

# U.S. Green Building Council (USGBC) LEED for Existing Buildings Overview

The Portland Building (TPB)  
2010

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## LEED EB v3 The Portland Building

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Why is this important?

According to the USGBC, in the United States buildings account for:

- 72% of electricity consumption,
- 39% of energy use,
- 38% of all carbon dioxide (CO<sub>2</sub>) emissions,
- 40% of raw materials use,
- 30% of waste output (136 million tons annually)
- 14% of potable water consumption.

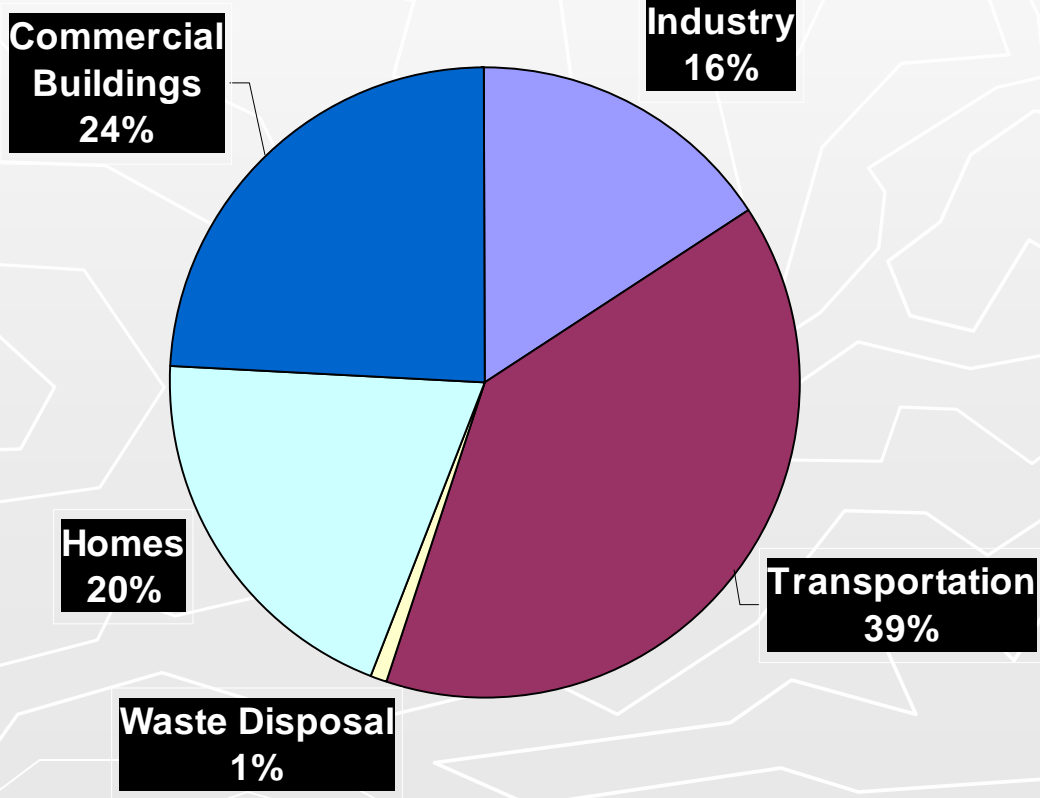


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Why is this important?

In Multnomah County, Buildings account for 24% of the Carbon Emissions (2008)

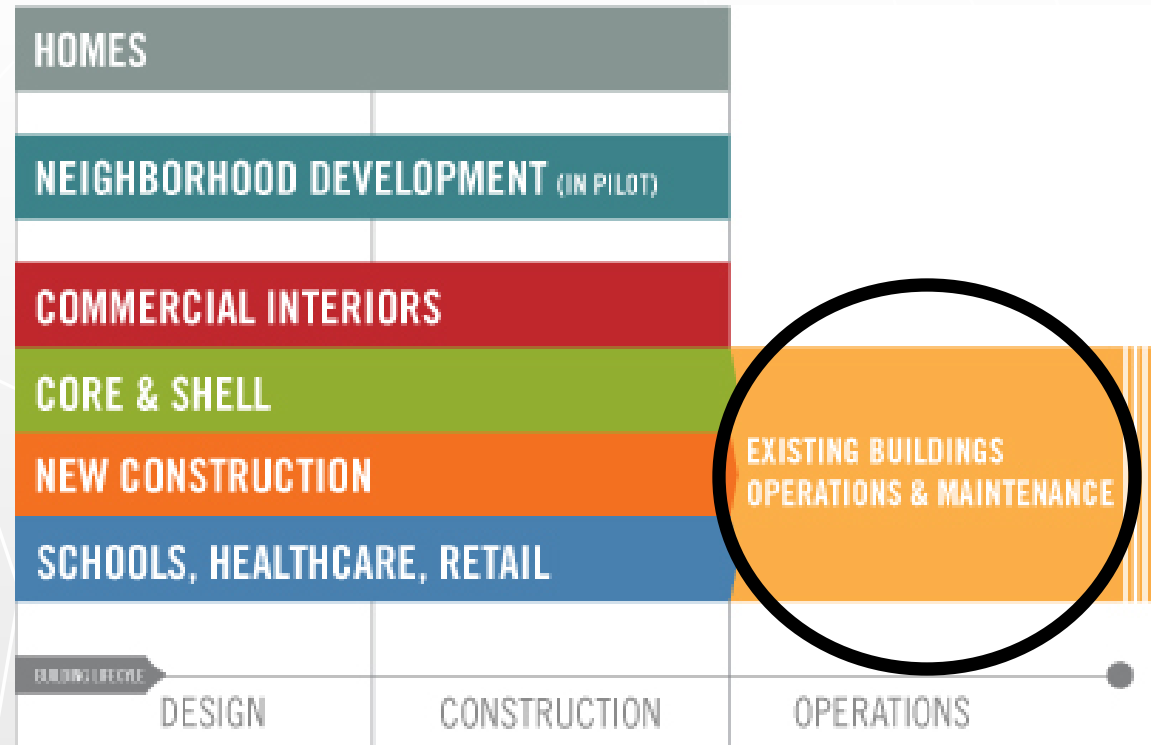


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## What is LEED?

(quick tip: its always LEED never LEEDs)

Leadership in  
Energy &  
Environmental  
Design



**USGBC's Mission:** To transform the way buildings & communities are designed, built & operated, enabling an environmentally & socially responsible, healthy, & prosperous environment that improves the quality of life.

**LEED EB** provides a benchmark for building owners & operators to measure operations, improvements and maintenance during a set time period.

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## Certification Levels

**Platinum: 80+**

**Gold: 60-79**

**Silver: 50-59\***

**Certified: 40-49**

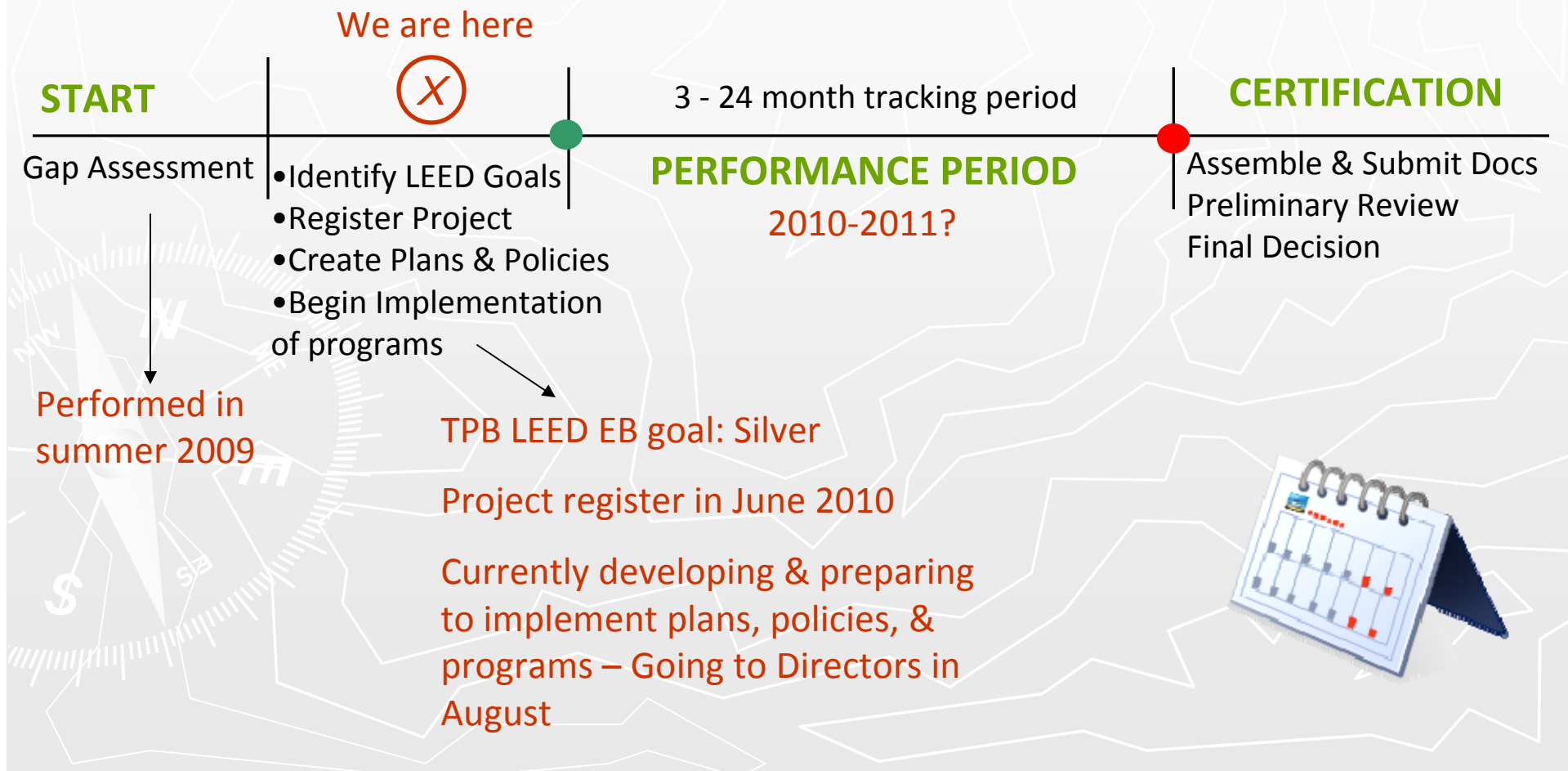
\*The City's Green Building Policy requires the City's existing facilities to be LEED Silver Certified and new construction to be Gold Certified



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## The LEED EB Process

———— start to finish can take 2+ years —————>  
likely shorter

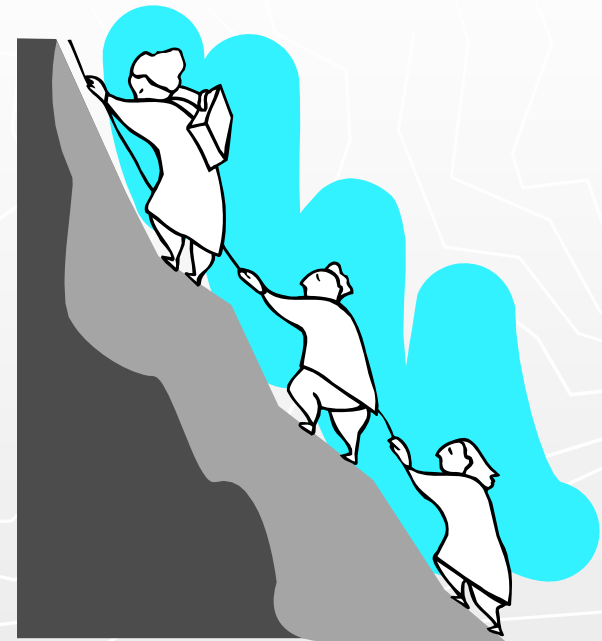


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## LEED EB Team Member Participants

- ▶ Facilities Managers
- ▶ Building/Mechanical Engineers
- ▶ Maintenance Technicians
- ▶ Landscape Architects
- ▶ Project Managers
- ▶ Purchasing Managers
- ▶ Tenant Representatives
- ▶ Consultants (Energy, Engineering, LEED)
- ▶ Contractors (Custodial, Pest Mgmt, Landscaping)



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## Minimum Program Requirements (MPRs)

- Comply with Environmental laws ✓
- Be a Complete Bldg or Space – must be on permanent already existing land ✓
- Use a Reasonable Site Boundary – must include all contiguous land that is associated with normal building operations ✓
- Min Floor Area Requirement – 1,000 sf ✓
- Min Occupancy Rates – FTE must equal at least 1 ✓
- Share whole building energy & water usage data ✓
- Comply with a min bldg area to site area ratio – gross floor area of bldg must be no less than 2% of gross land area of the site boundary ✓
- Building must be occupied for at least 12 months with 75% ✓
- Occupancy rate or greater per industry standards for building type ✓
- 90%+ of the building SF must be included in LEED Certification (Up to 10% SF exclusion allowed but only for areas with separate use/management practices) ✓ – TPB 1<sup>st</sup> may fall into this category
- Must meet all regulatory requirements for hazardous material management (PCB/Asbestos/Mercury in lamps) & waste water discharge ✓
- Performance period required for all credits pursued ✓

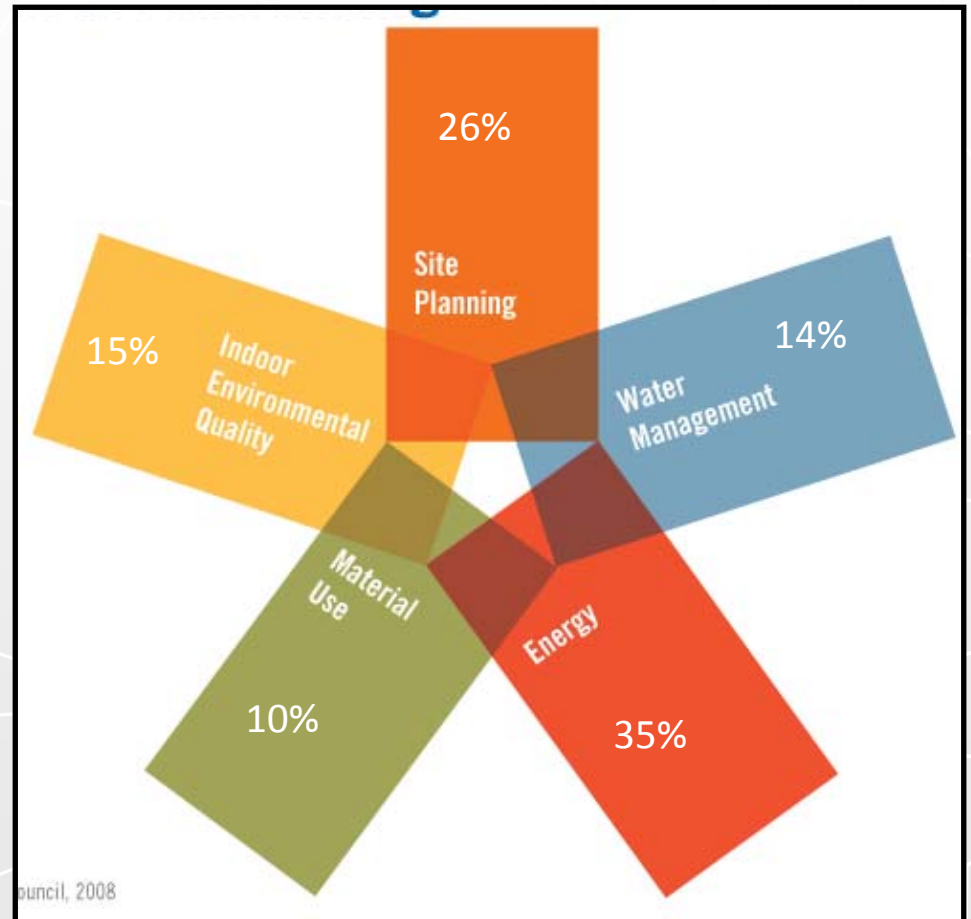


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LEED Rating Systems are broken down into the same 5 categories

## LEED EB Point Breakdown

Sustainable Sites (SS)	26 pts
Water Efficiency (WE)	14 pts
Energy Atmosphere (EA)	35pts
Materials & Resources (MR)	10pts
<u>Indoor Environmental Qlty (IEQ)</u>	<u>15pts</u>
Sub-Total	100pts
Innovation in Operation (IO)	6pts
<u>Regional Priorities (RP)</u>	<u>4pts</u>
Total	110pts



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## Credit Categories

### Sustainable Sites

- ▶ Hardscape Management
- ▶ Erosion Control and Landscape Management
- ▶ Commuting Alternatives
  - Citywide: 53% use Transit, 6% bike, 3% walk and 14% carpool
- ▶ Heat Island
  - TPB Eco-Roof supports this credit!
- ▶ Stormwater Quantity Control
  - Estimates are at 60% stormwater
- ▶ Light Pollution reduction

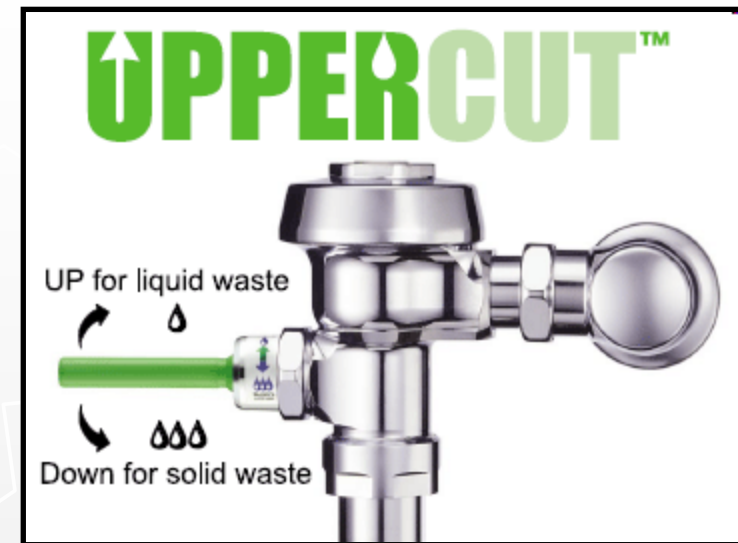


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## Credit Categories

### Water Efficiency

- ▶ Plumbing Efficiency
  - TPB Water Audit
- ▶ Whole Building Water metering and Sub-metering
  - TPB: Cooling Tower
  - TPB: Eco-Roof
- ▶ Water Efficient Landscaping
  - Can TPB Eco-Roof comply?
- ▶ Cooling Tower Chemical Management

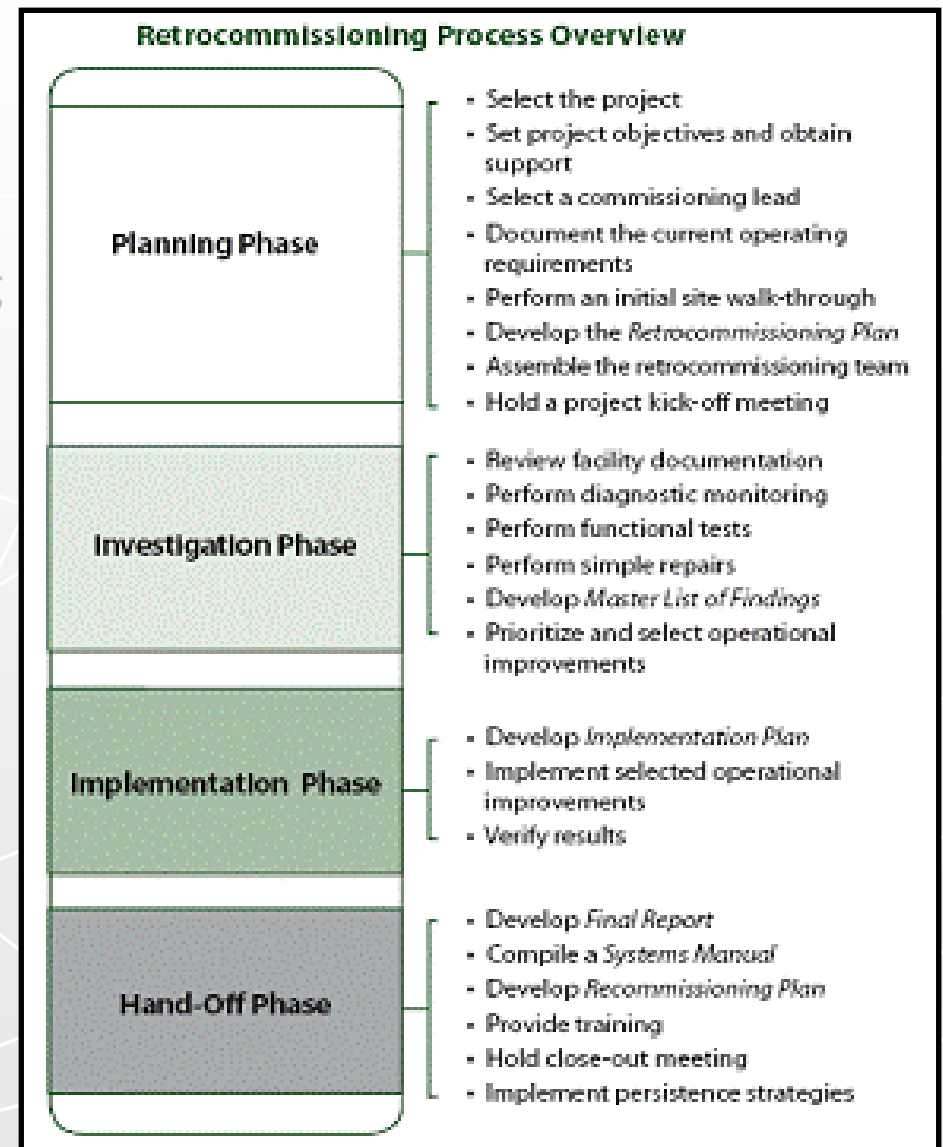


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## Credit Categories

### Energy & Atmosphere

- ▶ Building Energy Audit/Commissioning
  - TPB 2010
- ▶ Refrigerant usage (no CFCs)
  - TPB uses: HCFCs & HFCs
- ▶ Use of a BAS
- ▶ Renewable Energy – TPB has none
- ▶ Emissions Reporting
- ▶ Energy Star Rating (min 69)
  - TPB 74 (75 is Energy Star Certified!)



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## Credit Categories

### Materials and Resources

- ▶ Purchasing
  - TPB OD\* Ongoing Consumables: 65%
  - OD TPB Electronics: 47%
  - OD TPB Furniture: 0%
- ▶ Solid Waste Management
  - Recycling rate: 50% (TrashCo only)
- ▶ Waste Audit
  - TPB 2008: 33% compostable, 35% recyclable, 30% trash

\*OD = Office Depot

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Business Solutions Division



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## Credit Categories

### Indoor Environmental Quality

- ▶ Thermal Comfort
  - ARRA project will increase comfort & reduce energy
- ▶ Green Cleaning
  - RFP for IPM
  - 41% of cleaning products “green”
  - 50% of cleaning equipment “green”
  - 44% of paper products “green”
- ▶ Indoor Air Quality
  - TPB is installing MERV 13 filters
  - Air Quality testing twice a year



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## Extra Credits

### Innovation in Operations

- ▶ Double some credit requirements
- ▶ Address issues not readily addressed in LEED EB
  - Ergonomics program & wellness program
- ▶ LEED Accredited Professional
  - Wendy Gibson
  - Connie Johnson
- ▶ Track Building Sustainability Costs

### Regional Priority

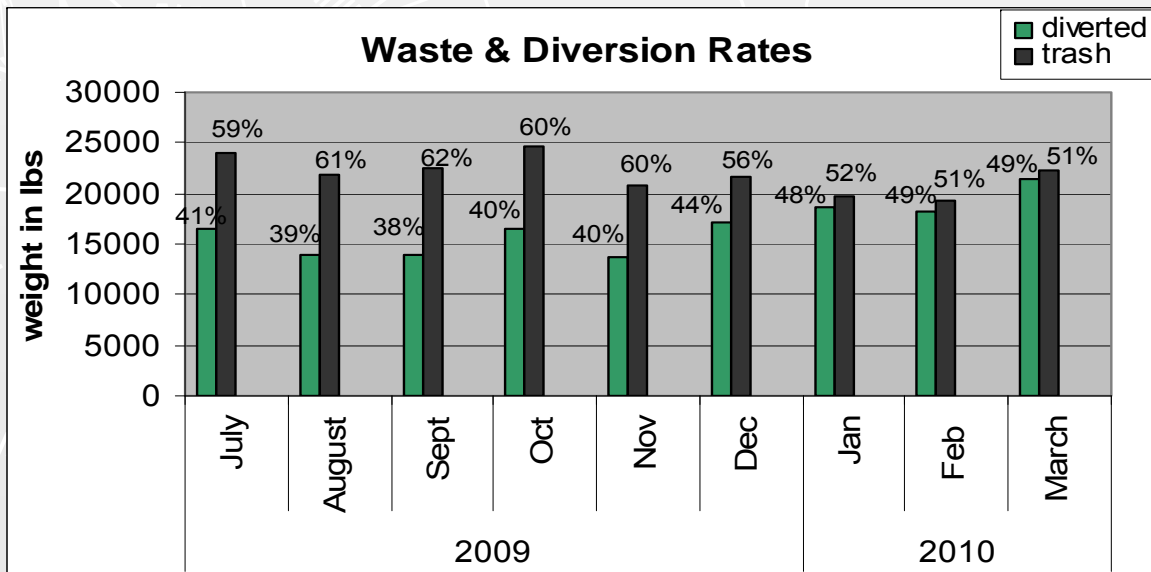
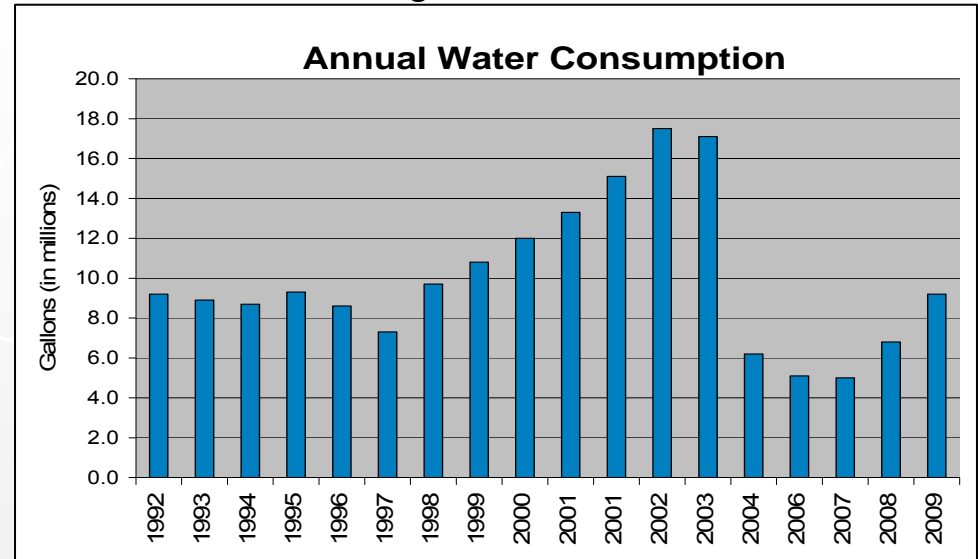
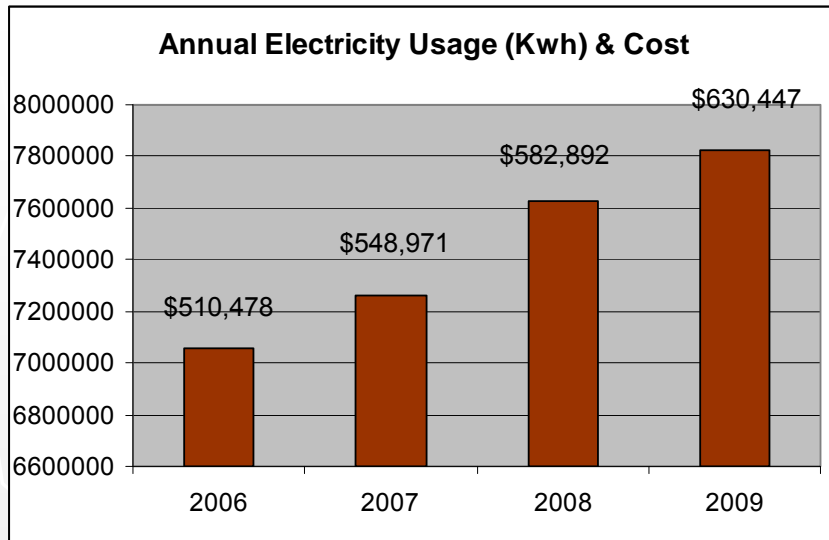
- ▶ Protecting & Restoring Habitat
- ▶ Stormwater Quantity Control
- ▶ Heat Island Effect
- ▶ Lighting Pollution



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TPB is 74% more efficient than similar buildings nationwide

Potential plumbing fixture upgrades in TPB will decrease water usage



The City's recycling goal is 85% by 2015!

Did you know that In 2009, The Portland Building's (TPB) Carbon emission equivalent was equal to 1,074 cars on the road!



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## Tenant Specifics

### Purchasing



- ▶ Purchase according to LEED standards for ongoing consumables, electronics, and furniture
- ▶ Attend LEED compliant sustainable purchasing training
- ▶ Track purchases outside of OD

### Energy



- ▶ Turn off computers at night
- ▶ Turn off lights to conference rooms when you leave
- ▶ Turn off task lighting and office accessories when you leave

### Solid Waste Mgmt



- ▶ Reuse, Reduce, Recycle! And Compost too!
- ▶ Track recycling/reuse not tracked by TrashCo.
- ▶ Print double-sided. Electronically edit. Print only portion of email you need.

### Transportation



- ▶ Bike, walk, carpool, use transit
- ▶ Fill out survey

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Questions?

