

# THE ISI ENVISION™ RATING SYSTEM FOR CLEAN WATER INFRASTRUCTURE



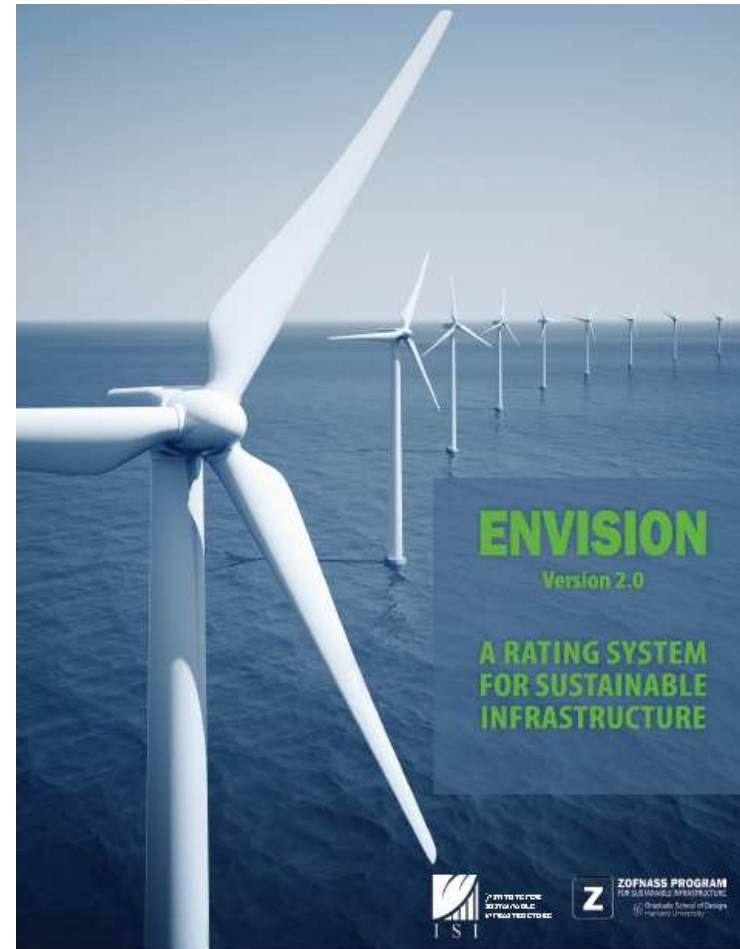
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NACWA  
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# Agenda

- What is Envision?
- Why was it Developed?
- Envision Rating System
- How Can it Help You?



# The Issues We Face as an Industry are Becoming Mainstream





# Institute for Sustainable Infrastructure (ISI)

- Founded in 2010 by
  - American Public Works Association
  - American Society of Civil Engineers
  - American Council of Engineering Companies
- ISI is a 501 (c) (3) not for profit organization, structured to develop and maintain a sustainability rating system for civil infrastructure in the United States.



# Development of Envision™ Rating System



*Are We Doing the  
Right Project?*



*Are We Doing the  
Project Right?*

# Why Was Envision™ Developed?

- Current rating systems for infrastructure in the U.S. are sector specific
- No U.S. system covers all aspects of infrastructure
- Envision™ is designed to fill the gap
- Encourage holistic, community approach to infrastructure



# What Types of Infrastructure Will Envision™ Rate?



## ENERGY

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



## WATER

Potable Water  
Distribution and  
Treatment  
  
Wastewater  
Collection and  
Treatment  
  
Water Reuse  
  
Stormwater  
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



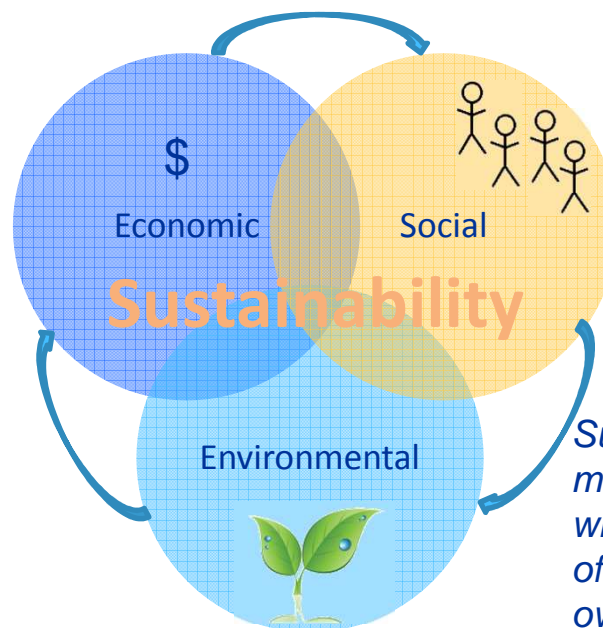
## INFORMATION

Telecommunication  
Internet  
Phones  
Satellites  
Data Centers  
Sensors

# THE ENVISION™ RATING SYSTEM



- People desire to live in a clean, healthy environment.
- More people in an area is an opportunity for economic growth.
- Money wisely invested in preserving the environment can maintain an area's desirable status to keep people there.



*Sustainable development... meets the needs of the present without compromising the ability of future generations to meet their own needs. ~U.N. 1987*



# 60 Credits in 5 Categories



## QUALITY OF LIFE

- Purpose, Community, Wellbeing



## LEADERSHIP

- Collaboration, Management, Planning



## RESOURCE ALLOCATION

- Materials, Energy, Water



## NATURAL WORLD

- Siting, Land & Water, Biodiversity



## CLIMATE AND RISK

- Emission, Resilience

# Envision™ Self-Assessment Checklist

## Leadership

### 1. Collaboration

#### LD1.1 Provide Effective Leadership

Intent: Provide effective leadership

Metric: Demonstrate principles of sustainable leadership

Assessment Questions:

Has the project team

Is the project team or to be taken?

Does these commitments value of the project

#### LD 1.2 Establish a Sustainable Vision

Intent: Create a project vision seeking to improve

## Resource Allocation

### 1. Materials

#### RA1.1 Reduce Net Embodied Carbon

Intent: Conserve energy by reducing embodied carbon

Metric: Percentage reduction in embodied carbon

Assessment Questions:

Does the project team plan materials over the project life cycle?

Will the project achieve a 20% reduction in embodied carbon?

#### RA 1.2 Support Sustainable Material Practices

Intent: Obtain materials and services from sustainable practices.

Metric: Percentage of materials from sustainable practices

Assessment Questions:

Will the project team establish relationships with suppliers that have strong sustainability

## Natural World

### 1. Siting

#### NW 1.1 Preserve Prime Habitat

Intent: Avoid placing project in areas identified as of high conservation value

Metric: Avoidance of prime habitat

Assessment Questions:

Will the project team avoid prime habitat?

Will the project avoid prime habitat?

Will the project establish prime habitat?

Will the project significantly restore habitat?

Will the project improve habitat?

## Climate and Risk

### 1. Emissions

#### CR1.1 Reduce Greenhouse Gas Emissions

Intent: Conduct a comprehensive life-cycle carbon analysis and use this assessment to reduce the anticipated amount of net greenhouse gas emissions during the life cycle of the project contribution to climate change.

Metric: Life-cycle net carbon dioxide equivalent (CO2e) emissions.

Assessment Questions:

Will a life-cycle carbon assessment be conducted on the project?

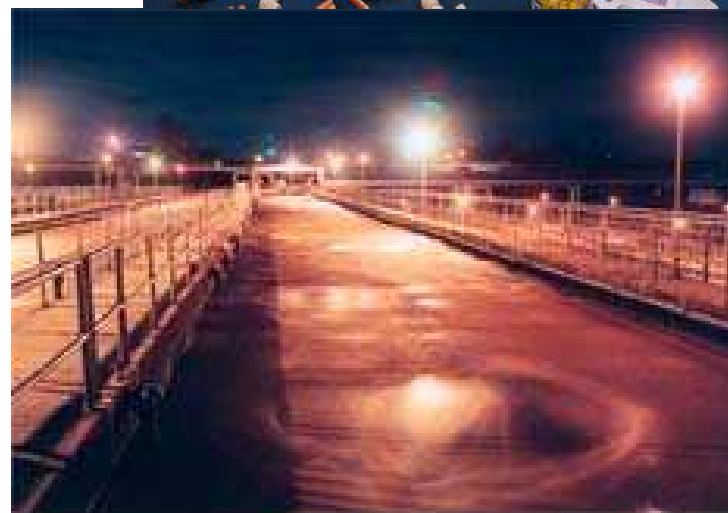
Based on that assessment, will the project be designed in a way that substantially reduces carbon emissions?

#### CR 1.2 Reduce Air Pollutant Emissions

Intent: Reduce the emission of six criteria pollutants; particulate matter (including PM10 and PM2.5), ozone, carbon monoxide, sulfur oxides, nitrogen oxides, lead, and noxious odor.

# Quality of Life – Purpose, Community, Wellbeing

- QL 1.3 Develop Local Skills and Capabilities
- QL 2.3 Minimize Light Pollution
- QL 2.4 Improve Community Mobility and Access
- QL 3.3 Enhance Public Space



# Leadership – Collaboration, Management, Planning

- LD 2.1 Pursue By-Product Synergy Opportunities
- LD 2.2 Improve Infrastructure Integration
- LD 3.2 Address Conflicting Regulations and Policies





# Resource Allocation – Materials, Energy, Water

- RA 1.2 Support Sustainable Procurement Practices
- RA 1.4 Use Regional Materials
- RA 1.6 Reduce Excavated Materials Taken Off-Site



# Natural World – Siting, Land & Water, Biodiversity

- NW 1.1 Preserve Prime Habitat
- NW 1.5 Preserve Floodplain Functions
- NW 1.7 Preserve Greenfields

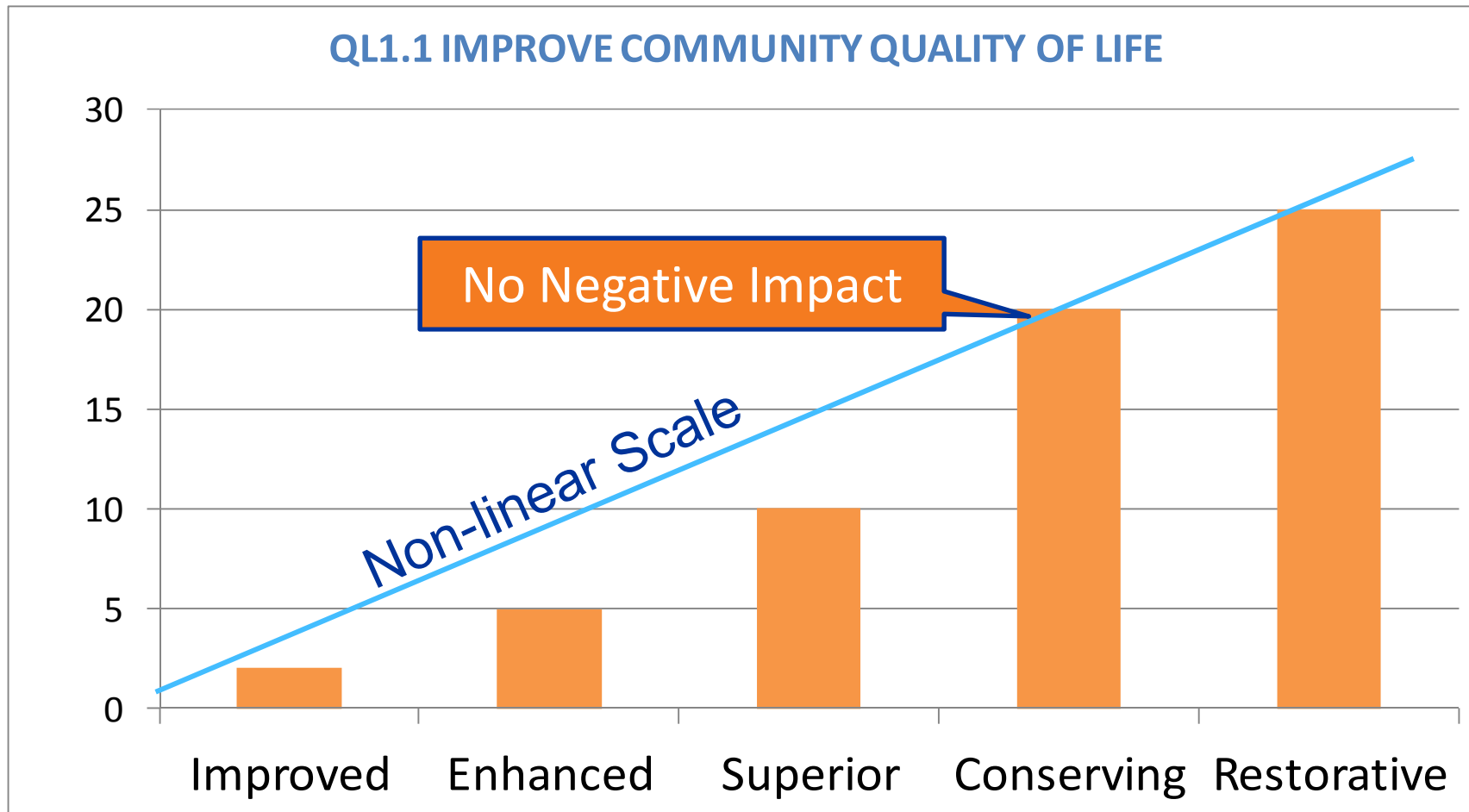


# Climate and Risk – Emissions, Resilience

- CR 1.1 Reduce Greenhouse Gas Emissions
- CR 2.1 Assess Climate Threat
- CR 2.5 Manage Heat Island Effects



# Levels of Achievement





# Input Portal – [www.sustainableinfrastructure.org](http://www.sustainableinfrastructure.org)

[News](#) [FAQs](#) [Rating System](#) [ISI Credentials](#) [Project Application](#) [Education & Training](#) [Case Studies](#) [Comments](#)


**Project Application**


## Envision™ Sustainable Infrastructure Rating System


[Instructions](#) [Projects](#) [Section Menu](#) [QL](#) [LD](#) [RA](#) [NW](#) [CR](#) [Section Totals Summary](#) [Report](#)


### Section Menu


Please click on the links to take you to the relevant sections:

 **QUALITY OF LIFE**

 **LEADERSHIP**

 **RESOURCE ALLOCATION**

 **NATURAL WORLD**

 **CLIMATE AND RISK**

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# Rating System

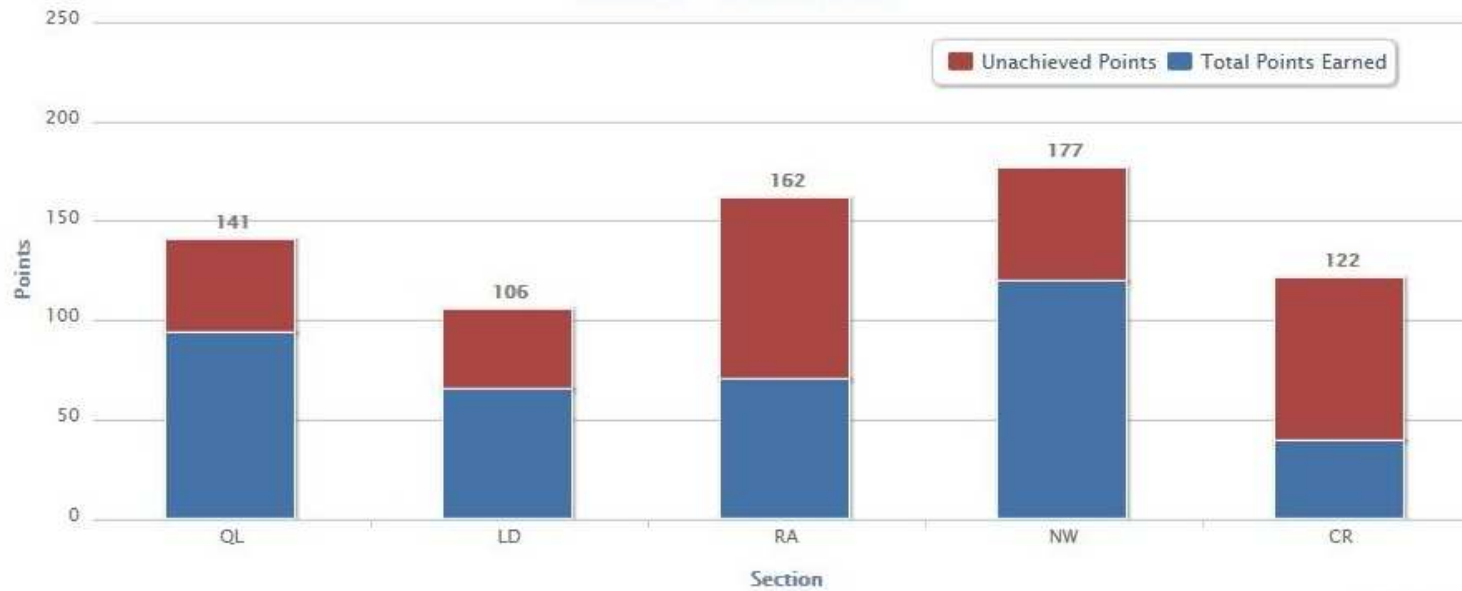
	Section and Objective Numbers	Objectives	Required for Project	Level Of Achievement	Score	Objective Available Points
<b>QUALITY OF LIFE</b>						
QL1	QL1.1	<b>Improve community quality of life.</b> Improve the net quality of life of all communities affected by the project and mitigate negative impacts to communities. <a href="#">details / guidance</a>	YES	Restorative ▼	25	25
			Notes: <div></div>			
QL1	QL1.2	<b>Stimulate sustainable growth and development.</b> Support and stimulate sustainable growth and development, including improvements in job growth, capacity building, productivity, business attractiveness and livability. <a href="#">details / guidance</a>	YES	Superior ▼	5	16
			Notes: <div></div>			
QL1	QL1.3	<b>Develop local skills and capabilities.</b> Expand the knowledge, skills and capacity of the community workforce to improve their ability to grow and develop. <a href="#">details / guidance</a>	<b>Assessor Decision</b> Include ▼	Improved ▼	1	15
			Notes: <div></div>			

# Scoring Summary




## Section Totals Summary

Section	Maximum Possible Score	Section Points	Innovation Points	Total Points Earned
QL	141	91	3	94
LD	106	66	0	66
RA	162	71	0	71
NW	177	118	2	120
CR	122	40	0	40
<b>Total Project Points</b>	<b>708</b>	<b>386</b>	<b>5</b>	<b>391</b>

Envision™ Section Scores



# Envision™ Award Levels

Recognition Level	Minimum Applicable Points
Bronze Award	 20%
Silver Award	 30%
Gold Award	 40%
Platinum Award	 50%



# Envision™ Provides a Framework to Assess the Sustainability of America's Infrastructure

- Envision™ applies to all civil infrastructure
- Builds sustainability awareness in planning, design construction and maintenance
- Applicable at any point in an infrastructure project's life cycle
- Speaks to the triple bottom line: social, economic and environmental goals
- Designed to keep pace with a changing concept of sustainability
- Helps you demonstrate project sustainability

# Questions ?

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[www.sustainableinfrastructure.org](http://www.sustainableinfrastructure.org)

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