Brownfield redevelopment: success depends on innovation and communication across many disciplines – all linked by legal requirements for new development to improve the environmental health of sites that may be contaminated.
Graduate students from 10 fields contribute their own critical, interdisciplinary thinking to further evolution of brownfield redevelopment.

The course:
Provides a comprehensive overview of issues and an introduction to cutting-edge topics that affect brownfield redevelopment

Challenges students to invent mechanisms to promote sustainable approaches to the particular challenges of remediation, redevelopment, and habitation of contaminated sites.
Innovation is an essential link between science and society. It can be a means of teaching the habit of paying attention to science and practicing interdisciplinary exchange for careers that, intentionally or not, affect the environment.

Innovation for sustainability: Turning knowledge into change that protects earth’s life-support system for the long term while respecting societal values.

Nassauer and Opdam, 2007. *Landscape Ecology*
Achieving Crime Reduction in Hamilton Dip: Design and Community Engagement Solutions for Vacant and Abandoned Properties

Dana Petit
Diane Sherman
Jingyuan Wang
Mona Younis

December 1, 2009
Instant Information: Utilizing Technology to Manage Land Bank Inventory

Joshua Cregger Elizabeth Griffin Aviva Glaser Sarah Howie Joane Slusky
## REVENUE THROUGH ECOSYSTEM SERVICES

Liz Durfee, Lauren Lesch, Lilly Peterson, Zach Robin, and Christian Runge

### Hamilton Dip

<table>
<thead>
<tr>
<th></th>
<th>$/sqft</th>
<th>Open Space</th>
<th>Mixed</th>
<th>Full Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>$1.69</td>
<td>$355,663</td>
<td>$6,102,985</td>
<td>$8,261,856</td>
</tr>
<tr>
<td>Commercial</td>
<td>$2.83</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>Solar</td>
<td>$15.61</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>Wind</td>
<td>$17.81</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>Carbon</td>
<td>$0.0072</td>
<td>$7,584</td>
<td>$3,310</td>
<td>$0</td>
</tr>
<tr>
<td>Wetland</td>
<td>$0.07</td>
<td>$24,829</td>
<td>$57,237</td>
<td>$0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$388,077</strong></td>
<td><strong>$6,163,533</strong></td>
<td><strong>$8,261,856</strong></td>
<td></td>
</tr>
</tbody>
</table>
Guidelines for Deciding What A Vacant Lot Can Become

If...

Contiguous with other greenspaces or serves as an important connection

→

Preserve as habitat and carbon sequestration
Scenario 3 carries the least risk and lowest forecasted insurance costs.
Elements of the Pedagogy

An authentically interdisciplinary problem with many aspects of practice open to innovation

Students across appropriate disciplines

A case study site that allows students to critically observe an interdisciplinary exchange

Precedent cases that sharpen critical observations of the selected case

Select practitioners and stakeholders are topical experts and coaches

Active coaching as student teams develop innovations

Student presentation of innovations to practitioners and citizens for critique

Brownfield redevelopment

Design, planning, applied ecology, engineering, environmental justice, business, law, social work, public health, policy.

A relevant case represents larger issues of sustainability

Each case presents a different “real world”.

Career paths, substantive knowledge, legitimacy, innovation opportunities.

Problem-finding, relevance, credibility, role clarity on the team, peer critique

Relevance, legitimacy, credibility
Logistics of the Pedagogy

- An authentically interdisciplinary problem with many aspects of practice open to innovation

- Students across appropriate disciplines

- A case study site that allows students to critically observe an interdisciplinary exchange

- Precedent cases that sharpen critical observations of the selected case

- Select practitioners and stakeholders are topical experts and coaches

- Active coaching as student teams develop innovations

- Student presentation of innovations to practitioners and citizens for critique

Introductory lectures and reading

Reading scholarly literature outside your discipline

Site description, data, and visits. Instructor forms teams based on individuals’ expressed topic interests.

Select practitioners are familiar with these cases. Written reflections on precedent lessons and gaps.

Mid term individual exam

The instructors become consultants to the teams.

Team executive summary, 30 minute presentation and critique.
Innovation is an essential link between science and society.

- Innovation
- Interdisciplinary practice
- Science informing practice
- Long term ecosystem services

It can be a means of teaching the habit of paying attention to science practicing interdisciplinary exchange for careers that, intentionally or not, affect the environment.