

# PLASTIC PIPE: EMPOWERING GREEN BUILDING

Many building systems are deemed to be “green” or sustainable. The sustainable systems listed on this chart frequently utilize plastic pipe. In fact, many such systems are *empowered* by plastic pipe because it is the logical material for the system. The first part of the chart is devoted to sustainable rating systems and lists the number of rating points attributable to the system (or application) within each system. The second part of the chart lists the systems that are covered by the listed construction standards or codes. The user of this report in printed form is warned that the entire area of sustainable construction codes and standards is rapidly changing. This report is based on PPFA’s understanding of the respective green rating systems as of the date here (11/01/2010). Each designer, architect, installer, etc., must make their own determination based on the requirements of the rating system they are going to use. For more information go to [www.ppfahome.org](http://www.ppfahome.org).

System	Direct Positive Impacts	GBI Green Globes (Draft Standard 01-2008P)			NAHB NGB Standard (ICC 700-2008)			USGBC LEED (various rating systems - NC, H, etc.)		
		mentioned	points	section(s)	mentioned	points	section(s)	mentioned	NC/Homes 2009 points	section(s)
Gray Water / Irrigation	<i>water</i>	3	15 max total	9.10.1	<input checked="" type="checkbox"/>	14 total	802.1	<input checked="" type="checkbox"/> 3	1	WE 1, 2 (NC/Homes)
Geothermal Ground Loop	<i>energy</i>	3			<input checked="" type="checkbox"/>	20 or 30	703.4.6	3	1+	EA 1 (NC) EA 6 (Homes)
Efficient Hot Water Distribution	<i>energy &amp; water</i>				<input checked="" type="checkbox"/>	1 to 8	801.1	<input checked="" type="checkbox"/> 3	6 max	EA 7.1 (Homes)
Rainwater Harvesting	<i>water</i>	3	15 max total	9.10.1	<input checked="" type="checkbox"/>	8	801.8	<input checked="" type="checkbox"/> 3	1	WE 1, 2 (NC)
Radon Venting	<i>IEQ / life safety</i>	3	2	12.3.2	<input checked="" type="checkbox"/>	10 or 15	902.3	3	1	EQ 9 (Homes)
Central Vacuum Systems	<i>IEQ / life safety</i>				<input checked="" type="checkbox"/>	5	902.5	<input checked="" type="checkbox"/>	1	EQ 8.2 (Homes)
Residential Fire Sprinklers	<i>building durability</i>									
Full Waste Water Treatment	<i>water</i>	3	15 max total	9.10.1	<input checked="" type="checkbox"/>	14 total	802.1	3	1	WE 1, 2 (NC)
Solar Water Heating	<i>energy</i>	3			<input checked="" type="checkbox"/>	8 to 20	704.3.2.1	3		
Efficient Irrigation	<i>water</i>	3	6 total	7.4.1.8.3/5	<input checked="" type="checkbox"/>	10 max	801.7.1		2 to 4	WE 1 (NC)
Foundation Drainage	<i>durability, IEQ</i>	3	2	10.7.4.2	<input checked="" type="checkbox"/>	4	602.3		2 to 4	WE 1 (NC)
Drain Waste Heat Recovery	<i>energy</i>				<input checked="" type="checkbox"/>	2	703.5.3	3		
Radiant Floor Heating	<i>IEQ, energy</i>							3	2	EQ 7 (Homes)
Reclaimed (Dual) Water System	<i>water</i>	<input checked="" type="checkbox"/>	3	7.4.1.8.2	<input checked="" type="checkbox"/>	4 to 10	802.1	<input checked="" type="checkbox"/>		

## Resources:

Green Globes (Draft Standard 01-2008P), GBI (Green Building Initiative)  
 National Green Building Standard (ICC 700-2008); National Association of Home Builders (NAHB)  
 Leadership in Energy and Environmental Design (LEED) Rating Systems, United States Green Building Council (USGBC)  
 2008 California Green Building Code, State of California  
 ASHRAE 189.1 Standard (4<sup>th</sup> draft for Comment), American Society of Heating, Refrigerating and Air-Conditioning (ASHRAE)  
 International Green Construction Code (IgCC) (5th Draft Not For Public Comment), International Codes Council (ICC)  
 Green Plumbing and Mechanical Code Supplement (GPMS), International Association of Plumbing and Mechanical Officials (IAPMO)



	Direct Positive Impacts	2008 California Green Building Code		ASHRAE 189.1 Standard (May 2009)	
System		mentioned	section(s)	mentioned	section(s)
Gray Water / Irrigation	<i>water</i>	<input checked="" type="checkbox"/>	603.4 604.2 604.3 604.4 605 A605.1	<input checked="" type="checkbox"/>	"alternate water" def.
Geothermal Ground Loop	<i>energy</i>	3	503.1	3	
Efficient Hot Water Distribution	<i>energy &amp; water</i>	<input checked="" type="checkbox"/>	A603.1.1		
Rainwater Harvesting	<i>water</i>	<input checked="" type="checkbox"/>	603.4 604.2 604.3 604.5	<input checked="" type="checkbox"/>	"alternate water" def.
Radon Venting	<i>IEQ / life safety</i>	3	805		
Central Vacuum Systems	<i>IEQ / life safety</i>				
Residential Fire Sprinklers	<i>building durability</i>				
Full Waste Water Treatment	<i>water</i>				
Solar Water Heating	<i>energy</i>			3	
Efficient Irrigation	<i>water</i>	<input checked="" type="checkbox"/>	A604.1	<input checked="" type="checkbox"/>	6.3.1
Foundation Drainage	<i>durability, IEQ</i>	<input checked="" type="checkbox"/>	A707.1	<input checked="" type="checkbox"/>	"alternate water" def.
Drain Waste Heat Recovery	<i>energy</i>				
Radiant Floor Heating	<i>IEQ, energy</i>				
Reclaimed (Dual) Water System	<i>water</i>	3	603.4 604.2 604.3 603.5 605	<input checked="" type="checkbox"/>	6.4, 6.5

	Direct Positive Impacts	ICC International green Construction Code (IgCC)		IAPMO Green Plumbing and Mechanical Code Supplement (2010)	
System		mentioned	section(s)	mentioned	section(s)
Gray Water / Irrigation	<i>water</i>	<input checked="" type="checkbox"/>	708	<input checked="" type="checkbox"/>	503
Geothermal Ground Loop	<i>energy</i>	<input checked="" type="checkbox"/>	607.2.2.1, 613.5.1.3 & 4	<input checked="" type="checkbox"/>	706
Efficient Hot Water Distribution	<i>energy &amp; water</i>	<input checked="" type="checkbox"/>	702.8, 710.9	<input checked="" type="checkbox"/>	602
Rainwater Harvesting	<i>water</i>	<input checked="" type="checkbox"/>	707	<input checked="" type="checkbox"/>	501 , appendix B
Radon Venting	<i>IEQ / life safety</i>	<input checked="" type="checkbox"/>	804.2		
Central Vacuum Systems	<i>IEQ / life safety</i>				
Residential Fire Sprinklers	<i>building durability</i>				
Full Waste Water Treatment	<i>water</i>				
Solar Water Heating	<i>energy</i>	<input checked="" type="checkbox"/>	608.5.1, 611.4	<input checked="" type="checkbox"/>	605
Efficient Irrigation	<i>water</i>	<input checked="" type="checkbox"/>	402.3.3	<input checked="" type="checkbox"/>	Chapter 5
Foundation Drainage	<i>durability, IEQ</i>	<input checked="" type="checkbox"/>	507.7		
Drain Waste Heat Recovery	<i>energy</i>	<input checked="" type="checkbox"/>	608.6	<input checked="" type="checkbox"/>	604.5.3
Radiant Floor Heating	<i>IEQ, energy</i>			<input checked="" type="checkbox"/>	704.4.3.11, 704.5.9
Reclaimed (Dual) Water System	<i>water</i>	<input checked="" type="checkbox"/>	709	<input checked="" type="checkbox"/>	412

System specifically mentioned and/or awarded points 3

"Performance" points possible with system