

# WELCOME TO THE URBAN GREENING MASTER PLAN PROJECT KICK-OFF



# THE URBAN GREENING PLAN



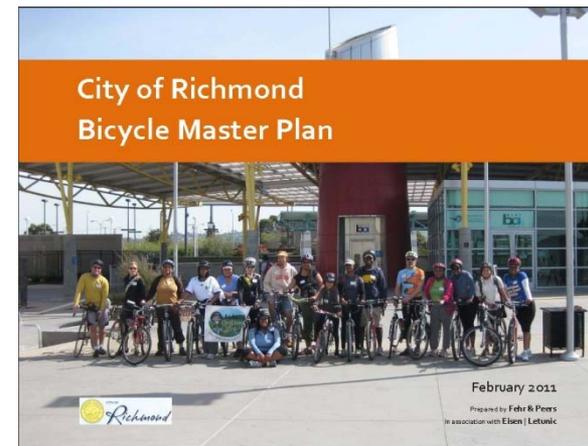
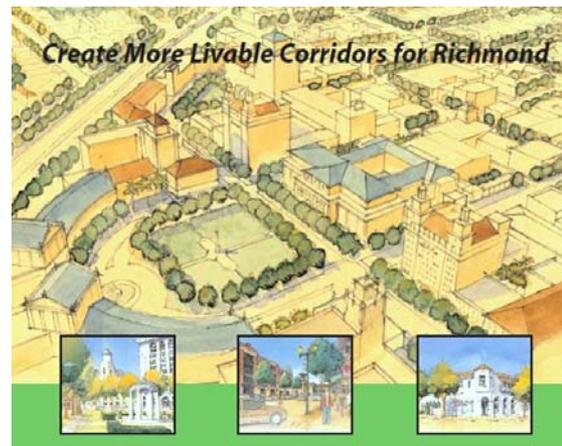
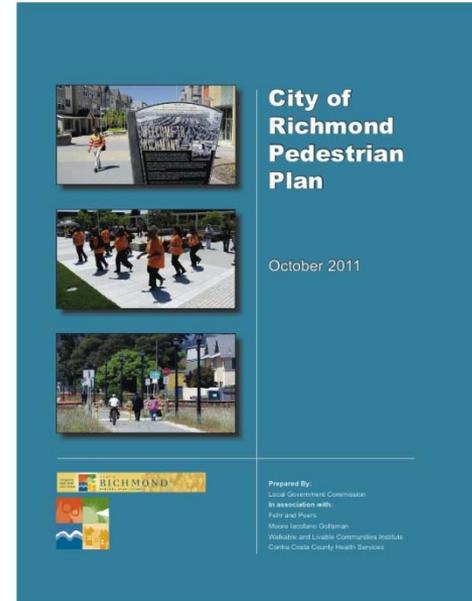
# THE URBAN GREENING PLAN WILL

- assess and prioritize opportunities to expand and enhance green space;
- coordinate with existing neighborhood and City projects;
- include an update of the City's tree ordinance;
- improve urban forest management;
- promote greening of parkway strips;
- and provide opportunities for community participation.

# GREENING OPPORTUNITIES



# COLLABORATIVE OPPORTUNITIES



# TREE ORDINANCE UPDATE



# TREE ORDINANCE UPDATE

- Update City tree ordinance and policies
- Establish an Urban Forest Advisory Committee

# URBAN FORESTRY



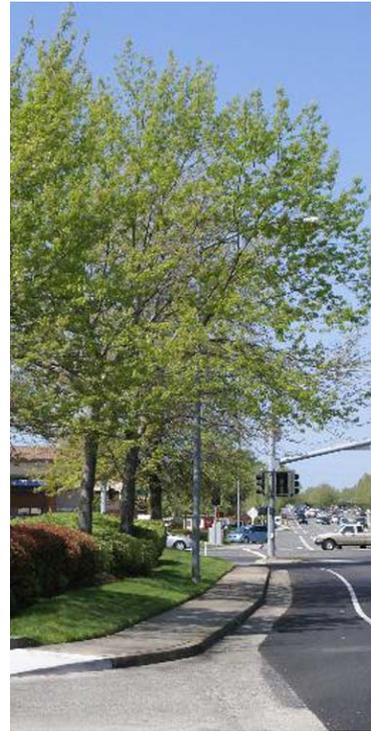
# URBAN FORESTRY



Trees on City Owned Property



Trees that Predate Development



Trees on Privately Owned Property



Wild Trees on 'Leftover' Land

# URBAN FORESTRY

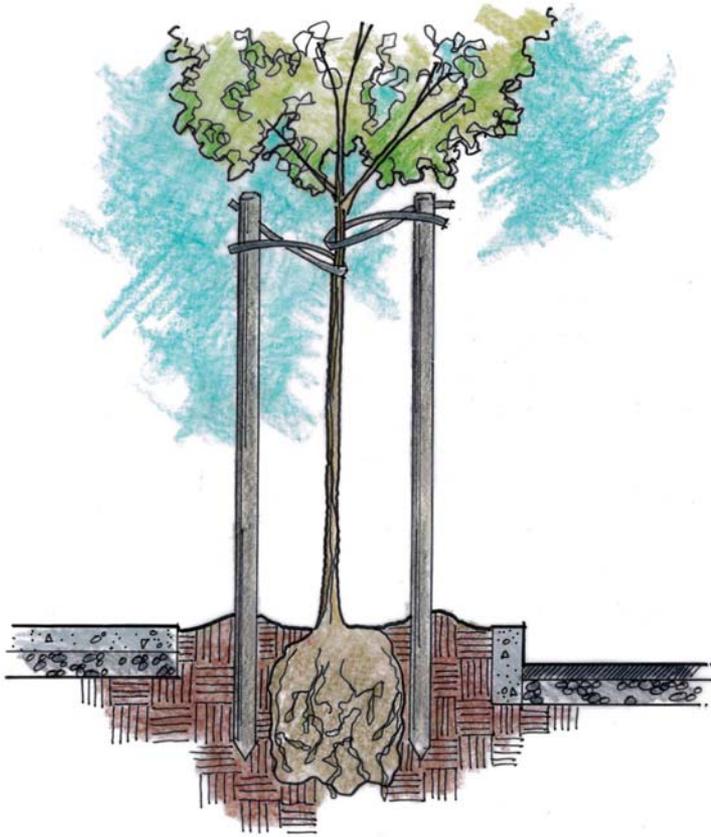
- Careful management to achieve maximum benefits
- Update and modernize inventory of City trees
- Analyze tree health and improve conditions
- Develop tree planting guidelines and programs

# URBAN FORESTRY - BENEFITS



- Improved air quality by plant transpiration
- Atmospheric carbon captured and held
- Shade reduces “heat island” effect
- Water quality improved and run off reduced

# 7 STEPS TO SUCCESSFUL TREE PLANTING



1. Planting hole preparation
2. Careful removal from nursery container
3. Scarify Root Ball
4. Set root crown at proper height
5. Gently remove compacted soil
6. Set support stakes
7. Correctly secure with tree ties

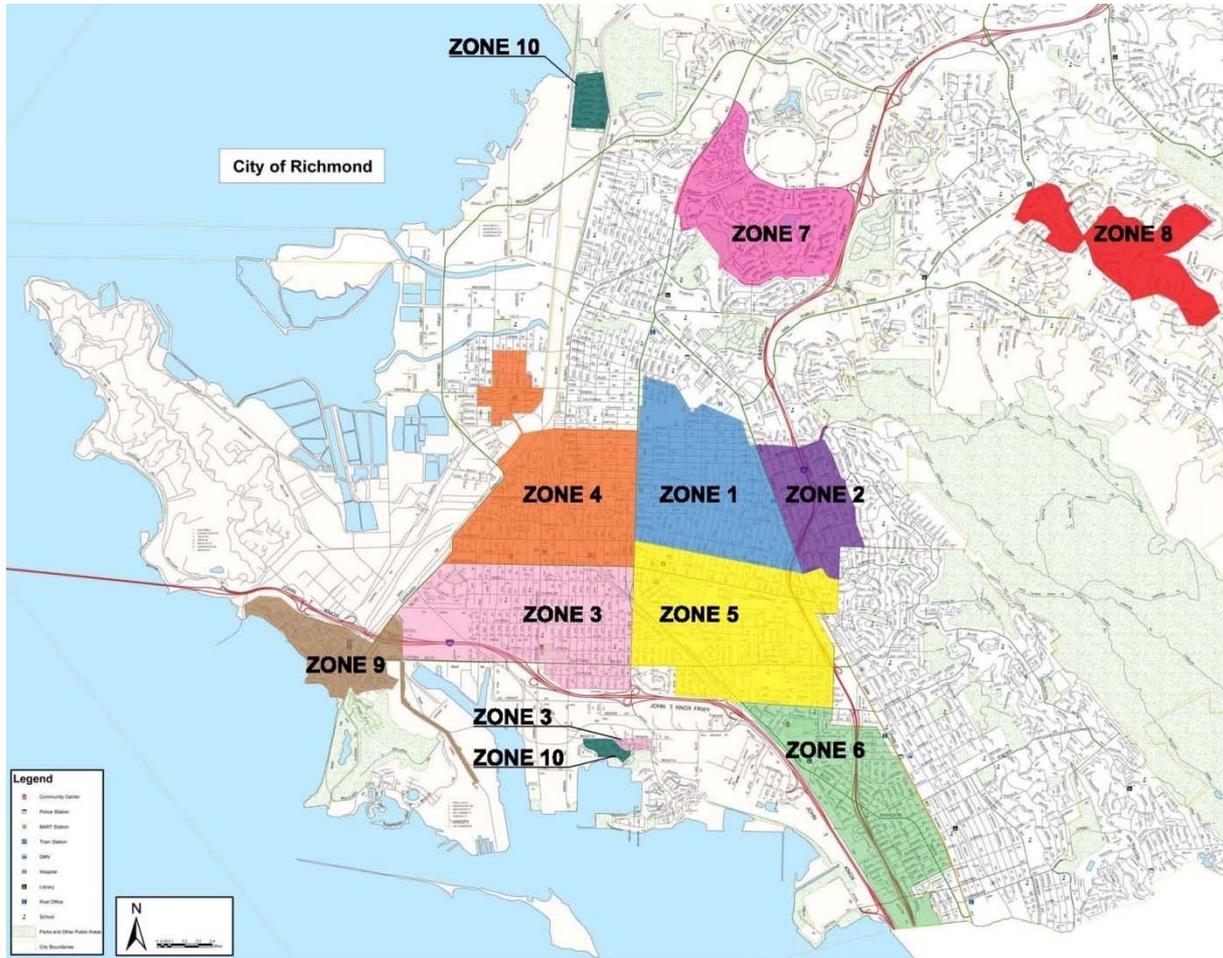
# TREE PLANTING



# TREE PLANTING



# TREE INVENTORY



# TREE INVENTORY



# INVENTORY DATABASE



i-Tree Streets - City of Richmond Tree Inventory

File Input View Reports Tools Help

Report By: Species (Citywide)

Report Type: \$ per Tree

Export Print

Public Private All

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Main Report

## Richmond

### Annual Benefits of Public Trees by Species (\$/tree)

3/16/2012

Species	Energy	CO <sub>2</sub>	Air Quality	Stormwater	Aesthetic/Other	Total (\$)	Standard
Platanus x acerifolia	3.11	0.28	0.44	0.67	17.70	22.19	(N/A)
Prunus cerasifera	2.63	0.30	0.40	0.48	28.64	32.45	(N/A)
Pyrus kawakamii	10.42	0.72	2.73	3.42	61.08	78.37	(N/A)
Pyrus calleryana	12.41	0.80	3.39	2.25	72.38	91.24	(N/A)
Ulmus parvifolia	19.83	1.36	8.42	7.31	44.68	81.61	(N/A)
Tristaniopsis laurina	6.97	0.45	1.34	2.07	58.45	69.28	(N/A)
Myoporum laetum	17.77	1.44	8.94	6.83	74.80	109.78	(N/A)
Tristaniopsis confert	13.80	1.59	-11.35	3.77	102.65	110.46	(N/A)
Fraxinus species	14.63	1.05	1.87	2.54	77.72	97.81	(N/A)
Arbutus var. marina	1.90	0.21	0.27	0.35	26.23	28.95	(N/A)
Magnolia grandiflora	15.23	1.15	-1.81	5.25	67.08	86.89	(N/A)
Cinnamomum camp	16.55	1.66	6.06	6.86	58.28	89.41	(N/A)
Acer rubrum	0.85	0.08	0.07	0.14	65.69	66.83	(N/A)
Liquidambar styraci	20.39	1.31	-12.14	3.82	120.51	133.89	(N/A)

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# INVENTORY DATABASE



i-Tree Streets - City of Richmond Tree Inventory

Report By: Species (Citywide)

Report Type: Species (Citywide)

### Richmond

#### Annual Air Quality Benefits of Public Trees by Species

3/16/2012

Species	Deposition (lb)				Total Depos. (\$)	Avoided (lb)				Total Avoided (\$)	BVOC Emissions (lb)	BVOC Emissions (\$)	Total (lb)	Total (\$)
	O <sub>3</sub>	NO <sub>2</sub>	PM <sub>10</sub>	SO <sub>2</sub>		NO <sub>2</sub>	PM <sub>10</sub>	VOC	SO <sub>2</sub>					
Platanus x acerifolia	7.8	3.4	4.8	0.7	175	3.3	0.8	0.4	1.6	53	-14.8	-107	8.0	120
Prunus cerasifera	1.6	0.6	0.9	0.1	34	1.2	0.3	0.2	0.7	20	-0.1	0	5.5	53
Pyrus kawakamii	12.4	5.4	8.0	1.1	282	4.8	1.2	0.6	2.6	78	0.0	0	36.1	360
Pyrus calleryana	15.5	5.8	7.5	1.1	312	5.1	1.3	0.6	2.6	82	0.0	0	39.5	394
Ulmus parvifolia	34.9	14.0	20.8	2.8	760	6.6	1.7	0.9	3.6	108	-8.2	-59	77.2	809
Tristaniopsis laurina	3.7	1.6	2.5	0.3	85	2.2	0.6	0.3	1.2	36	0.0	0	12.3	121
Myoporum laetum	28.8	12.7	16.8	2.5	635	4.9	1.3	0.6	2.7	80	0.0	0	70.3	715
Tristaniopsis conferta	1.8	0.8	1.6	0.2	46	3.5	0.9	0.4	1.8	55	-125.7	-908	-114.9	-806
Fraxinus species	3.2	1.1	1.9	0.2	68	3.4	0.8	0.4	1.7	54	0.0	0	12.8	122
Arbutus var. marina	0.5	0.2	0.3	0.0	10	0.4	0.1	0.1	0.2	7	0.0	0	1.8	17
Magnolia grandiflora	6.9	3.1	4.7	0.6	161	3.2	0.8	0.4	1.8	53	-45.2	-326	-23.6	-112
Cinnamomum camphora	11.9	5.3	7.7	1.0	272	3.0	0.8	0.4	1.7	50	0.0	0	31.8	321
Acer rubrum	0.0	0.0	0.0	0.0	1	0.1	0.0	0.0	0.1	2	0.0	0	0.3	3
Liquidambar styraciflua	4.1	1.6	2.6	0.3	90	3.2	0.8	0.4	1.6	50	-93.5	-675	-79.0	-534
Cupressus sempervirens	0.1	0.1	0.1	0.0	3	0.2	0.1	0.0	0.1	4	-0.3	-2	0.5	5
Pistacia chinensis	1.0	0.4	0.5	0.1	21	0.4	0.1	0.1	0.2	7	-3.6	-26	-0.8	1
Melaleuca linariifolia	9.3	4.1	5.4	0.8	204	1.6	0.4	0.2	0.9	26	0.0	0	22.6	230
Yucca glauca	0.5	0.2	0.3	0.0	11	0.2	0.0	0.0	0.1	3	-0.8	-6	0.6	8

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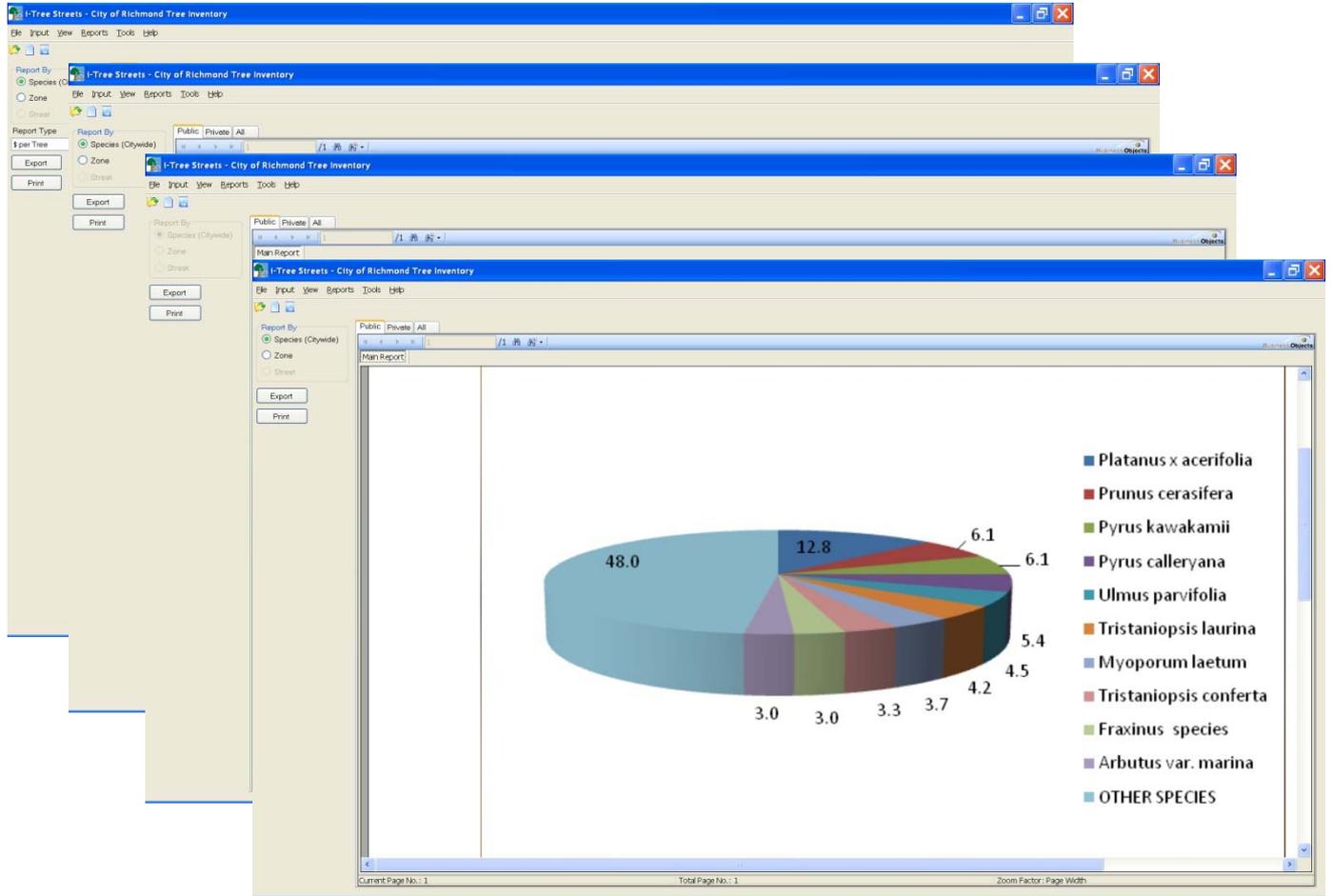


Richmond  
**Importance Values for Public Most Abundant Trees**  
 3/16/2012

Species	Number of Trees	% of Total Trees	Leaf Area (ft <sup>2</sup> )	% of Total Leaf Area	Canopy Cover (ft <sup>2</sup> )	% of Total Canopy Cover
Platanus x acerifolia	275	12.8	51,717	2.4	25,725	3.
Prunus cerasifera	132	6.1	32,843	1.5	13,319	1.
Pyrus kawakamii	132	6.1	144,099	6.7	53,273	6.
Pyrus calleryana	116	5.4	153,228	7.1	50,874	6.
Ulmus parvifolia	96	4.5	258,697	11.9	142,093	18.
Tristaniopsis laurina	90	4.2	62,732	2.9	20,481	2.
Myoporum laetum	80	3.7	172,089	7.9	65,675	8.
Tristaniopsis conferta	71	3.3	105,382	4.9	23,844	3.
Fraxinus species	65	3.0	102,173	4.7	31,437	4.
Arbutus var. marina	64	3.0	11,284	0.5	4,738	0.
Magnolia grandiflora	62	2.9	108,527	5.0	37,431	4.
Cinnamomum camphora	53	2.5	106,046	4.9	49,070	6.
Acer rubrum	45	2.1	3,703	0.2	1,274	0.
Liquidambar styraciflua	44	2.0	103,165	4.8	22,692	2.

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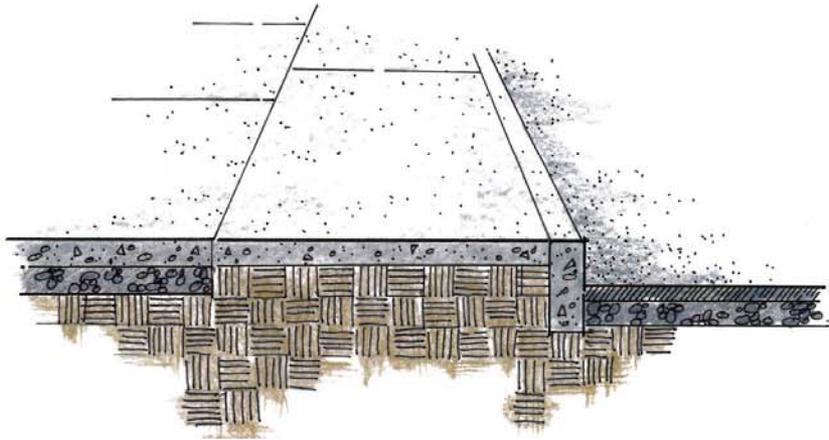
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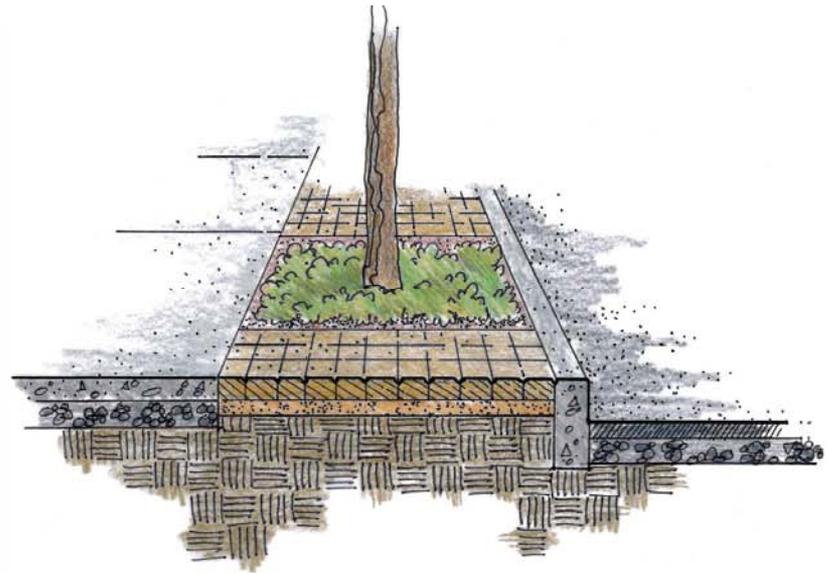
# GREENING PARKWAY STRIPS



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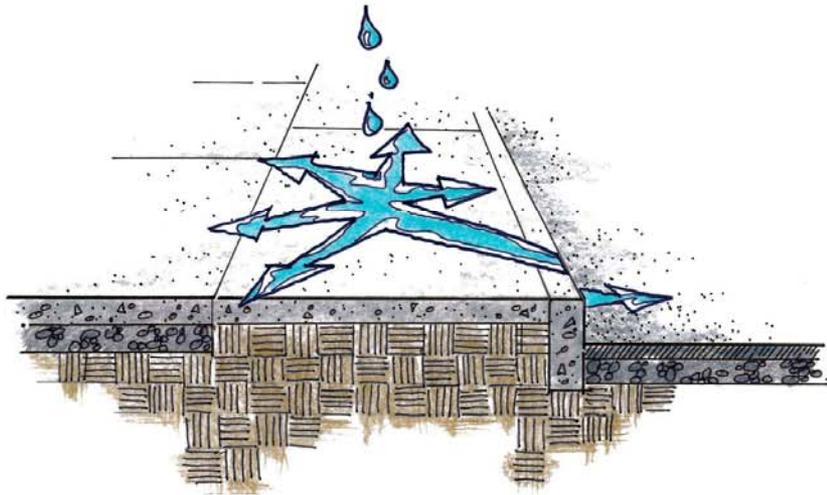


Paved Parkway Strips

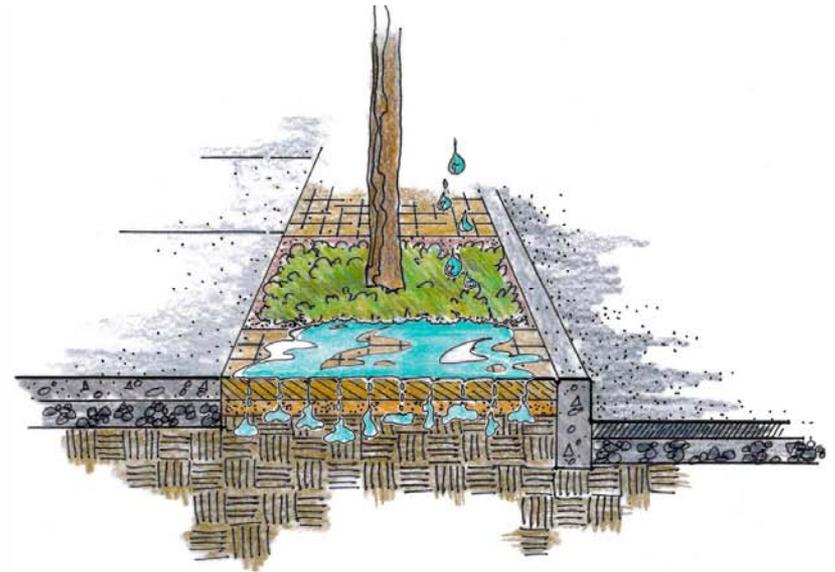


Green Parkway Strips  
include trees,  
planting and  
permeable paving

# GREEN PARKWAY STRIPS

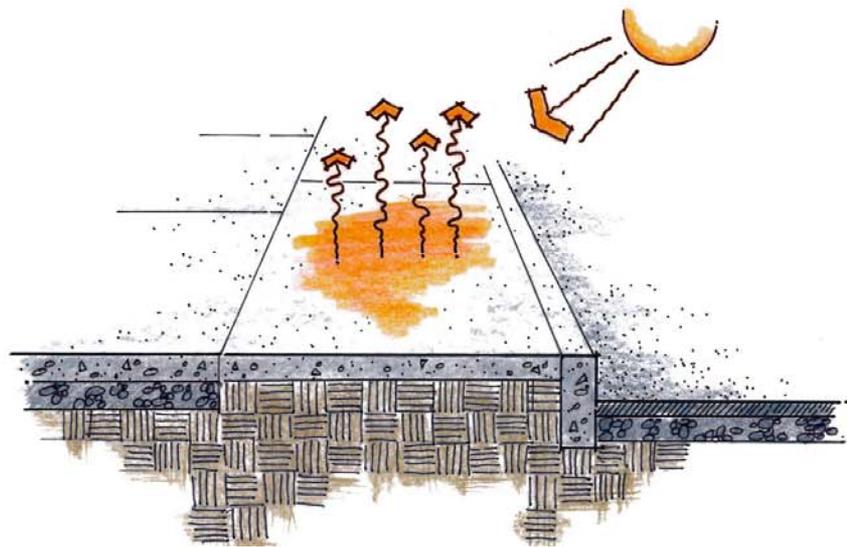


Paved Parkway Strips  
shed stormwater

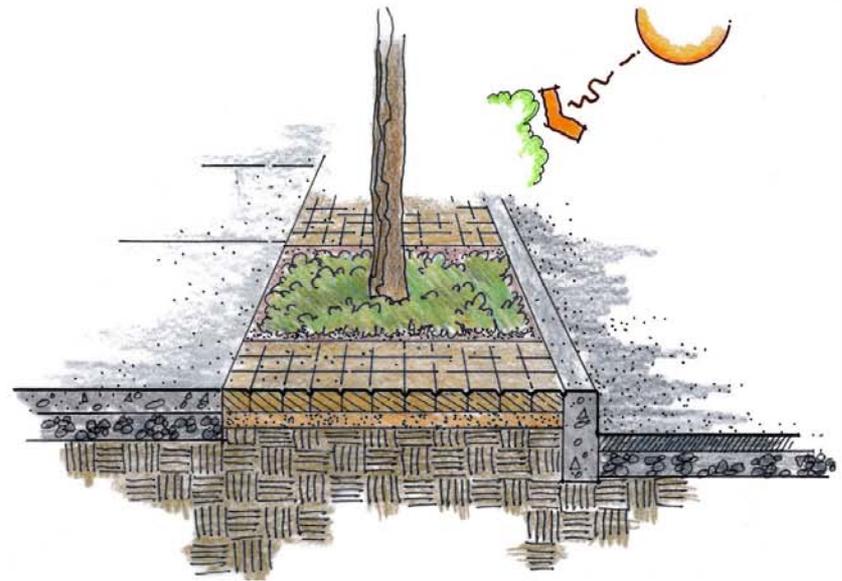


Green Parkway Strips  
capture and hold  
stormwater

# GREEN PARKWAY STRIPS



Paved Parkway Strips radiate heat



Green Parkway Strips cool immediate area and reduce "heat island" effect

# COMMUNITY PARTICIPATION

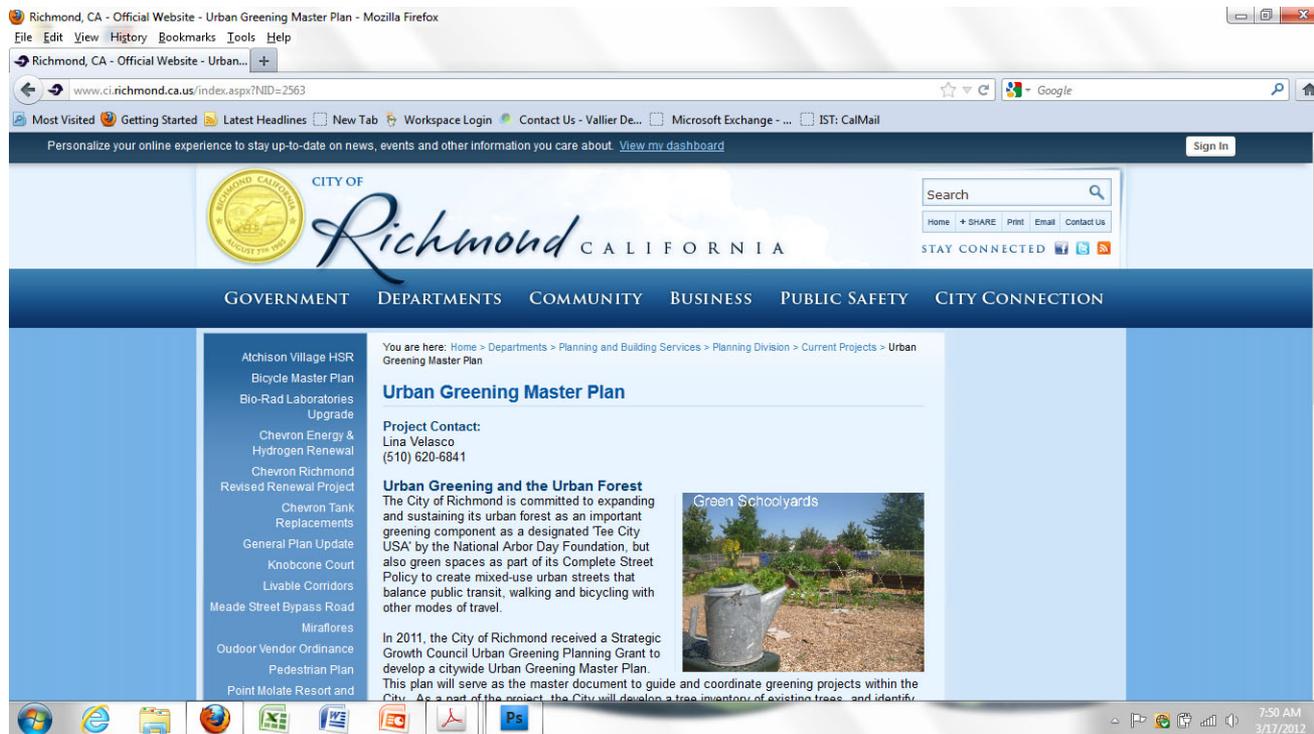


# COMMUNITY PARTICIPATION

- Participate in Urban Greening Plan workshops and focus groups
- Attend Arbor Day in October
- Join the Urban Forest Advisory Committee (Contact the Mayor's office for application)

# COMMUNITY PARTICIPATION

- Urban Greening Plan web site



# THANK YOU FOR COMING!

