

1. Hillary Swain – Ecological Heart of the Heartland

Reviewed the Paleo History – History of everglades

Natural system description

Lake Wales Ridge Sand Scrub – Lake Wales Ridge rare

Hot spot of rare and endangered species in US/ and world

110 miles in length

Much converted for agricultural and urban /suburban development

South end contains the remaining scrub habitat

The Scrub jay is concentrated on the Ridge.

Appropriate for public land management

Massive effort since 1980's for public lands doubled

Many lots available for acquisition

Many listed species on the Lake Wales Ridge

Ridge acquisition program has greatly improved the sustainability of species on the Lake Wales Ridge.

Lake Ridge conservation plan prepared

There are some habitats that only can be saved with public acquisition.

Cannot buy all areas, and is not realistic to have public ownership over large areas of Heartland.

Many endangered areas in Heartland are on private lands, less that 10 % acquired lands with threatened species

Private lands have a role to play in the protection of threatened and endangered species.

Private lands protection potential

Heartland Cattle lands (range lands)

Managed lands – massive change from 1900 to present,

Preserve rare and common species as well

Keeping common species common as a result of rangeland

How to manage this system

Ecosystem services

Supporting, services

- food,
- costs of fertilizer
- public benefits, storage of carbon in ecosystem, limited data collected

Provisioning

- Landowner
- Benefits for public, increase in cattle production
- Costs for landowner, lost opportunity costs increase in cost of land
- Cost to public, last 15 years lost in improved land and range land
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Regulating – flooding- cleans agricultural lands

- Land owner, benefits to public
- Watering, ameliorates some of the cooler times
- Cost to land owner, need to be a genius on how to manage wetlands
- Public, loss of wetlands
- Cultural services, ranch way of life
- It of course goes without saying that economic feasibility limits the amount of what can or cannot be done for land.

Cultural- esthetic, recreational,

- Indian Prairies safari eco-tour.
- Intensification of agricultural operations – increase revenue
- Rangeland environmental services program – (FRESP)
 - Collaborative effort ranchers, WMD, etc
 - Contract with ranchers, to provide services, i.e., water storage, reduction in Phosphorus,
 - Buck Island Ranch, selling increasing acre-feet of water storage, risk may be flooded out in rainy years

- Economic disasters
 - Weather
 - Disease
 - Public health scare
 - regulations
- Offset by disaster payments
- Estate taxes
- Liability issues

Evolving planning mechanisms

- Easements
- Rural lands stewards
- Consider small and wide ranging animals
- Incentives for landowners
- Sustain movement without regulatory

Michelle Harmeling – IHN

Guide for permitting reclamation

Compared C/S east of Peace River 1940 to 2004

Focusing on streams and wetlands

Improve water quality and quantity

Preserve corridors and connect to existing corridors]

Try to avoid fragmentation

Coordinated development areas

Water quality bmps

CSAs and other waste areas to be utilized - i.e. reservoirs

2001 published IHN/CDA management plan

2006 – Updated plan

Attempt to coordinate with land owners, county agencies

2008 42,392 acres owned

Peace River Basin 25,310 acres owned

Examples of Altman tract and C/S and Alafia River State Park, Payne Creek flood plain preserved

Revising and inventorying IHN lands

Attempting to acquire more properties i.e., Tenoroc, more wetlands upper headwaters, and un-impounding water in old CSAs to enhance water flows and quality

Environmental education website

Main goal is ecological enhancement and protecting wild life resources

Protecting archeological resources

Wetland mitigation (38% loss last 40 years)

Land management practices

GIS/GPS development

Public outreach

Future – blueprint for habit restoration

Web site

Dr. Tom Hctor – Looking to 2060 Growth Projection and Seal Level Rise and impact on Natural Systems

Regional growth projection model has not been done for Heartland

FL 2060 base line map general picture assumptions

- Moderate population growth
- Growth continue at existing density
- New population based upon suitability -- schools, roads, water etc
- No new conservation lands
- Co by co

Results

- Doubling of population
- Lower density counties fewer people have greater impact than in high density cos
- 7 million acres consumed 2.7 native, lands
- Considerable development in Hardee and Desoto

SW FL Regional model (mass transit, Beaver moderate projection)

- Three scenarios
 - Base line
 - Redevelopment
 - Composite (redevelopment 10% , light rail, conservation)

Base line like 2060

- Similar to 20 60 model
- Fragmentation
- Loss of agricultural lands
- New urban 1.17million acres

Redevelopment

- New urban less .3 mill acres than 1.17
- Light rail .5 mill urban

Sea Level rise modeling

- Florida not expected to have major temp changes
- Sea level and plate tectonics
- 2.5 feet rise, or 1 meter
- Projection 1, 3 and 6 meter sea level rise
- Most of everglades is flooded 1 meter loss of 20%
- People impacted
 - 1 meter 7.8 million people or 49.1 % of population
 - 3 meter - 9.8 million people or 61.6 % of population
 - 6 meter -11.5 million people or 72.3% of population
- Peace River becomes important ecological corridor with sea level rise

Develop a set of climate e change scenarios

Population growth

Combine together for options to accommodate population and environment

Pat Steed - Break Out Groups Goal writing

SMART goals

Integrity of Management systems

- By 2060 have in place connectivity of targeted conservation and preservation lands on both public and private lands
 - By 2012 reach consensus on the identified targeted habitat / systems (plant and animal) for conservation and preservation (with all stake holders).

- By 2035 the heartland will have 70 % protection of targeted areas.
- By 2060, the Heartland will have restored function to the Preservation and conservation areas through mechanisms (fire, etc) – acknowledged by future Development Policies
 - 2035 the heartland will have restored 50% of critical corridors natural functions.

Management

- By 2035 of the identified critical lands that are in private ownership establish an incentive based programs that will result in a minimum of 50% of these areas being privately managed according to BMPS in an ecologically sensitive manner to promote conservation, preservation and /or restoration.
- By 2035 establish a public access program that is appropriate for that site on all suitable public lands in the heartland.

Conservation

- Keep balance between conservation / population growth lands
- Try to identify the most high value conservation lands, (refine CLIP)
- Funding mechanisms to increase conservation lands/ banking, etc.

March 4th Agriculture same location

Ppt posted on web