March 4, 2022

Michael Bosi, Planning Director
Jamie Cook, Director Development Review
Jamie French, Deputy Department Head
Collier County Growth Management Department
2800 North Horseshoe Drive
Naples, FL 34104

RE: Conservancy’s Recommendations to improve the RLSA’s Land Development Code Section 4.08.00

Dear Mr. Bosi, Ms. Cook, and Mr. French:

Although the Rural Lands Stewardship Area (RLSA) Overlay is twenty years old, only recently has the program’s effectiveness as a stewardship program truly been put to the test. Prior to the 5-Year Review (2007-2009), the RLSA had only one approved Stewardship Receiving Area (SRA), the Town of Ave Maria. However, as you know, during the second restudy (2018-2021), several more SRA applications were submitted to Collier County and were approved.¹ In addition, the County recently approved several Stewardship Sending Area (SSA) applications. These recent applications provide a wealth of information and reveal what is working and what improvements are necessary for the program to achieve its goals of wetland and habitat protection, retention of agricultural lands, and smart growth.

Through our in-depth reviews of these recent SSA and SRA applications, we discovered flaws within the RLSA program that will result in ineffective restoration plans and impacts to listed species habitat, even within the preserves (SSAs). Although there are these serious issues, the applications still generated substantial stewardship credits toward development.

Many of the issues boil down to loopholes and weak language within the Land Development Code (LDC). While, the Conservancy has solutions to improve the LDC, we understand that our recommendations may be outside of staff’s scope of work, as the LDC amendments are only to implement the 2021 GMP RLSA Amendments. Unfortunately, because the adopted 2021 RLSA GMP Amendments are modeled after the outdated 2009

¹ Rivergrass and Hyde Park Villages approved in 2020, followed Longwater and Bellmar Villages in 2021.
“5-Year Review Amendments,” the 2021 RLSA GMP amendments failed to address many of the current issues we raise in this document.

This document explains some of the ways in which recent SRA and SSA applications fail to align with the RLSA’s goals and objectives for habitat protection and restoration. Following each issue we present, we provide our recommendations to improve policies within Collier County’s LDC Section 4.08.00. If staff believes our recommendations to be outside of the scope this LDC Amendment process, we ask that staff consider our recommendations for the upcoming amendment cycle or the EAR.

In this document, we present the following issues:

- **ISSUE #1**: Restoration Plans that do not achieve stated outcomes.
- **ISSUE #2**: SSA Applications may still generate large numbers of restoration credits while providing minimal restoration work.
- **ISSUE #3**: The LDC should require measurable success criteria based on specific environmental outcomes instead of completed tasks.
- **ISSUE #4**: SSA Agreements and Easements must include perpetual maintenance agreements to manage and control exotic species.
- **ISSUE #5**: Although the Planning Commission acts as the County’s Environmental Advisory Committee, they do not review or hold hearings for SSA applications.
- **ISSUE #6**: SRAs may reduce habitat functionality in adjacent SSAs.
- **ISSUE #7**: LDC 4.08.01Q fails to conform to the RLSA’s goal.
- **ISSUE #8**: Scores for Listed Species Habitat Indices must be increased to protect the endangered Florida panther.
- **ISSUE #9**: Issues with the proposed location of panther corridors. Conservancy provides recommendations for location of wildlife crossings.

While these issues are not all encompassing, we believe these to be the most significant issues pertaining to restoration and protection of natural resources. Following the explanation of each issue, we provide our recommendation for LDC Section 4.08.00 in BLUE.

**ISSUE #1 - Restoration Plans that do not achieve stated outcomes:**

SSA15’s Amended restoration plan, approved by the BCC in 2021, provides an example of a restoration plan that does not measure up to its stated goals. SSA15 lands are within an important regional wetland flowway that connects National Audubon Society’s Corkscrew Swamp Sanctuary to Florida Panther National Wildlife Refuge and Fakahatchee Strand State Preserve. These lands are part of a large regional mammal corridor, called Camp
Keais Strand Corridor, for the endangered Florida panther and other mammals. Florida Forever targets Camp Keais Strand for protection and states in their five year plan “the large, interconnected swamps of Southwest Florida must be preserved if such wildlife as the Florida panther and black bear are to survive.”

The applicant’s goal for SSA15’s Amended restoration plan is “to return the natural/historic functions to degraded and altered habitats, which will in turn provide regional benefits for surface water flow and wildlife.” While the goal sounds promising, experts concluded that SSA15’s restoration plan would not fully restore Camp Keais Strand to natural and historic conditions. This is because the applicant withdrew their commitment of significant work to restore two large farm fields that impede flows within Camp Keais Strand to wetlands, even though the work was included in a 2016 version of the SSA15 Amendment application for the Town of Rural West. Furthermore, the restoration plan failed to demonstrate significant hydrological benefits to SSA15 lands because the applicant did not provide an updated flowway restoration analysis after the applicant removed the significant farm field restoration work from the plan.

Kevin Godsea, Refuge Manager of U.S. Fish and Wildlife Services’ Florida Panther National Wildlife Refuge (FPNWR), explained in a letter to Collier County his concerns that SSA15’s restoration plans would not achieve its stated goals of flowway restoration and landscape connectivity. Mr. Godsea stated:

Secondly, the application does not address the need for hydrologic restoration of the adjacent Camp Keais Strand Flowway Stewardship Area. Hydrological restoration of the Camp Keais Strand was identified as a unique functional group within Southwest Florida Comprehensive Watershed Management Plan, which the County and Service both participated in.

During this effort, members of local and state agencies, NGOs, and the Federal government made every effort to take a holistic approach to hydrological restoration. We implore the County and other regulatory authorities to require the applicants to include wetland restoration activities identified within the Southwest Florida Comprehensive Watershed Management Plan, especially those within the Camp Keais Strand functional group.

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3 Stewardship Sending Area 15 Collier County Restoration Plan, Revised Oct. 2019, Exhibit F to Easement Agreement p. 1

4 Stewardship Sending Area 15 Amendment Application dated January 2016. Exhibit 4-1: Aerial with Restoration Designation Areas p. 40/241 of pdf includes restoration work of two large farm fields.

5 The 2016 SSA15 Amendment application included the “Rural Lands West Camp Keais Strand Flow Way Restoration Analysis”, which was never updated after restoration work for two large farm fields was removed. Page 52/241 of pdf
Hydrologic restoration of the Camp Keais Strand is clearly a component of the RLSA Stewardship Sending Areas, and is critically important for downstream conservation lands such as the FPNWR. Currently two farm fields restrict the flowway to a few culverts in a span of 100 yards, whereas restoring these farm fields back to wetlands would result in a nearly 1 mile wide flowway immediately adjacent to the proposed Longwater development. The applicant’s original plans for the Town of Rural Lands West included restoring these approximately 935 acres of farmland in the middle of the Camp Keais Strand Stewardship flowway in SSA15, to benefit the hydrology of downstream conservation lands. This wetland restoration was not included in the plans for Rivergrass Village, Longwater Village or Belmar Village, and we believe that it should, as this type of wetland restoration was clearly the intent when the RLSA was established.

If properly implemented, Camp Keais Strand hydrological restoration activities could ultimately benefit one of the most biodiverse forested wetlands in the state of Florida (i.e., Fakahatchee Strand), as well as the Picayune Strand. (Letter - Attachment A)

In addition, the Conservancy hired Michael Frankenberger, Certified Professional Ecologist and President of Natural Resources Services, Inc., to review SSA15’s 2016 and 2019 restoration plans. Mr. Frankenberger found similar concerns with SSA15’s amended plan, as was stated by Mr. Godsea. At the January 28, 2020 Board of County Commission adoption hearing for SSA15 Mr. Frankenberger stated:

They [applicant] don’t provide any data, no hydrological data to support their assumption that this is going to provide great environmental benefit and hydrological improvements… They [applicant] provide no data except in ’16 they did do a hydrological monitoring plan, but that is irrelevant because they took out most of the restoration, and it doesn’t identify all the additional development around the sloughs.

The restoration work removed from the plan that Mr. Frankenberger referenced was the work to restore the two large farm fields.

Mr. Frankenberger also stated the following in a report to the Conservancy6 upon his review of Amended SSA15 Amendment application:

The application flow-way restoration plan includes an unsupported assumption that the two identified areas of flow-way work, totaling 4.5 acres will significantly improve Strand flow-way functions far beyond the proposed work site, including the >8 mile length of the strand within SSA15. However, there is no supporting documentation to support this extended reach of existing road impact or potential benefit.

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6 Natural Resources Services, Inc. Outside Review and Comment on the SSA 15 Natural Resource Index Assessment and SSA 15 Proposed Restoration Plan.
Figure 1 provides a side-by-side comparison of SSA15’s restoration areas from 2016 (left) and 2019 (right).

The 2016 plan, on the left, includes restoration work for two large farm fields (Areas 8 and 9 depicted in light purple and pink). The 2019 plan, on the right, shows that restoration for the two farm fields has been removed.

The 2016 Plan states:

The restoration of Areas 8 and 9 will contribute significantly to the hydrologic improvement of Camp Keais Strand. The removal of the perimeter berms and ditches and re-grading of Areas 8 and 9 will aid in restoring historic sheet flow conditions within Camp Keais Strand.7

Because restoration of the two farm fields was so important to the hydrologic restoration of Camp Keais Strand, the restoration work should not have been removed from the plan, unless the hydrologic modeling was updated after removal of the significant farm field

restoration and the modeling supported the assumption that regional surface water flows and wildlife habitats would be restored to natural/historic function, as was promised by SSA15’s goal.

RECOMMENDATION 1: Language within LDC 4.08.06.C.5.j.(4) and (5) must be strengthened for flowway restoration plans. As part of the “Restoration Analysis and Report”, require applicants to provide site-specific data and a hydrological study to identify how the restoration work will result in significant and measurable hydrological improvements. Applicants shall provide pre and post hydrological data as part of the success criteria to demonstrate improvements associated with each restoration activity. Furthermore, if prior to approval of an SSA application, or as part of an amendment to an approved SSA, the applicant modifies the amount and type of restoration work, the applicant shall provide the county with an updated Restoration Analysis and Report. The report must include an updated hydrological study demonstrating that the modified restoration plan still achieves the restoration goals provided in the plan, or the SSA agreement shall not be approved.

RECOMMENDATION 2: If prior to approval of an SSA application, or as part of an amendment to an approved SSA, the applicant modifies the amount and type of restoration work to be provided for any type of restoration stated in Policy 3.11, (i.e. wading bird habitat restoration, panther corridor restoration, caracara habitat restoration, etc.) the applicant must provide an updated Restoration Analysis and Report that demonstrates how the modified plan would still achieve a functional enhancement of the restoration area.

RECOMMENDATION 3: Camp Keais Strand and Okaloacoochee Slough are part of the Big Cypress Basin and a large interconnected natural system of wetlands and habitat corridors that connect with surrounding public lands. However, the letter from FPNWR manager suggests that some landowner-proposed restoration projects for SSAs are designed piecemeal, without considering whether the restoration project would benefit surrounding public lands. The LDC should be updated to require that applicants who apply for Restoration Credits (R-1 and R-2) must first consult with wildlife agencies and land managers of adjacent, downstream and/or connecting public lands to ensure that the proposed restoration activities are based on a holistic approach to benefit the entire watershed and habitat types. In addition, restoration plans within Camp Keais Strand or Okaloacoochee Slough must be consistent with Southwest Florida Comprehensive Watershed Management Plan (SWFCWP). The SWFCWP was created through a large coordinated effort to “restore surface water hydrology (getting the right quantity of water to the right place, at the right time),
improve water quality, restore landscape connectivity for wildlife, and restore the health of the estuaries.”

ISSUE #2 - SSA Applications may still generate a large number of restoration credits while providing minimal restoration work:

Collier County Planning Staff clearly understood that restoration credits may not always be commensurate with restoration work provided, which is why they provided the following RLSA White Paper Recommendations.

Structure restoration credits so that needed restoration is assured in return for the maximum credit and acreage footprint of SRA development (draft LDC Amendment)

Restructure the timing of R-1 credits: only half of R-1 credits awarded at time of permit approval through the ERP process (or County permit if no ERP required): the remaining “R-1” credit(s) would be awarded only after the owner successfully complete all phases of R-2 restoration. (draft LDC Amendment)

Restoration credits represent the lion’s share of stewardship credits earned to date and are the primary type of credits that are expected to be earned in the future.8 We believe that the relationship between restoration credits and restoration work provided should always be proportional. In other words, the applicant should provide extensive environmental restoration work toward restoring habitats, flowways, and corridors, if the number of restoration credits is substantial.

The SSA15 Amendment Application provides an example of how restoration work was not commensurate with the number of credits the applicant received. SSA15’s Amended and Adopted restoration plan provided restoration work over only 116 acres, a mere 2% of the SSA’s total 5,253 acres.9 Nonetheless, their application generated 21,428 restoration credits. At ten credits per acre, the restoration credits alone entitle them to 2,142 acres of SRA development, which may be applied toward any combination of SRAs.10 As example, 21,428 restoration credits may be applied toward two 1,000-acre villages or even a 2,142-acre town. A 2,142-acre SRA could easily add far more than 12,800 new residents to Collier County.11 These new residents will increase demands on traffic, water, sewer,

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8 Collier County Stewardship Credit Analysis August 2020; Collier County May 2019 White Paper
9 Stewardship Sending Area 15 Collier County Restoration plan provide that there will be 104.23 acres of farm field restoration, 8.15 acres of exotics removal, 3.47 acres to remove trail south of Oil Well (5,400ft x 28ft), and .22 acre section road removal to alleviate pinch point (500ft x 20 ft.). The total lands where restoration work will occur is 116.07 acres. Resolution 2020-25, p. 2.
10 Policy 4.19 requires ten credits per acre, so 21,428 stewardship credits = 2,142 acres of SRAs.
11 SRAs can build up to 4 homes per acre. Even if we assume the 2,142 acres will be developed at a lower density of 3 homes per acre and at 2.5 persons per household, we get a population of 16,065. Assuming a vacancy rate of 20% = 12,852
fire, police, and impacts to water quality and wildlife in the area. Thus, the increase in
development rights just from SSA15’s restoration credits is very substantial.

Ultimately, SSA15’s applicant offered a faulty restoration plan, as we saw in the previous
section, consisting of only 116 acres of restoration work, in exchange for substantial
developer entitlements. We do not believe this ever was the intended purpose of
restoration credits. Unfortunately, this seems to be a pattern with more recent SSA
agreements, as we found a similar case with SSA14’s restoration plan where there was little
restoration work provided in exchange for considerable restoration credits.

While the Board in 2021 did take a step in the right direction by reducing R-1 dedication
credits, for some of the categories, to one credit per acre, we believe that applicants will
continue to provide little restoration in exchange for an abundance of restoration credits.
This is because there is little incentive to provide costly restoration work for two reasons:

   a. Lands restored through costly restoration activities generate the same credits as
      lands that may benefit indirectly from restoration.
   b. Less costly types of restoration, that provide fewer benefits to wildlife or wetlands,
      generate the same number of credits as costly restoration that provide much greater
      benefits.

   a. Lands restored through costly restoration activities generate the same credits
      as lands that may benefit indirectly from restoration:

Environmental restoration work can be very costly, especially when the site includes large
farm fields restored to wetlands or forested areas. However, the applicant of SSA15
discovered that, even if they removed major restoration work, they could still generate
copious restoration credits. Before the SSA15 Amendment was adopted, the applicant
removed 88%12 of the restoration work that was provided in the 2016 application, yet
the total restoration credits were only reduced by 25% in the final adopted application.13

How could the applicant generate so many restoration credits while removing most of
the restoration work? A review of SSA15’s restoration plan shows that the bulk of restoration
credits were generated for potential indirect benefits of the restoration work. Although the
actual restoration work was planned for only 116 acres, the applicant claimed that 2,678
acres would benefit from the restoration work.14

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12 The 2016 SSA15 Amended application provided 942 acres of restoration. While the adopted SSA15 Amendment
   provided only 116 acres. Thus, 826 acres of restoration was removed or 88% of the total restoration work.
13 The 2016 SSA15 Amended application proposed to generate 28,357 restoration credits (p. 18/241), while the adopted
   SSA15 Amended Application generated 21,428 restoration credits. Thus, a reduction of credits of about 25%.
Figure 2 shows maps provided by the applicant’s consultant. The map on the left shows, in blue and pink, the 2,678 acres where the applicant earned restoration credits. The map on the right shows, in orange and purple, the exact location where 116 acres of restoration work or restoration activities are planned.

**Figure 2:** Map on left shows areas where R-1 and R-2 credits are generated. Map on right shows locations of actual restoration activities.

While we agree that flowway restoration work, when done right, can benefit downstream lands, we also believe the framers intended to award Restoration credits only for restoration work or for “restoration activities” as stated in the LDC. Furthermore, the paltry restoration work of 116 acres, provided by the applicant, is likely why principal ecologist Michael Frankenberger and FPNWR Refuge Manager Kevin Godsea voiced

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15 LDC policies 4.08.06.B.3f (1) (2), and (5) all state that Restoration Stewardship Credits shall be generated for “restoration activities.”
concerns that SSA15’s restoration plan would provide little hydrological benefit to Camp Keais Strand flowway and downstream conservation lands.

b. Less costly types of restoration, that provide fewer benefits to wildlife or wetlands, generate the same number of credits as costly restoration that provide much greater benefits:

Besides removing extensive restoration work altogether, the applicant discovered that they could provide less expensive types of restoration with cheaper, less effective types of restoration, and not be penalized. As example, the 2016 SSA15 application provided planting of native wetland and upland species for each restoration area. However, the final adopted application removed all plantings in lieu of natural recruitment, even for the largest project, restoration of a 104-acre farm field. Michael Frankenberger stated concerns that natural recruitment may not work for large areas. He stated:

*It should be noted that the condition to let a large agricultural area restore vegetation naturally is very risky as long-term agricultural management has likely significantly reduced native seed bank and we would recommend that the applicant modify the plan to including seeding planting prior to first rainy season after grade restoration.*

Frankenberger also stated concerns that more costly restoration activities that provide greater benefits to wildlife and hydrology generate the same credits as activities that yield less environmental benefits:

*It appears that an error was made on the assignment of credits for flow-way work and farm field work. The amount of restoration work/expense for the restoration of farm fields and the potential wetland/flow-way/wildlife benefits for the farm field restoration is in order of magnitude greater than the cost/benefits associated with the road removal (flow-way restoration). The credits allotted should be more justifiably be assigned with the 70% to the farm fields and the +25% for the road removal.*

If changes are not made to the newly adopted GMP Policy 3.11, the issue of awarding an extensive amount of restoration credits in exchange for minimal restoration could become even worse, as the new policy increases the ways in which restoration credits may be earned.

**RECOMMENDATION 4:**

The *only* way to incentivize significant restoration work is to award R-2 restoration credits *only* for the areas where the actual restoration work is to occur, not for the lands that have the potential to be indirectly restored. As example, R-2 credits may be generated on lands where there is a road removal, grading, removal of berms, planting of native species, seeding, exotics removal, etc. However, R-2 credits shall be awarded *only* after all specified environmental outcomes are achieved. R-1
credits may be awarded for lands that may benefit indirectly from restoration; however, Land Use Layers 1-6 shall first be removed.

It should be noted that under the existing Stewardship Credit Matrix, base credits may be generated for lands having “Restoration Potential”. This is yet another way landowners may generate credit for lands that may indirectly benefit from restoration, and another reason why R-2 credits should only be granted for the actual restoration work.

Furthermore, the program should encourage planting of native vegetation and/or seeding, rather than natural recruitment to earn R-2 credits. If an application provides for natural recruitment, then restoration credits should be held until natural recruitment is successful, as determined by permitting agency.

ISSUE #3 – The LDC should require measurable success criteria based on specific environmental outcomes instead of completed tasks:

Principal Ecologist Michael Frankenberger, who reviewed SSA15’s restoration plans, suggested that the plan lacked measurable success criteria for environmental outcomes. The success criteria provided within SSA15 Amendment was not based on whether the restoration work resulted in measurable environmental goals such as desired habitat types with dominant native species or achieved targeted hydroperiods, instead, the success criteria was whether the applicant completed restoration activities or tasks. As example, SSA15’s Amended Restoration Plan provided the following success criteria for flow-way restoration:

The following are the success criteria for flow-way restoration: (1) removal of the old road grade designated for removal as part of the SSA 14 restoration plan will be completed; (2) removal of road grade south of Oil Well Road will be completed; (3) removal of the pinch point farm road will be completed; (4) if two years after removal of the road grades natural recruitment of native vegetation within the footprint of the old road grades has not occurred, then planting/seeding will be completed; and (6) the restored areas will be free from exotic vegetation immediately following a maintenance activity and will consist of no more than five percent cover for exotic species. A total of 10,264.5 Stewardship Credits shall be available upon the achievement of these success criteria.

The statement demonstrates that the plan’s success is entirely measured upon whether the work is completed, not if or how the restoration work would benefit water quality or quantity within the strand or whether certain habitat types are enhanced for listed species or wildlife. The LDC should be updated to require that success criteria demonstrates
significant and measurable enhancements of specific habitat types with specific tree or vegetative cover and/or targeted hydroperiods or water quality improvements.

The 2021 adopted RLSA GMP amendments added several new ways in which applicants may earn restoration credits, so now is the time for the language to include specific success criteria based on environmental outcomes. As example, for crested caracara habitat restoration, the success criteria could be whether the restoration work results in the creation or enhancement of suitable caracara habitat, such as open dry or wet prairies consisting of scattered cabbage palms or lightly wooded areas with saw palmettos, cypress, and/or scrub oak.

Mr. Frankenberger provided examples of measurable success criteria for SSA15, which we incorporated in the following recommendation to improve restoration plans.

**RECOMMENDATION 5:**
Add specificity to require that the Restoration Plan provide clearly defined and measurable expectations on what defines successful fulfillment of the restoration goals. Success criteria goals for habitat restoration should include desired dominant native species and minimum appropriate vegetative cover by habitats (i.e. deep marsh, marsh, wet prairie, hydric pine flatwoods, hardwood wetlands, cypress, pine uplands, palmetto uplands, etc.).

For each of these systems, targeted habitats and hydroperiods (i.e. time period of saturation/inundation, average season high water depth, maximum seasonal high water) needs to be defined to allow post assessment and management adjustments.

For forested and upland systems, in addition to identifying appropriate native tree composition (species and dominance), minimum trees per acre and minimum tree height/canopy closure should be provided to define level of success.

The Conservancy is happy to provide language for success criteria, specific to each restoration type listed in Amended Policy 3.11, per the request of planning staff.

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16 The 2021 amendments to Policy 3.11 provide landowners with additional opportunities to earn restoration credits for caracara habitat restoration, exotic control/burning, panther corridor enhancements, and restoration of shallow wetland wading bird foraging habitat. This is in addition to credits for flowway and native habitat restoration, which existed prior to the 2021 amendments.

ISSUE #4 - SSA Agreements and Easements must include a perpetual maintenance agreement to manage and control exotic species:

One of the benefits of the RLSA program often touted by RLSA landowners is that SSAs will be preserved and maintained in perpetuity at no cost to the taxpayers. ECPO’s presentation at the March 28, 2019 RLSA Workshop stated:

*Total conservation land has grown to 50,000 acres (from 16,000 in 2002) that are permanently preserved, protected and managed at no cost to Collier County taxpayers – land that is valued at more than $500,000,000.* (Emphasis added)

However, a review of SSA15’s Application documents, reveal ambiguous maintenance obligations that appear to end after only a few years. While there are annual inspections, the SSA Easement Agreement or Restoration plan does not state how long the inspections are to last and does not provide any maintenance requirements for the restoration areas. What happens if after ten years, much of the area becomes infested with exotic or nuisance species? There is nothing in the Stewardship Agreement to require the applicant to maintain the restoration areas.

The LDC currently provides loose standards for maintenance and control of exotic species and for monitoring success of all restoration work. The LDC only requires the following:

*When the restoration is to be undertaken by the applicant, a Restoration Plan that addresses, at a minimum, the following elements: (f) annual management, maintenance and monitoring.*

*Stewardship easement Agreement shall identify the specific land management measures that will be undertaken and the party responsible for such measures.*

*Identification of the proposed land management measures that will be undertaken and the party responsible for such measures.*

Language within Stewardship Easement Agreements should require minimum standards for controlling exotic species and for prescribed burning and should state that annual management is perpetual.

**RECOMMENDATION 6:**
Write policy based on staff’s White Paper recommendation: “Add specific exotic vegetation control measures to the SSA agreement and easement and require

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18 4.080.06.C.5.j.(5) (SSA Designation Application)
19 4.080.06.C.8.b (SSA Designation Application Package)
20 4.080.06.D.1.d. (SSA Application Review Process)
maintenance that assures no greater infestation than that existing at time of SSA designation.” The plan should identify perpetual exotic control and other management measures as a requirement for Stewardship Easement Agreements. In addition to providing control measures for Category I and Category II exotic species, nuisance species such as cattail, dog fennel, and pasture grasses, shall not be allowed to flourish and count toward successful vegetation establishment.

RECOMMENDATION 7: We agree with staff’s recommendation that “additional specific maintenance standards [] should be included in all future SSA agreements and easements (draft LDC Amendment).” In addition, the agreements and easements must identify the long-term management entity who will maintain SSAs. Insuring funding for long-term management is essential. A suggested approach would be for each credit received, the owner would set aside monies into a long-term management endowment fund to be used solely for management of the property. This applies after all phases meet substantial success and ensures costs shall not be borne by taxpayers.

ISSUE # 5 - Although the Planning Commission acts as the County’s Environmental Advisory Committee, they do not review or hold hearings for SSA applications.

Although the Collier County Planning Commission (CPCC) acts as the County's only Environmental Advisory Committee (EAC), the LDC does not provide for the CCPC-EAC to review Stewardship Sending Area (SSA) applications, they only review the Stewardship Receiving Area (SRA) applications. This lack of review by CCPC-EAC is completely illogical, as SSA applications are incredibly complex and include a plethora of important reports and analyses related to preservation and restoration including: Restoration Plans, Natural Resource Index Assessments, SSA Credit Agreements, Restoration Analysis and Report, and SSA Easement Agreement. The Restoration Plan report alone includes numerous important sections warranting an in-depth review by the CCPC-EAC, including restoration goals, the description of work to be performed, entity responsible for the work, work schedule, success criteria, and management and maintenance.21 Below are just some of the reasons why an additional layer of review by the CCPC-EAC is necessary:

1. A review of SSA applications by CCPC-EAC would provide better assurances that SSA applications adhere to complex GMP and LDC rules for SSAs.
2. To ensure restoration plans are designed to achieve stated outcomes.
3. To ensure restoration credits are commensurate with restoration work provided.

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21 LDC 4.08.08.C.5.j(5)
4. To ensure that habitat within SSAs will not be impacted by adjacent SRAs.
5. So that the CCPC-EAC fully understands the entirety of a developer’s project.

Not surprisingly, Eastern Collier Property Owner’s (ECPO) opposes a review of SSA applications by the CCPC-EAC for reasons that do not add up. The reality is that ECPO simply wants little oversight of SSA applications because SSA Applications are the instrument by which RLSA landowners earn stewardship credits. Stewardship credits are the currency of the program and they substantially increase density and the value of their lands. Furthermore, ECPO understands that without a review and public hearing by the CCPC-EAC, there is less scrutiny of restoration plans and restoration work proposed.

However, having only half the information of a development plan makes the CCPC-EAC susceptible to false claims and misinformation regarding what the applicant proposes for the preserve (SSA) and the number of credits generated. As example, the developer for the Town of Big Cypress, which includes Rivergrass, Longwater, and Bellmar, claimed the following:

*Collier Enterprises will preserve more than 12,000 environmentally sensitive acres as part of the plan for the Town of Big Cypress and the Villages of Rivergrass, Longwater, and Bellmar.*

When the statement is taken at face value, it seems like a great deal for Collier County. The applicant is setting aside 12,000 acres in exchange for 3,500 acres of development. However, the whole truth is that the SSA lands that make up the 12,000-acre preserve will generate 52,295 stewardship credits, which are enough credits to allow for approximately 6,425 acres of SRAs, not 3,500 acres as they claim. An accurate statement would have been:

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22 Section 4 Public Participation and Comments, Committee Deliberations, Committee Actions Regarding Recommended Amendments to the Rural Lands Stewardship Overlay, p. 100
https://www.colliercountyfl.gov/home/showpublisheddocument/23857/635883137282070000

23 TownofBigCypress.com

24 Rivergrass, Longwater, and Bellmar total approximately 3,000 acres. Per the Town Agreement, the Town of Big Cypress core area equals 515 acres. Thus, the total development area = 3,515 acres.

25 The 12,372 acres of preserve that Collier Enterprises agreed to set aside for Town of Big Cypress is for SSA14, SSA 15, SSA 17, and SSA18. (SSA14 = 1,713 acres; SSA 15 = 5,253 acres; SSA 17 = 3,148 acres; SSA 18 = 2,250 acres; total preserve = 12,372 acres). These SSAs generated 52,295 stewardship credits for setting aside SSA14, SSA15, SSA17, and SSA18. (SSA14 = 12,893 credits; SSA 15 = 31,367 credits; SSA 17 = 4,528 credits; SSA 18 = 3,507 credits). The total SRA acreage from 52,295 credits = 6,425 SRA acres. (3,000 acres of SRAs for Longwater, Rivergrass, Bellmar; 515 acres of SRA for Town Core; plus credits left over to develop 2,909 acres of SRAs).

MATH: The developer is using credits right now from those SSAs toward three villages totaling 3,000 acres: Rivergrass, Longwater, and Bellmar. Rivergrass Resolution 2020-024 shows that 6,198 credits were used; Longwater’s Submittal 5 - SRA Credit agreement shows that 6,697 credits will be used; Bellmar’s Submittal 6 - SRA Credit agreement shows that 6,742 credits will be used. Total Credits applied toward 3,000 acres for those three villages = 19,637. The proposed Town Core would consume an estimated 3,559 credits (515.1 acres – 159.2 acres for public benefit acres which do not consume credits Per Amendment 4.20 = 355.9 acres); 355.9 acres x 10 credits per acre = 3,559 credits). Credits used for the three villages = 19,637 + estimated 3,559 credits used per Town Core = 23,196 total estimated credits to be consumed if Town Core is approved. Therefore, there are 29,099 remaining credits (52,295 – 23,196 = 29,099 remaining credits.) Based on
“Collier Enterprises will preserve more than 12,000 environmentally sensitive acres as part of the plan for the Town of Big Cypress and the Villages of Rivergrass, Longwater, and Bellmar. In addition, we may develop three more villages at nearly 1,000-acres each or we may use the credits from the preserve toward an additional 2,909 acre town.”

We believe the CCPC-EAC may not have understood this, as they were not tasked with review of the SSA agreements. Furthermore, they may not have been aware that approximately 86% or 10,625 acres of the 12,000-acre preserve was already protected from development, because of the RLSA’s Group 5 policies. 26

Grandiose claims of high preservation to development ratio may have been a primary reason for the CCPC to recommend approval of Longwater and Bellmar and for the Board to vote to approve the villages, even when the Conservancy demonstrated that the projects did not achieve the RLSA’s requirements for design, fiscal neutrality, or traffic impacts.

Since SSA applications are the vehicle to generate stewardship credits, which entitle development and, ultimately, the need for infrastructure and services provided by Collier County, it is irresponsible to prohibit a review and public hearing by the CCPC-EAC.

It is our hope, that by adding another layer of review and a public hearing for SSA applications, restoration plans will yield better environmental outcomes, applicants will be granted restoration credits proportionate to extent of restoration work provided, and the public and the Board will have an accurate understanding of the true development-to-preservation ratios.

**RECOMMENDATION #8:**
We recommend that the Collier County Planning Commission (CCPC), which is also Collier County’s Environmental Advisory Committee (EAC), becomes an integral part of the adopted RLSA Amendments, 10 credits per SRA acre would be required. So 29,099 credits / 10 credits per acre = 2,909 remaining SRA acres. This means that from the 12,300 acres of presrves there are enough credits for an additional 2,909-acre Town or three additional 970-acre villages, this is in addition to Longwater, Bellmar, and Rivergrass and the 515-Town Core. (Data found in SSA application materials and Town SRA agreement).

26 MATH: SSA14, 15, 17, and 18 = 5,057.2 acres of WRAs; 4,260.4 acres of FSAs; and 2,996.4 acres of HSAs = 12,314 acres. Policy 5.1 prohibits development and mining within all FSAs, unless the acre has an NRI score of 1.2 or less. There are 77 acres within the acres of FSAs that score 1.2 or less. Thus, 4,183 acres of the total 4,260.4 acres of FSAs is protected. Policy 5.3.1 prohibits site clearing and alteration in FSAs, WRAs, and HSAs within 80% of the property, unless lands are to be used for agriculture. Since FSAs are already protected, then we will apply Policy 5.3.1 to the remaining 8,053 acres of WRAs and HSAs. 8,053 x 80% = 6,442 acres. Thus, there are approximately 6,442 acres of WRAs and HSAs which are protected, plus 4,183 acres of FSAs = 10,625. Thus, 86% of the 12,372 site is already protected simply by being located within the RLSA. (10,625 / 12,372 = 86%). 12,372 acre preserve – 10,625 protected from development = 1,747 acres vulnerable to development. These protection measures were the trade-off, when the program was created, for the County granting landowners the opportunity to increase density 20-fold on RLSA lands and build compact cost efficient SRAs. (SSA data provided in SSA application materials).
of the approval process for Stewardship Sending Areas (SSA). We recommend that LDC 4.08.06.C.6, 4.08.06.E, and 10.03.06 are amended to require the CCPC-EAC to review all SSA applications, including Stewardship Sending Area Credit Agreements and Restoration Plans. In addition, the CCPC-EAC should hold a public hearing for each SSA agreement and provide a recommendation for approval, denial, or approval with conditions to the BCC.

**ISSUE #6 – SRAs may reduce habitat functionality in adjacent SSAs:**

Staff’s 2019 RLSA White Paper includes a very important recommendation aimed at better protections for preserves (SSAs). The recommendation, under the “Environmental Protection” section, states:

*Require applicants to address the effect of potential SRA development on adjacent SSA values when SSAs are proposed (draft LDC Amendment).*

The Conservancy was pleased to see the recommendation in the White Paper, because we raised the issue in our 2018-2019 RLSA Comment letter. We do not believe that the framers of the RLSA program ever considered that an SRA’s design could cause a reduction of listed species habitat value within an SSA preserve, however, we discovered that this could happen if the project is poorly designed.

The Town of Rural Lands West’s (RLW) application, which is another iteration of Collier Enterprises’ villages, provides a good example of what could happen to listed species habitat values when a SRA is designed to surround an adjacent SSA (SSA17). Although the applicant withdrew RLW’s application from Collier County in 2019, in lieu of the villages and the amended Town of Big Cypress, the applicant continues to seek state and federal approvals for the same lands within RLW’s development footprint (Figure 3). The applicant’s habitat conservation plan, for their federal incidental take permit application, states that preserves, which includes SSA17, “will be managed to preserve their existing ecological functions.” Contrary to this claim by the applicant, an analysis conducted by Dr. Robert Frakes, discussed below, demonstrates that RLW’s design will actually *reduce* the ecological function of SSA17.

SSA17, like other WRAs, provides high quality wetlands and habitat for listed species, which is why the GMP identifies WRAs, along with FSAs and HSAs, as lands with “the

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28 The landowner-developer has an Environmental Resource Permit conceptual approval for lands within the RLW footprint from the South Florida Water Management District. In addition, they continue to seek approvals for the RLW footprint through a Clean Water Act Section 404 permit through the Florida Department of Environmental Protection, and under a federal incidental take permit application with the US Fish and Wildlife Service.

29 Stantec Consulting Services, Inc. Eastern Collier Multiple Species Habitat Conservation Plan, Revised 2018. For submittal to: U.S. Fish and Wildlife Service.
highest priority for natural resource protection.”\textsuperscript{30} SSA17 WRA consists of 3,148 acres of an ecologically important wetland system, providing habitat for \textbf{11 listed species}, including, among others, the Florida sandhill crane, Big Cypress fox squirrel, wood stork, limpkin, and the endangered Florida panther.\textsuperscript{31} Shaggy Cypress Swamp is a large wetland area, within SSA17, that received high rankings for Natural Resource Index Values (NRI) because of its importance for providing listed species habitat and wetlands.\textsuperscript{32}

The applicant designed RLW to surround Shaggy Cypress with neighborhoods, a golf course, and the town center.\textsuperscript{33} Dr. Robert Frakes analyzed RLW’s proposed site plan, using the \textit{landscape-scale adult panther habitat model}.\textsuperscript{34} Applying Dr. Frakes’ model to RLW’s plans, Figure 3 illustrates how RLW would adversely affected Adult Breeding panther habitat (panthers three years or older).

The left side of Figure 3 shows the current adult breeding panther habitat value, and the right side shows the Frakes et al. (2015) model re-run with the Rural Lands West project in place. The diagonal lines depict the proposed location of Rural Lands West, which are mostly farm fields today, but include many of the same lands within the approved Longwater Village and Rivergrass Village. The warmer the color, as depicted with reds, oranges, and yellows, the higher the value to adult breeding panthers. Gray and white colors depict lower value habitat for adult breeding panthers.

\textsuperscript{30} Collier County Future Land Use Element, RLSA Overlay Policy 1.18
\textsuperscript{33} The same applicants are pursuing a permit through the Clean Water Action Section 404 permit for the same lands as RLW, in which Shaggy Cypress is proposed to be encircled by development.
The Frakes et al. (2015) model demonstrates that there would be a significant decrease in adult panther breeding habitat value, not only within the Shaggy Cypress, but within all of SSA17 lands, should those lands be developed. Disturbances from the surrounding neighborhoods—light, noise, pets, and traffic—would deter the Florida panther and other species from occupying SSA17 lands. Furthermore, SSA17 lands south of Oil Well Road, adjacent to the approved Rivergrass and Longwater, would also be subject to a significant reduction in habitat value for adult breeding panthers. Making matters worse, Dr. Frakes’ analysis shows that RLW would decrease habitat value within Camp Keais Strand Flowway Stewardship Area (FSA). This is unfortunate, because Camp Keais Strand is a primary wetland flowway system and designated by the RLSA program as lands critical for protection. It is also one of only two major south-to-north corridor for the panther and provides primary habitat.

The U.S. Fish and Wildlife Service had similar concerns regarding another iteration of RLW, the 2008 version of the Town of Big Cypress DRI, which also would have surrounded preserves within SSA17’s lands. Upon review of the development proposal, the U.S. Fish and Wildlife Service stated in a letter to the U.S. Army Corp of Engineers: *Although there are internal waters and habitat preserves being proposed within the current development design, the overall development has been designed in such a way to discourage use by panthers and other large animals (see discussion below). Therefore, the entire development will be considered as being*
converted into habitat that is of no value to the panther. Please consider this when conducting your panther habitat analysis.35 (Emphasis added)

Ironically, under the applicant’s current federal incidental take permit application, they claim SSA17 as mitigation lands for panther impacts from their proposed “covered activities” (development).36

The developers approved villages of Rivergrass and Longwater are also designed to surround SSA17’s lands. Despite the fact that habitat values with SSA17 will be diminished due to the development’s design, the developer still generated 4,527 Stewardship Credits from Collier County for “preserving” Stewardship Sending Area 17 (SSA17).37

While the land development code allows SRAs to surround WRAs for water management activities,38 the code further explains that when additions and modifications to the WRA result in a net loss of habitat function within the WRA, then mitigation and restoration that “provide[s] comparable habitat function” to other areas of the RLSA district is required. However, the required mitigation and restoration are only for impacts related to water management activities. There are no LDC policies to address loss of habitat function or value within a WRA as a result an SRA’s design, which is why staff’s White Paper recommendation is important and why the LDC must be improved.

RECOMMENDATION #10:
We believe the LDC should be strengthened to better protect panther habitat within WRAs and SSAs from the impacts of nearby development. In order to preserve habitat values and connectivity for the endangered Florida panther, we recommend language is added to state that SRAs are prohibited from surrounding or partially surrounding a WRA or SSA, when the WRA or SSA consists of adult breeding habitat or primary panther zone habitat.

36 The developer’s lands are part of a habitat conservation plan (HCP) to obtain a federal incidental take permit under the Endangered Species Act. Figure 2-1 of the HCP depicts SSA17 lands as a “Preservation.” The “Preservation” areas are set aside as mitigation for impacts to the permitted areas. The HCP states: “As residential/commercial and earth-mining activities are approved and implemented in the area designated for Covered Activities, commensurate acreages within the lands designated for Preservation/Plan-Wide Activities and Very Low Density Use will be managed to preserve their existing ecological functions.”
37 Resolution 2021-083 for Stewardship Sending Area 17, p. 2
38 Collier County LDC 4.08.06.A.1 and LDC 4.08.06.A.4.b.
ISSUE #7 - LDC 4.08.01Q fails to conform to the RLSA's goal:

Despite a concerted effort by many to create a planning program for eastern Collier County that protects listed species and their habitats, and regardless of the RLSA’s goal of “directing incompatible uses away from wetlands and upland habitats” Collier County recently approved three developments directly within prime habitat of a critically endangered listed species. (Figure 4)

Figure 4: Panther habitat zones with locations of approved villages.
Figure 4 shows that both 1,000-acre sites for Longwater and Bellmar Villages are located **entirely** within primary zone habitat of the endangered Florida panther. The proposed 515-acre town connector is also 100% within primary zone panther habitat. In addition, over 700 acres, or about 70% of Rivergrass Village’s site, is within Primary Zone panther habitat. Hyde Park Village is within secondary zone panther habitat. The Collier County Board of County Commissioners approved all projects, except for the town connector, in 2020 to 2021.

Clearly, the County is not adhering to the RLSA’s goal of directing incompatible uses from upland habitat. This is incredibly concerning as the situation for the panther is getting dire. There are only 120 to 230 Florida adult panthers left in the wild and the panther is restricted now to only 5% of its historic range.39 Furthermore, new evidence shows that the panther population may be declining.40

At the hearings for the villages, Collier County planning staff was questioned as to why they would recommend approval of projects that are mostly or entirely within primary habitat of an endangered species. Staff’s response was that they were following LDC 4.08.01.Q requirements, which limit “preferred and tolerated” panther habitat to specific land cover FLUCFCS codes. LDC 4.08.01.Q states:

*Listed Species Habitat Indices: One of the indices comprising the Natural Resource Index Value, with values assigned based upon the habitat value of the land for listed species. Index values are based on documentation of occupied habitat as established by the intersect of documented and verifiable observations of listed species with land cover identified as preferred or tolerated habitat for that species. Land mapped, using FLUCFCS, as 310, 321, 411, 425, 428, 434, 617, 6172, 621, 6218, 6219, 624, and 630 is deemed to be preferred or tolerated habitat for panthers for the purpose of assigning a value for these indices. An intersection of at least one data point establishing the presence of a listed species within a geographic information system (GIS) polygon of preferred or tolerated habitat for that species shall result in the entire polygon being scored as occupied habitat.*

Yet, the land cover types considered “preferred and tolerated” for the panther, as provided in LDC 4.08.01.Q, are outdated. Data from late 1990’s to 2000 informed the FLUCFCS for

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40 Presentation by FWC at August 4, 2021 Commissioners meeting: “Staff are tracking all indicators of changes in the panther population, and for the first time since the genetic restoration efforts, and decline was detected in the motor vehicle mortality model. Similar dips were seen in the number of depredations. It is unclear if this is a sign of a stabilizing population or indicates a more widespread impact of FLM or other threats.”
In addition, the same out-of-date data sets determined the locations of the RLSA’s habitat stewardship areas.

While data used for the report was current during the creation of the Immokalee Area Study, Wilson Miller, the report’s author, acknowledged that science would continue to evolve, especially regarding the understanding of habitat use and needs of the endangered Florida panther. The report stated:

*The analysis involving panther habitat for the Study will be complemented by ongoing computer modeling of potential habitat and development of an updated panther recovery plan by interagency committees led by the U.S. Fish and Wildlife Service.* . . .

*Exhibit 12A shows the same telemetry point data set at the scale of the study area. The data can be used within the study area for a variety of analyses involving panther occurrence and habitat utilization. Again, these analyses may be complemented by ongoing efforts by governmental interagency committees.*

Although the US. Fish and Wildlife Service (USFWS) completed their panther recovery plan in 2008, the RLSA program was not updated with the USFWS’ modeling of panther habitat. Since 2002, the RLSA’s adoption date, there have been three major discoveries regarding panther habitat relevant to the program: the location and importance of the Primary Zone (Figure 5), the realization that agricultural fields are important to panthers and thusly included in the Primary Zone designations, and the delineation of Adult Breeding Habitat (Figure 6).

**What is Primary Zone Panther Habitat?**

Using all records of panther telemetry available from 1981 to 2001, land use cover data, satellite imagery, and GIS information, a group of eleven panther scientists, Kautz et al. (2006), identified regions that are most important for conservation of Florida panther habitat (Figure 5). Kautz et al. (2006) describes Primary Zone panther habitat as the minimum space needed to “support a population that is barely viable demographically as long the habitat base remains stable” and lands that are “essential to the long-term viability and survival of the Florida panther.” The Secondary Zone is important to transient sub-adult males and may support expanding panther populations if habitat restoration were to occur.

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41 Report and Recommendations of the Collier County Rural Lands Assessment Area Oversight Committee for the Immokalee Area Study, Wilson Miller May 2002, Table 1: Data Sets and Publications Obtained for Use in the Immokalee Area Study.
42 Wilson Miller, December 2000, The Immokalee Area Study Stage 1 Report, p. 14
Most importantly, the U.S. Fish and Wildlife Service considers Kautz et al. (2006) to be current best available science for prioritizing for panther protections, as it has been wrapped into the agency’s recovery plan and Panther Habitat Assessment Methodology. The USFWS Florida Panther Recovery Plan states that habitat as identified by Kautz et al. (2006) should be maintained in order to maintain the existing population. Below is a quote from the USFWS 2008 Florida Panther Recovery Plan, 3rd Revision:

“The Primary Zone supports the only breeding panther population. To prevent further loss of population viability, habitat conservation efforts should focus on maintaining the total available area, quality, and spatial extent of habitat within the Primary Zone. The continued loss of habitat functionality through fragmentation and loss of spatial extent pose serious threats to the conservation and recovery of the panther. Therefore, conserving lands within the Primary Zone and securing biological corridors are necessary to help alleviate these threats.” p. 89

The Primary Zone included other land cover types that are not included in LDC 4.08.01.Q, such as row crops, pasture, orchards, and marsh as primary habitat for the endangered panther.

**Why are Agricultural Lands within Primary Zone Important?**

In addition to forested areas, agricultural lands are necessary to meet daily needs and support the prey on which the panther depends. Many agricultural areas contain important natural landscape connections that support panther home ranges, panther reproduction, dispersal movements, and availability of large prey. The Primary Zone consists partly of agricultural lands. USFWS Florida Panther Recovery Plan and other best available science acknowledge the importance of agricultural lands as habitat not only for the Florida panther, but also for the eastern indigo snake, crested caracara, and the Florida bonneted bat.

**What is Adult Breeding Panther Habitat?**

Frakes et al. (2015) found that conservation of Adult Breeding Habitat south of the Caloosahatchee River is also essential to the recovery and survival of the Florida panther.

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Ninety-three percent of panther's adult breeding habitat lies within the Primary Zone (Figure 6). Frakes et al. (2015) developed a distribution map for resident breeding panthers, ages 3 and up, by using telemetry of 87 adult panthers from 2004 to 2013. They concluded that, “protection of the remaining breeding habitat in south Florida is essential to the survival and recovery of the subspecies and should receive the highest priority by regulatory agencies.”49

The RLSA and LDC 4.08.01.Q does not account for Primary Zone or Adult Breeding habitat nor does it consider the importance of agricultural lands to the Florida panther. Without a modification to the LDC to protect these important habitat areas, panther habitat will continue to be vulnerable to development and road impacts in the RLSA, contrary to the Overlay’s very goal.

49 Ibid, p. 15-16
50 Carlton Fields Memorandum, March 1, 2010. Analysis of Data Analysis requirements to support RLSA Review Committee recommended comprehensive plan amendments.
Data relied upon must be the best available data. If a more recent analysis or study is available, then that analysis must be considered. p. 3

For all data used to support this proposed amendment the studies must be the most up-to-date version available at the time the amendment is adopted by the Commission. Any relevant analysis that has been conducted since the Report was finalized should also be used as supporting documentation. p. 5

Even Collier County Planning Staff stated that the RLSA Overlay should be updated with new panther studies and data. In 2008, during the first review of the RLSA program, staff from the Environmental Services Department wrote a memo to Tom Greenwood, Principal Planner who was responsible for coordinating the County’s RLSA’s 5 Year Review Committee, explaining that the land cover codes assigned in 2002 that determine preferred and tolerated panther habitat were outdated and should be updated. Below is that statement from a 2008 Memorandum:51 (Attachment B)

What is considered to be habitat utilized by the Florida Panther has changed since 2002. The FLUE AND LDC use FLUCCS codes to define “preferred and tolerated” panther habitat as 310 (dry prairie), 321 (palmetto prairie), 411 (pine flatwoods), 425 (temperate hardwoods), 428 (cabbage palm), 434 (hardwood – conifer mixed) 617 (mixed wetlands), 6172 (mixed wetland shrubs), 621 (cypress), 6218 (cypress melaleuca), 6219 (cypress wet prairie), 624 (cypress pine, cabbage palm), and 630 (wetland forest mix).

The USFWS habitat types include marsh, pasture, row crops, orchards, and exotic plants that are not included in the current RLSA description. Utilization of the descriptive habitat types for listed species solves the issues of incomplete FLUCCS lists and minor interpretation differences. (Emphasis added)

In addition, Collier County planning staff, in a 2011 email, requested that Stantec (formerly WilsonMiller) provide an analysis of newer panther studies and a re-evaluation of land cover types deemed as panther habitat.52 Stantec’s consultant, Al Reynolds, who represented ECPO landowners, pushed back on this request. Mr. Reynolds likely knew that if the program was updated to reconsider habitat areas of the endangered panther based on newer panther studies, then his clients (ECPO) would have to modify their development plans. Instead, he claimed that when a property owner applies for a SSA or SRA application panther data is updated. Here is what was stated in that email: (Attachment C)

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51 Memorandum from Collier County Environmental Staff to Tom Greenwood, April 24, 2008. (RLSA Restudy Phase 2 – Policy Comments, Environmental Services Department Draft)
52 Email between Al Reynolds, Stantec and Michelle Mosca, Collier County, November 30, 2011, Subject: Data and Analysis Requirements for the RLSA 5-Year
Michelle Mosca, Collier County Planning Staff:
A comparative analysis of current data/reports is needed to determine any changed conditions since the RLSA committee’s review and recommendations. County staff is requesting that Stantec staff prepare an analysis/evaluation of the new SFWMD Land Use and Cover as well as new (since BCC consideration) panther habitat use studies and provide comments regarding changed conditions.

Al Reynolds, Stantec:
One of the basic principles of the RLSA is that there will always be more recent and more site specific data available as the program is implemented, and this is best addressed at the time a property owner and the county evaluate a specific application for an SSA or SRA, or when a property owner uses their baseline uses. This is all spelled out in detail in the GMP and LDC. As such, there is no need to continuously amend the GMP Overlay Map. Similarly, Panther information is always in a state of flux, as new telemetry is generated and new studies are performed.”

Mr. Reynolds’s suggestion to rely only on a review of the site-specific panther data under the rules of the existing LDC policies, does nothing to protect panther habitat. Rivergrass, Longwater, and Bellmar’s approvals are proof of this. The environmental consultant for the applicant of those three villages, Passarella and Associates, did update the site-specific data for all three SRA applications, per LDC rules. However, because Passarella utilized the same outdated FLUCFCS codes to determine “preferred and tolerated” panther habitat, as provided in the LDC, all three projects scored nothing or next to nothing for panther habitat within the “Listed Species Habitat Indices.” Which is absurd, because all three sites are located mostly or entirely within Primary Zone panther habitat, according to U.S. Fish and Wildlife Service GIS layers. The LDC has an egregious loophole that must be corrected.

While the program has not been updated yet with recent panther habitat studies, it is still possible to protect primary panther habitat, and better protect habitat of other listed species by amending the LDC. However, there are three necessary changes to the LDC, provided in Recommendations 11, 12 and 13.

53 Email between Al Reynolds, Stantec and Michelle Mosca, Collier County, November 30, 2011, Subject: Data and Analysis Requirements for the RLSA 5-Year

54 Passarella and Associates. Bellmar Village SRA Natural Resource Index Assessment. Revised August 2020. Prepared for Collier Enterprises Management. p. 5 and Exhibit 9A; Passarella and Associates. Longwater Village SRA Natural Resource Index Assessment. Revised May 2020. Prepared for Collier Enterprises Management. p. 5 and Exhibit 9A; Passarella and Associates. Rivergrass Village SRA Natural Resource Index Assessment. Revised September 2019. Prepared for Collier Enterprises Management. (The NRI assessment for Rivergrass did not include an exhibit for Listed Species Habitat Indices, as it should have; however, the overall low NRI scores from Exhibit 7 illustrate that panther habitat was not scored).
RECOMMENDATION #11: We recommend the following amendment to protect primary panther habitat and align the RLSA program with its stated Goal of “directing incompatible uses away from wetlands and upland habitats”:

Update LDC 4.08.01.Q to remove incorrect FLUCFCS codes and any reference to “preferred or tolerated” panther habitat. Replace language to instead state: “Lands mapped as Primary Zone\(^{55}\) panther habitat, per U.S. Fish and Wildlife Service’s GIS shape files, shall be utilized for the purpose of assigning a value under the ‘Listed Species Habitat Indices’.”

ISSUE #8 - Scores for Listed Species Habitat Indices must be increased to protect the endangered Florida panther:

In addition to updating LDC 4.08.01Q to incorporate the Primary Zone, the Stewardship Matrix for scores within “Listed Species Habitat Indices” must also be increased (Figure 7).

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\(^{55}\) Primary Zone panther habitat areas are described in US Fish and Wildlife Service, 2008 Florida Panther Recovery Plan, 3rd Revision.
Figure 7 shows the Stewardship Natural Index Factors for the RLSA program set forth on the Stewardship Matrix Worksheet. Wilson Miller, working on behalf of ECPO, designed the NRI scoring and stewardship credit matrix system. There appears to be no rhyme or reason for selecting the scores for each of the six indices. Although the Conservancy requested a copy of the methodology for the NRI scoring from Collier County, during the 2018-2021 RLSA Amendment process, we were never provided with it.

It appears that Collier County also does not have access to the methodology. Either a methodology that determined the NRI scores on the matrix was never created based on sound science, or Stantec (Wilson Miller) is just not willing to provide it. Without the methodology, we can only assume that Wilson Miller specifically chose 1.3 as the minimum score necessary for an acre to be protected from development. In addition, we can only assume that Wilson Miller designed the NRI system to ensure that their clients, Eastern Collier Property Owners, were assured an enormous footprint of lands that, no matter how the NRI values were applied, those lands would always score under 1.3, and therefore would always be eligible for intensification as SRAs, regardless of any updated best available science.56

The Conservancy conducted a GIS analysis on Open lands within the Primary Zone areas of the RLSA. Unless the scores under “Listed Species Habitat Indices” are increased, there is virtually no way to protect Primary Zone panther habitat under the RLSA’s rules. This is so even if the outdated “preferred and tolerated” FLUCFCS were replaced with Primary Zone GIS files and there are panther telemetry points present.57 This is why values for “Primary Zone” must be increased to 1.3 and values for “Primary Zone plus other species” must be increased to 1.6.

In that 2008 letter from the Environmental Services Department to Tom Greenwood, during the 5-Year Review, staff urged changes to the NRI scoring because panther habitat within Open Areas was not protected. They stated the following: (Attachment B)

Protection of listed species and wildlife habitat from intense land uses is one of the requirements in the Growth Management statutes. The HSAs were delineated to protect listed species and their habitat. During the first 5 years of the RLSA program there have been several instances of listed species in Open areas. The HSAs alone do not provide adequate protection to listed species. Additionally the 2002 definition of panther habitat is very limited compared to habitat valuation matrix utilized by USFWS now.

56 RLSA Overlay Policy 4.9 states that “a SRA shall not be cited on lands that receive a Natural Resource Index value of greater than 1.2.”
57 Policy 4.08.01Q states: “An intersection of at least one data point establishing the presence of a listed species within a geographic information system (GIS) polygon of preferred or tolerated habitat for that listed species shall result in the entire polygon being scored as occupied habitat.”
In addition to the FSA and HSA areas the NRI score was intended to protect important natural resources. The NRI was not intended to specifically provide protection for listed species, it is intended to direct development away from important natural resources. The NRI score necessary to prevent conversion to high intensity uses is 1.3. In the "Open Areas," only areas with panthers and other listed species or panthers in wetlands with muck soils will score an NRI of 1.3 or greater. The weighting is inadequate for the NRI alone to contribute significantly to natural resource protection.

The listed species that depend on large amounts of dry prairie like sand hill cranes, burrowing owls, and caracara now utilize pasture lands and fallow areas also. Although some of these areas were included as HSAs the NRI scoring is not weighted to provide protection outside of Stewardship or ACSC areas. (Emphasis added)

The NRI valuing system has failed. Without the changes we propose, it is highly likely that many more developments will be approved within primary panther habitat. It is also likely that habitat of other listed species, which all score under 1.3 on the matrix, will also be converted to development. Bellmar Village provides a perfect example of the failing of the NRI scoring.

Figure 8: Bellmar Village site with panther telemetry and habitat data
Bellmar’s site is only about 1.5 miles from the Florida Panther National Wildlife Refuge and it is located entirely within Primary Zone panther habitat (Figure 8). Even though few panthers have been collared and the green and purple telemetry points represent only a small sample size of panthers, there are still numerous telemetry points near the site, which indicates that the Bellmar site is heavily traveled by panthers.

Although the site is considered primary panther habitat and the area is heavily travelled, Bellmar scored a zero value for Listed Species Habitat Indices for most of the site. Only a small portion of the site scored a value of 0.4 NRI for listed species. Furthermore, because Bellmar scored low for all other indices and not one single acre achieved the 1.3 threshold, nothing could protect Bellmar from qualifying as a SRA, under Collier County’s faulty rules.

The issue all boils down to a faulty NRI scoring system and a refusal to update the program with current best available science, even though the landowner’s own representative stated that the program would be updated with habitat modeling from the USFWS’s Panther Recovery Plan.

Now is the time to update the LDC to protect this critically endangered species. Under ECPO’s “Habitat Conservation Plan,” they propose to destroy 17,500 to 19,600 acres of primary panther habitat within the RLSA for uses such as development and mining! However, every single acre of Primary Zone panther habitat could be avoided and ECPO could still build the 91,480 dwelling units they propose, and more! There are approximately 36,881 acres of “Open” areas within the RLSA that are outside of primary panther habitat (Figure 9: Conservancy Vision Map -pink areas on map). The RLSA program allows up to four units per acre for towns and villages. Thus, even if they build at an average density of 2.5 units, per acre, they could build 92,202 homes without touching

58 Stantec Consulting Services, Inc. Eastern Collier Multiple Species Habitat Conservation Plan (HCP), Revised 2018. For submittal to: U.S. Fish and Wildlife Service. Table 4-1 and 4-3

59 Ibid, p. iii
one acre of Primary Zone panther habitat. If they increase the average density beyond 2.5, they could build even more homes.

In addition, because the development areas would be more compact and closer to an existing road network and infrastructure, the costs to Collier County for providing infrastructure and services would be far less.

Collier County cannot assume that wildlife agencies will protect the panther. From 1984 to 2012, the US Fish and Wildlife Service permitted 97,000 acres of panther habitat for development, mining, transportation projects, and other projects.60

Collier County can modify the program to achieve the goal of listed species habitat protection. During the 2003 hearings for creation of the LDC policies, Collier County’s outside legal counsel, Nancy Linnan, stated the following at a planning commission meeting:61

“First of all, you can amend the comprehensive plan at any time assuming you do it during the twice a year state so you have that ability to see it getting out of whack. You have five year period where there is a mandatory check with certain requirements that you have to look at. You also have your EARs where you are going to be doing it and it doesn’t preclude you from

60 Information from multiple US Fish and Wildlife Service consultation logs from FOIA. Some of the losses were prior to the delineation of panther habitat zones as defined by Kautz et al 2006, as the “line” of panther habitat was well westward of where it currently stands today.

61 Collier County Audio Tapes from May 1, 2003, Tape 1A. Conversation starts approximately 40 min 52 seconds.
asking at any point please bring us up to speed on where we are, give us an accounting on where we are on the credits. And so you will be seeing all of the SSAs coming in, you will be seeing all of the SRAs coming in, so you will have a pretty good idea of what is going on out there.”

Dwight Richardson (Planning Commissioner) replied: “So we can change the rules at that time if it’s not working?”

Nancy Linnan: “Yes.”

**RECOMMENDATION #12:** We recommend the following amendment to align the RLSA program with its stated Goal of “directing incompatible uses away from wetlands and upland habitats.” Modify Listed Species Habitat Indices within the Stewardship Credit Matrix by:

- Replacing language that states, “Panther occupied habitat (preferred and tolerated)” with “Primary Zone panther habitat.” Increase value from 0.5 to 1.3.
- Replacing language that states, “Panther occupied habitat (preferred and tolerated) plus other listed species” with “Primary Zone panther habitat plus other listed species.” Increase value from 0.8 to 1.6.

**RECOMMENDATION #13:** Additional habitat protections for other listed species are necessary. If an acre of land scores zero for five of the six indices (Figure 7), but scores 0.4 for “Other documented listed species habitat” then that species’ habitat is vulnerable to development. We recommend, for other listed species, that the LDC is updated to require habitat buffers found in Florida Fish and Wildlife Conservation Commission (FWC) or U.S. Fish and Wildlife Services’ (FWS) Species Conservation Measures and Guidelines. As example, FWS recommends a 985 feet buffer around a caracara nest. FWC recommends a 400 feet buffer around a sandhill crane’s nest and 575 feet around a big cypress fox squirrel nest.


63 U.S. Fish and Wildlife Service South Florida Ecological Services Office DRAFT April 20, 2004. Species Conservation Guidelines South Florida Audubon’s Crested Caracara, p. 3

**ISSUE #9 – Issues with the proposed location for panther corridors.**

Conservancy provides recommendations for location of wildlife crossings.

**PROPOSED PANTHER CORRIDORS:**
The recently amended Policy 3.11.3 provides up to ten Stewardship Credits per acre for designation and restoration of lands within a northern or southern panther corridor. The policy states that the credits shall be granted for lands within a “federally approved corridor.” The Conservancy is unaware of any federally approved corridor near or within the proposed “North Corridor General Location” and “South Corridor General Location” as identified by the red arrows on the RLSA Overlay map. Furthermore, there are serious issues with the County’s proposed general locations of the corridors and policy language, including the following:

1. Two approved projects are located squarely within the area of the proposed “North Corridor General Location.” Figure 10 shows the location of Immokalee Sand Mine, an 897 acre-mining project, and the 578-acre approved Immokalee Solar project for Florida Power and Light (FPL). Clearly a panther corridor is not appropriate for areas where there are permitted uses. Furthermore, while we are aware that FPL has the capacity to use panther permeable fencing, FPL has provided no evidence that panthers will access or utilize solar sites once panels and fencing have been installed. It is our understanding that FPL has been collecting data on other sites utilizing this panther friendly fencing in Hendry County for many years, but has not provided data to confirm that panthers continue to use these sites after the solar panels have been installed.

2. Collier County purchased 1,046 acres near the “South Corridor General Location” (Figure 10). Although, the proposed use has yet to be decided, ideas for the parcel provided by staff include a new location for the county fairground, EMS/fire, parks and recreation, hurricane debris management and horticulture processing, and/or workforce housing. Any proposed panther corridor should avoid proximity to the Collier County site, as any of those uses would add considerable traffic near the proposed corridor.

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66 Collier County City View. Immokalee Solar CU, Site Plan.
67 Collier County BCC Agenda Item 11B, March 9, 2021.
3. Although Policy 3.11.3 provides landowners with the opportunity to generate substantial credits for panther corridors, there are no assurances that all landowners within the corridors will participate. If just one landowner within the proposed corridors chooses not to participate, and instead chooses to develop their lands, then the corridor will be fragmented and will not be viable. We believe that no credits shall be issued until all landowners within the corridor have committed to set aside their lands as a panther corridor.

**RECOMMENDATION #14:** We provide the following recommendations for panther corridors:

1. The proposed corridor locations are relocated to areas where there are no permitted uses that are more intensive than existing agriculture.

2. Credits for “designating” property within a panther corridor shall not be issued until the corridor is complete, where all landowners within the proposed corridors have designated their lands to a panther corridor.

3. The SSA Agreements must stipulate that land use layers within the panther corridors are removed to an Agriculture or Conservation layer.
The U.S. Fish and Wildlife Services’ Florida Panther Recovery Plan, 3rd Edition (p. 30-31), provides specifications for panther corridor widths depending on the length. The document states that corridors extending between 0.6 miles to 4 miles in length should be more than 1,312 feet wide (Beier, 1995), perhaps up to 1 mile (Noss, 1992), 5 (Beier, 1995), or even 10 miles (Harrison, 1992) wide. As this is a landscape corridor covering a great distance, the Conservancy has previously targeted a 1 mile width for these corridors.

Once the County provides more information for the proposed corridor locations, the Conservancy may provide additional comments and/or recommendations.

RECOMMENDATIONS FOR WILDLIFE CROSSINGS:
Roads are one of the greatest threats to wildlife. Currently, the RLSA has a limited road network. However, Eastern Collier Property Owners’ (ECPO) plans show that they would like Collier County to add approximately 200 miles of new and expanded road projects to the RLSA, to connect the many developments they would like built.68 This road network would add approximately 800,000 daily vehicle trips to Collier County’s road network,69 dramatically increasing the risks to of vehicle strikes and roadkills to all of the RLSA’s wildlife.

The recently amended Policy 4.14 provides for “provisions for the construction and/or permitting of wildlife crossing” as one of the ways in which landowner-developers may mitigate or offset a SRA’s traffic impacts. However, wildlife crossings must be strategically located and appropriately designed to better protect the RLSA’s many threatened and endangered species.

RECOMMENDATION #15: Three important studies have already been conducted to determine where wildlife crossings are most needed, due to the highest incidents of wildlife mortalities. To reduce road mortalities of wildlife and listed species, the Conservancy recommends that Collier County select the locations of wildlife crossings and fencing based on results of these studies, including crossing locations and designs for large mammal crossings:

- Florida Department of Transportation District One. Florida Panther Recovery Implementation Team. Transportation Subteam. June 2020. Southwest Florida Road Hot Spots 2.0. (Figure 11) This report is updated typically annually, so please refer to the most up-to-date information. https://www.fws.gov/verobeach/FloridaPantherTransportation/20210127_SouthwestFloridaPantherHotSpotsReportRevised2020.pdf

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Once the County provides more information about this section of the LDC, the Conservancy may provide additional comments and/or recommendations.
**Figure 11**: Southwest Florida Road Hot Spots Report. Florida Panther Recovery Implementation Team Transportation Subteam. Adopted by USFWS. Map of panther vehicle collisions.
In conclusion, the Conservancy is hopeful that you will consider these recommendations as the basis for amendments to section 4.08.00 of the Land Development Code, or if you believe the recommendations to be outside your current scope of work, please consider our recommendations for the next amendment cycle and EAR.

If you would like to discuss these matters further, you may reach us at (239) 262-0304.
Sincerely,

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Attachments:

A. U.S. Fish and Wildlife Service Letter to Collier County Planning Commission re: Longwater and Bellmar SRAs, dated March 1, 2021.

B. Memorandum from Collier County Environmental Staff to Tom Greenwood, April 24, 2008. (RLSA Restudy Phase 2 – Policy Comments, Environmental Services Department Draft)

C. Email between Al Reynolds, Stantec and Michelle Mosca, Collier County, November 30, 2011, Subject: Data and Analysis Requirements for the RLSA 5-Year