

Appendix A: Initial Cost Analysis Calculations

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This appendix details the methodology, sources, and calculations for the initial cost estimates included in the Climate Action Plan. Only initial costs of the supporting measures are calculated in order to create an even basis of comparison. While some measures include simple payback or rate of return data, these statistics are for information purposes only.

Initial cost analyses for the 21 reduction goals are based on the experience of City Staff and research conducted by PMC and ICLEI. City Staff from planning, public works, and building inspection gave estimates of time and materials to the City for implementing each measure. The initial costs of other measures were based on market research and the experience of similar cities.

The initial cost estimate for many reduction measures are represented as a range. This is due to the different hourly pay rates of staff, which are anywhere from \$50 - \$100 per hour once salary, insurance, and other costs to the City are taken into account.

Energy Use

1. Expand energy saving opportunities to businesses

1.1 Consider developing a tax rebate program for efficiency improvements in businesses.

Data Source	N/A
Interpretation	The initial cost of a tax rebate program cannot be determined until a more specific scope is determined. Any rebate program would need to be balanced against other revenue generating sources.
Total	Unknown

1.2. Expand energy saving opportunities for large and small commercial and industrial properties.

Data Source	City Staff and PMC
Interpretation	The cost of this program would be borne by existing programs through PG&E and the State. The only cost to the city would be facilitation, which is estimated to be 50 hours of staff time per year. $50 \text{ hrs} * (\$50 - \$100 / \text{hr}) = \$2,500 - \$5,000$ per year. There is a possibility for community group assistance or funding this effort through grant opportunities.
Total	\$2,500 - \$5,000 per year

2. Improve residential energy efficiency

2.1. Establish energy efficiency standards for new construction and remodel projects that exceed the State's 2008 Title 24 energy standards by 15%.

Data Source	City Staff and PMC
Interpretation	It is estimated that writing energy efficiency standards for new construction and remodel projects would take approximately 40 hours of Staff time, which equates to \$2,000 - \$4,000. There would be additional costs associated with staff time needed for plan checks, however this cost will be absorbed through cost recovery

	agreements with the applicants.
Total	\$2,000 - \$4,000
2.2. Perform energy-efficient lighting retrofits and/or home energy audits.	
Data Source	Acterra and PMC
Interpretation	The cost of this measure depends on whether the home energy audits are coordinated by a non-profit organization or by community groups. A non-profit organization, such as Acterra, estimates that a proposal for San Carlos would be similar to that for Menlo Park, which was \$35,000 for 250 home energy audits in one year. Alternatively, costs to the City for a home energy audit program run by community groups would be negligible. With these assumptions, this reduction measure will have costs anywhere from \$0 - \$35,000.
Total	\$0 - \$35,000
2.3. Expand the distribution of free or subsidized energy and water saving devices and services to the mass market.	
Data Source	PMC and Pacific Gas and Electric (www.pge.com)
Interpretation	The cost of distributing free or subsidized energy and water saving devices and services is minimal assuming that supplies are provided as they have been historically by utility providers and through promotions. Some staff time would be anticipated as a liaison with PG&E and other service providers; however these positions already exist and would not be an additional cost to the City.
Total	Negligible
2.4. Expand and better integrate programs that increase energy efficiency in low-income households.	
Data Source	PMC and Federal Low-Income Household Energy Assistance Program (http://www.acf.hhs.gov/programs/ocs/liheap/)
Interpretation	The Federal Low-Income Household Energy Assistance Program (LI-HEAP) distributes funding for low-income weatherization services as does the U.S. Department of Energy and PG&E. It is likely that some coordination time from City staff would be necessary to determine applicant eligibility; however this effort would likely be covered by grants or other revenue sources.
Total	Negligible

3. Adopt a green building standard for all new development and major remodels

3.1A. Provide information and support to developers on LEED and GreenPoint standards.

Data Source	City Staff and PMC
Interpretation	Supporting State green building requirements would not impact the City's existing building services. The cost of promoting LEED and GreenPoint standards through informational handouts and conversations with applicants about the benefits of green building would be equivalent to the current level of outreach.
Total	No additional cost

3.1B. Create a green building ordinance requiring a GreenPoint, LEED, or equivalent green building certification per development category.

Data Source	City Staff and PMC
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Calculation Depending on the type of green building ordinance adopted (regional or custom), the cost of development of the code could vary substantially.

For a regional approach, the primary costs would be related to development of the green building ordinance since there would be no public workshops or local coordination at the City level. According to City staff, if the ordinance is coordinated with neighboring jurisdictions or coordinated regionally, the cost of the ordinance would be minimal, with only staff time to coordinate the process. Training on LEED and GreenPoint certification would require a day-long training session with costs from \$3,000-\$5,000 in staff time and materials.

For a custom approach, the up front cost of developing a green building ordinance just for the City of San Carlos could be much higher. According to staff cost estimates and informal queries of neighboring jurisdictions, costs could range from less than \$10,000 to over \$100,000. Most formal cost estimates do not account for staff time associated with project development and are not consistent with our conservative approach to estimating fully loaded cost. For this reason, comparable studies were not available to inform this cost/benefit analysis. Staff estimated the amount of time it would take for City staff to develop a green building code in coordination with consultants and other regional resources.

With San Carlos' history of public involvement, the City would host public workshops to ensure the stakeholders in the community can be involved in what is included in a custom green building code for the City. With the cost of the workshops, writing a custom ordinance, and managing the ordinance development process, the fully loaded costs for the City of San Carlos are estimated to be in the range of \$50,000 to \$75,000. Fully loaded costs include staff time, consultant time, workshop facilitators, materials for distribution and training for building department employees. If this option is selected, staff will apply for grant funding to cover the costs but there is no guarantee that these funds would be granted.

For either approach above, an estimated \$100-\$200 in staff time per plan check would also be necessary with the implementation of LEED, GreenPoint, or equivalent building standard, however this cost would be absorbed by the developer through application fees.

Total \$3,000 - \$75,000

4. Create water and waste efficient landscapes

4.1. Formalize the City's water efficient landscaping practice by writing it into the Parks Master Plan.

Data Source City Staff and PMC
Interpretation Implementing this goal would alter design standards in the Parks Master Plan, which is estimated to cost a one-time \$10,000 consultant fee. Further analysis would be necessary to determine

the hard cost per plant as well as staff time per planting or total cost to hire additional contract landscapers. Adding this measure, and formalizing the City's existing policy would not increase costs for physical installation beyond what is already programmed.

Total \$10,000

4.2. Expand the current landscaping ordinance to require efficient landscaping in conjunction with all residential and commercial property improvements.

Data Source City Staff and PMC

Interpretation To update and enforce a more restrictive landscaping ordinance, approximately 40 hours of staff time or \$2,000-\$4,000 would be required. Additional review by plan-checkers is estimated to be an added half hour per application or \$3,750-\$7,500 assuming 150 qualifying plan checks per year, however this cost would be absorbed by the applicant.

Total \$2,000-\$4,000

5. Identify opportunities for on-site renewable energy generation on City and privately-owned property

****Overall: \$10,000 Cost to the City for a feasibility study of on-site energy generation.**

Source: City Staff and PMC.

5.1. Identify opportunities for increasing solar system installations in the community and on City facilities.

Data Source PMC – also see footnotes

Interpretation The average cost of PV installation per kW is \$9,000 without subsidies or financial assistance.¹ Keeping with our assumptions above, the gross cost to the City for installing an additional 100 kw of solar panels would be \$900,000. Much of this cost would be paid back by the California Solar Initiative, which pays \$0.50 per kWh for solar power generation in the first five years. With an average of 4.5 hours of sunlight each day over the course of a year,² we can estimate that a 100 kW system would produce 164,250 kWh per year.³ This equates to \$410,625 over five years, or roughly half of the cost of installation. The remaining \$480,000 can be paid incrementally through available loan programs. For the purpose of this analysis we are assuming the initial cost will be paid up front, however longer term return on investment will substantially reduce the cost of purchase and installation.

Total \$480,000

5.2. Identify opportunities for Wind energy generation.

Data Source PMC and AWEA

Interpretation Small wind energy systems cost from \$3,000 - \$5,000 for every kilowatt of generating capacity, or approximately \$40,000 for a 10 kW installed system without taking into account rebates or incentives.⁴ For the purpose of analyzing the cost benefit of this

¹ Solar Buzz, "Fast solar energy facts," <http://www.solarbuzz.com/FastFactsIndustry.htm>, accessed November 1, 2008. Middle of \$8-10 per watt price range

² Rocky Grove Sun Company, "How many PV modules?" <http://www.rockygrove.com/design/howmany.html>, accessed November 3, 2008.

³ 100 kW of PV installed * 4.5 sun hours per day * 365 days = 164,250 kW-hours (kWh)

⁴ American Wind Energy Association (AWEA), "Finding Incentives," <http://www.awea.org/smallwind/toolbox2/financing.html>, accessed November 3, 2008.

measure, it is assumed that the City would install ten small-scale wind turbines, which would equal \$30,000 - \$50,000 without assistance. The California Energy Commission Emerging Renewables Program provides rebates for wind turbines less than 50 kW. The American Wind Energy Association estimates that this program, along with other federal programs, will cover the cost of a wind turbine within 10 years, resulting in 20 years of relatively no-cost energy.⁵

For the purposes of this study, it is assumed that half of the cost of the wind turbines will be born up-front in order to create consistency with other measures that also have a payback. Therefore, the initial cost of ten wind turbines is estimated to be \$15,000 - \$30,000 assuming most planning and coordination by Staff is completed as part of the initial feasibility study.

Total \$15,000 - \$30,000

5.3. Identify opportunities for Biomass energy opportunities.

Data Source PMC

Interpretation It is difficult to make an estimate of initial cost and greenhouse gas emissions reductions from biomass energy due to the different fuels that could be used. The method of biomass energy production that is commonly quantified at this point is methane capture. However, since the landfills serving the City of San Carlos are outside of the City limits, it would require a coordinated effort with multiple partners and service providers to integrate methane into the fuel stream for the City of San Carlos.

Total Unknown

6. Implement reduction strategies included in the energy audit of City facilities. Continue to monitor City facility performance.

Data Source City Staff and PMC

Interpretation Until the inventory is completed, the cost of modifying City facilities and their operations to increase efficiency is unknown. Additionally, the greenhouse gas benefits cannot be calculated until after the inventory is completed.

Total Unknown

7. Provide for increased albedo (reflectivity) of all urban surfaces including roads, driveways, sidewalks, and roofs in order to increase reflectivity and minimize the urban heat island effect

Data Source City Staff, PMC, US EPA (<http://www.epa.gov/heatisland/mitigation>)

Interpretation The US Environmental Protection Agency identifies multiple cool pavement technologies, many of which are similar if not lower in cost to traditional asphalt. There would be some staff time for coordinating with public works and including the high albedo content requirements in the CIP, however these costs would be a component of the next CIP update associated with the General Plan. CalTrans would also need to be contacted regarding El Camino Real and the State's efforts to increase albedo on State

⁵ AWEA, "Finding Incentives"

	highways. Coordinating increased albedo discussions should be coordinated with other CIP and coordination efforts to save time.
Total	Negligible

8. Encourage tree planting.

8.1. Provide for City assistance to community tree planting programs and efforts.

Data Source	Case studies, PMC and CAPP
Interpretation	The 200 trees planted estimate is based on a two year program of 100 trees per year completed before 2015 in order to allow them to mature to a measurable carbon sequestration rate. Cost would be one hour of staff time per tree (\$50-\$100). In addition, twenty hours of staff time would be required for kickoff of the program and the preparation of a Council resolution (\$1,000-\$2,000 depending on staff wage). Assuming that 200 trees are planted by community tree planting programs, we can estimate costs to be \$11,000 - \$22,000 total. If this program is operated by a non-profit or other community organization, the cost of the program would be substantially less. For the purposes of this costs estimate we have included a range of costs for all options of implementation.
Total	\$1,000 - \$22,000 total

8.2. Require a specific tree coverage and tree replacement requirement for all new development.

Combined with measure 8.3, "Develop and Implement Shading Requirement for City owned parking lots."

8.3. Develop and implement a shading requirement for all City-owned parking lots.

Data Source	City Staff
Interpretation	Staff estimates that updating the zoning code with shading requirements (including the shading requirement in the next measure) will cost 36 hours of Staff time, which is equivalent to \$1,800 -\$3,600, however this effort would be combined with other code updates following approval of the General Plan, so the costs would be substantially less than this figure as economies of scale would allow reduced costs for actions on all GP update related revisions to the municipal code.
Total	\$1,800 -\$3,600

Transportation and Land Use

1. Encourage development that is mixed-use, infill, and higher density.

1.1. Revise municipal codes to encourage and allow for mixed-use, infill, and higher-density development.

Data Source	City Staff and PMC
Interpretation	It is estimated that it would take approximately 90 hours staff time (\$50-\$100 pay range) = \$4,500 - \$9,000 to complete code revisions in this regard, however this effort would likely be combined with other code updates following approval of the General Plan, so the costs would be substantially less than this figure as economies of scale would allow reduced costs for actions on all GP update related revisions to the municipal code.
Total	\$4,500 - \$9,000

2. Increase housing density near transit.

2.1. Revise municipal codes to encourage and allow for higher-density commercial and residential centers near transit corridors with the express intent of encouraging transit ridership and reducing the use of the personal automobile.

Data Source	City Staff and PMC
Interpretation	City staff has indicated an estimate of roughly \$22,500-\$45,000 in initial staff time for a planner to write TOD code revisions (equivalent to 450 hours dedicated) however this effort would likely be combined with other code updates following approval of the General Plan, so the costs would be substantially less than this figure as economies of scale would allow reduced costs for actions on all GP update related revisions to the municipal code.
Total	\$22,500-\$45,000

3. Increase bike parking.

3.1. Increase the bicycle parking requirement for commercial projects in order to promote cyclist safety, security, and convenience.

3.2. Require large employers to provide facilities that encourage bicycle commuting, including shower facilities, and covered or indoor bicycle parking.

Data Source	City Staff and PMC
Interpretation	City Staff estimates approximately 18 hours of effort for planning staff to write bike parking code revisions. When assuming an hourly rate of \$50-\$100 per hour, this translates to \$900-\$1,800 in initial staff time. This effort would likely be combined with other code updates following approval of the General Plan, so the costs would be substantially less than this figure as economies of scale would allow reduced costs for actions on all GP update related revisions to the municipal code.
Total	\$900-\$1,800

4. Actively promote walking and biking as safe modes of local travel, particularly for children attending local schools.

4.1. Promote traffic calming methods on City streets such as landscaped median barriers and traffic circles.

Data Source	City Staff and PMC
Interpretation	As previously described, traffic calming measures are the responsibility of the neighborhoods, however information could be provided on water bills or through other means for greater outreach and public awareness of the opportunity. Any costs associated with this measure would likely be combined with out outreach programs that are developed as a result of the adoption of this plan.
Total	Negligible

4.2. Establish clear and convenient pedestrian rights of way with shade and minimal tripping hazards.

Data Source	City Staff and PMC
Interpretation	The City already allocates \$50,000 a year to responding to complaints about pedestrian safety. City staff does not estimate

that additional funds will be necessary to implement this reduction measure.

Total Negligible

4.3. Incorporate bicycle-friendly intersections and boulevards into street design as recommended by the Bicycle Transportation Plan currently under review.

Data Source City Staff, PMC and *Streets and Sidewalks, People and Cars: The Citizens' Guide to Traffic Calming* by Dan Burden

Interpretation Preparation of the Bicycle Transportation Plan has already been accounted for in the current budget. The installation of striping for bike intersections would cost approximately \$100 per striped lane, or for a typical intersection with 4 lanes, \$400.

Assuming three additional miles of bike lanes are installed and ten bike intersections are striped, we can estimate that this measure will cost approximately \$157,000. Many of these updates will occur as other improvements are needed, with gradual implementation of this policy through regular maintenance cycles. This being the case, it is likely this program will cost less than estimated, however in keeping with other cost estimates, cost recovery options are not considered.

Total \$157,000

4.4. Promote "Walk pools" or "Walking buses" to increase the number of students that walk to school.

Data Source City Staff and PMC

Interpretation The cost of advertising and coordinating the routes for the program would be absorbed by parent groups and schools. The cost to the City for coordinating with these programs would be minimal and largely absorbed by the other measures under this goal and existing programs.

Total Negligible

5. Create travel routes that ensure that destinations may be reached conveniently by public transportation, bicycling, and walking.

5.1. Create a plan to identify and address barriers to safe or convenient walking, biking, and transit ridership from major residential areas to public areas of interest and see it the plan's implementation.

Data Source City Staff and PMC

Interpretation The initial cost of this measure would be negligible since the plan is in the process of being updated. Some of the expected recommendations of the Bicycle Pedestrian Plan are largely encompassed in the initial cost estimations of other reduction measures in this Plan, yet the specific costs cannot be calculated until the Bicycle Pedestrian Plan is completed.

Total Negligible

5.2. Make it a condition for approval that new large-scale developments address transit, biking, and walking access to the location.

Data Source City Staff and PMC

Interpretation The only cost associated with this measure is plan review to ensure that new large-scale development applications address transit, biking, and walking access. It is estimated that this requirement will cost an additional four hours per plan check, or \$200-\$400 dollars, however this cost would be absorbed by the applicant. As

development leaned towards addressing these issues proactively, the time required to complete plan checks would be reduced. Additional costs for review would be borne by the applicant.

Total Negligible

5.3. Provide for an education program to residents and businesses as well as increased code enforcement in order to minimize vegetation that degrades access along public rights of way.

Data Source City Staff and PMC

Interpretation A cost of \$9,000-\$18,000 from recurring staff time for Right of Way (ROW) management for approximately 10% of a full-time position for the year at an hourly rate range of \$50-\$100 an hour. An expected extra 300 hours of enforcement annually would take place at \$15,000-\$30,000 in staff costs ongoing per year. These costs could be substantially reduced if community organizations were involved in the program via ongoing education and enforcement.

Total \$24,000 - \$48,000

6. Provide for a shuttle service in order to increase transit ridership.

6.1. Establish a shuttle service within the City of San Carlos connecting areas not adequately served by public transit to Caltrain.

Data Source City Staff and PMC

Interpretation Estimated \$2,000-\$4,000 in costs generated by 40 hours of staff admin/contract start up time. Operating costs would be covered by Measure A and local businesses. Additional funding is anticipated through Proposition 84 funds that are anticipated in support of SB375 implementation.

Total: \$2,000-\$4,000

7. Promote car sharing programs.

7.1. See to the establishment of a car sharing program

Data Source City Staff and PMC

Interpretation Initial setup and coordination between City staff and the Car Share organization will take approximately 36 hours, or \$1,800 to \$3,600 of staff time. Ongoing management costs are expected to be borne by the car-share program group.

Total \$1,800 to \$3,600

7.2. Provide for car share parking spaces in convenient locations

Data Source City Staff and PMC

Interpretation The costs for signage and re-striping would be borne by the car sharing company. Costs to the City would be minimal and largely encompassed under the existing permitting process. Any updates to parking areas would occur in a regular maintenance cycle and would not be additional to other maintenance.

Total Negligible.

8. Enforce affordable housing requirements

8.1. Continue to enforce the City's Below Market Rate (BMR) Ordinance (as amended) to support the development of affordable housing in the area

Data Source City Staff

Interpretation The Below Market Rate (BMR) Ordinance is already being

	implemented. No additional costs.
Total	Negligible

9. Convert more City vehicles to hybrid, electric, alternative fuel, or smaller vehicles.

9.1. Replace 15 traditional automobiles in the City's fleet with more efficient vehicles by 2020.

Data Source	ICLEI CAPP software
Interpretation	The initial cost for purchasing a Toyota Prius (as one example) for City use has a price range of \$21,430 for base model. This assumes fleet price is \$500 above invoice and includes destination charge with no additional options. Assuming that the City purchases 15 additional hybrid vehicles using this estimated cost as a guide, the total charge to the City would be \$321,450. The replacement of three fleet vehicles (included in this cost) has already occurred. Fleet replacement will be accommodated through normal fleet replacement timelines and would not be additional to other fleet replacement costs. Estimated costs outlined below would be in lieu of other fleet replacement costs currently budgeted.
Total	\$321,450 - \$345,540

10. Increase accommodation and promotion of alternatively fueled vehicles and hybrids.

10.1. Offer prioritized parking for hybrid or alternative fuel cars on City streets.

Data Source	City Staff and PMC
Interpretation	This measure will consist of initial restriping for the selected priority parking spaces, which also is considered an ongoing public works task with a cost of \$100 per parking space. Another \$400 per parking space relating to enforcement of the designated priority spaces by proper cars is estimated. Therefore, assuming that 20 spaces are converted, we can estimate that the cost of this measure is approximately \$10,000.
Total	\$10,000.

10.2. Encourage alternative fueling stations within close proximity to potential customers.

Data Source	City Staff and PMC
Interpretation	The process of encouraging alternative fueling stations within San Carlos would largely be incorporated the zoning code update effort following adoption of the General Plan update in 2009.
Total	Negligible

10.3. Encourage developers to dedicate parking lot spaces to electric vehicle recharging stations.

Data Source	City Staff and PMC
Interpretation	The cost to the City for encouraging electric vehicle recharging stations is negligible. Parking and recharging stations would be incorporated into existing incentives and concessions for project approval. As a point of information, the cost to the developer is estimated to be five thousand dollars per lot for recharging stations, including equipment & installation initial cost. The costs to the City would be minimal and incorporating design requirements of proposed facilities would be incorporated into the zoning code

	update effort following adoption of the General Plan update in 2009.
Total	Negligible.

Solid Waste

1. Support Zero Waste.

1.1. For municipal operations, establish a zero waste policy.

Data Source	City Staff
Interpretation	A zero waste policy would require approximately 200 hours of Staff time per year for training, purchasing of receptacles, and coordinating with handlers, or approximately \$10,000 to \$20,000 depending on pay grade. City staff members are already spending this amount of time on coordination of recycling efforts, but this time would be shifted to the new zero waste policy and accompanying trainings.
Total	Negligible

1.2. Establish an environmentally preferable purchasing program (EPP) for government operations

Data Source	City Staff and PMC
Interpretation	City staff estimates that the initial cost for preparing an Environmentally Preferable Purchasing ordinance would be approximately \$5,000. There may be additional costs at the onset for quality control of new and unfamiliar products and their providers. There is also potential for higher material costs, although research is showing that the costs of environmentally preferable products are comparable with traditional products. There are also significant cost-saving opportunities in the future for EPPs. Entering into a regional purchasing cooperative may reduce costs by allowing neighboring cities to buy sustainable products in bulk. Organizations like the State Regional Purchasing Cooperatives and Joint Venture Silicon Valley may be able to facilitate or aid in a program such as this.
Total	\$5,000

2. Increase recycling and composting at public events.

2.1. Require recycling and composting as a condition of approval for public events.

Data Source	City Staff and PMC
Interpretation	An additional two hours of staff time (\$100-\$200) per public event contract would be necessary under this reduction measure. This includes informing and monitoring recycling and composting opportunities at the applicants' events. The costs of recycling and composting would be incurred by the event holder, not the City. According to City records, approximately 25 public events occur annually in the City of San Carlos. Therefore, an estimated \$2,500 - \$5,000 is foreseeable to implement this measure. A similar practice is already in place so the training would be minimal. Long term costs associated with this reduction measure are considered negligible as resources and awareness will improve over time.
Total	Negligible

3. Increase overall waste diversion by at least 1% per year.

3.1. Increase required Construction and Demolition (C&D) diversion rate beyond the 60% currently required.

Data Source	City Staff, PMC and NorCal Waste Contract
Interpretation	The City of San Carlos is already well on its way to preparing for increased waste diversion. A consultant has been hired to address the C&D waste diversion ordinance and prepare a more stringent program. This extra effort for C&D recycling is currently funded through solid waste fees, but it may be funded in the future through C&D permit fee add-ons. The first year of counter work associated with the new C&D requirements is expected to cost approximately \$70,000, however this cost would be born by the applicants.
Total	Negligible

3.2. Provide for expanded recycling outreach and services to multi-family residential buildings, including renter-occupied apartment buildings.

Data Source	NorCal Waste Contract
Interpretation	Expanded outreach to the residents of San Carlos is underway concerning recycling and composting services. In October 2008, City Council directed Staff to begin negotiations with NorCal Waste Systems of San Mateo County to become the new Solid Waste, Recycling and Organics Collection firm in San Carlos starting on January 1, 2011. As part the agreement, NorCal Waste will be providing a six month recycle publicity program to advertise their new programs. They will also do ongoing outreach and public education as part of their contract with the City. As a result, the initial cost to the City is expected to be negligible.
Total	Negligible

3.3. Mandate commercial recycling

Data Source	City Staff, PMC, and NorCal Waste Contract
Interpretation	Costs to mandate commercial recycling would be minimal. The 2011 service contract with NorCal Waste will allow for increased commercial recycling.
Total	Negligible