



SEA LEVEL 2040 SEA LEVEL 2070

AGRICULTURE 2040 2070

Spotlight on Florida's Future



UF CENTER FOR LANDSCAPE CONSERVATION PLANNING

March 2026



PROJECT TEAM

1000 Friends of Florida, a statewide not-for-profit membership organization established in 1986, focuses on sharing planning strategies to build better communities and save special places in one of the fastest-growing states in the nation. Find out more at 1000fof.org.

Paul Owens, *President*

Vivian Young, FAICP, *Special Projects Director Emeritus*

The **University of Florida Center for Landscape Conservation Planning** (Center) conducts applied research on the relationship between conservation, green infrastructure, and land use. The Center's research results influence public policy through education and direct involvement in applying relevant science, technology, sound planning principles, and state-of-the-art conservation analysis, planning, and management methods. Find out more at www.conservation.dcp.ufl.edu.

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Michael O'Brien, *GIS Manager*

Information on methodology, technical reports, downloadable state, regional, and county maps, and more are available at

1000fof.org/sealevel2040 and 1000fof.org/ag2040-2070

Center for Landscape Conservation Planning Florida Ecological Greenways Network (FEGN) dashboard conservation.dcp.ufl.edu/fegn

NOTE: Some numbers and percentages used in this report have been adjusted to be consistent with the *Agriculture 2040/2070* study. This includes incorporating silviculture as an additional agricultural land use category and adjusting some numbers for a consistent 2019 base year. This means that some *Sea Level 2040/2070* numbers are different from those in the more detailed reports found online.

Cover Photo Credits

Vivian Young, FAICP - Bear Sign, Excavator, Tempo, Farmland sign

David Mognahan - Spring

Carlton Ward Jr/Wildpath - Panther

MORE PEOPLE AND LESS LAND

It is said that two things are certain: death and taxes. Florida's certainties over the coming decades must also include continuing population growth and intensifying sea level rise. Compounding this, Florida has a long tradition of low-density, sprawling development which takes up more land than compact forms. If sprawling patterns continue, they will have a devastating impact on our natural and agricultural lands.

To help Floridians visualize the vulnerability of our state's lands, waters, communities, and residents to the combined potential impacts of sea level rise, population growth, and development patterns, the University of Florida Center for Landscape Conservation Planning and 1000 Friends of Florida partnered on the GIS-based *Florida's Rising Seas: Sea Level 2040/2070* (2023) and *Agriculture 2040/2070* (2024). These also include possible alternative development patterns in 2040 and 2070.

It is essential to understand that each of these studies depicts what could happen under different future scenarios, but not necessarily what **will** happen – as that will be determined based on the decisions we make in the years and decades to come.

The Projections

Population Growth

Florida's growth in population over the past decades has been relentless, more than doubling from 9.7 million residents in 1980 to 21.5 million in 2019. Moderate population projections indicate Florida could grow by more than 12 million residents to 33.7 million by 2070.

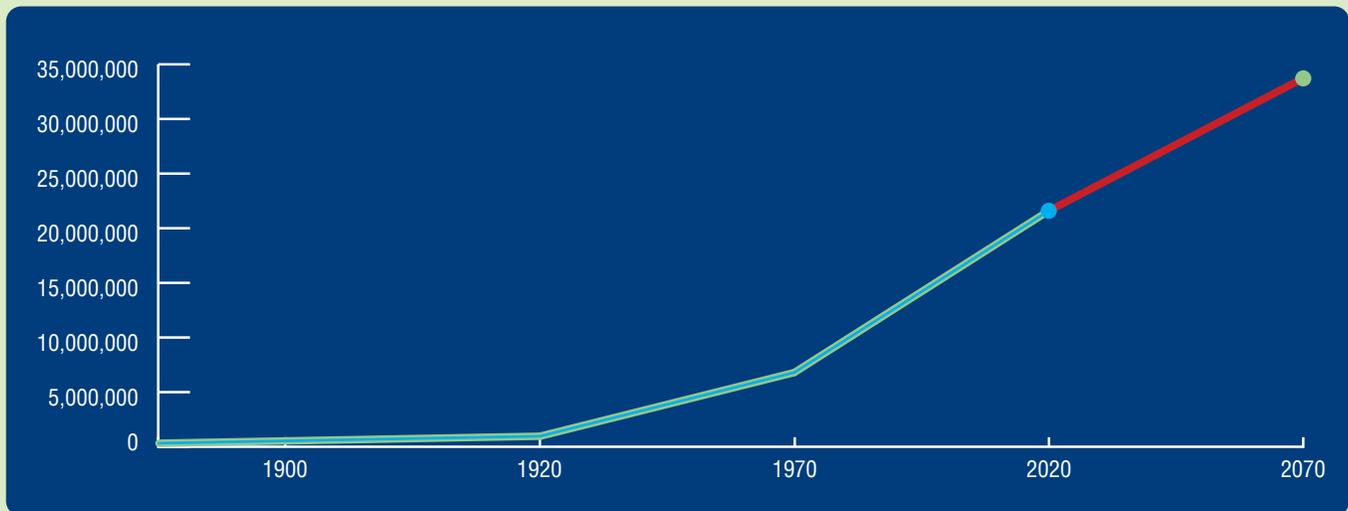
Sea Level 2040/2070 and Agriculture 2040/2070 depict what COULD happen under different future scenarios, not necessarily what WILL happen.



↑ 57%

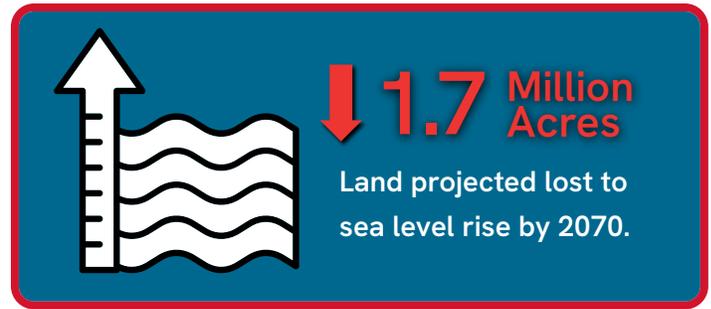
Amount Florida's population could grow between 2019 and 2070.

ACTUAL & PROJECTED FLORIDA POPULATION GROWTH 1900-2070



Source: <https://www.macrotrends.net/global-metrics/states/florida/population> and *Sea Level 2040/2070*

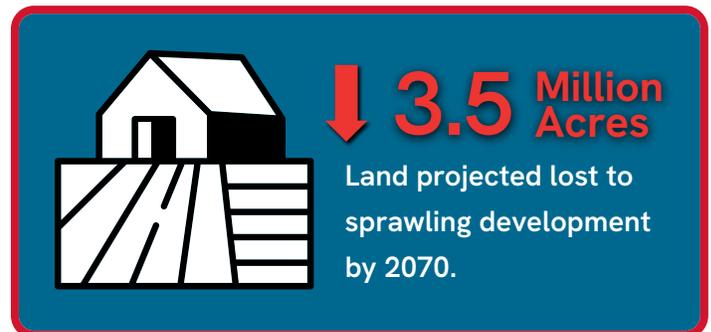
Accelerating sea level rise brings new challenges to Florida. Coastal and some inland communities are already experiencing impacts, which are expected to intensify over the coming years. Sea level rise will result in the direct inundation of coastal (and some inland) areas, damaging or destroying existing homes, businesses, and infrastructure. These studies use moderate projections to depict the potential loss of land to direct sea level inundation.



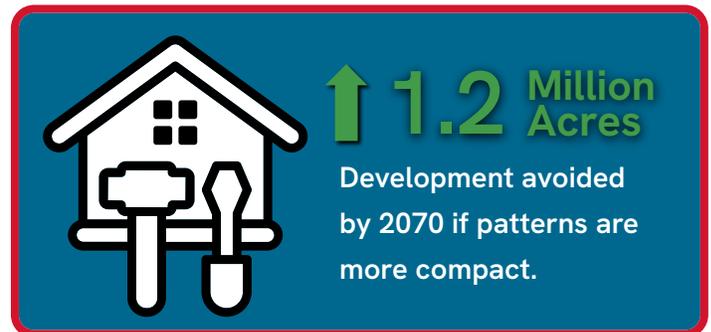
Our Choices

Continued Sprawling Development Patterns

A growing population brings more land development to accommodate new residents and the jobs and services they depend on. Compounding this, with the proliferation of automobile-oriented suburbs since World War II, there has been a substantial trend toward fewer people on each acre of land. On average, each resident requires more land than in the past to accommodate their homes, and the workplaces, shops, and services to support them.



If Florida continues its current sprawling development patterns, Florida could “lose” 3.5 million acres of land to development, including 2.2 million acres of agricultural land, by 2070. This potential loss should raise concerns about the future of our natural and agricultural lands.



Increased Conservation Measures

Alternatively, if future development patterns are more compact and priority natural lands are protected, the recent 2070 studies reveal that Florida could avoid development on about 1.2 million acres of land.

While this represents a significant saving of rural lands, it does not go far enough. Even with more compact development, Florida could still lose substantial natural and agricultural lands and their economic and ecological benefits.

Priority Natural Lands

Priority natural lands, as defined in this study, include currently protected lands and those highly prioritized for future protection from loss because of their ecological importance, including supporting Florida's biodiversity, water supply and quality, or other essential ecosystem services. These lands include the top three priorities of the

Florida Ecological Greenways Network (FEGN) along with current Florida Forever projects. If all unprotected Priority Natural Lands were protected, this would amount to about 10.7 million additional protected acres, or about 31% of the state's total land. These do not represent all conservation priorities in Florida.

Future Protected and Priority Lands*



*Includes Florida Forever conservation land projects and Priorities 1, 2, and 3 in the Florida Ecological Greenways Network (FEGN), otherwise known as the Florida Wildlife Corridor

Florida Ecological Greenways Network (FEGN) Dashboard

Visit the UF Center for Landscape Conservation Planning's Florida Ecological Greenways Network (FEGN) dashboard at conservation.dcp.ufl.edu/fegn/ for GIS information from these studies at the statewide

and county levels. This includes priority natural and agricultural land under the highest threat of development.

Why More Compact Development?

Some people negatively react to the concepts of "more compact" and "increased density" when referring to development. They picture canyons of high rises and sterile communities.

However, well-planned and -designed communities with a mix of places to live, work, and shop in closer proximity offer myriad benefits to residents and local governments alike. They can provide a more vibrant living environment, with more opportunities for walking and social interaction, more transit and affordable housing options, and more dining, shopping and cultural outlets. Residents can save money by reducing the number of vehicles they own and maintain. Public health benefits can include reducing obesity and chronic disease, improving happiness and mental health, and reducing fatalities among pedestrians and bicyclists.

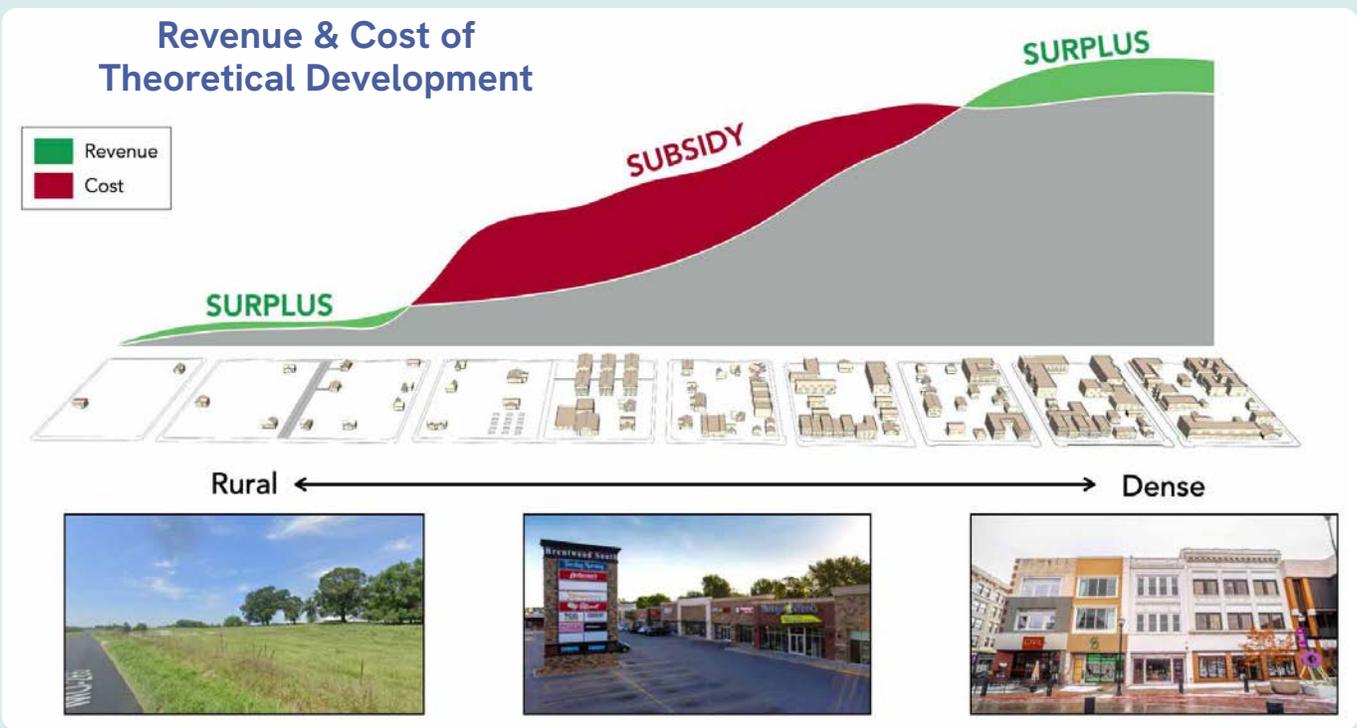
From a local government perspective, condensed communities are more fiscally sustainable. In its 2024 report, *The Economics of Development in Florida*, and 2025 report, *The Economics of Rural Land Use in Florida*, (both available at 1000fof.org/priorities/fiscal) the geoaccounting firm Urban3 analyzed data from 19

of Florida's 67 counties and other communities nationwide.

Urban3 concluded that low-density suburban development does not produce enough tax revenue per acre to pay for its infrastructure costs, making it fiscally insolvent over the long term. By contrast, denser, walkable, mixed-use development patterns produce far more tax revenue per acre than is needed to pay for their associated infrastructure, and often actually subsidize other more sprawling development.

Additionally, when comparing local government costs with property tax generated, land in conservation and agriculture generate a net positive while low density development has a net negative balance for a local government.

Some argue that people do not want to live in more compact areas. However, in its 2023 *Community & Transportation Preferences Survey*, the National Association of Realtors found that "Americans are placing greater value on homes close to nearby shops, cafes, and parks—and they may even pay more for such properties." This includes 90% of Gen Z and millennial respondents.



Source: Urban3



David Moynahan

ABOUT SEA LEVEL AND AGRICULTURE 2040/2070

As noted, *Sea Level 2040/2070* and *Agriculture 2040/2070* reveal that the combination of less land due to sea level inundation and millions more residents will have significant implications. The sea level and agriculture studies address the impacts of projected population growth and sea level rise on Florida's land uses and development patterns.

Agriculture 2040/2070 builds on the original *Sea Level 2040/2070* study. It incorporates different, more comprehensive data and analysis on agriculture in Florida. Unlike the sea level studies, *Agriculture 2040/2070* also includes silviculture as an additional category of agriculture. The numbers and percentages used in this report have been adjusted to be consistent with *Agriculture 2040/2070* data and adjusted for a base year of 2019 throughout. Because of these adjustments, some *Sea Level 2040/2070* numbers in this report differ from the more detailed *Sea Level 2040/2070* reports online. Both the sea level and agricultural studies include population and sea level rise projections for 2040 and 2070:

- **The 2040 projections** provide nearer-term future scenarios suitable for conservation and community planning.

- **The 2070 projections** provide longer-term future scenarios to reflect the potential cumulative effects of many decisions over decades.

Each analysis further includes data and maps reflecting a baseline of current conditions and two possible future scenarios:

- The **Baselines REFLECT** development patterns (or the number of people per acre of land) in Florida from 2019 to 2022.
- The **Sprawl Scenarios ASSUME** that current development patterns continue over the coming decades.
- The **Conservation Scenarios ASSUME** that new development will be more compact, accommodating more people per acre and reducing the total acreage needed statewide to support Florida's growing population. They also assume that development will be avoided on more than 5 million additional acres of priority natural land considered instrumental for the long-term health of Florida's environment.

Page 31 includes more details on projections and assumptions.



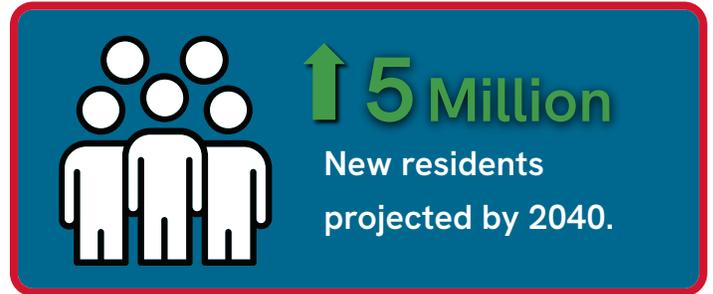
FLORIDA IN 2040

The Projections

Population Growth

Florida faces pressure from unrelenting population growth, which stimulates development that eats into the state's natural and agricultural lands at an alarming rate. While there are also low and high projections, Sea Level 2040 and 2070 are based on the moderate Florida Bureau of Economic and Business Research population projections to explore possible impacts of this growth.

Florida's population could grow by almost 5 million more residents, from 21.5 million in 2019 to 26.4 million in 2040.



PROJECTED POPULATION GROWTH BY 2040



2019 - 21,477,737

2040 - 26,406,000



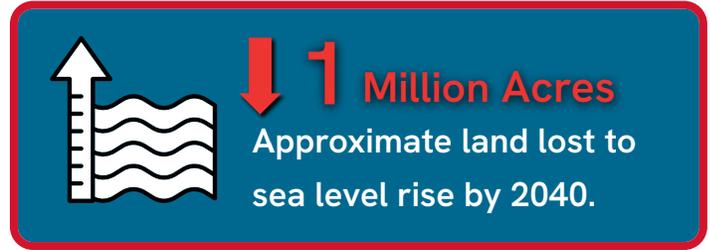
Vivian Young, FAICP

Sea Level Rise

Most Floridians already know that sea level rise is occurring. Sunny-day flooding, higher storm surge, more inland flooding, more significant flooding during tropical events, saltwater intrusion into water supplies, impacts to infrastructure, and more already affect millions. Sea level rise will only intensify over the coming decades as global temperatures continue to warm and the impacts of climate change further increase, resulting in the loss of land due to direct inundation and forcing the relocation of impacted residents. Residents on land projected to be lost would need to relocate. The *Sea Level 2040/2070* models are based on National Oceanic and Atmospheric Administration (NOAA) intermediate projections and based on an FSU study on population relocation (Hauer 2016), which assumes that half of those affected by sea level rise would stay in the same or an adjacent county, and the other half would move out of state.

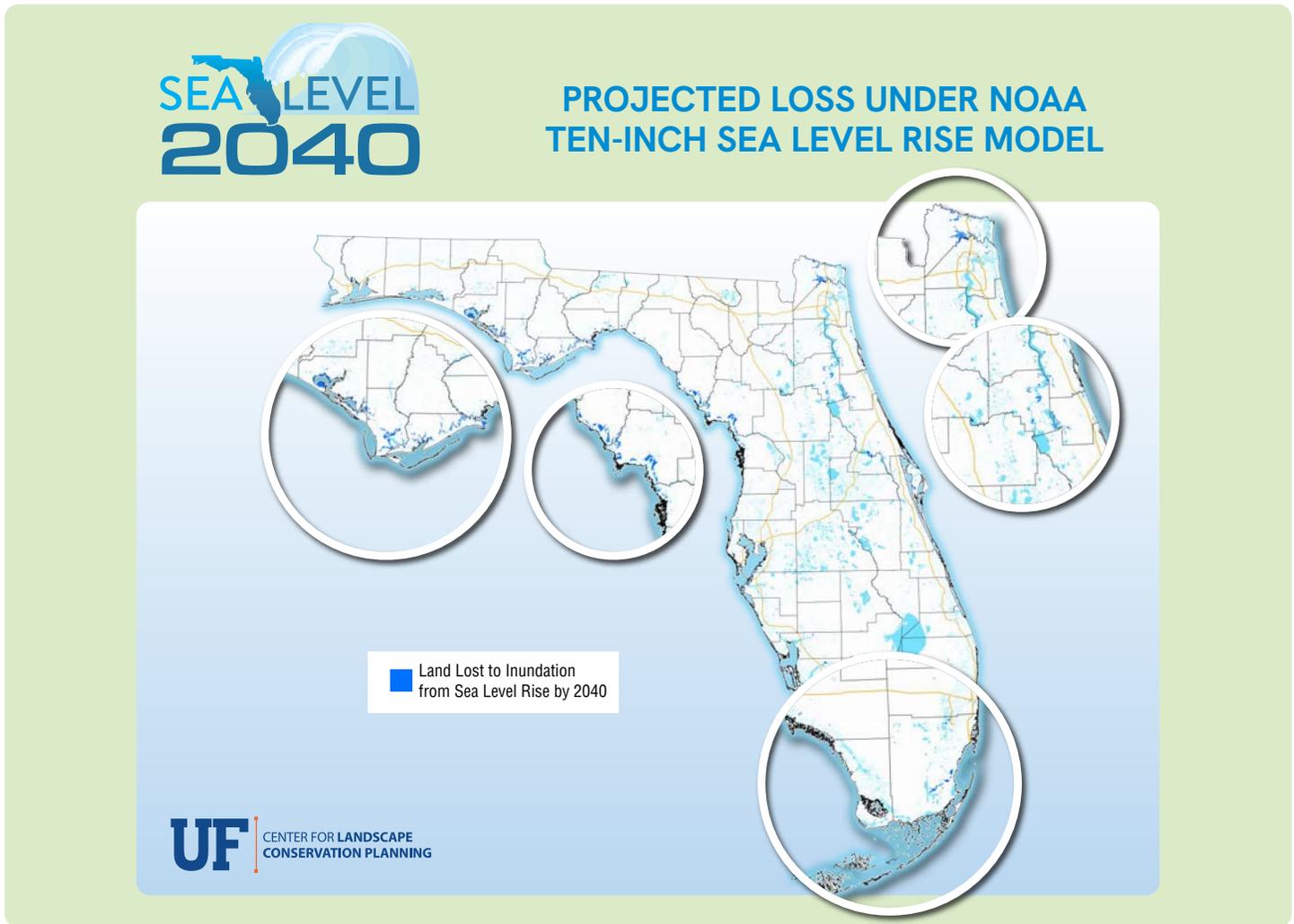
Projected Sea Level Rise

If sea level rises by about 10 inches, or .25 meters by 2040



- the 2022 NOAA intermediate projection - Florida could lose about 1 million acres of land, including more than 850,000 acres of priority natural lands.

Additionally, more than 200,000 residents could need to relocate



Our Choices

Based on the above assumptions on possible future population growth and sea level rise, the 2040 studies depict two possible future development scenarios and land conservation patterns.

Continued Sprawling Development Patterns

The Sprawl Scenario ASSUMES current sprawling patterns of development will continue over the next fifteen years. If this is the case, Florida could lose about 1 million acres of land to development, in addition to land lost to sea level rise.

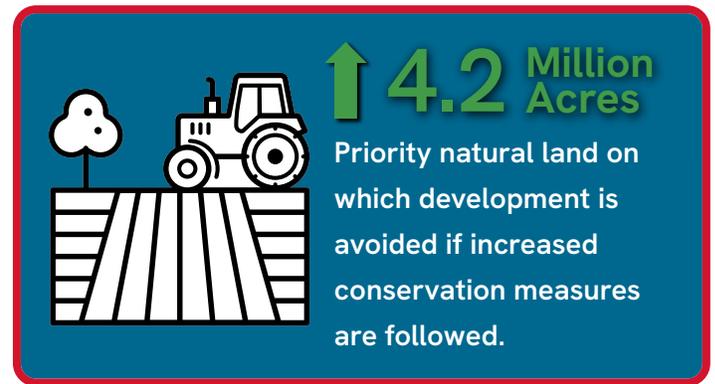
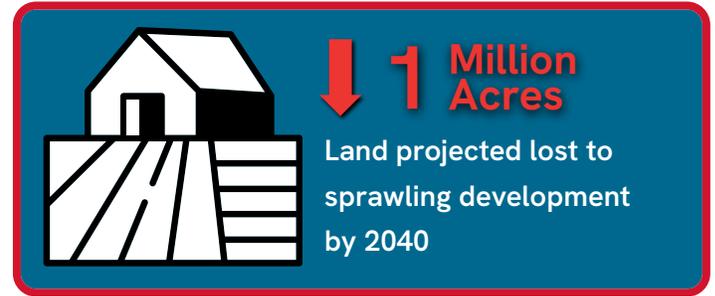
Increased Conservation Measures

The 2040 Conservation Scenario ASSUMES that future development is 30% more compact and avoids the development of 4.2 million acres of priority natural lands. In this case, Florida could avoid development on about 270,000 acres of land compared to the Sprawl Scenario. While this scale of conservation will not realistically occur, it is a useful assumption for an alternative scenario.

Other Options

It's crucial to understand that we have more options than the ones presented. By embracing even more robust

land conservation and sustainable planning, we can create more livable communities while safeguarding our natural and agricultural lands and the economic and ecosystem services they provide.



PROJECTED ACRES OF DEVELOPED LAND BY 2040

Continued Sprawl



Increased Conservation Measures



2019 Existing
5,428,000

2040 Sprawl
6,374,000

2040 Conservation
6,102,000

Source: Sea Level 2040

PROJECTED ACRES OF PRIORITY NATURAL LAND BY 2040

Continued Sprawl



Increased Conservation Measures



2019 Existing
9,850,000

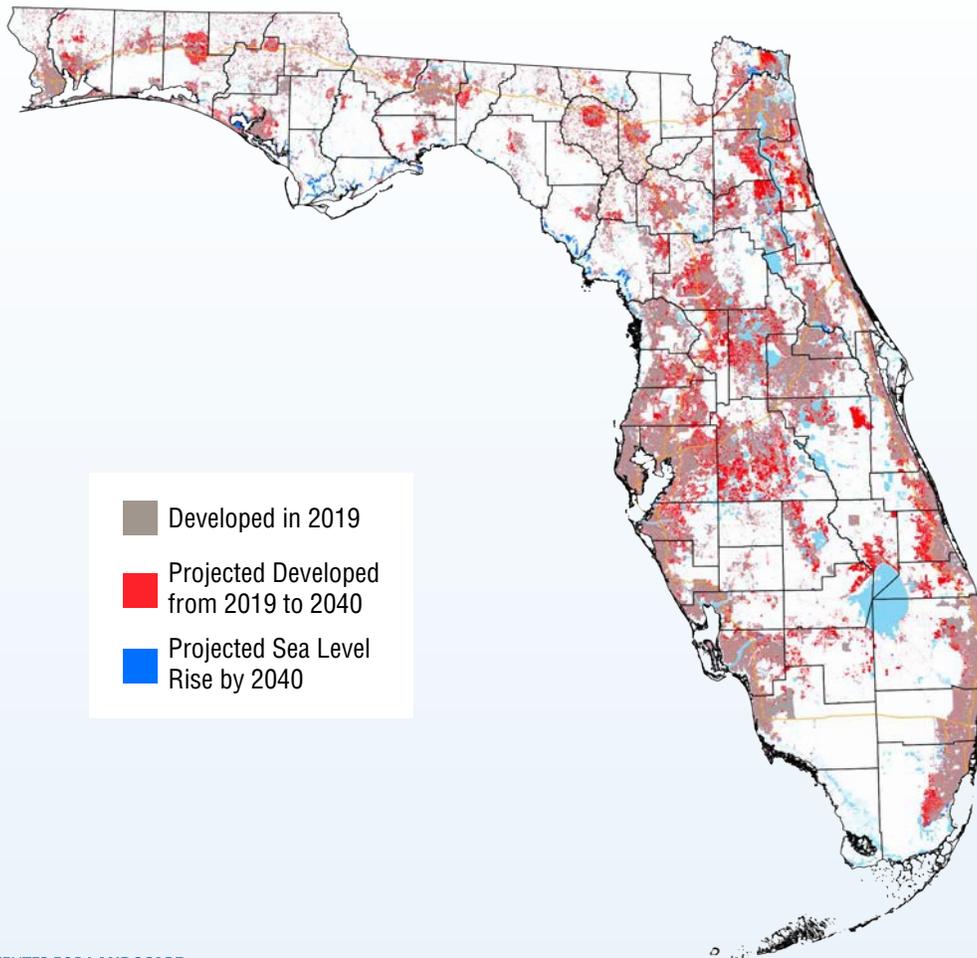
2040 Sprawl
8,997,000

2040 Conservation
14,076,000

Source: Sea Level 2040

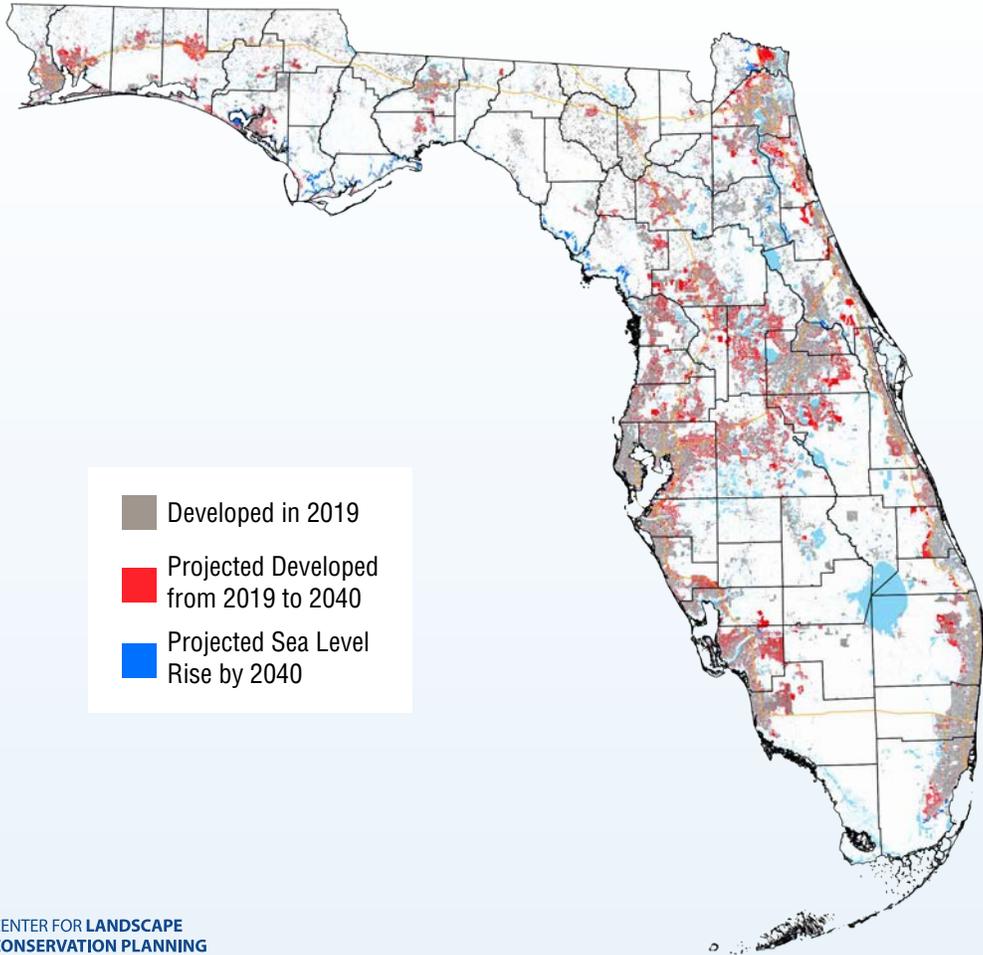
SEA LEVEL 2040

CONTINUED SPRAWLING DEVELOPMENT

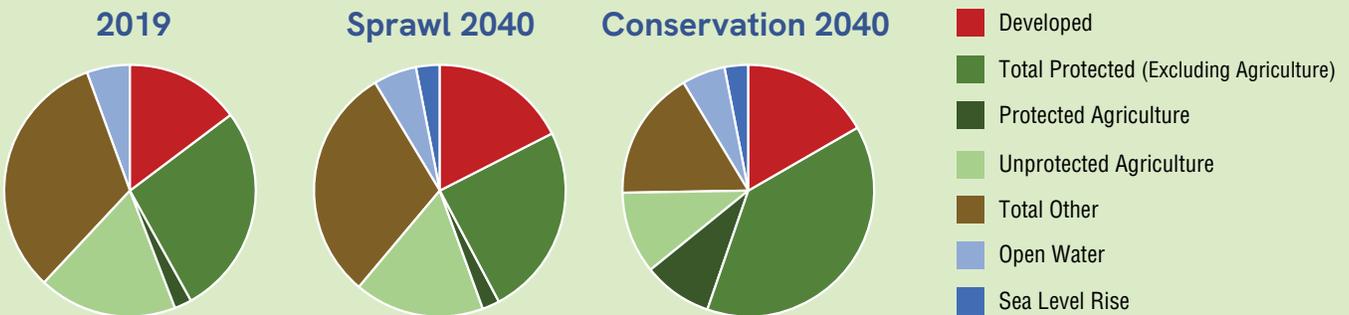


SEA LEVEL 2040

INCREASED CONSERVATION MEASURES



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FLORIDA IN 2070

While *Sea Level 2040* can help guide shorter-term community planning and advocacy, *Sea Level 2070* provides an “airplane view” of the potential cumulative effects of many planning decisions – large and small – over the decades to come. Unlike *Sea Level 2040*, which uses more recent data, *Sea Level 2070* uses 2010 densities and patterns of development as a continuation of earlier GIS-based *Florida 2070/Water 2070* projects.

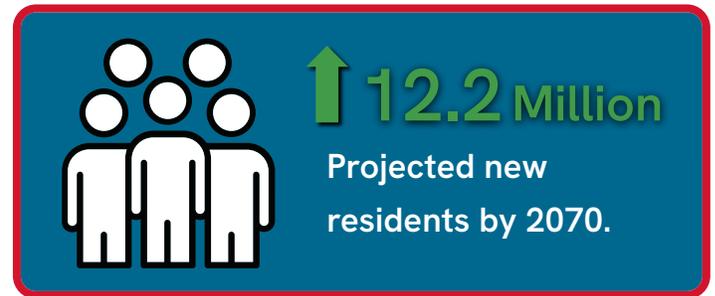
2040 and 2070 are based on the moderate Florida Bureau of Economic and Business Research population projections to explore possible impacts of this growth.

Florida could grow by 12.2 million more residents by 2070, representing about a 60% increase over 2019 and bringing Florida's total population to 33.7 million.

The Projections

Population Growth

Florida faces pressure from unrelenting population growth, which stimulates development that eats into the state's natural and agricultural lands at an alarming rate. While there are also low and high projections, *Sea Level*



PROJECTED POPULATION GROWTH BY 2070



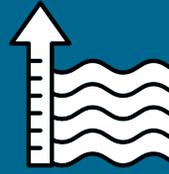
 2019 - 21,477,737

 2070 - 33,721,828



Projected Sea Level Rise

If sea level rises by about 3 feet, or 0.9 meters by 2070 - the 2017 NOAA intermediate high projection - Florida could lose about 1.7 million acres of land due to sea level rise inundation, including 1.3 million acres of currently protected natural land. Close to a million residents could need to relocate.



1.7 Million Acres

Land projected lost to sea level rise by 2070.

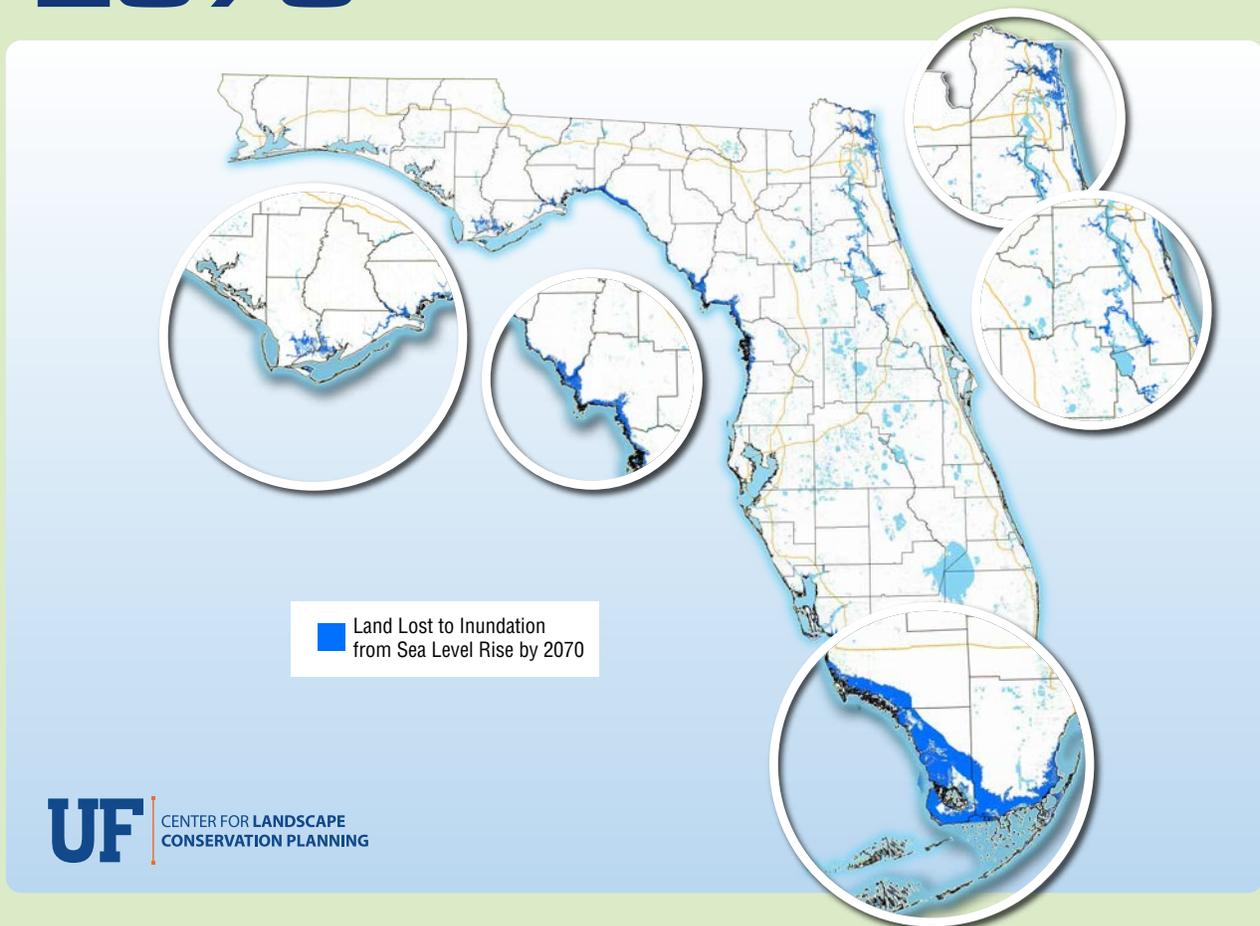


1 Million Residents

Projected to need to relocate due to sea level rise by 2070.

**SEA LEVEL
2070**

PROJECTED LOSS UNDER NOAA THREE-FOOT SEA LEVEL RISE MODEL



Our Choices

As with the 2040 study, Sea Level 2070 looks at two possible future scenarios.

Continued Sprawling Development Patterns

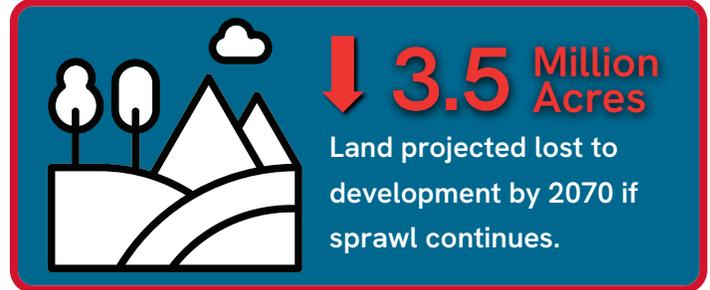
The Sprawl Scenario ASSUMES current sprawling development patterns continue through 2070, in which case Florida could lose about 3.5 million additional acres of land to development, including about 1.5 million acres of priority natural land.

By 2070, nearly a quarter of Florida’s land could be developed. The additional land lost between the baseline year and 2070 would equate to a staggering 250 acres per day, including the conversion of about 120 acres of agricultural lands a day. Another 93 acres a day are projected to be submerged due to sea level rise.

Land Conservation, More Condensed Development Patterns, and Some Redevelopment

The 2070 Conservation Scenario ASSUMES future development is 20% more compact, some redevelopment occurs in urbanized areas, and Florida avoids development on 5 million acres of priority natural land, in which case Florida could avoid development on approximately 1.3 million acres of land compared with the Sprawl Scenario.

These studies once again underscore the fact that modest density increases are not enough to protect Florida's natural and agricultural lands. More sustainable development patterns and conservation of priority natural lands are not just desirable, but essential. We all have a responsibility to ensure the future vitality of our state.

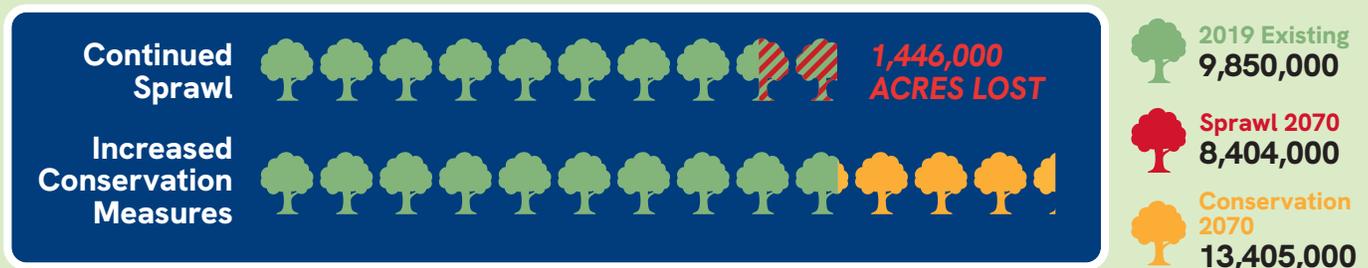


PROJECTED ACRES OF DEVELOPED LAND BY 2070



Source: Sea Level 2070

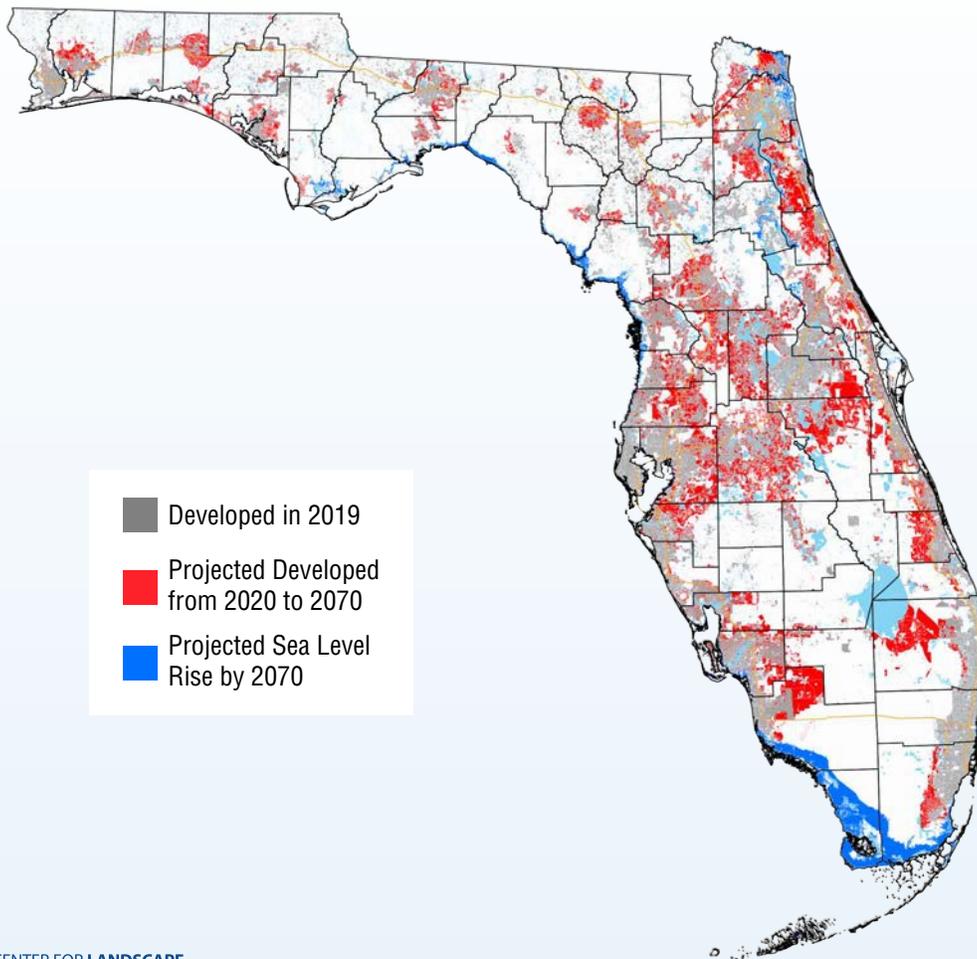
PROJECTED ACRES OF PRIORITY NATURAL LAND BY 2070



Source: Sea Level 2070

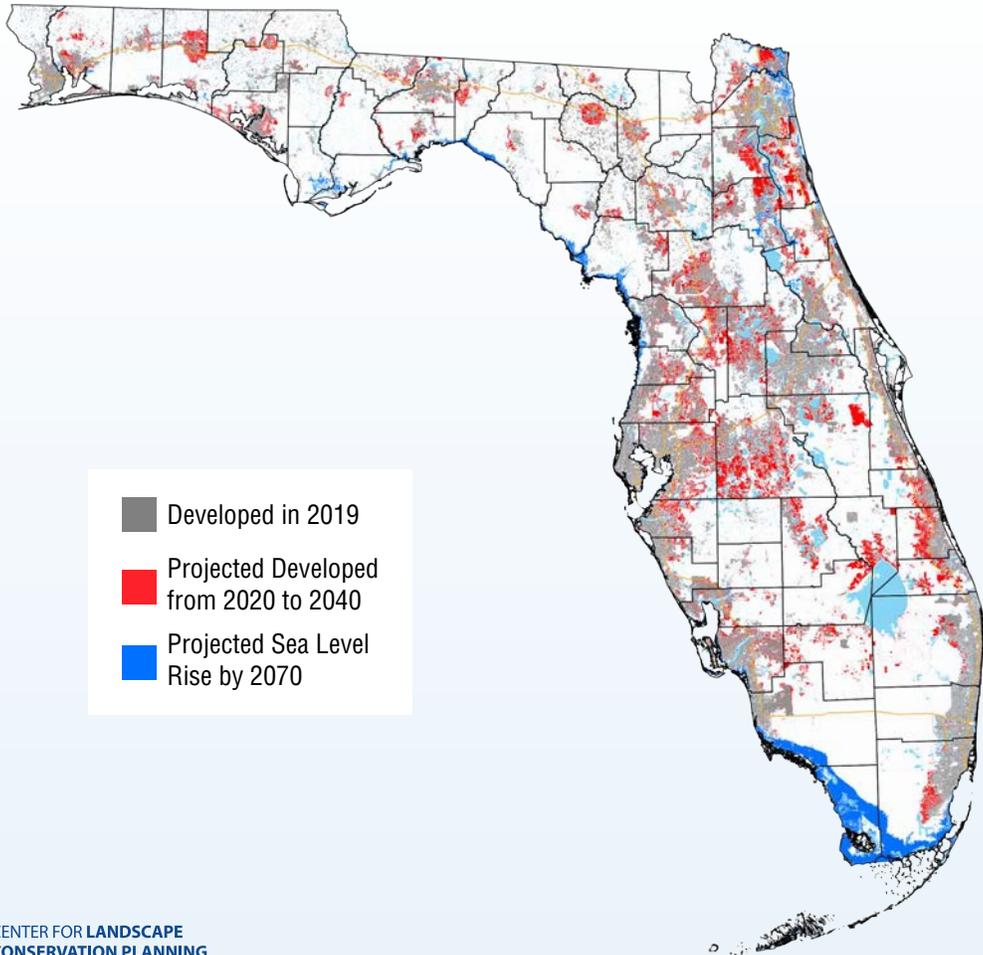
SEA LEVEL 2070

CONTINUED SPRAWLING DEVELOPMENT



SEA LEVEL 2070

INCREASED CONSERVATION MEASURES



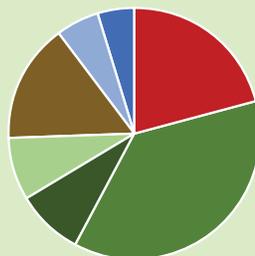
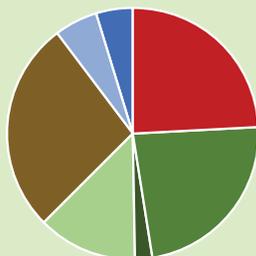
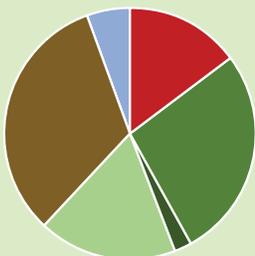
- Developed in 2019
- Projected Developed from 2020 to 2040
- Projected Sea Level Rise by 2070

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2019

Sprawl 2070

Conservation 2070



- Developed
- Total Protected (Excluding Agriculture)
- Protected Agriculture
- Unprotected Agriculture
- Total Other
- Open Water
- Sea Level Rise

AGRICULTURE IN FLORIDA

Despite being often viewed as separate “silos,” Florida’s natural, agricultural, and developed lands are intricately interconnected. Compact development patterns in urban and suburban areas leave more land available for nature and agriculture, while undeveloped natural and agricultural lands provide crucial ecosystem services that support and protect our communities. This interconnection underscores the urgency of our situation and the need for immediate action.

Agriculture is the second-largest industry in the state and an economic powerhouse. According to the University of Florida Institute of Food and Agricultural Science (IFAS), the direct financial contributions of the agriculture, natural resource, and food industries in 2019 included \$106 billion in sales and 1,279,638 jobs. About a third of Florida’s 36.3 million acres of land remains in agriculture today. Of these, roughly 41% is used for grazing for ranching, 37% for silviculture, and the remaining 22% for other uses, including crops and nurseries.

These “working lands” are essential for the commodities they produce. Vast ranchlands, forests, citrus groves, crop fields, and more reflect a rich tradition of

generations of farmers working the land, as do the small towns that dot the rural landscape and support local and regional economies. These working landscapes continue to play a vital role in Florida’s quality of life.

Florida’s agricultural lands also sustain and improve food and nutrition security for current and future generations. Additionally, they support valuable ecosystem services, including cleansing and storing our drinking water, providing flood control, and enhancing climate resilience.

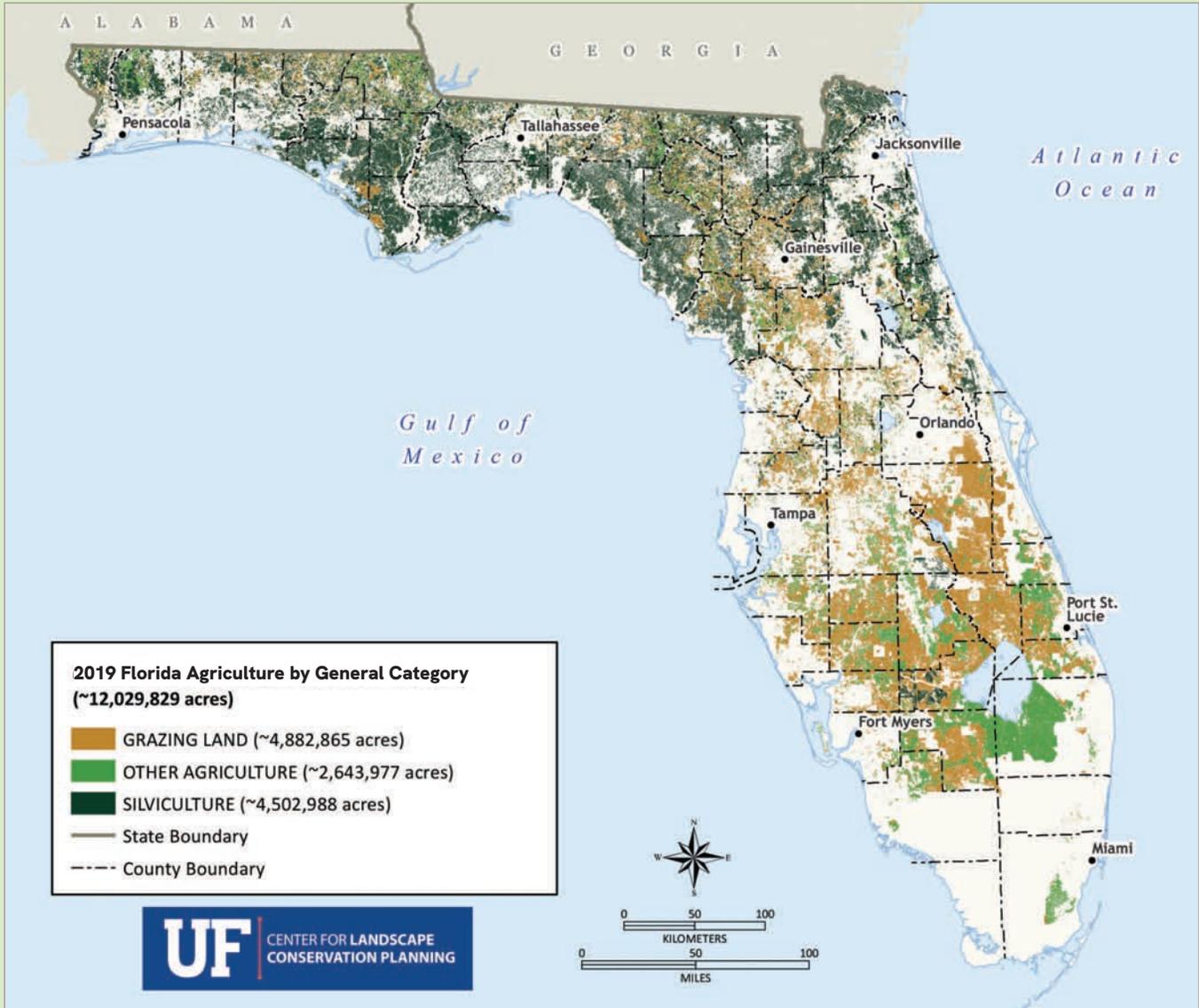
Our Choices

Using the Sea Level 2040 and 2070 scenarios, the Center and 1000 Friends dove more deeply into the impacts of possible future development and sea level rise on Florida’s agricultural lands.



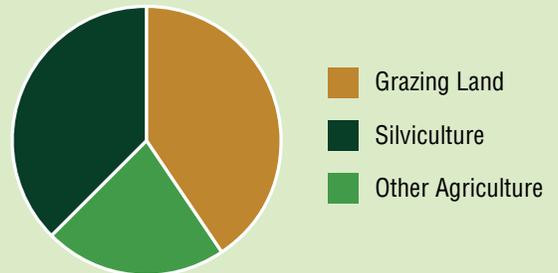
Carlton Ward Jr. / Wildpath

2019 FLORIDA AGRICULTURE BY CATEGORY



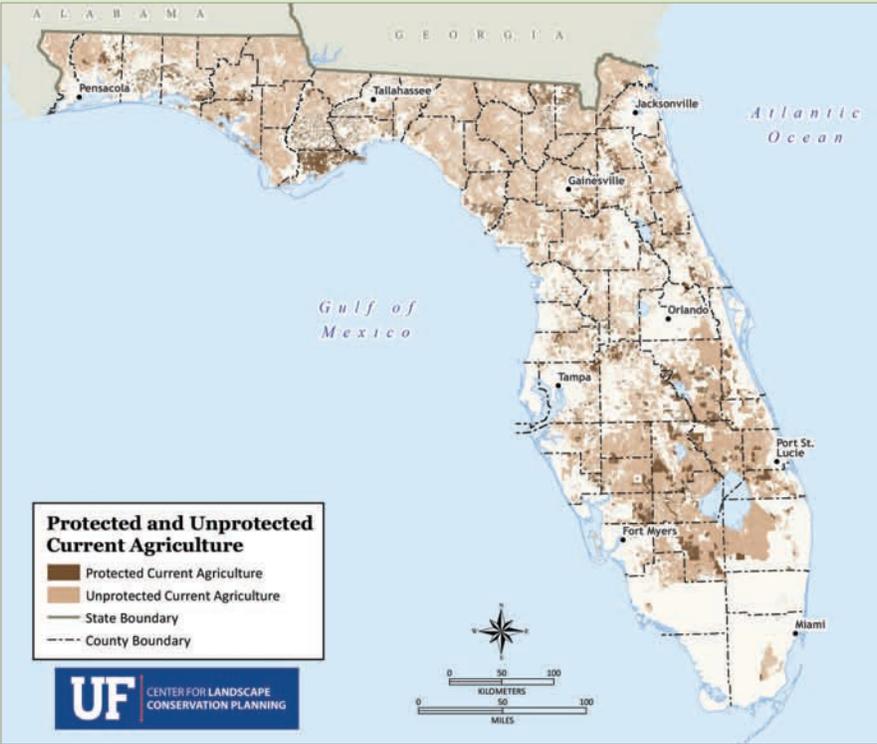
Date: 11/2023. Data: Balmoral Group, Environmental Systems Research Institute, Florida Department of Agriculture and Consumer Services, Florida Fish and Wildlife Conservation Commission, Florida Geographic Data Library, Florida Natural Areas Inventory, University of Florida Center for Landscape Conservation Planning, U.S. Census Bureau, U.S. Geological Survey. Projection: Albers Conical Equal Area

General Category	Acres	Percent
Grazing Land	4,882,865	40.6%
Other Agriculture	2,643,977	22.0%
Silviculture	4,502,988	37.4%
TOTAL	12,029,829	100.0%

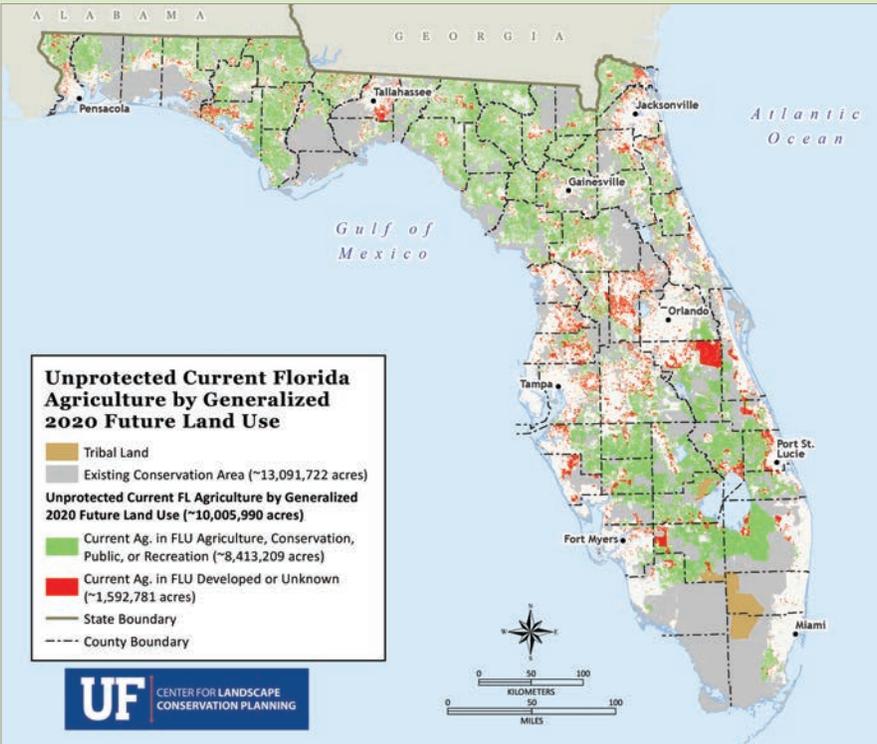


1/3 of Florida Amount of land currently in agriculture.

PROJECTED AND UNPROTECTED CURRENT FLORIDA AGRICULTURE



CURRENT FLORIDA DESIGNATIONS OF AGRICULTURAL LAND IN 2020 FUTURE LAND USE MAPS





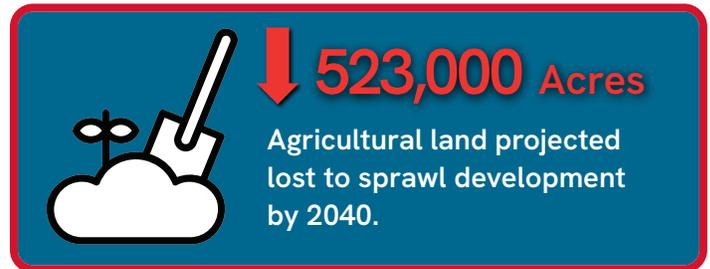
AGRICULTURE 2040

Agriculture 2040

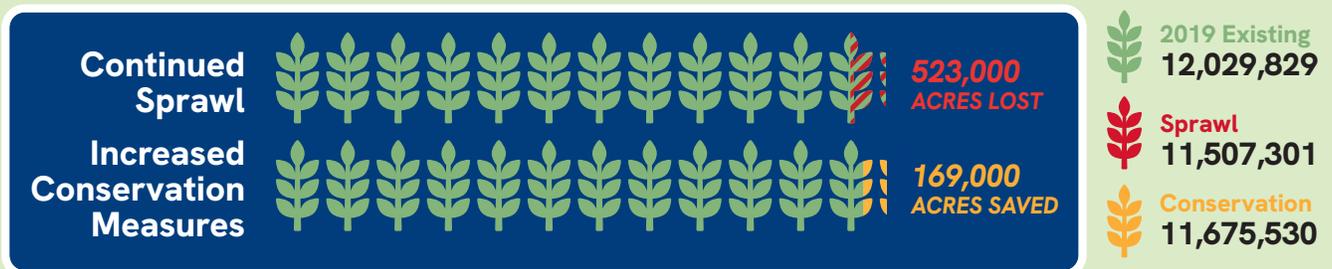
By 2040, approximately 7,500 acres of agricultural land are projected to be lost to sea level rise inundation.

By continuing sprawling development, by 2040 Florida could lose about 523,000 acres of agricultural land to development.

With increased conservation measures, by 2040 Florida could avoid development on about 169,000 acres of agricultural land compared with the Sprawl Scenario.



IMPACT ON AGRICULTURAL LAND BY 2040



Source: Agriculture 2040/2070





AGRICULTURE 2070

Agriculture 2070

By continuing Sprawling Development by 2070, Florida could lose more than 2.2 million acres of agricultural land to development.

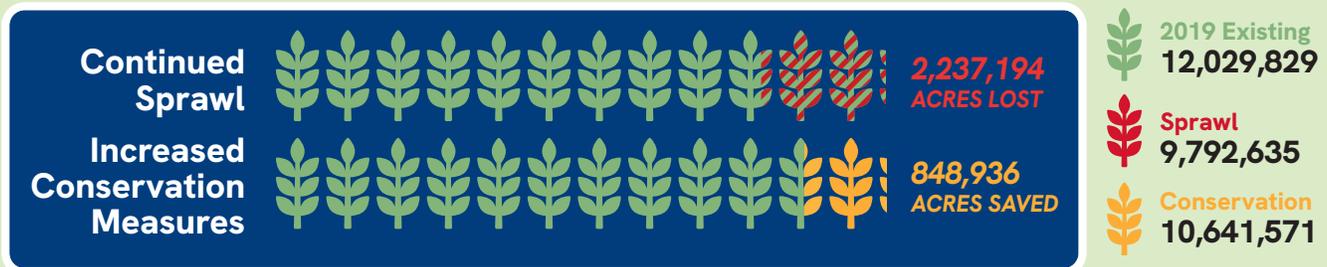
With increased conservation measures, by 2070 Florida could avoid development on about 850,000 acres of agricultural land compared with the Sprawl Scenario

In other words, if Florida continues with its existing pattern of sprawling development, by 2070 close to a fifth of its agricultural land—about 2.2 million acres or almost 45,000 acres a year—is projected to be lost. Grazing lands would be the most impacted, with more than 1 million acres lost.

Even with 20% more compact development patterns, some redevelopment, and avoiding development on priority natural lands, as shown in the Conservation Scenario, Florida could still lose approximately 1.4 million agricultural acres. The impacts of inundation due to sea level rise are projected to be small, with only 41,000 acres projected to be lost by 2070.



IMPACT ON AGRICULTURAL LAND BY 2070



Source: Agriculture 2040/2070

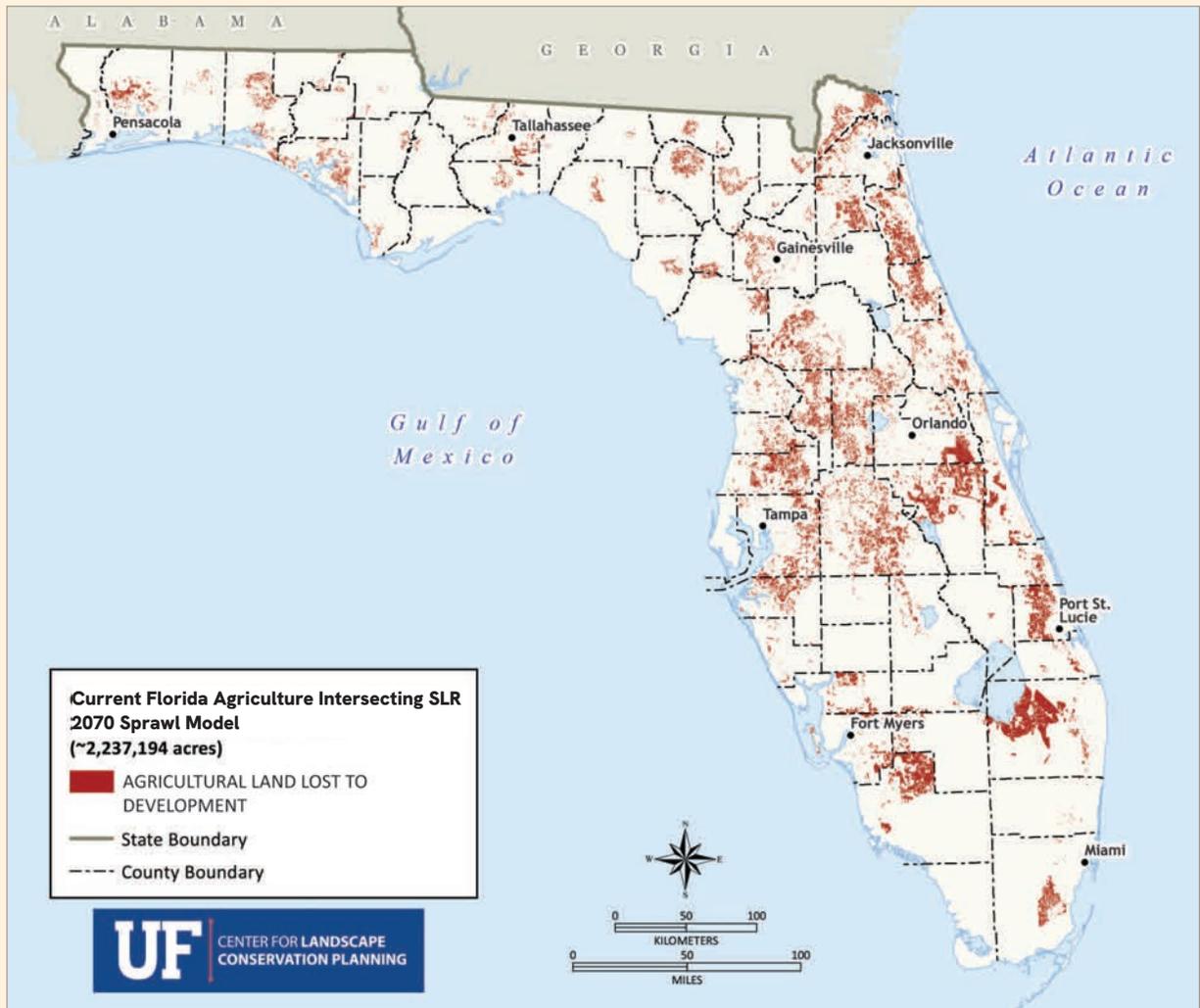




AGRICULTURE 2070

PROJECTED AGRICULTURAL LAND LOST TO DEVELOPMENT BY 2070

SPRAWL SCENARIO



THE NEED FOR MORE TOOLS IN THE TOOLBOX

The combination of economic and development pressures, coupled with our changing climate, presents significant challenges for agricultural lands. Agricultural lands must remain in production and profitable in order to stave off economic pressures to develop. This underscores the importance of innovation and the need for new strategies to protect our agricultural industry and the lands on which we all depend.

Conservation Easements

Of Florida's 12 million acres of agricultural land, less than 20% have been protected from development through federal, state, local, and private land conservation programs. These include conservation easement agreements with private property owners who enter legally binding commitments to restrict development on their property in return for payment for development rights, tax benefits, or other incentives.

Nearly half of state land-protection projects – whether through the Rural and Family Lands Protection Program (RFLPP) or Florida Forever – consist of agricultural land uses. Efforts to preserve biodiversity and ecosystem services in Florida often dovetail with efforts to protect agricultural land.

The RFLPP program is explicitly geared toward agricultural lands, ensuring that most conserved land will remain privately owned, managed by the landowner, continue in agricultural production and support the state's economy, and stay on the tax rolls.

However, as with other state conservation programs, RFLPP funding is contingent upon the Florida Legislature, which has not always recognized its importance. Increased and ongoing robust funding for this and other state and federal programs is essential.



Florida Greenways & Trails

Payment for Ecosystem Services (PES)

As noted, natural and agricultural lands provide essential ecosystem services with significant economic, ecological, and other values. Efforts to protect Florida's priority natural lands also preserve agricultural lands, as most agricultural lands include a mosaic of cultivated and natural lands, including wetlands.

About 36% – or 13 million acres – of Florida's land is wetlands, with about 8.5% or more than a million acres on agricultural land. Ranches often encompass vast intact wetlands and floodplains, which help cleanse and store our fresh water, support flood control in urban areas, and provide essential habitat for wildlife.

Agricultural lands also support climate resilience. Timberlands absorb carbon dioxide, helping to reduce carbon in the atmosphere. In addition to sequestering carbon, agricultural and natural lands can help buffer developed areas from the impacts of flooding associated with storms and allow the migration of plants and animals as the climate changes. They enhance biodiversity, harbor wildlife, promote outdoor recreation, and support the natural, aesthetic landscapes and rural communities that make Florida unique.

A Few Words on Emerging Practices

Precision farming, which harnesses the power of AI, is a game-changer. By utilizing the latest technology,

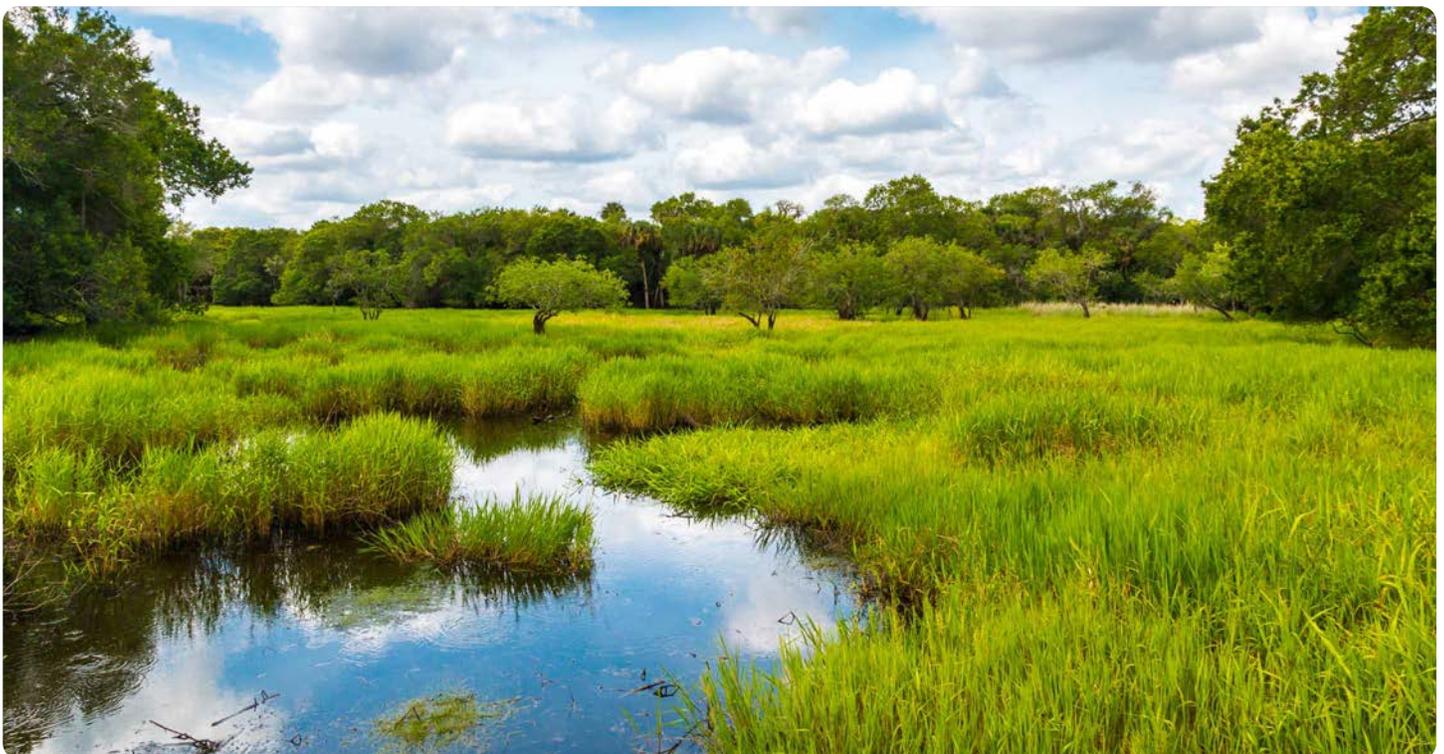
About Ecosystem Services

Natural and agricultural lands provide essential ecosystem services with significant economic value, including:

- Protecting water supply and quality
- Providing flood control
- Supporting climate resilience
- Sequestering carbon
- Harboring wildlife
- Promoting outdoor recreation
- Contributing aesthetic value

including GPS, satellites, robots, drones, and sensors, farmers can significantly reduce the amount of energy, fertilizer, and water used on agricultural lands while boosting productivity and employing more sustainable farming practices that are better for the environment. This innovative approach also equips farmers to better adapt to climate change, offering a promising future for agriculture in Florida.

Interest is also growing in regenerative agriculture, which can build on these precision agriculture practices. This holistic approach seeks to improve the health of ecosystems and enhance land productivity, rather than just maintain it. Strategies include improving soil health, increasing biodiversity, and reducing dependence on synthetic inputs.



The Florida Wildlife Corridor

The Florida Wildlife Corridor (Corridor) is an interconnected network of 18 million acres of natural and agricultural lands with high conservation value. It is a vital ecological corridor that spans much of the state, providing crucial habitat for a wide variety of wildlife and supporting the health of Florida's unique ecosystems. Building on state greenway planning and land conservation initiatives launched in the 1980s, the Corridor lays out a vision to protect a network of high-priority landscapes.

About 10 million acres in the Corridor are protected. Of the 8 million acres of unprotected land, about three-quarters are working agricultural land, including ranch and timberland, reflecting their significant conservation values.

Under the Sprawl Scenario, roughly 206,000 acres of priority natural lands in the Corridor could be lost to development or sea level rise by 2040, possibly increasing to 1.2 million acres by 2070.

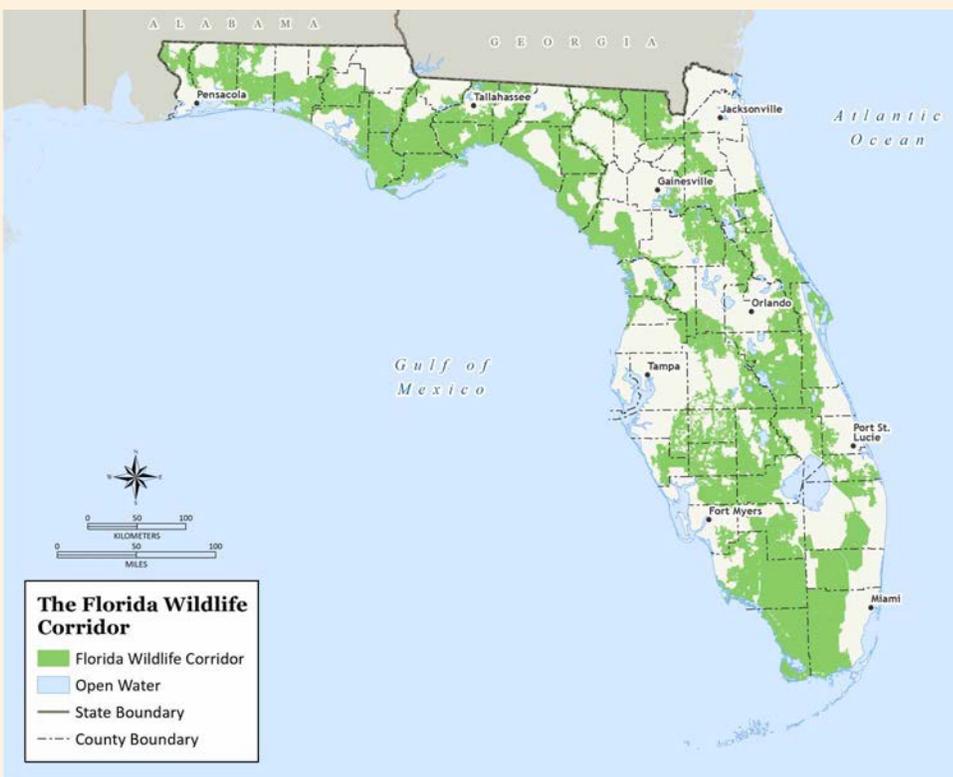


Land protection through outright purchase or conservation easement is the primary tool currently used to protect the Corridor. Still, not all land in the Corridor is a good fit for these programs. Sound community planning must play a significant and complementary role in protecting these resources, which are vital to Florida's future.

The Corridor has become a leading statewide conservation priority for those who strongly support green space protection, water resource

protection and restoration, and lessening the impacts of suburban sprawl. In recent years, the Florida Legislature has appropriated about \$2 billion to expand protection within the Corridor, which helps protect our drinking water, connect wildlife habitat, support agriculture, and afford critical ecosystem services. Continued robust funding for land conservation and effective community planning is essential as development erodes and fragments our state's rural landscape.

PROPOSED FLORIDA WILDLIFE CORRIDOR



The Issue of Land Fragmentation

The direct loss of land to development is not the only problem for natural and agricultural systems. Land fragmentation - the creation of scattered parcels of land due to poorly planned development and infrastructure in rural areas - compounds the outright loss of land.

Fragmentation diminishes the rural landscape's ecological and agricultural values. Scattered urban development can disrupt natural systems, creating isolated patches of natural land. This, in turn, can disrupt wildlife habitat and movement patterns, result in deforestation, and reduce critical natural functions such as water quality benefits provided by intact floodplain and wetland ecosystems. It can also impair the ability to manage natural lands, making such practices as

prescribed burns essential for ecosystem maintenance more challenging or impossible.

It also makes agricultural lands less viable for current uses and future agriculture. When agriculture loses "critical mass," not only is the future of agriculture impaired, but the impacts ripple through the regional economy. Fragmentation makes the remaining agriculture less viable, resulting in cascading fragmentation to the point of no return. The conversion of agricultural lands to sprawling development leaves remaining agricultural lands, the local and regional economies they support, and the ecosystem services they provide increasingly vulnerable, fragmented, and often degraded.



Carlton Ward Jr / Wildpath

A BETTER PATH FORWARD

As the coming decades unfold, the urgency of proactive planning and conservation efforts cannot be overstated. With significant population growth and sprawling development patterns on the horizon, the potential loss of millions of acres of Florida's natural and agricultural lands is a stark reality. Steering development away from priority natural and working agricultural lands and promoting more compact development patterns is essential.

Given these findings, what is a better path forward? Here are some priorities to help ensure that Florida's rural lands can flourish over the coming decades:

- **The conservation of natural and working agricultural lands at the state, federal, regional, county, and municipal levels requires a robust financial commitment. This includes funding for land acquisition and conservation easements, both of which are essential for protecting priority lands.**

Land conservation – protecting priority lands through federal, state, local, or private programs primarily through land acquisition and, increasingly, conservation easements – is essential. Ongoing advocacy to robustly fund these and other critical state, federal and county natural and agricultural land conservation programs is paramount.

- **Sound, science-based land use planning and conservation decision-making are crucial for promoting the protection of critical lands and minimizing fragmentation. By basing our decisions on scientific analysis, we can ensure that our actions are effective and sustainable.**

Effective community planning can complement land conservation efforts by promoting appropriate location, density, and design for new development

to curtail damaging sprawl and fragmentation. Planning policies and practices are essential to guide development away from Florida's rural lands.

This includes science-based urban and rural policies, plans, and programs that promote more condensed development in urbanized areas, leaving more land for nature and agriculture. Analysis should also include economic data, which generally shows that smarter, denser development patterns are better for local economies (including generating more sustainable tax revenue and allowing more efficient public services) and the environment. For more information on such data analysis, visit 1000fof.org/priorities/fiscal. A community's comprehensive plan and Future Land Use Map can provide a platform to protect essential resources at the community level.

- **Market-based solutions, including incentivizing the protection of ecosystem services, are needed to ensure the long-term economic viability of Florida's rural lands and the services they provide.**

Maintaining viable working landscapes in Florida is critical for the economy and the environment. In addition to supporting continued, viable agricultural output, natural and agricultural lands provide myriad ecosystem services for public benefit. Developing science-based market mechanisms to incentivize the protection of ecosystem services at scale is a critical component to ensure the long-term viability of agriculture and the services its land provides. The development of Florida's agricultural lands is inevitable if agriculture is not economically sound. Combining tools, including conservation easements and payments for ecosystem services (PES), is essential to maintain what remains of our state's rural character and economy.

Toward a More Sustainable Future

Florida and its communities must become more strategic in protecting land through science-based acquisition, agricultural easements, local planning, incentives, and other means. Science-based analysis can serve as the foundation by addressing a series of questions:

- Which lands are less appropriate for development due to their natural or agricultural values?
- Which lands are essential to maintain vital ecosystem services, including water filtration, flood storage, and storm protection?
- Which lands are needed to prevent fragmentation of vast landscapes that protect wildlife habitat for native species, water supply and quality, or functioning natural or agricultural systems?
- Which could protect important recreational lands and waters that support ecosystem services and the resource-based economy?
- Which priority lands are most vulnerable to development and would benefit from more focused protection efforts?
- Which areas are most subject to fragmentation caused by the introduction of new roads, other infrastructure, and scattered development?

Effective public policy, science-based planning and land management strategies, and market-based solutions can help ensure that Florida's natural and agricultural lands and their many values can flourish over the coming decades.

Significant change is needed to ensure the viability and health of rural lands for future generations. There is no going back once land is converted to asphalt and rooftops.

Flexibility will be key in a changing climate and economy. More tools are needed in the toolbox. Multiple options, including voluntary and incentive-based strategies that address both near- and long-term planning horizons, are necessary.

A partnership between key stakeholders is not just important, it's essential. By working together, we can identify opportunities to protect and sustain rural lands, maintaining rural economies and communities while ensuring a more sustainable, resilient future for all Floridians.

The time is now to prepare for an increasingly challenging future.



Florida Bicycle Association

APPENDIX: OVERVIEW OF ASSUMPTIONS

Overview of Assumptions

The GIS-based Sea Level 2040 and 2070 studies each include a baseline map depicting current conditions and two potential future scenarios dominated by additional sprawl or efforts to contain growth and protect essential conservation lands. Both assume that the likelihood of future land development will vary depending on its location and characteristics, with lands closer to cities, major roads, or other features demonstrated to be more attractive to future growth. They also assume that residents on land lost to sea level rise will relocate, with half moving out of state and the other half allocated within the same county and with overflow to adjacent counties if there is insufficient capacity.

Sea Level 2040:

- Based on 2021 Florida Bureau of Economic and Business Research (BEBR) medium projections (adjusted to 2019), Florida's population of 21.5 million will grow to 26.4 million residents in 2040.
- Sea Level will rise by 0.25 meters or almost 10 inches, based on the 2022 NOAA intermediate projection and a Florida State University (FSU) study on population relocation (Hauer 2016).
- Sprawl 2040 assumes 2019 densities and patterns of development will continue over the next two decades, factoring in the impacts of sea level rise on Florida's lands.
- Conservation 2040 accounts for the same population growth and sea level rise by 2040 but also emphasizes the opportunity to protect much of the state's highest priority lands for conservation and agriculture and assumes new development will be 30% more compact.

Sea Level 2070:

- Based on 2015 BEBR medium projections (base year used in order to be consistent with projections for the earlier Florida 2070/Water 2070 studies but adjusted to 2019), Florida's population could grow by 57%, from about 21.5 million in 2019 to 33.7 million in 2070.
- Sea Level will rise by 0.9 meters or almost 3 feet, based on a modified version of the 2017 NOAA intermediate high projection and the FSU study on population relocation (Hauer 2016).
- Sprawl 2070 assumes that 2010 densities and patterns of development will continue over the next six decades but factors in the impacts of sea level rise on Florida's lands and the resulting need for population relocation.
- Conservation 2070 accounts for the same population growth and sea level rise by 2070 but also assumes that developing the state's identified priority natural conservation lands will be avoided, any new development will be 20% more compact, and more redevelopment in urbanized areas will occur.

Agriculture 2040/2070:

Based on the *Sea Level 2040/2070* studies, Agriculture 2040/2070 identifies a higher total of agricultural lands because it includes silviculture as "agriculture" instead of "other" and relies on more detailed data from the Florida Department of Agriculture and Consumer Services.

To find out more about *Sea Level 2040/2070*, visit 1000fof.org/sealevel2040

For *Agriculture 2040/2070*, see 1000fof.org/ag2040-2070.



March 2026

A joint project of . . .

