

5. Environment

Land use decisions and infrastructure investments have the power to greatly affect the quality and sustainability of our natural environment. The consequences of haphazard or undirected development can linger for generations and their effects can be profound. Morgantown sits in a region known for its natural beauty and its residents are eager to protect those attributes for generations to come. The chapter outlines a series of mitigative and protective measures aimed at maintaining environmental quality and conserving natural resources.

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A. Goal

Protected natural areas, efficient use of energy resources, healthy waterways and clean air.

B. Key Findings

This section summarizes key points raised during the public meetings and found from the technical analysis conducted for Crossroads. The objectives and strategies outlined later in the chapter are shaped by these ideas.

Public Input

The following themes highlight the most commonly expressed ideas from small group discussions and surveys conducted during the public meetings.

Preserve open green space and the urban tree canopy. For both environmental and recreational interests, residents voiced an interest in retaining or increasing the amount of green space in the city and protecting natural areas in the county. Developed areas should have more landscaping, particularly native plants and trees that thrive in urban areas and help to mitigate threats to waterways and air quality.

Improve air and water quality. Concern about the area's air and water quality (largely with respect to industrial activity) was a strong theme from public input. Efforts should be undertaken to protect these resources.

Reducing waste. Residents expressed a strong desire for reducing waste throughout the city by encouraging recycling and residential composting.

WV Code Compliance

This chapter addresses the following topics required by the West Virginia Code:

- Environmental
- Conservation
- Natural Resources

Conserving energy. Along with reducing waste, conserving energy was a strong theme. Suggestions include improving the efficiency of public and private buildings and promoting the use of alternative sources of energy such as small-scale wind and solar, or other new technologies.

Single stream recycling should be expanded to all Morgantown residents. The recycling program that was implemented in Morgantown on October 1, 2012 should be expanded to all Republic Services customers in the greater Morgantown area.

Existing Conditions and Trends

The following themes were distilled from the technical analysis of the existing conditions and trends and represent the most important points.

Urban run-off and combined sewage overflows are a threat to water quality. In many of the older areas of Morgantown, stormwater and wastewater flow in combined sewers. Major rain events can overwhelm these systems causing untreated sewage to discharge into waterways such as Decker's Creek and the Monongahela River. While these events occur infrequently their effects can linger long after. The increase in fecal coliform bacteria decreases the dissolved oxygen of the stream and greatly reduces its overall health.

Large areas of impervious surfaces in developed areas combined with the region's topography, accelerate the run-off of water during large rain events. In areas with combined sewer systems, this runoff contributes to the overflow threat. In areas with dedicated stormwater systems, the runoff flows rapidly into streams carrying sediment and pollutants and ultimately decreases the health of urban waterways.

Acid mine drainage (AMD) is a recurring issue affecting surface water quality. When pyrite is exposed in mining operations to the water infiltration or direct run-off it reacts to form sulfuric acid. This dissolves through rock layers to free heavy metals such as lead. This lead is in turn carried into the stream, lowering the pH significantly. This is a major issue for many streams in West Virginia including Deckers Creek. As the creek runs through the abandoned Richard Mine area, it picks up these heavy metals and takes on a reddish hue. The low pH is toxic to many of the streams organisms and greatly reduces its overall health.

Air quality is a concern. As a state, West Virginia has the highest levels of deaths per capita associated with air pollution. The emissions of coal-fired power plants (as well as motor vehicles, diesel trucks and industrial

processes) coupled with the hilly topography of the region contribute to higher than normal levels of ground-level ozone, sulfur dioxide and fine particulates. Morgantown's overall ambient air quality, which is based on the levels of six different pollutants, ranks near the middle of the West Virginia's cities. Its levels for ozone measured between 2008-2010, are fifth worse in West Virginia but still within ambient air quality standards set by the EPA. Its levels of sulfur dioxide are also fifth among large cities in the state, and exceed EPA standards. Both of those metrics have steadily improved over the past two decades, but they remain a concern.

Fine particulate air pollution is another major concern in many parts of West Virginia including Monongalia County. Fine particulates are created from fuel combustion and are linked to a variety of serious health concerns. The latest measurements (averaged over three years) are just within standards set by the EPA. However, at times the fine particulate levels have exceeded those standards. In 2004, the EPA proposed designating Monongalia County and neighboring Marion County nonattainment areas for fine particulates. The nonattainment designation would implement a series of clean-up measures to bring the areas back into attainment. Among other requirements, the nonattainment designation would limit new industrial siting and restrict federal highway funding in the area, which would impact the region's economy and delay transportation improvements intended to reduce congestion. Since that time however, annual levels of fine particulates and short-term concentrations have improved.

Unlike water quality, air quality is extremely difficult to effect at a local level. Morgantown is dependent on the actions of state and federal policymakers for improvements to its air quality. Stricter emission standards for the state have decreased pollutants from the largest sources including electric utilities and chemical manufacturing. Pollutant creators like cars and small businesses are addressed by state or federal policy.

Environmentally-sensitive areas and passive open space. Morgantown has large areas of steep slopes that are unsuitable for development. These areas serve an important function of providing passive open space, serve as habitat for wildlife, and provide a buffer between development and urban waterways, which contributes to healthy waterways. While sites with steep slopes are subject to additional development standards within Morgantown, outright protection of steep slopes is not codified in Morgantown or in the county, leaving these sensitive areas vulnerable.

Recycling service. On October 1, 2012, the city began implementing a new service for single-stream curb-side recycling. Called the "Clean Community Concept," the program aims to change the city's current 80/20 trash to recycling ratio to 80 percent recycling, 20 percent trash.

Energy conservation. The Morgantown Municipal Green Team was established in 2007 to help the City meet the objectives of the U.S. Mayors Climate Protection Agreement. That agreement aims to reduce negative public impact on the climate, improve efficiency in the public use of energy resources, and identify steps which can be taken to achieve greater stewardship in both. The Green Team also helps the City implement the Green Building Municipal Leadership Initiative (adopted October 3, 2006) and promote the adoption of LEED and Energy Star standards. In 2009 the City completed an energy audit of all city facilities and adopted an improvement program to reduce the city's energy expenditures. In 2008, the City completed construction of the LEED Certified North Side Fire Station.

Tree City. Morgantown has been recognized as a Tree City USA by the Arbor Day Foundation for its community forestry program and tree care ordinance and support of Arbor Day activities. The Morgantown Tree Board, a subcommittee of the Urban Landscape Commission is a volunteer group that meets to discuss issues relating to the City's tree inventory, hazardous trees, species selection review on public projects, and develop Arbor Day activities in the city.

C. Objectives and Strategies

Outlined below are six objectives and 27 strategies to support the environment element. The objectives indicate a specific policy direction, while the strategies are detailed actions necessary to initiate or complete an objective such as a program, policy or a project.

Objective 1. Support efforts to improve air quality locally and regionally.

- EN 1.1 Lobby state and federal environmental agencies to strengthen air quality standards.
- EN 1.2 Lobby state and federal environmental agencies to enhance the monitoring and enforcement of air quality standards.

Objective 2. Maintain quality ground and surface water quality

- EN 2.1 Monitor the quality of groundwater to minimize the potential of contamination to the drinking water supply
- EN 2.2 Report possible groundwater contamination to the appropriate entities (WV Department of Environmental Protection and US EPA)
- EN 2.3 Continue to monitor surface water for possible contamination from Acid Mine Drainage sites.

- EN 2.4 Identify treatment measures for Acid Mine Drainage contamination.
- EN 2.5 Lobby for state regulation to protect water quality from current mining and extraction activities.
- EN 2.6 Meet regularly with WVU and WVDOH to collaborate on respective Municipal Separate Storm Sewer System (MS4) permitting, planning, and obligations.

Objective 3. Protect environmentally significant areas and natural resources.

- EN 3.1 Update subdivision regulations and site design standards for controlling soil erosion, surface water quality and sedimentation, and to minimize the removal of natural vegetation.
- EN 3.2 Adopt stronger regulations restricting development on steep slopes based on best practices.
- EN 3.3 Verify the presence of any significant natural features in development proposals and consider the quality of the feature to determine whether it should be protected, restored, or allowed to be altered.
- EN 3.4 Identify and survey areas for flood plain/wetland protection, habitat quality, connectedness, recreational opportunities, and pollution reduction capabilities.

Objective 4. Improve the urban tree canopy and greenway network.

- EN 4.1 Develop urban forest management plan and policies that address protection or replacement of significant trees on developing land.
- EN 4.2 Establish standards for tree species located within and near public rights-of-way and or easements.
- EN 4.3 Examine paper streets (undeveloped right-of-way), utility-owned land and floodplains for potential acquisition and/or use as greenspace.
- EN 4.4 Establish pocket parks in every neighborhood.
- EN 4.5 Plant shade trees in city parking lots.

COMMUNITY PRIORITY

Objective 5. Promote energy conservation and “green” building.

- EN 5.1 Update zoning and building codes to accommodate alternative energy generation (i.e. small-scale wind or solar).
- EN 5.2 Create a Green Building Program that provides incentives for use of “green” building techniques that are energy efficient and environmentally friendly (using LEED or another best practice benchmark).
- EN 5.3 Design and construct future city buildings and facilities using LEED standards.
- EN 5.4 Incorporate LEED standards into renovations of city buildings and facilities.
- EN 5.5 Meet regularly with WVU to remain informed, provide input, and collaborate on strategies identified in WVU’s Sustainability Strategic and Action Plans.

Objective 6. Reduce solid waste generated in the city.

- EN 6.1 Conduct a residential composting program that involves education and the coordination of local home composting supply providers.
- EN 6.2 Evaluate the success of the “Clean Community Concept” recycling program.
- EN 6.3 Establish a program to encourage recycling participation by commercial uses, which includes two-family and multi-family residential developments under the City’s 2012 Solid Waste Contract.
- EN 6.4 Work with the Monongalia County Solid Waste Authority to expand residential and commercial recycling programming, particularly curbside single stream, throughout the greater Morgantown market.
- EN 6.5 Study the feasibility of developing and implementing requirements for a certain percentage of construction and demolition waste to be recycled.