4.0 Plan Implementation, Monitoring and Update

This section discusses implementation of the climate plan. The following information is provided:

4.1 Plan Implementation: Identifies City Departments and programs that will undertake climate plan measures and target dates for implementation; and describes application to individual project design and permitting; and environmental review.

4.2 Monitoring and Plan Update: For carbon emissions reduction, plan implementation status will be tracked, carbon emissions inventory changes will be monitored, and progress compared to targets. For climate adaptation, plan implementation and climate change indicators will be monitored. Periodic updates of the climate plan will be slated.

4.1 Plan Implementation

The following discusses implementation of climate plan measures over the next decades to reduce community carbon emissions and to plan for climate adaptation. Plan strategies are implemented through City government operations programs, communitywide measures, and development permitting processes. There will also be monitoring and reporting on plan implementation and measures of climate change, and periodic update of climate plan objectives and programs.

4.1.1 City programs

As identified in the climate plan, the City has undertaken many activities in the past decades that will benefit carbon reduction and adaptation planning, both for City government operations and the larger community. Many in-place and future programs will be ongoing through the planning period to 2030.

Future carbon reduction and adaptation planning measures identified in the City climate plan will be undertaken in the coming years by a variety of City departments and divisions. These include the Community Development Department (Planning and Building & Safety Divisions); Public Works Department (Facilities & Energy, Water Resources, Transportation, and Engineering Divisions); Waterfront Department; Airport Department; Parks & Recreation Department (Parks and Creeks Divisions); Environmental Services/Solid Waste Program; and Fire Department (Fire Prevention and Emergency Operations Divisions). Many of the future climate plan measures are policies and programs adopted in the December 2011 Santa Barbara General Plan update.

Some programs will also be joint ventures undertaken in coordination with regional agencies and programs, such as the Sustainable Communities Strategies process underway by the Santa Barbara Association of Governments. Implementation of carbon-reducing and adaptation measures will also be carried out by private individuals and businesses.

City actions will be taken up whenever possible as part of existing, ongoing City operations and programs, as budgets allow and are authorized through the annual budget process. Grant funding will continue to be pursued to assist in financing the implementation of climate plan measures.

The following charts (Figures 4-1 and 4-2) identify overall implementation time lines for carbon reduction measures and adaptation planning measures, with target dates of 2015, 2020, 2025, or 2030 within the climate plan 2030 planning horizon.

Figure 4-1 Climate Plan Implementation Time Line – Emission Reduction Strategies			
CLIMATE PLAN STRATEGY	**TARGET YEAR**	**CLIMATE PLAN STRATEGY**	**TARGET YEAR**
Energy efficiency and green building measures		35. Development impact fees	2015
1. Energy-efficient City facilities	ongoing	36. Street widths	ongoing
2. Recreational field lighting efficiency	2015	37. New development vehicle emissions	2015
3. Energy-efficient buildings–voluntary actions	ongoing	38. Marine shipping emissions	ongoing
4. Energy-efficient buildings–further actions	2025	***Vegetation measures***	
5. Green building	ongoing	39. Tree planting	2030
Renewable energy measures		40. Street trees	2015, ongoing
6. Hydroelectric plant re-commissioning	2015	41. Tree and landscaping protection	2015
7. Solar photovoltaic project at Airport	2015	42. Urban heat island effect	2020
8. Community choice aggregation	2015	43. Regional open space preservation	ongoing
9. Alternative/advanced fuels	2020, 2030	***Waste reduction measures***	
10. Alternative fuel infrastructure	2015	44. City business purchasing guidelines	2015
11. Small wind generators	2020	45. City facilities recycling	2015
12. Facilitate renewable energy technologies	2020	46. Electronic processes	2015
13. Solar energy	ongoing	47. City coordination with region	2020
Travel and land use measures		48. Waste-to-energy facility at landfill	2015
14. Fleet vehicles	ongoing	49. Communitywide waste diversion	2020
15. City employee travel changes	ongoing	50. Regional material recovery facility	2015
16. Mixed use land use policies	2015	51. Waste audit information for business	2015
17. Sustainable neighborhood plans	2020, 2030	52. Recycling education campaigns	2015
18. Experimental development	2015	53. Single-use packaging reduction	2015
19. Complementary land uses	2020	54. Business & MF recycling ordinance	2015
20. Electric vehicle charging stations	2015	55. Construction waste enforcement	2015
21. Pedestrian infrastructure	ongoing	56. Increased recyclables sorting	2015
22. Bicycle infrastructure improvements	2015, ongoing	57. School waste diversion	2015
23. Personal transportation	2020, ongoing	58. Materials reuse/recycling for builders	2015
24. Inter-model connections	ongoing	59. Building space guidelines for waste	2015
25. Optimize roadway capacity, flow	ongoing	60. Additional recycling materials	2020
26. Mid-block traffic improvements	ongoing	61. Additional green waste capacity	2020
27. Regional transportation and transit	ongoing	62. Additional recycling in public places	2020
28. Vehicle speeds	2015	63. Additional composting	2020
29. Bus pull-out right of way	2015	64. Single-use bag reduction	2015
30. Circulation improvements	ongoing	***Water conservation measures***	
31. Transit passes	ongoing	65. City facilities – water conservation	ongoing
32. Parking policies	ongoing	66. Community water conservation	2015, ongoing
33. Car-pooling and telecommuting	ongoing	67. Recycled water	2020, 2030
34. Car-sharing	ongoing	68. On-site water storage and reuse	2020

Figure 4-2 Climate Plan Implementation Time Line – Adaptation Strategies			
Climate Plan Strategy	**Target year**	**Climate Plan Strategy**	**Target Year**
Climate change adaptation planning		85. Sea level rise adaptation	2020
69. Planning for adaptation	2020, 2030	86. Future inundation	2020
70. Coordination of climate planning efforts	ongoing	87. Bluff retreat guidelines	2015
Emergency preparedness		88. Cliff erosion policies	2020
71. Emergency response strategies	2015	89. Shoreline management plan	2020
72. Emergency workforce	2015	90. Beach erosion policies	2020
73. Public education for emergencies	2015	91. Coastal ecosystems study	2020
74. People with disabilities	2015	***Public services***	
75. Community resilience planning	2020	92. Water supply planning	2015, ongoing
Wildfire, flooding, water quality		93. Regional cooperation - water supply	ongoing
76. Residential development – high fire hazard	2015	94. Local food cultivation	2030
77. Fire prevention and creek restoration	2015	95. Community gardens	2030
78. Water system improvement for firefighting	ongoing	96. Regional agriculture	ongoing
79. Private water supplies for firefighting	ongoing	***Biological resources***	
80. Floodplain mapping update	2020	97. Wildlife and habitat protection	2020, ongoing
81. Creek resources and water quality	2025, ongoing	98. Open space connectivity and trails	2020, ongoing
Coastal vulnerability and adaptation planning		99. Creek protection, restoration	2020, ongoing
82.Sea level monitoring, data, analysis	2020	***Local economies***	
83. Sea level risk assessment and vulnerability	2020	100. Coordinate with local business	2015, ongoing
84. Incorporate adaptation in development	2015, ongoing		

4.1.2 Individual development project design and permitting

Some climate plan measures will be applied to new development through the City development design and permitting processes. These may include project design measures that would reduce carbon emissions, and measures to avoid or address reasonably foreseeable future climate-related hazards at specific locations.

A number of City programs, guidelines, and ordinances already in place provide guidance for individual project development design and permitting for energy conservation and green building, land use, transportation design; tree protection and landscaping, waste reduction, water conservation, and adaptation.

Appendix C provides initial guidance for including carbon reduction and climate adaptation measures in project design and permitting, as applicable. This chart will be updated as additional guidelines are developed.

Additional project guidelines

Several future Climate Plan measures direct the preparation of additional guidelines and incentives that would assist developers and City reviewers in applying project development design measures to address climate issues, as summarized below:

Carbon reduction strategies

- Energy strategies. Measures 3 and 4-Energy-efficient buildings; 5-Green building; 12-Incentives for alternative fuel infrastructure; 11-Small wind generators
- Travel & land use strategies. Measures 16-Mixed-use land use policies; 17-Sustainable neighborhood plans; 18-Experimental development; 19-Complementary land uses; 20-Electric vehicle charging stations; 32-Parking policies; 37-New development vehicle emissions.
- Vegetation strategies. 41-Tree and landscaping protection; 42-Urban heat island effect.
- Waste reduction strategies. Measures 59-Building space guidelines for waste management.
- Water conservation strategies. Measures 65-Community water conservation; 66-On-site water storage and reuse.

Climate change adaptation planning

- Measure 69-Planning for adaptation
- Wildfire, flooding, water quality. Measures 76-Limit residential development in high fire hazard areas; 77-fire prevention and creek restoration; 79-private water supplies for fire-fighting; 80-floodplain mapping update; 81-Creek resources and water quality
- Coastal vulnerability. Measures 82-Monitoring, data collection, analysis of sea level rise; 84-Incorporate adaptation in development; 85-Sea level rise adaptation; 86-Future inundation; 87-Bluff retreat guidelines; 88-Cliff erosion policies
- Biological resources. Measures 97-wildlife, coastal, & native plant habitat protection; 98-Open space connectivity and trails; 99-Creek setbacks, protection, restoration

4.1.3 Environmental review

Environmental review of climate plan

The General Plan Program EIR (2010) provided an initial analysis of carbon emissions impacts from future citywide growth under General Plan land use designations and policies, as well as impacts of climate changes on Santa Barbara. The EIR identified the citywide impact significance threshold as whether or not citywide carbon emissions levels would meet established State targets.

An Addendum to the EIR provides documentation of environmental review of this Santa Barbara climate action plan per the requirements of the California Environmental Quality Act (CEQA). The climate plan provides a refined analysis of carbon emissions impacts that updates the Program EIR analysis.

The climate plan demonstrates that current annual citywide carbon emissions generation levels, as well as projected 2020 and 2030 levels with implementation of climate plan strategies, more than meet the State's 2020 target for overall emissions reductions and the State's regional Santa Barbara County 2020 and 2030 targets for per capita vehicle emissions levels.

The EIR Addendum concludes that in the period to 2030, City activities including new development under the General Plan will not result in a considerable contribution to climate change. The climate plan also summarizes potential future climate effects on the City, consistent with the Program EIR analysis.

Environmental review of individual projects

State legislation, case law, and regulatory guidelines have been evolving over the past several years as to how climate change issues will be addressed as part of environmental review of individual projects under California Environmental Quality Act (CEQA) procedures.

SB 97 amended CEQA to require that carbon emissions be evaluated as part of CEQA environmental review. As allowed under SB 97, the City has now analyzed and identified mitigation for potential significant effects of carbon emissions on a programmatic, citywide level through this Climate Action Plan and the Program EIR and Addendum.

Upon adoption, this climate plan will function as a cumulative mitigation program for climate change effects for the City of Santa Barbara, which will removes the cost quantified analysis by some individual project applicants.

4.2 Monitoring and Plan Update

The following discusses monitoring and reporting on plan implementation status, citywide carbon emissions inventory, and measures of climate change, as well as periodic climate plan update.

4.2.1 Climate plan monitoring and reporting

The climate action plan contains many programs also recently included in the 2011 General Plan update. The General Plan includes an AMP component (Adaptive Management Program) for monitoring and reporting on General Plan implementation status and indicators of community sustainability. This will allow for reassessment and adjustment of General Plan policies. The AMP process and schedule is slated for forthcoming development.

To avoid duplication of effort, climate plan monitoring and reporting will be coordinated with the General Plan AMP. In addition, wherever possible, monitoring will utilize already existing City processes. For example, for the issue of water supply, the Water Resources Division already provides an annual water supply report to City Council, which will also inform the climate plan status report.

Plan implementation

Monitoring and reporting on the implementation status of climate plan strategies for carbon emissions reduction and climate adaptation will occur with the same schedule and process established for AMP monitoring and reporting of General Plan implementation status (e.g., annual report to Planning Commission and City Council or other schedule as established).

Figures 4-1 and 4-2 in the prior section provide schedule targets for implementation of climate plan strategies.

Carbon emissions inventory and measures of climate change

Implementation status reports in 2015, 2020, 2025, and 2030 will include the following additional monitoring information:

- An update to the citywide carbon emissions inventory and comparison with 2020 and 2030 targets; and
- Updated information on climate change and future projections (e.g., temperature, rainfall, storms and flooding, sea level rise, sea cliff retreat rates, biological resources, etc.).

These more comprehensive climate plan status reports will be provided to the Planning Commission and City Council and will be available online for public access.

4.2.2 Plan updates

Within the climate plan period through 2030, plan provisions can be reassessed and amended as needed as a part of the regular monitoring and reporting process.

A comprehensive update to the Climate Action Plan is targeted for 2030, concurrent with other key City long-range planning documents, including the General Plan and Long Term Water Supply Plan.