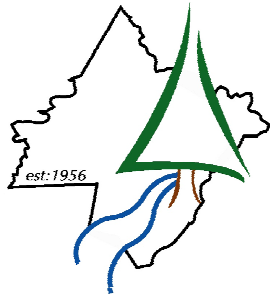


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Conservation Horizons

Pike County Conservation District

Global Warming is a Real Threat to our Fishing

Adapted from PA Fish and Boat Commission's Executive Director, Dr. Douglas Austen's, "Global Warming is a Real Threat to our Fishing," Pennsylvania Federation of Sportsmen's Clubs On Target – November/December 2007

Open any newspaper or scan the Internet and it's almost guaranteed you'll run across some article about global warming – remarkable reductions in the extent of glaciers, sea levels rising, loss of ice on lakes that dramatically reduce our ice fishing season, or new invasive species moving into areas that previously were too cold. The conclusion is inescapable. Global warming is a reality that we must address in our efforts to protect, conserve and enhance our natural resources.

Certainly there is a cadre of people out there who are predicting gloom and doom. Conversely, there are some who adamantly deny the existence of any significant global climatic shift – or at least would argue man's role in it. As with any issue of this magnitude, we cannot let the fringes misdirect us or give us an excuse to not attempt to gain a fuller understanding.

I'd like to share what I have learned from the experience of working with fisheries and wildlife professionals throughout the country. The situation was a panel of agency directors, one each from the Northeast, Southeast, Midwest, the West, and also Alaska's director. The setting was the annual meeting of the Association of Fish and Wildlife Agencies (AFWA), the umbrella organization for state natural resource agencies representing our interests in Washington, D.C. and working on state partnership issues.

In my role of speaking for the Northeast, my staff and I prepared by contacting all of the northeast states and the Canadian provinces from Ontario to the Nova Scotia. We asked for their position on global warming, policies that direct their agency, and how their management is being affected, if at all, by global warming. Throughout this process we also canvassed the literature and looked for reports that project what will happen and provide guidelines for response.

Right up front it was clear that every state natural resource agency recognizes that global warming is real and that we need to take it seriously as a management challenge. This wasn't a message from non-biologist bureaucrats being swayed by movies such as Al Gore's "An Inconvenient Truth." This message was by field biologists who are observing and seeing, firsthand, alarming changes in Alaska and dramatic ecological shifts in Arizona.

It is at these fringes, either the Arctic areas or the desert locations, where the effects will be the most dramatic and first noticed. There were also other signals that were brought up time and again. For example, diseases and invasive species have moved north as the winter low temperatures have become less severe. All of this has made the vague concept of a worldwide climate shift a local reality for the agencies responsible for managing the resource. We need to understand what is happening and be prepared for what it will bring to each of our states.

That said, there certainly is a great deal of room for better understanding. There is substantial fog surrounding the various model predictions for how fast warming has or will occur. The predicted effects in some areas will be greater than others and the detail of the models make it hard to say how changes will affect specific areas.

So, what should natural resource agencies do? Do we change our current management in anticipation of impending changes? Should regulations be adopted that reflect potential future scenarios?

It was with these questions that we all struggled. Without knowing specific effects for a particular area, it is hard to create management plans. Thus, the mid-latitude states such as Pennsylvania are finding it to be a difficult challenge developing appropriate responses.

It strikes me, however, that resource agencies already have some tools in our arsenals. For example, many of the effects that global warming will produce in the coming century resemble the same general type of impact on streams as urbanization has had over the past century. We have already experienced warming of the water, due to loss of riparian vegetation. We have witnessed stream flows become unnatural as a result of impervious surfaces (e.g. parking lots) producing higher flood flows and more extensive low flows. Nearby groundwater recharge areas have been replaced with houses and strip malls. The net result has been the loss of species, degraded water quality and, almost certainly, loss recreational opportunity.

It really is the same suite of on-the-ground responses for urbanization that will need be applied with even more vigor to address global warming impacts on waterways- protect riparian

areas, reduce impervious surfaces, prevent sprawl as much as possible, and maintain or improve in-stream habitat. These are good things, regardless of the nature of the insult upon the land.

The U.S. Environmental Protection Agency lists the following potential water resource impacts of global warming:

Northeast Region – Decreased snow cover amount and duration; Possible large reduction in streamflow: Accelerated coastal erosion, saline intrusion into coastal aquifers; Changes in magnitude, timing of ice freeze-up/breakup, with impacts on spring flooding; Possible elimination of bog ecosystems; and Shifts in fish species distributions, migration patterns.

December Question: Why does drinking water often look cloudy when first taken from a faucet and then it clear up?

December Answer: The cloudy water is caused by tiny air bubbles in the water similar to the gas bubbles in beer and soda. After a little while, the bubbles rise to the top and are gone. This cloudiness occurs more often in the winter when the drinking water is cold.

January Question:

According to a statewide survey on behalf of the Pennsylvania Federation of Sportsmen's Clubs and the National Wildlife Federation, what percentage of hunters and anglers in Pennsylvania say they have already witnessed changes in climate where they live, such as warmer, shorter winters, hotter summers, earlier spring and less snow?