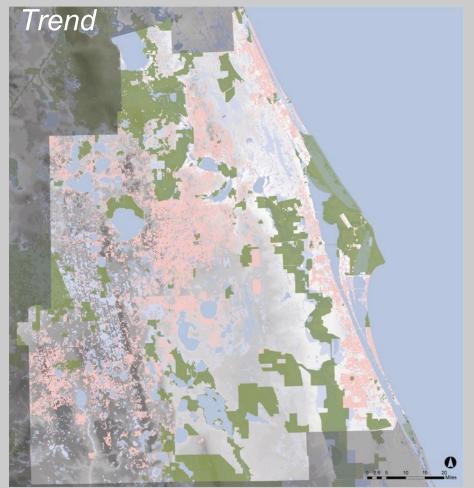
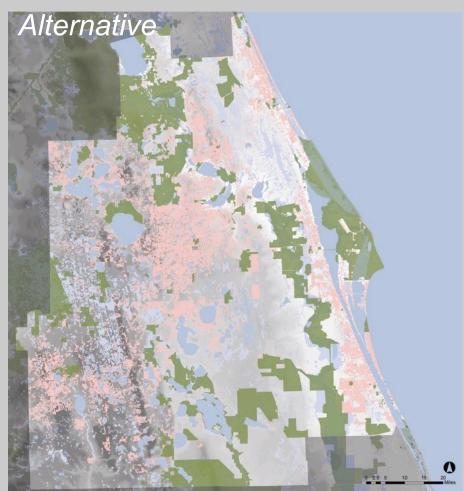


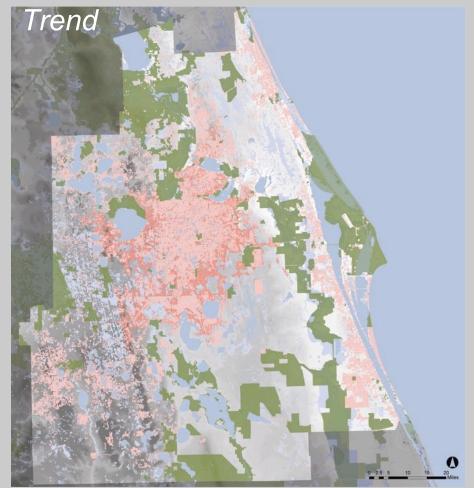


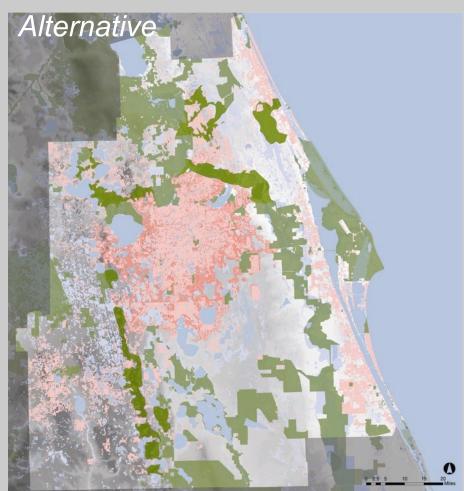
# Phase I: 2000



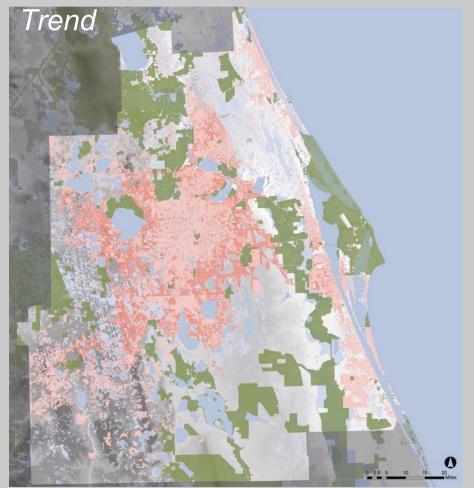


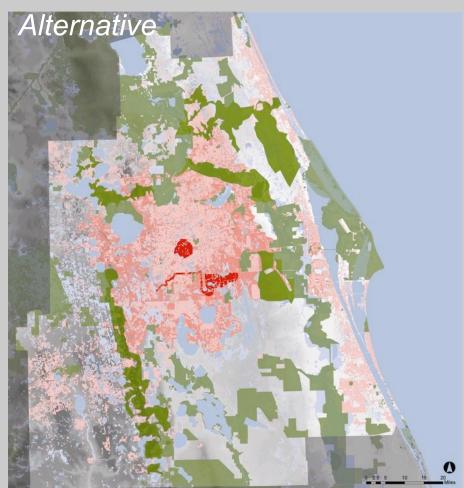
# Phase I: 2010



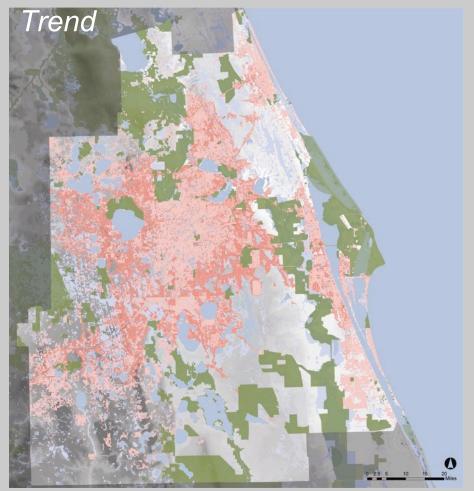


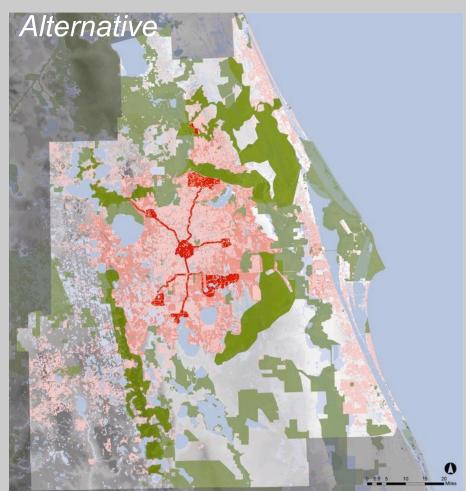
### Phase II: 2020



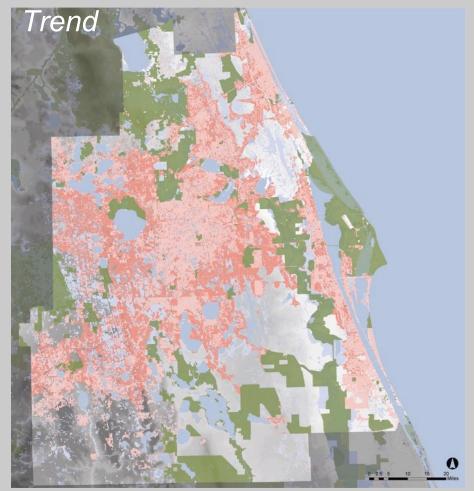


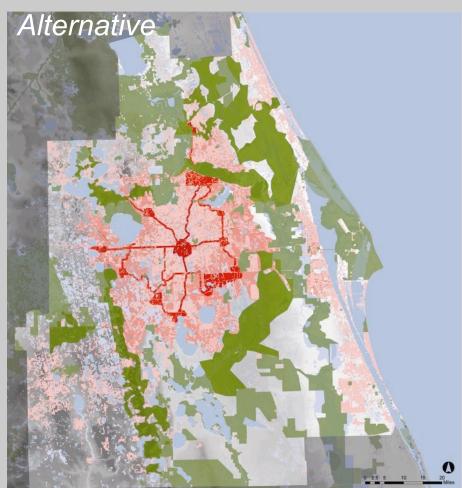
### Phase III: 2030



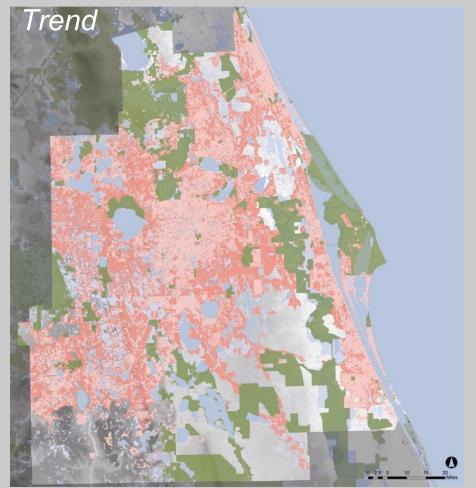


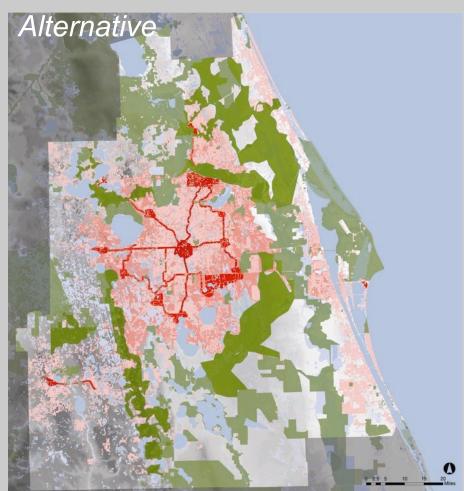
# Phase IV: 2040





# Phase V: 2050





# Financing the Alternative Model

- The Alternative Model results in urbanizing only 420,410 new acres. At \$90,000 an acre that is 37.8 billion dollars, 66.9 billion less than the cost of urbanizing land in the Trend Model.
- 66.9 billion dollars can be considered the "budget' for financing the high-speed rail, transit systems, and land acquisition necessary to make the Alternative Model feasible

### Costs of the Alternative Model

	Acres	Cost/Acre	Total
Cost			
Urbanization costs for new development	420,410	\$90,000	\$37.8 Billion
Infrastructure costs for redevelopment	328,904	\$20,000	\$6.6 Billion
Conservation land acquisition	724,429	\$25,000	\$18.1 Billion
High-speed rail, transit, freight, ferry			\$ 27.9 Billion
TOTAL COSTS OF ALTERNATIVE MODE	ĔL.		\$90.4 Billion
TOTAL COSTS OF TREND MODEL			\$116.7 Billion

COST SAVINGS WITH ALTERNATIVE MODEL = \$26.3 BILLION for a far superior form of development

# FLORIDA IN THE 21<sup>ST</sup> CENTURY:

2020, 2040, 2060

**STUDIO LEADERS:** 

JONATHAN BARNETT ANDREW DOBSHINSKY

**STUDENTS:** 

BEVERLY CHOI
ALAN CUNNINGHAM
MELISSA DICKENS

JENNIFER DRIVER
LOKKAY FAN
JAIME GARCIA
NICOLE GIBSON
JENNIE GRAVES

MOLLIE HENKEL

SHEKOOFAH KHEDHRI JENNIFER LAI JASON LALLY MARIE LEWIS LORI MASSA ALEXIS MELUSKY

LAURA OTTOSON

UNIVERSITY OF PENNSYLVANIA. DEPARTMENT OF CITY PLANNING. CPLN 702: URBAN DESIGN STUDIO. 24 APRIL 2007.



### FLORIDA POPULATION PROJECTIONS

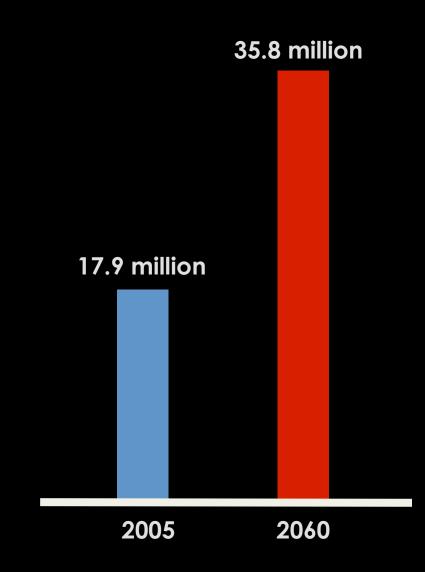








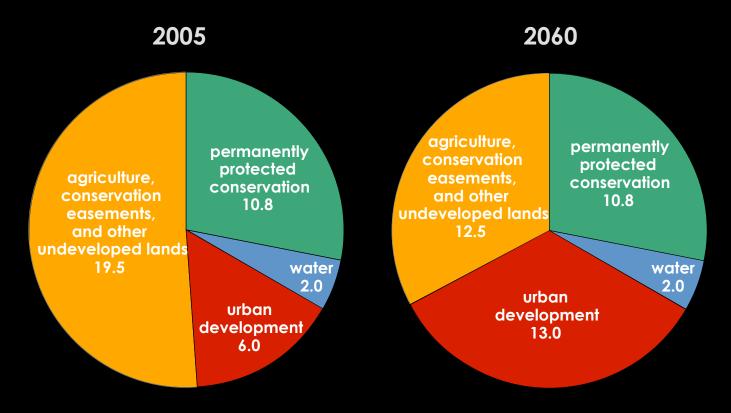








Statewide land use allocation (millions of acres)



Total land in Florida: 38.3 million acres







### SAVING THE ENVIRONMENT FROM THE TREND

2

3

4

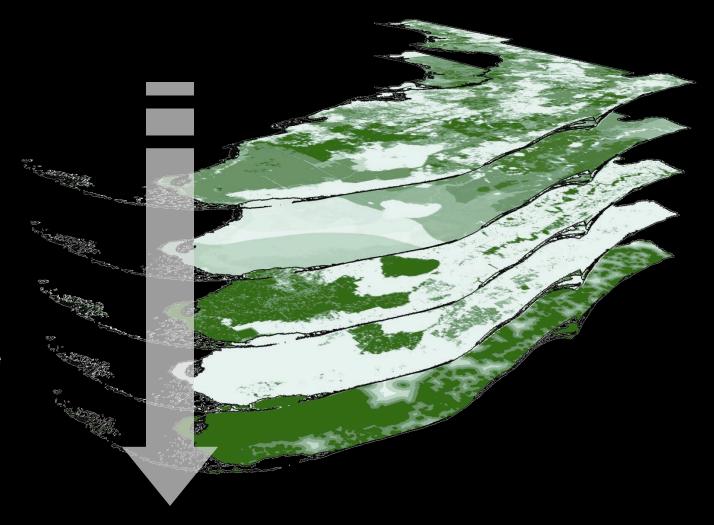
Wetlands

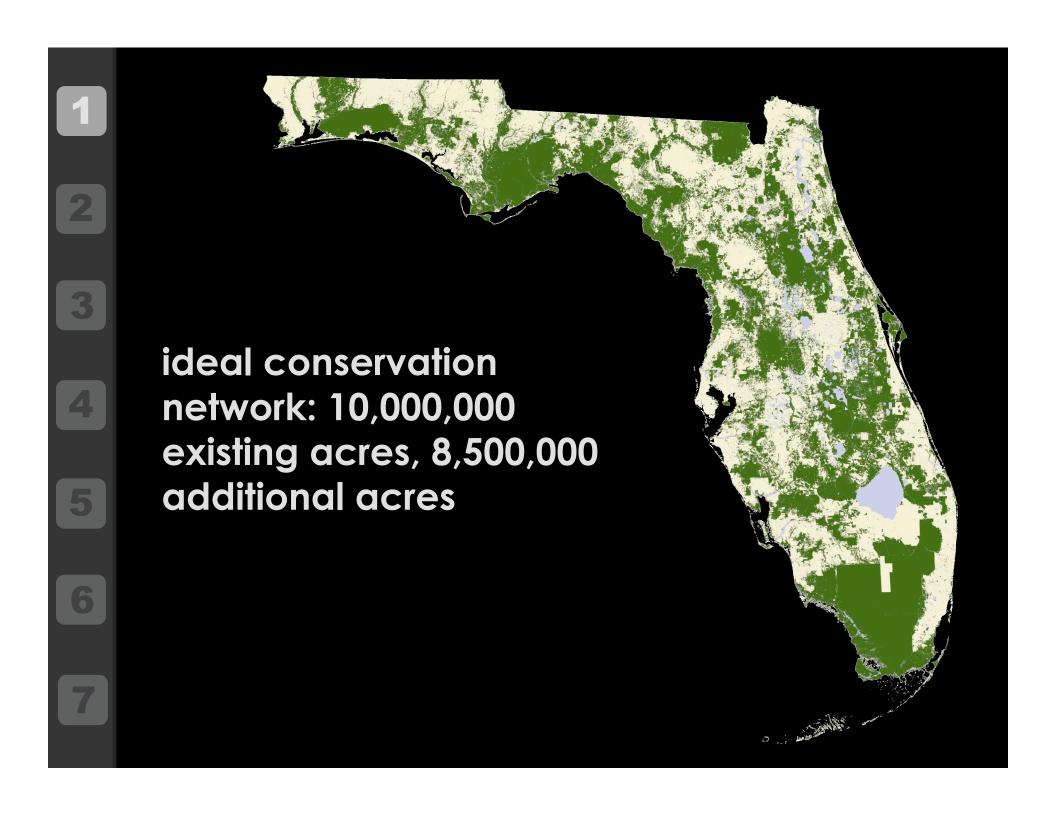
Habitat

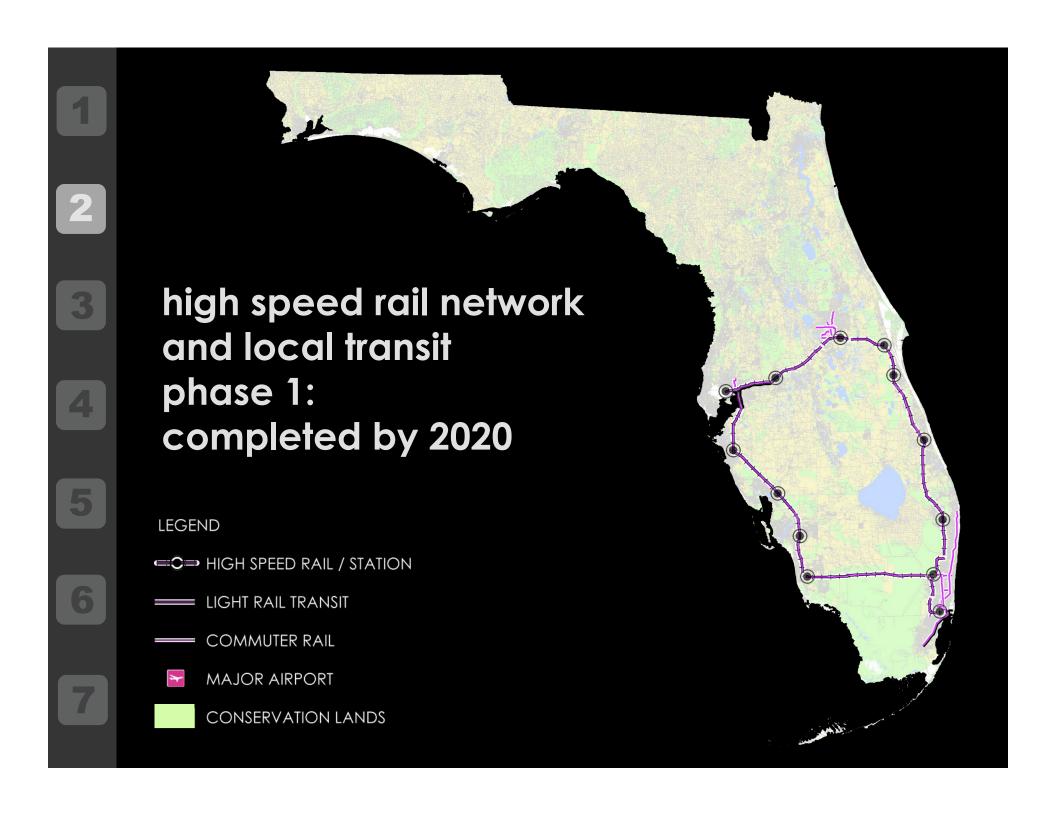
Water

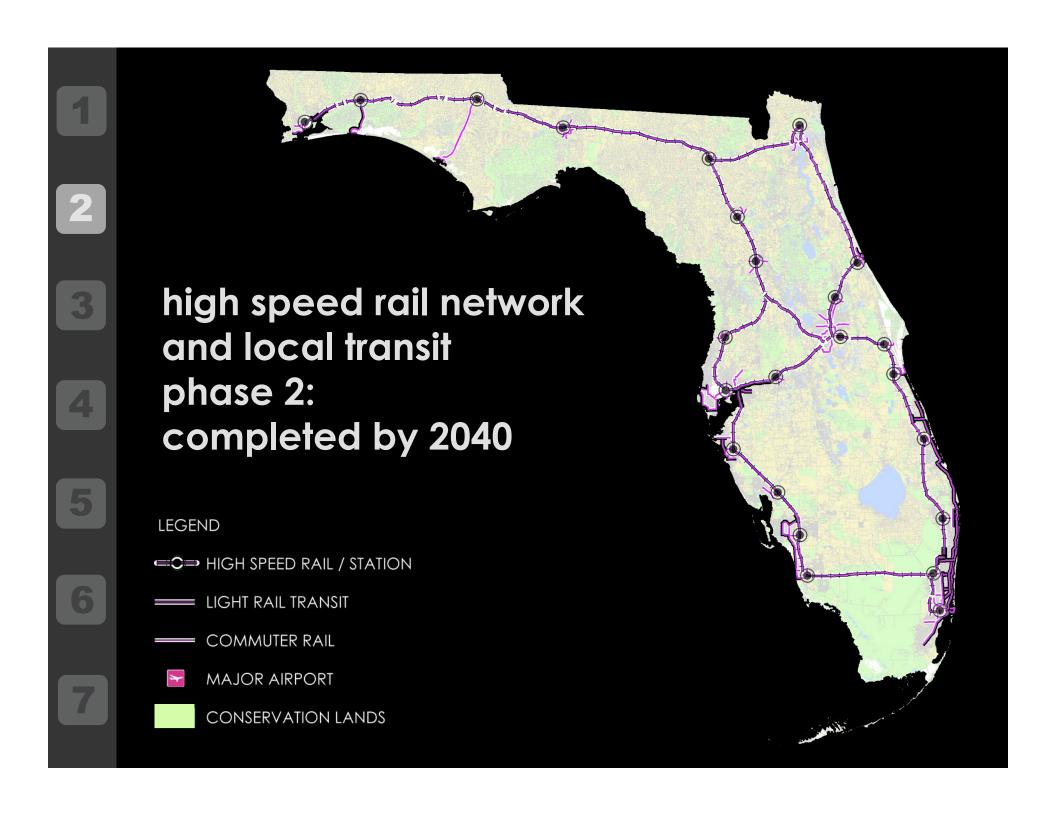
Agriculture

Contiguity



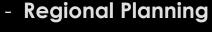








### PRINCIPLES FOR AN ALTERNATIVE FUTURE



Distributed population regionally and used average regional density

- Protect Florida's Essential Land – Design with Nature

Purchased highest priority lands for conservation so that lands could not be developed

- Invest in Balanced Transportation

Included transit corridors and nodes in development suitability

- Plan for Climate Change

Did not allow new development in 2060 sea level rise areas Included changing coast line in development suitability layer

- Don't Waste Land

Regional densities increased to the state average if currently below

Encourage Compact Development – Rebuild to Create Great Places
 Increased densities in transit corridors and nodes











### HOW THE COMPUTER MODEL WORKS

#### 1. Mask:

Existing urban outside of local transit, protected land, water, sea level

#### 2. Suitability:

Existing urban, transportation, water, coastline, DRIs, wetlands

3. Gross Density:
Regional average or 3 people per acre

3







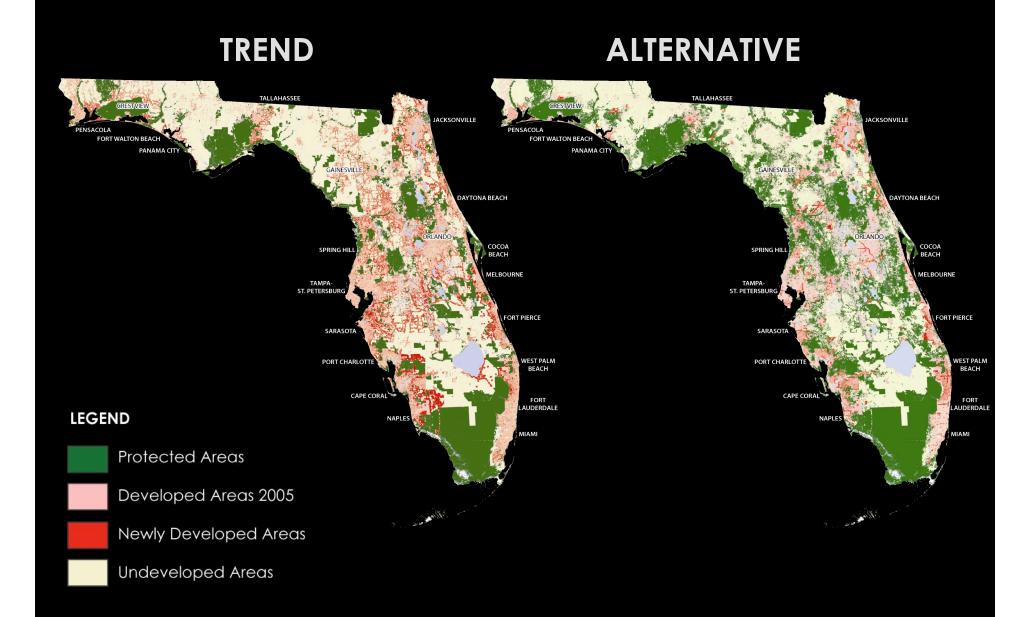
### **URBANIZED AREAS AS OF 2005**



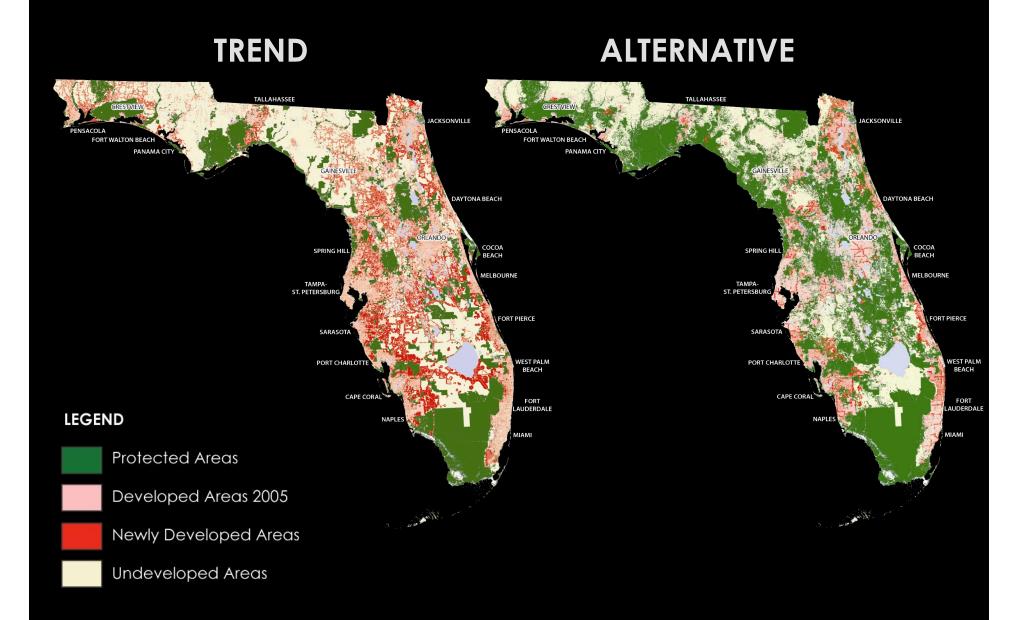
# **URBANIZED AREAS BY 2020**



# **URBANIZED AREAS BY 2040**



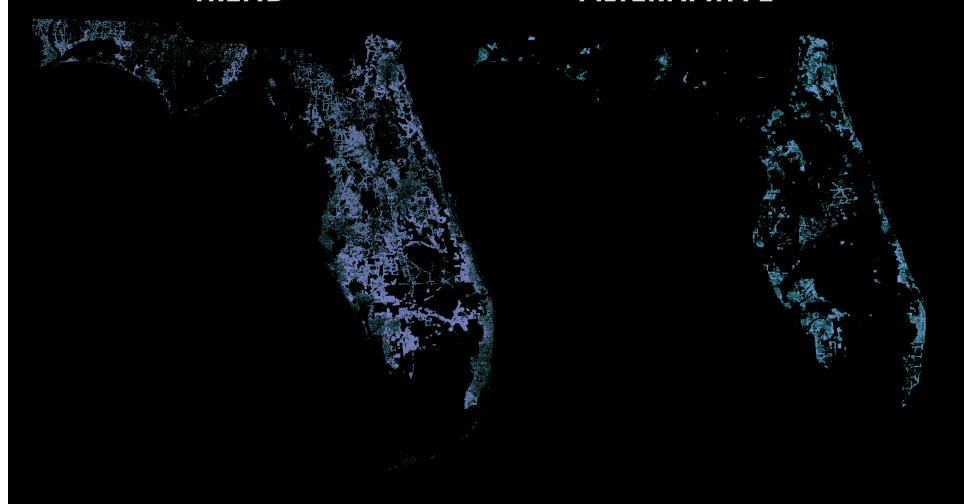
# URBANIZED AREAS BY 2060



# GROWTH DIAGRAMS: 2060

### **TREND**

### **ALTERNATIVE**















# TAKING A CLOSER LOOK

### **WEST FLORIDA: 2005 EXISTING CONDITIONS**

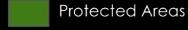
**TREND** 

### **ALTERNATIVE**





#### **LEGEND**





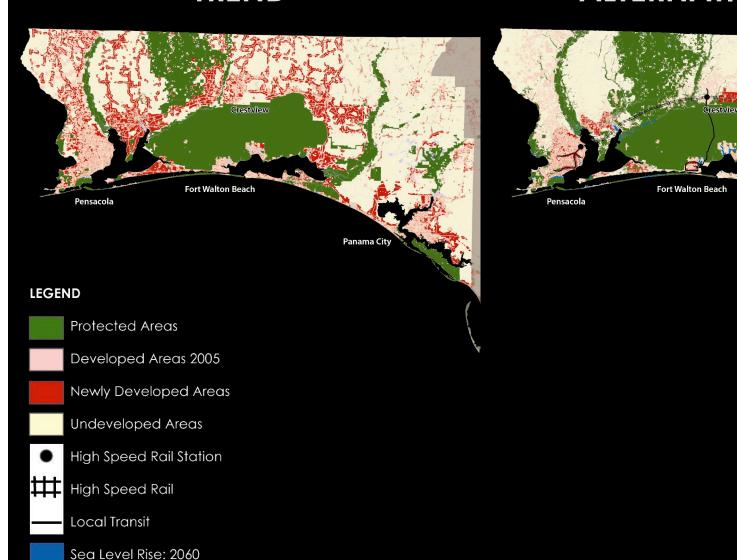


### **WEST FLORIDA: 2060 CONDITONS**

**TREND** 

(0.418m)

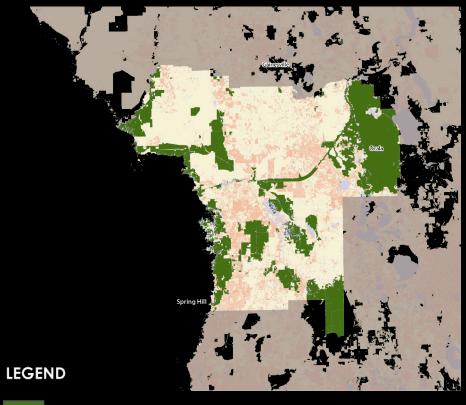
### **ALTERNATIVE**

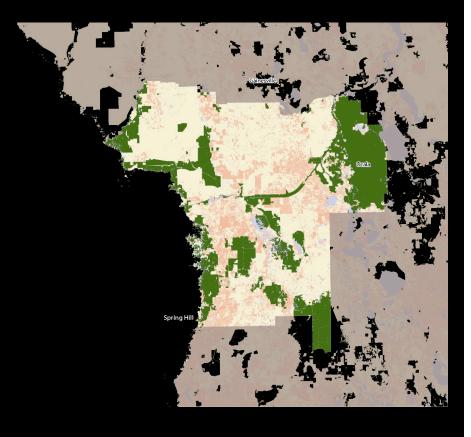


### **CENTRAL FLORIDA: 2005 EXISTING CONDITONS**

**TREND** 

### **ALTERNATIVE**





Protected Areas



Developed Areas 2005



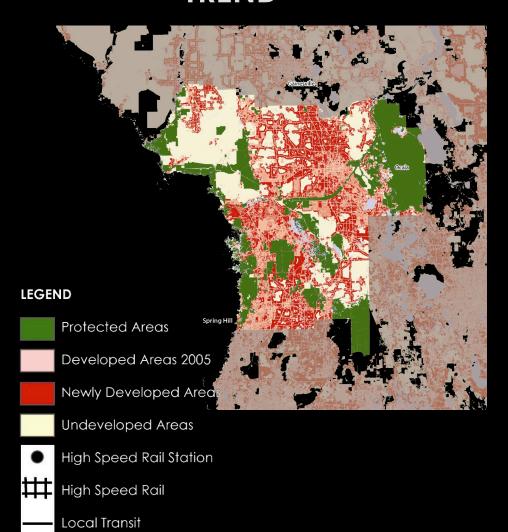
**Undeveloped Areas** 

Withlacoochee Region

### **CENTRAL FLORIDA: 2060 CONDITONS**

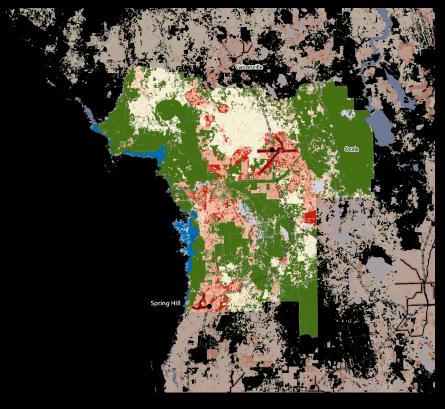
**TREND** 

### **ALTERNATIVE**



Sea Level Rise: 2060

(0.418m)

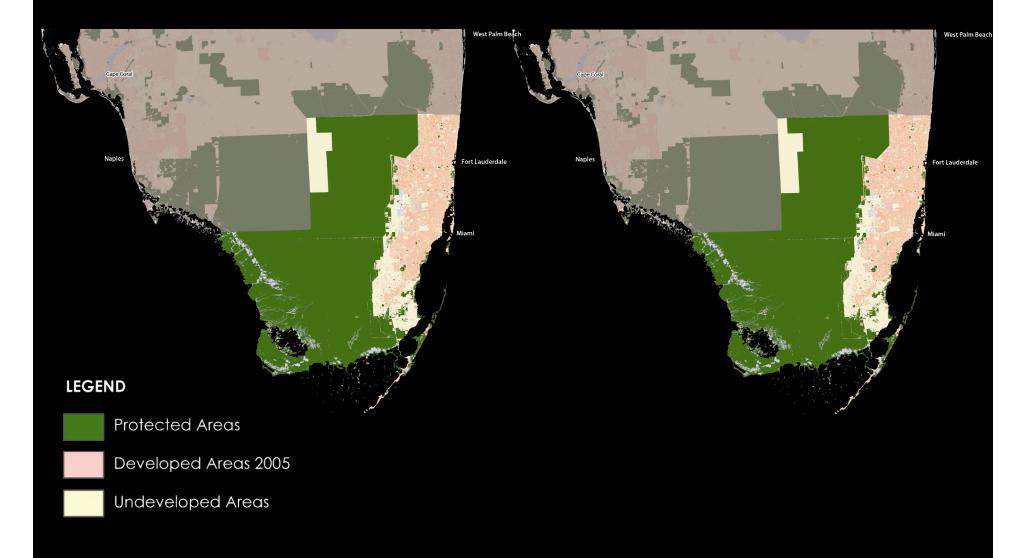


Withlacoochee Region

# **SOUTH FLORIDA: 2005 EXISTING CONDITIONS**

**TREND** 

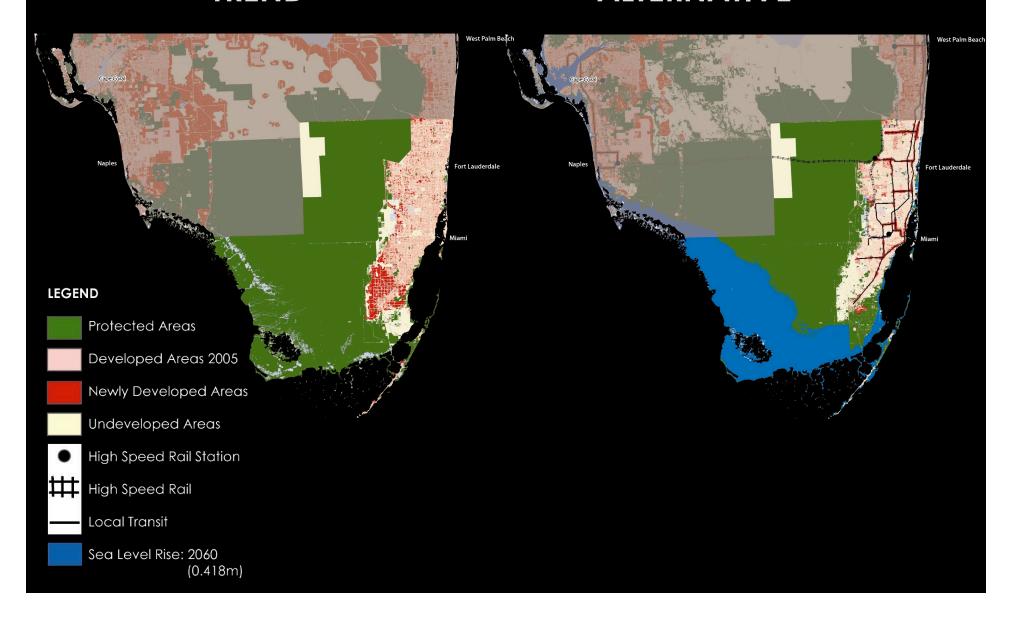
### **ALTERNATIVE**



### **SOUTH FLORIDA: 2060 CONDITIONS**

**TREND** 

### **ALTERNATIVE**





### IMPLEMENTING THE ALTERNATIVE

BY 2020, Florida needs to:

- purchase 2.5 million acres of development rights at an average cost of \$10,000 an acre
- build 556 miles of high speed rail at \$30 million a mile
- build 743 miles of local transit at \$20 million a mile
- build 171 miles of regional rail at \$15 million a mile
- expand 1,068 miles of highway





Totaling ~\$70 billion to 2020, or \$5.3 billion a year







### IMPLEMENTING THE ALTERNATIVE

BY 2040, Florida needs to:

- purchase the development rights to another 2 million acres of the highest priority conservation land, which we estimate will cost an average of \$21,000 an acre
- build another 754 miles of high speed rail
- build another 214 miles of local transit
- build another 32 miles of regional rail
- expand 351 miles of highway



Totaling ~\$67 billion to 2040, or ~\$3.6 billion a year











### IMPLEMENTING THE ALTERNATIVE

BY 2060, Florida will have had to:

 purchase the development rights of an additional 4 million acres to secure the future of Florida's landscape, which will average ~\$33,000 in cost per acre









Totaling ~\$144 billion, or \$7.2 billion a year



		TREND	ALTERNATIVE
_	Land Development	\$700 BILLION	\$174 BILLION
	New Acres Developed	7 MILLION	1.6 MILLION
A	Transportation Modes Offered	HIGHWAYS	HIGHWAYS + HIGH SPEED RAIL LOCAL TRANSIT
	Highways	\$85 BILLION	\$21 BILLION
	High Speed Rail and Local Transit		\$61 BILLION
	Land Acquisition		\$203 BILLION
	Highest Priority Conservation Land Saved	0 ACRES	8.5 MILLION ACRES

### **TREND**

# **ALTERNATIVE**

