9. SUSTAINABILITY ELEMENT

A. Purpose

This Sustainability Element's goals, policies, and programs facilitate environmental, social, and economic well-being for all Fort Bragg residents by encouraging green building, renewable energy, energy conservation, water conservation, recycling and waste reduction in all new construction and remodel projects. Element 4 Conservation and Open Space and Element 5 Circulation of this General Plan also address components of sustainability, including: stormwater management, habitat protection, parks, and bicycle facilities.

Green Building. Green Building consists of utilizing building siting, design, construction techniques, and building materials to reduce building operating costs and the negative impacts of buildings on the environment and its occupants. Green building techniques are applied to the treatment of the building site, to improve water and energy efficiency, in the selection of materials and resources, and to improve indoor environmental quality. Construction practices, building technologies, and best practices are likely to evolve, and new practices and technologies are likely to be developed during the life of the General Plan. Consequently, the General Plan focuses on performance-based requirements to achieve sustainability by using the US Green Building Council's LEED® (Leadership in Environment and Energy Design) rating system.

Energy Conservation. The City has adopted a green house gas (GHG) reduction goal of 20% by 2020. The City has also prepared a Climate Action Plan to help the City realize this goal. As nearly 40% percent of the nation's energy is consumed by homes and commercial buildings, the policies in this General Plan are needed to reach the City's GHG reduction goal. In addition, by making buildings more energy efficient, building owners will save on long term operating costs.

Water Conservation. The City of Fort Bragg depends on surface water flows to serve the water demands of city residents and businesses. Surface flows are highly dependent on annual weather patterns, and weather patterns are likely to change due to Climate Change. Thus water use minimization in all development is necessary to ensure that the City can continue to serve existing and new development. The Sustainability Element uses a multi-pronged approach to minimize consumption of potable water, including: minimization of water demand indoors and out; use of potable water for potable purposes; and encouraging reuse of storm water and grey water on-site for landscaping irrigation. Reducing water also saves energy, since water pumping and wastewater treatment require significant amounts of energy.

Waste Reduction. Waste reduction is as important as recycling, in that it saves natural resources, energy, disposal space and costs, and reduces pollution risks. Additionally, the waste leaving the City of Fort Bragg is hauled long distances and contributes to the City's GHG production.

B. Goals, Policies and Programs

Green Building

Goal S-1: Maximize the use of green building practices and materials in new and existing development.

Policy S-1.1 Building Reuse: Where existing buildings in the Plan Area are structurally sound and reuse is economically feasible, reuse of buildings in whole or part is preferred.

Policy S-1.2 Encourage Green Techniques: All green building techniques are encouraged, with preference given to techniques that address local issues, such as use of locally produced natural materials, water and energy conservation measures, and techniques that respond appropriately to Fort Bragg's cool, rainy environment, such as passive solar design and low impact development (LID) strategies.

Program S-1.2.1: Require LEED Certification for large projects. Modify the Inland Land Use and Development Code to require LEED Certification or equivalent for all new development projects of more than 5,000 square feet and LEED-NC silver rating or equivalent for all projects of more than 10,000 square feet.

Program S-1.2.2: Provide incentives for adherence to LEED for smaller residential and commercial projects. Review and revise the Inland Land Use and Development Code to incorporate planning incentives for development projects that adhere to the relevant USGBC LEED standards or Build It Green's GreenPoint Rated standard for commercial and residential development respectively.

Program S-1.2.3: Promote the use of building materials that maintain healthy indoor air quality in an effort to reduce irritation and exposure to toxins and allergens for building occupants. Promote the use of building materials, furniture and paint that maintain healthy indoor air quality, and discourage the use of materials that degrade indoor air quality.

Program S-1.2.4: Revise the Citywide Design Guidelines to make green building practices an important criterion in the development review process.

Program S-1.2.5: Train City staff with responsibilities in construction project management and development permit review, in green building techniques and materials.

Program S-1.2.6: Foster awareness in Fort Bragg's business and residential communities of the economic and environmental benefits of green building practices.

Program S-1.2.7: Provide green building technical assistance and referrals as part of Planning Counter services.

Policy S-1.3 Municipal Green Building**:** All new construction of City-owned buildings shall incorporate sufficient green building methods and techniques to qualify for the equivalent of

LEED™ Certified rating. Renovation of City-owned buildings shall seek to incorporate LEED™ pre-requisites and credits, where feasible.

Energy

Goal S-2 Encourage development that minimizes the demand for non-renewable energy and reduces Green House Gas (GHG) emissions.

Policy S-2.1 Passive Solar Design Strategies: All building and site design shall use passive solar design strategies for space heating and lighting to reduce energy demand to the extent feasible.

Policy S-2.2 Alternative Energy: Encourage the development and use of alternative sources of energy such as wind, solar, and biomass to meet Fort Bragg's energy needs.

Program S-2.2.1: Revise the City's Zoning Ordinance to allow small wind, solar and geothermal systems for on-site use as a permitted use in all zones within the City.

Policy S-2.3: Reduce Energy Demand with a goal of Net Zero Energy in New Construction. All new construction shall minimize energy use. Net zero buildings and homes are encouraged. These homes produce as much energy (through conservation, photovoltaic panels, solar hot water, wind, and geothermal) as they consume and have a net zero impact on green house gas production.

Program S-2.3.1: Continue to adopt the California Green Building Code with a goal of achieving net zero energy performance in new residential buildings by 2020.

Program S-2.3.2: Review the California Green Building Code in 2018 and if Council determines that the California Green Building Code will not achieve net zero energy performance in new residential construction by 2018, consider adopting net zero energy regulations for residential construction in Fort Bragg by 2020.

Program S-2.3.3: Develop educational and financing programs that help businesses and homeowners improve the energy efficiency of existing and new buildings.

Policy S-2.4: Require passive solar design in new construction, where feasible, as part of Design Review**.**

Program S-2.4.1: Modify the Citywide Design Guidelines to include guidelines that require passive solar design for residential and commercial new construction projects.

Policy S-2.5 Use of Local and Renewable Energy: Buildings and infrastructure that create and/or use locally and renewably generated energy are encouraged. Photovoltaic and wind energy systems are encouraged. The installation of solar panels or other clean energy power generation sources over parking areas is preferred.

Policy S-2.6 Climate Action Plan: Prepare and periodically update the City's greenhouse gas inventory and Climate Action Plan in order to achieve the City's GHG emission reduction targets.

Policy S-2.7 Energy Conservation Measures in existing Buildings: Encourage owners of existing dwellings to retrofit with energy-saving features.

Program S-2.7.1: Require retrofitting of energy-saving features in existing dwellings as a part of the City's Housing Rehabilitation Program by providing information, technical assistance, and requiring retrofits as part of any loan or grant program.

Program S-2.7.2: Develop programs to assist residential and commercial building owners with energy efficiency retrofits and the installation of alternative energy.

Water

Goal S-3: Minimize the use of potable water in new and existing development.

Policy S-3.1 Reduce Water Use: Minimize the use of potable water in new and existing development.

Program S-3.1.1: Modify the Inland Land Use and Development Code to require that new development achieves at least 60 percent of the possible credits in the Water Efficiency category of Leadership in Energy and Environmental Design for New Construction (LEED-NC) and LEED for Homes or equivalent.

Policy S-3.2 Rainwater Capture: The installation of cisterns is encouraged to capture rainwater from roofs for all water needs and for flood control during heavy storms. Cisterns may be located above or below ground.

Policy S-3.3 Water Conservation Education: Business/property owners shall incorporate educational programs that promote water conservation habits and practices in all hotel, restaurant, and multi-family residential development.

Policy S-3.4 Drought Tolerant Landscaping: New development shall include drought tolerant landscaping for landscaped areas in commercial and multi-family residential uses.

Program S-3.4.1: Require landscaping for all new commercial and industrial development to use drought tolerant plants and no vegetative turf unless recreation needs or other area functions specifically requires turf.

Program S-3.4.2: Develop programs to educate single-family homeowners on water conserving landscaping methods and discourage the use of turf.

Program S-3.4.3: Encourage green roofs, landscape-based treatment measures, and pervious materials for hardscape, and other stormwater management practices to reduce water pollution are encouraged.

Waste

Goal S-4 Reduce, recycle, and reuse solid waste generated in the City.

Policy S-4.1 Recycling**:** All commercial, office, and multi-family residential developments shall provide a centralized drop-off location for recyclables and compostable materials.

Policy S-4.2 Recycling and Reuse of Solid Waste: Comply with State requirements to reduce the volume of solid waste through recycling and reduction of solid waste.

Program S-4.2.1: Continue to participate in the County's Integrated Waste Management Plan operated by the Mendocino Solid Waste Management Authority.

Program S-4.2.2: Continue to implement the City's Construction and Demolition Waste Recycling Ordinance. Periodically review the ordinance and consider increasing the target diversion amounts.

Raw Water Pond

Raw Water Pond with Hex Tiles