



## Climate Action Leadership Summit

Bay Area Air Quality Management District

Monday, May 4, 2009

# GreenPoint Rated Tools to Support Climate Action Plans and Local Governments

Bruce Mast

Director of Programs

Build It Green

[Bruce@Builditgreen.org](mailto:Bruce@Builditgreen.org)



## Thank you

This project was generously funded by

❖ Stopwaste.org



❖ Bay Area Air Quality Management District



Committed to Achieving Clean Air to Protect the Public's Health and the Environment

❖ Silicon Valley Social Venture Fund





## Agenda

- ❖ Introduction to Climate Calculator
- ❖ GreenPoint Rated tracking system
- ❖ How local governments will be able to use it
- ❖ How it will impact climate planning and achieving reductions, etc.



## GreenPoint Rated Supports Implementation, Monitoring, Verification

- ❖ Local Government Steps to Prepare Climate Action Plan:
  1. Conduct baseline GHG inventory
  2. Establish GHG reduction target
  3. Develop climate action plan, e.g.,
    - a. Green building ordinance for new homes
    - b. GHG reduction requirements for existing homes, tied remodeling permits, time of sale, or date certain
    - c. Local assessment district / financing mechanism
    - d. Incentives for infill development
  4. Implement policies and measures
  5. Monitor and verify results



# GreenPoint Rated Toolkit

- ❖ Verification protocols & Certified GreenPoint Rater network
- ❖ Climate calculator
- ❖ Tracking system
- ❖ Consumer label for green homes



# GreenPoint Rated

**One Program**

**GreenPoint Rated Program**

**2 Rating Systems**

GreenPoint Rated New Home

GreenPoint Rated Existing Home

**4 Labels**

Multifamily

Single Family

Whole House

Elements





## The Climate Calculator

- ❖ Project Team: Green Building in Alameda County, Build It Green, KEMA, ICLEI
- ❖ Addresses single family and multifamily homes
  - New (all) and existing (single-family only)
- ❖ Measures avoided emissions AND footprint
- ❖ Third-party verification



## How It Works

- ❖ Verification
  - Raters verify green aspects of home
  - Gather data on specific measures and practices
  - Raters upload documents to Build It Green's website
- ❖ Calculator
  - Housed on Build It Green's website
  - Creates a basecase footprint
  - Creates a footprint and savings of the green home
- ❖ Results
  - Users can access data on line
  - Emissions equivalents classified in Scope 1,2,3
  - Other benefits shown (gallons of water, kWh, etc.)



## Usability for Local Governments

- ❖ Access project data on-line
- ❖ Verify compliance with incentives or mandatory requirements
- ❖ Monitor and track GHG emissions reductions
  - to meet established GHG reduction target
  - to evaluate success of climate action plans



## Calculator Outputs

- ❖ Savings from building green:
  - Therms
  - kWh
  - GHGs of refrigerant
  - Waste (tons)
  - Gallons of water indoors & outdoors
  - Vehicle miles traveled
- ❖ CO<sub>2</sub> equivalents of all above
- ❖ Forecasted and actual savings
- ❖ Footprint
- ❖ Scope 1, 2 & 3 emissions
- ❖ Results on GPR Consumer label

106

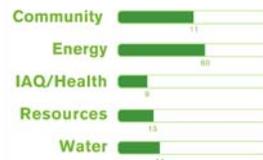


GreenPointRATED

EXISTING HOME Whole House

ADDRESS: Freeda Court  
732 Hayes Avenue  
Livermore CA, 94550  
YEAR BUILT: 1990, upgraded to 2005 codes  
BASED ON: Single Family, ver. 1.0

PERFORMANCE ABOVE A CONVENTIONAL HOME BUILT IN THE SAME YEAR.



*Estimated resources saved versus a conventional home*

5368 gallons of water saved per year  
7443 kilowatt hours saved per year  
5 tons of CO<sub>2</sub> emissions avoided per year  
34% energy efficiency improvement overall

[www.GreenPointRated.org](http://www.GreenPointRated.org)



# GPR Data Collection Form Inputs

Microsoft Excel - GPR Single Family Data Collection Form v3.1

7. Number of Duplicate Certificates Needed

8. Rental Property or For Sale

C. Climate Calculator Information

The inputs below are for the Climate Calculator. The inputs will feed into the tracking system to quantify planned and achieved AVOIDED CO<sub>2</sub> emissions. If there is more than one unit for the project, input the information below based on the total per project, that is the total for all units. Some default values have been entered for your convenience. In the actual column at final, verify these values match the fixtures and/or appliances installed on this specific project. Cells may be left blank, by benefits will not be calculated for cells that are left blank.

	Planned		Actual	
	Gas	PROP	Gas	PROP
1. Project Zipcode:				
2. Electric Utility Service Area:				
Heating Fuel Type (Natural Gas, Propane, Electricity)				
3. Size of Project				
Units/Acres (for entire development)				
Number of units in this phase				
Average Square Footage per Unit				
Average Number of Bedrooms Per Unit (Round to whole number)				
4. Waste Generation & Diversion by Material Weight				
Planned waste diversion will be calculated based on details and will be included in the calculation of "planned" avoided CO <sub>2</sub>				
Waste Diversion by Separated Material Type (Tons)				
Wood				
Wallboard				
Concrete				
Cardboard				
Mixed Metals				
Green Waste				
Waste Diversion for Mixed C&D Materials (Tons)				
Mixed C&D waste sent to recycling/transfer stations				
Facility Average for All Mixed C&D				
Total Garbage Generated				
5. Landscape area (Total Area in Sq Ft excluding hardscape):				
Enter Project yearly average Reference ET Factor (inches per year per sq ft) for nearest location				
Reference ET can be looked up here: <a href="http://www.water.ca.gov/infocenter/etref.asp">http://www.water.ca.gov/infocenter/etref.asp</a>				
Monthly rainfall should be added together to get yearly average				



# GreenPoint Rated Tracking System

Build It Green - Projects Dashboard - Mozilla Firefox

http://builditgreen.com/ProjectsDashboard.asp

Build It Green - Projects Dashboard

Good afternoon James. Below is your summary of current BIG GPR projects. Sort the table by any column header to use the search tool to narrow your results. To view more details about a project in detail, click in any data field.

SEARCH TABLE

All Fields Application Date Approved Date County Advanced

Title/Status	Submittals	Type	Rating	Developer	City	Phased	Logs Up	Assigned
Oak Glen / Applied	(Final) Complete (37)	SF	3se	Hammond Fine Homes	Palo Alto	No	Applied	Unassigned
Wallace Residence / In Progress	(Final) Complete (37)	SF	3se	NA	Woodside	No	Applied	Unassigned
Wallace Residence / Applied	(App) Applied (19)	SF	3se	Galaxer Malak	San Jose	No	Applied	NA
4880 Dawn Lane, Sausal / Applied	(Final) Complete (25)	SF	3se	Bill Lindke	Stiquet	No	Applied	Unassigned
Wallace Residence / Applied	(App) Complete (37)	SF	3se	NA	Woodside	No	Applied	Unassigned
Wallace Residence / Applied	(App) Applied (37)	SF	3se	Subul Malik		No	Applied	James
4880 Dawn Lane, Sausal / Finalized	(Final) Complete (37)	SF	3se	Bill Lindke	Stiquet	Yes	In Review	JP
Wallace Residence / Applied	(App) Applied (37)	SF	3se	NA	Woodside	No	Applied	Unassigned
Villa Terra / Applied	(App) Applied (37)	SF	3se	Neal Cross Architect	San Jose	No	Applied	Unassigned
Oak Glen / Applied	(App) Applied (37)	SF	3se	Hammond Fine Homes	Palo Alto	No	Applied	Unassigned
Wallace Residence / Applied	(App) Applied (37)	SF	3se	NA	Woodside	No	Applied	Unassigned
Oak Glen / Applied	(App) Applied (37)	SF	3se	Hammond Fine Homes	Palo Alto	No	Applied	Unassigned
Wallace Residence / In Progress	(App) In Review (37)	SF	3se	Subul Malik		No	Pending	Unassigned
4880 Dawn Lane, Sausal / Applied	(App) Applied (37)	SF	3se	Bill Lindke	Stiquet	Yes	Applied	Unassigned
Villa Terra / In Progress	(App) Pending (37)	SF	3se	Neal Cross Architect	San Jose	Yes	Complete	Unassigned
4880 Dawn Lane, Sausal / Applied	(App) Applied (37)	SF	3se	Bill Lindke	Stiquet	No	Applied	Unassigned
Villa Terra / Applied	(App) Applied (40)	SF	3se	Neal Cross Architect	San Jose	No	Applied	Unassigned



# GreenPoint Rated Tracking System

Build It Green - Mozilla Firefox  
 http://builditgreen1.feynman.net/ReportingStatistics.aspx

**GreenPointRATED** PROJECTS DASHBOARD START NEW PROJECT REPORTS RESOURCE ROOM CONTACT BIG LOGOUT

home / reporting / STATISTICS

Highest Score: 92 - 2007 Sharon Road, 2007 Sharon Road, 2007 Sharon Road

Highest Community Score: 4 - 2001 Sharon Road, 2007 Sharon Road, 2007 Sharon Road, 2007 Sharon Road

Highest Energy Score: 73 - 2007 Sharon Road, 2007 Sharon Road, 2007 Sharon Road

Highest IAQ/Health Score: 7 - 2001 Sharon Road, 2007 Sharon Road, 2007 Sharon Road, 2007 Sharon Road

Highest Resources Score: 6 - Post Residence - 3246 Bryant, 2007 Sharon Road, Neptune Residence, 2007 Sharon Road, 2007 Sharon Road

Highest Water Score: 2 - 2007 Sharon Road, 2007 Sharon Road

Builder with most Projects Enrolled: 4 - Andrew Libov

Home Projects Dashboard Start New Project Reports Resource Room Contact BIG  
 Version 0.4.0. Copyright 2009 Build It Green. Website design by Feynman Group. XHTML CSS SQL



# Calculator Reporting Functions

Build It Green - Reports - Mozilla Firefox  
 http://builditgreen1.feynman.net/Reports.aspx

**GreenPointRATED** PROJECTS DASHBOARD START NEW PROJECT REPORTS RESOURCE ROOM CONTACT BIG LOGOUT

home / reporting / REPORTING

[GPR Tracking](#)  
[GPR Project Specific Information](#)  
[Footprint Details](#)  
[Aggregated Footprints](#)  
[All Projects](#)

Choose Type:   
 Aggregate:  by [-] [+ ] [all] results [Fields] [print table] [export table] [«] [«] [1] [»] [»]

Project #	GPR Actual	GPR Forecast	Savings Forecast	Savings Actual	Annual Electric Use (kWh)	Annual Electric Use (Therms)	Annual Fuel Use (Propane)	Annual Water Use (Gallons)	Waste Generation One Time (Tons)	VMTs (Miles/yr)	SC En
Want	0	0	0	0	0	0	0	0	0	0	0
2001 Sharon Road	58254.8380645163	0	0	0	5458.96548387097	7955890	298.72	939736.011289917	32	0.2	
2007 Sharon Road	264	53.27	0	0	188900	1.4706	0	0	0.2		
2007 Sharon Road	264	53.27	0	0	188900	1.0664	0	0	0.2		
Calculator Error											
WANG/TSAI RESIDENCE	0	0	0	0	0	0	0	0	0	0	
2007 Sharon Road	264	53.27	0	0	188900	1.0664	0	0	0.2		
2007 Sharon Road	264	53.27	0	0	188900	1.0664	0	0	0.2		

display [-] [+ ] [all] results [Fields] [print table] [export table] [«] [«] [1] [»] [»]

Home Projects Dashboard Start New Project Reports Resource Room Contact BIG  
 Version 0.4.0. Copyright 2009 Build It Green. Website design by Feynman Group. XHTML CSS SQL



## Calculator Reporting Functions

Project #	Project Title	Annual Electric Use (kWh)	Annual Fuel Use (Therms)
2009-039	WANG/TSAI RESIDENCE	264	19
2009-040	Rost Residence - 3246 Bryant	0	0
2009-041	2001 Sharon Road	264	53.27
2009-042	2007 Sharon Road	264	53.27

Annual Water Use (Gallons)	Waste Generation One Time (Tons)	VMTs (Miles/yr)	SCOPE 1 Emissions (Annual)	SCOPE 2 Emissions (Annual)
177,950	266.55	0	0.1001	0.0047
0	266.69	0	0.0000	0.0000
188,900	267.07	0	0.2807	0.0546
188,900	266.67	0	0.2807	0.0546



## Calculator Reporting Options

- ❖ User defined criteria for report
  - Jurisdiction
  - Building Type
- ❖ User defined fields included in report
- ❖ Report types
  - Basecase
  - GPR forecast and actual
  - Savings forecast and actual
- ❖ Report outputs
  - Report can be exported to excel
  - Summary Report format available



## Questions/ comments

---

- ❖ Are there additional outputs needed for your reporting needs?
- ❖ Does the reporting functionality address your needs?
- ❖ What type of summary statistics do you need?
- ❖ Would cities be interested in viewing the data collection form for each project?



## Contact Us

---

Bruce Mast  
Build It Green Director of Programs  
Bruce@ builditgreen.org  
510-845-0472 ext. 111  
[www.BuildItGreen.org](http://www.BuildItGreen.org)