CRITIQUE AND RECOMMENDATIONS OF COLLIER COUNTY'S RURAL LANDS STEWARDSHIP AREA PROGRAM: 2018-2019 RLSA Restudy

January 2019

INTRODUCTION

Collier County is currently planning for future growth within 300 square miles of rural lands in eastern Collier County, Florida. The current plan for eastern Collier, called Rural Lands Stewardship Area (RLSA), was adopted in 2002 and is undergoing a review by the Growth Management Department, which includes public involvement. The RLSA consists of 195,000 acres of farm fields, pastures, uplands, wetlands, and public conservation lands. At build-out, the RLSA can accommodate approximately 300,000 new residents.[1] The Conservancy is concerned that the current RLSA program is fundamentally flawed and that changes must be made to the RLSA program during ***this*** review or there will be serious negative environmental and economic impacts to Collier County's residents and wildlife. The following report outlines the flaws of the RLSA program and our recommendations to improve the plan so that natural resources are protected and a better quality of life is ensured for future generations.

RLSA lands encompass an area eighteen times greater than the City of Naples and is a region containing significant natural resources including habitat for 19 endangered or threatened species[2], significant wetland flow-way systems, and tens of thousands of agricultural lands. Critical Lands and Waters Identification Project (CLIP) shows that the RLSA is one of the most biologically rich and ecologically important regions in the entire state (Figure 5)[3]. These natural resources contribute greatly to Collier County's economy and provide critical ecological functions. As an example, Collier County produces $203 million worth of agricultural products per year.[4] Much of that production comes from the 93,000 acres of agricultural lands in the RLSA.[5] Tourists are attracted to the region's unique wildlife, which brings in revenue and creates jobs. In 2011, the Florida Fish and Wildlife Conservation Commission determined that the total economic effect of wildlife viewing in Florida was $4.928 billion[6]. Wetlands systems in the RLSA, such as the Camp Keais Strand and Okaloacoochee Slough, provide ecological benefits to the county such as storing floodwater, the removal of pollutants, and providing critical habitat and habitat linkages to surrounding conservation lands.

Because of the region's economic and ecological importance, each policy of the RLSA program must embody the main goal and the goal mandated by the Final Order,[7] which requires that the program accomplish the following: 1) protect agricultural lands and prevent the premature conversion to non-agricultural uses; 2) direct incompatible uses away from listed species habitat

[1] Collier County's 2008 Interactive Growth Model and 2005 Collier County Residential Build-Out Study, Preliminary Report, 8. County website: https://www.colliercountyfl.gov/home/showdocument?id=830
[2] Stantec Consulting, Inc. (2018, August). "Eastern Collier Multiple Species Habitat Conservation Plan prepared for Eastern Collier Property Owners." The RLSA provides habitat for 16 federal and state threatened and endangered species and three other species that are under review or a candidate for federal protection under the Endangered Species Act.
[3] Florida Natural Areas Inventory (2016, September). Critical Lands and Waters Identification Project. Found here: http://www.fnai.org/pdf/CLIP_v4_user_tutorial.pdf
[4] Florida Department of Agriculture and Consumer Services. (2012) "Florida Value of Agricultural Products Sold" – Data is collected every 5 years by USDA, next update 2019. Website: https://www.freshfromflorida.com/Agriculture-Industry/Florida-Agriculture-Overview-and-Statistics
[5] Wilson Miller (2000, December). "Immokalee Area Study Stage 1 Report – Collier County Rural and Agricultural Area Assessment." p. 9
[6] Florida Fish and Wildlife Conservation Commission. (2011) "The Economic Benefits of Wildlife Viewing in Florida." p. ii
[7] State of Florida Administrative Commission Final Order No. AC-99-002 (1999, June 22).

and wetlands; and 3) avoid sprawl-type development. The Conservancy has always been supportive of these objectives. However, as currently written, the policies are too weak and ineffective to obligate each new development proposal to be consistent with the very goal of the program. The Conservancy of Southwest Florida (Conservancy) believes that if the fundamental flaws of the overlay are not fixed, the program will bring about contradictory outcomes including: 1) severe habitat fragmentation; 2) low-density, auto-centric, and sprawling developments; and 3) needless conversion of tens of thousands of agricultural lands to development.

There is evidence that these contradictory outcomes are already materializing under the RLSA program. A major development application for the Town of Rural Lands West (RLW) is moving through the application process. The town's plans are in direct contrast to the very foundational principles of the RLSA Overlay and would result in grave impacts to natural resources. Even so, it is possible that RLW's plan, which proposes 10,000 homes and 2 million square feet of non-residential uses, would be approved even under the following circumstances:

1) Listed species habitat & wetlands would *not* be protected, as three-fourths of RLW is proposed to be built within primary panther habitat and approximately 500 acres of wetlands would be impacted;[8]
2) Agricultural lands *would be* prematurely converted, as 3,958 of 4,092 acres or 97% of RLW's total Stewardship Receiving Area (SRA) would be built in agricultural lands;[9] and
3) Sprawl-type development *would be* the outcome, as the site is 6 miles long and includes a 54-hole golf course.[10]

Even though RLW's plan contrasts with the underlying principles of the RLSA overlay, it is conceivable that the project will be approved. This is because the site lies entirely within the "Open" areas of the overlay, which according to RLSA policies are locations appropriate for development. Although it is true that the site is within the open area, the site is also within primary zone panther habitat and consists almost entirely of agricultural lands. These facts alone should be grounds for denial, or at the very least, the applicant should be required to modify the site. Also, there are no policy restrictions that limit the size of golf courses and that preclude a six-mile long town from being considered compact and walkable. These are just a few examples of the serious inconsistencies between RLSA policies and goals and why the program is in need of an overhaul.

The RLSA program must be substantially amended during ***this*** review and not left for future reviews. The stakes are high for Collier County, both financially and environmentally, if the

[8] Passarella & Associates. (2018, January 4). Rural Lands West SFWMD Wetland Impact Map. p. 1 of 52. Exhibit No. 3.7. (282.33 acres of direct wetland impacts + 143.69 acres of PFFW impacts + 35.72 acres of secondary impacts + 2.09 acres secondary PFFW impacts + 15.65 impacts to other surface waters)
[9] Natural Resource Index Assessment for Rural Lands West, p. 5
[10] Stantec Submittal Letter to Collier County dated June 15, 2018. 9 holes were added to SRA application from the original plans of 45 holes.

program is not amended. Since periodic reviews of the program are not a requirement, it is not known when there will be another chance to make substantial revisions. Smart Growth America states that if the RLSA is built out as currently planned, the County will lose $3.3 billion over 20 years in costs associated with new roadways, emergency medical services (EMS), school construction and staffing, and school bus transportation.[11] If the RLSA plans are not modified to curb sprawl and save habitat, the iconic Florida panther is threatened with extinction. Survival of many other endangered species in the region is also at risk. Scientists assert that the Earth's rate of species extinction is more severe than perceived.[12] A primary reason for this massive species extinction is due to habitat loss.[13] Habitat loss in the RLSA for many of the listed species is a major concern. Also, water resources could be impacted due to 43,000 acres of development near two major flow-ways. Without significant amendments to the RLSA program during ***this*** review, it is likely that RLW and similar projects would be approved, resulting in unacceptable consequences for habitat and natural resources.

This document describes the fundamental flaws and major issues of the current RLSA program. It also includes the Conservancy's solutions and our vision map that, if implemented, would redirect the program back to its central and underlying goal: to conserve habitat, water resources, and agricultural lands, and avoid sprawl. In addition, the Conservancy's plan reduces the need for new roads and infrastructure, thereby saving billions of taxpayer dollars[14].

These policy recommendations do not infringe on private property rights, and adjustments to the program were anticipated from the very beginning, hence the required initial five-year review. Landowners, leaders, planners, and citizens all have a responsibility to ensure that development within the RLSA exemplifies the highest level of rural and environmental stewardship. We truly hope our recommendations to fix the fundamental flaws and other issues will be seriously considered during ***this*** review. Once each new town and village is approved and built there is no going back!

[11] Smart Growth America (2018, September). The Fiscal Implications of Development Patterns – Rural Lands Stewardship Area, Collier County, Florida. https://www.conservancy.org/file/policy-rlsa/The-Fiscal-Implications-of-Development-Patterns---RLSA-Collier-County_FINAL.pdf
[12] Ceballos G., Ehrlich, P.R., and Dirzo R. (2017). Biological annihilation via the ongoing sixth mass extinction signaled by vertebrate population losses and declines. *Proceedings of the National Academy of Sciences.* July 25, 2017 114 (30) E6089-E6096; published ahead of print July 10, 2017 http://www.pnas.org/content/114/30/E6089
[13] *Ibid.*
[14] Smart Growth America (2018, September). The Fiscal Implications of Development Patterns – Rural Lands Stewardship Area, Collier County, Florida. https://www.conservancy.org/file/policy-rlsa/The-Fiscal-Implications-of-Development-Patterns---RLSA-Collier-County_FINAL.pdf

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ACRONYMS AND ABBREVIATIONS

ACSC	Area of Critical State Concern
CLIP	Critical Lands and Waters Identification Project
DCA	Department of Community Affairs
DU	Dwelling Units per Acre
ECPO	Eastern Collier Property Owners
EMS	Emergency Medical Services
FSA	Flowway Stewardship Area
HCP	Eastern Collier Multiple Species Habitat Conservation Plan
GMP	Growth Management Plan
HSA	Habitat Stewardship Area
LDC	Land Development Code
PRT	Panther Review Team
RLSA	Rural Lands Stewardship Area
RLW	Rural Lands West
SGA	Smart Growth America
SRA	Stewardship Receiving Area (Areas that can be designated for towns, villages, hamlets, or compact rural development using credits earned from SSAs)
SSA	Stewardship Sending Area (Areas designated by the landowners to remain in agriculture or preservation in exchange for securing credits to develop SRAs - towns, villages, hamlets, or compact rural development).
WRA	Water Retention Area
USFWS	U.S. Fish and Wildlife Service

Table 1 provides a summarized list of what the Conservancy sees as fundamental flaws of the RLSA program and our solutions. A more detailed explanation of each flaw and our solutions to correct each issue follows the summarized list.

Table 1: Summarized List of RLSA Fundamental Flaws and Conservancy's Solutions

FUNDAMENTAL FLAWS	CONSERVANCY'S SOLUTIONS
FLAW I - THE PROGRAM WILL LEAD TO SPRAWL, RESULTING IN HIGH ECONOMIC & ENVIRONMENTAL COSTS	Implement Traditional Neighborhood design standards from: ***Toward Better Places: The Community Character Plan for Collier County, Florida***: 1. Increase Minimum and Maximum Density. 2. Reduce SRA size. 3. Require Maximum Distance between Center and Edge of Community. 4. Reduce the Maximum Block Perimeter for Neighborhood General. 5. Require Greater Specificity for Mobility Plan. 6. Limit Size and Number of Golf Course Holes. 7. Conservancy's 2018 Vision Map.
FLAW II - THE PROGRAM ALLOWS 250% MORE DEVELOPMENT THAN WAS INTENDED.	Reduce Development Potential by Recalibrating Credits.
FLAW III - NATURAL RESOURCE INDEX VALUES ARE OUTDATED	Update NRI values using best available science. 1. Update Listed Species Habitat Indices and NRI Values 2. Update NRI Values Before SRA Approval 3. Reassess Program Every 5 Years 4. Modify Definition of *Listed Species Habitat Indices* 5. Update Natural Resource Index Map
FLAW IV - LANDOWNERS CONTROL NRI DATA	Collier County should obtain & house original NRI data which establishes the NRI value for each acre of land.
FLAW V - SRAs ARE PERMITTED WITHIN PRIMARY ZONE & ADULT BREEDING HABITAT	Conservancy's 2018 RLSA Vision Map - directs development away from habitat that is critical to the survival of the endangered Florida panther, thereby saving listed species habitat, wetlands, agricultural lands, and infrastructure costs.
FLAW VI - DEVELOPMENTS MAY RESULT IN REDUCED HABITAT FUNCTIONALITY IN ADJACENT SENDING AREAS.	Amend GMP and LDC policies to state that SRA design shall demonstrate development will not adversely impact habitat and functionality of listed species habitat in adjoining FSAs, HSAs, WRAs, and SSAs.
FLAW VII - THE STEWARDHIP CREDIT SYSTEM FOR RESTORATION NEEDS TO BE RE-EVALUATED.	Eliminate "double-dipping" of credits and remove conflicts-of-interest 1. Eliminate Double-Dipping by Eliminating R-1 Credits 2. Adjustments to NRI Values should be made during SRA applications 3. The County should Select Consultant for SSA Applications 4. Additional Measures for Restoration Plans

FUNDAMENTAL FLAWS & CONSERVANCY'S SOLUTIONS

1. FLAW I: THE PROGRAM WILL LEAD TO SPRAWL, RESULTING IN HIGH ECONOMIC AND ENVIRONMENTAL COSTS

According to population projections, Collier County will have 500,000 residents by 2041, which is an increase of about 135,000 people in just 23 years.[15] Because eastern Collier contains the greatest availability of undeveloped private lands in the county, the RLSA will accommodate some of that growth. Thus far, only the Town of Ave Maria has been built under the RLSA program; however, several other applications for new towns and villages are under review with the county. Also, a group of major landowners called Eastern Collier Property Owners (ECPO) submitted an Eastern Collier Multiple Species Habitat Conservation Plan (HCP) as part of an incidental take permit through the U.S. Fish and Wildlife Service (USFWS).[16] If approved, the HCP and federal permit would stream-line the development process making it easier for them to build up to 45,000 acres worth of residential homes, commercial centers, and earth mining over a 50 year period. The build-out population in the RLSA could reach well over 300,000.[17] Thus, ***now*** is the time to ensure that Collier's RLSA program is set up to guide development proposals in the most economically and environmentally sustainable way. Otherwise, costs associated with low-density sprawl-type development, for which the RLSA program is based, are hefty and include inflated public spending, loss of important agricultural lands, greater energy consumption, air pollution, wetland loss, loss of habitat, and negative social impacts.[18]

As a solution to sprawl, numerous RLSA policies in the growth management plan (GMP) and land development code (LDC) support compact, walkable, and economically sustainable development. Just one example states:

> *"These planning strategies and techniques are intended to minimize the conversion of rural and agricultural lands to other uses while discouraging urban sprawl, protecting environmentally sensitive areas, maintaining the economic viability of agricultural and other predominantly rural land uses, and, providing for the cost-efficient delivery of public facilities and services."*[19]

Such policies look good on paper, but the reality is that the RLSA program is not set up to curb sprawl, nor will the program attain its own goal and policies. Here is why:

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[15] Collier County Comprehensive Planning (2018, June). "Collier County Permanent Population Projections and Estimates – Fiscal year." Retrieve from: https://www.colliercountyfl.gov/home/showdocument?id=80748

[16] Stantec Consulting Services (2018, August) Eastern Collier Multiple Species Habitat Conservation Plan.
The HCP is a development proposal by Eastern Collier Property Owners (ECPO) to develop 45,000 acres of land within 151,000+ acres of privately owned lands in the RLSA. Stantec, ECPO's consultant, created the HCP as a requirement of an Incidental Take Permit under the Endangered Species Act. If approved, the Incidental Take Permit will make it easier for ECPO to impact habitat of 19 listed species.

[17] Collier County's 2008 Interactive Growth Model and 2005 Collier County Residential Build-Out Study, Preliminary Report, 8. County website: https://www.colliercountyfl.gov/home/showdocument?id=830

[18] R. Ewing, "Is Los Angeles-Style Sprawl Desirable?" *Journal of the American Planning Association*, Vol. 63, 1997, pp. 107-126.

[19] Collier County LDC 4.08.07C

1.1 Flaw: The Current Model for RLSA Development will have a Negative Fiscal Impact on Collier County

Smart Growth America (SGA) found that without drastic changes to the RLSA program, patterns of low-density town and village development will lead to enormous economic costs for Collier County.[20] In their study called, "The Fiscal Implications of Development Patterns - Rural Lands Stewardship Area, Collier County, Florida," SGA modeled three different development scenarios in the RLSA using Collier County's financial documents. The first scenario, called *Sprawl*, is based on the 45,000 acreage cap as proposed in ECPO's HCP and as recommended by the *RLSA 5-year Review Committee.*[21] The *Sprawl* scenario includes densities between 2.18 and 2.75 dwelling units per acre. The RLSA program currently allows low-density town and village development to spread over a 43,300 acre footprint, very similar to the *Sprawl* scenario. The second scenario, called *More Compact Density*, modeled a 40,700 acre footprint with densities ranging between 2.18 and 3 dwelling unit per acre. The third scenario, *Smart Growth*, modeled 14,915 acres worth of development with higher densities between 2.18 and 14 dwelling units per acre. The results of the study are not surprising. The *Sprawl* scenario with the lowest densities and least compact development footprint would result in the highest costs to Collier County (Table 2). Over a 20 year period, development patterns between 2.18 and 2.75 dwelling units (du) would lead to a negative net fiscal impact of $3.3 billion from costs associated with new roadways, emergency medical services (EMS), school construction and staffing, and school bus transportation.[22] Conversely, the *Smart Growth* scenario would result in a positive net fiscal impact to the County of $400 million over 20 years.

Table 2 – Collier County Development Scenarios - Net Fiscal Impact

Dollars (in Billions unless otherwise indicated)	Scenario 1: Sprawl	Scenario 2: More Compact Development	Scenario 3: Smart Growth
Total Costs – 20 Years	$10.9	$9.9	$7.1
Est. Tax Revenue - 20 Years	$7.6	$7.4	$7.6
Net Fiscal Impact – 20 Years	-$3.3	-$2.5	+$0.4
Net Fiscal Impact – Per Year*	-$540 Million	-$125 Million	+$21 Million

*Smart Growth America, 2018 - *Annual costs are average costs per year. The estimated costs on an annual basis would vary from year to year.*

[20] Smart Growth America (2018, September). "The Fiscal Implications of Development Patterns – Rural Lands Stewardship Area, Collier County, Florida". https://www.conservancy.org/file/policy-rlsa/The-Fiscal-Implications-of-Development-Patterns---RLSA-Collier-County_FINAL.pdf

[21] Collier County. RLSA 5-Year Review Committee – Section 2 Recommendations. Amended Policy 4.2.

[22] Smart Growth America (2018, September). "The Fiscal Implications of Development Patterns – Rural Lands Stewardship Area, Collier County, Florida", p. 11

WilsonMiller (now Stantec) are consultants for ECPO who created a "Conceptual Build-out Roadway Network" for the RLSA. WilsonMiller's conceptual roadway network consists of 200 miles of new and widened roads that they anticipate are needed to accommodate 45,000 acres worth of development in the RLSA (Figure 1). Based on 2015 construction costs provided in Collier County's Long Range Transportation Plan,[23] the Conservancy calculated the total construction costs for WilsonMiller's Roadway Network to be $7.8 billion![24] SGA, on the other hand, considered the total fiscal impact of WilsonMiller's roadway network on the county.[25] They estimated that the 20-year fiscal impact of the proposed roadway network over 45,000 acres (Scenario 1 - *Sprawl*) would be a negative $5.54 billion impact to Collier County! SGA found that if the roadway network was built on a reduced footprint of either 40,696 acres (Scenario 2 - *More compact density*) or 14,915 acres (Scenario 3 – *Smart Growth*), then the costs to Collier County over 20 years would be a loss of either $3.28 billion or a loss of $1.22 billion, respectively. Again, the more compact higher density *Smart Growth* scenario would significantly reduce costs for Collier County over the proposed 45,000 acre *Sprawl* scenario of low-density development.

These estimates of the potential roadway costs are very concerning because ECPO is trying to shirk their responsibility to pay for all of the expensive mitigation costs associated with the transportation network outside of their proposed developments, even though their own conceptual roadway map shows that new roads are needed to accommodate the 45,000 acres worth of development that *they* propose. Wilson Miller explains this in their HCP:

> *"The HCP Area does not include the existing roadway network, and avoidance and minimization of environmental impacts resulting from improvements to the transportation network are the responsibility of FDOT and the MPO, together with State and Federal environmental regulatory agencies."*[26]

[23] Collier MPO Financial Resources Technical Memorandum 2015
[24] The Conservancy's: "The Real Cost of Building Roads" analysis found here: https://www.conservancy.org/file/15---policy-main/rural-lands/CSWFL-Handout--Map---Real-Cost-of-Building-Roads.pdf
[25] Smart Growth America (2018, September). "The Fiscal Implications of Development Patterns – Rural Lands Stewardship Area, Collier County, Florida", p. 22-23.
[26] Stantec Consulting. (2018, August) Eastern Collier Multiple Species Conservation Habitat Plan prepared for Eastern Collier Property Owners. p. 110

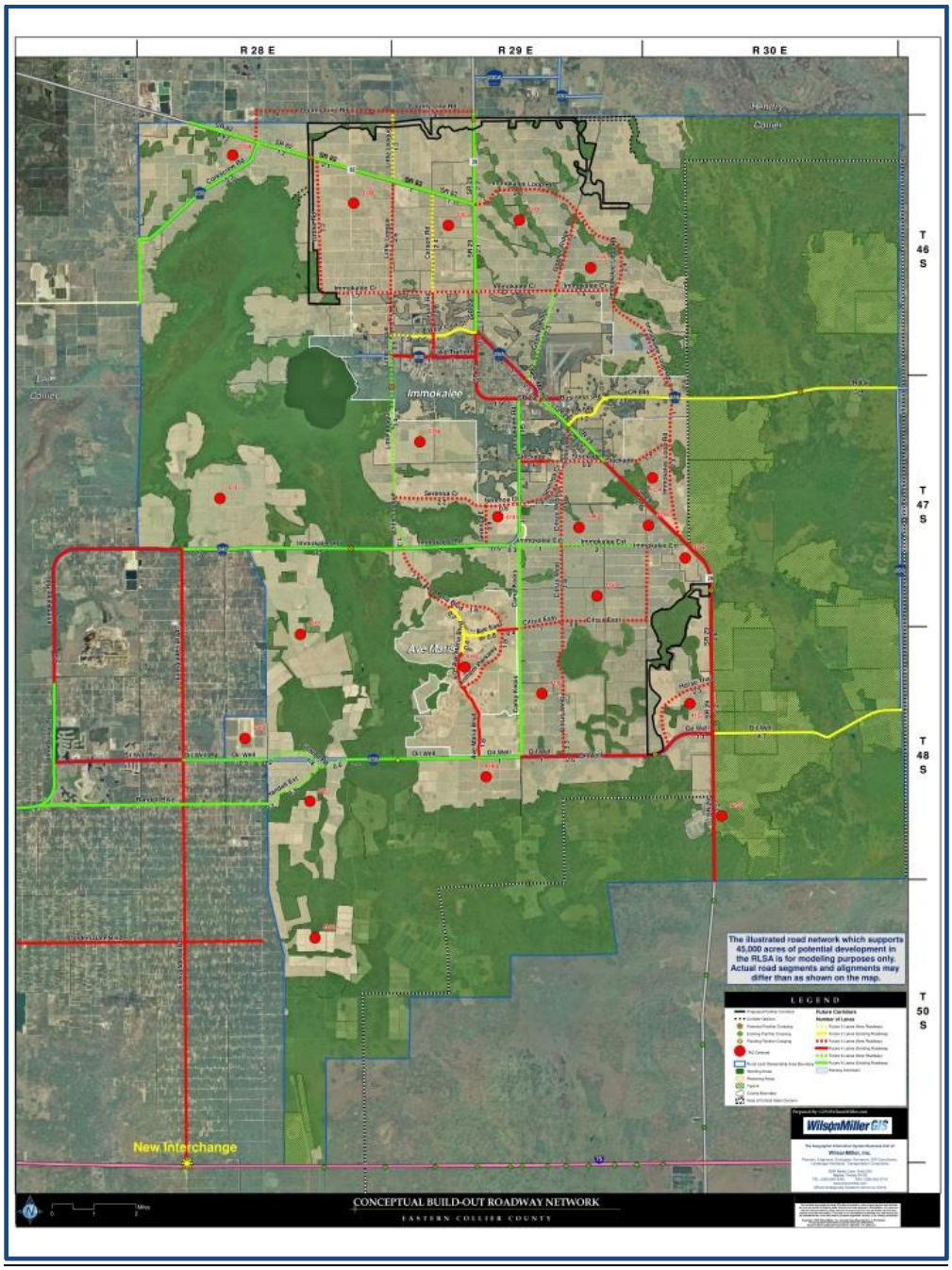

Figure 1: Wilson Miller's Conceptual Build-out Roadway Network for RLSA (includes 87.7 miles of new roads & 111.61 miles of expanded roads totaling 199.31 miles of total roadway improvements.)

1.2 Flaw: Roadway Network will have High Environmental Costs

Besides significant economic costs, the vast 200 miles of new roads and roadway expansion will have grave impacts on the Florida panther and other listed species. Even without the proposed roadway network, panthers and wildlife are being killed on a regular basis on existing roads. Figure 2 shows panther mortality strikes from 1981 to 2017 on roads within 25 miles of the RLSA. There have been 269 panther mortalities from vehicle strikes during that time frame, 77

of those strikes occurred in the RLSA. If development in the RLSA continues on the same path of low-density sprawl that the current program allows, the roadway network needed to accommodate the vast acres of new towns will assuredly lead to many more fatalities to the panther and many other species.

Many roads within WilsonMiller's conceptual roadway network cross primary panther habitat and stewardship areas, even though panther scientists warn against this. The Panther Review Team (PRT), consisting of six panther biologists, stated that:

> *"Planning for all new roads constructed within the RLSA should attempt to avoid bisecting HSAs, FSAs, WRAs, and areas the PRT recommends for protection. All new roads should be designed to minimize the loss or fragmentation of panther habitat if no alternative routes that avoid panther habitat exist."*[27]

If ECPO's HCP proposed a development pattern similar to the Conservancy's *2018 RLSA Vision Map* (Figure 11), then there would be no need to build roads that cross primary panther habitat. The Conservancy studied the impacts on panther mortality from increased traffic on a proposed new road network. Using PRT's estimates of traffic volumes and the methodology that the U.S. Fish and Wildlife Service (USFWS) employed in a Biological Opinion letter, the Conservancy was able to estimate the potential impact of increased RLSA development on the panther due to vehicular traffic.[28] The PRT estimated the number of daily trips for the proposed RLSA road network to be approximately 825,000 trips per day by 2050 as a result of 45,000 acres of development and mining.[29] Utilizing the USFWS's methodology applied to the RLSA, it is estimated one panther roadkill death for every 8.1 million vehicle trips. This would equate to approximately 37 panther deaths every year due to vehicle mortality within the RLSA, or approximately one panther death due to vehicle collision every 10 days.[30] Given gradual increases of traffic over the 50 year time frame, this would equate to approximately 1,275 panthers. The effects of the proposed roadway would be the final nail in the coffin for the Florida panther since the current total population ranges only between 120 and 230.[31]

[27] Panther Review Team (2009, October 15). "Technical Review of the Florida Panther Protection Program Proposed for the Rural Lands Stewardship Area of Collier County, Florida." Prepared for Rural Landowners and Conservation Organizations as Parties to a Memorandum of Understanding dated June 2, 2008.
[28] U.S. Fish and Wildlife Service. (2018). Letter from Roxanna Hinzman, Field Supervisor, South Florida Ecological Services Office, United States Department of Interior, Fish and Wildlife Service to Jason Kirk, Colonel, District Commander, U.S. Army Corps of Engineers dated January 23, 2018 with Service Consultation Code : 04EF2000-2015-F-0261, Corp Application Number SAJ-2006-06379 (SP-EWG) for Project: Argo Corkscrew Crossing.
[29] Panther Review Team (2009, October 15). "Technical Review of the Florida Panther Protection Program Proposed for the Rural Lands Stewardship Area of Collier County, Florida." Prepared for Rural Landowners and Conservation Organizations as Parties to a Memorandum of Understanding dated June 2, 2008.Table 6.3-1
[30] Conservancy of Southwest Florida, Center for Biological Diversity, Natural Resources Defense Council Letter to United State Fish and Wildlife Service re: FWS-R-4-ES-2018-0079 – Public comments on Draft Environmental Impact Statement for Eastern Collier Multiple Species Habitat Conservation Plan (2018, December 3). p. 25
[31] Florida Fish and Wildlife Conservation Commission webpage accessed 12/26/18: http://myfwc.com/panther

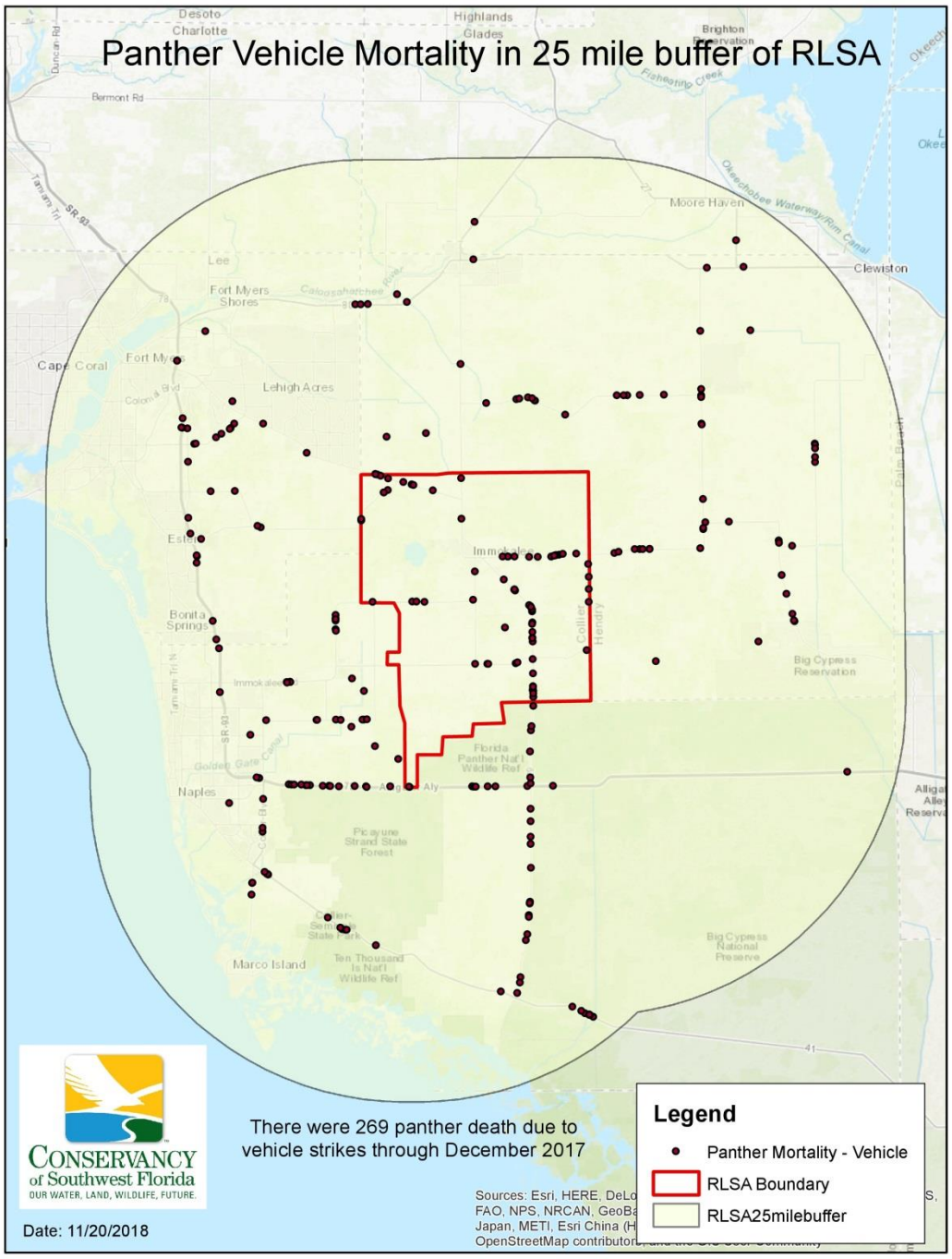

Figure 2: Panther mortality RLSA 1981-2017

Dr. Reed F. Noss, an expert on habitat conservation plans, reviewed the *Eastern Collier Multiple Species Habitat Conservation Plan* (HCP), which proposes 45,000 acres of development within the RLSA over 50 years.[32] In his review, Dr. Noss considered impacts to wildlife resulting from

[32] Noss, R. F. (2018, November). "Review of Eastern Collier Multiple Species Habitat Conservation Plan: A Report to the Conservancy of Southwest Florida."

implementation of the HCP. He asserts that road strikes will significantly and negatively impact listed species if the HCP is approved. Dr. Noss argues:

> *"The increased traffic volume, which would result from implementation of this HCP, poses a grave risk not only to the panther, but to most of the other Covered Species as well, such as the indigo snake (Breininger et al. 2012), diamondback rattlesnake, and gopher tortoise, which are often killed crossing or basking on roads, and the caracara, which forages on roadkill and often becomes roadkill itself. The Plan (p. 126) acknowledges this, especially for juvenile caracara, citing Morrison (2003). Wood storks are vulnerable, as they often forage in ditches along roads, as are sandhill cranes, which are commonly struck as they saunter slowly across roads. Even the Florida scrub-jay is highly vulnerable to roadkill, to the extent that roadside territories are demographic sinks (Mumme et al. 2000), as acknowledged in the Plan. Collisions with vehicles are mentioned as threats to several of the Covered Species (e.g., sandhill crane, p. 188; burrowing owl, p. 191), but inexplicably the increased collisions that will inevitably result from much higher traffic volume under the Plan are not acknowledged as take."*[33]

Noss further asserts:

> *"It is my professional opinion that the failure to adequately address and mitigate the take of panthers and other Covered Species as a result of roadkill is the single biggest flaw of the Plan. The Plan fails to even recognize this mortality as take, which in inexcusable."*

1.3 Flaw: Agricultural Lands are Undervalued

The RLSA program undervalues agricultural lands and treats these lands as a placeholder for future development. In fact, 85% of the 93,000 acres of open areas (areas where SRA development is allowed) is within agricultural lands.[34] Collier County should think twice about giving up agriculture so easily. Agricultural lands are a finite resource. There are many reasons for preserving agricultural lands but a few include: long term food security for the region, more access to healthy foods, significant contributions to the economy,[35] providing employment, water recharge, providing habitat and habitat connections, and flood risk reduction.

If building trends continue with low-density sprawl-type developments, South Florida will lose over 650,000 acres of agricultural lands by 2070.[36] However, if land-use patterns in South Florida change to a more compact form of development, the agricultural losses will be much less, at 167,000 acres.[37] Unfortunately, trends in the RLSA reflect the status quo as the vast

[33] *Ibid*. p. 11
[34] GIS analysis conducted December 5, 2018, according to 2008 FLUCCS codes. Rangelands are included under the agricultural umbrella and in the 85%.
[35] Florida Department of Agriculture and Consumer Services (2012) "Florida Value of Agricultural Products Sold." (Collier County produces $203 million worth of agricultural products per year.)
[36] University of Florida- Geoplan Center (2016, November). "Technical Report: Florida 2070 – Mapping Florida's Future – Alternative Patterns of Development" 2070. p.1 Found here: http://1000friendsofflorida.org/florida2070/wp-content/uploads/2016/09/florida2070technicalreportfinal.pdf p. 25.
[37] *Ibid*. pg. 15 (Statistics combine Protected Agricultural lands and Agriculture – croplands, livestock, and aquaculture)

majority of approved and pending developments are within agricultural lands. As example, over 87% of Ave Maria's receiving area was from agricultural lands[38] and the applicant for RLW proposes to build 97% of the site on agricultural lands.[39] These losses contribute to an already growing regional problem.

1.4 Flaw: Examples of Sprawl under Current Plan

The State of Florida is losing land to development at alarming rates. If development trends in Florida remain the same, nearly 34% of all lands within the state would be developed by 2070, as compared to 18% in 2010.[40] Development patterns must change toward "smarter growth" patterns so that natural resources are available to meet the needs of future generations. The American Planning Association defines "smart growth" as growth which:

> *"Supports choice and opportunity by promoting efficient and sustainable land development, incorporates redevelopment patterns that optimize prior infrastructure investments, and consumes less land that is otherwise available for agriculture, open space, natural systems, and rural lifestyles."*[41]

Plans for new development and proposed development within the RLSA do not achieve the APA's definition of smart growth. The RLSA program, as it exists today, allows a mix of new urbanism design principles and business-as-usual low-density cul-de-sac neighborhoods. RLSA development, thus far, consists of a compact mixed-use walkable town center, surrounded by low-density golf course gated subdivisions, typical of many southwest Florida communities. As example, Rural Lands West (RLW) proposes a 6 mile long by 2 mile wide site plan consisting of neighborhoods surrounded by a 54-hole golf course! This is ludicrous, as it is virtually impossible to create an environmentally sustainable compact-walkable town that stretches 6 miles and is surrounded by 54 holes of golf.

Another example of a town that has a denser town core surrounded by lower density gated subdivisions is the Town of Ave Maria. Ave Maria was the first approved town within the RLSA, and some lessons can be learned from it with regard to modifications to improve the RLSA. Thus far, only 1,700 homes of 11,000 have been built. We are told that will increase to 2,000 by the end of this year.[42] The town contains 5,057 acres (includes 1,000 acres for Ave Maria University) at an average density per acre at 2.18 dwelling units per acre. The community also includes a golf course. Ave Maria meets the density requirements of the RLSA program (between 1 to 4 du for towns), but higher density would result in more compact, walkable towns for future RLSA developments.

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[38] Florida Department of Community Affairs (2007, December 31). "Rural Land Stewardship Area Program 2007 Annual Report to the Legislature". p. 9

[39] Natural Resource Index Assessment for Rural Lands West, p. 5.

[40] University of Florida- Geoplan Center (2016, November). "Technical Report: Florida 2070 – Mapping Florida's Future – Alternative Patterns of Development 2070." p.1 http://1000friendsofflorida.org/florida2070/wp-content/uploads/2016/09/florida2070technicalreportfinal.pdf

[41] American Planning Association. APA Guide on Smart Growth. Found here: https://www.planning.org/policy/guides/adopted/smartgrowth.htm

[42] Information provide by David Genson of Barron Collier Enterprises at Collier County RLSA workshop on November 29, 2018.

A major reason why the RLSA does not meet the target of smart growth is because the program's policies are not sufficiently modeled after Collier County's own community character plan. The main objective of the county's community character plan is to do away with low-density, gated PUDs and cul-de-sac subdivisions which are ubiquitous in Collier County. Collier County's plan, *Toward Better Places, The Community Character Plan for Collier County, Florida* recommends that, "Developing and redeveloping settlements based upon a model of traditional neighborhood design principles is the first step towards great neighborhoods."[43] The plan provides the following list as qualities which make great neighborhoods, absent of sprawl:

> *"A legible center and edge to the neighborhood, an integrated network of walkable streets, an overall size to the neighborhood suitable for walking, buildings set close enough to the streets to spatially define the streets as public spaces, and opportunities for shopping and workplaces to call home."*[44]

The authors cite Old Naples as an example of a traditional neighborhood, but other examples in Florida include Key West, Downtown Sarasota, Celebration, Seaside, and Downtown Fort Myers, St. Augustine, Dunedin, Winter Park, St. Petersburg, and Abacoa in Jupiter.

2. SOLUTION I: IMPLEMENT DESIGN STANDARDS FROM "TOWARD BETTER PLACES"

In 2001, award-winning town planners Dover, Kohl & Partners (Dover Kohl),[45] created *Toward Better Places: The Community Character Plan for Collier County, Florida*. The plan was developed over a year-long process with public workshops, focus groups, and a survey. The final product is a plan that provides the framework for how citizens of Collier County would like their community to grow. The plan addresses implementation of land use decisions, transportation networks, and greenspace planning. One of the hallmarks of the plan is "to provide more housing choices in Collier County by reintroducing walkable traditional neighborhood development as a counterbalance to the multitude of gated subdivisions that have been built over the past 20 years."[46] The plan further states that "creating new neighborhoods with interconnectivity and greater density is the only way to avoid the worst-case scenario presented by the sprawl approach."[47]

So what are specific ways to ensure that new development within the RLSA better achieves the plan's objectives and goals? Many of the following solutions can be found within *Toward Better Places*: *The Community Character Plan for Collier County, Florida.*

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[43] Dover, Kohl & Partners for Collier County (2001, April) "Toward Better Places, The Community Character Plan for Collier County, Florida," p. 2.6
[44] *Ibid*, p. 2.6
[45] Dover, Kohl & Partners have received awards from American Planning Association, Environmental Protection Agency, and Congress for New Urbanism, webpage: https://www.doverkohl.com/awards-2/
[46] Dover, Kohl, & Partners (2001, April). "Toward Better Places: The Community Character Plan for Collier County, Florida." p. i.
[47] *Ibid*, p. 2.32.

2.1 Solution: Increase Minimum and Maximum Density

Dover Kohl asserts that planning decisions should be integrated with community character and design, and that the perception that lower density is better for Collier County must change. They state:

> *"Housing density must be rethought, especially in core areas and activity centers, the bias against higher density and towards planning by the numbers – with an assumption that lower density is better density – needs to be replaced with an emphasis on design."*[48]

As the SGA report demonstrates, the minimum and maximum density requirements within the RLSA are too low to avoid sprawl. Towns and villages within the RLSA are only required to average between 1 and 4 dwelling units (du) per acre, while hamlets and compact rural developments (CRD) can average even lower densities between ½ to 4 du per acre. Compared to the City of Naples, these densities are extremely low. Residential density requirements for Old Naples' downtown walkable area allows up to 12 du per acre.[49] Residential densities within other areas of the City of Naples range between a max of 6 du for low density residential to up to 25 du per acre for high density residential (Table 3).[50] Densities within the RLSA program are not only far lower than the City of Naples, but they are also lower than many of the gated golf course PUDs (Planned Unit Development), which are known to consume more land than traditional neighborhoods and are often considered not walkable.

Table 3 shows a comparison of densities between the City of Naples residential land use categories, three well-known large PUDs in unincorporated Collier County, and three developments within the RLSA that are either approved or pending.

[48] *Ibid*. p. 2.15
[49] City of Naples Comprehensive Plan Future Land Use Element (Updated October 2017) Policy 1.1, p. (Downtown Mixed-Use land use category).
[50] *Ibid*.

Table 3: Comparison of Densities in Collier County

City of Naples (consisting mostly of traditional neighborhoods)	Gross Acres	Allowed Density per Acre (du = dwelling unit)	Estimated Build-out
Downtown Mixed Use District	(varies per project)	Up to 12 du; (in certain areas density is limited to parking requirements & 3 story height limit)	n/a
Low Density Residential	(varies per project)	Up to 6 du	n/a
Medium Density Residential	(varies per project)	Up to 12 du	n/a
High Density Residential Mid Rise & High Rise	(varies per project)	Up to 18 du	n/a
High Density Residential Tower	(varies per project)	Up to 25 du	n/a
Planned Unit Developments (PUDs) in unincorporated Collier County	Gross Acres	Gross Density per acre[51]	Estimated build-out
Lely Resort	2,892	3.10 du	1992 - 2025
Pelican Bay	2,104	3.89 du	2004 - 2024
The Vineyards	1,930	3.02 du	2006 - 2018
Towns within RLSA	Size (Gross Acres)	Gross Density per acre[52]	
Town of Ave Maria	5,057 (includes 1,000 acre university; without university density is 2.75)	2.18 du	2005-2030[53]
Town of Rural Lands West (proposed)	4,092	2.44 du	(Application pending)
Collier Lakes (proposed village)	655	2.74 du	(Application pending)

It is ironic that the RLSA, which promotes a compact form of development throughout its policies, consists of lower density requirements than many other areas in Collier County. Our ways of growing and developing must change.

1000 Friends of Florida recently completed a special report, called *Florida 2070*, which provides an overview of what Florida will look like in 2070.[54] The report states that "if we continue developing land the way we do now more than a third of the state will be paved over by 2070."[55] However, the study continues to say that, "The most important finding from Florida 2070 is that

[51] Collier County List of Planned Unit Developments. Retrieved from https://www.colliercountyfl.gov/home/showdocument?id=73654 on 11/10/2018
[52] Collier County Growth Management Department, Zoning Division.
[53] Estimated Build-out date for Ave Maria provided at Collier County RLSA workshop, November 29, 2018.
[54] Thousand Friends of Florida (Spring 2070). What is your Vision for Florida? Florida 2070-Water 2070. Pdf found here: 1000friendsofflorida.org/florida2070
[55] *Ibid*. p. 2

even modest increases in development densities can result in a substantial saving of land."[56] While the RLSA program is in a review – ***now*** is the time to make the necessary changes to get the County back on track starting by increasing density requirements and decreasing the allowed development footprint, as discussed below.

2.2 Solution: Reduce SRA Size

In conjunction with increases in density, it is equally important to reduce the size requirements for Stewardship Receiving Areas (SRA). By reducing the minimum and maximum SRA size, this will encourage a more compact development design, thereby conserving land. As example, Rural Lands West proposes to build a 4,092 acre town with 10,000 homes. This equates to 2.44 du per acre. The applicant for RLW stated that the projected build-out population for RLW is 23,900, so they used an average of 2.39 persons per household to determine the build-out population.[57] If the density was increased to 10 du per acre, which is within the "Medium Density Residential" requirements for the City of Naples, then RLW could build 10,000 homes on 1,000 acres. The number of homes built and the projected build-out population of 23,900 would remain the same. This would save agricultural lands, listed species habitat and wetlands, and avoid sprawl, thus, achieving the goal of the RLSA.

2.3 Solution: Require Maximum Distance Between Center and Edge

According to Dover Kohl, in *Toward Better Places*, a ¼ mile radius is the optimum distance for creating a walkable neighborhood.[58] They state that the center of neighborhood (near amenities or mixed-uses) to the edge of the neighborhood should be about a 5 min walk or a ¼ mile (Figure 3).[59] Florida Department of Transportation (FDOT) confirms Dover Kohl's assessment of appropriate walkable block sizes in their *Traditional Neighborhood Development Handbook.*[60] FDOT states that a 5 minute walk or ¼ mile distance is "highly walkable and assumes the pedestrian mode as a viable and often preferred travel mode." A national survey, by Yang and Diez-Roux, found that people will walk a bit longer than ¼ mile. They found that the national mean and median values for walking distances were 0.7 and 0.5 miles, respectively.[61]

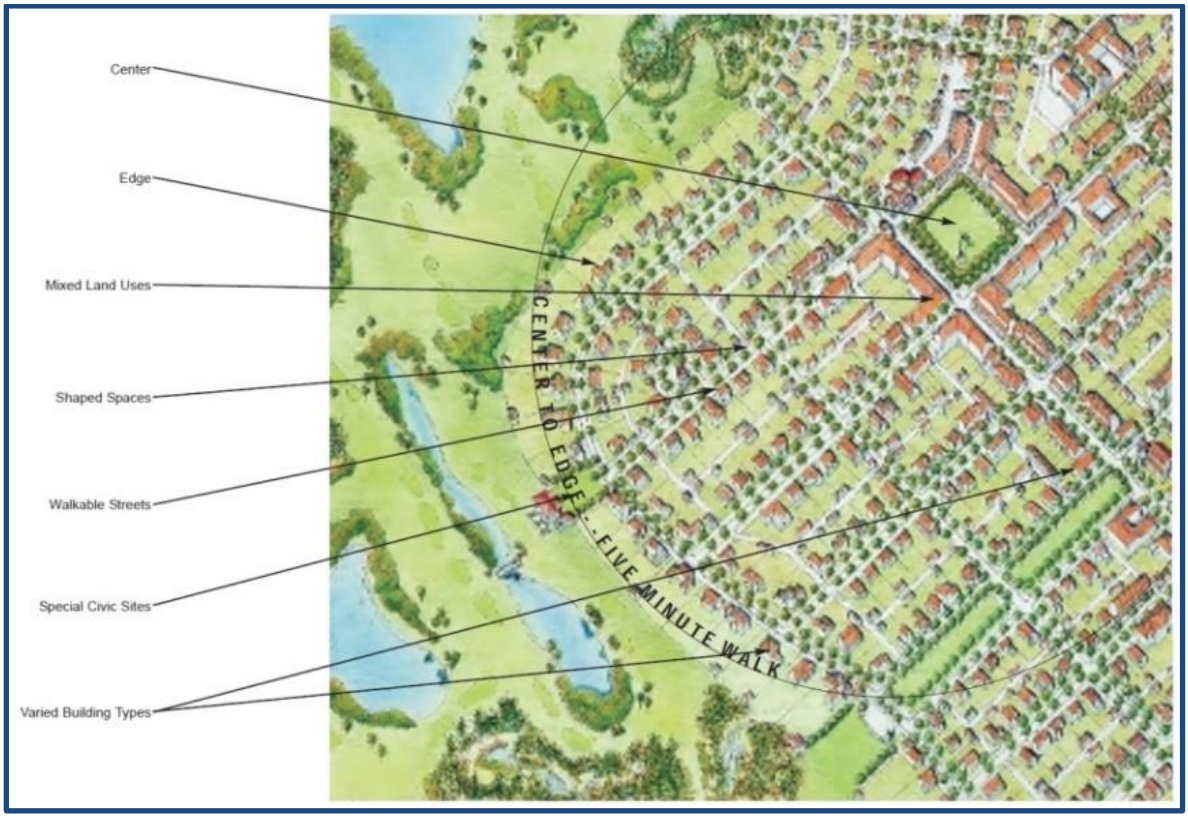
Some neighborhoods within the RLSA far exceed even a one mile distance from center to edge. Aerial views the proposed town of Rural Lands West show that distances between the town centers in some neighborhoods are over two miles.[62] This far exceeds the optimum walking

[56] *Ibid*.
[57] Projected build-out population of Rural Lands West provided at Collier County RLSA workshop, November 29, 2018.
[58] Dover, Kohl & Partners (2001, April). "Toward Better Places: The Community Character Plan for Collier County, Florida." p. 2.8.
[59] *Ibid*. p. 2.8.
[60] State of Florida Department of Transportation office of Roadway Design (2011). "Traditional Neighborhood Development Handbook."
[61] Yang, Y. and Diez-Roux, Ana V. (2012). "Walking Distance by Trip Purpose and Population Subgroups." *Am J Prev Med.* 2012 July ; 43(1): 11–19. doi:10.1016/j.amepre.2012.03.015.
[62] The distance between some residential neighborhoods and a town center or mixed use area within the Town of Rural Lands West is over 2 miles in some areas.

threshold of ¼ mile to 0.7 miles that research shows is a comfortable walking distance to retail and mixed uses.[63]

Figure 3 shows a portrayal of a walkable traditional town plan with Dover Kohl's recommended center-to-edge 5 minute radius.

Figure 3: Example of town plan with 5-Minute walk radius



Source: Dover, Kohl, & Partners. "Toward Better Places: The Community Character Plan for Collier County, Florida."

The greater the distance between the center and edge the greater likelihood that people will opt to drive instead of walk.[64] A solution to avoid this is to include a policy in the LDC that requires a maximum distance between a mixed-use center and edge of the neighborhood, preferably no longer than 0.7 miles. According to the RLSA program, the location of additional town and village centers, including mixed-use or retail centers, can be added to the master plan at a later date. However, the location of centers should be depicted in the Master Plan during the review period to ensure continuity of the traditional neighborhood design, before the SRA is approved.

[63] Yang, Y., Diez-Roux, A. (2012). Walking Distance by Trip Purpose and Population Subgroups. *Am J Prev Med*. 2012 Jul; 43(1): 11–19. doi:10.1016/j.amepre.2012.03.015;
Ewing R & Hodder R. "Best Development Practices: A Primer for Smart Growth." Urban and Economic Division of the US Environmental Protection Agency. *American Planning Association*. Found here: https://www.epa.gov/sites/production/files/2014-04/documents/best-development-practices.pdf

[64] Dover, Kohl, & Partners (2001, April). "Toward Better Places: The Community Character Plan for Collier County, Florida." p. 30

2.4 Solution: Reduce Maximum Block Perimeter for Neighborhood General

Old Naples consists primarily of neighborhoods with small blocks lengths and an interconnected street grid pattern. This is the type of development that Dover Kohl considers to be a walkable traditional neighborhood community and a model for new development in Collier County. Dover Kohl recommends a block perimeter between 1,400 to 1,800 feet in order to create walkable block sizes.[65] FDOT recommends an average block perimeter of 1,320 feet to create easy walking environments, but they also state block lengths of 400 to 600 feet are acceptable.[66] Other researchers agree with Dover Kohl or FDOTs recommendations.[67]

The RLSA program is not consistent with Collier County's Community Character Plan. The land development code states that the *Town Core* and *Town Center* can consist of a maximum 2,500 feet block perimeter and *Neighborhood General* can have 3,500 feet block perimeters maximum.[68] Although block sizes for the core and center are larger than the block sizes recommended by the County's own Community Character Plan, the block sizes for *Neighborhood General* far exceed Dover Kohl's ideal block size, by almost double. Therefore, we recommend that the maximum block sizes for *Neighborhood General* should be reduced to a maximum 2,500 feet perimeter. A reduction of the maximum block size will also help towards reducing the total SRA size.

It is also important to note that applicants are asking for deviations to the already excessive block sizes. For example, the applicant for Rural Lands West is requesting a deviation to increase the maximum block perimeter in the Town Center from 2,500 feet to 3,500 feet. Any such deviation should be denied, as it is inconsistent with traditional neighborhood development and would move the proposed development farther away from the stated goals of the RLSA and Collier County.

2.5 Solution: Require Greater Specificity for Mobility Plan

A large network of well-connected streets is one of the hallmarks of traditional neighborhood design. A dense network of interconnected streets provides an ample number of routes versus a single route that gated communities often offer. In addition to reducing traffic congestion, Dover Kohl, in *Toward Better Places*, states that a road network greatly affects community character. Although the RLSA program requires an interconnected system of roads, sidewalks and pathways, the requirements for the SRAs Mobility Plan are minimal. Without requiring specificity within the Mobility Plan, it is impossible to determine whether neighborhoods will

[65] *Ibid.* p. 2.8
[66] State of Florida Department of Transportation office of Roadway Design (2011). "Traditional Neighborhood Development Handbook". p. 14
[67] Ewing, Reid. (1999) Pedestrian- and Transit-Friendly Design: A Primer for Smart Growth. *American Planning Association*. P. 6
Farr, Douglas (2008) Sustainable Urbanism -Urbanism by Design with Nature. *John Wiley & Sons*. (LEED Diamond level for walking is a block length between 300-500 feet; platinum level 300-400 feet.) p. 151-152
[68] Collier County LDC 4.08.07J.2.d.i-iii.

consist of a network of interconnected streets and sidewalks or a single route system typical of gated communities.

The LDCs *Master Plan Content* merely requires the location of all roads, all proposed major internal rights of way, and pedestrian access ways on the Master Plan, but it does not require the location of the local streets.[69] As a requirement of each SRA application, the applicant should include within the *Master Plan Content* a rendering of the total street network (including local and neighborhood streets) in all portions of the SRA. If this were required, it would be possible for staff to assess whether the applicant attains a truly compact, walkable design, with an interconnected mobility plan.

2.6 Solution: Limit Size and Number of Golf Courses

Dover Kohl states that Collier County must break the cycle of creating "isolated, gated, golf course subdivisions". During this review, the need for golf courses in the RLSA and maximum size of courses should be re-assessed. Golf course communities in the RLSA consume agricultural land and habitat, they are typically not compact or walkable, and the demand for additional golf courses in Collier County—arguably the golf course capital of the world—is questionable. Building future communities around golf should be reconsidered. The National Golf Foundation states there are 4 million fewer golfers than there were in 2005 and golf course closures have outnumbered openings for the past 8 years.[70] Not only is there a sufficient supply of golf courses in the County, but data shows golf memberships are declining, and golf clubs are getting too expensive to run.[71]

Collier County has over 75 golf courses and there is no evidence the county needs more.[72] In fact, recently Collier County government has experienced the effects of the waning industry. In 2016, three golf course owners approached the County regarding rezones or conversions to other uses. This sparked a moratorium on golf course conversions until staff had enough time to study potential issues surrounding conversions.[73] The study found that the County would lose money on operating costs and the $3+ million investment if they were to purchase and run a public golf course.[74]

The first town within the RLSA, Ave Maria, already has an 18-hole golf course and the applicant for Rural Lands West (RLW) requests an allowance for a 54-Hole Golf course. Based on an industry average of 150 acres for each 18-hole golf course, we can assume that RLW's 54-holes

[69] Collier County LDC 4.08.07.G.2.
[70] New-Press, Craig Handel (2016, February 26). "Golf clubs becoming a tougher sell."
[71] Eidukot, John (2018, July). Golf Operator Magazine. "The Decline of Golf in 2018 – The Perfect Storm for Most Golf Clubs."
[72] Collier County (2016). Collier County Golf Courses. Accessed on 2018, November 23 here: https://www.colliercountyfl.gov/home/showdocument?id=70243
[73] Collier County Board of County Commissioners; April 12, 2016 –Agenda Item 10 B; and Collier County "Golf Course Conversion Overview of White Paper and LDC Amendment (2016, April 3)
[7474] Stanley, Greg (2017, October 22). Naples Daily News. "Study shows public course would cost Collier."

alone would cover approximately 450 acres.[75] The majority of those acres would be within primary panther habitat and agricultural lands. If approved, the course would fragment wildlife habitat, prematurely convert significant acres of agricultural lands and panther habitat to developed lands, and will create sprawl.

The RLSA will not be built out for many decades, so the county should focus on needs of future generations. The National Association of Realtors surveyed millennials in 2015 regarding their housing preferences.[76] They found that millennials prefer living in attached housing with walkable neighborhoods and in areas with transit. More than half of all Americans would rather have a home with smaller yard but within walking distance to amenities.[77] The RLSA program must be amended to redirect away from more future golf course communities and to cap the number of holes allowed, not only to save land, but so that the program is better situated to accommodate changing housing preferences.

2.7 Solution: Conservancy's 2018 Vision Map

A solution to all problems related to sprawl in the RLSA can be solved by directing growth to "Potential Development Areas" as provided in Conservancy's 2018 RLSA Vision Map (Figure 11). Our vision map directs development away from habitat that is critical to survival of the endangered Florida panther, thereby saving listed species habitat, wetlands, agricultural lands and infrastructure costs. In addition, our map would result in fewer roads and fewer expanded roads; thereby, decreasing the fragmentation of primary panther habitat and decreasing the potential for panther vehicle collisions.

3. FLAW II: THE PROGRAM ALLOWS 250% MORE DEVELOPMENT THAN WAS INTENDED

In 2002, the RLSA Overlay was adopted. Throughout the two and a half year public process leading up to the adoption of the program, the public was told that the maximum development potential for SRAs (included towns, villages, hamlets, and compact rural developments) was 16,800 acres or 9% of the total area. The rest of the lands, 91%, would be set aside as conservation and agriculture. After the program was adopted, and during the first review (2007-2009), it became very clear that the program had a much greater capacity for development than 16,800 acres. During the review, it was discovered that the program created the capacity for developing 43,300 acres, which was a 250% greater capacity for SRA development than promised in 2002!

[75] Golf Course Superintendents Association of America, 2007). "Golf Course Environmental Profile: Property Profile and Environmental Stewardship of Golf Courses Volume I Summary".
[76] National Association of Realtors. (2015, November 19). "Millennials Transportation and Housing Choices will Shape the Nation".
[77] Portland State University. Transportation and Research Education Center. (2015, July 27) "Millennials favor walkable communities, says poll from National Association of Realtors and TREC."

What happened?! Only a few days prior to the adoption of the plan, Policies 1.21 and 3.11 were amended, increasing the number of Stewardship Credits in the system. The workshops and RLSA committee meetings had ended so the public and most individuals involved in the making of the RLSA program were not aware that these policies were added, nor were they informed of the extent to which these policies would increase the capacity of the program.

In fact, Mark Strain, planning commissioner, asked during the Collier County Planning Commission's RLSA adoption hearing on October 17, 2002, whether or not the added policies were publicly disclosed. (The planning commission adoption hearing was just five days before the RLSA program was adopted). Mr. Strain asked:

> *"Anybody that can answer this is fine with me. The policies in this whole process that you are presenting to us today, did that go back to the committee? And has the committee approved all this? Has it had all the public input in that regard?"*

The County's outside legal counsel, Marty Tumbler, replied:

> *"No, in fact, that was the same, that didn't happen in the fringe either. Um there was some discussion we wish we had the time to do that. I mean as you are all I'm sure very well we were under a very quick block in order to comply with the Final Order here. In a perfect world it would have been nice to do that but we had to deal with the constraints that we got."*[78]

It was not until 2008, that WilsonMiller, the landowner's consultants in charge of creating the program for Collier County, provided calculations of how many credits were actually available in the program. WilsonMiller's 2008 memo to Collier County stated that the, "RLSA Program is estimated to produce a total of 315,000 Stewardship Credits assuming 100% property Owner Participation."[79] The number of available credits in the 2008 memo was in stark contrast to the credits provided in WilsonMiller's 2002 report which stated the maximum number of available Stewardship credits was 136,909.[80] (The Addendum at the end of this report provides additional information on the credit system during program's creation). Because of the extra credits that were revealed in the 2008 memo, the acres available for intensification ballooned from the original intent of 16,800 acres to 43,300 acres.[81] This also led to an increase in the RLSA's projected build-out population from an estimated 87,000 residents to over 300,000![82] Unfortunately, these important findings were not discovered until after the program was adopted,

[78] Collier County audio transcript. Comments by Mark Strain, planning commissioner and Marty Tumbler, Collier County legal counsel. (Audio of Collier County Planning Commission meeting regarding RLSA Overlay adoption on October 17, 2002 – Tape 4 Side B, starts approx. 43:25)
[79] Memo from Wilson Miller to Collier County RE Estimates of Stewardship Credits under the current and revised RLSA Program and recommendation for Credit calibration. 9-18-2008.
[80] Wilson Miller (2002, May) "Report and Recommendations of the Collier County Rural Lands Assessment Area Oversight Committee for the Immokalee Area Study", p. 40
[81] Collier County. "Response to DCAs Objections, Recommendations, and Comments Report for Collier County Comprehensive Plan Amendment 02-R2 (Eastern Rural Lands and Agricultural Assessment Area)" provides the point where the County increase the bonus credits for Policies 1.21 & 3.11 prior to adoption. pg. 23
[82] Figures from Collier County's 2008 Interactive Growth Model and 2005 Collier County Residential Build-Out Study, Preliminary Report, 8. County website: https://www.colliercountyfl.gov/home/showdocument?id=830

so the real capacity of the program was never disclosed to the public, committees, or Board of County Commissioners during the creation and adoption of the program.

We are now faced with a program that allows a massive amount of development, not to mention the amount of public services in terms of roads, police, schools, and EMS that this larger development footprint will require. To put it in perspective, 43,300 acres is greater than the area of 20 Pelican Bays at 2,149 acres and is nearly the size of 2 mega-towns like Fort Lauderdale at 23,238 acres each! With that much land available for development, there is little incentive to create compact communities. Furthermore, that many acres of new towns and villages will have grave consequences on the numerous endangered and threatened species that call the RLSA home.

3.1 Flaw: 5-Year Recommendations

Recommendations proposed by the 5-year Review Committee would expand the capacity of the program even further and make matters worse. According to WilsonMiller (now Stantec), the proposed recommendations by the 5-year Review Committee would infuse over 100,000 more credits into the system, increasing the potential Stewardship Receiving Areas (SRA) acres from 43,300 to 57,800 acres.[83] However, we are told that the landowners and the 5-year review committee are suggesting an acreage cap of 45,000 acres. Even with this cap, more than half of the lands proposed for intensification are within primary zone panther habitat and would result in 19,101 to 21,122 acres of primary zone panther habitat loss.[84] This is unacceptable, as primary zone habitat supports the only breeding population of panthers and is essential to the survival of the species.[85] The Conservancy believes there are other ways to protect and restore listed species habitat and to adequately protect agricultural lands that do not require increasing credits. (See The Conservancy's 2018 RLSA Vision Map – Figure 11).

4. SOLUTION II: REDUCE DEVELOPMENT POTENTIAL BY RECALIBRATING CREDITS

The Conservancy understands that it may create difficulties to return the RLSA program to its original intent because nearly 185,000 stewardship credits[86] have already been earned or are pending approval. At eight credits per acre, these credits already entitle over 23,000 acres of

[83] Wilson Miller (2008); Rural Lands West Stewardship Area "Maturity"- Letter to Tom Greenwood on Estimate of Stewardship Credits under the current and revised RLSA Program and recommendation for Credit calibration

[84] Stantec Consulting. "Eastern Collier Multiple Species Conservation Habitat Plan" (2018, August), prepared for Eastern Collier Property Owners. p. 86 & 89. This acreage excludes any potential additional impacts to primary panther habitat from the Town of Ave Maria.

[85] Kautz, et al. (2006) *How much is enough*? Landscape–scale conservation for the Florida panther. *Biological Conservation 130, p. 118-133.*

[86] From report called "Collier County Rural Land Stewardship Sending Area (SSA) Land Characteristic Summary and SSA Credits Earned, SSA Credits Pending, SSA Credits Redeemed in SRAs, and SSA Credit Balances" (updated 12/08/11) and from another Collier County report called "SRA Credit Use and Reconciliation and RLW" Dated, August 27, 2018. CREDITS TOTALLED AS FOLLOW: 129,987 total credits from Collier County's 2011 report + 68,976.9 total credits from "SRA Credit Use and Reconciliation and RLW", which includes amended Applications SSA14 through SSA16 and SSA17. Then 14,263.4 credits were subtracted for SSA 14-SSA 16 from the 2011 report since they were already included in the amended applications report for SSA 14-16. Calculation: 129,987 + 68,976.9 - 14,263.4 = 184,700.0 Total credits

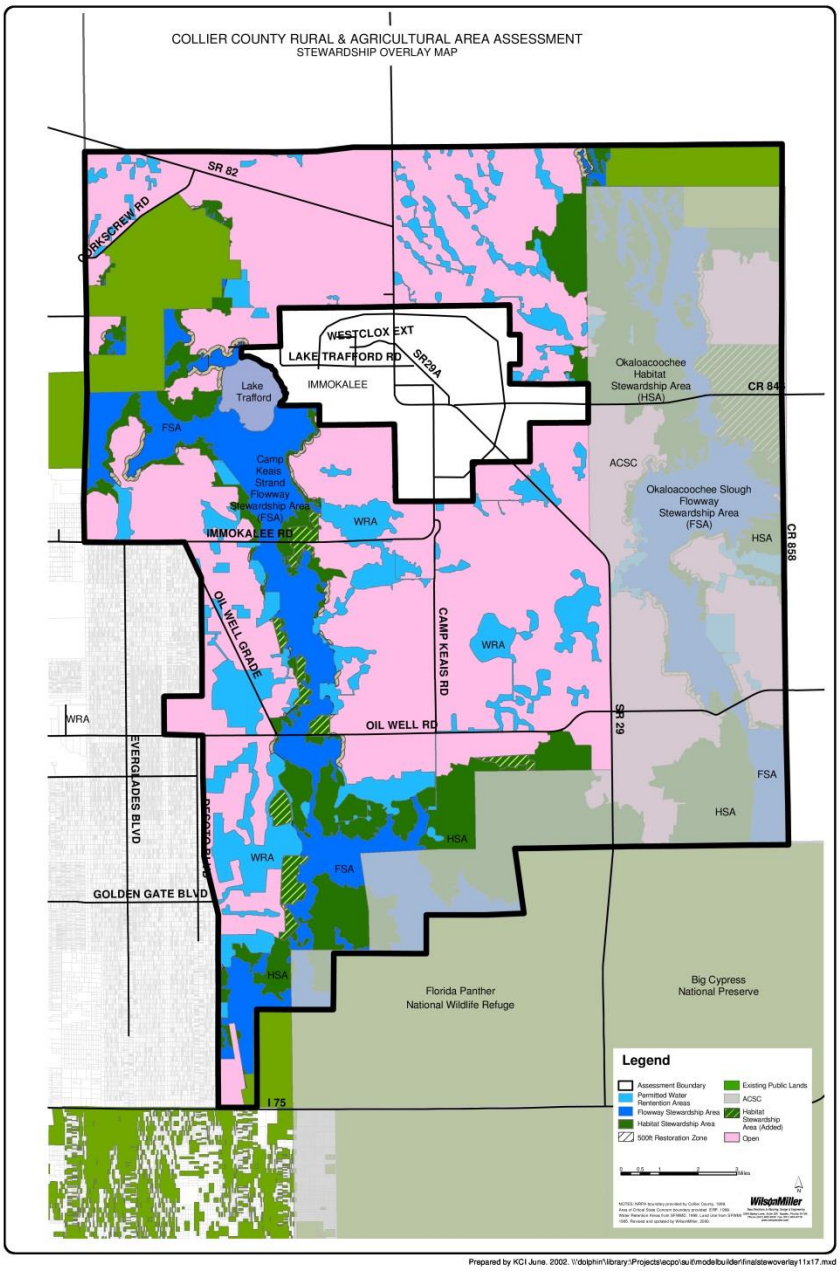
SRA development, which excludes additional acreage needed for public benefit use and any open space over 35% of total area.[87] First, the Conservancy recommends an official updated count of all stewardship credits that are pending and have been earned, since the last count was in 2011. The public should be informed as to how many credits are in the system. Second, the Conservancy recommends that the Stewardship Credit system is re-calibrated during ***this*** review, before even more credits are entitled, to an amount more consistent with what the program intended.

Scaling back the development capacity of the program would allow Collier County to get back to the primary goal of the RLSA and the mandate of the Final Order. The current program allows the 43,300 acres of Stewardship Receiving Areas (SRA) to be built virtually anywhere within 93,000 acres of "Open" areas, as shown in pink on Figure 4. The Department of Community Affairs (DCA), Florida's former land planning agency, reviewed Collier's RLSA program and stated:

> *"The large 93,000 acre area eligible for designation of receiving areas, which also allows the conversion of land uses to the underlying low-density uses, is the exact opposite of a plan to direct growth to the most suitable areas. This may lead to fragmentation of natural areas, wildlife habitat, and agricultural areas. The overall rural character of the area is under threat from the potentially large amount of urban development."*[88]

[87] Collier County LDC 4.08.08.B.2-3.
[88] Department of Community Affairs (2007, December). "Rural Lands Stewardship Area Program 2007 Annual Report to the Legislature." p. 12

Figure 4: Rural Lands Stewardship Area Overlay Map



4.1 Solution: Financial Benefits of Recalibrating Credits

Scaling back the maximum potential development by recalibrating credits has added financial benefits. The Smart Growth America (SGA) report, mentioned earlier in this paper, showed that compact development within the RLSA will save significant taxpayer dollars over the proposed development footprint of 45,000 acres. In fact, the *Smart Growth* scenario saves $3.8 billion dollars over the 45,000 acre *Sprawl* scenario in reduced roadways costs, school construction and staffing, school transportation, and EMS response costs over 20 years (Table 2). As densities

increase and development becomes more compact in the RLSA, costs drop dramatically. If the stewardship credits are recalibrated to reduce the development footprint significantly, new development could be fiscally neutral to the County or even slightly positive (Table 2).

4.2 Solution: Can Stewardship Credits be Re-calibrated?

You may be wondering: *"Can the Stewardship Credit System be recalibrated to scale back the maximum potential acreage of development?"* According to an ECPO representative from Baron Collier Companies the answer is *yes*. Stewardship credits are not vested until the Stewardship application has been approved. During a presentation to the Collier County Board of County Commissioners on April 21, 2009 regarding the 5-year review of the RLSA program, Tom Jones, of Barron Collier stated:[89]

> *"You have to remember, no one has been entitled to these credits. You have to go through an application process, it has to be vetted through staff, and staff has to recommend either approval or disapproval to the commission."*

Also, during the 2003 hearings for creation of the LDC policies, the County's outside legal counsel, Nancy Linnan, stated the following at a planning commission meeting:[90]

> *"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 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."*

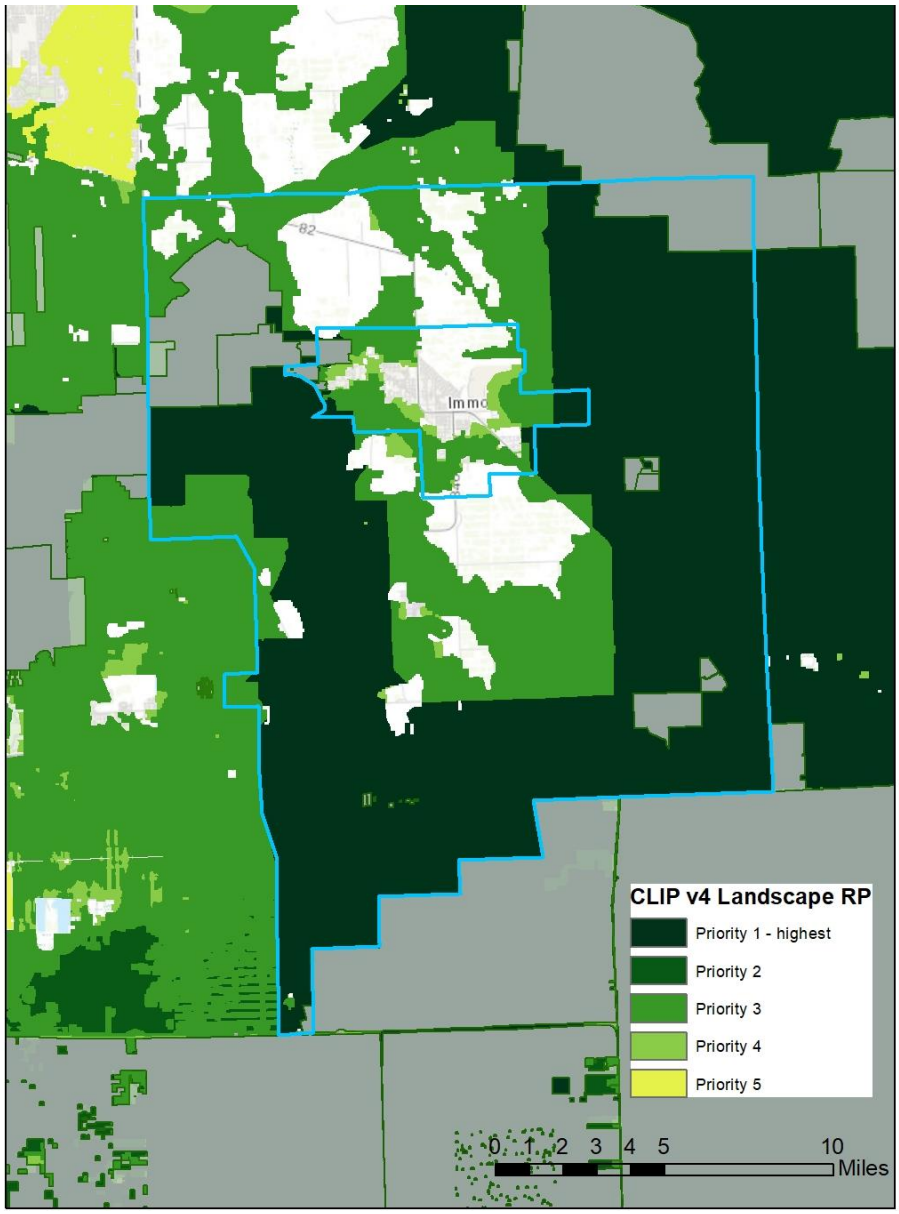
5. FLAW III: NRI VALUES ARE OUTDATED

The Natural Resource Index (NRI) values upon which the program is predicated do not reflect the ecological importance of many areas within the RLSA. Critical Lands and Waters Identification Project (CLIP) ranks many of the RLSA lands as Priority 1, which CLIP considers the highest priority for land conservation based on biodiversity, landscape function, surface

[89] Collier County Board of County Commission – Transcripts on special meeting on RLSA 5-year review. April 21, 2009. P. 40
[90] Collier County Audio Tapes from May 1, 2003, Tape 1A. Conversation starts approximately 40 min 52 seconds.

water, groundwater, and marine resources (Figure 5).[91] Because of outdated data within the RLSA program, 38,779 acres of Priority 1 lands are designated as "Open" areas of the RLSA overlay, meaning those lands are appropriate for development and intensification.[92] After nearly 20 years, the RLSA program has never been updated to include important scientific discoveries regarding habitat of listed species, habitat connectivity, and surface and ground water resources.

Figure 5: Landscape Resource Priorities from CLIP v.4 prioritization



Source: Noss, R. F. (2018). "Review of Eastern Collier Multiple Species Habitat Conservation Plan: A Report to the Conservancy of Southwest Florida."

[91] Florida Natural Areas Inventory (2016, September). Critical Lands and Waters Identification Project. Found here: http://www.fnai.org/pdf/CLIP_v4_user_tutorial.pdf

[92] GIS Analysis of RLSA Open lands within CLIP Priority 1 lands conducted December 10, 2018. There are 31,742 acres of Priority 2 lands within Open areas.

Data from the 2000 *Immokalee Area Study Stage 1 Report* determined the NRI values of each acre of land and appropriate locations for sending and receiving areas within the overlay.[93] Also, the data collected in 2000 was used to score the "Listed Species Habitat Indices" for each acre of land within the RLSA. At the time, the *Immokalee Area Study* included the most current scientific data available. The report states that, "a major effort was dedicated to producing up-to-date, appropriately scaled, accurate land cover map of the area."[94] It also states, "Mapping areas of highest ecological value using the best available data and analysis established in stage one of the Immokalee Area Study has led to the mapping of FSAs, HSAs and WRAs."[95] WilsonMiller, 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."*[96]

That was nearly 20 years ago, but the data and program have not been updated. Since that time, there were three major discoveries: the location and importance of the *Primary Zone* (Figure 6), the realization that agricultural fields are important to panthers, and *Adult Breeding Habitat* (Figure 7).

5.1 Primary Zone Panther Habitat

Using all records of panther telemetry available from 1981 to 2001, land use cover data, satellite imagery, and GIS information, Kautz et al. (2006) identified regions that are most important for conservation of Florida panther habitat. Kautz et al. 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."[97] The Secondary Zone is important to transient sub-adult males and may support expanding panther populations if habitat restoration were to occur.

5.2 Agricultural Lands as Habitat

In addition to forested areas, agricultural lands are necessary to meet daily needs and support the prey on which the panther depends.[98] Many agricultural areas contain important natural landscape connections that support panther home ranges, panther reproduction, dispersal movements, and availability of large prey.[99] The Primary Zone consists partly of agricultural lands. USFWS Florida Panther Recovery Plan and other best available science acknowledge the

[93] Wilson Miller, Inc. (2002, May) Report and Recommendations of the Collier County Rural Lands Assessment Area Oversight Committee for the Immokalee Area Study.
[94] *Ibid.*
[95] WilsonMiller, Inc. (2002, May) Report and Recommendations of the Collier County Rural Lands Assessment Area Oversight Committee for the Immokalee Area Study. P. 34.
[96] *Ibid.* p. 14
[97] Kautz, et al. (2006) How much is enough? Landscape–scale conservation for the Florida panther. *Biological Conservation 130, p. 118-133*
[98] Kautz, et al. (2006) How much is enough? Landscape–scale conservation for the Florida panther. *Biological Conservation 130, p. 118-133*
[99] Cominskey et al (2002). Panthers and Forests in South Florida an Ecological Perspective. *Conservation Ecology* Vol 6, No. 1

importance of agricultural lands as habitat for species not only for the Florida panther, but also for the eastern indigo snake, crested caracara, and the Florida bonneted bat.[100]

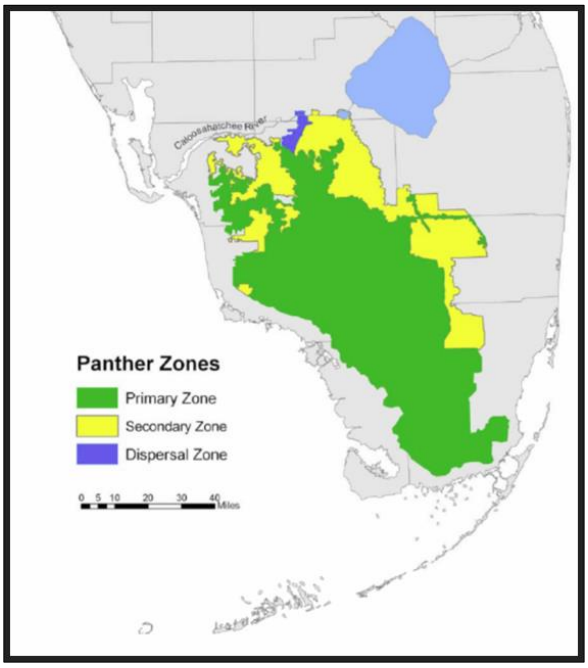


Figure 6 Kautz et al. Primary Zone

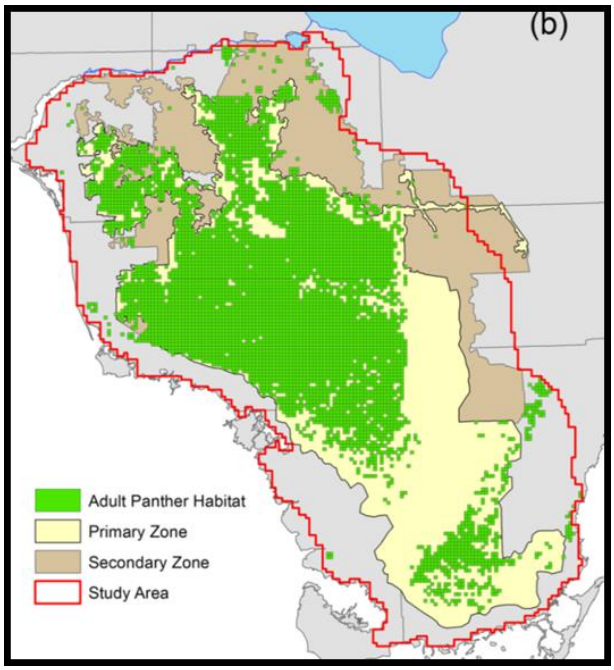


Figure 7 Frakes et al. Adult Breeding Habitat

5.3 Adult Breeding 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.[101] Ninety-three percent of panther's adult breeding habitat lies within the Primary Zone. Frakes et al. (2015) developed a distribution map for resident breeding panthers 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."[102] The RLSA does not account for Primary Zone or Adult Breeding habitat nor does it consider the importance of agricultural lands to the Florida panther.

[100] In example, see Kautz, et al, 2006. How much is enough? Landscape-scale conservation for the Florida panther. *Biological Conservation*: Vol. 130, p. 118-133. Jackson, S., 2013. Home Range Size and Habitat Use of the Eastern Indigo Snake at a Disturbed Agricultural Site in South Florida: A Thesis Presented to Florida Gulf Coast University. Morrison and Humphrey, 2001. Conservation Value of Private Lands for Crested Caracaras in Florida. Conservation Biology, Vol. 15, No. 3, Pages 675-684. Bailey et al., 2017. Impact of Land Use and Climate on the Distribution of the Endangered Florida Bonneted Bat.

[101] Frakes RA, Belden RC, Wood BE, James FE (2015) Landscape Analysis of Adult Florida Panther Habitat. PLoS ONE 10(7): e0133044. doi:10.1371/journal.pone.0133044

[102] *Ibid*, p. 15-16

6. SOLUTION III: UPDATE NRI VALUES USING BEST AVAILABLE SCIENCE

Collier County's RLSA program must be updated to capture the environmental value of primary panther habitat and to ensure the program is consistent with USFWS regulatory framework in the prioritization of panther conservation. The USFWS established that Kautz et al. (2006) is current best available science for prioritizing for panther protections. The *Florida Panther Recovery Plan* characterizes lands identified by Kautz et al. (2006) as crucial for the panther's continued survival and recovery.[103] The plan further states that habitat as identified by Kautz et al. (2006) should be maintained in order to maintain the existing population.[104] USFWS states in their Florida Panther Recovery Plan:

> "*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.*"[105]

Updating NRI values to accurately reflect recent data of panther habitat will not only help to direct development away from those areas which are inappropriate for intensification, but will more fairly and accurately provide the ability for landowners who own lands within primary habitat to earn more stewardship credits. The following recommendations should be implemented during ***this*** review of the RLSA program:

6.1 Solution: Update Listed Species Habitat Indices and NRI Values: The *Listed Species Habitat Indices* score and Natural Resource Index Score for each acre of land within the RLSA should be updated with Primary Zone panther habitat, Adult Breeding habitat GIS data layers, and updated data layers for other listed species. Because primary zone and adult breeding habitat are essential to the survival of the endangered Florida panther, every acre of land within those habitats should score over 1.2 NRI value. The presence many species are not known until a development is planned or started so a wildlife survey would still be required for every SRA application.

6.2 Solution: Update NRI Values before SRA Approval – During the Stewardship Sending Area (SSA) application process, NRI values are verified to determine if the land use-land cover has been altered or listed

[103] US Fish and Wildlife Service, 2008. "Florida Panther Recovery Plan, 3rd Revision."
[104] *Ibid*. p. 101.
[105] U.S. Fish and Wildlife Service (2008) "Florida Panther Recovery Plan, 3rd Revision." p.89

species habitat has changed. The "Restoration Potential Indices" is also determined during the SSA application process. However, the RLSA program does not require an assessment of changes to NRI value during the SRA application process. Because land cover and listed species habitat can change over time, it is equally important to accurately re-assess the value of SRA lands during the application process, as it is required for SSA lands.

6.3 Solution: Re-assess Program Every 5 Years based on the best available science for panthers, other listed species, and water resources and include compatibility with state and federal regulations, and the Endangered Species Act.

6.4 Solution: Modify Definition of *Listed Species Habitat Indices*. The definition of *Listed Species Habitat Indices* in Collier County's LDC should be revised to define the current data and methodology used.[106]

6.5 Solution: Update Natural Resource Index Map to reflect modifications mentioned in Solutions 6.1 through 6.4.

7. FLAW IV: LANDOWNERS CONTROL NRI DATA

The foundational data for the County's entire RLSA program is currently held by the landowners' consultants, Stantec (formerly WilsonMiller), and not by Collier County. Stantec holds the 2000 data which determined every Natural Resource Index (NRI) value for each acre of land within the RLSA. This is very concerning, not only because the RLSA is supposed be a public program, subject to transparency and analysis by all citizens, but because the data that Stantec holds is the very same data that ultimately determines how many Stewardship credits their client landowners can earn. The greater the NRI value of the land, the greater number of stewardship credits landowners can earn. Stewardship credits are the currency of the RLSA program and they are very valuable. If a landowners chooses to participate in the program they can increase the number of allowable dwelling units per acre 20-fold on their lands within the "open" areas. Also, if they own agricultural property within the Stewardship Areas they could sell Stewardship credits to other parties, while continuing to farm those lands.

The current method of housing data with the landowners' consultant and keeping it private, removes the possibility for checks and balances. If only the landowners and Stantec know which values went in to determining the total NRI value of each acre of land, how can the County or the public verify that the information is correct? How can we determine whether the landowners are receiving too many or too little Stewardship Credits for a Stewardship Sending Area application if we cannot verify the NRI data that was used to calculate the credits? How do we know

[106] Collier County LDC 4.08.01Q

whether the "open" areas, which are the areas appropriate for SRA development, were accurately assessed?

8. SOLUTION: COLLIER COUNTY SHOULD HOUSE NRI DATA

There needs to be transparency. Collier County must obtain the underlying data and the methodology for which the program is based. The Conservancy understands that the program was adopted over 15 years ago and that the data was not turned over to the County at that time; but it is necessary for the County to obtain the data during ***this*** review. Or the entire NRI system needs to be revamped based on publicly available data that Collier County can house and published a methodology that any party can follow to determine the NRI value of a particular grid cell. As previously mentioned the data used to determine NRI values and the RLSA NRI map is from the year 2000 and must be updated with best available science. As the NRI values are updated, questions may occur as the accuracy of some of the values assigned to a parcel. It is crucial for the County to have the base data available in order to verify that the value assigned to each parcel is accurate.

9. FLAW V: SRAs ARE PERMITTED WITHIN PRIMARY ZONE & ADULT BREEDING HABITAT

It is ironic that the RLSA program encourages development in habitat essential for the Florida panther when a major component of the program's primary goal is to protect listed species and their habitats. Not only does the program's outdated data layers increase vulnerability of panther habitat, but the fact that many of the areas "appropriate" for SRA development are within primary habitat makes the problem even worse. This is because the "*Open"* areas (Figure 4) consist of *Primary Zone* panther habitat and *Adult Breeding Habitat*. Approximately half of the 93,000 acres of *Open* areas lie within primary zone panther habitat and 31% are within adult breeding habitat.[107] This is unacceptable as all primary zone and adult breeding habitat should be protected within the RLSA.

9.1 Why is it Important to Protect Florida Panther Habitat?

Florida panthers are not only beautiful and majestic mammals, they are part of Florida's natural history and symbolic of old Florida - of ***real*** Florida. Protecting their habitat in the RLSA is essential for many reasons including:

- Only 120 to 230 Florida panthers exist in the wild.[108]

[107] GIS data layers show that 53% of "Open" areas are within the Primary Zone panther habitat. Data retrieved December 5, 2018.
[108] Florida Fish and Wildlife Conservation Commission. http://myfwc.com/panther

- The Florida panther is restricted to less than 5% of its historic range, which include RLSA lands.[109]
- Habitat loss is the greatest threat to the Florida panther.[110]
- The Florida panther has one breeding population, which is located in southern Florida.[111]
- If we lose panther habitat we also lose areas for hiking, areas that store floodwater and cleanse water, and areas we need to replenish our drinking water supplies.
- We need the panther to maintain biodiversity. Florida is third in the nation for having the most endangered and threatened species.[112] The Florida panther is considered an *umbrella species* (Figure 8). Lands that the Florida panther needs for its own survival protects other listed species. The Florida Panther National Wildlife Refuge states that by protecting panther habitat within their reserve, 126 bird species, 50 reptile and amphibian species, and 22 mammal species are also protected.[113]
- The Florida panther is our state official mammal elected by school children in 1982.

Figure 8: Graphic of Florida panther as umbrella species, by Steve Carbol

9.2 Flaw: Impacts on Adult Breeding Habitat Quantity & Quality

One of the leading panther scientists, Dr. Robert Frakes, modeled the impacts on Adult Breeding Habitat in the RLSA.[114] He based his analysis on 45,000 acres of development as proposed by the *Eastern Collier Multiple Species Habitat Conservation Plan* (HCP). The HCP provides locations of potential SRAs (town and village developments), many of which are proposed within panther habitat. His model predicts substantial loss of adult panther breeding habitat in

[109] Frakes RA, Beldon RC, Wood BE, James FE. (2015). *Landscape Analysis of Adult Florida Panther Habitat. PLoS ONE*, 10(7).
[110] Kautz, et al. (2006) *How much is enough? Landscape–scale conservation for the Florida panther. Biological Conservation 130, p. 119*
[111] Frakes RA, Beldon RC, Wood BE, James FE. (2015). *Landscape Analysis of Adult Florida Panther Habitat*. *PLoS ONE*, 10(7).
[112] U.S. Fish and Wildlife Service. Environmental Conservation Online System (ECOS) Found here: https://ecos.fws.gov/ecp0/reports/species-listed-by-state-totals-report
[113] U.S. Fish and Wildlife Service. Florida Panther National Wildlife Refuge pamphlet: https://www.fws.gov/uploadedFiles/Fl%20PantherGeneral%20brochure%2011.18.08.pdf
[114] Frakes, Robert A. (2018, October 7). "Impacts to Panther Habitat from the Proposed Eastern Collier Multiple Species Habitat Conservation Plan: A Quantitative Analysis. Prepared for: Conservancy of Southwest Florida."

terms of quality and quantity from proposed HCP development (SRAs). Figure 9 shows loss of adult panther habitat quality post HCP development.

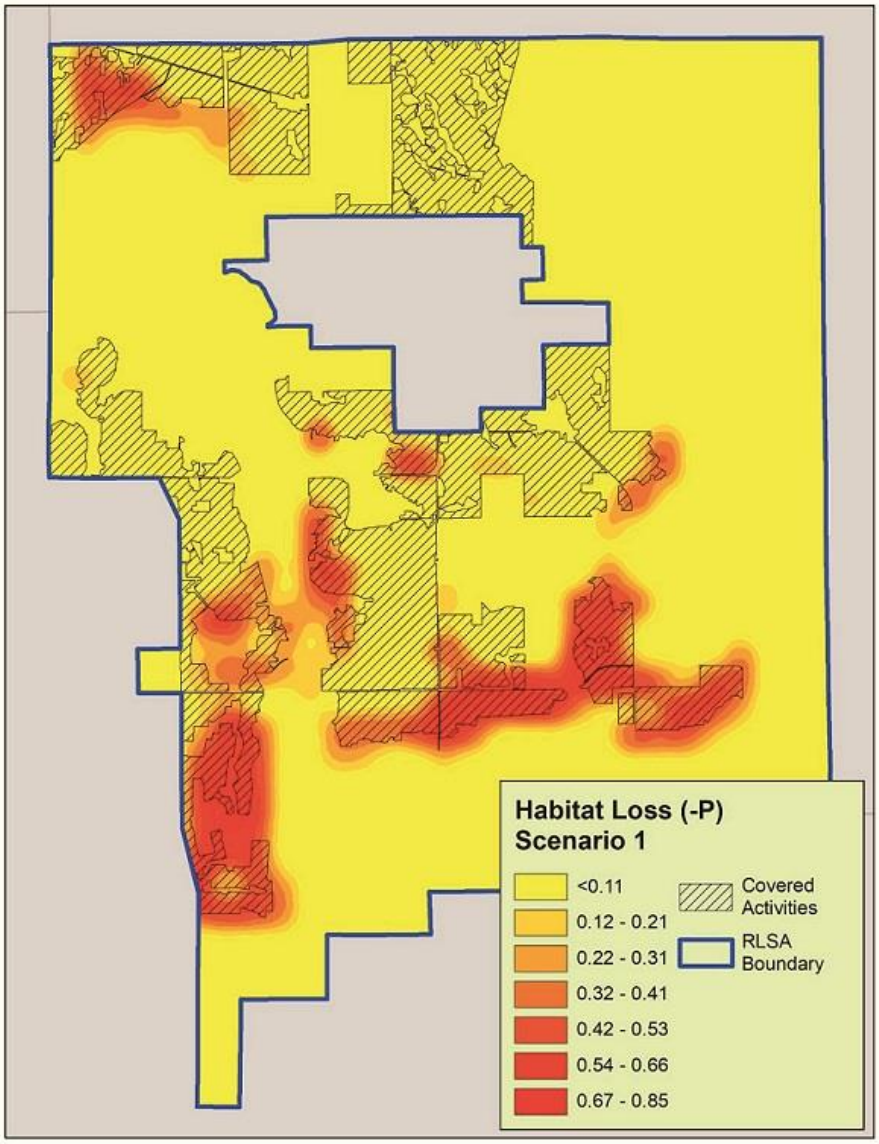


Figure 9: Loss to adult panther habitat quality under development proposed by HCP. Source: Frakes (2018). The darker red and orange colors represent the greatest loss of habitat quality.

Dr. Robert Frakes states, "The model predicted that the RLSA will lose 16,779 acres (18%) of existing adult panther habitat." The study also reported that overall habitat quality within the RLSA would be decreased by 16% with the implementation of 45,000 acres of HCP development. Dr. Frakes modeled a second scenario, which included likely additional residential development, agricultural intensification, and mining beyond the HCP. That model showed an overall decrease of adult panther habitat of 21,425 acres and 23.4% decrease of habitat quality. Because habitat is already extremely limited for the Florida panther, we do not have even one acre to lose.

9.3 Flaw: Impacts on Panther Corridors

Not only will 45,000 acres of proposed HCP development reduce habitat quality and quantity, development in the proposed areas will fragment panther corridors (Figure 10).

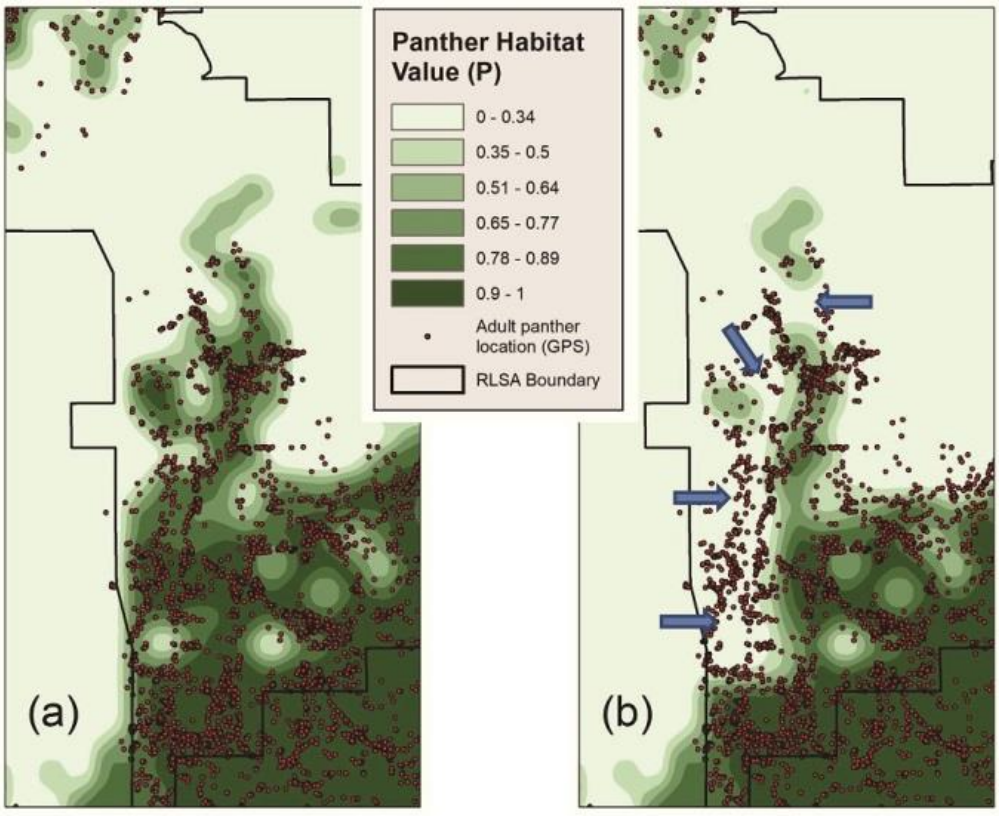


Figure 10: HCP jeopardizes panther corridor connectivity between Florida Panther National Wildlife Refuge and Corkscrew Swamp Sanctuary. Source: Frakes (2018)

Dr. Frakes analyzed the potential impacts from proposed HCP development on two main north-south panther corridors in the RLSA: (1) Corkscrew Swamp Sanctuary through Camp Keais Strand leading to Florida Panther National Wildlife Refuge and (2) Okaloachoochee Slough through Summerlin Swamp leading to Big Cypress National Preserve. Frakes (2018) predicts that both corridors will be severely fragmented, narrowed, and shortened as a result of HCP development. Figure 10 side (b) depicts adult panther habitat in the corridor near Camp Keais Strand after implementation of HCP development. The panther corridor is substantially narrowed and habitat value is virtually decimated in locations shown by blue arrows.

10. SOLUTION V: CONSERVANCY'S 2018 RLSA VISION MAP

Lands designated as *Open* should be reassessed. As stated previously, recent scientific literature on panther habitat would more accurately guide receiving areas that are less impactful to the

Florida panther. The Conservancy created a *2018 RLSA Vision Map,* aimed at resolving many of the fundamental flaws of the current program. If development is directed to "Potential Development Areas," according to the Conservancy's *2018 RLSA Vision Map,* then wetlands, listed species habitat, and agricultural lands will be saved, and sprawl will be minimized (Figure 11).

The *2018 RLSA Vision Map* was created by directing development away from Primary Zone panther habitat and Adult Breeding Habitat, lands recognized by panther scientists as essential to the panther's recovery and survival.[115] By conserving those areas for the Florida panther, the program would protect many of the other 18 federal and state listed species residing within RLSA lands.[116] Panther habitat removed from *Open* areas should be preserved as Habitat Stewardship Areas (HSAs). This would reduce the acres for potential development or *Open* areas to 36,881 acres. The development footprint could be located within the 36,881 acres of "*Potential Development Area*," instead of the 93,000 acres of *Open* lands depicted on the *Collier County Rural Lands Stewardship Area Overlay Map* (Figure 4). By reducing the footprint and directing development to the *Potential Development Areas* provided in the Conservancy's *2018 RLSA Vision Map* the following would be achieved (Figure 11):

(a) 47,727 acres of primary habitat for the endangered Florida panther would be protected;
(b) 41,430 acres of agricultural lands would be saved;
(c) 6,103 acres of wetlands protected; and
(d) Over $1 Billion saved.[117]

[115] Kautz, et al. (2006) *How much is enough? Landscape–scale conservation for the Florida panther. Biological Conservation 130, p. 118-133 & and* Frakes RA, Beldon RC, Wood BE, James FE. (2015). Landscape Analysis of Adult Florida Panther Habitat. *PLoS ONE*, 10(7).
[116] Three of the 19 listed species mentioned are under review for listing status or are considered candidate species.
[117] Smart Growth America (2018, September). The Fiscal Implications of Development Patterns – Rural Lands Stewardship Area, Collier County, Florida. p. 11 Table 2 (Net fiscal impact over 20 years for EMS, School buildings & staffing, school bussing, and road construction). Analysis based on Scenario 2 in SGA report at 40,704 acres; however an even more compact footprint of 37,149 acres would result in greater savings. The projected build-out population would remain the same.

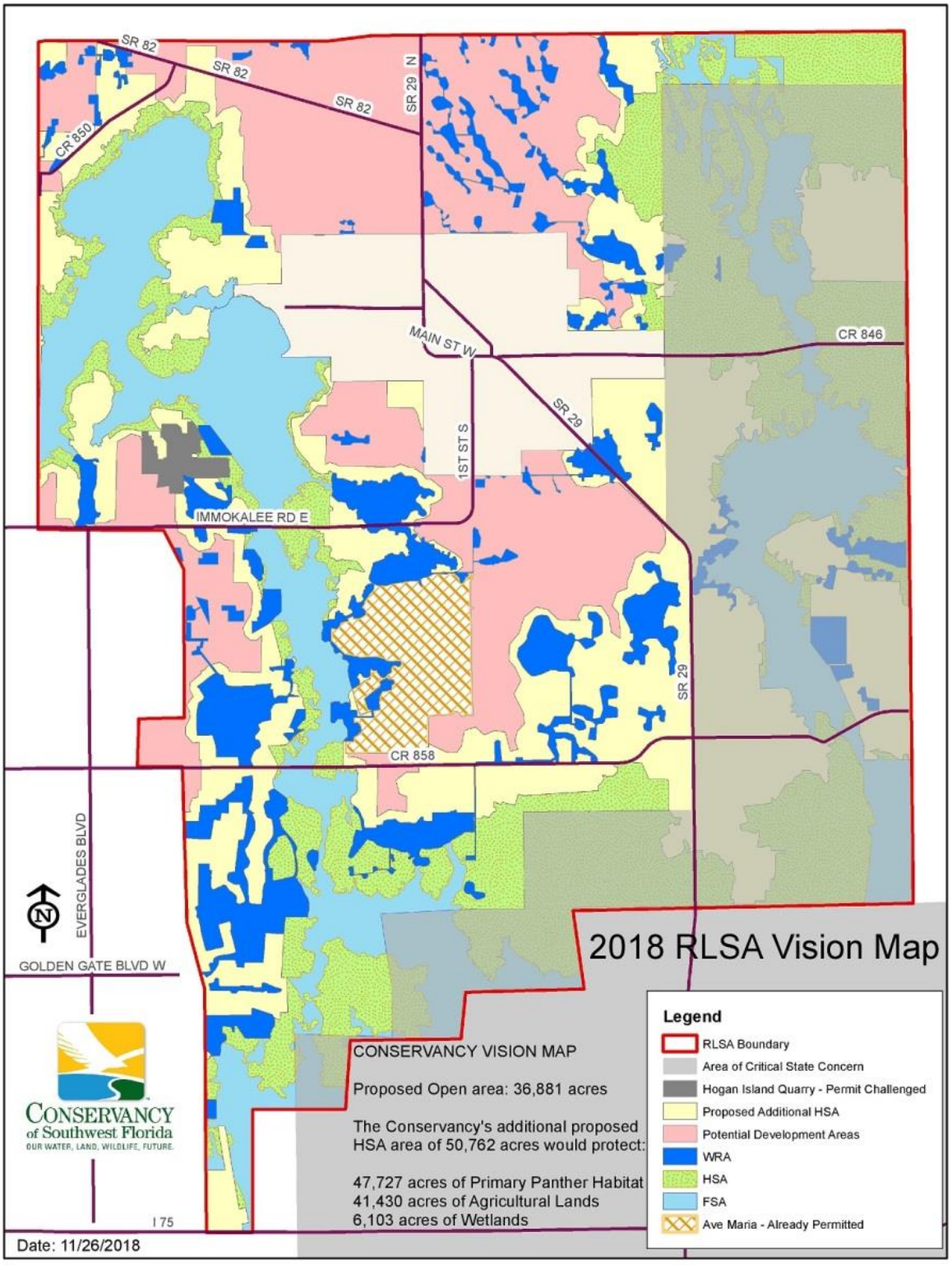


Figure 11: Conservancy's 2018 RLSA Vision Map. "Potential Development Areas," shown in pink, exclude Primary Zone and Adult Breeding Habitats. Not all lands within Potential Development Areas are suitable for intensification as habitat for other listed species may occur within those areas. Each development proposal must be consistent with local, state, and federal guidelines, consist of a listed species management plan, and obtain proper permits.

By removing Primary Zone and Adult Breeding habitat areas from the potential development area, over 41,000 acres of agricultural and working lands would be saved, which solves a primary concern of the 5-Year Review Committee.[118]

11. FLAW VI: DEVELOPMENTS MAY RESULT IN REDUCED HABITAT FUNCTIONALITY IN ADACENT SENDING AREAS

The current RLSA system is flawed in that landowners are able to receive Stewardship Credits for actually impacting habitat of listed species, rather than protecting habitat. This is because policies within the program undervalue the importance of water retention areas (WRAs) as habitat for listed species. As an example, if approved, Collier Enterprises will earn 4,845[119] Stewardship Credits for "protecting" Stewardship Sending Area 17 (SSA17), which would entitle them to over 600 acres of SRA development. SSA17 is proposed to serve as a WRA for the Town of Rural Lands West (RLW), consisting of 3,122 acres of an ecologically important wetland system providing habitat for 12 listed species, including the endangered Florida panther.[120] SSA17 lands also have a high Natural Resource Index value between 1.7 & 2.6 as much of the lands are within the Shaggy Cypress Swamp consisting of high quality cypress strands. However, habitat for many of the listed species would be severely cut off as the Shaggy Cypress Swamp and other SSA17 wetlands would be encircled with neighborhoods, golf courses, and the town center. Also, a sixteen foot wide multi-use biking/walking path is planned to bisect the Shaggy Cypress Swamp, further fragmenting habitat.

Using the *landscape-scale adult panther habitat model*, Dr. Robert Frakes' analyzed RLW's proposed site plan.[121] Figure 12 demonstrates how the Rural Lands West project will adversely affect Adult Breeding Habitat if the project is permitted.[122] The left side shows the current 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 Frakes et al. (2015) model shows that there will be a significant decrease in the habitat value within the Shaggy Cypress system and all of SSA17 lands if RLW is built. Lands south of Oil Well Road would have virtually no habitat value for the Florida panther. Disturbances from the surrounding neighborhoods—light, noise, pets, and traffic—would deter the Florida panther and other species from occupying SSA17 lands.

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[118] Collier County. Comments of the Environmental Advisory Council and RLSA Review Committee Responses. Final March 10, 2009 (Attachment C)
[119] Rural Lands West SRA Credit Use and Reconciliation Application. (2018, August). p. 3
[120] Passarella and Associates. Stewardship Sending Area 17 Application (January 2016) & Rural Lands West SRA Credit Use and Reconciliation Application. (2018, August). p. 3
[121] Frakes RA, Beldon RC, Wood BE, James FE. (2015). Landscape Analysis of Adult Florida Panther Habitat. *PLoS ONE*, 10(7).
[122] Figure 12 demonstrates how the Rural Lands West project will adversely change Adult Breeding Habitat if the project were to be permitted. The left side shows the current panther habitat value, and the right side shows the Frakes et al model re-run with the Rural Lands West project in place. 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. Frakes model shows that there will be a significant decrease in the value of lands within the Shaggy Cypress and the Camp Keais Strand (which is one of only two existing south-to-north panther corridors) post-development of RLW.

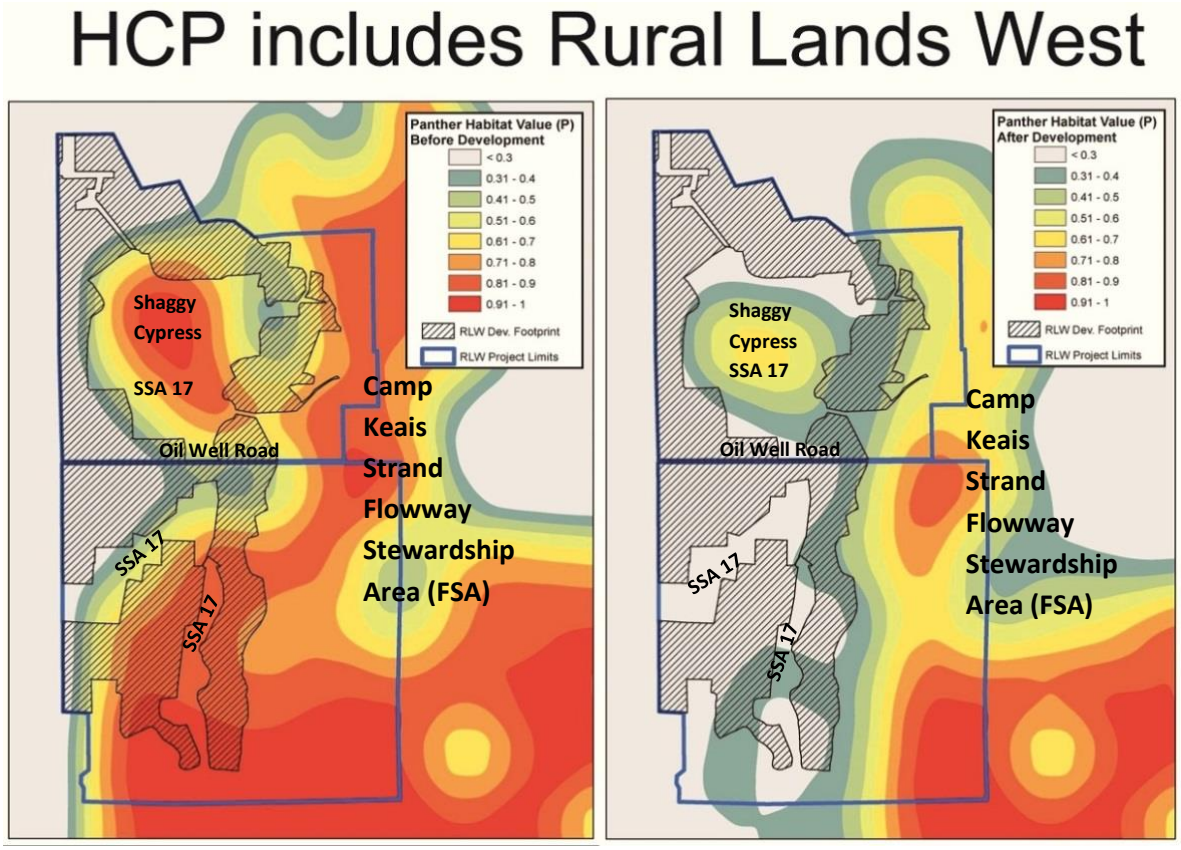


Figure 12: Frakes (2018). Panther Habitat Value Before and After RLW Development

Not only would the habitat value within SSA 17 be diminished, but the analysis shows that RLW would decrease habitat value outside the SRA footprint in Camp Keais Strand Flowway Stewardship Area (FSA) (Frakes 2018). Camp Keais Strand is a primary wetland flowway system and designated by the RLSA program as lands critical for protection. It is also a major south-to-north corridor for the panther and provides primary habitat.

It is troubling that Collier Enterprises could earn Stewardship credits for SSA17, when in reality the SRA diminishes habitat value within the adjacent WRA and FSA. The RLSA Overlay clearly defines the purpose of Stewardship Sending Areas as areas that are to be protected. Stewardship Credits are the currency given to landowners for protecting those areas. Policy 1.21 supports this point when it states, "The incentive based Stewardship Credit system relies on the projected demand for Credits as the primary basis for permanent protection of flowways, habitats and water retention areas."[123] It would then logically follow that the applicant should not be allowed to redeem Stewardship Credits towards SRA acreage if the development plans demonstrate listed species habitat will be impacted in the SSA for which credits were earned, such as in the case with RLW.

[123] Collier County Future Land Use Element.

Policies must be amended to prohibit development from impacting habitat of listed species in adjoining WRAs, FSAs, and HSAs. Furthermore, the program should not allow lands to become SSAs or for landowners to earn Stewardship Credits if SRA development diminishes natural resources within the SSA.

12. SOLUTION VI: AMEND GMP & LDC POLICIES

As a solution, policies within the GMP and LDC should be amended to ensure that the SRA is planned in a *truly* environmentally acceptable manner, so that SRA development shall not reduce habitat functionality for listed species in an adjacent SSA, WRA, FSA or HSA. The LDC already states that an "SRA design shall demonstrate that ground water table draw down or diversion will not adversely impact the adjacent FSA, HSA, WRA or conservation land."[124] Thus, the same consideration should be made for listed species habitat. Based on Frakes (2018) model, we know that loss of panther habitat quality and quantity can be predicted (Figures 9, 10 & 12). As previously mentioned, the Florida panther is an umbrella species (Figure 8), so by removing potential development areas that would impact panther habitat that will also protect many of the other species that the Florida Panther National Wildlife Refuge mentions in Section 9.1.

Examples of amended language are underlined and provided below:

Policy 4.9: *"A SRA must contain sufficient suitable land to accommodate the planned development in an environmentally acceptable manner. The primary means of directing development away from wetlands and critical habitat is the prohibition of locating SRAs in FSAs, HSAs, and WRAs. SRA design shall demonstrate that development will not adversely impact habitat and habitat functionality for listed species in adjoining, SSA, FSA, HSA, & WRA. To further direct development away from wetlands and critical habitat, residential; commercial, manufacturing/light industrial, group housing, and transient housing, institutional, civic and community service uses within a SRA shall not be sited on lands that receive a Natural Resource Index value of greater than 1.2. In addition, conditional use essential services and governmental essential services, with the exception of those necessary to serve permitted uses and for public safety, shall not be sited on lands that receive a Natural Resource Index value of greater than 1.2. The Index value of greater than 1.2 represents those areas that have a high natural resource value as measured pursuant to Policy 1.8. Less than 2% of potential SRA land achieves an Index score of greater than 1.2."*

Policy 4.12: "*Where a SRA adjoins a FSA, HSA, WRA or existing public or private conservation land delineated on the Overlay Map, best management and planning practices shall be applied*

[124] Collier County. Future Land Use Element Policy 4.12.

to minimize adverse impacts to such lands. SRA design shall demonstrate that development will not adversely impact habitat and habitat functionality for listed species in adjoining SSA, FSA, HSA, & WRA. Also, SRA design shall demonstrate that ground water table draw down or diversion will not adversely impact the adjacent FSA, HSA, WRA or conservation land. Detention and control elevations shall be established to protect such natural areas and be consistent with surrounding land and project control elevations and water tables."

LDC 4.08.07(A)(1)g: **"***An SRA may be contiguous to an FSA or HSA, but shall not encroach into such areas, and shall buffer such areas as described in Section 4.08.07 J.6. An SRA may be contiguous to, or encompass a WRA. If the WRA contains habitat for listed species, the SRA must demonstrate that the development does not reduce habitat functionality of listed species in an adjoining SSA, WRA, FSA, and HSA."*

13. FLAW VII: THE STEWARDSHIP CREDIT SYSTEM FOR RESTORATION NEEDS TO BE RE-EVAUATED

13.1 Flaw: Double-dipping

The current Stewardship credit system encourages "double dipping" of credits, where landowners can be compensated twice on the same lands without giving up any more rights (Table 4). Not only can landowners earn "base credits" for removing land uses layers and giving up rights to develop within WRAs, FSAs, and HSAs, but they can also earn credits on those very same lands for simply "dedicating" their lands for restoration if they are located in certain areas. The LDC states that, "The actual implementation of restoration improvements is not required for the owner to receive such credits."[125] Therefore, the applicant does not have to spend one dime on restoration activities in order to receive the credits, and they can continue to ranch, raise livestock or continue with any other activities within the "Agricultural Group 2" land use layer.[126]

All for simply stating they are "dedicating" their lands for restoration landowners can earn a tremendous amount of credits. Those credits are called R-1 credits. As an example, if Stewardship Sending Area 15 (SSA15) Amendment Application is approved, Collier Enterprises will earn an additional 14,178 (R-1) credits for merely designating their lands for restoration, but for not actually completing any restoration work (Table 4).[127] The credits for R-1 will be earned after the applicant has already earned 5,434.9 base credits for removing land uses 1 through 4 (ex. residential, general conditional uses, earth mining, and recreational) and 4,684.9 credits for

[125] Collier County LDC 4.08.06.B.3.f(3)
[126] Collier County LDC 4.08.06.B.3.f(4).
[127] Passarella & Associates. Stewardship Sending Area 15 Amendment Application.

removing two additional land use layers (Agricultural Group 1 & support services). The additional 14,178 (R-1) credits would allow the applicant to receive credits on the very same lands twice and would give them another 1,772 acres toward SRA development, based on the 8 credit per acre rule. This is all for doing nothing extra!

Table 4: Credits from SS15 amendment application. (Source: Passarella and Associates – Stewardship Sending Area 15)

Credit Source	Approved Credits	Proposed Additional Credits**	Total Credits
Early Entry Bonus Credits	1,826.9	0.0	1,826.9
Base Credits (for removing land use layers 1-6)	5,434.9 (Layers 1-4 removed)	4,684.9 (Layers 5-6 removed & Restoration Potential index)	10,119.8
Restoration Credits (R-1)	0.0	14,178.4	14,178.4
Restoration Implementation Credits (R-2)	0.0	14,178.4	14,178.4
Total	**7,261,8**	**33,041.7**	**40,303.5**

The highlighted R-1 credits are credits to be earned for "designating" lands to restoration. These are in addition to removing land uses 1-6, which already protects lands from intensification. R-1 credits allow the applicant to earn additional credits for no additional conservation benefit provided. (**Proposed additional credits are from the amendment application. Approved credits are from the original application).

According to the RLSA program, removing land use 1-6 layers already removes any potential for crop raising and intensive development, including residential and mining, and leaves only Agricultural Group 2 uses (ranching & grazing) and conservation. Therefore, why should landowners receive additional R-1 credits for doing nothing? They should only receive restoration credits for actually restoring the lands.

In addition, there is no guarantee that the actual restoration will be completed under the current program. In fact, very little restoration has ever been done under the RLSA program. Collier County estimates that only 428 acres of approximately 50,000 acres of SSAs have been restored.[128] That equates to about 2.5%. Thus, the overwhelming majority of credits for restoration are R-1 credits, which are earned for simply designating lands that have the potential for restoration rather than actual restoration.

13.2 Flaw: Only SSAs are updated during Application Process, Not SRAs

During the application process, NRI values can be updated for SSAs but not for SRAs. SRA applications should receive the same consideration. However, it is very concerning that the landowner's consultant is in charge of determining updated NRI values and calculating stewardship credits, instead of the county or an outside independent consultant not affiliated with any of the Eastern Collier landowners.

[128] Collier County. (2018, April 26). Meeting Summary RLSA Restudy Group 3 Policies Meeting – Protecting Natural Resources.

As part of an SSA Designation application, the NRI values can be changed in two ways. First, the NRI value that was assigned to each acre of land during the *Immokalee Area Study* (year 2000) is verified to determine if the Index Value score is still valid.[129] The Index Value of each parcel within the SSA application is verified by the landowner's consultant via "recent aerial photograph or satellite imagery, agency-approved mapping, or other documentation, as verified by field inspections."[130] If changes to characteristics of the land are found that make the Index Scores assigned during the RLSA no longer valid then the applicant's consultant must provide "documentation to support a change in the related Natural Resource Index Value(s)."[131] The consultant then provides "Calculations that quantify the number of acres by Index Values, the level of conservation being offered, and the resulting number of credits being generated."[132] The applicant then submits the application to the County staff for review.

Just as in SSA lands, land cover and listed species habitat conditions could change over time for SRA lands, potentially making a portion of the parcel within an SRA application eligible for stewardship protection and inappropriate for development. A similar review of NRI values for SRA applications should be required, as long as County staff or an outside independent consultant determines updated NRI values and credits.

13.3 Flaw: The Applicant's Consultant Calculates Restoration Credits

The second method for updating NRI value is according to the Restoration Potential Index, which is assigned during the SSA designation process.[133] The landowner's own environmental consultant is tasked with evaluating the restoration potential for the land, which is problematic. The consultant determines the appropriate Restoration Potential Value, figures the total potential Restoration Stewardship Credits, then re-calculates the total Stewardship credit value for lands within the SSA application.[134] County staff then reviews the SSA application for accuracy.

As shown in Table 4, Passarella and Associates, environmental consultants for the applicant Collier Enterprises, figured that 5,259.0 acres of SSA15 lands have a huge restoration potential. If approved, SSA15 amended application would grant the applicant an additional 28,356 credit for restoration (R-1 + R-2).[135] That equates to 3,544.6 acres of SRA development based on 8 units per acre, which earns them enough credits to build 3 towns at 1,000 acres a piece or one large town at 3,500 acres. That does not even include the other 11,946.7 credits for base credits and early entry bonus that would entitle the applicant to another 1,493 acres of SRA

[129] Collier County LDC 4.08.06.C.3.a
[130] Collier County LDC 4.08.06.C.3.a.
[131] Collier County LDC 4.08.06.3.a and 4.08.06.4.i
[132] Collier County LDC 4.08.06.4.j
[133] Collier County LDC 4.08.06.B.3.e
[134] Collier County LDC 4.08.06.B.3.e
[135] Credits from Table 4 include R1 and R2 and Restoration Potential Index.

development. Although staff will review the application, it is a major concern that the landowners' consultants are in charge of figuring and calculating their own restoration credits.

It is also important to point out that the original intent of the program was to conserve nine acres of RLSA private lands for every one acre of development. In other words, 90% was to be conserved, and 10% would be developed (9:1 ratio). However, if Collier Enterprises receives all 40,303.5 credits for SSA15 application (Table 4) that would entitle them to 5,037.8 acres of SRA development. SSA15 would conserve 5,259 acres of land. Thus, the ratio would be significantly less, at approximately one acre of development to every one acre of preservation (1:1 ratio).[136] This is definitely not the deal the people of Collier County thought they were getting when the program was adopted.

13.4 Flaw: Program needs more County Oversight of Restoration Plan

There needs to be greater oversight by Collier County in terms of the restoration plan process. As example, the applicant and their consultant create the restoration goal, and they provide the list of activities for the restoration work, the work schedule, and success criteria.[137] However, since Collier County grants the restoration credits to the applicant, which can often be a considerable amount of credits, the county should set the goal, the work to be completed, and the success criteria. Otherwise, the restoration work may be minimal and not even effective. Many of the lands to be restored are within a significant natural regional wetland cypress slough system, such as Camp Keais Strand and Okaloacoochee Slough. They are also locations that provide important habitat and corridors for numerous endangered and threatened species, such as the Florida panther. What happens if credits are given to the applicant for completing the restoration, but two or three years down the road it is found that restoration was not successful? What happens if the restoration work creates additional impacts? The LDC does state that credits will be granted once the success criteria has been met, but it also says that this is "determined by the permitting or commenting agency authorizing said restoration."[138] Since Collier County is the authority granting the Stewardship Credits, should not the county also be responsible for ensuring that the success criterion is met before granting credits?

14. SOLUTION VII: ELIMINATE "DOUBLE-DIPPING" and REMOVE-CONFLICTS-OF INTEREST

The following will improve the flaws surrounding Restoration credits:

[136] Total credits from SSA 15 application = 40,305 credits/8 credits per acre = 5,038 acres worth of SRA development compared to 5,259 acres of preservation. This is nearly a 1:1 ratio.
[137] Collier County LDC4.08.06.B
[138] Collier County LDC4.08.06.B.5.f(5)

14.1 Solution: Eliminate "Double-Dipping" by Eliminating R-1 credits. Restoration credits should be awarded only for lands that are actually restored, not for lands that have only been dedicated to restoration. Remove language from GMP and LDC which allows R-1 credits to be earned.

14.2 Solution: Adjustments to NRI Values should be made during SRA applications just as they are during SSA applications. If changes are found for land cover and listed species habitat conditions that would increase NRI value over 1.2, those lands should then be ineligible for SRA development, but could qualify to become an WRA, HSA, or FSA and worthy of earning Stewardship credits.

14.3 Solution: The County should select independent consultant for SSA applications. The County should hire an independent environmental consultant, from an approved list, to conduct all analyses for the SSA Designation Application including, but not limited to: the Restoration Analysis and Report, Matrix Calculation, Natural Resource Index Assessment, Restoration Credit Analysis, Restoration Plans, SSA Credit Agreement, Stewardship Easement Agreement, and all Stewardship Credit calculations for the SSA. This would remove conflict-of-interests by requiring an independent outside consultant to determine updated NRI values and all credit calculations. Applicant should be required to place monies in escrow for payment of such services, which will go toward environmental consultant fees at the time the services are rendered.

14.4 Solution: Additional Measures for Restoration Plans.

a. Restoration goal and success criterion for each SSA should be provided by the County or outside independent consultant hired by County from an approved list.
b. Description of work and schedule of each phase should be provided by Collier County or consultant hired by County from an approved list.
c. Once the work is complete and recruitment of native vegetation has occurred, a third-party consultant who does not represent the applicant or County, should conduct an analysis of the work to determine whether the restoration was successful; such as whether the hydrology has been correctly restored, the sheet flow is functional, listed species are occupying the restored area, the wildlife corridor is functional, and that the restoration plan did not create additional impacts. The analysis would then be paid for by the applicant out of an escrow account and then restoration credits granted.

We do not agree with the 5-year Review Committee's recommendations to amend Policies 2.2 and 3.11, which would further increase available Stewardship credits for restoration. The Conservancy's *2018 RLSA Vision Map* (Figure 11) will better protect agricultural lands, wetlands, and listed species habitat without increasing credits.

15. CONSERVANCY'S LIST OF OTHER RECOMMENDATIONS

While the major flaws and solutions of the program have already been addressed in this report, the Conservancy is offering a list of other recommendations to improve the program. These recommendations are also aimed at directing the program back to its original goal of protecting natural resources and agriculture, and avoiding sprawl. In addition, these recommendations are aimed at promoting sustainable building practices.

Implement policy to require a mandatory 5 year review of program to assess whether the program is meeting the goals it aims to achieve. Changes to the program may be needed as more SRAs are approved, based on changing demographics and population projections, relevant scientific findings, budgetary constraints, updated assessments of water supply and quality, and to assess any unintended consequences to natural resources, including habitat of listed species.

Amend policies which state developments have to be fiscally neutral only by build-out, as build-out could take 30 years+ (Policy 4.18 and LDC 4.08.07L). SRAs should demonstrate fiscal neutrality at the end of each phase or the end of every 5 years, whichever occurs first.

Encourage infill and re-development of Collier County's urban areas by adding a Policy which allows Stewardship Credits from RLSA lands to be used toward entitling additional units or other economic incentives within the urban areas.

Require that SRA's submit Annual Monitoring Report, with the same or similar reporting requirement as PUDs. (10.02.13.F)

Certain uses within SSAs, HSA, and FSAs should be removed permanently.

1. FSAs - Oil and gas extraction and exploration should be removed as an allowable use within FSAs, since FSAs were chosen as areas important for protecting water quality, quantity and flowways within RLSA. Oil and gas extraction should be removed as a use in FSAs whether or not the landowner participates in RLSA program. (Modify Policy 3.5 & LDC 4.08.06.A.2.c)
2. HSAs - Earth mining, oil and gas exploration and drilling, and recreational uses, such as golf courses, should be removed as allowable uses from all HSA lands, as HSAs were chosen for listed species habitat importance and connections (Modify Policy 3.7; LDC 4.08.06.A.3.b and 4.08.06.A.3.h). The above mentioned uses should be removed in HSAs whether or not the landowner participates in the RLSA program. Golf courses should only be allowed in SRAs (4.08.05.K – Policy 3.7)
3. SSAs- Earth mining & processing & oil and gas exploration and drilling should not be

allowed in any SSAs. (Modify 4.08.06.A.2.c; 4.08.06.A.3.b; and 4.08.06.A.3.g). 4. Collier should assess whether all agriculture is appropriate for FSAs.
Include Dark Sky Policy as recommended by 5-Year Review Committee: *"Policy 3.15(New Policy). Within one year of the effective date of this Policy LDC regulations shall be implemented for outdoor lighting to protect the nighttime environment, conserve energy, and enhance safety and security."*[139]
Florida Green Building Coalition requirement - All SRAs should be required to achieve a Florida Green Development Certification Standard through Florida Green Building Coalition or equivalent designation.
New Construction & Remodel Requirements: Include within each homeowner association covenants and/or deed restrictions a requirement that all homes must earn a Florida Green Development Certificate or equivalent. Require energy efficient appliances and indoor and outdoor water efficiency standards for new construction and major remodeling.
Require use of 100% Florida Friendly Plantings with low irrigation requirements for new development in RLSA. Include within each homeowner association covenants and/or deed restrictions a requirement that ***only*** licensed professionals are allowed to apply fertilizers and pesticides. Homeowners are prohibited from applying fertilizers and pesticides for their lawn or shrubbery.
Require Low Impact Development practices to manage storm water run-off in order to protect water quality. (Examples include: vegetative filter strips adjacent to impervious surfaces, commercial and residential rain gardens, using porous pavers, concrete and asphalt, narrower streets, pervious parking lots, and green roofs).
Golf Course Acreage Should Require Stewardship Credits even if 35% Open Space is met. Modify Policy 4.10 to state that Stewardship Credits are required for all golf course acreages.
Limit Extensions for Stewardship Sending Area Applications to one year to ensure the Natural Resource Index Assessment and Support Documentation includes accurate updated data and information. (4.08.06.C.3-4)
Require Complete Street Design Policies for SRA development which will result in safer travel for all users including pedestrians and bicyclists, it would offer greater transportation choices, reduce greenhouse gas emissions, it would improve health, and will ease traffic congestion.

16. REJECT THE 5-YEAR RECOMMENDATIONS: ALL ISSUES CAN BE SOLVED THROUGH GOOD PLANNING

Recommendations resulting from the first review of the RLSA program (2007-2009) should not be considered nor implemented, as they would create more problems than they would solve.[140] The recommendations from the first "5-year review" are misguided, as they seek to better protect

[139] Collier County. (2007). "Section 2. All Committee-Recommended Revisions to Improve the Rural Lands Stewardship Area Overlay," p. 55
[140] Collier County. (2009) "Section 2 – All Committee-Recommended Revisions to Improve the Rural Lands Stewardship Area Overlay".

agricultural lands, enhance panther corridors, and increase restoration opportunities utilizing a flawed method. The "5-year recommendations" incentivize landowners through a drastic increase in the number of potential Stewardship credits. At least 106,000 additional credits could be earned if the 5-year recommendations are implemented and likely much more than that. This would dramatically increase the number of available acreage for SRA development from 43,300 to 57,888.[141] Even though the 5-year recommendations also propose a cap of 45,000 total acres for SRAs, once the potential is there to earn additional credits only a simple policy amendment would be needed to increase the acreage cap beyond 45,000 acres. Collier County should learn from past mistakes, such as when it was found that a 2002 policy to increase credits for restoration had the unintended consequence of expanding the capacity for development by 250%. As this report mentioned, this increase in capacity was uncovered and disclosed to the public years later.[142] Adding more credits to solve the fundamental flaws of the program during this review is like putting a Band-Aid on an oozing gaping wound. The Conservancy has already demonstrated in this report that there are *real* solutions to heal the flaws of the program, without adding more credits.

The best solution to improving the RLSA program is through good planning principles, in other words, by adhering to *Smart Growth* principles as defined by the American Planning Association in Section 1 of this paper. The Conservancy's *2018 RLSA Vision Map* combined with other solutions offered in this paper provide an alternative that would truly create compact walkable communities, development patterns emblematic of smart growth, thereby saving land. Our plan saves over 41,000 acres of agricultural lands and over 47,000 acres of primary panther habitat and panther corridors, and our plan solves issues surrounding restoration credits. Not only do our solutions offered in this report follow Collier County's own vision plan, but we offer ways to optimize infrastructure and save taxpayer dollars.[143] This report demonstrates that in order to solve the fundamental flaws of the RLSA, Collier County must circle back to the basics of good planning, of smart growth patterns, and of conserving lands for future needs. The system does not need more credits. The system needs planning which truly incorporates responsible environmental and rural land stewardship.

17. CLOSING REMARKS:

The development patterns we choose to accommodate growth in the RLSA will impact all of Collier County's residents for centuries, perhaps even millennia. Now more than ever, citizens and elected officials must spend our tax dollars wisely. Naples includes one of five zip codes in the state of Florida for being most vulnerable to sea level rise.[144] Because of impending costs

[141] Wilson Miller (2008, September 18). "Memo to Tom Greenwood: Rural Lands Stewardship Area 'Maturity' (Proposed Rural Lands Stewardship Area Overlay)" Appendix H – Collier County
[142] For explanation see Section 3, Flaw II of this paper.
[143] [143] Dover, Kohl & Partners for Collier County (2001, April) "Toward Better Places, The Community Character Plan for Collier County, Florida,"
[144] Climate Central (2014, April). "Florida and the Surging Sea: A vulnerability assessment with projections for sea level rise and coastal flood risk."

associated with sea level rise and climate change, we cannot needlessly squander funds to make up for an economic shortfall created by low-density sprawl that will inevitably result from the current program. Soon, if not right now, Collier County will have additional expenses for making our coasts resilient to flooding and storm surge events, for beach re-nourishment projects, for protecting our living-shorelines, and for ensuring our electric grid can accommodate increasing demands. Besides the need to increase resiliency, the County already has an obligation to its current residents for ensuring roads and bridges are properly maintained, for providing adequate EMS services and public safety, for ensuring students have an opportunity for a good education, that proper mental health care is available, that our parks are maintained, and for maintaining a great quality of life. The costs for these services will become even more difficult to attain as the seas continue to rise and the effects of rising temperatures worsens.

The Conservancy does not oppose development, as long as it is done sustainably. We agree that landowners have property rights, but those rights also come with shared responsibilities. Landowners share in responsibilities with the residents of Collier County, with planners, and with elected officials, to ensure that development does not negatively affect generations far into the future. President Theodore Roosevelt once stated, "I recognize the right and duty of this generation to develop and use the natural resources of our land; but I do not recognize the right to waste them, or to rob, by wasteful use, the generations that come after us." We have an obligation during *this* review to make the best possible decisions for the RLSA, so that our children and grandchildren are not financially burdened by our mistakes, so they are able to experience and enjoy Florida's beautiful and unique wildlife, so they have clean and abundant drinking water, and so they have the opportunity for a quality of life at least as good as ours.

APPENDIX

(Provides Additional information Regarding Flaw II, from p. 17)

The following passages from important RLSA documents and audio excerpts support the argument that the information provided to the public, the RLSA Committee, and the Board of County Commissioners, prior to adoption of the RLSA program, only included statements that the RLSA program could accommodate a maximum of 16,800 acres of SRA development or the equivalent of 9% of total RLSA lands. However, it was determined during the first 5-year review of the program that the true capacity of the program was actually a maximum of 43,300 acres of SRA development, which was in addition to the base zoning of 1 unit per 5 acres for landowners who choose not to participate in the program.

Statements from the 2002 *Immokalee Area Study*, the foundational document for the RLSA program, described how it was determined that 16,800 acres was appropriate for the maximum SRA development and how many credits could be earned:

> *"Using the current zoning entitlement of 1 dwelling per 5-acres on A-Agriculture zoned land as a control total, the maximum number of dwelling units that could be constructed on the 182,331 acres of privately held land would be 36,466 dwelling units. Using an average gross density for compact rural development of 2.17 dwelling units per gross acre, consistent with the Rural Development Characteristics guidelines discussed previously, only 16,805 acres would need to be set aside for the buildout density in compact rural development as opposed to accommodating that same number of units on 182,331 acres of 5-acre home sites. The remaining step in the calculation process involves eliminating the credits for the number of acres to be used as Receiving Lands (16,805 X .15 credits per acre = 2,521 credits). The net result is 134,388 credits generated for the rural compact development of 16,805 acres, resulting in an exchange rate of 8.0 Sending Area credits per acre of Receiving Area land."*[145]

Several other documents also reported that 16,805 acres or 9% of the RLSA shall be set aside for compact development. As example, the Board of Collier County Commissioners transmittal hearing packet from July 12, 2002, stated:

> *"The results revealed that the incentive-based stewardship program fulfills all Final Order objectives. Approximately 85,000 acres of the 182,300 acres of privately held lands are delineated as Flow Way, Habitat and Water Retention Stewardship Areas. Approximately 21,000 acres of ACSC land are able to generate credits as SSAs and retain current agriculture activities, and approximately 60,000 acres of non-ACSC land can also retain its agriculture designation. Approximately 16,800 acres are required for compact rural*

[145] WilsonMiller. (May 2002) Report and Recommendations of the Collier County Rural Lands Assessment Area Oversight Committee for the Immokalee Area Study. p 40 highlights added)

development. In contract, the Baseline Reference with interim NRPAs conserved approximately 40,900 acres and, except for lands in the ACSC, offered little or no protection for the 141,400 acres of agriculture lands that could otherwise be subject to conversion to non-agriculture uses."[146]

And the Executive Summary of the Adoption Hearing, which is document that the Board of Collier County Commissioners based their final vote to approve the RLSA overlay, stated:

"Although there are 93,000 +- acres of potential SRAs (private land less FSAs and HSAs), it is estimated that the "8 credit requirement" will set aside approximately 16,800 acres, or 9% of the Study Area, for clustered development."[147]

During the Collier County Planning Commission hearings, just days before adoption of the RLSA program, the County's own outside legal counsel, Nancy Linnan, confirmed these previous statements when she said:

"What is the result of all this? Is that the overlay map would accommodate the population that is projected on that property, and this is not a new population projected and this does not include population projections for the urban area or the fringe. It would accommodate the population over the course of 25 years on 1/10th of the land area. And what you get when you do that is you are going to preserve open space, natural resources, and just as importantly in this process, agriculture. So at implementation 90% of that 195,000 acres would be open space."[148]

Finally, Policy 2.1, which is a current policy within Collier County's Future Land Use Element of the RLSA Overlay, further drives home the point that development in the RLSA should not exceed ten percent:

"Analysis has shown that SRAs will allow the projected population of the RLSA in the Horizon year of 2025 to be accommodated on approximately 10% of the acreage otherwise required if such compact rural development were not allowed due to the flexibility afforded to such development."

[146] Collier County Board of County Commissioners Transmittal Hearing Agenda Packet, June 12, 2002, p.78 – (highlights added)
[147] Board of County Commissioners Executive Summary Adoption Hearing Report, October, 22, 2002, p. 3 – highlights added)
[148] Collier County audio transcript. Nancy Linnan, Collier County legal counsel (Linnan's statement from audio of Collier County Planning Commission meeting regarding RLSA Overlay adoption on October 17, 2002 – Tape 4 Side A, starts 21:25)

ADDENDUM

1. RIVERGRASS VILLAGE REPLACES RURAL LANDS WEST

Shortly after this report was submitted to Collier County, Collier Enterprises withdrew their application for Rural Lands West. Collier Enterprises stated the main reason for the withdrawal was because of "Bureaucracy and economic overreach by Collier County management."[149] Their statement further elaborated that they could not agree with Collier County regarding a fair share contribution for county infrastructure. Concerns of the project raised by Collier County staff likely also played a part in the withdrawal of the project. County staff insisted that the plan needed to be modified so that the town did not surround existing and future east-west public roadways. Staff was also concerned that the Rural Lands West project was not meeting the goal of a walkable community with an interconnected sidewalk system, a requirement of RLSA policies.[150] Another outstanding issue appears to have been in regard to the developer's proportionate share of the construction costs for Big Cypress Parkway, a main road that is needed for the development.[151]

While these are all legitimate concerns of the Rural Lands West project raised by county staff it was disappointing that no concerns were raised regarding environmental incompatibility of the project. There was no mentioned in staff's comments that the project did not meet the goals of the RLSA as over 75% of the project was proposed within primary panther habitat or because the so-called "preserve" areas would have been surrounded by development, significantly diminishing the habitat value within those preserves. Even though both issues blatantly violated the RLSA program's goal of directing development away from habitat of listed species, the topics were omitted from the county's review of the project.

Only a month after the county application for Rural Lands West was withdrawn, Collier Enterprises submitted a new application for a smaller 1,000 acre project called "Rivergrass Village." Rivergrass Village is located north and south of Oil Well Road and proposes to accommodate 2,500 homes and have up to 80,000 square feet of commercial. The mixed-use village center would only be about 20 acres. Unfortunately, like Rural Lands West, Rivergrass is proposed in a location that would impact the endangered Florida panther. Over 70% of the project is proposed within primary zone panther habitat. Also, the proposed plan does not meet the RLSA goal of a compact, walkable community as the town is bisected by a major freight corridor, Oil Well Road, making it difficult and unsafe to walk to the village center.

Even though Rivergrass Village was submitted as a smaller project with Collier County, Collier Enterprises is still seeking a federal permit for the full 4,000 acre project of Rural Lands West, which itself is only a phase of a massive future project that would extend from north of

[149] Collier Enterprises Statement on Rural Lands West Application. (January 7, 2019)
[150] Collier County Growth Management Division Consistency Review Memorandum, August 3, 2018 & Collier County Office of the County Manager (November 1, 2018). Letter to Collier Enterprises Management Inc. regarding Rural Lands West Developer Agreement Status.
[151] Collier County. (November 1, 2018). Letter from Office of the County Manager Leo E Oches Jr. from Nick Casalanguida to Donald Huffner Jr. Collier Enterprises Management, Inc.

Immokalee Road almost to I-75 in the south. Therefore, it is obvious that Rivergrass Village is only one small phase of Collier Enterprises' desired development footprint. Thus, the Conservancy's concerns about Rural Lands West as stated in this report remain the same.

2. THE CONTINUED UNDERESTIMATION OF STEWARDSHIP CREDITS WITHIN THE RLSA PROGRAM

Throughout this report, the Conservancy of Southwest Florida (Conservancy) identified a number of flaws with the RLSA program. One of the major flaws is the fact that the public was not informed regarding the development capacity of the program. In 2008, during the first review of the RLSA Overlay it was revealed the program's capacity for development was 250% greater than what the public was told at adoption in 2002.[152] Our research has determined, once again, that the development capacity of the program has been greatly underestimated.

Past and Current Count of Stewardship Credits

The issue of ever increasing development capacity stems from the continued underestimation of stewardship credits. Table 5 provides WilsonMiller's 2002 and 2008 estimates of the total number of stewardship credits that could be generated at 100% participation in the RLSA program. In 2002, the year the RLSA program was adopted, WilsonMiller predicted that the maximum number of stewardship credits needed to accommodate the build-out population of eastern Collier County was 136,909 credits. Their analysis showed that those credits would entitle a maximum of 16,805 acres worth of Stewardship Receiving Area (SRA) development. However, in 2008, during the first review of the program, WilsonMiller's estimate changed when they revealed that the program could generate far more credits than originally stated.[153] WilsonMiller determined that the maximum number of credits was actually 315,000, which would entitle up to 43,312 acres of SRA development (Table 5).

Table 5: Estimates of credits and development acreage from 2002 and 2008 and current status of program.

WilsonMiller's 2002 Estimate of Total Stewardship Credits[154]	**WilsonMiller's 2008 Estimate of Total Stewardship Credits[155]**	**Approved and Pending Credits as of 3/1/2019[156]**
136,909 credits	315,000 credits	226,406 credits
WilsonMiller's 2002 Estimate of Total RLSA Development Potential	**WilsonMiller's 2008 Estimate of Total RLSA Development Potential**	**Current Development Potential Based on Approved and Pending Credits**
16,805 acres	43,312 acres (includes 10% pubic benefit acres)	31,130 acres (includes 10% for public benefit acres)

[152] See Flaw II, p. 16 of this report for further detail regarding the increase in credits from the creation to the program to the 5 Year Review.
[153] See Flaw II, p. 16 of this report for further detail regarding the increase in credits from the creation to the program to the 5 Year Review.
[154] WilsonMiller (2002, May) "Report and Recommendations of the Collier County Rural Lands Assessment Area Oversight Committee for the Immokalee Area Study", p. 40
[155] WilsonMiller (2008, September 18). "Memo to Tom Greenwood: Rural Lands Stewardship Area 'Maturity' (Proposed Rural Lands Stewardship Area Overlay)" Appendix H – Collier County
[156] Collier County (2019, March 14). Email from Kris Van Lengen to April Olson providing RLSAO Program Status for credits as of 3/1/2019.

The program is now seventeen years old. In March 2019, Collier County updated the number stewardship credits that are earned, pending, approved and approved but reserved until restoration is complete.[157] The county's count shows a total of 226,406 credits (Table 5).[158] At 226,406 credits, this would entitle approximately 31,130 acres of SRA development (226,406 / 8 credits per acre = 28,300 acres + 10% for public benefit acres = 31,130 acres). Thus, the acreage entitled for development today is already nearly double that of WilsonMiller's original estimation; yet the program is still far from reaching its development potential.

Underestimation of Restoration Credits

The Conservancy has uncovered yet another drastic underestimation of stewardship credits which will further increase the development potential of the RLSA, well beyond even WilsonMiller's 2008 estimate. The miscalculation concerns restoration credits. In 2008, WilsonMiller estimated that a maximum of 160,000 restoration credits could be generated at full participation in the program.[159] Eleven years have passed and the program has already come close reaching 160,000 restoration credits. According to the 2019 credit count by Collier County, 123,958 restoration credits have been approved, are pending approval, or will be granted once restoration work is completed.[160] The Conservancy's research shows that 160,000 restoration credits is just the tip of the iceberg regarding the actual number that can be generated. In fact, there is a potential to earn more than three times the restoration credits that WilsonMiller predicted in 2008. This is because WilsonMiller mistakenly assumed that for future Stewardship Sending Areas (SSA) applications only 29% of SSAs within FSAs (Flow-way Stewardship Area), HSAs (Habitat Stewardship Areas), and Restoration Zones would be eligible to earn restoration credits.[161] However, the land development code, which provides guidelines for earning restoration credits, is written in such a way that 100% of FSAs, HSAs, and Restoration Zone lands are eligible for restoration credits.[162] An analysis of restoration credits is explained in greater detail in the proceeding sections.

A. **Types of Restoration Credits**

According to Policy 3.11 and Collier County's land development code, applicants who own parcels within FSAs, HSAs, and Restoration Zones have the potential to earn restoration credits.[163] Landowners can earn restoration credits two ways. They can earn R-1 credits by dedicating their lands to restoration, if those lands have the "potential" to be restored to improve flow-way or habitat restoration. According to Policy 3.11, *"The actual implementation of restoration improvements is not required for the owner to receive such credits and the costs of restoration shall be borne by the governmental agency or private entity undertaking the*

[157] Collier County (2019, March 14). Email from Kris Van Lengen to April Olson providing RLSAO Program Status for credits as of 3/1/2019.
[158] Collier County's number of stewardship credits to date is even higher than the Conservancy's estimate provided on page 18 of this report. Our estimate did not include the over 41,000 credits that are approved but will be granted if the landowner chooses to complete the restoration work.
[159] WilsonMiller (2008, September 18). "Memo to Tom Greenwood: Rural Lands Stewardship Area 'Maturity' (Proposed Rural Lands Stewardship Area Overlay)" Appendix H – Collier County , p. 3
[160] Collier County (2019, March 14). Email from Kris Van Lengen to April Olson providing RLSAO Program Status for credits as of 3/1/2019. Restoration credits include RI and RII.
[161] WilsonMiller (2008, September 18). "Memo to Tom Greenwood: Rural Lands Stewardship Area 'Maturity' (Proposed Rural Lands Stewardship Area Overlay)" Appendix H – Collier County , p. 3
[162] Collier County Land Development Code 4.08.06
[163] Collier County FLUE RLSA Overlay Policy 3.11.

restoration."[164] Landowners may also earn R-2 restoration credits if the landowner has committed to carry out the restoration work. A total of six to eight restoration credits (R-1 + R-2) could be generated per acre, depending on location of the parcel.[165]

B. **Criteria for Earning R-1 Credits**

There are certain locational criteria for generating R-1 credits. The land development code allows four R-1 credits for each acre of land dedicated for restoration within any of the following locations: the Camp Keais Strand FSA, contiguous HSAs, or those portions of the Restoration Zone that are contiguous to Camp Keais Strand. Two R-1 credits can be earned for each acre of land dedicated for restoration within any of the following areas: Okaloacoochee Slough, contiguous HSAs, or restoration zones contiguous to Okaloacoochee Slough.

In addition to locational criteria, LDC 4.08.06.B.3.e, states that R-1 credits can be earned only if a **Restoration Potential Index Value** is identified under the following conditions:

> *"If the **applicant** asserts that the land being designated as an SSA has a Restoration Potential Index Value of greater than zero (0), an evaluation of the restoration potential of the land being designated shall be prepared by a qualified environmental consultant (per Chapter 10 of the LDC) on behalf of the **applicant** and submitted as part of the SSA Designation Application Package. In the event that restoration potential is identified, the appropriate Restoration Potential Index Value shall be determined in accord with the Credit Worksheet. The credit value of each acre to which the Restoration Potential Index Value is applied shall be recalculated by adding the Restoration Potential Index Value to that acre's total Index Value.* (highlight added)

C. **Why 100% of Lands are Eligible for R-1 Credits**

All lands within FSAs, HSAs, and Restoration Zones are eligible for R-1 credits because all such lands meet the locational criteria presented in Policy 3.11 and because all lands have a Restoration Potential Index Value greater than zero. The RLSA Overlay Map (Figure 4) depicts the locations of FSAs, HSAs, and Restoration Zones. The map shows that all FSAs, HSAs, and Restoration Zone parcels are within or contiguous to the Camp Keais Strand FSA or contiguous HSAs, or they are located within or contiguous to Okaloacoochee Slough and contiguous HSAs. Therefore, 100% of lands within FSAs, HSAs, and Restoration Zones meet the locational criteria for earning R-1 credits.

The second criterion for earning R-1 credits is that the applicant must assert that the land being designated as an SSA has a Restoration Potential Index Value greater than zero. Using zero as a threshold for determining "restoration potential" is an extremely easy standard meet. Since the onus is on the landowner or their consultant to show which lands have the potential to be restored, why wouldn't every landowner assert that their land has a restoration potential value greater than zero? The land development code does require the applicant to submit a Restoration

[164] Collier County, Future Land Use Element. Rural Lands Stewardship Overlay. Policy 3.11
[165] *Ibid.*

Analysis and Report, which includes an evaluation of existing conditions and a summary of restoration efforts "*required to reestablish original conditions; enhance functionality of wetlands or wildlife habitat; or remove exotics so as to enhance the continued viability of native vegetation and wetlands."*[166] Even so, because HSAs within the RLSA were established to protect listed species and their habitats, every cleared farm field within an HSA consists of disturbed lands with the potential to enhance listed species habitat. Every acre of wetland and upland within HSAs and FSAs has some level of exotic infestation that can be cleared to either enhance listed species habitat or enhance wetland functionality. Thus, based on the second criterion to qualify for R-1 credits, 100% of all lands within an FSA, HSA, and Restoration Zone would be eligible.

D. **Criteria for Earning R-2 Credits**

Four additional R-2 credits can be earned when the restoration work is complete. Collier County's land development code states that in order to earn R-2 credits one of the following eligibility requirements of LDC 4.08.06.B.3.f(5) must be met:

> *"(a) FSA and/or HSA lands where restoration would increase the width of flow way and/or habitat corridors along the Camp Keais Strand or Okaloacoochee Slough so that, in the opinion of the **applicant's** environmental consultant and County environmental or natural resources staff, there will be functional enhancement of the flow way or wildlife corridor;*
>
> *(b) FSA and/or HSA lands where restoration would increase the width of flow way and/or habitat corridors within two miles of existing public lands so that, in the opinion of the **applicant's** environmental consultant and County environmental or natural resources staff, there will be a functional enhancement of the flow way or wildlife corridor;*
>
> *(c) Documentation of state or federal listed species utilizing the land or a contiguous **parcel**;*
>
> *(d) Lands that could be restored and managed to provide habitats for specific listed species (e.g., gopher tortoise, Big Cypress fox squirrel, red-cockaded woodpecker, etc.), or;*
>
> *(e) Occurrence of a land **parcel** within foraging distance from a wading bird rookery or other listed bird species colony, where restoration and proper management could increase foraging opportunities (e.g., wood storks)."*

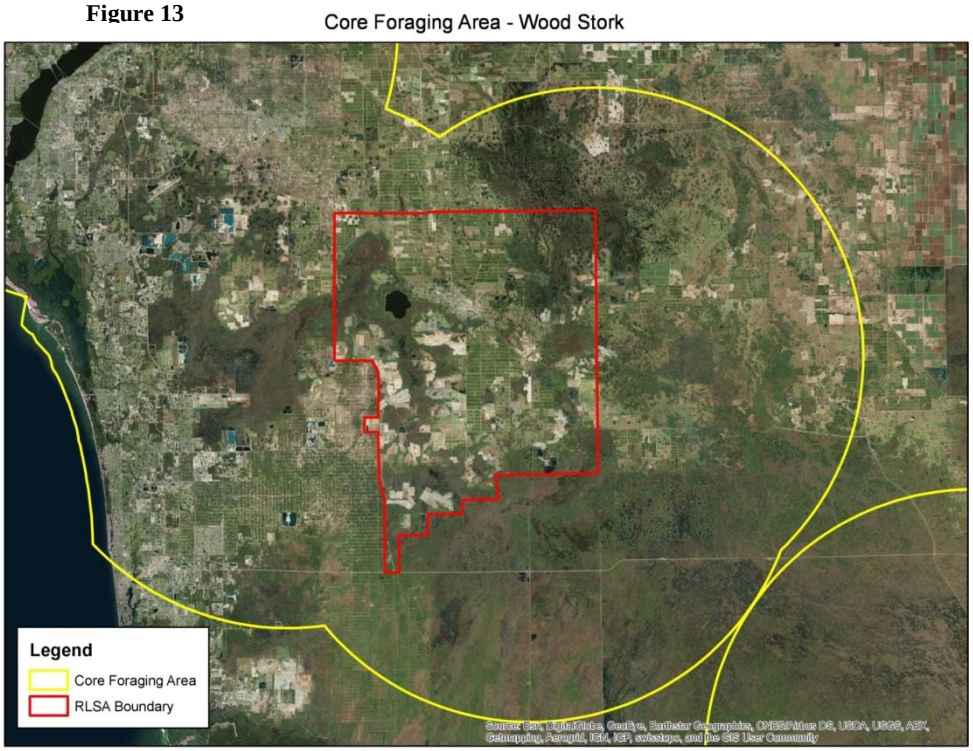
E. **Why 100% of Lands are Eligible for R-2 Credits**

All lands within FSAs, HSAs, and Restoration Zones are also eligible to earn R-2 credits. This is because the applicant is required to satisfy just one of the five criteria as stated in the land development code Policy 4.08.06B3f(5). With such lax eligibility criteria, it would be difficult to find one parcel that does not meet at least one of the five eligibility requirements. In fact, if we consider just one of the five criteria, "criteria (e)" for example, we can demonstrate that all

[166] Collier County Land Development Code LDC 4.08.06.C.5.j.(4)

parcels within FSAs, HSAs, and Restoration Zones are eligible for R-2 credits. Criteria (e) states that the land parcel must be within "foraging distance from a wading bird rookery or other listed bird species colony, where restoration and proper management could increase foraging opportunities (e.g., wood storks)." Figure 13 shows that the entire RLSA boundary is within an active Wood Stork Core Foraging Area. Since FSAs, HSAs, and Restoration Zone are all within the RLSA, this means that 100% of those lands would be eligible for R-2 credits if the applicant is willing to commit to even meager restoration efforts such as removing exotic plant species, which exists on every parcel.

Figure 13



As previously stated, WilsonMiller incorrectly assumed that only 29% of lands within FSAs, HSAs, and Restoration Zones would be eligible for restoration credits. However, upon review of the last four SSA applications (SSA14 – SSA 17), we see that applicants applied for restoration credits on 58% of the total SSA acres.[167] Of those four applications, SSA 14, SSA 15 and SSA16 were approved but later amended so that the applicant could later receive additional credits for restoration. Therefore, it is logical to assume that all other approved SSA applications could also be amended to generate additional restoration credits. Because we know that 100% of FSAs, HSAs, and Restoration Zones are eligible for restoration credits and because landowners have the option to amend applications to generate additional restoration credits, we should assume that 100% of restoration credits could be earned when determining the maximum potential of stewardship credits in the RLSA system.

[167] The total acres for SSAs 14-17 equal 12,966.7. Of those total acres, 7,497.3 acres were eligible for restoration. Thus we find that 58% of the total SSA acres are eligible for restoration credits.

F. **WilsonMiller's 2008 Credit Calculation for Max Potential Credits in RLSA Program**

As stated previously, in 2008 WilsonMiller estimated that a maximum of 315,000[168] credits could be earned in the RLSA program. Their 2008 estimate was based on the following calculation:

Max Base Credits		128,000	
Max Early Entry Credits		27,000	
Potential Restoration Credits		160,000	(Assumes 29% of SSAs qualify)
Total Potential Stewardship Credits in RLSA Program	=	**315,000**	

G. **Conservancy's Calculation for Max Potential Credits in RLSA Program**

Since we know that WilsonMiller's estimate of 160,000 restoration credits was grossly underestimated based on their assumption that only 29% of lands would eligible for restoration credits, we also know that their estimation of 315,000 as the maximum number of credits within the RLSA program is also underestimated. The Conservancy is providing an updated analysis of the maximum number of stewardship credits within the RLSA program based on the knowledge that 100% of lands within an FSA, HSA and Restoration Zone are eligible for restoration credits. Our calculation is as follows:

According to WilsonMiller, there are a total of 73,000 acres within FSAs, HSAs, and Restoration Zones.[169] Since 100% of those lands are eligible to receive restoration credits then 73,000 acres are eligible to receive R-1 and R-2 credits.

According to Policy 3.11, up to eight credits (R-1 + R-2) per acre can be earned for restoration within Camp Keais Strand and up to six credits (R-1 + R-2) per acre can be earned for restoration within the Okaloachoochee Slough. We will use an average of seven credits per acre, since FSAs, HSAs, and Restoration Zones are located in both areas.

Thus, 73,000 acres x 7 restoration credits = **511,000 potential restoration credits (R-1 + R-2)**

Using WilsonMiller's method, restoration credits are then added to the maximum number of base credits that could be earned and to the maximum early entry bonus credits.[170] The number of early entry credits was provided in Collier County's recent count of credits.

[168] WilsonMiller (2008, September 18). "Memo to Tom Greenwood: Rural Lands Stewardship Area 'Maturity' (Proposed Rural Lands Stewardship Area Overlay)" Appendix H – Collier County , p. 3

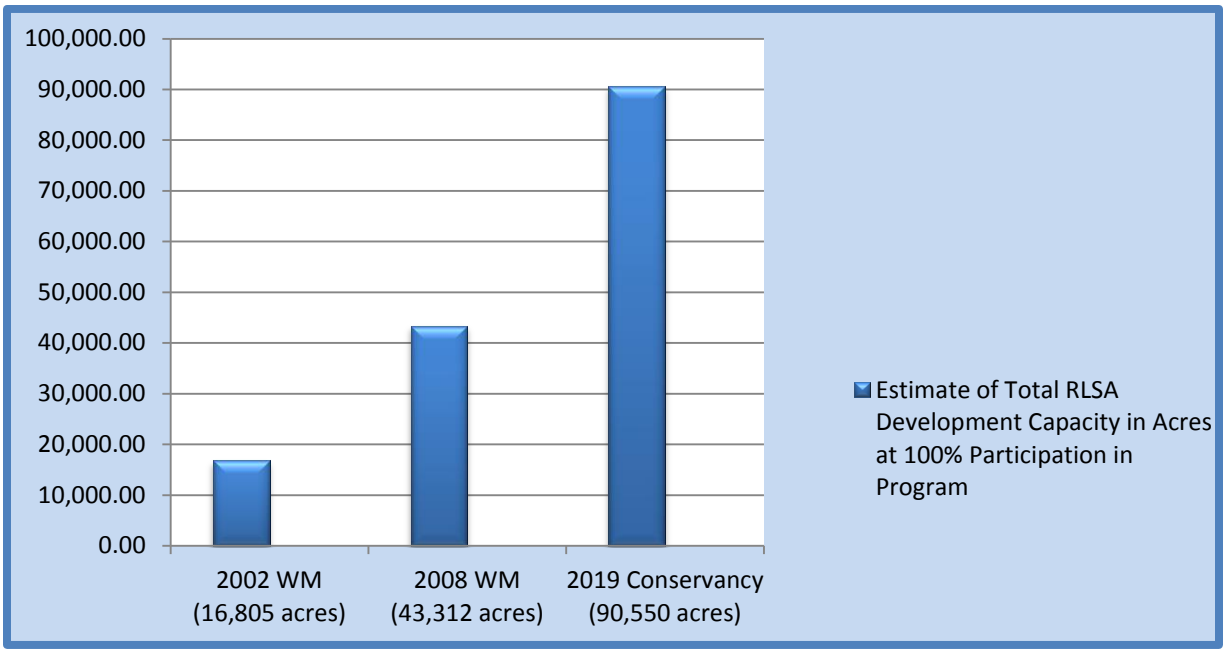
[169] WilsonMiller (2008, September 18). "Memo to Tom Greenwood: Rural Lands Stewardship Area 'Maturity' (Proposed Rural Lands Stewardship Area Overlay)" Appendix H – Collier County , p. 3

[170] Policy 1.21 of Collier County's FLUE RLSA Overlay states that a maximum of 27,000 early entry bonus credits could be generated. Early entry bonus credits were available until January 30, 2009. Thus, WilsonMiller's 2008 credit calculation included the full 27,000 credits for early entry. The Conservancy's credit calculation includes the total early entry bonus credits that Kris Van Lengen stated in his email that have been generated to date, which were 19,552 credits. Since the early entry bonus credit program has expired, this is the maximum number of early entry bonus that can be generated.

Max Base Credits	128,000
Max Early Entry Credits	19,552
Potential Restoration Credits	511,000
Total Potential Stewardship Credits in RLSA Program	**= 658,552**

Because we find that the potential for earning restoration credits has increased so too does the development capacity for the RLSA. In fact, over 90,000 acres worth of SRA development would be entitled if the program generates 658,552 stewardship credits (658,552 / 8 credits per acre = 82,319 + 10% public benefit acres = 90,551 acres). This development capacity is more than double the acreage that was predicted in 2008 and more than five times the amount than was predicted in 2002. Table 6 shows how the development capacity in the RLSA program has increased over time.

Table 6: Increase of Development Capacity of RLSA Program over Time



H. Conclusion: R-1 Credits Discourage Restoration and Increase Development Capacity

When the RLSA program was created, a benefit of the program often touted was that it would restore and preserve tens of thousands of acres of environmentally important lands within the RLSA, all at no cost to the tax payers. However, since the actual restoration of RLSA lands is not a prerequisite for earning R-1 credits, very little restoration under the RLSA program has ever been accomplished. In fact, as of April 2018, only 428 acres or 2.5% of all acres dedicated for restoration have actually been restored.[171] Plus, R-1 credits are earned without giving up any more rights because R-1 credits are generated after landowners earn "base credits" for agreeing

[171] Collier County (2018, April) Meeting Summary from April 26, 2018 RLSA Restudy Group 3 Policies Meeting, Protecting Natural Resources.

to remove land use layers and giving up rights to develop. According to the RLSA program, it is a prerequisite for land use layers 1 through 6 to be removed before lands can be designated for restoration.[172] Thus, they earn base credits for removing those land-use layers, which removes any potential for crop raising and intensive development, including residential, commercial, and mining, and leaves only Agricultural Group 2 uses (ranching and grazing) and conservation.[173] They then earn additional restoration credits for simply agreeing to designate those same lands for restoration. This is essentially "double-dipping" of credits on the same lands, even though very little restoration work is being undertaken. And most lands continue to be used for ranching and grazing even after the credits are generated, rather than being used for conservation. Since no additional rights are given up after base credits are earned, R-1 credits are mere free-bees.

Even though little restoration has been accomplished under the RLSA program (428 acres), an abundance of R-1 credits have been generated, which entitle a tremendous amount of development. To date, 58,854 R-1 credits have been earned or are pending application approval.[174] That equates to over 7,300 acres worth of SRA development from just the R-1 credits. To look at it another way, that is enough credits to build more than seven 1,000 acre villages! Development of seven 1,000 acre villages in exchange for 428 acres of restoration hardly seems like a fair exchange.

Also, because of restoration credits, the development potential for the RLSA program has ballooned out of control. The program went from the original estimate of 16,800 acres worth of development to what we know as the true development capacity of over 90,000 acres worth of development. That many acres equate to nearly the same geographic size of four mega-towns the size of Fort Lauderdale, Florida![175] Because the development potential of the RLSA is larger than anticipated, this will have far-reaching and catastrophic impacts to listed species and natural resources. Our research in this report has already demonstrated that WilsonMiller's 2008 estimate of 43,300 acres worth of development is not sustainable for wildlife and natural resources in the region. So 90,000 acres worth of new towns and villages would be devastating to the region.

The evidence is clear that the number of stewardship credits that can be generated within the RLSA program is excessive. The Conservancy stands by our position as mention in this report that the Stewardship Credit System needs to be completely restructured and credits recalibrated so that fewer credits are in the system, development is directed to appropriate locations, and the development potential of the program is drastically reduced. Furthermore, R-1 credits do not accomplish any environmental restoration within the RLSA and must be eliminated.

3. SRAs ARE UPDATED DURING APPLICATION PROCESS

The Conservancy would like to correct a mistake within the report. Sections 6.2 and 13.2 of the report (p. 26 & 37) state that the Natural Resource Index (NRI) values of SSAs are updated

[172] Collier County Land Development Code 4.08.06.B.3.f(4)
[173] Collier County Land Development Code 4.08.06.
[174] Collier County (2019, March 14). Email from Kris Van Lengen to April Olson providing RLSAO Program Status for credits as of 3/1/2019.
[175] Wikipedia. Accessed April 10, 2019. https://en.wikipedia.org/wiki/Fort_Lauderdale,_Florida Fort Lauderdale is equivalent to 36.31 square miles or 23,238.4 acres.

during the application process, while the NRI values of SRAs are not updated during the application process. This assertion is incorrect. Even though this requirement for SRAs is not mentioned in the comprehensive plan as it is for SSAs,[176] Collier County's land development code (4.08.07.D.4) does require that NRI values for SRAs are updated during the application process. However, it is important to mention that neither the land development code nor the comprehensive plan require that the Listed Species Habitat Indices of NRI Values are updated with data from current Florida panther studies, such as locations of primary zone and adult breeding habitats as mentioned in this report. This has been mentioned as a major flaw of the RLSA program.

[176] Collier County's Growth Management Plan (Policy 1.9) states "Any change in the Characteristics of land due to alteration of the land prior to the establishment of a SSA that either increases or decreases any Index Factor will result in an adjustment of the factor values and a corresponding adjustment in the credit value." There are no such policies in the Growth Management Plan for SRAs.