Moving Toward Sustainability with Public Transportation

Rail-Volution
October 2008
MAX Light Rail

- 44 miles
- 3 lines
- 64 stations
- 105 Vehicles
- 80% low floor
- 35.2 M rides in FY08
TriMet Rider Profile

- 71% choice riders
- Median age is 37
- 54% are single
- $50,000 household income
- 34% college educated
TriMet’s Approach: Top Down/Bottom Up

General Manager Vision:
Be an Environmental Leader

TriMet Brand Aspiration:
Make Portland the most livable in the country

TriMet Brand:
Essential to Livability
TriMet’s Approach: Top Down/Bottom Up

1. Sustainability Team: policies, training, resources, educational events, employee suggestions
2. Sustainability Coordinators (30)
3. Front line work groups
TriMet’s Journey to Sustainability

1. Sustainable Transportation
2. Sustainable Operations
3. Sustainable Construction Practices
Sustainable Transportation

Transit Oriented Development (TOD)

$6 billion invested within walking distance of MAX platforms since 1980
Annual Boardings per Resident

Source: 2006 National Transit Database

*Agency does not provide Demand Response service.
Transit Growth Outpacing Cars and Population


- TriMet Ridership: 53%
- TriMet Service: 20%
- Daily Vehicle Miles Traveled: 25%
- Population: 16%

Growth Rates (% increase after 10 years)
Portland’s “Green Dividend”

• TOD = Less Travel = More savings
  • Portlanders travel 4 miles less daily than average
  • 2.9B fewer miles and 100M fewer hours each year
  • Resulting Savings:
    – $1.1B in travel costs
    – $1.5B in time costs
Sustainable Transportation
Clean Air

TriMet service reduces:
- 4.2 tons of smog per day
- Greenhouse gases
- Reliance on oil
Sustainable Operations

How can we incorporate sustainable practices into our daily operations?
Sustainable Operations
Improving Efficiency

- **Light Rail:**
  - Hydro Power and Regenerative Braking

- **Bus:**
  - Reducing idling
  - Recalibrating transmissions
  - Altering front-end alignments
  - Adjusting tire pressure

**Annual savings:**
- 500,000 gallons
- $1.125 million
Sustainable Operations

Biodiesel

TriMet is the largest user of biodiesel in Oregon

- 325,000 gallons/year
Sustainable Operations
Emission Reduction

- Less fuel = reduced emissions
- Ultra low sulfur fuel
- Particulate traps
Sustainable Operations

Switch to electric vehicles
Sustainable Operations

Energy Efficient Lighting

• Retrofit vehicles, shops, offices, Park-&-Rides:
  • Fluorescent bulbs
  • Photovoltaic cells
  • Occupancy sensors
  • Light Emitting Diodes (LEDs)
Sustainable Operations

- Hazardous Waste: from 40,000 gal to 500 gal
- Green Cleaners
- Re-refined Oil
- Recycling Tires
Sustainable Operations

Refurbishing Shelter Glass with Art

- Saved $125 on 760 panels: $95,000
- Minimizes vandalism
- Improves appearance of shelters

Solar-powered Shelters and Park-&-Rides
Sustainable Operations

Sustainability Team

- Recycling
- Paper use reduction
- Alternative commute
- Turn out the lights
- Sustainable lunch
Sustainable Construction Practices

- Using existing materials – reduced costs by $2.4 million
- Recycling pavement and track
- Eliminating wooden and steel forms
- Plastic railroad ties
- Plastic bollards
- Overall savings $3 million
Sustainable Construction Practices

Naturescaping has reduced:

- Water demand
- Maintenance costs
- Heating and cooling costs
- Pesticide and fertilizer use
- Yard debris
- Stormwater runoff

- Saves $200,000/year
Improving Stormwater Management

- Using scuppers and bioswales to treat stormwater
- Allowing natural filtration from station platforms
- Sweeping Park-&-Ride lots to remove sediments
Sustainable Construction Practices

Stormwater Management can be beautiful
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