

ENVIRONMENTAL MASTER PLAN

Attleboro, MA

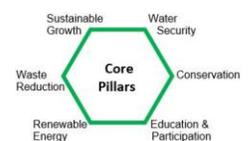
A Blueprint To An
Environmentally Sustainable Future

Sustainable By Design

Vision:

To be in the top 1% of Green Communities in the Commonwealth by 2035, where its leaders and residents make environmentally sustainable choices every day, even in the face of competing interests.

Revision:
August 17, 2022
EMP Task Force



DEDICATION

“Someone is sitting in the shade today because someone planted a tree a long time ago.”
Warren Buffet, Businessman

This Environmental Master Plan (EMP) is not for the folks that wrote it. It’s not for the residents that will embrace it. It’s not for the elected officials that will vote for and support it. It’s not for the workers that will execute it. The EMP is for those that come after all of us. It is dedicated to those it will benefit the most, our grandchildren and their grandchildren. May they look back with pride at the vision expressed by this EMP and the work it inspires.

EXECUTIVE SUMMARY

This Environmental Master Plan (EMP) embodies the mantra of “think global, act local”. The EMP seeks to build on a robust history of Attleboro City planning, with a specific aim of improving the City’s environmental sustainability and resilience for the benefit of residents, businesses, and other institutions.

Many communities have written or are writing EMPs to serve their population. These plans are consistent with sustainability plans adopted by the Commonwealth of Massachusetts. Our Attleboro EMP presents both a strategic plan (vision of where to go and why), and a tactical plan (mission of how we might get there), under the title of “*Sustainable by Design*”. The Attleboro EMP is consistent with, but also strives to build upon state and national plans. The EMP focuses on six critical pillars: Sustainable Growth, Water Security, Conservation, Waste Reduction, Renewable Energy, and Education. Supporting these pillars is an extensive list of recommended actions that should be evaluated for implementation.

The volunteer task force presenting this EMP has reached out to a number of civic and municipal groups for input. The task force is asking for City Council endorsement of the EMP, the establishment of a steering committee to track progress, and encouragement to evaluate the recommended actions.

OVERVIEW

“By failing to plan, you are planning to fail.” Benjamin Franklin, Statesman

Planning is what we do to prepare for future events. It is our responsibility and duty to prepare. Otherwise, we are left to attempt to repair at a higher cost—the damage that could have been avoided. If the damage is catastrophic, repair is hopeless. The 2021 UN-backed 3,949-page report, the *Intergovernmental Panel on Climate Change* written by hundreds of research scientists concluded “*It is unequivocal that human influence has warmed the atmosphere, ocean and land. Widespread and rapid changes in the atmosphere, ocean, cryosphere and biosphere have occurred.*”. This report shows the urgent need for all levels of government and society to work in concert to address these grave consequences.

EMP planning falls into two categories, Sustainability and Resilience. The goal of sustainability is to meet the needs of the present without compromising the ability of future generations to meet their own needs. When sustainability is impossible to achieve, planning must include actions of resilience (or adaptation). Resiliency is the capability to prepare for, withstand, recover, and adapt to significant threats with minimum damage to social wellbeing, the economy, and the environment. For example, the data indicates that some regions are suffering increasingly extreme dry climate conditions, and other regions are

experiencing increased extreme flooding. Resilience planning must take all scenarios into account and act accordingly—what is too late to fix, we must have a plan to adapt.

The EMP is a big-picture “master” plan that also establishes a strategic direction for tactical execution. The EMP establishes several “Pillars,” and recommends several actions for the City to consider in furtherance of each Pillar. This document does not commit the City to any particular action. Rather, the EMP, including the Pillars and Recommended Actions (see “Recommended Action Plan” section, below), will need to be further evaluated and approved on their own merit. By providing a Vision, Mission, focus (pillars), and a list of recommended municipal and personal actions, the EMP establishes a strategic direction for tactical execution. Embracing the EMP does not mean tacit approval of the recommended action; each recommended action will need to be evaluated and approved on their own merit.

The EMP is not designed to be a data warehouse. There already exists a plethora of studies, reports, accompanying data, and experts that support the premise that an Environmental Master Plan is needed. Refer to the Auxiliary Information for a lengthy list of sources that were researched for this document.

The task force plans to conduct several meetings for invitees to question and/or comment on the EMP. A public forum is also planned. Meanwhile, the task force encourages the public to voice their support for the EMP by way of an on-line petition: www.change.org/attleboroemp.

THE PROCESS

“Great things are done by a series of small things brought together.” Vincent Van Gogh, Artist

At the request of the mayor, the initial draft of the EMP was prepared in December, 2021, by a task force comprised of a small core team (see biographies in Appendix), and a larger outreach group of community leaders and residents who were consulted for feedback, input, and ideas. The task force has posted its in-person meetings as Open Meetings. In addition to input provided by the team, we have borrowed from EMP’s written by other communities, large and small, across the United States and Canada.

The task force plans to submit the EMP to the mayor by late summer, 2022. It is hoped that the mayor will distribute the EMP with the intent of making the plan officially sanctioned by the administration and other governing bodies. Endorsement of the EMP is not an approval for funding or pursuing the actions. Such actions will be submitted to the proper bodies at later times depending on further evaluation of the EMP and recommended action items. After endorsement, it is envisioned that some group—be it a special committee or a City office—be assembled to evaluate, further develop, and implement appropriate actions.

VISION STATEMENT

To be in the top 1% of Green Communities in the Commonwealth by 2035, where its leaders and residents make environmentally sustainable choices every day, even in the face of competing interests.

The EMP acknowledges that we have the responsibility and duty to manage our daily activities in a sustainable manner on this planet. The “we” is everybody, as individuals, and as a community. There will be challenges in doing the right thing, every single day, but if we do not earn our sustainable keep, the challenges our grandchildren will face will be far greater. Any action short of sustainable (input = output) should be viewed as spending on credit, where that debt and liability is passed on to our grandchildren and their grandchildren.

The vision of being “top 1% by 2035” is a short-term goal relative to the projected impact of the EMP. As progress is tracked, and current circumstances updated, adjustments to the Vision and Actions supporting the Vision are anticipated. It is hoped that significant progress will be made and a more ambitious Vision will be established.

MISSION STATEMENT

The mission is to create a long-range, strategic, and ambitious Environmental Master Plan (EMP) for the City of Attleboro and to encourage extensive, equitable, and inclusive community participation in its future evolution and execution. The EMP, which includes a compilation of actionable recommendations based on six core pillars of focus, provides a blueprint for sustainable and resilient growth.

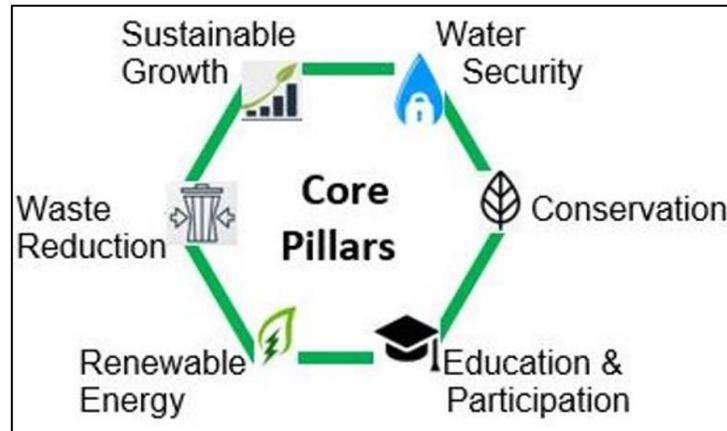
SIX CORE PILLARS

“What we can control is our performance and execution, and that’s what we’re going to focus on.” Bill Belichick, Patriots Head Coach

To make it easier to visualize and execute, the EMP focuses on six core pillars. Each pillar is discussed below in more detail. Addressing these pillars will give Attleboro the best opportunity to reach the targeted Vision. Each pillar includes several areas of attention. For example, the pillar “Water Security” includes topics such as water quality, availability, management, pollution, access, and control. An initial set of actions are recommended for each of the pillars. Actions may fall under more than one pillar, potentially raising its priority for execution.

Core Pillars:

- Sustainable Growth
- Water Security
- Conservation
- Waste Reduction
- Renewable Energy
- Education & Participation



PILLAR 1: SUSTAINABLE GROWTH

“You never change things by fighting the existing reality. To change something, build a new model that makes the existing model obsolete.” R. Buckminster Fuller, American Architect

Sustainable Growth gauges progress in terms of being self-supporting, not at the expense of our environment. The EMP seeks improvements in our sustainable partnership with our natural resources.

Economic development (including residential, commercial, industrial, municipal, infrastructure, etc.) can be both progressive and sustainable. Meeting the Vision of the EMP will prove to be good for the economy of Attleboro, particularly if we are a leadership community. There are four factors to consider when assessing economic success:

- (1) Efficiency gains can reduce the City’s operating costs. For example, with Attleboro’s recent selection as a DOER Green Community, we were awarded two grants that will result in energy savings amounting to \$400,000.
- (2) Municipalities with an aggressive environmental plan will be among the largest recipients of grants.
- (3) Higher density growth produces significantly more taxes.
- (4) Proactive planning for environmental catastrophes will greatly reduce cost of addressing them after the fact. Mitigating hazards (e.g., floodproofing) beforehand can significantly reduce the costs of repair or loss. Today’s financial institutions are already negatively assessing municipal bond ratings for lack of climate planning.

Pillar-specific Recommended Actions can be found in the Appendix to this EMP.

PILLAR 2: WATER SECURITY

“Water is the driving force of all nature.” Leonardo da Vinci

Security is defined as being in a state of being free from danger or threat. The Water Security pillar is broader than making sure Attleboro water is clean. Water Security also includes adequate supply, accessibility, and mitigation from flooding, runoff, and drought.

Water Security was, is, and will always be a critical pillar in Attleboro and anywhere humans exist. A clean water source is needed to survive for longer than three days. Protecting ground and surface water supplies within Attleboro serves as a backup plan should outside reserves become compromised. Climate change, unsustainable growth, and poor planning only add to the burden and challenges of accessible clean water. Water Security is more than protecting drinking water supplies. Too much water (flooding, stormwater runoff, detention) can be as devastating and expensive to a community as too little water (drought). Once contaminated, unavailable, or poorly controlled, water misfortunes may not reverse for generations.

This EMP supports protecting ground and surface water supplies within Attleboro, as well as a backup plan should reserves become compromised. Climate change, unsustainable growth, and poor planning will add to the burden and challenges of managing extreme flooding and rainfall, but also extreme drought.

Pillar-specific Recommended Actions can be found in the Appendix to this EMP.

PILLAR 3: WASTE REDUCTION

“The most dangerous kind of waste is the waste we do not recognize.” Shigeo Shingo, process expert and creator of the Toyota production system

Waste Reduction represents the fastest, cheapest, easiest approach to the Vision. Waste reduction can be done by the entire community. Based on US averages, 45,000 Attleboro residents annually create more than 36,000 tons of trash, waste 105 million gallons of clean water, and emit 9,000 tons of air pollutants. We waste 33% of our food, and 52% of electricity generated goes unused. As the mantra goes, we reduce first, and then re-use and recycle.

No doubt, reducing energy consumption is the fastest, easiest, least expensive way to meet the Vision as it pertains to energy. Since a significant amount of energy is needlessly wasted, this is the primary target. Further, there is the added benefit that such measured reductions qualify for sizable grants. For example, with recent designation as a Green Community, Attleboro has already received two grants for making energy efficiency improvements in municipal buildings, resulting in significant waste reduction.

Pillar-specific Recommended Actions can be found in the Appendix to this EMP.

PILLAR 4: CONSERVATION

“What is the use of a house if you haven’t got a tolerable planet to put it on?” Henry David Thoreau, Writer and Naturalist

Conservation is the act of preserving, protecting or saving something from damage, change, or waste. Conservation results in a two-fold benefit to meeting the EMP Vision. First, conservation will likely contribute to a net positive outcome (i.e., more than sustainable). Second, conservation reverses an alternate use which would likely have a net negative outcome (i.e., worse than sustainable).

Conserving open space and wildlife corridors contributes to carbon footprint recovery, water filtration, flood protection and aesthetics. There are physical and psychological benefits, too, when these areas include appropriate recreational opportunities, such as low-impact hiking trails.

Pillar-specific Recommended Actions can be found in the Appendix to this EMP.

PILLAR 5: RENEWABLE ENERGY

“The nation that leads in renewable energy will be the nation that leads the world.” James Cameron, Filmmaker

Fossil fuels, the product of many millennia of plant and animal decomposition, are finite and not securely distributed around the world. In 2018, humans burned 55 trillion tons of fossil fuels, which is 100x more than everything alive on Earth today. Clearly, not sustainable.

Renewable Energy, when managed correctly, is inexhaustible and far more environmentally friendly than the alternative of fossil fuels. In addition, many renewable energy sources such as solar, wind, and geo-thermal also have the advantage of local security. Many Attleboro homeowners are already benefiting from reduced electrical costs resulting from solar installations. Companies too are investing in renewable energy as a means to reduce operating costs. (See examples in Sources for Research in the Auxiliary Information.) As installations increase (on parking lots, roofs, brownfields), and technology improves, costs will decline.

The US market for EV’s (electric vehicles) increased nearly 2,000% from 2011 to 2019. The federal government has a goal that 50% of new cars and trucks be zero-emission by 2030. Supporting that goal is a \$7.5 billion budget to build a network of EV charging stations nation-wide.

By law, signed by Governor Baker, the Commonwealth of Massachusetts must reduce its greenhouse gas emissions by 50% from 1990 values by 2030 and by 85% by 2050. However, current infrastructure is highly dependent on fossil fuels; global fossil fuel-generated electricity increased by a record 9%, tracking a record increase of CO₂. There is also the matter of methane releases caused by leaking production and transmission infrastructure. Proactive transition to renewable energy generation is needed to reach the Commonwealth’s goals, as well as the EMP’s Vision.

Pillar-specific Recommended Actions can be found in the Appendix to this EMP.

PILLAR 6: EDUCATION & PARTICIPATION

“Education is the most powerful weapon which you can use to change the world.” Nelson Mandela, first democratically elected president of South Africa

The EMP can help foster passionate and diverse leaders and thinkers who engage their community and public officials on topics of resilience and sustainability. The implementation and promotion of local data collection, data sharing, data monitoring tools, and other efficient, broad-reaching technologies is key to effective education and inclusive community participation.

Pillar-specific Recommended Actions can be found in the Appendix to this EMP.

RECOMMENDED ACTION PLAN

“Unless commitment is made, there are only promises and hopes; but no plans.” Peter F. Drucker, business guru.

The EMP is first a strategic document. But strategy without a tactical intent is a failed strategy. Therefore, accompanying the EMP is a non-exhaustive list of recommended actions (the “Recommended Action Plan”) that in time the City could, upon further review and evaluation either undertake or encourage the community to undertake. The Recommended Action Plan is a critical component of the EMP. Each Action is intended to contribute to achieving the Vision statement. The Recommended Action Plan is comprised of two tabs: Municipal and Personal. The Municipal tab includes the proposals that are recommended to be undertaken by the City of Attleboro to achieve the Vision and Mission of the EMP. Each recommended action is presented with a cursory review of the rationale and difficulty of execution. The Personal tab includes a set of recommendations that we, as individuals can do to achieve the Vision and Mission of the EMP.

The expectation is that these actions are communicated to the public. Perhaps awards or other forms of recognition can be used to encourage progress toward the Vision of the EMP.

While the EMP is a bold, broad coverage, long range, ambitious strategic plan, the Recommended Action Plan is intended to be executed incrementally.

Eventually all reasonable actions would be reviewed independently, and assigned accordingly for execution. While many recommended actions will have a financial or other personal benefit, that should not be the sole criteria for execution. Since anthropogenic activities are broadly impacting humans across the globe, each action should be primarily judged not by “what’s in it for me”, but “what’s in it for us.

All recommended actions from the EMP should affirmatively work to reduce the disproportionate environmental burdens (e.g., heat, pollution, access) typically borne by Environmental Justice communities.

AUXILIARY INFORMATION

How This Document Was Generated

Typically, strategic plans are crafted by consulting firms. Instead, this EMP document was developed by a small, volunteer task force, experienced in strategic planning, tactical execution, and a long history in the environmental sciences.

During the drafting of the EMP, the core task force team sought input from individuals and civic groups such as the Mayor, members of the City Council, Planning Department, Planning Board, Conservation Agent, Conservation Commission, Economic Development, Chamber of Commerce, Municipal Building Commission, Attleboro Redevelopment Authority, Attleboro Land Trust, Friends of the Ten Mile River, Superintendent of Schools, School Committee, Attleboro Public Library, SRPEDD, Garden Club, State Representative, Audubon Society, and The Sun Chronicle. (Note: This does not suggest that the listed entities endorse or even agree with the EMP, only that they were offered engagement to garner broad participation.)

The task force also engaged with the community for comment and input via website, postings, press, and social media. As per the below recommendations, the task force hopes for additional input at public meetings where residents and other stakeholders will contribute their ideas and comments.

The Task Force

Roy Belcher:

- Academics: BA (University of Kansas); MBA (Bryant College).
- Marine Corps veteran.
- Formerly Deputy Superintendent, Mass Dept. of Correction.
- Public Accounting (CPA).
- The Sun Chronicle, retired as General Manager, 22 years.
- Former President of the Attleboro Land Trust, currently active board member.
- Attleboro Resident for 49 years, two adult children graduated AHS.

Brian Hatch:

- Academics: BA (Colgate University): Political Science; JD (Boston College Law School); MS (University of Rhode Island): Labor and Industrial Relations.
- Licensed Massachusetts Attorney since 1985.
- Hatch Legal Group: Dental Practice Specialty Law Firm, 2003-present.
- Board of Directors: Attleboro Land Trust, Acquisitions Committee Chairman.
- Pro Bono Counsel and Board Member: Citizens Against the Rehoboth Compressor Station (CARCS); author of Rehoboth By-Laws Article 4.11 Natural Gas Compressor Stations and Power Plants; Author of Attleboro City Council Resolution regarding Compressor Stations.
- Provided drafting and legal assistance to Councilor Diana Holmes, Chairman of Ordinance Committee in drafting ordinances related to conservation issues.
- Conservation Commissioner for City of Attleboro.
- Hike Attleboro Committee, Chairman.

Richard DiNitto:

- Academics: AD Environmental Science (Northshore Community College); BS Geology & Geophysics (Boston College); MS Geology & Geophysics (Boston College).

- 40+ years' experience in the environmental consulting business; investigating and remediating waste contaminated properties across the Americas, Europe and Asia; developing and implementing environmental and safety procedures for manufacturing businesses and providing Fortune 500 companies with international regulatory guidance on environmental and safety laws and regulations for over 100 countries. Currently assisting two very large multinational firms on Sustainability, Environmental response, Energy Management, and have worked on some of the largest environmental cleanups in the US. My team reviews and reports on Environmental legislative changes for more than 100 countries and we review across the globe in real time.
- Founder and co-owner of The Isosceles Group, a private environmental and safety consulting business for 22 years with staff in 6 States.
- Managed COVID response actions and individual case care for 27,000 employees located in nearly 20 countries during the past 2 years.
- Global EHS Manager for the past 10 years for Sensata Technologies, headquartered in the Attleboro Business Center Park (former Texas Instruments); managing all environmental requirements for their properties.
- Previous manager of several Environmental Consulting Divisions having managed more than 500 employees across the East Coast and the Caribbean.
- Assisted in mapping the bedrock geology of Massachusetts for the US Geologic Survey.
- Co-Authored manual on Environmental Site Investigation Techniques.

Jillian Weber

- Academics: BS (Pennsylvania State University) Earth Science; Minor in Geography
- Interned for the US Department of Energy's Global Change Education Program at Oak Ridge National Labs; updated the UCBORN soil database; estimated global soil carbon and nitrogen totals; and assisted in carbon sequestration fieldwork and data collection for analysis.
- Program Coordinator for World Resources Institute's Information Program in Washington DC. Traveled to Nairobi, Kenya to support USAID funded GIS conference focused on improving natural resource management in multiple countries.
- President & Co-President of the Hill-Roberts Elementary School PTO 2015 – 2018.
- Current Project Scientist for Coneco Engineers & Scientists, Inc. since 2017.
- Attleboro Resident for 16 years with husband John, with two sons currently attending Coelho Middle School and Attleboro High School.

Emily Migliaccio:

- Academics: BS (Boston College): Environmental Geosciences, Environmental Studies; JD (Vermont Law School).
- Licensed Rhode Island and Massachusetts Attorney since 2014.
- Recent Employment: Attorney with Cervenka Green & Ducharme LLC (2017 – present); former Associate Attorney with Partridge Snow & Hahn LLP (2014 – 2017).
- Recent Professional Involvement: former Board Member and Secretary of ecoRI News; former Hearing Officer for the Rhode Island Coastal Resources Management Council.
- Attleboro resident for over six years, living with my husband, son (born in August 2021), cat, and turtle.

Mike Davis, chair:

- Academics: BA (Salem State University): Biology (environmental), Chemistry, Education; MS (Northeastern University): Health Science (public health focus with

thesis assessing heavy metal migration from a hazardous waste site); CSS (Harvard University, extension): business management.

- Former high school science teacher for Biology, Chemistry, Environmental Science, and later at Bristol Community College.
- Long history of leading or participating in environmental initiatives.
- Member volunteer on the Attleboro Land Trust.
- Ward 4 Attleboro City Councilor for four years, chairing Planning and Land Use Committee. Authored an op-ed piece in Sun Chronicle (1994) “A Vision For Attleboro”, with a focus on environmental partnership.
- Chaired Poncin-Hewitt recreation facility committee. Member, or chair, of many other committees and task forces.
- Retired after five decades of leading several business turn-arounds in a wide variety of industries, as a manager, director, general manager, VP, President or owner.
- Attleboro resident for 38 years, two adult children, four grandchildren all living in Attleboro.

Need For An Environmental Master Plan

Reasons to support the EMP:

- Climate Change is real, approaching faster, and requires preparation
- Sustainable stewardship of natural resources is both a responsibility and duty.
- Residents have the right to live in a world and community that will sustain their lives and livelihoods. This is less about a litter-free neighborhood and more about sustaining human existence. This is an existential threat to human existence.
- Attleboro residents deserve a plan that maps out a sustainable future.
- The development of Attleboro as a 'Green City' is also important to the progressive economic development of the area. There are economic benefits to being a sustainable and resilient community.
- Sustainable planning and tactics have an economic return and cost avoidance benefit, similar to any investment.
- Sustainable growth requires a plan with goals and measurement of progress.
- Many communities across the US and Canada have an Environmental Master Plan. Many were initiated in the early 2000's, twenty years ago.
- Drinking water security is essential for resident health and safety.
- Use of our natural resources is popular with residents.
- This Plan will help guide decisions-makers
- Attleboro does not currently have an environmental master plan, and should have one.
- It is better to have a plan and not need it, than to need a plan and not have it.

Sources of Research

- Attleboro Comprehensive Plan: [Comprehensive-Plan-PDF \(cityofattleboro.us\)](http://cityofattleboro.us/Comprehensive-Plan-PDF)
- Attleboro Natural Hazards Mitigation Plan: [scott.pdf \(cityofattleboro.us\)](http://cityofattleboro.us/scott.pdf)
- Hazard Mitigation Update Project: [Environmental Site Assessment \(cityofattleboro.us\)](http://cityofattleboro.us/Environmental-Site-Assessment)
- Trash waste: [How Much Waste Does the U.S. Produce? | Dumpsters.com](http://Dumpsters.com/How-Much-Waste-Does-the-U.S.-Produce?)
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- Arctic Sinkholes: [Arctic Sinkholes | Full Episode | NOVA | PBS - YouTube](#)
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- Carbon capture & sequestration: [World Energy Outlook 2021 – Analysis - IEA](#)
- Megadrought: [Drought Spreads to 93 Percent of West--That's Never Happened - Scientific American](#)
- Geothermal linked heat pumps: [GeoMicroDistrict Feasibility Study - HEET](#)
- Office of Sustainability: [Staff | Office of Sustainability | City of Philadelphia](#)
- Benefits of electric vehicles: [Are Electric Vehicles Really Better for the Climate? Yes. Here's Why - Union of Concerned Scientists \(ucsusa.org\)](#) ; [Electric vehicles are not just the wave of the future, they are saving lives today. | Earthjustice](#) ; [Why Electric Cars are Better than Gas Cars | EnelX](#) ; [UPDATE: AAA Says Owning An EV Costs More Than Having An ICE Car \(insideevs.com\)](#) ; [Why Buy An Electric Car? | Top Reasons To Choose Electric vs. Gas \(myev.com\)](#)
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Appendix of Recommended Actions

[Table to be inserted, or refer to Excel file: "Recommended Action Items"]