ASE is very fortunate to have people committed to both the study of and advocacy for the environment. One of these is a relatively new board member, Susan Faulkner Davis. Susan does the Kite layout, and many of you will remember her for her extraordinary pictures and insight into birds at our holiday program last December.

To encourage participation of our members in educational meetings, ASE offers partial or full scholarships for the registration fee to these events. All you have to do to attain one of these scholarships is let an officer know what you want to attend and how much it costs at least a week before the meeting. Susan and her husband Don attended the Florida Gulf Coast Audubon Academy on Sea Level Rise. She gave a full very informative talk to your board. What follows is her unnerving report.

Paton White, President, Audubon Society of the Everglades

Florida Gulf Coast Audubon Academy

Sea Level Rise: How to be a climate messenger

This was a very informative, all day academy, hosted by Tampa, St.Petersburg, Citrus, Manatee, Sarasota, Venice Area and Clearwater Audubon Chapters.

The first speaker in the morning was **Dr. David Hastings, professor of Marine Science and Chemistry at Eckerd College, St. Pete.** He talked about climate change science and I am briefly condensing some of his hourlong talking points:

1. Climate Change is:

…Happening now

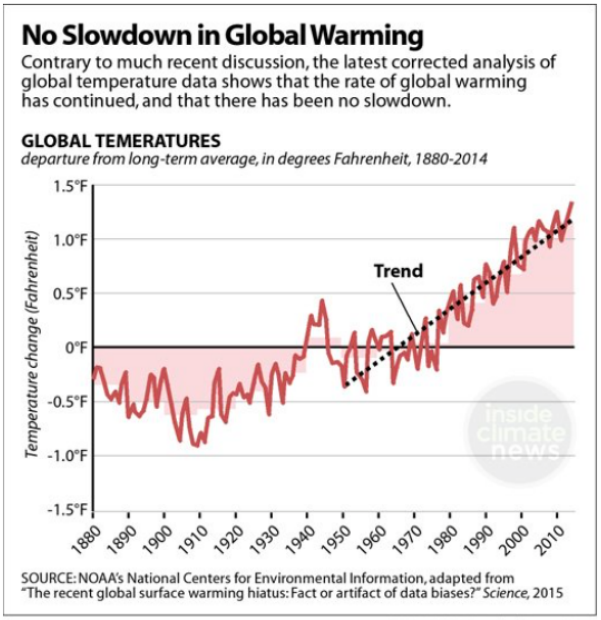
…We are causing it

…97% of scientists agree about climate change

…We can't wait to "fix it"

…We **can** fix it..**if we have the will and start NOW**

2. Disinformation is and has been put



out by the big oil companies.

3. We are going to have to learn adaptation instead of mitigation.

4. Over the past 10,000 years temperature have remained constant BUT, the last 150 years have seen massive changes. **(the spike in the 1940 and 50's was the result of the manufacturing push caused by WWII).**

5. Bloomberg has a great webpage that shows temperature rise. It only shows temperatures to 2014 but 2015 topped 2014 for temperature rise and we are already on track in 2016 to surpass 2015.

http://www.bloomberg.com/graphics/2014-hottest-year-on-record/

6. CO 2 and temperature are related but NOT causal.

7. Heat is increasing more rapidly in the Arctic where ½ of the sea ice has been lost since 1980..of the ice that's left, there is only 1/5 of the 1980's volume..so the ice pack is also getting thinner.

8. Less ice means less heat reflected back into space so the planet warms…a vicious cycle.

9. Scientists are CONSERVATIVE by nature. They now agree that their estimates of sea level change may be wrong (**underestimated)** by a factor of 3.

10. We are seeing the effects of global warming: ocean acidification, saltwater intrusion into freshwater, coastal flooding resulting in property loss (there are insurance estimates that Miami will suffer a 2.5 billion dollar loss of property by 2050), more intense TS's and hurricanes to name a few.

So What Can WE Do?

Personal Solutions:

… install solar

…eat less meat (meat production is 30% of all greenhouse emissions)

…drive and fly less

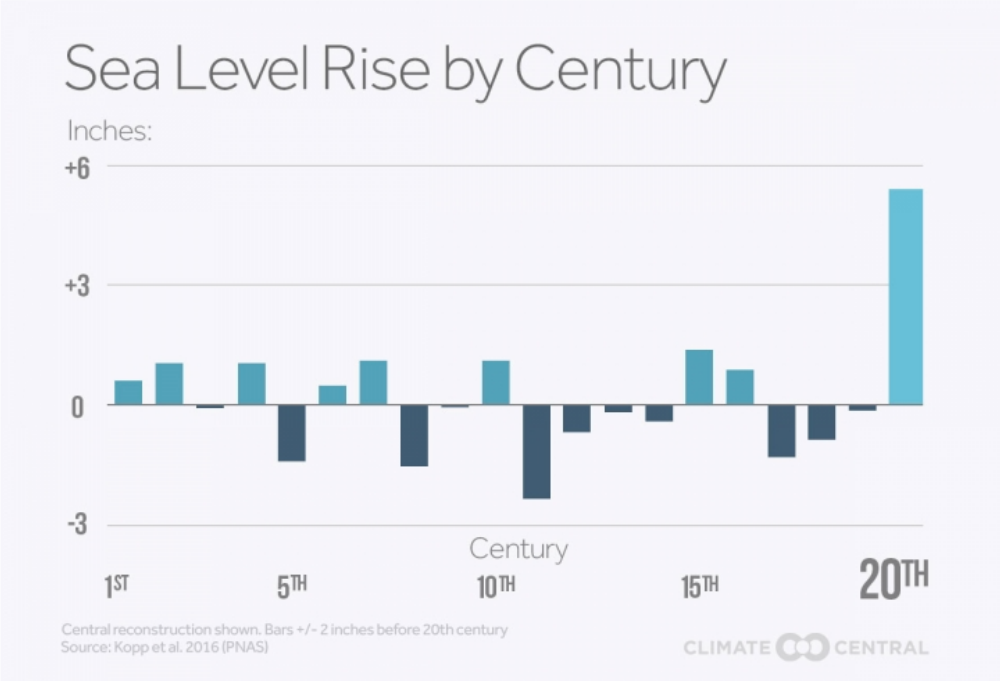
Structural Solution:

…speed up transition away from fossil fuel and put a price on carbon

WE must do this NOW

The second speaker was **Dr.Mark Hafen,** he is a scientist and an urban planner, **Assistant Director at USF's School of Public Affairs**. His specialties are Urban Environmental Policy, Climate Change and Sea Level Rise and Wetlands. He spoke about coastal planning for climate change. Some of his talking points were:

1. We must act now to effect change but also plan ahead and adapt to the rising sea levels.
2. In the US, 23 million people live in "low coastal zones" areas that are 33 ft above sea level or less, also 10 % of the global population lives here..
3. By 2025, 6 BILLION people will live in these "low coastal zones".
4. Coastal zones are VERY resilient when left undeveloped..BUT that's not the trend.
5. We must try to regenerate these coastal zones.
6. Climate Central has a good research tools if you are interested in learning more about sea level rise ***http://www.climatecentral.org***



7. Here's what can be done, aka "Planning Strategies":

…help to guide development away from high risk coastal areas by getting involved and going to city management, city planning meetings

…plan ahead for recovery

…preserve and restore natural coastal infrastructure

…promote a diverse local economy. What if the entire economy is wiped out by a storm or coastal sea rise?

…create resilient and decentralized infrastructures, use solar panels on roofs

…locate critical facilities away from high risk areas (in Tampa, Davis Island is home to Tampa General Hospital..a high risk choice)

…design homes and buildings for passive survivability: solar, cisterns, triple pane windows, homes positioned and designed to catch prevailing winds.

…try to engage the local community in acting. planning

8. Planning Tools for survivability:

…remove zoning and subdivision ordinances about lawn irrigation

…require “coastal setbacks” for homes built along coastal areas..leave the dunes intact

… promote land and property acquisition of coastal areas to restore the natural defenses.

…Some engineering tools that can be used: Barriers (the Dutch solution) and Vertical retreat; build up, not out.

In the afternoon, **Ann Paul, head of Audubon Coastal Islands Sanctuaries** spoke. A summarization of her talk:

1. At least 314 birds are at risk from climate change in the US alone.
2. ALL coastal birds will be affected by as little as three feet of ocean rise.
3. Birds help us tell the story, they are humanities’s “canaries” once again.

To help birds we must

1. Protect birds now!
2. Protect undeveloped shorelines, work to restore altered shorelines.

3. Go solar, advocate for and use alternative energy, slow the change and design the future.
4. SHARE THE WORD…many remain in denial. Increase the team working on this problem.
5. Support the people who will lead us to the best possible future!

We learned about ADVOCACY

1. Go to city and agency planning meetings.
2. Look at their websites to get an idea of what the various departments do, what they are responsible for and who does what.
3. Make sure the person/agency you go to is responsible for the issue you are concerned about.
4. When you go to advocate for an issue, have a plan, take other people with you, be concise and polite.
5. if you're unsure who you need too talk with, ASK - "I've identified a problem and need to know who I can talk to about finding a solution".

Things we, as an organization, can do:

…have a series of panel presentations (4 or 5) at a library or city hall about environmental issues, help to educate new and old Floridians.

…invite city councilmen or commissioners to go out to visit the nature they represent..get them into the field!

…attend local planning commissions as they deal with actual proposed land use.

So, why birds? Economics, just think of Florida without its beautiful natural areas. Birding is BIG business, the second largest hobby. **Birds are indicators of a healthy environment.**

RESOURCES:

www.FloridaClimateMessenger.com there are a series of videos here from AUDUBON about climate change and a climate messenger Toolkit to use when we are planning to educate and inspire people to help us all.