Peter Lowitt, FAICP
Director ï Devens Enterprise Commission
Devens, Massachusetts  USA
September 20, 2012

DEVENS: AN ECO-INDUSTRIAL PARK
Background on Devens

- Located 30 miles outside of Boston
- Former Military Base (NE Army headquarters for 79 yrs.) 4400 acres (1780 ha)
- 1800 acres (728 ha) for development (remainder – recreation and protected open space)
- Base Closure announced - 1993
- Base Closed 1996
Charrette Broke into Groups

All plans considered sustainability an integral part of the base development and functioning. All teams agreed on protecting the aquifer at Devens, cleaning up the site, implementing sustainable agriculture, and implementing a comprehensive recycling strategy.

Three groups focused on industrial ecology and a zero-emissions, no waste system, similar to a biological community.
Standard Economic Development Formula for Innovation

• Create research parks or areas where academics, post-docs, graduate students, researchers, financiers, entrepreneurs, various levels of management and workers can mix and network.

• Typical of this approach would be Silicon Valley, the North Carolina Research Park Triangle, Route 128 in the Boston area, and Dahlien Software Park in Northern China.

• The key concept is networking and communication amongst players who might not normally be in communication otherwise. Theoretically this leads to the cross fertilization of ideas and engenders creativity.
Recognizing interconnectedness of Resources (setting the stage for eco-industrial planning):

~1800 acres of Core Habitat in Devens:

- Habitats for rare, vulnerable, or uncommon mammal, bird, reptile, amphibian, fish, invertebrate, and plant species
- Priority Natural Communities
- High quality wetland, vernal pool, aquatic habitats
- Intact forest ecosystems
- USFWS Oxbow Wildlife Refuge and NHESP ACEC in Devens
Sustainability begins with the protection of existing natural ecosystems. The Devens Reuse Plan first identified the base's critical environmental network and then proposed other uses around that buffered network.
Collaboration

- Shared Facilities
- Day care
- Conference Center
- Recreational sports
- Mirror Lake
- Red Tail Golf Course

- Devens Eco Efficiency Center networks and programs
- Occupational Health and Safety Network
- Compliance University
- Green Building Network
- EcoStar Environmental Branding and Achievement Program
- The Great Exchange
The Great Exchange

• Started in 2007 to redirect excess inventory, unwanted items and reusable “waste”

• Repurposed an estimated 400 tons of material to date

  30-40 entities exchange 50-75 tons of materials each year and save $25,000-35,000 in avoided purchasing and disposal costs
Devens Eco-Industrial Park

Turning Trash to Treasure

- Redirected wastes
  - 30x 50 plastic bags
  - Mis-sized boxes
  - Used gaylords
  - Shrink wrap
  - 5-gallon pails
  - Liquid dispensers
  - Product that cannot be sold

- Recipients include:
  - State prison
  - Towns across state
  - Schools
  - Art organizations
  - Social services
  - Small businesses
Government Action

- MA Construction & Demolition Debris Waste Ban 2007
- MA 2014 food waste ban to go into effect.
- MA film tax credit

- Devens Recycling LLC 94,500 sf C&D Recycling Facility locates at Devens
- Devens pilots institutional food waste composting program 2011-2012
- Studies underway to assess potential for food biomass plant (CHP)
- New England Studios locates four sound and film production stages at Devens 2012.
Devens Eco-Industrial Park

Devens Recycling
Encouraging Innovation

- Net Zero Energy Housing Workforce Housing design competition produces 20 dwelling units with 8 single family i 7 sold (-21 HERS) and 12 townhouses (38 HERS) 2011-2012.

- Increasing Renewables Portfolio of Devens Utilities and allowing net metering of utilities leads to 3 MW Solar Photovoltaic project (2012)
Devens Eco-Industrial Park

Economy....  Ecology....  Community....

New Patriots Christian Congregation
Worship Service: Sun 10 am
Sunday School: Sun 9 am
Bible Study: Wed 7 pm
United Native American Cultural Center
Loaves & Fishes
Guild of St. Agnes
Devens Eco-Industrial Park

1994 Reuse Plan

Development must be sustainable, which means achieving a balance of economic, social, and environmental needs, while maintaining and enhancing the natural resource base.

- 4,400 acres targeted for re-development (1780 ha)
- 1,400 acres permanently protected

<table>
<thead>
<tr>
<th>Devens Development Since 1996</th>
<th>Projected</th>
<th>Actual or Permitted</th>
<th>Percent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial Build Out (Square Feet)</td>
<td>8.2 million</td>
<td>4.2 million +/-</td>
<td>51%</td>
</tr>
<tr>
<td>Jobs Created</td>
<td></td>
<td>3208</td>
<td></td>
</tr>
<tr>
<td>Annual Payroll</td>
<td></td>
<td>220 million</td>
<td></td>
</tr>
<tr>
<td>Private Investment</td>
<td></td>
<td>1.4 Billion</td>
<td></td>
</tr>
<tr>
<td>State Investment</td>
<td></td>
<td>120 million*</td>
<td></td>
</tr>
<tr>
<td>US Army Investment Site Remediation</td>
<td></td>
<td>120 million*</td>
<td></td>
</tr>
<tr>
<td>Residential Units</td>
<td>282</td>
<td>120</td>
<td>43%</td>
</tr>
</tbody>
</table>

Balancing Needs....
Conclusions

• We have embarked on a holistic approach to redeveloping this former Army base – ranging from housing to providing industries a path toward sustainability through our Eco-Star program and Eco-Industrial networking opportunities.
• We have reduced the mental distance between firms at Devens
• Many of the firms see themselves as part of a system of industries
• We have a number of by-product exchanges but no major process exchanges at this point
• We are currently providing collective waste disposal, by-product exchange facilitation, reuse/recycling services to all firms and residents at Devens, expandable to businesses in the region at some point in the future.
• Launched Regional HHW facility 2011
For more information Contact:
Peter Lowitt, FAICP
peterlowitt@devensec.com
www.devensec.com
www.devenscommunity.com (Donohue Institute Report on economic impacts of redevelopment 2012)
Winter publication of Devens Sustainable Indicators Report 2012 will be on the former web site.