Appendix C –

Target Setting Rationale

TARGET SETTING RATIONALE

AECOM recommends that the Shasta region jurisdictions utilize the following greenhouse gas (GHG) reduction targets within their climate action plans to demonstrate the jurisdictions' commitment to California's climate protection efforts. The appendix describes (a) existing California climate change legislation and State guidance relevant to establishing GHG reductions target and (b) recommended communitywide operations GHG reduction targets.

STATE LEGISLATION

The State of California has issued a variety of guidance relevant to the establishment of GHG reduction targets. The primary guidance relevant to local jurisdictions includes the following:

Executive Order S-3-05

Executive Order (EO) S-3-05 states that California is vulnerable to the effects of climate change, including reduced snowpack in the Sierra Nevada Mountains, exacerbation of California's existing air quality problems, and sea level rise. To address these concerns, the executive order established statewide targets to reduce GHG emissions to 2000 levels by 2010, to 1990 levels by 2020, and to 80% below 1990 levels by 2050.

Assembly Bill 32 and Climate Change Scoping Plan

Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006, requires California to reduce statewide GHG emissions to 1990 levels by 2020. AB 32 directs ARB to develop and implement regulations that reduce statewide GHG emissions. The Climate Change Scoping Plan (Scoping Plan) was approved by ARB in December 2008 and outlines the State's plan to achieve the GHG reductions required in AB 32. The Scoping Plan contains the primary strategies California will implement to achieve a reduction of 169 million metric tons of carbon dioxide equivalent, or approximately 28% from the State's projected 2020 emission levels.

In the Scoping Plan, ARB encourages local governments to adopt a reduction goal for municipal operations emissions and move toward establishing similar goals for community emissions that parallel the State commitment to reduce GHGs. The Plan identifies California's cities and counties as "essential partners" within the overall statewide effort and recommends that local governments set a GHG reduction target of 15 percent below 2008-2008 levels by the year 2020.

Senate Bill 375

Additionally, Senate Bill (SB) 375 (2008) established a process whereby regional targets for reduced passenger vehicle and light duty truck GHG emissions have been established for each Metropolitan Planning Organization (MPO) in the state, including the Shasta region. The Air Resources Board adopted targets for the Shasta region are zero percent per capita growth in 2020 and 2035. It should be noted that this is a regional target and not necessarily a target for each member jurisdiction.

Senate Bill 97

Senate Bill (SB) 97 acknowledges that climate change is a prominent environmental issue that requires analysis under the California Environmental Quality Act (CEQA). Pursuant to SB 97, the State CEQA Guidelines were updated in 2010 to include provisions for mitigating GHG emissions and/or the effects of GHG emissions. The amended CEQA Guidelines (Section 15183.5) allow jurisdictions to analyze and mitigate the significant effects of GHGs at a programmatic level by adopting a plan for the reduction of GHG emissions. Later, as individual projects are proposed, project specific environmental documents may tier from and/or incorporate by reference that existing programmatic review in their cumulative impacts analysis. If a plan is to be used for tiering or incorporation by reference purposes, it should contain enforceable reduction measures and demonstrate that it can reliably reduce the community's GHG emissions to a degree that contributes its fair share to State emissions reduction efforts (see Attorney General's guidance below).

Attorney General Guidance

In March 2009 correspondence to local governments, the State Attorney General's Office emphasized and expanded upon this recommendation by stating that communitywide targets should align with an emissions trajectory that reflects aggressive GHG mitigation in the near term, and California's interim (1990 levels by 2020) and long-term (80 percent below 1990 levels by 2050) GHG emissions limits set forth in AB 32 and Executive Order S-3-05.

The Attorney General's August 31st 2009 letter to San Diego County states that GHG projections associated with a General Plan update should estimate the emission levels through the full planning horizon not just in 2020. Though the letter only explicitly calls for projections, it could be assumed that an emission reduction target would also be required.

Summary of State Guidance on Local Government Targets

Table C-1 provides a summary of the State of California's guidance to local governments regarding GHG reduction targets. This guidance applies to both local government operations and communitywide emissions reductions efforts.

Table C-1: Summary of State Guidance on Local Government Targets

Target Year	2020	Interim Year Between 2020-2050	2050
AB 32 Scoping Plan Recommended Target	15% below 2005-2008 levels	NA	NA
Attorney General's Office Guidance	15% below 2005-2008 levels	Demonstrate a trajectory toward 2050 levels (e.g., 49% below 2005-2008 levels by 2035)	80% below 1990 levels or 83% below 2005-2008 levels

RECOMMENDED GHG TARGETS FOR SHASTA COUNTY JURISDICTIONS

To conform to the 2020-2035 GHG reduction targets of the Attorney General, AECOM recommends that Shasta County jurisdictions adopt the following 2020 and 2035 GHG reduction targets. Because 2008 serves as the year of the baseline inventory, the reduction targets are expressed as percent reductions below 2008 levels (see Tables C-2, C-3, C-4, and C-5 for a comparison of 2008 and 1990 baseline targets for each jurisdiction). These tables simply illustrate the magnitude of reductions that would be required to meet the Attorney General's Guidance shown in Table C-1.

2020 Target: 15 Percent below 2008 Levels

Selecting a reduction target that calls for GHG emissions to be 15 percent below 2008 levels by 2020 offers the following benefits:

- Consistent with current guidance offered by ARB and the California Attorney General's Office
- Demonstrates contribution to State AB 32 GHG emissions reduction goals for 2020

2035 Target: 49 Percent below 2008 Levels

A target that strives to reduce GHG emissions to be 49 percent below 2008 levels by 2035 provides the following benefits:

- Consistent with the guidance offered by the California Attorney General's Office
- Demonstrates a trajectory toward the State's long-term (EO-S-3-05) emissions reduction goals
- Aligns with SB-375 planning horizon

Table C-2: Comparison of 1990 and 2008 Based Targets - Unincorporated Shasta County

2008 Emissions Level From Inventory	Estimated 1990 Emissions Target Level (15% below 2008)
571,255	485,567

Target Year	Target Emissions Level	Percent Below 1990 Emission Levels	Percent Below 2008 Emission Levels
2020	485,567	0.00%	15.0%
2021	472,457	2.70%	17.3%
2022	459,832	5.30%	19.5%
2023	446,722	8.00%	21.8%
2024	433,611	10.70%	24.1%
2025	420,987	13.30%	26.3%
2026	407,876	16.00%	28.6%
2027	394,766	18.70%	30.9%
2028	382,141	21.30%	33.1%
2029	369,031	24.00%	35.4%
2030	355,921	26.70%	37.7%
2031	343,296	29.30%	39.9%
2032	330,186	32.00%	42.2%
2033	317,075	34.70%	44.5%
2034	304,451	37.30%	46.7%
2035	291,340	40.00%	49.0%
2036	278,230	42.70%	51.3%
2037	265,605	45.30%	53.5%
2038	252,495	48.00%	55.8%
2039	239,385	50.70%	58.1%
2040	226,760	53.30%	60.3%
2041	213,649	56.00%	62.6%
2042	200,539	58.70%	64.9%
2043	187,914	61.30%	67.1%
2044	174,804	64.00%	69.4%
2045	161,694	66.70%	71.7%
2046	149,069	69.30%	73.9%
2047	135,959	72.00%	76.2%
2048	122,848	74.70%	78.5%
2049	110,224	77.30%	80.7%
2050	97,113	80.00%	83.0%

Table C-3: Comparison of 1990 and 2008 Based Targets - City of Anderson

2008 Emissions Level From Inventory	Estimated 1990 Emissions Target Level (15% below 2008)
88,625	75,331

Target Year	Target Emissions Level	Percent Below 1990 Emission Levels	Percent Below 2008 Emission Levels
2020	75,331	0.00%	15.0%
2021	73,297	2.70%	17.3%
2022	71,339	5.30%	19.5%
2023	69,305	8.00%	21.8%
2024	67,271	10.70%	24.1%
2025	65,312	13.30%	26.3%
2026	63,278	16.00%	28.6%
2027	61,244	18.70%	30.9%
2028	59,286	21.30%	33.1%
2029	57,252	24.00%	35.4%
2030	55,218	26.70%	37.7%
2031	53,259	29.30%	39.9%
2032	51,225	32.00%	42.2%
2033	49,191	34.70%	44.5%
2034	47,233	37.30%	46.7%
2035	45,199	40.00%	49.0%
2036	43,165	42.70%	51.3%
2037	41,206	45.30%	53.5%
2038	39,172	48.00%	55.8%
2039	37,138	50.70%	58.1%
2040	35,180	53.30%	60.3%
2041	33,146	56.00%	62.6%
2042	31,112	58.70%	64.9%
2043	29,153	61.30%	67.1%
2044	27,119	64.00%	69.4%
2045	25,085	66.70%	71.7%
2046	23,127	69.30%	73.9%
2047	21,093	72.00%	76.2%
2048	19,059	74.70%	78.5%
2049	17,100	77.30%	80.7%
2050	15,066	80.00%	83.0%

Table C-4: Comparison of 1990 and 2008 Based Targets - City of Shasta Lake

2008 Emissions Level From Inventory	Estimated 1990 Emissions Target Level (15% below 2008)
571,255	485,567

Target Year	Target Emissions Level	Percent Below 1990 Emission Levels	Percent Below 2008 Emission Levels
2020	122,358	0.00%	15.0%
2021	119,054	2.70%	17.3%
2022	115,873	5.30%	19.5%
2023	112,569	8.00%	21.8%
2024	109,265	10.70%	24.1%
2025	106,084	13.30%	26.3%
2026	102,780	16.00%	28.6%
2027	99,477	18.70%	30.9%
2028	96,296	21.30%	33.1%
2029	92,992	24.00%	35.4%
2030	89,688	26.70%	37.7%
2031	86,507	29.30%	39.9%
2032	83,203	32.00%	42.2%
2033	79,900	34.70%	44.5%
2034	76,718	37.30%	46.7%
2035	73,415	40.00%	49.0%
2036	70,111	42.70%	51.3%
2037	66,930	45.30%	53.5%
2038	63,626	48.00%	55.8%
2039	60,322	50.70%	58.1%
2040	57,141	53.30%	60.3%
2041	53,837	56.00%	62.6%
2042	50,534	58.70%	64.9%
2043	47,352	61.30%	67.1%
2044	44,049	64.00%	69.4%
2045	40,745	66.70%	71.7%
2046	37,564	69.30%	73.9%
2047	34,260	72.00%	76.2%
2048	30,957	74.70%	78.5%
2049	27,775	77.30%	80.7%
2050	24,472	80.00%	83.0%

Table C-5: Comparison of 1990 and 2008 Based Targets - City of Redding

2008 Emissions Level From Inventory	Estimated 1990 Emissions Target Level (15% below 2008)
958,570	814,784

Target Year	Target Emissions Level	Percent Below 1990 Emission Levels	Percent Below 2008 Emission Levels
2020	814,784	0.00%	15.0%
2021	792,785	2.70%	17.3%
2022	771,601	5.30%	19.5%
2023	749,601	8.00%	21.8%
2024	727,602	10.70%	24.1%
2025	706,418	13.30%	26.3%
2026	684,419	16.00%	28.6%
2027	662,419	18.70%	30.9%
2028	641,235	21.30%	33.1%
2029	619,236	24.00%	35.4%
2030	597,237	26.70%	37.7%
2031	576,052	29.30%	39.9%
2032	554,053	32.00%	42.2%
2033	532,054	34.70%	44.5%
2034	510,870	37.30%	46.7%
2035	488,870	40.00%	49.0%
2036	466,871	42.70%	51.3%
2037	445,687	45.30%	53.5%
2038	423,688	48.00%	55.8%
2039	401,689	50.70%	58.1%
2040	380,504	53.30%	60.3%
2041	358,505	56.00%	62.6%
2042	336,506	58.70%	64.9%
2043	315,321	61.30%	67.1%
2044	293,322	64.00%	69.4%
2045	271,323	66.70%	71.7%
2046	250,139	69.30%	73.9%
2047	228,140	72.00%	76.2%
2048	206,140	74.70%	78.5%
2049	184,956	77.30%	80.7%
2050	162,957	80.00%	83.0%