



RESILIENT NEIGHBORHOODS 2012 PILOT PROGRAM RESULTS

The Resilient Neighborhoods pilot program goal was to help Marin residents reduce their carbon emissions and build community resiliency to protect against climate-spawned events like wildfires, severe storms, floods, droughts, and disruption in food supplies. Residential participation in climate mitigation and adaptation action is especially important here. Marin’s relative affluence and low amount of industry contribute to the residents being responsible 60-70% of the County’s carbon emissions. Further, Marin’s car-dependent lifestyles create communities where neighbors don’t know each other, and the idea of leaving the car at home and walking or biking to shop locally or buy locally-grown food is rarely considered.

Results exceeded expectations in both carbon reductions and community resilience-building actions. **106 households (270 people)** using the Low Carbon Diet behavior change program and peer support group model complemented by local resources reduced **1,298,859 carbon pounds**. **The average household reduced its carbon emissions by 28% (11,000 pounds) with 41% taking at least one energy upgrade action.** Community resilience was improved when households shifted their patterns of consumption to buy local and by families and neighborhoods becoming better prepared for emergencies.

The process of going through the program with a team of people is the core of its success—behaviors are changed and bonding among team members is created through the simple process of sharing information and experience to support one another to take the actions. And, of course, Resilient Neighborhoods makes it fun—from the team creating its own name to the final ceremony and team photo!

RESULTS BY GOVERNMENT JURISDICTION:

Government jurisdiction	# of households	# of people in households	Carbon lbs reduced	Resilience Pts earned
San Rafael *	41	96	492,522	172,500
Marin County	16	35	243,651	62,050
Larkspur	3	7	205,510	21,600
Fairfax	12	35	125,786	73,800
Mill Valley	4	12	118,662	27,600
Novato	9	22	89,492	44,000
San Anselmo	13	35	75,275	53,800

*Note: The City of San Rafael has set a goal of reducing its GHG emissions by 21% by the year 2020. Resilient Neighborhoods is written in the City’s General Plan to help reduce 6% of the total goal.

Since San Rafael’s GHG emissions are similar to the County, they are used as a comparison in the data below. San Rafael’s 2010 Estimated GHG inventory attributed 43% of the city’s GHG to transportation, 22% to home energy use and 14% to residential and commercial waste.

REDUCE TRANSPORTATION EMISSIONS

Action	% of HH Taking Action	Total lbs Reduced
1. Reduce miles driven in a car or truck by 20%	29%	52,940
2. Cancel air travel by 1 trip this year to save CO2	9%	71,259
3. Adopt fuel-efficient driving habits	33%	40,201
4. Get regular tune ups and maintain tire pressure	40%	78,800
5. Purchase a more fuel-efficient vehicle	11%	74,213
6. Purchase a hybrid or electric vehicle	6%	21,486
7. Purchase travel offsets	10%	212,975
Transportation accounts for 43% of Marin carbon emissions. 42% of RN emissions reduced were in		

transportation. 40% of households took at least one action. 551,874 lbs of carbon emissions reduced.

Home Energy Use (next 4 sections)

INSTALL ENERGY-SAVING HOME IMPROVEMENTS

Actions	% Taking action	Total lbs Reduced
1. Purchase energy star dishwasher	26%	1,750
2. Purchase energy star clothes washer	25%	6,020
3. 5b. Purchase programmable thermostat	23%	8,640
4. Purchase energy star air conditioner	1%	600
5. Purchase heat-pump air cooling unit to replace air/conditioner	0%	0
6. Insulate your hot water heater	2%	5,000
7. Install on-demand, tank less water heater(s)	7%	8,700
8. Seal and insulate or replace heating ducts	35%	18,700
9. Purchase an energy efficient furnace	24%	36,000
10. Install a heat pump water heater or solar-thermal water heating	4%	9500
11. Insulate attic, floors and /or walls	35%	11,200
12. Install high efficiency windows	18%	4,610
13. Purchase new energy star refrigerator	29%	8,800
14. Get a home performance audit done with a certified EUC contractor	41%	-
15. Install solar panels	4%	13,592
All actions required purchases, some were thousands of dollars, which generated income for local business and boosted the local green economy. 41% of eligible households took at least one action. 133,112 carbon lbs reduced.		

TAKE ACTION TO SAVE HOME ENERGY

Action	% Taking action	Total lbs Reduced
1. Change incandescent to CFL light bulbs	28%	19,501
2. Change incandescent to toxic free LED	33%	16,250
3. Change CFL to LED bulbs	14%	1,320
4. Thoroughly seal air leaks in your home	42%	28,900
5. Get furnace tune up	27%	6,300
6. Prepare a 1 – 3 year appliance and mechanical replacement schedule	23%	-
7. Communicate possible energy savings to your landlord.	67%	-
8. Opt for Light Green Power from MCE	7%	9,429
9. Purchase Deep Green power from MCE	34%	117,279
10. Plant Trees	23%	1,825
11. Set temperature of your water heater to 120 ⁰	52%	5,190
12. Purchase non-travel carbon offsets	6%	160,450
This section requires taking an action, but not changing a behavior. 67% took at least one action. 366,444 lbs reduced.		

ADOPT ENERGY-SAVING HABITS

Action	% Taking action	Total lbs Reduced
1. Reduce dishwasher use by one load weekly	29%	3,250
2. Improve hand dishwashing habits	49%	6,500
3. Reduce hot wash loads of laundry	27%	2,850
4. Reduce one weekly dryer load	39%	10,890
5. Set thermostat to 65-68....	62%	42,500

6. Turn all appliances completely off	58%	26,900
7. Replace or clean AC filter	9%	3,500
8. Raise your air conditioner thermostat 4 degrees	2%	280
This section requires changing a behavior pattern or habit. 63% took at least one action. 96,670 lbs reduced.		

SAVE WATER

Actions Taken – some actions and some behavior change	HH Taking Action	Total lbs Reduced
1. Install low-flow showerheads and/or thermostatic shower control	53%	12,000
2. Reduce shower time to 5 minutes	71%	26,550
3. Get a free water use consultation	26%	--
This section is behavior change and action. 71% took at least one action. 38,550 carbon lbs reduced		

TOTAL HOME ENERGY REDUCTIONS. Accounts for 22% of Marin carbon emissions and 49% of the RN program total. 634,776 lbs of carbon

REDUCE WASTE

Action	HH Taking Action	Total lbs Reduced
1. Set up system to capture all recyclable waste	61%	25,900
2. Reduce packaging and junk mail	5%	25,950
3. Reduce waste by one can size	44%	51,000
4. Compost and/or place all organic kitchen waste into green can	73%	29,400
5. Never buy water in plastic bottles again	52%	11,800
Waste (both commercial and residential) accounts for 14% of Marin carbon emissions. RN carbon lbs reduction from waste represents 11% of the program's total. 73% took at least one action. 144,050 carbon lbs reduced		

REDUCE CONSUMPTION AND SUPPORT LOCAL BUSINESS

Action	HH Taking Action	Total lbs Reduced
1. Start using Eco-Smart purchasing guidelines	24%	-
2. Speak to store managers or restaurants about changing to green products and practices	14%	-
3. Shift 2 frequent purchases to locally owned businesses in the next 2 months	56%	-
4. Shift 2 frequent purchases to a product from local farms or produced locally	58%	-
5. Buy organic for _ of your fresh produce	58%	-
6. Plant and grow at least 1 fruit or vegetable	31%	-
7. Visit a weekly farmers market two times in 2 months	57%	-
8. Switch from meat to vegetarian meals one or more days a week.	43%	45,850
58% shifted purchases to local business and local products and agriculture. This will help build community resilience.		
31% committed to grow some food. 45% switched away from animal products. Studies show that eating animal products, particularly beef, can account to 11% of the worlds total GHG emissions. 45,850 carbon lbs reduced.		

PREPARE FOR EMERGENCIES

Action	% Taking action
1. Complete household emergency plan	78%
2. Hold home emergency evacuation drill	43%
3. Assemble emergency supplies for 5-7 days	74%
4. Attend a local CERT class	26%
5. Complete Household Needs/resources form	61%
6. Exchange emergency information with neighbors	56%
78% took at least one action to be better prepared for emergencies, including preparing a household emergency plan for their family. 56% will exchange emergency information with neighbors to build resilience in our neighborhoods.	

BUILD CLIMATE AWARENESS

Actions Taken	% Taking action
1. Recruit people to be on an team	20%
2. Volunteer to be a RN coach	11%
3. Request that your workplace use Green Purchasing Guidelines	8%
4. Recruit people at work to form a lunch hour team	4%
5. Volunteer to be trained as a RN speaker	8%
6. Join a sustainability or other environmental group	11%
7. Help Cool the Earth or another local environmental school program	5%
8. Initiate a neighborhood building activity	21%
20% of households will help recruit another RN Team or want to initiate a neighborhood building activity.	

We want to thank our pilot program partners Sustainable Marin, City of San Rafael, Energy Upgrade CA in Marin and Dominican University's Green MBA Program for their support in making the program a success.