Rating Your Community’s Sustainability Efforts

PRESENTED BY
Kim Lundgren, Director of Sustainability, Vanasse Hangen Brustlin, Inc.
Douglas Melnick, AICP, Director of Planning and Sustainability, City of Albany, NY
Bill Bertera, Executive Director, Institute for Sustainable Infrastructure
I am here today representing...

1. A Local Government
2. A State Government
3. A Federal Agency
4. A Private Sector Firm
5. An Institution
6. A Non-Profit Organization
7. Other
Which US City do you think is the “Greenest”? 

1. Boston 
2. Denver 
3. New York 
4. Orlando 
5. Portland, OR 
6. San Francisco 
7. Seattle 
8. Other
Why do you think it is important to have sustainability rating systems?

1. Compare communities
2. Standardize methodology
3. Recognition
4. All of the above
5. I don’t think it is important
Which community-wide/organizational rating system are you most familiar with?

1. Audubon Sustainable Communities
2. Florida Green Building Coalition
3. Go Green Virginia
4. ISO 14000
5. STAR Community Rating System
6. Sustainable Jersey
7. None of the Above
Which community-wide/organizational rating system(s) have you used?

1. Audubon Sustainable Communities
2. Florida Green Building Coalition
3. Go Green Virginia
4. ISO 14000
5. STAR Community Rating System
6. Sustainable Jersey
7. Have not used any
A Snapshot of Sustainability Rating Systems
Rating System Scopes

- Community wide
  - National
  - State based
- Organizational
- Sector specific
  - Buildings
  - Roads
  - Sites
- Project specific
Community-wide & Organizational Rating Systems
Benefits

- Creates structure to achieve goals
- Determines benchmark for tracking progress
- Maintains consistency with others
- Offers third-party recognition
- Comprehensive National Rating System
- Commitment/Resources Required: High
- Flexible Rating System
- Policy and Program focused
Notable State Programs
- Links with existing energy and environmental management efforts
- Internationally recognized
- Self identified criteria
- Focused on organizational processes
## ALBANY 2030

The City of Albany Comprehensive Plan

### UTILITIES & INFRASTRUCTURE

<table>
<thead>
<tr>
<th>ID</th>
<th>Description</th>
<th>OP</th>
<th>PS</th>
<th>HV</th>
<th>A3</th>
<th>B3</th>
<th>Date</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Implement efficient water and wastewater management practices.</td>
<td></td>
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<td>2</td>
<td>Develop green infrastructure projects to reduce energy use.</td>
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<td>3</td>
<td>Promote alternative transportation choices to reduce vehicle miles traveled</td>
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<td>4</td>
<td>Implement energy-efficient, renewable energy technologies in construction projects.</td>
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<tr>
<td>5</td>
<td>Implement Long-Range Control Plan to improve water quality measures at WWTPs.</td>
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<td>6</td>
<td>Encourage water conservation practices.</td>
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<tr>
<td>7</td>
<td>Assess the feasibility and marketability of setting aside funding sources for regional parks and waterways.</td>
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<tr>
<td>8</td>
<td>Create a great infrastructure system.</td>
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</table>
indicators

THE EARTH INSTITUTE
COLUMBIA UNIVERSITY
set goals. measure progress
### Rating System Framework

**GOAL**
Sustainability themes with comprehensive community-level aspirations

**OBJECTIVE**
A clear, desired outcome intended to move the community toward the goal

**COMMUNITY LEVEL OUTCOMES**
Represent the actual state of a system and used to identify progress relative to Objective

**LOCAL ACTIONS**
Foundational or implementation based, proven effective and essential toward moving the needle

<table>
<thead>
<tr>
<th>Built Environment</th>
<th>Climate &amp; Energy</th>
<th>Education, Arts &amp; Community</th>
<th>Economy &amp; Jobs</th>
<th>Equity &amp; Empowerment</th>
<th>Health &amp; Safety</th>
<th>Natural Systems</th>
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</thead>
<tbody>
<tr>
<td>Ambient Noise &amp; Light</td>
<td>Climate Adaptation</td>
<td>Arts &amp; Culture</td>
<td>Business Retention &amp; Development</td>
<td>Civic Engagement</td>
<td>Active Living</td>
<td>Green Infrastructure</td>
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<tr>
<td>Community Water Systems</td>
<td>Greenhouse Gas Mitigation</td>
<td>Climate Resilience</td>
<td>Green Market Development</td>
<td>Civil &amp; Human Rights</td>
<td>Community Health &amp; Safety</td>
<td>Invasive Species</td>
</tr>
<tr>
<td>Compact &amp; Complete Communities</td>
<td>Greasing the Energy Supply</td>
<td>Community Cohesion</td>
<td>Local Economy</td>
<td>Environmental Justice</td>
<td>Emergency Prevention &amp; Response</td>
<td>Natural Resource Protection</td>
</tr>
<tr>
<td>Housing Affordability</td>
<td>Industrial Sector Resource Efficiency</td>
<td>Historic Preservation</td>
<td>Quality Jobs &amp; Living Wages</td>
<td>Equitable Services &amp; Access</td>
<td>Food Access &amp; Nutrition</td>
<td>Outdoor Air Quality</td>
</tr>
<tr>
<td>Public Spaces</td>
<td>Resource Efficient Public Infrastructure</td>
<td>Workforce Readiness</td>
<td>Poverty Prevention &amp; Alienation</td>
<td>Natural &amp; Human Hazards</td>
<td>Working Lands</td>
<td></td>
</tr>
<tr>
<td>Transportation Choices</td>
<td>Waste Minimization</td>
<td>Transportation &amp; Accessibility</td>
<td>Safe Communities</td>
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</tbody>
</table>
The goal is not just the rating, but a way to measure progress.

3-STAR Community (200-399 points)
Recognized for sustainability leadership

4-STAR Community (400-599 points)
Recognized for national excellence

5-STAR Community (600+ points)
Recognized as top tier achiever in national sustainability

Participating STAR Community: Registered intent to use the rating system

Reporting STAR Community (50-199 points): Registered intent to report and met basic prerequisite of completing an objective in all 7 goal areas
integration
public reporting
- you can’t manage what you don’t measure
- be prepared for internal resistance
- don’t get hung up on the ratings
- the data may not exist at all or how you need it
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City of Albany Department of Development & Planning
Director, Mayor’s Office of Energy & Sustainability
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melnickd@ci.albany.ny.us
Sector Specific & Project Based Rating Systems
Which sector/project focused rating systems have you used?

1. EnergyStar
2. Envision™
3. Green Globes
4. Green Roads
5. INVEST
6. LEED
7. Sustainable Sites
8. Other
9. None
Buildings
Roads
Comprehensive approach to horizontal infrastructure projects

Supported by APWA, ASCE, ACEC

Allows other rating systems to plug into it
ENVISION™
Envision™ was developed in joint collaboration between the Zofnass Program for Sustainable Infrastructure at the Harvard University Graduate School of Design and the Institute for Sustainable Infrastructure.

The Institute for Sustainable Infrastructure is a not-for-profit education and research organization founded by the American Public Works Association, the American Council of Engineering Companies and the American Society of Civil Engineers.
Envision™ is a tool, which itself is part of a larger system, developed to help plan and evaluate the sustainability of civil infrastructure.

This system includes:

- A self assessment checklist
- The Envision™ Rating Tool
- A credential program for individuals
- A Project Evaluation and Verification Program
- A Recognition Program for Sustainable Infrastructure
Envision™ is not a decision making tool...

It is a decision making guide best used in the planning and design stages of infrastructure projects
The Audience for Envision?
Primarily, but not exclusively,
Owners of civil infrastructure
Why will the public sector want to use Envision?

Because it will improve their performance...and

public confidence in their performance
The importance of infrastructure

The realities of the world in which we live

A new fact of life

Planet Earth is a perilous place for humans. Infrastructure provides:

- Physical Security
- The basis for public health
- Economic and commercial potential

- Population Growth
- Diminished Resources
- Climate Change
- Adaptation

It is no longer enough that infrastructure work, that it be constructed on time and within budget, or even that it last. It now must be sustainable.
WHAT DO WE MEAN BY “SUSTAINABLE”? 

“...to meet the needs of the present without compromising the ability of future generations to meet their own needs.”

- World Commission on Environment and Development, 1987
Why is Sustainability Important?

Our job is to plan for a future that is respectful of the environment and the atmosphere upon which all else depends.
WHAT MAKES ENVISION™ UNIQUE?

- It applies to civil infrastructure
- It includes design, planning, construction and maintenance elements
- It is applicable at any point in an infrastructure project's life cycle
- It speaks to the triple bottom line: social, economic and environmental goals
- It is designed to keep pace with a changing concept of sustainability
Envision™ promotes better decision-making...decision making that is itself sustainable.

How does it do that?
WHAT TYPES OF INFRASTRUCTURE CAN ENVISION™ RATE?

**ENERGY**
- Geothermal
- Hydroelectric
- Nuclear
- Coal
- Natural Gas
- Oil/Refinery
- Wind
- Solar
- Biomass

**WATER**
- Potable water distribution
- Capture/Storage
- Water Reuse
- Storm Water Management
- Flood Control

**WASTE**
- Solid waste
- Recycling
- Hazardous Waste
- Collection & Transfer

**TRANSPORT**
- Airports
- Roads
- Highways
- Bikes
- Pedestrians
- Railways
- Public Transit
- Ports
- Waterways

**LANDSCAPE**
- Public Realm
- Parks
- Ecosystem Services

**INFORMATION**
- Telecommunications
- Internet
- Phones
- Satellites
- Data Centers
- Sensors
60 Credits in 5 Categories

- Purpose, Community, Wellbeing
- Collaboration, Management, Planning
- Materials, Energy, Water
- Siting, Land & Water, Biodiversity
- Emissions, Resilience
CATEGORIES

QUALITY OF LIFE 13 Credits
1 PURPOSE
QL1.1 Improve Community Quality of Life
QL1.2 Stimulate Sustainable Growth & Development
QL1.3 Develop Local Skills & Capabilities

2 WELLBEING
QL2.1 Enhance Public Health & Safety
QL2.2 Minimize Noise & Vibration
QL2.3 Minimize Light Pollution
QL2.4 Improve Community Mobility & Access
QL2.5 Encourage Alternative Modes of Transportation
QL2.6 Improve Accessibility, Safety, & Wayfinding

3 COMMUNITY
QL3.1 Preserve Historic & Cultural Resources
QL3.2 Preserve Views & Local Character
QL3.3 Enhance Public Space
QL0.0 Innovate or Exceed Credit Requirements

LEADERSHIP 10 Credits
1 COLLABORATION
LD1.1 Provide Effective Leadership & Commitment
LD1.2 Establish A Sustainability Management System
LD1.3 Foster Collaboration & Teamwork
LD1.4 Provide for Stakeholder Involvement

RESOURCE ALLOCATION 14 Credits
1 MATERIALS
RA1.1 Reduce Net Embodied Energy
RA1.2 Support Sustainable Procurement Practices
RA1.3 Use Recycled Materials
RA1.4 Use Regional Materials
RA1.5 Divert Waste From Landfills
RA1.6 Reduce Excavated Materials Taken Off Site
RA1.7 Provide For Deconstruction & Recycling

NATURAL WORLD 15 Credits
1 SITING
NW1.1 Preserve Prime Habitat
NW1.2 Protect Wetlands & Surface Water
NW1.3 Preserve Prime Farmland
NW1.4 Avoid Adverse Geology
NW1.5 Preserve Floodplain Functions
NW1.6 Avoid Unsuitable Development on Steep Slopes
NW1.7 Preserve Greenfields

CLIMATE AND RISK 8 Credits
1 EMISSIONS
CR1.1 Reduce Greenhouse Gas Emissions
CR1.2 Reduce Air Pollutant Emissions

2 RESILIENCE
CR2.1 Assess Climate Threat
CR2.2 Avoid Traps & Vulnerabilities
CR2.3 Prepare For Long-Term Adaptability
CR2.4 Prepare For Short-Term Hazards
CR2.5 Manage Heat Island Effects
CR0.0 Innovate or Exceed Credit Requirements

3 WATER
RA3.1 Protect Fresh Water Availability
RA3.2 Reduce Potable Water Consumption
RA3.3 Monitor Water Systems
RA0.0 Innovate or Exceed Credit Requirements

NW0.0 Innovate or Exceed Credit Requirements

3 BIODIVERSITY
NW3.1 Preserve Species Biodiversity
NW3.2 Control Invasive Species
NW3.3 Restore Disturbed Soils
NW3.4 Maintain Wetland & Surface Water Functions
SAMPLE CREDIT

QL1.1 IMPROVE COMMUNITY QUALITY OF LIFE

INTENT:

Improve the net quality of life of all communities affected by the project and mitigate negative impacts to communities.

LEVELS OF ACHIEVEMENT

<table>
<thead>
<tr>
<th>IMPROVED</th>
<th>ENHANCED</th>
<th>SUPERIOR</th>
<th>CONSERVING</th>
<th>RESTORATIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>(2) Internal focus. The project team has located and reviewed the site's recent and relevant community planning information. Some, but not all systematic outreach to stakeholders and decision-makers has taken place.</td>
<td>(3) Community feedback. More substantive feedback has been obtained from community members, and participation in progress meetings has been tracked.</td>
<td>(4) Broad community alignment. All relevant community plans are reviewed and validated through stakeholder input. The project summary is written to achieve good project alignment with community plans, recognizing that the scope of the project is not limited to a “local” area.</td>
<td>(5) Broad community alignment. All relevant community plans are reviewed and validated through stakeholder input. The project summary is written to achieve good project alignment with community plans, recognizing that the scope of the project is not limited to a “local” area.</td>
<td>(6) Community resilience. Through rehabilitation of important community assets, upgraded and strengthened community infrastructure, and implementation of community safety, improved environmental quality and additional infrastructure capacity, the project substantially mitigates the adverse impacts on the host and nearby communities.</td>
</tr>
</tbody>
</table>

DESCRIPTION

This credit addresses the extent to which the project contributes to the quality of life in the host community and the community in which the constructed works is situated and directly affects. This determination is based on how well the project team has identified and assessed community needs, goals, objectives, and incorporated them into the project. Relevant community plans are assumed to be a viable expression of those needs, goals, objectives, and aspirations. In a real sense, they are the community’s expression of their desired quality of life.

Communication and interaction with community stakeholders is essential to reaffirm and improve the assessment. The project team works closely with community stakeholders to identify and address issues and concerns. When operational, the constructed works is expected to contribute to the efficiency and effectiveness of community infrastructure, while having minimal impact on the environment. Its benefits should be seen as broadly distributed throughout the community.

A project designed to benefit one community may have adverse effects on others. The purpose of this credit is to recognize projects that provide significant benefits to affected communities, as well as reduce or eliminate negative impacts. Positive effects on all important dimensions of performance may not be practical. Thus the credit seeks a net positive impact.

If the project team can show that the affected community (or communities) has an existing project assessment and approval process that verifies that the project is in concert with community goals and objectives, and that the project goes through that process successfully, then that success will constitute achievement of this credit. The level of achievement will be determined by the Assessment and Verification, and is a function of the comprehensiveness of the process, the extent to which community stakeholders are engaged in collaborative dialogue (rather than merely outside input to the process), and the degree to which improvements were made and/or adverse impacts mitigated.

ADVANCING TO HIGHER ACHIEVEMENT LEVELS

Benchmark. The project team may have located and reviewed community plans, looking for possible project site conflicts. The team compiled with local regulations and policies for stakeholder involvement.

Performance improvement. Give increased attention to community needs, goals, plans and their relation to the project. Increase the thoroughness and participatory engagement by which community goals and plans are incorporated into the project. Give additional considerations to existing conditions and look for opportunities to rehabilitate community assets. Achieve strong endorsement by stakeholders and community leaders.

EVALUATION CRITERIA AND DOCUMENTATION

A. Has the project team identified and taken into account community needs, goals, plans and issues?

1. Lists of examples of community benefits, plans and lessons learned.

B. Has the project team sought to align the project vision and goals to the needs and goals of the host and affected communities as well as address potential adverse impacts?

METRIC:

Measures taken to assess community needs and improve the quality of life while minimizing negative impacts.

1. Comprehensive impact assessments conducted, identifying and evaluating the positive and negative impacts of the project on affected communities. Planned actions for mitigating adverse impacts.
2. Minutes of meetings, letters and memos signed by key stakeholders, community leaders and decision-makers for establishing input and agreement regarding the impact assessment and planned actions.
3. To what extent has the affected community been meaningfully engaged in the project design process?

SOURCES


RELATED CREDITS

- QL1.2 Enhance Sustainable Growth and Development
- QL1.3 Develop Local Skills and Capabilities
- QL1.4 Promote Meaningful Stakeholder Involvement

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DRAFT FOR INTERNAL USE ONLY
Envision™ Sustainable Infrastructure Rating System

"Bridge"

Section Menu

Please click on the links to take you to the relevant sections:
Q11.1 IMPROVE COMMUNITY QUALITY OF LIFE

INTENT:
Improve the net quality of life of all communities affected by the project and mitigate negative impacts to communities.

METRIC:
Measures taken to assess community needs and improve quality of life while minimizing negative impacts.

LEVELS OF ACHIEVEMENT

<table>
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<tr>
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</thead>
<tbody>
<tr>
<td>(2) Internal focus. The project team has located and reviewed the most recent and relevant community planning information. Some, but not systematic outreach to stakeholders and decision makers has taken place. Some relatively easy, but not particularly important or meaningful changes made to the project. No significant adverse community effects are caused by the project (A, B, C)</td>
<td>(5) Community linkages. More substantive efforts to locate, review, assess and incorporate the needs, goals and plans of the host community into the project. Most potential negative adverse impacts of the project on the host community are reduced or eliminated. Key stakeholders are involved in the project decision-making process. (A, B, C)</td>
<td>(10) Broad community alignment. All relevant community plans are reviewed and verified through stakeholder input. The project team works to achieve good project alignment with community plans, recognizing that the scope of the project is a limiting factor. Potential negative impacts on nearby affected communities are reduced or eliminated. (A, B, C)</td>
<td>(20) Holistic assessment and collaboration. The project makes a net positive contribution to the quality of life of the host and nearby affected communities. The project team makes a holistic assessment of community needs, goals and plans, incorporating meaningful stakeholder input. Project meets or exceeds important identified community needs and long-term requirements for sustainability. Remaining adverse impacts are minimal, mostly accepted as reasonable tradeoffs for benefits achieved. The project has broad community endorsement. (A, B, C)</td>
<td>(25) Community renaissance. Through rehabilitation of important community assets, upgraded and extended access, increased safety, improved environmental quality and additional infrastructure capacity, the project substantially reinvigorates the host and nearby communities. Working in genuine collaboration with stakeholders and community decision-makers, the project owner and the project team scope the project in a way that elevates community awareness and pride. Overall quality of life in these communities is markedly elevated. (A, B, C, D)</td>
</tr>
</tbody>
</table>

DESCRIPTION

This credit addresses the extent to which the project contributes to the quality of life of the host community: the community in which the constructed works is situated and directly affects. This determination is based on how well the project team identified and assessed community needs, goals and objectives, and incorporated them into the project. Relevant community plans are assumed to be a viable expression of those needs, goals, objectives and aspirations. In a real sense, they are the community's expression of their desired quality of life.
SCORING SUMMARY

Section 1 choices updated.

"Prairie Waters Project"

Section Totals Summary

<table>
<thead>
<tr>
<th>Section</th>
<th>Maximum Possible Score</th>
<th>Section Points</th>
<th>Innovation Points</th>
<th>Total Points Earned</th>
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<tr>
<td>QL</td>
<td>155</td>
<td>11</td>
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<td>CR</td>
<td>122</td>
<td>12</td>
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<tr>
<td>Total Project Points</td>
<td>783</td>
<td>108</td>
<td>14</td>
<td>122</td>
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</tbody>
</table>

Envision™ Section Scores

[Bar chart showing section scores]
Putting it all together

- Establish / confirm your sustainability goals & priorities
- Assess your existing resources (human, financial, time)
- Review funding & technical assistance opportunities
- Set a timeline for yourself
Which one is right for your community?

- Demonstrates action towards your goals
- Creates leadership opportunities
- Helps celebrate small and big successes
- Recognizes that some progress is better than none
- Continuously pushes you to do better
THANK YOU!

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