Changing Course: Increasing Sustainability of MN Golf Courses

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Changing Course: Increasing Sustainability of MN Golf Courses

Jake VanderMeeden  ENVR 395  Fall 2022  Advised by Jean Lavigne and Joe Storlien

Introduction
The game of golf is growing at a pace faster than ever before. Positives of golf include increases in revenue, health/exercise, recreation opportunity, and greater appreciation for the outdoors. Unfortunately, many golf courses are not environmentally friendly. Considering the impending challenges of climate change, efforts to increase sustainability are very important and environmentally sustainable golf course practices will ensure long-term prosperity and growth of the game of golf

Ultimately, I will create a sustainability plan for Edinburgh USA, which is a golf course in Brooklyn Park, Minnesota

Proposed Solution

<table>
<thead>
<tr>
<th>Proposed Solution</th>
<th>Sustainability Impact</th>
<th>Ease of Implementation</th>
<th>Acceptability</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reintroducing Native Vegetation</td>
<td>VERY High</td>
<td>High</td>
<td>High</td>
<td>Medium</td>
</tr>
<tr>
<td>Rain Gardens/Drainage Basin Creation</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Managing for Wildlife</td>
<td>High</td>
<td>High/Medium</td>
<td>High</td>
<td>Medium</td>
</tr>
<tr>
<td>Utilizing Recycled Water</td>
<td>Medium</td>
<td>Medium</td>
<td>Medium</td>
<td>Medium</td>
</tr>
<tr>
<td>Modifying Chemical Usage</td>
<td>Medium</td>
<td>Low/Medium</td>
<td>Low</td>
<td>High</td>
</tr>
</tbody>
</table>

Research Question
What can be done to make golf courses in Minnesota more sustainable in the future?

Sustainability Problems
Monoculture
Chemical usage
Water/irrigation
Wildlife

Sustainability Solutions
Reintroducing native vegetation
Organic alternatives
Recycled water sources, rain gardens
Establishing wildlife habitat, Natural corridors

Conclusion
Potential solutions to make Minnesota golf courses more sustainable include: reintroducing native plants, chemical alternatives, recycled water, rain gardens, managing for wildlife, and reevaluating golf course expectations.

Top 3 feasible solutions for Edinburgh USA: native vegetation, rain gardens, managing for wildlife.

Further Reading: