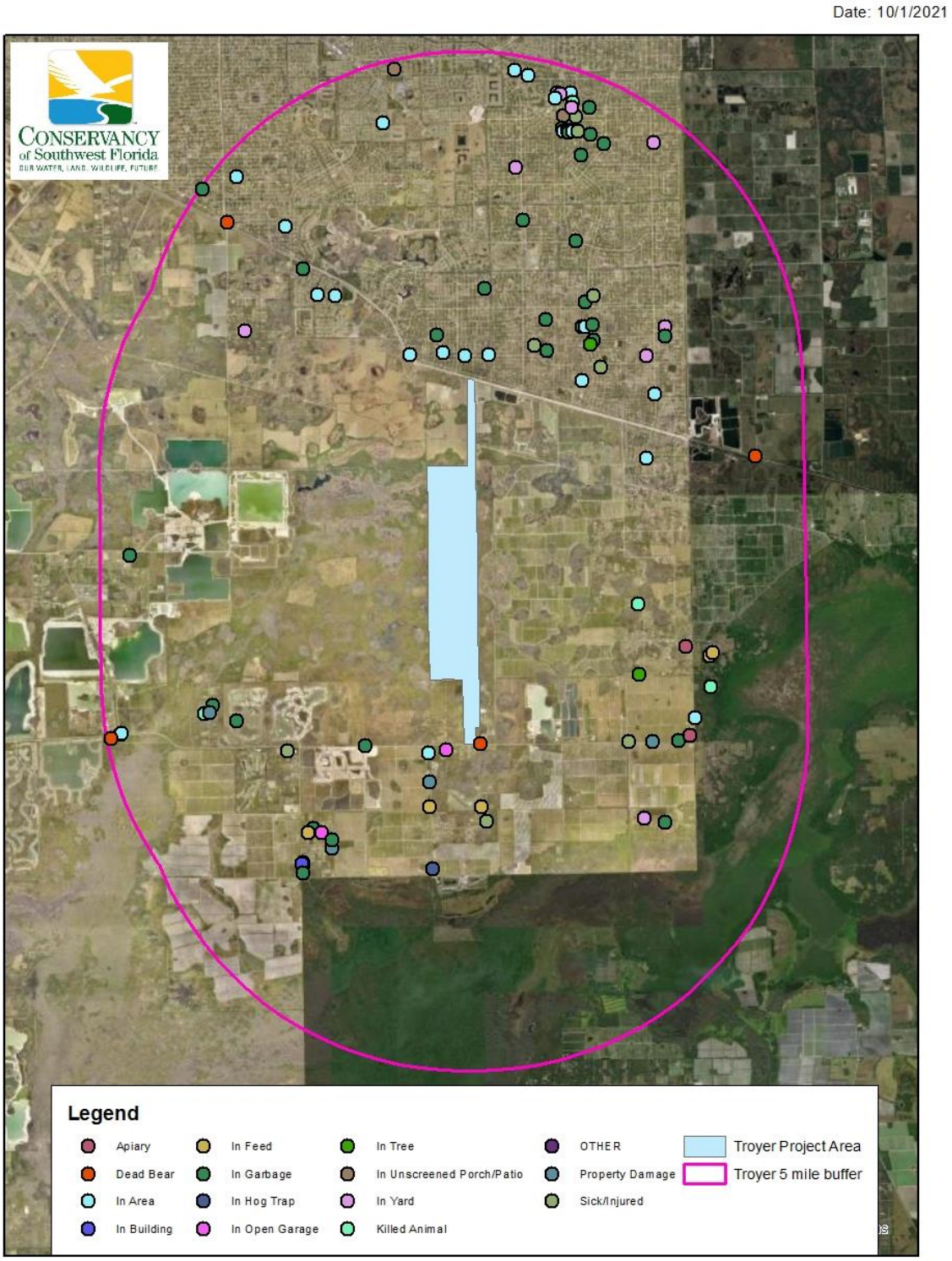


Exhibit E

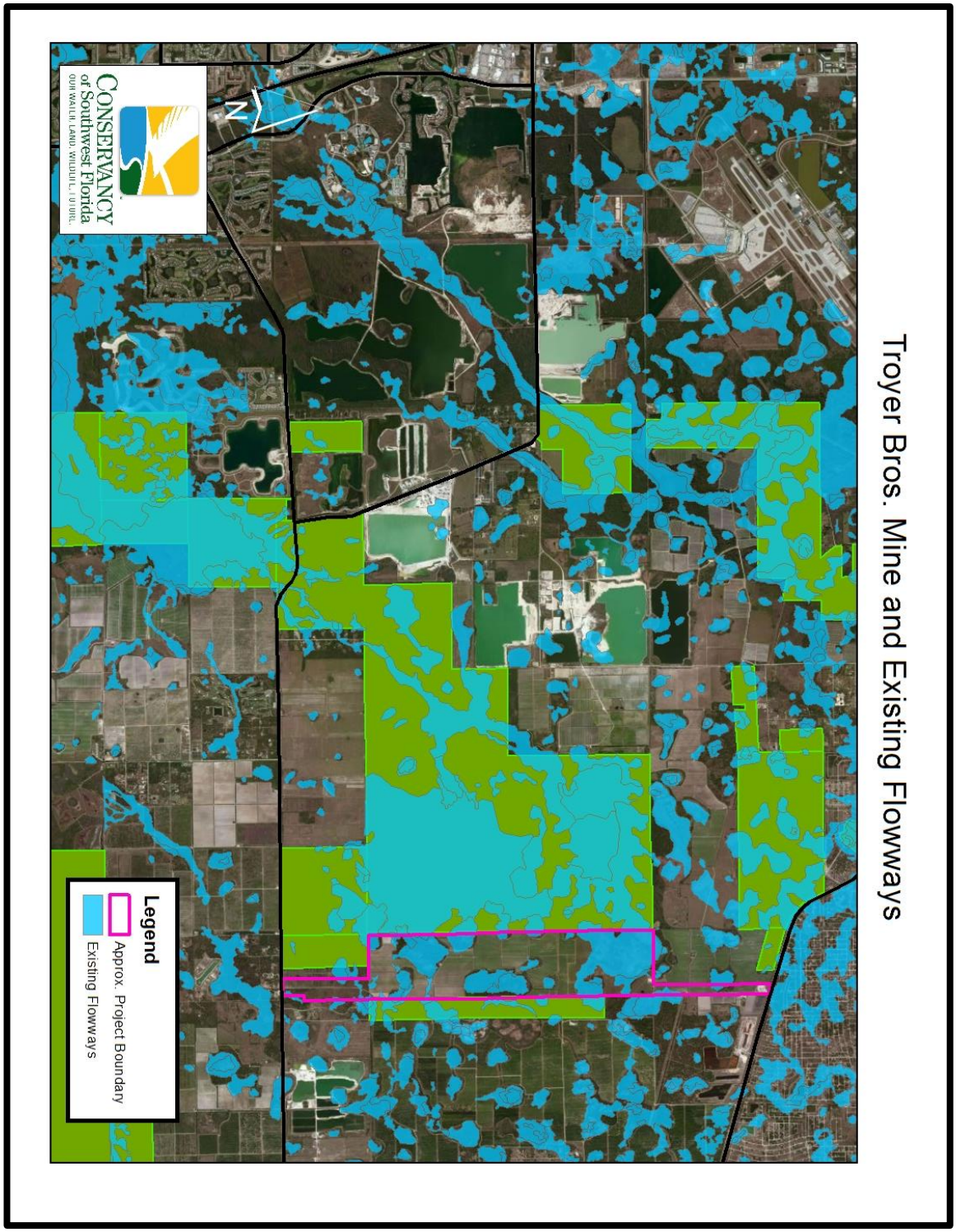

Troyer Bros. Mine and Existing Flowways
CONSERVANCY of Southwest Florida
N
Legend
Approx. Project Boundary
Existing Flowways

Exhibit F

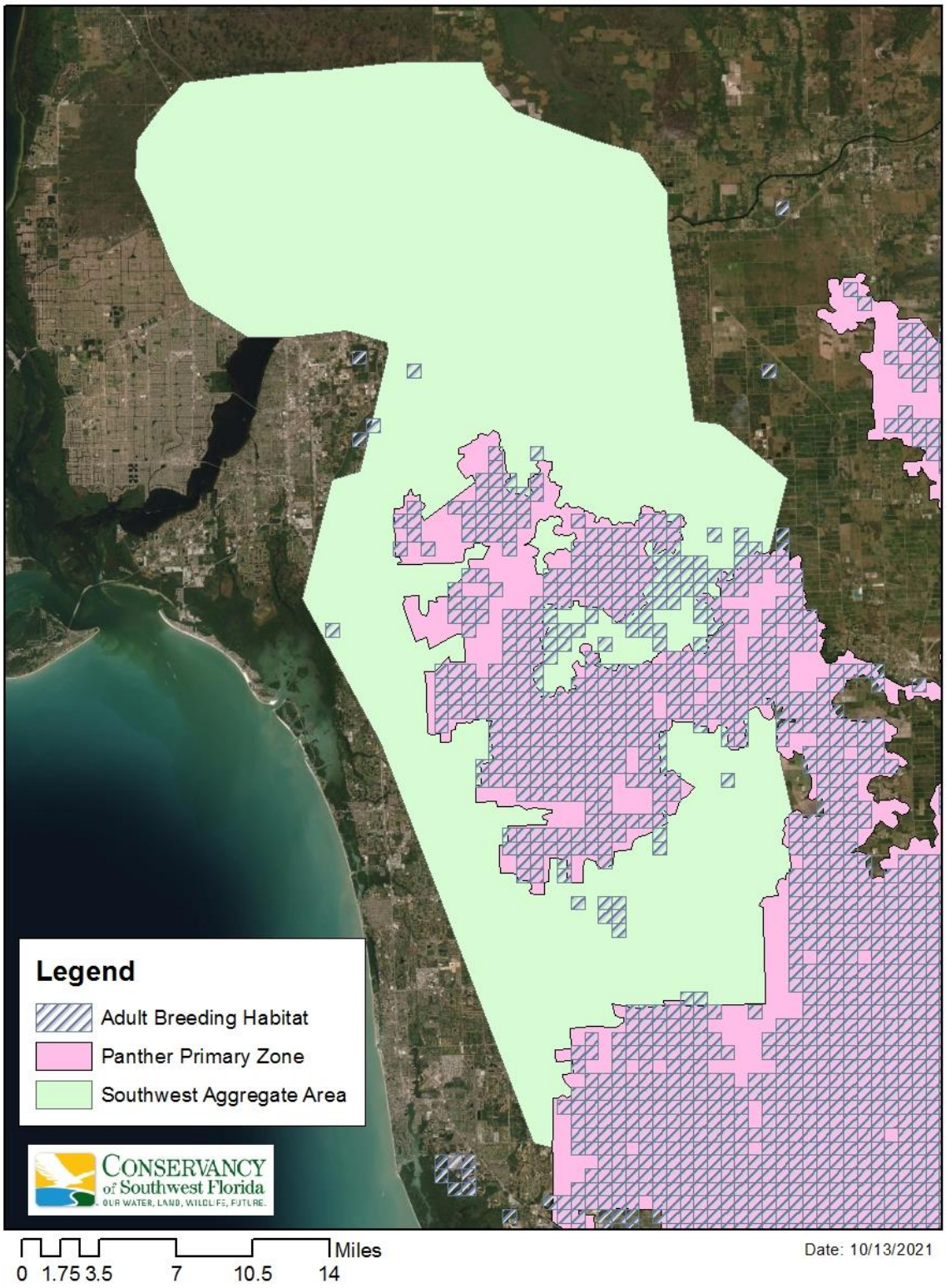

Legend
Adult Breeding Habitat
Panther Primary Zone
Southwest Aggregate Area
CONSERVANCY of Southwest Florida
OUR WATER, LAND, WILDLIFE, FUTURE.
0 1.75 3.5 7 10.5 14
Miles
Date: 10/13/2021

Exhibit G

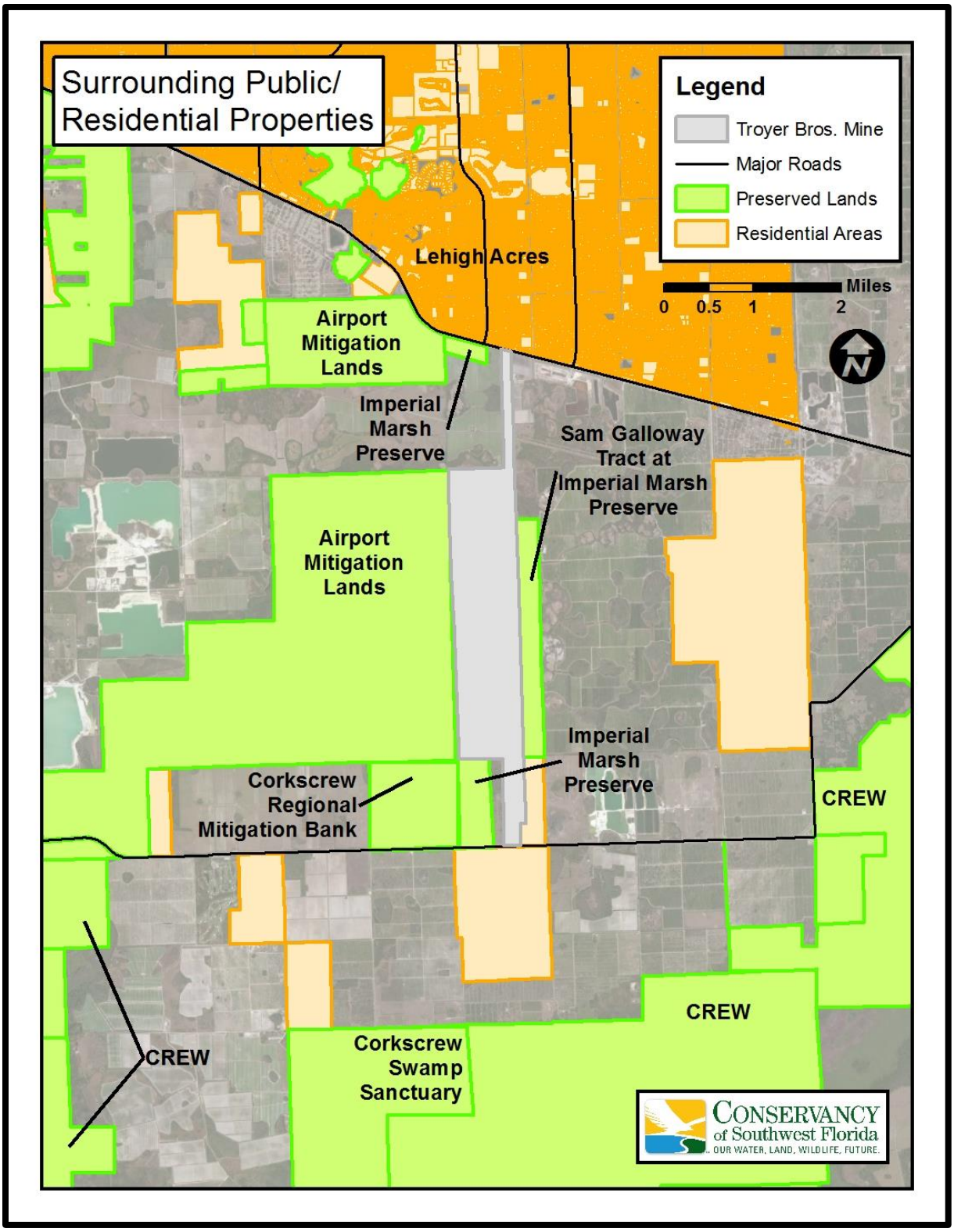

Surrounding Public/
Residential Properties
Legend
Troyer Bros. Mine
Major Roads
Preserved Lands
Residential Areas
Miles
0 0.5 1 2
N
Lehigh Acres
Airport
Mitigation
Lands
Imperial
Marsh
Preserve
Sam Galloway
Tract at
Imperial Marsh
Preserve
Airport
Mitigation
Lands
Imperial
Marsh
Preserve
Corkscrew
Regional
Mitigation Bank
CREW
CREW
CREW
Corkscrew
Swamp
Sanctuary
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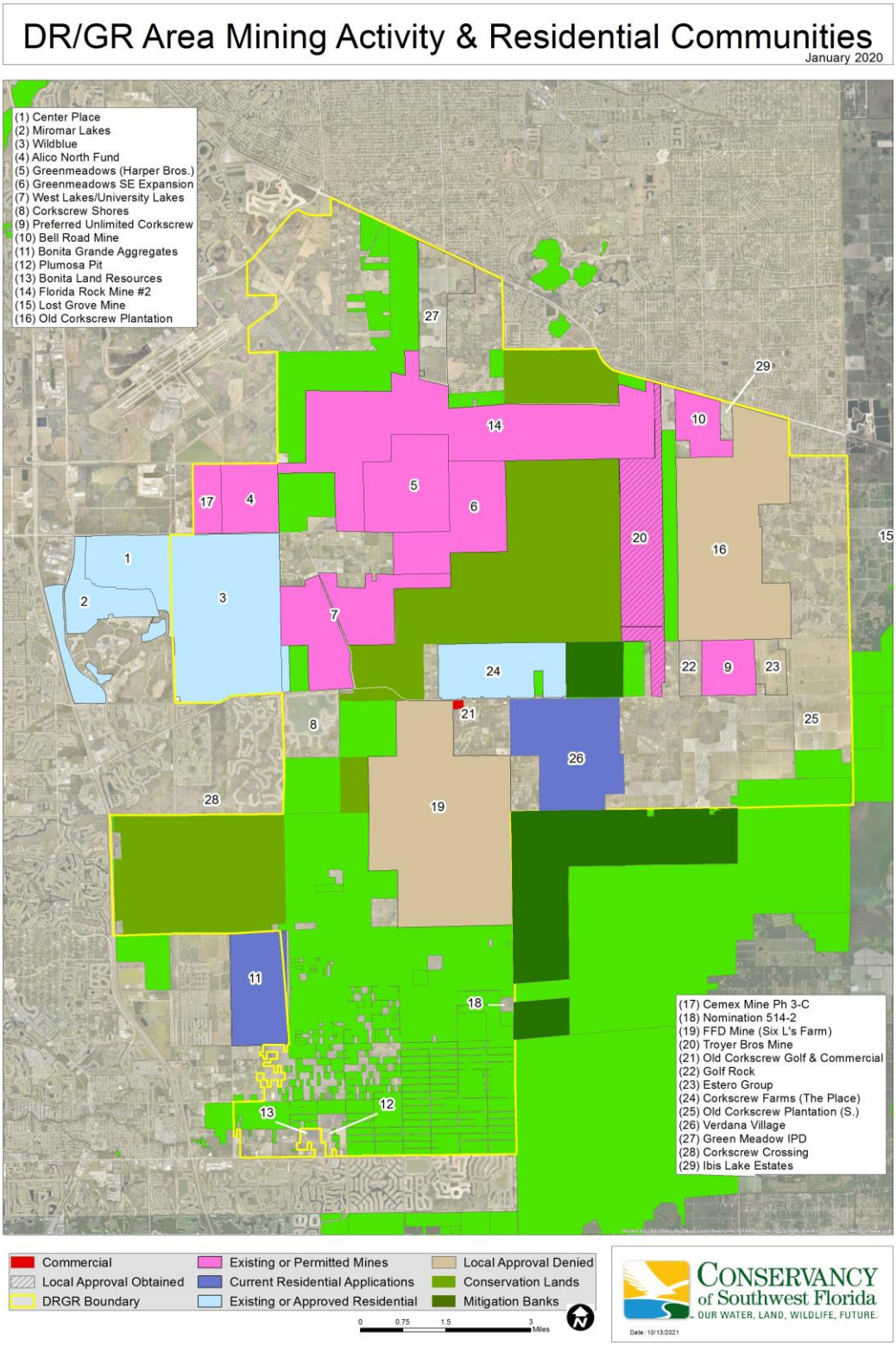
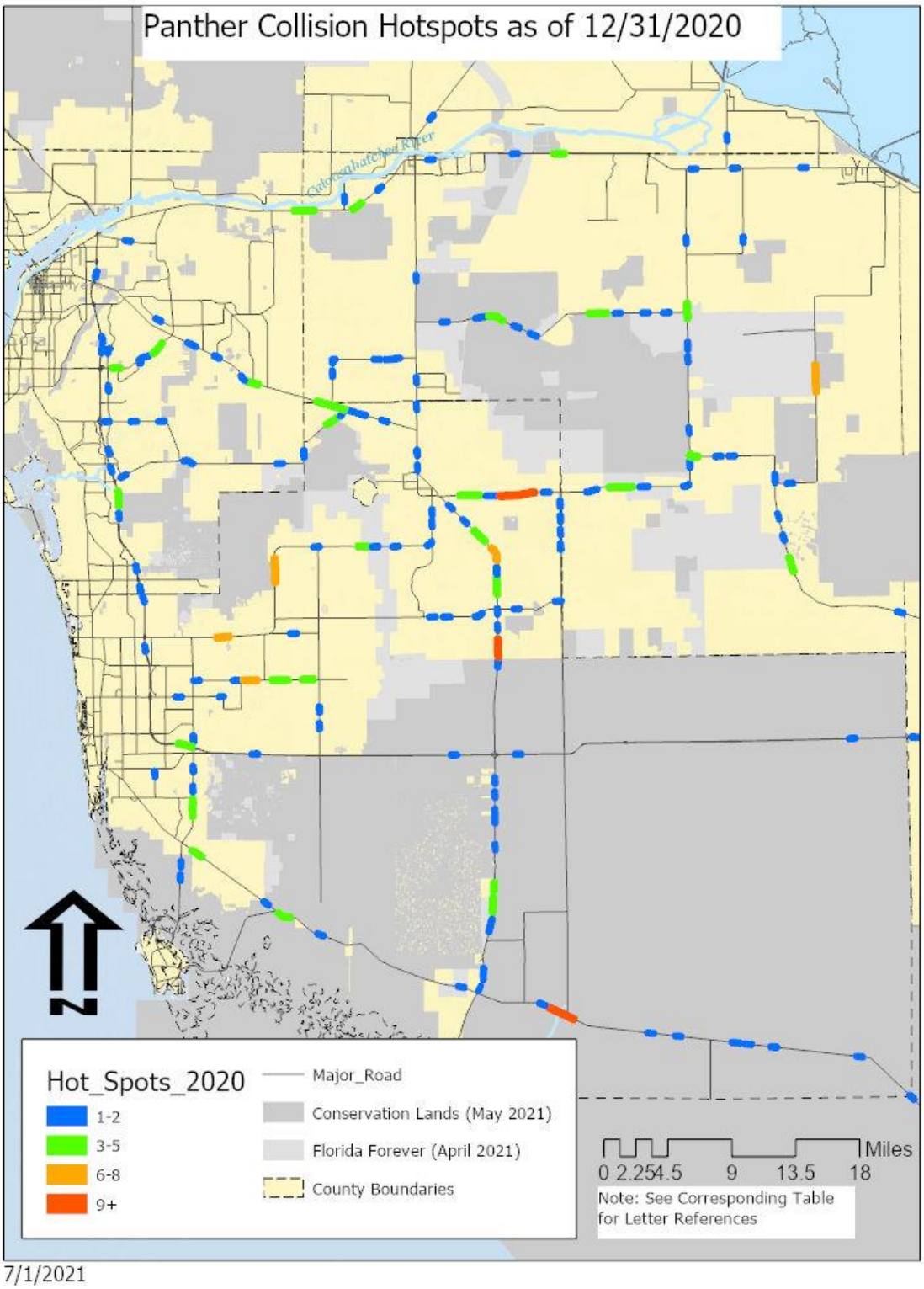
Exhibit H


DR/GR Area Mining Activity & Residential Communities
January 2020
(1) Center Place
(2) Miromar Lakes
(3) Wildblue
(4) Alico North Fund
(5) Greenmeadows (Harper Bros.)
(6) Greenmeadows SE Expansion
(7) West Lakes/University Lakes
(8) Corkscrew Shores
(9) Preferred Unlimited Corkscrew
(10) Bell Road Mine
(11) Bonita Grande Aggregates
(12) Plumosa Pit
(13) Bonita Land Resources
(14) Florida Rock Mine #2
(15) Lost Grove Mine
(16) Old Corkscrew Plantation
(17) Cemex Mine Ph 3-C
(18) Nomination 514-2
(19) FFD Mine (Six L's Farm)
(20) Troyer Bros Mine
(21) Old Corkscrew Golf & Commercial
(22) Golf Rock
(23) Estero Group
(24) Corkscrew Farms (The Place)
(25) Old Corkscrew Plantation (S.)
(26) Verdana Village
(27) Green Meadow IPD
(28) Corkscrew Crossing
(29) Ibis Lake Estates
Commercial
Local Approval Obtained
DRGR Boundary
Existing or Permitted Mines
Current Residential Applications
Existing or Approved Residential
Local Approval Denied
Conservation Lands
Mitigation Banks
0 0.75 1.5 3 Miles
CONSERVANCY of Southwest Florida
OUR WATER, LAND, WILDLIFE, FUTURE.
Date: 10/13/2021

Attachment I



7/1/2021