

# An Action Plan for a Sustainable Fairfield

A “sustainable” community adopts a formal strategy to safeguard its natural resources, its natural and built environments, and the quality of life for its residents – for now and the future.

The Town of Fairfield has a long history of support for sustainability initiatives. But as our Town grows and develops, it faces growing environmental challenges, compounded by the increasing pressure of climate change. Striving for sustainability has never been more critical and will require embedding the practice of sustainability into Town operations and the everyday life of its citizens.

The state has set an ambitious goal: to be carbon-free by 2040. As a sustainability leader in the state, Fairfield wants to continue to do its part. Toward that end, the Sustainable Fairfield Task Force (SFTF) is pleased to present this updated Sustainability Plan, which builds on the original plan released in January 2018. It assesses achievements, challenges, and action plans across a broad array of eighteen sustainability modules. The goals within the modules have been set for the year 2030; some goals can and should be achieved sooner, while others may need longer to achieve.

The SFTF recognizes that the Plan’s components are interdependent and synergistic; the modular format enables the work ahead to be focused and organized. The Plan details the benefits of diligent stewardship in each area, not only in terms of environmental quality, but also the economic value to the Town and its residents. ***It cannot be overstated that sustainability is not only sound environmental policy, but sound fiscal policy.*** For example, Fairfield’s steadily increasing roster of clean energy projects has led to annual energy savings of about \$3 million.

The Sustainability Plan is a dynamic, living document. The SFTF invites our fellow citizens to review the Plan and comment on how we can make it even more robust. In particular, we welcome ideas about how to better engage citizens in this important work. At regular intervals, we will report on updates and enhancements to the Plan and provide news regarding our progress.

Sustainability is a shared responsibility – and it yields shared benefits. We hope the Plan will inspire the active engagement of Fairfield’s citizens to do what we can in our homes, at our jobs, and throughout our day to help Fairfield reach its sustainability goals.

**Fairfield’s Sustainability Plan is:**

- **Authored by the Sustainable Fairfield Task Force**, a group of citizen-volunteers working in cooperation with Town officials and other stakeholders to advance the broader use of clean, renewable energy and help safeguard the Town’s natural and built environment (learn more about SFTF and find additional information at: <https://www.fairfieldct.org/sftf>)
- **Designed to be comprehensive in scope**, reflecting a broad array of sustainability action areas
- **A key source document** in maintaining Fairfield’s Sustainable CT certification (for more information on Sustainable CT go to <https://sustainablect.org/>)
- **Modular in format**, to maintain focus on action areas and facilitate tracking of metrics
- **Transparent** in presenting goals and assessing progress
- **A dynamic, evolving document**, designed to change with our Town’s evolving needs and opportunities
- **Your plan:** We encourage the Fairfield community to help shape our Town’s sustainability efforts; comments and ideas from residents and Town officials are welcome

Learn more about the SFTF at <https://www.fairfieldct.org/sftf>.

Please submit comments or other input on the Sustainability Plan by email to: [sustainablefairfieldtaskforce@gmail.com](mailto:sustainablefairfieldtaskforce@gmail.com)

**Background - Fairfield’s sustainability efforts are:**

- **Long-Established.** Sustainability and environmental preservation have been Town-wide priorities for decades.

<https://www.fairfieldct.org/content/10724/12126/default.aspx>

- **Recognized Statewide.** Fairfield is a statewide leader in sustainability, with the Town earning top honors in 2018 as a “Sustainable CT” community.

<https://www.fairfieldct.org/news/?FeedID=2421>

- **Aligned with Residents’ Interests & Concerns.** Fairfield’s first-ever “Green Survey” in 2018 demonstrated that residents highly value sustainability and environmental preservation – and seek the Town’s help in putting those values into practice. For more information:

<https://www.fairfieldct.org/content/10724/12126/default.aspx>

### **Statement on Climate Justice**

Climate justice has long been a focus of the environmental community. Our present climate crisis is a multiplier of the other crises of racial injustice and economic inequality. Americans of color often live on the frontlines of extreme weather events, pollution, and as a result, experience chronic health issues. Polluting industries are often located in areas where race, income inequality, and unsafe housing converge. Studies have shown that areas with more polluting facilities had higher death rates from Covid-19.

SFTF hopes to bridge town governing bodies and those of neighboring communities and public interest groups, offering information on environmental hazards affecting their lives -both of a local and global nature. We can encourage local food consumption, and educate towards zero waste and reduction of plastics and toxins in the environment and other public health initiatives. We can address zoning and land use, such as requiring net zero buildings for low-income housing.

As Coronavirus has made us keenly aware how global our community is, we must expand our reach to promote climate justice in the areas of jobs, communication, sustainable housing and transportation, clean water, food security, and health.

# Air Quality

Fairfield County was ranked as the 19<sup>th</sup> worst ozone-polluted county in the country in the 2018 American Lung Association's "State of the Air" report. Air quality is particularly bad during the summer months, driven in large part by wind-borne pollutants from coal, oil, and natural gas-burning power plants in the South and Midwest USA.

The Environmental Protection Agency has flagged Connecticut as "at risk" for not meeting its air quality standards for 2025 and is not currently meeting 2008 standards. Poor air quality is largely driven by ground level ozone and fine particulates, which exacerbate asthma and other lung diseases, cardiac disease, among others.

The Connecticut Department of Energy and Environmental Protection (DEEP) regularly monitors air quality around the state, and while air quality is much better than in the 1980s, we are still seeing many unhealthy days during the summer. In 2019, Fairfield County had 19 days that exceeded safety limits. On a positive note, the coal-burning power plant in Bridgeport is scheduled to be retired in 2021.

## **Achievements to Date**

- The Town offers a voluntary, collaborative tree-planting program to help residents enhance the beauty of their property and create shaded streets that enhance air quality and property values
- The Bicycle and Pedestrian Committee worked with the Town to develop a Bicycle and Pedestrian Master Plan, creating a network of bike/walking paths to encourage less auto traffic and reduce emissions
- UI/Municipal Electric Vehicle Readiness study, December 2019
- Expanding electric vehicle ownership in Fairfield, reducing emissions

## **Challenges Ahead**

- Raising awareness about air quality and relationship to health
- Although Fairfield currently has a policy that aims to "preserve, protect, and improve the air resources of the Town," it does not have a specific air quality action plan. Other municipalities have plans in place that can serve as guides to design a plan and help improve Fairfield's air quality programs.

## Benefits of an air quality plan

- Such a plan would provide a healthier environment, particularly important for children and those suffering from asthma and other lung problems.
- An indirect benefit would be the reduction of greenhouse gases that contribute to climate change.



DEEP Air Quality Index levels

## 2030 Plan Goals\*

- Communication plan on specific actions for residents to improve air quality such as more efficient use of automobiles and rethinking home thermostat settings
- Implement a “no idle” policy for cars, commercial vehicles and Town vehicles (e.g. school buses), and post 10 “No Idle” signs at strategic locations
- Convert 10 of the Town’s fleet of school buses from diesel to electric power
- Fast-charging EV stations for cars and trucks at our rest stops
- Workplace charging at 50% of Fairfield businesses
- Two thousand total Fairfield EV registrations
- Full implementation of the Bicycle and Pedestrian Master Plan

\*Some goals are ambitious and may need more time to achieve target participation rates; others can be achieved sooner. Work on all goals should begin as soon as possible.

## How Do We Reach Our Goals?

- Work with the Department of Health to develop an air quality plan
- Continue annual Green Wheels Expo to encourage EV ownership
- Work with the Town to “electrify” its municipal fleet and school buses
- Work with the Bicycle and Pedestrian Committee to fully implement the Bicycle and Pedestrian Master Plan

- Promote EV workplace charging stations for the Town and local businesses

FOR MORE INFORMATION
<a href="#">Key Air Pollutants</a>
<a href="#">Electric Vehicle Readiness Study</a>
<a href="#">Air Quality Index</a>
<a href="#">Tree Planting Program</a>
<a href="#">Air Quality Monitoring Site for Fairfield, CT</a>

## Biking and Walking

The climate is changing, and transportation is a leading cause. Walking and biking reduce energy use, improve air quality, reduce parking needs and traffic, improve personal health and fitness, and invigorate the local economy through increased access to local businesses and tourism. We can achieve these community-wide benefits through institutional planning and enforcement.

### Achievements to Date

- Town-wide bike route plan
- Three completed bike routes including Shoreline, Mill Plain, and Library to Library; the Lake Mohegan to Beach route is nearing completion
- Two bicycle pump/repair stations (Southport Beach, Brookside Drive) in place; a third is pending
- In 2018, published Approved Complete Streets policy, which was “Top Ten” ranked nationally by Smart Growth America
- Numerous education and outreach events and activities

### Challenges Ahead

- Continued expansion of bike routes
- Implementation of the Complete Streets plan
- Installation of more sidewalks to expand safe walking alternatives

### Benefits of biking and walking

- Reduced greenhouse gas emissions, which contribute to climate change

- Reduced congestion and toxic emissions from burning of fossil fuels
- Improved air quality and public health
- Savings on personal transportation costs
- Reduced pressure on Town land use for parking resources



A bike share program was launched in 2016 in partnership with private business, and led by the Fairfield Health Dept.

### **2030 Plan Goals\***

- Implement at least three new routes pursuant to Bike-Walk-Run plan
- Implement three projects pursuant to Complete Streets policy
- Complete implementation of bike route plan and Complete Streets plan
- Annual community outreach and education
- Support state efforts to promote mass transit and transit-oriented design

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### **How Do We Reach Our Goals?**

- Implement Bike-Walk-Run plan during repaving projects
- Using federal and state incentives when possible, apply Complete Streets policies to new projects
- Leverage private funding and partnerships when possible
- Continue outreach and education efforts

**FOR MORE INFORMATION**

[Bike-Walk-Run Plan 2016](#)

<a href="#">Bicycle &amp; Pedestrian Committee</a>
<a href="#">SmartGrowthAmerica.org</a>
<a href="#">Transit-Oriented Design</a>
<a href="#">Complete Streets Policy 2018</a>

## Community Outreach & Education

The Sustainable Fairfield Task Force (SFTF) aims to expand its ongoing outreach and education regarding sustainability and environmental preservation, and to encourage Town-wide involvement in activities designed to help Fairfield become a truly sustainable community.

### Achievements to Date

- Developing the Town's first-ever Sustainability Plan, followed by a series of forums to create awareness
- Securing Fairfield's designation as a Silver-level Sustainable CT community
- Organizing an annual region-leading EV-focused "Green Wheels Expo"
- Conducting the first-ever Town-wide "Green Survey"
- Providing support for renewable energy projects: residential solar programs, EV charging stations, household energy audits, LED bulb giveaways
- Overseeing the annual Earth Day Celebration event
- Conducting tours of key Town sustainability facilities
- Developing a Town informational resource for household recycling
- Conducting forums on "tips" for household sustainability and environmentalism
- Overseeing initiatives to engage Fairfield citizens in key sustainability opportunities, e.g., home composting, home gardening, pollinator pathways, environmentally friendly mattress disposal, residential "Solarize" program
- Providing informational/educational resources on dedicated Town webpage
- Conducting ongoing media/social media outreach to inform our community

### Challenges Ahead

- Crowded environment for cause-related messaging makes it difficult for local sustainability messaging to break through



- Keeping Fairfield’s citizens aware of increasingly critical environmental and sustainability issues and encouraging wider public involvement
- Maintaining alignment with Town bodies and Town officials to ensure an ongoing flow of consistent information and support of sustainability actions
- Creating and maintaining “feedback mechanisms” to better understand and respond to citizen concerns and interests re: sustainability

### **Benefits of Citizen Outreach & Education**

- Building recognition of Town’s leadership in sustainability, with benefit for the Town’s reputation
- Enhancing community support for Town’s sustainability initiatives
- Encouraging citizen action to enhance household sustainability

### **2030 Plan Goals\***

- Establish a Town-authored, quarterly media column focused on sustainability
- Promote specific sustainability and environmental quality initiatives
- Keep citizens fully updated on full range of steps/activities they can undertake
- Update and carry out two more “Green Surveys” by 2030

\*Some goals are ambitious and may need more time to achieve target participation rates; others can be achieved sooner. Work on all goals should begin as soon as possible.

### **How Do We Reach Our Goals?**

- Conduct biannual community “Solarize” initiative, building on prior projects
- Initiate annual Town workshop for residents focused on household sustainability
- Continued sponsorship of annual Green Wheels Expo
- Initiate program to recognize Town businesses with demonstrated sustainability actions
- Develop improved Web resources focusing on our sustainability mission, including core sustainability documents and standing sections for both timely news and “evergreen” content
- Initiate annual Town-wide newsletter updates to residents on sustainability issues and SFTF mission progress
- Regularly update the Town on significant sustainability initiatives, e.g., solar carports, EVs for Town fleet, electric school buses, via media outreach, Town e-mail list, Town website posts
- Build knowledge and engagement among Town’s youth via support for Sustainable Youth CT group and sustainability initiatives at Town schools
- Join forces with other CT municipalities via Sustainable Fairfield County, Clean Cities, EV Club of CT
- Establish Town-wide signage program highlighting key sustainability projects

- Conduct annual sponsored tour of sustainability projects/installations
- Curate annual, relevant exhibit at Museum/History Center, Main Public Library, Fairfield Farmer’s Market
- Highlight significant “sustainability business partners” in Fairfield Chamber of Commerce Directory

FOR MORE INFORMATION
<a href="#">Fairfield’s Sustainable CT Certification</a>
<a href="#">About Sustainable CT</a>
<a href="#">Fairfield “Green Survey”</a>
<a href="#">Sustainable Fairfield Task Force</a>
<a href="#">Follow SFTF on Facebook</a>

## Drinking Water Supply and Quality

Fairfield is in a region of relative water abundance, but we’ve always had droughts as well as flooding. Climate scientists project that future episodes of drought and flooding are likely to intensify. In addition, our water supply is at risk from increasing population and commercial development.

Each day, Fairfield uses about 9 million gallons of drinking water from several watershed areas for commercial and residential use. The Aquarion Water Company maintains about 300 miles of water mains in Fairfield; the oldest mains are about 80 years old.



Aspetuck Reservoir – only minutes away from town

### **Achievements to Date**

- Reliable supply of clean water for homes and businesses
- Water is monitored for general quality and regulated/emerging contaminants
- Watershed protection through partnership with the state's Department of Energy and Environmental Protection (DEEP), Aquarion, and the Nature Conservancy

### **Challenges Ahead**

- Ensuring that water supply and quality keeps pace with residential, municipal, and commercial development
- Ensuring reliable water delivery infrastructure
- Ensuring proactive response to drought conditions

### **Benefits of mindfully managing our water supply and use**

- Stable water supply costs
- Using less energy to make hot water
- Lowering operating costs of wastewater treatment facility, thereby lowering taxes
- Creating a cushion against drought conditions

- Protecting our health and safety by protecting the quality of our water
- Stewardship of a precious and finite natural resource

### **2030 Plan Goals\***

- Reduce Town per capita water use by 10%
- Develop a Town drought ordinance
- Maintain an effective fire prevention program
- Ensure an ongoing water main replacement program
- Support the current watershed management partnership
- Ensure that the regulated and emerging contaminants are adequately monitored

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### **How Do We Reach Our Goals?**

- Residential and commercial conservation measures, e.g., low-flow toilets, showers, and sinks; fixing leaks; rain barrels; other conservation measures
- “Xeriscaping” (water-efficient landscaping) – implement organic landscaping to build up soil structure for better water retention and less watering; use of native plants that require only rainwater
- Implement and maintain comprehensive standards for graywater separation and use

<b>FOR MORE INFORMATION</b>
<a href="#"><u>Water Quality Reports</u></a>
<a href="#"><u>Water Conservation</u></a>
<a href="#"><u>Water Monitoring</u></a>
<a href="#"><u>Land Management</u></a>
<a href="#"><u>CT Model Water Use Restriction Ordinance</u></a>

# Energy Efficiency and Energy Conservation

Energy efficiency and conservation are strategies that help reduce energy consumption in a home or business. Energy *efficiency* uses technology that requires less energy to perform the same function, or applies methods to reduce energy losses; energy *conservation* is any behavior that results in the use of less energy. Energy efficient products include LED light bulbs, insulation, weather stripping, caulking, and EnergyStar appliances. Energy conservation practices include prudent heat and air conditioning settings, turning off or dimming light bulbs, and using power strips.

## Achievements to Date

- From 2010-2019, 21% of Fairfield homes received a professional energy audit, of which 22% redeemed a residential energy efficiency rebate; 37% of Fairfield businesses participated in one or more state energy efficiency programs
- Over 3 million kWh is saved annually in Town buildings through energy management and efficiency upgrades
- One facility, Sullivan Independence Hall, achieved an energy score in the top 25% worthy of an Energy Star rating
- In 2015-16, the Sustainable Fairfield Task Force (SFTF) gave away more than 2,000 LED bulbs to residents at events

## Challenges Ahead

- Town residents and businesses may be less likely to move beyond “low-hanging fruit” energy-saving measures and adopt measures with longer payback periods
- Homeowners typically choose not to spend capital on energy efficiency retrofits, choosing instead renovations based on appearance, amenities, convenience and comfort
- Rebates, incentives and tax credits may decrease over time.
- Increased use of plug-in devices counter savings achieved through energy efficiency measures

## Benefits of energy efficiency

- Significantly reduces electricity costs and increases property value
- Improves indoor comfort and reduces moisture issues (mold, leaks, condensation)
- Protects air quality and public health
- Reduces greenhouse gas and harmful emissions
- Enhances energy stability and security



LED Light Bulb Exchange

## 2030 Plan Goals\*

- Adopt Energy and Asset Management Performance Contract that will include thermography study, implementation of Building Energy Management System, and upgrading of all lighting and HVAC equipment
- Achieve EnergyStar qualifying status for at least five municipal or school facilities
- Increase participation in energy audits, residential rebates and commercial programs by 5% annually
- Implement annual school energy conservation challenge
- 100% of Town buildings with “net zero” energy import from utility
- 80% of all Fairfield homes and businesses with net zero energy import

\*Some goals are ambitious, and may need more time to achieve target participation rates; others can be achieved sooner, but work on all goals should begin as soon as possible

## How Do We Reach Our Goals?

- Conduct education and outreach about energy efficiency opportunities and resources for residents and businesses
- Train Town facility maintenance and general staff to optimize energy efficiency savings through behavioral changes
- Implement energy-saving campaigns in community and schools
- Leverage federal and state incentives and low-interest financing

FOR MORE INFORMATION
<a href="#">Clean Energy Action Plan</a>
<a href="#">EnergizeCT.com</a>
<a href="#">Home Energy Solutions</a>
<a href="#">Green Energy Financing for Businesses, Non-Profits &amp; Houses of Worship (C-PACE)</a>
<a href="#">Database of State Incentives for Renewables and Efficiency</a>

## Food

Our national food system is complex and wasteful. The average plate of food travels 1,500 miles to reach our tables and over 4 million tons of food is wasted each year. According to the National Institutes of Health, the adverse environmental and health effects of pesticides are becoming increasingly clear. On a positive note, there has been impressive growth in farmers' markets, community-supported agriculture (CSAs), and other outlets for farmers to sell wholesome, unprocessed products directly to consumers. The United States Department of Agriculture's Economic Research Service has noted a sharp increase in local food sourcing by restaurants, retailers, and regional distributors.

### **Achievements to Date**

- Multiple weekly Farmers' Markets (June – October)
- Farm to School Network provides local produce during growing season
- Increased access to local foods by local groceries
- Some local restaurants are sourcing local food and local beers

### **Challenges Ahead**

- Ensuring the viability of local farming and local food infrastructure
- Promoting the benefits of locally-sourced food

### **Benefits of local food infrastructure**

- Local food is fresh, tasty, and nutritious
- Supports community health
- Supports local farmers and builds local economies
- Local food systems generally mean less energy consumption, emissions and food miles
- Supports genetic and ecosystem diversity
- Preserves open spaces
- Growing vegetables at home is more cost effective than buying and helps lower income families gain affordable access



A healthy, locally-sourced meal at a Fairfield restaurant

### **2030 Plan Goals\***

- 10% of Fairfield residents growing some sort of food at home



- Local produce/ingredients sourced by 25% of Fairfield restaurants (when available)
- School gardens at 80% of Fairfield schools
- Ensure availability of locally grown food choices at all supermarkets
- Support and solidify Fairfield Farmers’ Markets
- Expand food rescue program
- Classes on composting, square foot gardening, raised beds – at least annually
- Baseline survey and comparison with surrounding/similar towns
- Create more community garden plots
- Support “Farm to School” organizations

\*Some goals are ambitious and may need more time to achieve target participation rates; others can be achieved sooner. Work on all goals should begin as soon as possible.

### **How do we reach our goals?**

- Baseline survey and benchmarking with surrounding/similar towns
- Educate the community on benefits of local food and food rescue
- Establish food sourcing guidelines for grocery stores and restaurants
- Develop a comprehensive food rescue program to reduce waste
- Encourage restaurants to source local produce/ingredients (when available)
- Encourage grocery stores to feature locally produced food
- Offer free classes on composting, square foot gardening, raised beds
- Foster community garden plots
- Encourage schools to cultivate school gardens
- Expand involvement with “Farm to School” network

<b>FOR MORE INFORMATION</b>
<a href="#">Seven Generations Ahead</a>
<a href="#">National Farm to School Network</a>
<a href="#">Food Rescue US</a>

## **Forests and Trees**

For the purpose of this plan, the term “forest” includes all trees on public and private land in Fairfield, including trees within the rights-of-way along Town roads.

Trees are a large part of Fairfield’s heritage and sense of community. In the 1800s, Fairfield residents Annie B. Jennings and Mabel Osgood Wright were pioneers in forest management. Following their example, the Town continues to embrace its responsibility as a steward of its forest resources by protecting and enhancing the many environmental, cultural, and economic benefits of trees.

### **Achievements to Date**

- [Tree City USA](#) designation since 1988
- [Town of Fairfield Forestry Committee](#) since 2006
- [Town of Fairfield Community Forest Management Plan](#) in 2014
- Over 1,100 acres [Town-owned open space](#) parcels
- Town [Tree Planting](#) and [Commemorative Tree](#) Programs

### **Challenges Ahead**

- Roadside trees in Town neighborhoods were often planted at the same time using the same tree species; these trees will reach the end of their lifespans at the same time, and will fail in large numbers if attacked by pests specific to those trees (Emerald Ash Borer, Asian Long Horned Beetle, Lantern Bug, Gypsy Moth)
- The spreading of roadway salt during the winter months creates harsh conditions for trees
- Deer browsing on low, reachable branches and antler-rubbing on tree trunks during fall rutting cause great harm to newly planted trees
- Climate change is altering the types of trees that thrive in our area, e.g., in 30 years it is predicted that sugar maples will no longer be ubiquitous in Fairfield

### **Benefits of Trees**

- Energy efficiency due to shade and wind block
- Green areas provide calming, health benefits
- Aesthetic character/appeal
- Enhanced property values
- Water filtration

- Flood and erosion control
- Improved commerce
- Tree-lined streets and open spaces provide better habitats (edible plants, nuts, and berries)
- Shaded streets heighten neighborhood attractiveness
- Carbon sequestration
- Air and water purification
- Stream-flow regulation
- Educational/discovery opportunities
- Mitigate some climate change problems



Tree City USA ceremony

### 2030 Plan Goals\*

- Using data from UI, decrease power outages by 10% through utility infrastructure hardening and improvements in tree health and strategic tree trimming
- Increase tree canopy by 10% by increasing the number of trees planted, with tracking and maintenance programs
- Increase roadside tree species diversity and age variation with a careful tree planting program
- Education and outreach: signage project throughout Town in collaboration with pertinent Town and civic groups
- Increase open space acquisition and maintenance

\* Some goals are ambitious and may need more time to achieve target participation rates; others can be achieved sooner. Work on all goals should begin as soon as possible.

### **How Do We Reach Our goals?**

- Informational outdoor exhibit panels
- Seasonal “tree walk” events and educational tours
- Workshops

#### **FOR MORE INFORMATION**

[i-Tree Tools](#)

[Town of Fairfield Community Forest Management Plan](#)

## **Municipal and School Buildings**

Sustainable buildings feature environmentally responsible and resource-efficient choices throughout a building’s life cycle. Among the guiding principles are integrated design (linking architecture, structural engineering, optimized energy performance, and life cycle planning), water conservation, enhanced indoor air quality, low-environmental-impact materials, and assessment of climate change risks. Such standards promote fiscal responsibility, protect occupant health and productivity, and demonstrate environmental stewardship.

### **Achievements to Date**

- Riverfield and Stratfield School renovations designed to CT High Performance Building Standards featuring daylight harvesting, energy recovery ventilator, dedicated outdoor air system, rooftop solar panels, and an EV charging station
- Four schools (Ludlowe HS, Warde HS, Mill Hill & Riverfield) feature “white roofing” to reflect solar heat and reduce air conditioning loads
- Municipal and school buildings use low Volatile Organic Compound (VOC) building materials to reduce “off gassing” that can damage air quality, human health, productivity and the environment

## Challenges Ahead

- Many Town and school facilities are situated within the 100-year flood plain and may be subject to increased flooding
- Municipal construction projects are often compromised by “value engineering;” long-term savings opportunities are sacrificed for short-term budget constraints

## Benefits of sustainable buildings

- Save money on utility costs by reducing energy and water consumption
- Improve student/employee health and reduce absences
- Enhance student performance and employee productivity
- Using natural resources more efficiently lowers environmental impact
- Create a positive example for local residents and businesses



Reflective White Roof and Rooftop Solar Array at Fairfield Ludlowe High School

## 2030 Plan Goals\*

- All new construction or \$10M+ renovations in Town buildings follow CT High Performance Building standards (or similar verification systems such as LEED)
- Maintain electricity, heating fuel and water data for Town buildings in Portfolio Manager software to help achieve 20% reduction in usage for each
- Use life cycle cost-benefit analyses; adopt all energy technologies with payback of <5 years and strongly encourage those with payback of 5-10 years

- Include educational signs, kiosks, or learning labs in all green municipal and school buildings to encourage residents and businesses to adopt sustainable building practices
- Submit all major municipal or school facilities to LEED Gold or equivalent standards, net-zero energy import from utilities and use rainwater/grey water for 50% of needs

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### How Do We Reach Our Goals?

- Incorporate sustainable standards into long range plans for Town facilities
- Adopt system-wide plans to conserve water with new technologies and behavioral changes
- Increase public and business awareness of sustainable building concepts
- Install a voice for sustainability: SFTF member on all building committees

FOR MORE INFORMATION
<a href="#"><u>Town of Fairfield Clean Energy Action Plan</u></a>
<a href="#"><u>CT High Performance Building Manual</u></a>
<a href="#"><u>U.S. Green Building Council</u></a>
<a href="#"><u>Collaborative for High Performance Schools</u></a>
<a href="#"><u>Low Impact Development</u></a>

## Parks and Open Spaces

The Parks and Recreation Department manages 170 acres of Town parks, 36 playing fields, five miles of beaches, two public golf courses, two marinas, a fitness center, 31 asphalt tennis courts, a Har-Tru tennis center, three picnic areas, two waterfront banquet facilities, and a waterfront pavilion. The Tree

Warden oversees the Drew Park Community Garden offering raised beds for local gardeners upon application.

Fairfield has 59 parcels of open space land totaling over 1,100 acres (about 5% of total land in the Town); they range in size from less than 1 acre to over 180 acres and are representative of Fairfield's natural habitats: upland forest, lakes, rivers, salt marsh, wetlands, and meadows. These parcels are managed by the Conservation Department under the direction of the Conservation Commission and the Open Space Program. The Land Acquisition Commission is charged with developing a plan to acquire 70 acres of open space per 1,000 Town residents using a current \$500,000 reserve dedicated for such purchases.

The State of Connecticut's "Green Plan" established a goal to protect 673,210 acres (21%) of the state's land as open space by the year 2023. Ten percent of this open space is to be State parks, forests and wildlife areas. The other 11% is to be owned by Towns, private non-profit land conservation organizations, water companies, and the federal government.



Perry's Mill Pond Open Space

## **Achievements to Date**

- An extensive network of trails are maintained throughout many of Fairfield's open spaces. They can be used for hiking, walking, horseback riding, cross-country skiing or to access fishing spots. Camping permits for Brett Woods and shellfish permits can be obtained from the Conservation Department. Inland and saltwater fishing licenses can be purchased from the Town Clerk or the state Department of Energy and Environmental Protection (DEEP)
- The Conservation Department has created trail maps and usage guides for the most frequented of these open spaces available online
- The Town is in the process of developing a pollinator pathway by connecting open spaces, parks and private properties through the planting of native plants that will attract local pollinators

### **Challenges Ahead**

- Balancing revenue-generating land use with preservation of open space.
- Planning for Town population growth while conserving natural habitats (Plan for Conservation and Development)
- Maintaining current and future open spaces, in particular controlling invasive plants, is expensive and time-consuming

### **Benefits of Open Space**

#### Environmental

- Preserves natural habitat and serves as a refuge for wildlife
- Captures rainwater and allows it to infiltrate, reducing chemical runoff, flooding and erosion
- Trees and shrubs reduce air and noise pollution as well as flooding and erosion

#### Economic

- Proximity to open space enhances value of residential properties
- Reducing runoff reduces stormwater management cost

#### Educational

- Open spaces serve as outdoor classrooms for the study of nature

#### Health

- Safe access to outdoor public space offers opportunities to all residents to enhance physical and mental health
- The Parks and Recreation Department offers outdoor programs for residents of all ages



## 2030 Plan Goals\*

- Designate additional open space to reach the Town goal of 70 acres per 1000 residents, which will contribute to Connecticut’s Green Plan goals
- Develop contiguous sections of open spaces and parks and plant to facilitate local pollinators
- Develop additional biking and hiking trails across Town.
- Create an additional community garden (ideally near the Bigelow Senior center)

\*Some goals are ambitious and may need more time to achieve target participation rates; others can be achieved sooner. Work on all goals should begin as soon as possible.

## How Do We Reach Our Goals?

- Support Land Acquisition Committee
- Participate in updating the Plan of Conservation and Development
- Coordinate with Parks and Recreation Department on sustainable management of parks and fields
- Coordination with Bicycle and Pedestrian Committee in expanding walking, hiking, and biking opportunities in Fairfield

FOR MORE INFORMATION
<a href="#">Parks and Recreation Department</a>
<a href="#">Drew Park Community Garden</a>
<a href="#">Facilities Permitting and Reservations</a>
<a href="#">Land Acquisition Commission</a>
<a href="#">Conservation Department</a>
<a href="#">Fairfield Open Spaces</a>
<a href="#">Pollinator Pathway</a>
<a href="#">Guidebook to Fairfield Open Spaces</a>
<a href="#">Plan of Conservation and Development</a>

## Protection of Our Beaches and Coastal Areas

Fairfield’s beaches, rivers, and tidal marshes are coveted natural resources – centerpieces of its beauty and recreational offerings. But sitting in a coastal flood plain that was largely tidal marsh before being developed are over 3,800 (15%) of our homes, five churches, historical homes and buildings, and essential town operational infrastructure.

October 2017 CIRCA (Connecticut Institute for Resilience and Climate Adaptation) projections anticipate a sea level rise of up to 20 inches by 2050 for coastal Connecticut. It also projects more intense and frequent weather events leading to increased risk of both coastal and inland flooding.

The Flood & Erosion Control Board (FECB) is responsible for development and oversight of flood and erosion mitigation measures to increase the resiliency of our beaches, wetlands and infrastructure. CT State statutes require that sea level rise be considered in state and local conservation and development planning.

### Achievements to Date

- Fairfield has an approved FECB master plan that was recently updated by the ACOE (Army Corps of Engineers) that would protect the majority of the Town infrastructure and residences located in the flood plain as well as address the risks of inland flooding in the Rooster River areas and in the downtown/ railroad underpass areas. However, this plan is extremely expensive to implement and we are in the process of exploring options for funds to study and cost-effectively implement several key sections of the plan. Phase 2 would be to secure funding to do the actual implementation, likely through a combination of grants, resiliency funds and bonding.
- The Town has authorized three parts of this plan to date: (1) protecting our wastewater treatment plant and nearby Town facilities from a 500-year storm with a large berm; (2) installing a large pump station that would allow us to pump stormwater out of the flood plain within 24 hours so we do not see the 4-5 days of flooding we experienced after Hurricane Sandy; and (3) exploring

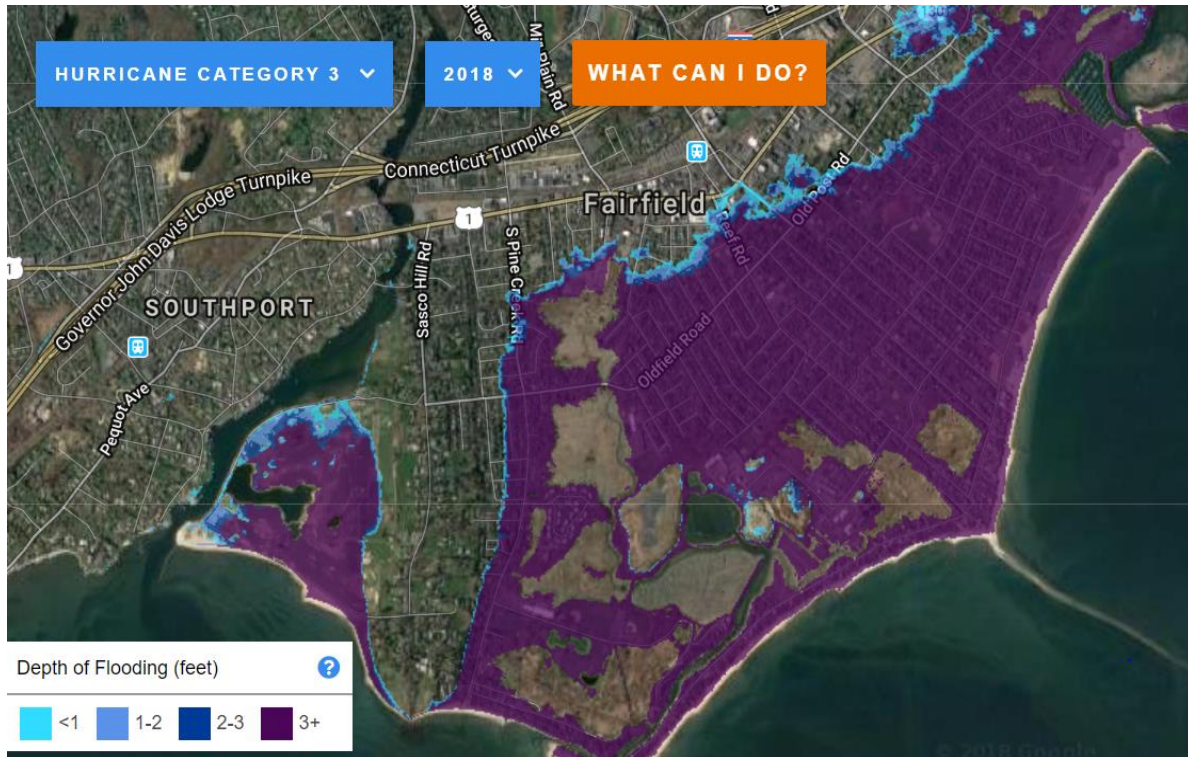
the design and implementation of detention basins to mitigate large flood events in the Rooster River watershed.

### **Challenges Ahead**

- Planning amidst uncertainty about the degree of sea level rise. The current CIRCA projection of 20 inches by 2050 is the best science we have today, but that will be updated and verified every 10 years
- Uncertainty of funding for mitigation projects
- Promoting resiliency programs for the roughly 3,000+ residential houses and key parts of Town infrastructure in flood plain that would be impacted by climate change and sea level rise
- Mitigating nuisance flooding that can make our coastal roads impassable in major weather events and creates a safety risk to residents

### **Benefits of an active flood and erosion control plan**

- Planning for intermittent flooding – such as a heavy rain or storm surge – as well as permanent flooding due to sea level rise
- Shaping current zoning and building regulatory decisions that would mitigate the impact of future sea level rise on both residential construction as well as Town facilities and look at options for inland flooding
- Taking both current flood plain areas and future projections into account in developing short- and long-term infrastructure plans



Flooding projections, Fairfield Source: FloodIQ.com

### 2030 Plan Goals\*

- Secure ACOE approval and implement the Engineered Beach management program
- Secure funding and implement the South Benson Pump Station and drainage plan
- Secure grant and/or Town funding for all studies in the FECB master plan so that the Town is in a position to apply for future grants to mitigate future flooding impacts on our Town infrastructure and residences
- Secure funding and implement flood mitigation efforts in the Rooster River area
- Ensure that the relevant departments have the necessary resources to implement our hazard mitigation plans and protect our Town residents in the event of a significant storm or flood event
- Review the zoning and building requirements in the flood plain

\*Some goals are ambitious, and may need more time to achieve target participation rates; others can be achieved sooner, but work on all goals should begin as soon as possible

### How Do We Reach Our Goals?

- Develop consensus on an overall long-term Town plan and execute prioritized elements of the plan as listed above over time
- Identify and utilize all available financial funding options

FOR MORE INFORMATION
<a href="#"><u>Town of Fairfield Flood Mitigation Plan</u></a>
<a href="#"><u>Town of Fairfield Flood Management Plan</u></a>
<a href="#"><u>Connecticut Institute for Resilience &amp; Climate Adaptation (CIRCA) Sea Level Rise Projections for the State of Connecticut</u></a>
<a href="#"><u>Town of Fairfield Flood &amp; Erosion &amp; Control Board “Hard” Control Projects</u></a>
<a href="#"><u>Southern CT Regional Framework for Coastal Resilience</u></a>

## Renewable Energy

In 2005, the Town pledged to reduce its municipal energy usage and to obtain 20% of its electricity from renewable sources by 2020. A 2014 aerial survey of Fairfield homes indicated that about 5,000 Fairfield homes have rooftop solar potential. With current incentives and market conditions, “going solar” has tremendous economic benefits for Fairfield residents.

### Achievements to Date

- Completed 32 solar energy projects on Town buildings
- ~30% of Town’s electricity comes from renewable sources
- 400 Fairfield homes have gone solar through four Town “Solarize” programs
- First commercial C-PACE incentive projects from the Conne
- Installation of two “microgrids” to ensure power for essential town operations during emergencies such as major weather events
- The Town’s renewable energy projects save \$3 million/year on energy costs

## Challenges Ahead

- Uncertainty about future state and federal renewable energy incentives
- Maintaining strong community support for renewable energy projects

## Benefits of clean renewable energy:

- Reducing greenhouse gas emissions, which contribute to climate change
- Reducing toxic emissions from burning of fossil fuels
- Improving air quality and public health
- Improving energy stability and security
- Saving money on electric bills



## 2030 Plan Goals\*

- 50% of Town electricity from renewables
- 5 large-scale clean energy projects (>500 kW each)
- 500 residents with solar power at their homes, including low-income
- Support state renewable policies (incl. wind, geothermal)

\*Some goals are ambitious and may need more time to achieve target participation rates; others can be achieved sooner. Work on all goals should begin as soon as possible.

## How Do We Reach Our Goals?

- Leverage state and federal incentives
- Continue use of power purchase agreements for Town solar projects

- Continue community “solarize” programs
- Continue and enhance community outreach and education
- Provide input into the Town’s updated Clean Energy Action Plan

FOR MORE INFORMATION
<a href="#">Clean Energy Action Plan</a>
<a href="#">C-PACE Financing</a>
<a href="#">Sustainable Fairfield Task Force</a>
<a href="#">DEEP Energy Resource</a>
<a href="#">Information on Solar Energy</a>

## Solid Waste and Recycling

Connecticut has adopted a Materials Management goal of diverting at least 10% of solid waste materials from trash by 2024 using a baseline year of 2014. There is a current bill in the state legislature that targets no more than 700 pounds of waste per capita by 2022 and 500 pounds by 2024.

In Fairfield, nine private haulers currently bring waste and recycling to the Town’s transfer station. Most waste is sent to the Wheelabrator facility in Bridgeport that produces energy through incineration, but also contributes to air pollution. Electronics, textiles, tires, scrap metals, appliances and other items can be recycled (some for a small fee). Yard waste is composted at WeDenali.

### Achievements to Date

- The Town has reduced its total tonnage of solid waste, anticipated to be 33,000 tons in fiscal year 2020. This is expected to stay relatively flat in FY 2021
- In 2019, the Sustainable Fairfield Task Force hosted five composting seminars and conducted an outreach program to reduce food waste. Through a grant,

over 50 residents received composters at a reduced price. SFTF plans a similar program for 2020

- In 2019, two mattress pick-up days were offered to Town residents for a nominal fee. Seventy mattresses and box springs were picked up and sent to a recycling facility where over 85% of the mattress components were recycled. The program will be continued in the future.
- The Town has created an FAQ page on what and how to recycle over 350 common items, and actively promoted mattress, paint, electronic and textile recycling, and tips for holiday recycling
- The Town holds an annual Hazardous Waste Day to dispose of hazardous items.

### **Challenges Ahead**

- Despite the Town's reduction in waste tonnage, this still represents an estimated 1,100 pounds of waste per capita per year
- China, once the major purchaser of American recycled materials, is no longer accepting many types of US-sourced materials. As a result, recycling in Fairfield now exceeds the cost of processing municipal solid waste
- Many Fairfield residents and businesses are not aware of what can and cannot be recycled, leading to contamination of recycled materials. This is reflective of a national problem in recycling

### **Benefits of Recycling**

- Refusing, Reducing, Reusing, Repairing, Re-gifting, Recovering, and Recycling means less new materials need to be created, which conserves water and other natural materials
- Reducing solid waste, which means less waste is incinerated
- Improving air quality – less incineration means less pollution
- Protecting our natural environment
- Reducing the cost to the Town of solid waste management
- In 2019, Fairfield residents diverted over 4,000 tons of waste through recycling





The “7 Rs” logo was Designed by [Shtiggy.wordpress.com](http://Shtiggy.wordpress.com) for a report by the [GAIA Foundation](http://GAIA Foundation) and modified by SFTF

### 2030 Plan Goals\*

- Reduce the amount of solid waste collected at the transfer station to 700 pounds per capita by 2022 and 500 pounds by 2024
- Reduce recycled material contamination through education and outreach
- Increase the types of items able to be recycled at the Transfer Station to include items such as mattresses and food waste
- Promote options for “swap shop” type programs for gently-used furniture
- Pilot “Zero Waste” schools in 2020/2021 and roll out successful programs to all Fairfield schools
- Create a green business endorsement to encourage local business to recycle and increase energy efficiency
- Continue programs and add others to reduce food waste
- Become a Zero Waste Town by implementing a Zero Waste program in all Town schools and buildings and encourage residents and businesses to become Zero Waste participants

\*Some goals are ambitious, and may need more time to achieve target participation rates; others can be achieved sooner, but work on all goals should begin as soon as possible

### How Do We Reach Our Goals?

- Work with residents, businesses and schools to promote and implement recycling and waste reduction:
  - Clarify what gets recycled and what doesn't
  - Promote composting programs at schools, businesses, and homes
  - Purchase products that use less packaging
  - Reuse durable items instead of single-use items

FOR MORE INFORMATION
<a href="#">Town of Fairfield Solid Waste &amp; Recycling</a>
<a href="#">CT DEEP Solid Waste &amp; Recycling</a>
<a href="#">Town of Fairfield Recycling FAQs</a>
<a href="#">Zero Waste Home</a>

## Sustainability and Town Purchasing

Fairfield's Purchasing Department has provided invaluable support in ensuring that purchasing decisions take into account environmental preservation and sustainability, both locally and in accord with more "global" concerns. This support aligns with the department's overall mission of "obtaining the best value proposition - quality, cost, and delivery - for all products and services purchased." Now, the Town has an appealing opportunity to formalize and broaden its purchasing procedures in line with environmental and sustainability goals.

### Achievements to Date (Town and SFTF)

- Maintaining a bid presentation process dedicated to reducing waste and promoting the use of recycled and environmentally preferable products (e.g., use of recycled paper; no plastic binders, covers, inserts or pages)
- Participating in all Town and school building committees, e.g., sustainability concerns reflected in building improvements such as window and roof replacement, etc.
- Providing input on sustainability concerns for special building projects, e.g., post-Sandy renovation of Penfield Pavilion

- Following the Purchasing Department's mandate to oversee electricity supply and pricing for the Town and Board of Education, providing input re: installations for solar energy generation at selected Town locations (e.g., school solar carports)
- Providing input re: prospective leasing and/or purchase of electrically powered vehicles for the Town fleet, electric school buses

### **Challenges Ahead**

- Growing urgency for purchasing with concern for environmental preservation and sustainability
- Maintaining fiscal responsibility with sustainable purchasing
- Adopting an ongoing, state-of-the-art Town process for sustainable purchasing

### **Benefits of Sustainable Purchasing Decisions**

- Reducing long-term costs
- Mitigating greenhouse gas emissions by reducing waste and use of hazardous materials
- Enhancing appeal/equity of Fairfield as a community by encouraging stronger ties with a more diverse roster of vendors

### **Goals 2030\***

- Formally embed consideration of environmental preservation and sustainability into the Town process for purchasing goods and services
- Monitor metrics chosen to reflect the process's effectiveness
- Increase the diversity of vendors hired by the Town

\*Some goals are ambitious and may need more time to achieve target participation rates; others can be achieved sooner. Work on all goals should begin as soon as possible.

### **How Do We Reach Our Goals?**

- Have Town elected officials, staff members, and commission members participate in sustainable procurement training as appropriate
- By Town resolution, develop/adopt a sustainable purchasing policy
- Distribute the newly adopted policy to relevant department heads, post the policy on the Town website, communicate policy to relevant suppliers, vendors
- Consider Sustainable CT social and environmental impact areas in formulating Town policy
- Implement Town's sustainable purchasing policy
- Develop and track an estimate of the percentage of Town's budget used to purchase sustainable goods/services

- Annually create a narrative description of goods/services sustainably purchased by the Town, reflecting key social/environmental impact areas
- Incorporate special vendor designations in the Town’s vendor roster, e.g., locally-owned businesses, sustainable or eco-friendly businesses, minority and women-owned businesses, alternative corporate structures, such as [B Corps](#) and cooperatively owned businesses

**FOR MORE INFORMATION**

[Sustainable CT Certification](#)

[Town of Fairfield Purchasing Department](#)

## Sustainable Homes

Our homes are our sanctuaries – an extension of who we are – with the ability to evolve and reinvent themselves with the times. Our homes are also our largest expense and typically the source of our largest energy and natural resource footprint. Homeowners planning renovations and new home builds enjoy an exciting array of sustainable choices including “green” building products, EnergyStar electric appliances, solar shades, ceiling fans, heat pumps, solar power with or without backup battery storage, automation, and electric vehicle (EV) charging stations. It’s even possible to build net zero/passive homes.

Federal tax credits, solar energy credits, and low-cost Green loans make these revolutionary ecosystems quite affordable and in some cases generate revenue. Sustainable choices for new build and home improvements come together to maximize comfort and energy efficiency, creating a healthier living environment.



Tesla Powerwall residential backup batteries

### **Achievements to Date**

- 21% of Fairfield homes have undergone an energy audit (Home Energy Solutions, or HES) between 2010 and 2019 to identify sources of wasted energy and remediate them to save money, increase energy efficiency, and add value to the home
- 350 Fairfield residences have received Green Bank solar incentives
- In 2015-16, the Sustainable Fairfield Task Force gave away more than 2,000 LED bulbs to residents at events
- Almost 400 EVs are currently registered in Fairfield

### **Challenges Ahead**

- Need for an updated Town carbon emissions/sustainability reporting model so that Town decision-making aligns with county and state emissions goals
- Engaging and convincing homeowners to adopt sustainable principles in all home improvements and builds
- Zero-carbon solutions in the built environment abound, yet builders and developers are slow to adopt these new building materials and technologies
- Increasing the percentage of homes undergoing an HES home energy audit

- Promoting the environmental benefits of sustainable residential landscaping and man-made architectural landscape features (“hardscaping”)

### **Benefits of Sustainable Homes**

- Reduced or net-zero conventional energy use
- Reduced or net-zero GHG emissions
- Financial returns on investment in the form of energy savings, maintenance savings, and lower insurance rates
- Optimized comfort and healthfulness of the home ecosystem, both inside and outside
- Built-in resilience to extreme weather and other climate change events
- Attractive, sustainable landscaping emphasizing native pollinator-friendly plantings, reducing lawn, organic/chemical-free management, and efficient water use
- Sustainable homes are eligible for certifications and awards, setting positive examples for others to emulate
- Live in harmony with nature and within the limits of Earth’s finite system

### **2030 Plan Goals\***

- 100% home energy audit (HES) participation
- Launch Fairfield Sustainable Homes Campaign and garner 80%+ participation
- Provide homeowners with a turnkey Fairfield Sustainable Homes Playbook that offers sustainable approaches for new and existing homes that include incentives, i.e., cash rebates, low-cost loans, and federal tax credits
- 50% of suitable homes solarized
- 1,200 electric vehicles registered to Fairfield residents
- A “no fossil fuel” building ordinance
- 100% of homes converted to zero emissions lawn care
- 100% of homes participating in Pollinator Pathway

\*Some goals are ambitious, and may need more time to achieve target participation rates; others can be achieved sooner, but work on all goals should begin as soon as possible

## How do we reach our goals?

- Explore programmatic and data collection coordination with Sustainable CT's plan for municipalities, and Metropolitan Area Policy Council's (MAPC) newly released community greenhouse gas inventory tool
- Metrics and reporting to include, but not be limited to, number of homes with rooftop solar; number of homes having undergone an energy audit; number of homes using organic and sustainable landscaping; number of homes opting for CT Clean Energy Options (50% or 100% of power from UI coming from renewable sources); number of homes with outdoor composting
- Promote home energy audits – a straightforward entry point for homeowners to acquire a growing sense of sustainability in thinking about their homes
- Garner Town support for a Sustainable Homes Campaign to educate and empower consumers to adopt sustainable principles in home ecosystems (home, hardscapes, landscapes)
- STEAMS (Science, Technology, Engineering, Arts, Mathematics, Sustainability) education storytelling makes sustainable behavior aspirational to any age while sharing and creating best practices

Thanks to Analiese Paik and Rainer Schrom for their input and expertise in contributing to this document.

### FOR MORE INFORMATION

[Connecticut Green Bank Homeowner Programs](#)

[Federal Solar Investment Tax Credit \(ITC\)](#)

[MAPC Community GHG Inventory](#)

[Sierra Club Resources](#)

[Appraisal Institute: Leadership on Green and Energy-Efficient Valuation](#)

# Sustainable Landscaping

Sustainable landscaping strives to be attractive while maintaining environmental balance with minimal use of maintenance resources. Typical features include native plants, minimally invasive soil management techniques (no tilling or mulching), application of compost, and reduction of stormwater run-off with bio-swales, rain gardens and permeable paving.

Sustainable landscaping relies chiefly on organic forms of fertilizers and pest control. Many traditional pesticides contain endocrine disruptors, which affect natural hormone production. Long-term exposure to these chemicals can affect human growth and gender-specific functions. However, in certain cases chemicals may be needed to control infestations of non-native invasive plants.

Traditional gas-powered landscape maintenance tools are loud and polluting. Advances in battery technology have made electric-powered options much more feasible with reduced noise and low climate impact.

## **Achievements to Date**

- The Town of Fairfield is committed to using organic fertilizers on all Town fields and open spaces (with the exception of golf courses)
- The Town utilizes various “Best Management Practices” for municipal grounds maintenance including Integrated Pest Management; irrigation; permeable pavement, and Land Use Practices of native planting and pruning policy
- The Town completed an inventory of properties and developed a site-specific approach to mowing, watering, treatments, plantings, and the management of invasive plants

## **Challenges ahead**

- Educating residents and businesses about non-fossil-fuel equipment, leaving the leaves, mowing at higher length, replacing lawns or portions of them with native grasses and plants or rain gardens, and inter-seeding with clover and organic options
- Working with local landscape companies to shift to organic landscape practices



## Sustainable Landscaping Benefits

- Organic landscaping practices improve soil and plant health, allowing the soil to retain moisture longer; provide more aeration of the soil, and improve soil texture. It encourages the growth of microbes, earthworms, fungi and other good bacteria that help to nourish plants, thus requiring little or no fertilizers
- Organic landscaping practices are safe for humans and pets, with no toxic or biohazardous pollution of soil and water
- Strategic use of trees can help lower heating and cooling bills as well as maximize the inherent beauty of landscape
- Use of native plants encourages biodiversity and reduces need to water, which lowers ground maintenance expenses due to lower water use and fewer chemical treatments
- Fossil-fuel-free (i.e., electric) mowing and landscape tools minimize noise pollution and reduce your carbon footprint, and prevent harmful particulate matter in the air we breathe



photo by Mary Hogue

## **2030 Goals\***

- Install pollinator gardens at 100% of schools to be used as on-site field trips/laboratories
- Promote Pollinator Pathway & Green Corridor programs so that residents and businesses understand the importance of their participation. Encourage participants to certify their landscape and prominently display signage to promote the programs
- Increase awareness and control of invasive species
- Expand organic landscaping practices to all Town golf courses
- Expand use of residential electric-powered options for landscaping tools
- Encourage local landscape companies to use electric blowers, chainsaws and other landscape tools
- Adopt ordinances banning and/or regulating turf fields, glyphosate, chlorpyrifos and other cancer-causing pesticides
- Adopt a version of the state drought ordinance to mitigate against excessive watering

\*Some goals are ambitious, and may need more time to achieve target participation rates; others can be achieved sooner, but work on all goals should begin as soon as possible

## **How Do We Reach Our Goals?**

- Educate residents through seminars and online resources on the use of organic landscaping; pollinator-friendly options; low-impact development to manage stormwater runoff; and conversion of portions of lawn to wildflower meadows
- Educational outreach to local nurseries to promote sustainable, non-invasive plantings
- Provide resources that outline invasive species identification, removal techniques, and replacement options
- Promote the benefits of non-polluting, quieter landscaping equipment to local landscaping companies
- Judicious use of organic tick, mosquito and flea control, to prevent killing bees and other beneficial insects

FOR MORE INFORMATION
<a href="#"><u>NOFA Standards for Organic Land Care</u></a>
<a href="#"><u>DEEP Organic Lawn Care</u></a>
<a href="#"><u>Low Impact Development</u></a>
<a href="#"><u>DEEP Sustainable Practices and Resources for the Landscaping and Lawn Care Industry</u></a>
<a href="#"><u>Connecticut Invasive Plant Working Group</u></a>
<a href="#"><u>Enhancing your Backyard Habitat for Wildlife</u></a>

## Sustainable Transportation

Sustainable transportation supports the mobility needs of society in a safe, efficient and equitable manner- consistent with human and ecosystem health. About 50% of a typical two-car household's carbon emissions are from transportation sources. Consumers should purchase a fuel-efficient, low-polluting car, keep their vehicle well maintained, and adopt good driving habits including observing the speed limit and consolidating trips. Use of mass transit, ride-sharing, biking, walking and telecommuting offer further opportunities to reduce transportation emissions.

Electric vehicles (EVs) represent a rapidly accelerating share of the automobile market. As EV technologies improve (already 4-5 times more efficient than that of a gasoline car), and with an expanding range of affordable models EVs are poised to become a mainstream family car. EVs will play an increasingly prominent role in reducing transportation emissions. . Both on the personal and municipal fronts, electrifying the town's vehicles is an exciting and achievable prospect.

### Achievements to Date

- First town-owned EV obtained in 2015
- Annual EV Showcase since 2015 (now the Green Wheels Expo); largest such event in the Northeast US

- Over 40 EV chargers in town
- About 400 EVs registered in town
- Propane equipment used for town landscaping
- “Introduction to EVs” course offered through Fairfield Continuing Ed and Fairfield Public Library
- Anti-idling signage at schools to reduce exposure to exhaust fumes
- Exhaust deflector shields on buses
- Procurement of electric school buses in progress
- Establishment of bike paths and shared lane markings

### **Challenges Ahead**

- Providing charging infrastructure for residents who cannot charge at home
- Locating and capitalizing EV charging projects, as a Town project or in partnership with third parties
- The electric grid will need to significantly increase its generating capacity to accommodate growth of EV adoption.
- Making the case for electric school buses and municipal EV fleets

### **Benefits of sustainable transportation**

- Reducing greenhouse gas emissions, which contribute to climate change
- Improving air quality and public health by reduction of toxic emissions from burning fossil fuels
- Improving energy stability and security
- Saving money on transportation costs



Level 2 EV charging station at Sherman Green installed in 2012

### **2030 Plan Goals\***

- 100% of transportation from sustainable sources by 2050
  - Reduce overall vehicular traffic via mass transit, biking, and walking
  - Five town-owned EVs, replacing older fleet vehicles
  - Large banks of EV chargers to address need for renters (also encourage and/or require multi-family housing units to install EV chargers)
  - 1200 EVs registered in Fairfield
  - Establish car and bicycle sharing services in Fairfield
  - Start replacing diesel school buses with electric buses (10 by 2025)
  - Support state efforts for mass transit, transit-oriented development (TOD), and ridesharing
  - Support Transportation & Climate Initiative for long term, regional effort
  - Formally oppose state efforts to widen I-95 for capacity reasons
- \*Some goals are ambitious, and may need more time to achieve target participation rates; others can be achieved sooner, but work on all goals should begin as soon as possible

### **How Do We Reach Our Goals?**

- Leverage federal and state incentives for sustainable transportation
- Add EV chargers to solar projects and building renovations
- Continue to advocate for electric school buses and town-owned EVs

- Continue EV outreach and education, especially via Green Wheels Expo
- Communicate with state and federal legislators about transportation issues

FOR MORE INFORMATION
<a href="#"><u>Town of Fairfield Clean Energy Action Plan</u></a>
<a href="#"><u>Reducing Personal Transportation Emissions</u></a>
<a href="#"><u>Gas Saving Tips</u></a>
<a href="#"><u>Commuting Alternatives (CTRides)</u></a>
<a href="#"><u>EV Connecticut Resources &amp; Incentives</u></a>
<a href="#"><u>Anti-Idling</u></a>

## Wastewater Management

Over 200 miles of sewer pipe link 85% of residences and 100% of commercial properties to Fairfield's Water Pollution Control Facility (WPCF), operating under the authority of the Water Pollution Control Authority (WPCA). The facility is valued at more than \$100 million, and is operated by 18 certified town employees.

Each day the WPCF returns about 8.5 million gallons of water, cleaned in accordance with state and federal standards (>95% of pollutants removed), to the Long Island Sound.

Fifteen percent of residences are on septic systems (see link below for tips on maintenance).

### **Achievements to date**

- The WPCF operates with 100% renewable energy coming from a solar array installed over old landfill in 2017 and a fuel cell, online since late 2019
- Wastewater sewer pipes are separate from stormwater pipes
- In a process unique in the state, the 500 tons of biosolids generated annually at WPCF is combined on site with local wood debris to make valuable compost

### **Challenges Ahead**

- Optimizing the effective and efficient operation of WPCF
- Protecting the WPCF from storm damage and flooding
- Maintaining separation of wastewater and stormwater systems

### **Benefits of Modern Wastewater Management**

- Lower sewage fees because facility runs on renewable energy
- Town receives rebates from the state for producing outflow that exceeds state nitrogen standards – which also protects the health of Long Island Sound.
- Town gets revenue from the sale of compost and keeps 500 tons of biosolids out of landfill yearly



## Fairfield Water Pollution Control Facility



Solar array powering the Water Pollution Control Facility  
Aerial photos by Dan Blumenfeld

### **2030 Plan Goals\***

- Approval and implementation of WPCA long-term Facilities Plan
- Completion of berm to “harden” the WPCF against 100-year flood conditions
- 20% reduction in WPCF/sewer pipe emergency calls to relieve “fatberg” obstruction (a fatberg is a large mass of fat and waste material that forms in sewers)

\*Some goals are ambitious, and may need more time to achieve target participation rates; others can be achieved sooner, but work on all goals should begin as soon as possible

### **How Do We Reach Our Goals?**

- A detailed, 25-year Facilities Plan awaits approval by the state. The plan will bring about important upgrades to aging equipment and further enhance operating efficiency
- Ongoing program to detect and repair pipe disruptions to reduce stormwater I&I (inflow and infiltration) into wastewater collection system



- Ensuring that stormwater management is an integral part of infrastructure and construction planning
- Promote commercial and residential water conservation measures: reducing wastewater reduces unnecessary throughput at WPCF, lowering operating costs.
- Protection of WPCF and private sewer connections through education of consumers to refrain from putting any form of grease into the drain, and not flushing so-called “flushable” wipes
- Consider regulations for “graywater” management as feasible; reusing graywater will reduce throughput at WPCF and conserve drinking water

#### FOR MORE INFORMATION

[Town of Fairfield Sewer Department \(WPCF\)](#)

[Septic Tips & Information](#)

## Wetlands and Marshes

Fairfield’s wetlands and watercourses are an irreplaceable but fragile natural resource, essential to the Town’s ecological health. They are an interrelated web of nature essential to an adequate supply of surface and underground water, providing hydrological stability and control of flooding and erosion. They recharge and purify groundwater, supporting many forms of animal, aquatic, and plant life. These valuable water resources are carefully monitored and regulated by many Town bodies, the CT Department of Energy Environmental Protection (CTDEEP), and the Environmental Protection Agency (EPA).

### Achievements to Date

- Self-regulated tide gates that restored 120 acres of salt marsh areas
- Restoration of Sasco Beach oyster beds

### Challenges Ahead

- Controlling invasive flora and fauna, *Phragmites* reeds being a major culprit
- Monitoring impacts of development
- Mitigating sea level rise

- Managing extreme weather events
- Keeping pollution out of wetlands, marshes and waterways, especially runoff from lawns and gardens (“non-point source pollution”)

### **Benefits of Protecting Wetlands and Marshes**

- Providing a natural buffer against flooding and storm surges
- Diminishing drought effects due to groundwater recharging
- Stabilizing of shores and banks
- Improving water quality through infiltration and purification
- Expanding habitat to support greater diversity of plants and animals
- Improving recreational benefits: hiking, fishing, boating, walking, swimming



### **2030 Plan Goals\***

- Public education and outreach
- Use of wind and water as alternative energy sources
- Increased use of porous pavement
- Increased focus on Low Impact Design (see link below)
- Continue to restore saltwater marsh where feasible
- Management and removal of invasive species
- Create environment to restore native habitat
- Include environmental impact into Town Planning and Zoning regulations

\*Some goals are ambitious, and may need more time to achieve target participation rates; others can be achieved sooner, but work on all goals should begin as soon as possible

## How Do We Reach Our Goals?

- Education and outreach to residents, businesses and government.
- Use of grants and public-private partnerships to execute remediation projects.

### FOR MORE INFORMATION

[Fairfield Inland Wetland & Watercourses Regulations](#)

[Fairfield Plan of Conservation and Development](#)

[Fairfield Salt Marsh Restoration Program](#)

[Mill River Wetland Committee](#)

[Connecticut Invasive Plant Working Group \(CIPWG\)](#)

[Connecticut Association of Conservation and Inland Wetlands Commissions \(CACIWC\)](#)

[EPA's "Green Streets" Program](#)

[NOAA's "What is a Watershed?"](#)