The following suggestions were provided by CFE at the June 2013 meeting:

- Include an executive summary at front of the report [Sassaman]
- Include specific recommendations in the "What You Can Do" section; not just links to other websites (e.g., list of native plants) [O'Connor]
- Include "What You Can Do" information as part of the executive summary (rather than waiting until end of report) [O'Connor]
- Consider including trend data on local bird, amphibian, and mammal populations, rather than including just the rare plants and animals; See ebird website [Hintz]
- Recognize County's landfill methane gas capture and reuse at UNC [Sassaman]
- Speak to Blair Pollock about environmental indicators for solid waste; see also recycling data contained County's solid waste plan, available on line [Sassaman]
- Acknowledge the recommendations at front of the 2009 SOE; indicate whether there was any progress for each [Niezgoda]
- Include potential effects of fracking on Orange County [Sassaman, others]
- Consider including info./restrictions about owning exotic animals [Niezgoda]
- Consider including a summary scorecard of some kind in the execute summary

The following suggestions were provided by CFE at the August 2013 meeting:

- Change the Air Resources section to Air and Energy Resources [Buckner]

- Identify any relationship to the 2030 Comprehensive Plan and progress made to implement County goals and objectives [Buckner] Munkittrick said he included several references to the comprehensive plan, but that more could be added.

- The introductory letter from CFE Chair could also reference Comp. Plan [Hintz]

- The icons used to convey current trends blend into the photo background; would help to include a border or "halo" effect; make arrow light color. [O'Connor, Cada]

- Add text above and below the trends icon (e.g. Good; Getting Better) [Hintz]

- Include summary table (or "scorecard") of trends/icons for all of the environmental indicators; include with executive summary [Buckner]

- Improve the format of headings and links for "What You Can Do" [O'Connor] Shaw asked CFE members to provide ideas for new/better links to information.

- Who determines how to characterize/summarize the status and trends for a particular environmental indicator? [Buckner] Shaw asked CFE members to evaluate the data and provide their assessments and any recommendations.

- Why was specific conductance chosen as an indicator of water quality? It may oversimplify overall water quality [Becker] Davis said it was recommended by DWQ staff. Neal asked Water & Biological Committee to make recommendation.

- Air and Energy Resources section should include metrics from the greenhouse gas inventory if feasible. Should also highlight County's innovative energy conservation projects, such as green building initiatives, landfill gas pipeline to UNC, solar arrays, and geothermal well projects. [Buckner and Neal]

- Include graphic showing where county residents get their energy; also info. about WISE program, LED streetlights, public green buildings [Buckner]

- Search for data on how many residents produce green energy or participate in green energy programs like NC Greenpower; number of households that have applied for tax credit for green building facility; provide links [Neal]

- Ask energy utilities how many households are above or below average for energy consumption [Hintz]

- Include references to climate change in narrative or Chair's message [O'Connor]

- New public school science curriculum has climate change requirement [Hintz]

- Clarify rankings for the status of rare plants and animals [Hintz] Neal asked the Water and Biological Resources Committee to consider, make recommendation.

- Include information about food disposal/composting in Land section [Becker]

- Include information about local food and farms, such as the number of farms, farmers markets, CSAs, etc. Also highlight Piedmont Food & Agricultural Processing Center (PFAP), farm incubator (Breeze), County's pledge of 10% local foods, reductions in bee populations & plant pollination [Buckner]

- Consider including an environmental justice component [Neal & Cada]

- Consider translating document into Spanish; use Google translate? [O'Connor]

- Don't include both tables and graphs for same dataset; choose one [Jones]

- Include some photos of urban areas in Orange County [Buckner]

- Include photos of model building projects, such as NC Botanical Garden, new school buildings, geothermal well project, etc. [Hintz]

- Summarize where we are with waste management in county; how much energy is used to haul waste to Durham? [Becker]

- Consider having an external reviewer/editor [Buckner] Shaw said Bill Kaiser has offered to serve in that capacity.

Loren Hintz's comments via email (August 13, 2013):

1. On maps make highway numbers larger (will electronic version allow larger map?)
2. On graphs using different colors also use thickness of line or symbols .... ----- etc so black and white photocopies can be read
3. Place year by hatch mark on graphs
4. Air quality - add buses to automobiles and trucks; mention the health damage of pollutants besides ozone; mention that many air pollutants originate from the west; explain size of micrometer in inches and mention health effects; name greenhouse gases in this section?
5. Land resources - what does watch 1-7 mean? is w1 or w7 the worse? Are all listed species found in Orange County? Pin Oak is often used as a street tree but is listed as W1. Did group decide not to use reference to birds? Also mention animal pests: Emerald Ash Borer. Mention web pages New Hope Audubon, Triangle Land Conservancy, Garden Club etc.
6. Mention link to "Muddy Water" Bolin Creek, Morgan Creek, Eno River Groups; Jordan Lake rules; etc.

David Neal's comments via email (August 13, 2013):

1. The pictures should include some of our county's denser, walkable urban areas, more transit pics, or otherwise include paved areas (with regard to water quality and storm water runoff) as part of the mix of environmental concerns.

2. I also agree that the "what you can do" sections should be prominent, should have more than links, and should include calls to civic action to change policy (to the extent that is appropriate for this body to do).

3. On the plug-in electric vehicle debate, I think Malcolm is right. Cars can be plugged in at night during off-peak periods when even our bad coal power is under-utilized and when emissions don't contribute to ground-level ozone. From a greenhouse gas perspective, the reporting that I have seen has concluded that plug-in electrics are better than internal combustion cars:

   http://www.greentechmedia.com/articles/read/smokestack-vs.-tailpipe-how-clean-are-electric-vehicles

   http://mediamatters.org/research/2012/02/08/myths-and-facts-about-electric-cars/185798

4. Tailpipe emissions are harder to control than point source emissions, and, if current trends continue, less and less coal will be in the mix.

5. I agree with Terri that including language about locally-focused, truly sustainable economic development that allows people to work close to where they live.

Terri Buckner's comments via email (August 13, 2013):

1. Did this recommendation come from CFE? "The County must commit to completing a greenhouse gas emission inventory every five years, so as to assess its progress toward meeting targeted reduction levels." Personally, I think it needs to be collected annually (ongoing). It's too big of a job to do on a 5-year schedule.

2. On the Air Quality chapter, I feel like the section on "what you can do" needs to be something other than a bullet list. To me, personal actions are always the most important section of any report. The placement--in the middle of a discussion of what the different pollution sources are--causes it to get loss as well as the format.

3. Regarding the sections on pollution from commuting, shouldn't we acknowledge the role of local economic development? People commute because there aren't sufficient jobs close to where they live.

4. I question this sentence: "PEV adoption forestalls degradation of air quality, since electricity production produces less air pollution than fossil fuel usage in most internal combustion engines." Electric production in NC primarily uses coal as it fuel source. From a sustainability perspective, I feel like PEVs are a cop-out but that's just my personal belief.

5. Land resources (How Can Orange County Improve?): "Continue working with its conservation partners to achieve the protection of at least 10% of the land in Orange County by 2010." "Continue working with conservation partners to achieve the permanent protection of at least 10% of the land in Orange County by 2010."
6. 2010 was 3 years ago.....

7. "MSW does not included industrial waste, which is typically disposed of in a separate facility." Typo--should be MSW does not include industrial waste....

8. I didn't see anything in the report about UNC's methane collection at the landfill or about OWASA's methane collection program....not sure if it should be in the recycling section or air resources.....

9. Biosolids....great job!

10. Lastly, all the photographs in the report are from rural areas. Given the growing expanse of the urbanized environment, I think it's important to include urban photographs, representing that environmental issues are just as important in cities as they are in rural areas (probably more important in some ways).

Jeanette O'Connor's comments via email (August 13, 2013):

1. I thought the graphs you included were much better than what we saw in the last SOE report - simple, easy to understand, useful. The only one I had a problem with was the graph on page 10 in the Air Quality section, which didn't make any sense to me.

2. I really liked the placement of the "what can you do" suggestions. How were the different links chosen? I haven't looked through all of them, but I think better options exist for at least some of them. For example, on page 26 where it says "plant a garden," there are hundreds of sites we could link to that don't sell products. I think it sets a bad precedent for us to be sending people to sites that want to sell something - if we're going to do that, we should at least try to find a site tied to a local business. Additionally, we should be encouraging people to plant ecological gardens as much as vegetable gardens, since the topic is conserving and caring for the county's land resources. I'm happy to provide some other links, but wasn't sure what the criteria was for choosing where to send people.

3. Can we add to the overview on page 47 in the Land Resources section the fact that native plants are important for the continued health of many pollinators, who play a critical role in our own food production? I think people less inclined to care about the health of the planet need a more personal reason to start paying attention, and the link btwn. pollinators, native plants, and our food can serve that function.

4. I don't know if you're making the GIS maps or if you're pulling them from the county or state, but I think the map on page 6 in the Demographics section is going to be almost pointless for the general citizen. Is there any way we can get a cleaner map, like the one on page 35 in the Land Resources section?

5. How were the 12 species pictured on page 48 in the Land Resources and on page 61 in the Water Resources section chosen? I think it would be most useful to choose plants out of those listed by DOT that people often plant in their yards or see planted around town. If the 12 pictures are those plants, then great. But if not, maybe we should consider finding that out. For instance, I see A LOT of sacred bamboo planted in neighborhoods, as opposed to species like kudzu, which (as far as I know) no one is likely to plant anymore.

6. I had the same thought as Terri regarding how "PEV adoption forestalls degradation of air quality, since electricity production produces less air pollution than fossil fuel usage in most internal combustion engines." While I think there are merits to electric cars, we shouldn't spread the idea that the electricity powering them is from renewable resources. Unless the stations are using solar panels or wind turbines, those cars are still technically burning fossil fuels, even if they're burning less than a conventional car.