

Environmental Change

Prepared by John F. Katers



Overview

The change factor that I have been asked to discuss is the environment. For the purposes of this paper and the associated conference presentation, I focused on the physical environment, which includes the water, air, and land that makes up our immediate surroundings, as well as the community infrastructure necessary to provide basic environmental services and protection. From my perspective, a quality environment is necessary for our immediate survival, but also our long-term personal well-being. In addition to the environmental indicators found in the Life Study, there are numerous scientific methods and data sets available to measure and analyze the overall quality and trends of the local environment. One such example would be NEW Water, which has decades of data on water quality in Green Bay.

The environment in Brown County and the surrounding area has changed significantly over time, with the most significant changes (negative and positive) occurring in the last 100 years. These changes were largely associated with economic development activities in the region that were tied to the industrial, agricultural and chemical eras. Prior to implementation of major environmental regulations in the 1970s, which led to a command-and-control approach, environmental protection was largely voluntary and resulted in significant environmental degradation. The command-and-control approach was effective in addressing multiple environment problems through the passage of the Clean Air Act, Clean Water Act, RCRA, CERCLA, TOSCA, etc. During the command-and-control era, there were confrontations between industry, regulators, academia, NGOs and the public. However, the local environment started improving in the 1970s and 1980s - gone are the days of “perfume boats” on the Fox River to mask the odor from a highly polluted system, yet there are still fish consumption advisories that will be in place for the near future. Starting in the 1990s, the command-and-control approach gave way to a more collaborative approach that included an emphasis on pollution prevention, waste minimization, recycling, carbon footprint, life cycle assessment, and corporate social responsibility. Although some environmental legacies like PCBs in the Fox River are still present, the final year of the PCB cleanup project in 2018 will be a significant milestone, which then begs the question of what is next? Despite the substantial advances made in the last several decades, environmental issues associated with ground water and surface water pollution continue to be of concern to local residents, with the current spotlight shifting toward nonpoint pollution from large-scale agriculture.

Key Stakeholders

Everyone has a stake in the local environment, as we are all dependent upon water, air, energy, food and waste management. Historically, the state of Wisconsin has been a leader in the environmental movement, having strong connections to icons like John Muir, Gifford Pinchot, Aldo Leopold, and Gaylord Nelson. By their very nature, environmental issues are interdisciplinary, requiring consideration of the environment itself, but also the technical, economic, social, and political ramifications of any “solution” this is proposed. Based on my experience, the technical and economic solutions are often more easily attainable than the political and social solutions. There are many locally engaged stakeholders with a long history of collaboration and success. County Executive Troy Streckenbach has also been very active in addressing environmental issues by bringing key stakeholders together, as evidenced by his formation of the Phosphorus Committee and the Zero Waste Committee.

Trends

As demonstrated by the results of the LIFE Study, there was continued satisfaction with the quality of the natural environment (80% rated as excellent or good), as well as positive change in several categories:

- Perception of Drinking Water Quality (80% excellent or good, up from 77%)
- Perception of Air Quality (72% excellent or good, up from 62%)
- Perception of the Quality of Rivers and Lakes (50% excellent or good, up from 45%)

However, there are also several ongoing areas of concern, most notably with perceptions related to addressing emerging environmental issues (45% rated as excellent or good), and although there was a positive change in perceptions related to the quality of rivers and lakes, this still remains problematic and has led to increased scrutiny of nonpoint pollution. This increased scrutiny of nonpoint pollution has subsequently led to concerns related to the urban/rural interface, land use management, the proliferation of large farms (CAFOs) and the associated issues of manure management, etc. In rural areas that depend on wells for drinking water, there are immediate concerns with water quality, while in urban areas the immediate concerns are more closely associated with surface water quality (algal bloom, anoxic zone in Green Bay, etc.).

Stated Plans

The Green Bay region is in a good position in terms of meeting the basic environmental needs of current and future populations, as the Green Bay Water Utility, NEW Water, and Brown County Port and Resource Recovery all have solid infrastructure in place, ongoing improvement projects, or plans to upgrade existing infrastructure. Therefore, the basic environmental needs of the community should be well met for the near future.

Emerging Issues

There are several emerging short-term and long-term issues that need to be considered:

- Drinking water quality in rural areas
 - Impacts of agriculture (current scrutiny on large-scale agriculture – CAFOs)
- Surface water quality
 - What is next after the Fox River PCB remediation project is complete in 2018?
 - The Fox River and Green Bay are still compromised by excessive nutrient loading
- Land use management
 - Urban/rural interface (ex.: recent controversy on the location of a manure pit)
 - Future of agriculture?
- Recycling and resource recovery
 - Management of organic wastes
 - Goal of zero waste?
- Renewable energy generation
 - Anaerobic digestion (potential step in addressing manure management)
 - Wind turbines (conflicts related to health concerns of residents and the lack of scientific consensus)
 - Hindered by low electrical rates for power purchase agreements
- Impacts of climate change
 - Warmer winters and nights (impact on agriculture)
 - Changing lake levels
 - Water quality issues (water temperature, prolonged periods of stratification, etc.)
 - Reduced ice cover