



Morgantown Municipal Green Team Strategic Plan (2018–2022)

Updated March 2018

Current Active Green Team Members:

Holly Purpura, Chair

Joey James, Past Chair

Pamela Cubberly, Secretary

Jim Kotcon, Energy Chair

Alex Davis

Hari Jammulamadaka

Karen Kalafat

Joseph Kanosky

Dan Pan

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HOW TO USE THIS STRATEGIC PLAN

The purpose of this plan is to

- Update the Green Team mission statement to better reflect the team's role and functions
- Specify how the team operates
- Provide the team with a vehicle for annual progress review
- Establish a long-term framework with goals and objectives

The Plan can also be used to

- Introduce newly elected officials and staff to the Team, fostering a productive advisory relationship
- Introduce new and prospective team members to the Team and provide them a framework for engagement

The Plan is intended to undergo annual review and updating by the Green Team.

ABOUT THE GREEN TEAM

Recognizing the need to make Morgantown a more environmentally friendly city, in October 2007 the City of Morgantown established the Morgantown Municipal Green Team as an advisory body to both the City Manager and City Council to guide environmental and energy-related matters in public policy, planning, education, departmental management, and new development.

Morgantown's 2013 *Comprehensive Plan* also indicated broader purposes for the Green Team:

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. (p. 70)

The original Green Team was initiated with City acceptance of 17 nominations for members; the team quickly grew to encompass 30 people, including representatives from a large variety of environmental groups, college/high school students, and people unaffiliated with any particular organization. The team adopted the principle of operating by consensus and, over the years, has mainly been facilitated by a Chair (two-year term), City Liaison, and Secretary. Active members of the team now average 10–15 persons with a listserv of 70+ past members and interested citizens.

In the past decade, members of the Municipal Green Team have included skilled citizens who have provided expertise, analyzed and interpreted data, developed environmentally responsible plans, carried out projects, and assisted in educational opportunities. Green Team members offer a range of expertise in environmental sustainability, energy, green building, agriculture, green space, planning, communications, and general interests. Although the team's membership has changed greatly in the past 10 years, it has served as a vital source of advice, expertise, and ideas to the City Manager and City Council on a variety of topics.

Activities that the Green Team has engaged in include, but are not limited to, the following:

- Development and distribution of educational materials
- Hosting of public information events and forums
- Providing supporting letters/statements on relevant topics
- Advising the City Manager, providing input to the City Council, including drafting policies and regulations, and proposing actions by City staff or Council

- Initiating and developing environmental projects and programs at the request of City staff or on its own
- Reviewing City plans and development proposals
- Collecting and analyzing environmental data
- Facilitating communications on environmental issues between the City and other entities

At inception, the team started with standing committees on energy, architecture, transportation, and recycling to research and propose projects and other activities (see Attachment C for details). As the team evolved, it has continued to focus on two of these—energy and recycling—as well as organizing committees on short-term projects, such as to cosponsor and promote two solar co-ops; revise the City’s urban agriculture ordinance; and organize and promote the City’s 2016 “Year to Go Green.”

Monthly Green Team meetings are open to the public and currently held on the first Monday of the month 5:30–7:00 pm usually at the Morgantown Public Library, 373 Spruce Street. See Green Team’s minutes and other information at www.morgantownwv.gov/295/Green-Team.

VISION, MISSION, AND FUNCTIONS

Vision

The Morgantown Municipal Green Team (Green Team) strives for a healthy, clean, and energy-efficient community that embraces the sustainable use of natural resources in order to promote a high quality of life for all residents.

Mission

The mission of the Green Team is to advise the City of Morgantown on matters relating to environmental sustainability in public policy, planning, education, departmental management, and development. The team also pursues its own initiatives as long as they fall within the framework of the City’s current 10-year *Comprehensive Plan* and any relevant agreements signed by the City relating to sustainability.

Functions

The team reports to the City Manager and regularly meets with key City staff and elected officials in order to coordinate activities and plans. The team

- educates and informs these parties and citizens at large on current projects and issues relevant to the environment;
- initiates relevant activities and projects within the framework of the City’s *Comprehensive Plan*; and presents regularly, in person and in writing, to the City Manager and Council, including an annual report at the end of January; and
- wherever possible, collaborates with other advisory boards, community groups, and other organizations in its activities.

The Green Team comprises citizens who live, work, or spend time in the Morgantown area that have expertise, skills, and/or interest in assisting the City of Morgantown in achieving environmental sustainability.

Topics of particular concern include air and water quality, energy efficiency and renewable energy, transportation, urban agriculture, and green space. Green Team members participate in monthly meetings and are encouraged to propose and implement special projects that advance progress toward the team’s long-term goals.

GOALS AND OBJECTIVES

Goal 1: Raising Public Awareness for Sustainability

- Objective 1A: Engage the community through traditional/social media
- Objective 1B: Promote environmental awareness and sustainable living in public spaces
- Objective 1C: Establish partnerships with other entities to promote sustainability

Goal 2: Promote Energy Sustainability

- Objective 2A: Improve energy efficiency of existing structures, utilizing high performance and sustainable building guidance principles in design [EN 5]*
- Objective 2B: Identify and promote renewable energy solutions that are consistent with needs, opportunities, and resources available in the greater Morgantown area
- Objective 2C: Identify and promote energy efficiency solutions that are consistent with needs, opportunities, and resources available in the greater Morgantown area

Goal 3: Reduce Pollution and Waste

- Objective 3A: Reduce solid waste [EN 6]
- Objective 3B: Promote recycling programs
- Objective 3C: Reduce water consumption and pollution [EN 2]
- Objective 3D: Reduce air pollution [EN 1]

Goal 4: Promote Sustainable Urban Development

- Objective 4A: Protect environmentally sensitive areas, water resources, biodiversity, and green space [EN 3]
- Objective 4B: Promote smart growth including a mix of land uses, variety of transportation choices, and attractive public spaces with a strong sense of place [EN 4]
- Objective 4C: Promote activities that will reduce urban carbon emissions
- Objective 4D: Promote urban agriculture

* Related Objectives under the City of Morgantown 2013 Comprehensive Plan.

PROJECTS FOR 2018

>>> *Communications*

“Crossroads” Facebook (potential)

Manage team-created Green Morgantown Facebook Group as “crossroads” for all residents on green topics.

Proud Green Home (ongoing)

Develop and distribute informational flyers on living green, based on LEED-based information and Morgantown situations.

>>> *Waste and Pollution Reduction*

Recycling Campaign (ongoing)

Implement public education program on reducing and reusing materials. Conduct residential composting program to educate and coordinate home composting. Apply for State of West Virginia recycling grant for submission by June 30, 2018.

Volkswagen Settlement (ongoing)

Assist the City to apply for funds from the Volkswagen settlement to the State of West Virginia for air pollution management. Projects could include such things as electric buses, electric car charging stations, etc.

City Recycling Service Contract (ongoing)

Promote team goals on recycling as the City continues to negotiate with Republic Services on its contract with the City.

>>> *Energy Efficiency & Renewable Energy*

City Climate Action Plan (ongoing)

Develop a climate action plan in response to City Council Resolution on Paris Accords.

LED Streetlights Feasibility Study (ongoing)

Present results to City Council and City Manager from team-sponsored LED Streetlights on City Streets study by City Intern Abby Cayton (WVU Mechanical Engineering Department) and support City action to implement recommendations.

IAC Energy Audit Study Implementation (ongoing)

Support and encourage City implementation of energy audit recommendations from the 2016–17 Green Team–sponsored study by WVU’s Industrial Assessment Center (undertaken by engineering student Alex Davis, who continues to participate in the Green Team) and additional energy audits in 2017, completed by WVU Mechanical Engineering Department student intern Abby Cayton.

>>> *Water Resources*

Rainwater Conservation Education (potential)

Expand use of rain barrels, rain gardens, and other means to capture/reduce water runoff in city through public education and other programs.

Waterway Cleaning (Richard Mine) (ongoing)

Reduce pollution and litter in waterways and watersheds, including litter collecting at Morgantown Dam and along Deckers Creek. This project also supports the cleanup of the Richard Mine, an initiative of the Natural Resources Conservation Service, the West Virginia Department of Environmental Protection Abandoned Mine Lands program, and Friends of Deckers Creek.

>>> *Smart Growth & Open Space*

Greenbelt Connecting Pathway (potential)

Support efforts to create a “greenbelt” around Morgantown by connecting existing parkland and open space with green corridors with hiking and biking trails to preserve local biodiversity and provide nearby access to recreation and nature.

Green Space Grant (ongoing)

Work with the West Virginia Land Trust to apply for a technical assistance grant for the City to explore green space expansion opportunities and mechanisms

Green Building Code (potential)

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).

Morgantown Municipal Green Team Strategic Plan

Appendix A

Green Team Activities & Results (2007–2017)

Energy and Recycling

In 2008–09, the team provided input or feedback to the City Manager on

- design of the LEED-certified North Side Fire Station;
- drilling for natural gas on City properties;
- use of inductive street lighting in Morgantown;
- developed a fuel efficiency analysis of the City’s vehicle fleet;
- advised an energy intern who completed an inventory of city street lights; and
- monitored proposals for hydropower dam (since at least 2008).

In following years, the Green Team launched multi-year initiatives to lower both City and community carbon emissions.

- **Energy performance contract (2009).** Assisted City in negotiating and implementing its first energy guarantee contract with Constellation Energy overall saving \$435,568 in 2011–2012.
- **Sustainable Morgantown Initiative.** Proposed and supported this three-year program funded by the Appalachian Stewardship Foundation and implemented by Downstream Strategies to (1) establish Morgantown’s baseline carbon emissions level; (2) identify promising strategies for reducing carbon emissions; and (3) implement the top four strategies. Expected savings of 2%–3% in residential electricity greenhouse gas emissions from expanded solar energy use and demand reduction devices in multiple unit housing in the next few years.
- **Morgantown and North-Central WV Solar Co-ops.** With WVSUN the team cosponsored two successful solar co-ops resulting in 23-plus additional residences and businesses powered by the sun in Morgantown and surrounding areas.
- **Energy audit of seven City buildings in 2016.** The team proposed and supported an energy audit of City buildings by the WVU Industrial Assessment Center. City implementation of the recommendations could result in as much as \$32,755 annual energy cost savings (about 21% of annual energy costs for these buildings) with a payback within 3.5 years on a required investment of \$113,104.

Public Education

In addition, the Green Team has long run a strong public education component, including the following initiatives and activities in the past 10 years:

- Two yearlong City-declared years on the environment: in 2010 the educational campaign “It’s Easy to Be Green” and, in 2016, a call to action by residents, businesses, and government called “The Year to Go Green.”
- Nearly 25 separate Green Nights at the Library or other events/forums on a variety of topics (see list of topics below)
- Spring Sustainability Fairs in 2014–2016, cosponsored by the Farmer’s Market and Morgantown Public Library
- Information meetings for the Morgantown Solar Co-op (2014–15) and North-Central West Virginia Solar Co-op (2016–17)
- Regular publicity in the media on all these activities, targeted letters to the editor, interviews, etc. on a variety of topics
- Initially developed a website to increase public awareness of its activities and to provide useful resources to the public. Later, the City gave the team its own webpage on the City’s website,

providing the public with a record of its meetings and brief information on its objectives and strategies, as well as a special “Year to Go Green” webpage with linked calendar to events

- Creation in 2013 of the City-sponsored Green Morgantown Facebook group to serve as a “crossroads” for nonpartisan communications on environmental concerns in Morgantown, now with more than 560 members

Central to the yearlong City-declared “2010: It’s Easy Being Green!” initiative, Green Nights at the Library were held at 5:30pm each third Thursday of the month at the Morgantown Public Library. This initial series highlighted local expertise on green topics, including:

- Energy-efficient construction techniques and energy auditing
- Sustainable design
- Organic gardening
- Local food production and community support agriculture
- Financial incentives for energy efficiency improvements
- Toxic substances in everyday cleaning and personal care products
- “What Do You Think?” opinion/idea gathering event at the Morgantown Farmers Market

After a hiatus in 2011–12, Green Nights has continued each fall/winter from Fall of 2012 through Fall of 2016, covering a range of topics on how to live green as well as discussing topics of community concern (such as expanding/improving recycling; air and water quality; and encouraging urban agriculture; etc.).

2012–13: Topics included energy efficiency, solar energy, “slow” and local food, weatherization tips, green transport, recycling, making natural cleaning and personal products, and wildlife friendly backyards. The series ended with a “Green Morning” Fair at the Farmer’s Market.

2013–14: Topics included school transport, tree care and planting, baseline carbon study for Morgantown, recycling, and solar energy. The series ended with a spring Green Households Fair at the Farmer’s Market, co-sponsored with the Morgantown Library.

2014–15: Topics included urban agriculture, making natural home products, green space in Morgantown, community solar power co-ops, and “Compost 101.” The series ended with the 2nd Annual Green Households Fair, co-sponsored by the Farmer’s Market and Morgantown Public Library.

2015–16: In the fall of 2015, the Green Team sponsored the series “Air, Water, and Waste: Where Is Morgantown Heading?” with three public forums:

- “How Clean Is Morgantown’s Air and What Can We Do About It?” was co-sponsored by the Mon Valley Clean Air Coalition with invited experts from WVU and WVDEP.
- “How Clean Is Morgantown’s Water and How Can We Keep It That Way?” cosponsored with the Morgantown Utility Board (MUB) and Downstream Strategies (DSS) with speakers from MUB, DSS, and the Mon Valley Green Space Coalition.
- “Is Recycling Working in Morgantown and What Can We Do About It?” was sponsored by the Green Team with key speakers from the City of Morgantown, Monongalia County, WVU, Republic Services, and others.

In early 2016, the Green Team joined with cosponsors of the City’s 2016 “Year to Go Green,” Friends of Decker’s Creek, and Downstream Strategies to hold the following events:

- A Celebration of Sustainability: Official Launch of 2016: Year to Go Green!

- Energy and Your Business (cosponsored by Friends of Decker's Creek)
- 3rd Annual Green Households Fair (cosponsored by Farmer's Market and Morgantown Public Library)

In addition, the League of Women Voters in Morgantown, a cosponsor of the Year to Go Green, upon a suggestion from the Green Team, added a special forum for voters on a number of levies to appear on the spring ballot, among which were several related to green space and transportation.

2016. In the fall, the Green Team hosted three workshops as part of its "How2GoGreen" series in honor of the Year to Go Green. Topics included the North-Central WV Solar Co-op, Composting Basics, and Home Energy Saving Tips.

Morgantown Municipal Green Team Strategic Plan

Appendix B

2013 Morgantown Comprehensive Plan, Section 5: Environment

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.

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.

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 runoff 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 curbside 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.

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.

Morgantown Municipal Green Team Strategic Plan

Appendix C

2005 Mayors' Climate Protection Agreement

- A. We urge the federal government and state governments to enact policies and programs to meet or beat the target of reducing global warming pollution levels to 7 percent below 1990 levels by 2012, including efforts to: reduce the United States' dependence on fossil fuels and accelerate the development of clean, economical energy resources and fuel-efficient technologies such as conservation, methane recovery for energy generation, waste to energy, wind and solar energy, fuel cells, efficient motor vehicles, and biofuels;
- B. We urge the U.S. Congress to pass bipartisan greenhouse gas reduction legislation that includes:
 - 1. Clear timetables and emissions limits; and
 - 2. A flexible, market-based system of tradable allowances among emitting industries.
- C. We will strive to meet or exceed Kyoto Protocol targets for reducing global warming pollution by taking actions in our own operations and communities such as:
 - 1. Inventory global warming emissions in City operations and in the community, set reduction targets and create an action plan;
 - 2. Adopt and enforce land-use policies that reduce sprawl, preserve open space, and create compact, walkable urban communities;
 - 3. Promote transportation options such as bicycle trails, commute trip reduction programs, incentives for carpooling and public transit;
 - 4. Increase the use of clean, alternative energy by, for example, investing in "green tags," advocating for the development of renewable energy resources, recovering landfill methane for energy production, and supporting the use of waste to energy technology;
 - 5. Make energy efficiency a priority through building code improvements, retrofitting city facilities with energy efficient lighting and urging employees to conserve energy and save money;
 - 6. Purchase only Energy Star equipment and appliances for City use;
 - 7. Practice and promote sustainable building practices using the U.S. Green Building Council's LEED program or a similar system;
 - 8. Increase the average fuel efficiency of municipal fleet vehicles; reduce the number of vehicles; launch an employee education program including anti-idling messages; convert diesel vehicles to biodiesel;
 - 9. Evaluate opportunities to increase pump efficiency in water and wastewater systems; recover wastewater treatment methane for energy production;
 - 10. Increase recycling rates in City operations and in the community;
 - 11. Maintain healthy urban forests; promote tree planting to increase shading and to absorb CO₂; and
 - 12. Help educate the public, schools, other jurisdictions, professional associations, business and industry about reducing global warming pollution.

Energy and Recycling

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- design of the LEED-certified North Side Fire Station;
- drilling for natural gas on City properties;
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- Creation in 2013 of the City-sponsored Green Morgantown Facebook group to serve as a “crossroads” for nonpartisan communications on environmental concerns in Morgantown, now with more than 560 members

Central to the yearlong City-declared “2010: It’s Easy Being Green!” initiative, Green Nights at the Library were held at 5:30pm each third Thursday of the month at the Morgantown Public Library. This initial series highlighted local expertise on green topics, including:

- Energy-efficient construction techniques and energy auditing
- Sustainable design
- Organic gardening
- Local food production and community support agriculture
- Financial incentives for energy efficiency improvements
- Toxic substances in everyday cleaning and personal care products
- “What Do You Think?” opinion/idea gathering event at the Morgantown Farmers Market

After a hiatus in 2011–12, Green Nights has continued each fall/winter from Fall of 2012 through Fall of 2016, covering a range of topics on how to live green as well as discussing topics of community concern (such as expanding/improving recycling; air and water quality; and encouraging urban agriculture; etc.).

2012–13: Topics included energy efficiency, solar energy, “slow” and local food, weatherization tips, green transport, recycling, making natural cleaning and personal products, and wildlife friendly backyards. The series ended with a “Green Morning” Fair at the Farmer’s Market.

2013–14: Topics included school transport, tree care and planting, baseline carbon study for Morgantown, recycling, and solar energy. The series ended with a spring Green Households Fair at the Farmer’s Market, co-sponsored with the Morgantown Library.

2014–15: Topics included urban agriculture, making natural home products, green space in Morgantown, community solar power co-ops, and “Compost 101.” The series ended with the 2nd Annual Green Households Fair, co-sponsored by the Farmer’s Market and Morgantown Public Library.

2015–16: In the fall of 2015, the Green Team sponsored the series “Air, Water, and Waste: Where Is Morgantown Heading?” with three public forums:

- “How Clean Is Morgantown’s Air and What Can We Do About It?” was co-sponsored by the Mon Valley Clean Air Coalition with invited experts from WVU and WVDEP.
- “How Clean Is Morgantown’s Water and How Can We Keep It That Way?” cosponsored with the Morgantown Utility Board (MUB) and Downstream Strategies (DSS) with speakers from MUB, DSS, and the Mon Valley Green Space Coalition.
- “Is Recycling Working in Morgantown and What Can We Do About It?” was sponsored by the Green Team with key speakers from the City of Morgantown, Monongalia County, WVU, Republic Services, and others.

In early 2016, the Green Team joined with cosponsors of the City’s 2016 “Year to Go Green,” Friends of Decker’s Creek, and Downstream Strategies to hold the following events:

- A Celebration of Sustainability: Official Launch of 2016: Year to Go Green!

- Energy and Your Business (cosponsored by Friends of Decker's Creek)
- 3rd Annual Green Households Fair (cosponsored by Farmer's Market and Morgantown Public Library)

In addition, the League of Women Voters in Morgantown, a cosponsor of the Year to Go Green, upon a suggestion from the Green Team, added a special forum for voters on a number of levies to appear on the spring ballot, among which were several related to green space and transportation.

2016. In the fall, the Green Team hosted three workshops as part of its "How2GoGreen" series in honor of the Year to Go Green. Topics included the North-Central WV Solar Co-op, Composting Basics, and Home Energy Saving Tips.

Morgantown Municipal Green Team Strategic Plan

Appendix D

Morgantown Municipal Green Team Procedural Guidelines

Morgantown Municipal Green Team Procedural Guidelines

Article I: Organization

1.1 Authority

The Morgantown Municipal Green Team was established by the City of Morgantown and is authorized to serve as a skilled advisory body to the City Manager and City Council in helping to guide environmental matters relevant to public policy, planning, education, departmental management, and new development.

1.2 Purpose of the Green Team

The purpose is consistent with the goals outlined in the Green Team's Strategic Plan:

1.2.1 Raising public awareness for sustainability

1.2.2 Promoting energy sustainability

1.2.3 Reducing pollution and waste

1.2.4 Promoting sustainable development

1.3 Duties of the Green Team

1.3.1 Advise the City Manager and City Council on environmental issues

1.3.2 Develop and distribute educational materials pertaining to sustainability

1.3.3 Initiate, support, and facilitate environmental projects and programs within the framework of the City's *Comprehensive Plan* and the team's own Five-Year Plan.

1.3.4 Facilitate communications on environmental issues between the City and other entities

1.3.5 Wherever possible, collaborate with other advisory boards, community groups, organizations, and businesses on its activities

1.3.6 Report regularly, in person and in writing, to the City Manager and City Council, including an annual report at the end of January.

Article II: Membership

2.1 Membership Appointment

The members of the Green Team shall be nominated by team members and approved by the Green Team Chair. The membership appointment shall be reviewed by the City Manager. The members of Green Team shall have a demonstrated interest, experience, or willingness to work toward the purposes of the Green Team. Members should live, work, or spend time in the Morgantown area and have expertise, skills, and/or interest in assisting the City of Morgantown in achieving environmental sustainability.

2.2 Membership Composition

2.2.1 The Team may add additional non-voting ad hoc members for specific purposes as approved by the Team.

2.2.2 The membership shall be inclusive in representing various groups and stakeholders in the community.

2.3 Attendance

To remain in good standing, voting members of the Team should attend at least half of the meetings in a six-month period. Attendance can be fulfilled by electronic communication. Failure of a member to meet this standard may result in their replacement.

Article III: Meetings

3.1 Regular Meetings

Meetings are held monthly. Dates of meetings will be decided upon at the previous meeting.

3.2 Special Meetings

Special meetings of the members may be called at the request of a majority of the voting members to consider a specific subject. Notice for time and place of any special meeting is to be given using whatever reasonable means available. No business other than the subject of the Special Meeting shall be transacted at said meeting.

The Green Team shall hold organizational meetings with the City Manager at least once or twice a year and regular coordination meetings with key City staff to assure that team activities address City concerns. The City Manager shall appoint a City staff person to serve as City Liaison with the team.

3.3 Quorum

Fifty percent (50%) of the voting members shall constitute a quorum for the transaction of business.

3.4 Voting

Voting on all matters during the Green Team's meeting shall require a majority vote of members present.

Article IV: Officers

4.1 Officers

The officers of the Green Team shall be a Chairperson, Vice Chairperson, and Secretary, all of whom shall be elected from the Green Team Membership. Officers elected shall hold term for two years and be eligible for re-election. All nominees shall be asked whether they are willing to serve if elected, before their name is placed in nomination.

4.2 Chair

The Chair of the Green Team shall prepare an agenda, call all meetings, preside at all meetings, act as a primary liaison with the City Manager and City Council, coordinate the activities of the standing and ad hoc committees, and be a consulting member of all committees. S/he shall also represent the team with representatives of the media and inquiries from other organizations or agencies.

4.3 Vice-Chair

The Vice Chair shall act as Chair in the absence of the Chair. The Vice-Chair shall have such other duties as the Green Team may authorize from time to time be assigned to the office.

4.4 Secretary

The Secretary shall be responsible for maintaining adequate records of all meetings of the Green Team. S/he will assure that minutes, annual reports, plans, and other key team documents are uploaded on the team's City webpage and maintained in online and print archives to be passed on to future team secretaries and chairs.

Article 5: Committees

5.1 Committees

The Green Team may establish committees to carry out the functions related to its responsibilities.

Article 6: Finances

6.1 Fiscal Responsibilities

The Green Team shall not have the authority to maintain any financial account or to receive any gifts, endowments, bequests, or investments. Any such account shall be maintained instead as directed by the City Manager.

Article VII: Change to These Standards of Operation

7.1 Amendments

Changes to these procedures may be recommended by a two-thirds vote of the Green Team membership and must be approved by the City Manager.

Approved by action of the Morgantown City Manager

Date _____



What is the Morgantown Municipal Green Team? And what does it do?

What is our mission?

The mission of the Morgantown Municipal Green Team (Green Team) is to advise the City of Morgantown on matters relating to environmental sustainability in public policy, planning, education, departmental management, and development. The team also pursues its own initiatives as long as they fall within the framework of the City's current 10-year Comprehensive Plan and any relevant agreements signed by the City relating to sustainability.

What is our vision for Morgantown?

The Green Team strives for a healthy, clean, and energy-efficient community that embraces the sustainable use of natural resources in order to promote a high quality of life for all residents.

How do we work?

The team reports to the City Manager and regularly meets with key City staff and elected officials in order to coordinate activities and plans for environmental sustainability (see back for examples) by

- initiating relevant activities and projects within the framework of the City's Comprehensive Plan and presenting regularly, in person and in writing, to the City Manager and Council, including an annual report at the end of January;
- educating and informing these parties and citizens at large on current projects and issues relevant to the environment; and
- wherever possible, collaborating with other advisory boards, community groups, and other organizations in its activities.

Become a member and get active!

The Green Team comprises citizens who live, work, or spend time in the Morgantown area and have expertise, skills, and/or interest in assisting the City of Morgantown in achieving environmental sustainability. Topics of particular concern include air and water quality, energy efficiency and renewable energy, transportation, urban agriculture, and green space.

Green Team members are encouraged to propose and implement special projects that advance city progress toward sustainability with the team's support and advice. The Green Team maintains a list of viable project ideas that fall within the goals and objectives of its 2017-21 long-range plan.

For more information, contact Joey James, Chair, at jjames@downstreamstrategies.com.

What have we accomplished since 2007?

Throughout its decade-long efforts, the Green Team has endeavored to unite residents, businesses, organizations, and local government in a comprehensive approach to improved sustainability. Activities developed and implemented all or in part by the Green Team since 2010 include:

2016–17 WVU Industrial Assessment Center energy audit in seven City buildings, recommended specific actions to save both energy and money. City implementation of these actions could save as much as \$32,755 in annual energy costs (about 21% of annual energy costs for these buildings) with a payback within 3.5 years on a required investment of \$113,104.

2016 Morgantown Year to Go Green was established by the City of Morgantown as a call to action by residents, businesses, and government to promote clean air, clean water, clean energy, and green space. A range of activities helped open dialogue and partnerships across the community to further sustainability.

2015 and 2016 Solar Coops were established by WV SUN supported by the team and other partners, first in the Morgantown area and then in North Central West Virginia. Between these two coops, 24 households installed solar panels for a total of 180.7 kilowatts of installed capacity.

2013–17 Green Morgantown is a public Facebook group cosponsored by the City of Morgantown as a “crossroads” for information on events, activities, and alerts related to environmental concerns in Morgantown. Please see www.facebook.com/groups/greenmorgantown.

2012–15 Sustainable Morgantown Initiative was a three-year, team-initiated program funded by the Appalachian Stewardship Foundation and implemented by Downstream Strategies. Phase I established Morgantown’s baseline carbon emissions level; Phase II identified promising strategies for reducing carbon emissions; and Phase III implemented the top four strategies. Savings of 2%–3% in residential electricity greenhouse gas emissions are expected from expanded solar energy use and demand reduction devices in multiple-unit housing.

2010–2016 Green Nights at the Library was an annual series of presentations, forums, workshops, and resource nights on green topics sponsored by the Morgantown Municipal Green Team in association with the Morgantown Public Library.

2010 It’s Easy Being Green, declared by the City of Morgantown, celebrated our community’s successes in working toward sustainability and encouraged communitywide improvement, awareness, and enthusiasm by promoting positive change, achievable goals, easy tasks, and fun educational events.

About the logo: In 2009 WVU Sophomore Andrew Sheldon designed the Green Team logo.

Bio Sheet of Active Members of the Morgantown Municipal Green Team



Holly Purpura (Chair), Executive Director, Friends of Deckers Creek, works to remediate the watershed that runs directly through downtown Morgantown, West Virginia. In addition to this, Holly leads community outreach and educational programming within the city. For example, she is actively promoting Morgantown's first Green Business Council. A West Virginia native and WVU alum, Holly worked previously in grants management at National Geographic Education and digital marketing at The Hunger Project (UK). She has served on the Green Team since 2015 and accepted the position of chair in November 2017.



Joey James (Past Chair) is a multidisciplinary researcher at the local consulting group Downstream Strategies with experience in a broad range of resource management topics. He has professional experience in the public, nonprofit, and private sectors and has worked extensively in energy policy analyses, GIS development, database management, environmental data analysis, and environmental outreach. Joey managed the Green Team-sponsored Sustainable Morgantown Initiative. He has served on the Green Team since August 2014 and as chair from November 2015 to November 2017.



Pamela Cubberly (Secretary) has worked as writer and editor for more than 35 years in government, nonprofit, and private sectors, focusing on international development and environment. With a master's degree from Michigan's School of Natural Resources, she worked successively for Michigan Sea Grant, the US Environmental Protection Agency, and World Wildlife Fund until 1992 when she started consulting for USAID, the World Bank, and a variety of profit and nonprofit contractors. Pam joined the Green Team in 2011, serving as Secretary since 2015.



Jim Kotcon (Energy Chair) is an Associate Professor of Plant Pathology and Environmental Protection at WVU's Davis College of Agriculture, Natural Resources, & Design and a longtime adviser of the Student Sierra Coalition. Jim also helps manage the university's Organic Agriculture Farm. He helped found the West Virginia Environmental Council and is a respected authority in West Virginia on energy and air and water quality issues, authoring numerous letters to public agencies, guest editorials, and newsletter articles. Jim has served continuously on the Green Team since its inception in 2007. Among his many contributions, he has been instrumental in the team's work on energy, recycling, urban agriculture, two solar co-ops, and the City's Year to Go Green, providing both technical expertise and strategic advice.

Ella Belling (Executive Director, Mon River Trails Conservancy)—although not officially a Green Team member—is a frequent attendee and contributor to Green Team discussions, especially on recycling and green space issues.



Jennifer Selin is currently a City Council member representing the Fourth Ward and has been a member of the Green Team for several years. Jenny has long been active in the Evansdale and Suncrest Neighborhood Associations and the West Virginia Botanic Garden. She served on the Planning Commission for many years as well as on the Year of the Child steering committee and the Responsible Hospitality Institute Mainstreet initiative. She represents the City on the Metropolitan Planning Organization, Celebration of America, Airport Advisory Committee, and Chamber of Commerce's Transportation Committee. She is a founding

member of Try This Monongalia County and was the WVU Design Team Coordinator. She is a professional mediator with an academic background in education, parks and recreation, and law.



Joseph Kanosky is a Lead Engineer with the Facility Operations Engineering and Facilities Team at the Department of Energy's National Energy Technology Laboratory (DOE/NETL). By invitation of the Mayor of Morgantown, Joe has represented NETL since February 2016 on the City's Year to Go Green, which is providing a framework toward environmental sustainability for the Morgantown area. Joe has been an engineer with NETL for almost 34 years and served as a Project Manager for design and construction projects for more than 25 years. He has extensive experience in project management, energy management, and LEED and sustainable design projects. Joe is a certified Project Management Professional (PMP), Certified Energy Manager (CEM), Certified Plant Engineer (CPE), and Certified Plant Maintenance Manager (CPMM).



Jing Zhang, a transportation planner at the Morgantown Monongalia MPO, is a certified planner (AICP), Professional Transportation Planner (PTP), Accredited LEED Professional (LEED AP ND), and Envision Sustainability Professional (ENV SP). His job includes pedestrian and bicycle planning, as well as travel demand modeling, traffic micro-simulation and corridor study. Jing is an advocate for active transportation and sustainable communities. He has made presentations at many national and international events, including the National Bike Summit, ASCE International Conference on Transportation and Development, and TRB Tools of the Trade Conference. He is a board member of the Association of Pedestrian and Bicycle Professionals. Jing previously worked for the City of Anderson, SC and interned at the New York

City DOT. He holds two master's degrees: City and Regional Planning (Clemson University) and Music (Beijing Normal University).



Karen Kalafat is a graduate student at WVU with a focus on sustainability. She has a background in design, with professional experience in government, nonprofit, education and corporate sectors. She is accredited through the US Green Building Council as a LEED AP ID+C (Leadership in Energy and Environmental Design Accredited Professional in Interior Design and Construction.) She has been a member of the Green Team since early 2016. Karen is also a small business owner with a pawn shop featuring secondhand merchandise and teaches yoga.



Alex Davis, currently a master's graduate student in Industrial Engineering at WVU, completed an energy audit for the City as part of her internship with the WVU Industrial Assessment Center (IAC) beginning in May 2016. She is one of the primary researchers and authors of the IAC's 2016 assessment report on in seven City buildings, to be presented to the City this spring for approval and implementation. The report identifies substantial energy-saving opportunities with potential yearly savings of more than \$32,000 a year after 3.5 years.

Note: The "wider" Green Team comprises more than 70 former Green Team members and/or interested citizens upon whom the team can call for advice and assistance. They are linked to the team by a Google listserv.