

Application of the Envision™ Sustainability Rating System to Enhance the Upper Truckee River Restoration Strategy

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The Upper Truckee River (UTR) Restoration Strategy (Strategy) is based on a well-developed, eco-system based, approach comprised of restoring natural geomorphic processes and functions to produce benefits such as improved habitat and water quality. The Strategy also emphasizes the importance of sustainability, climate change and ecosystem services, and the need for projects that exhibit multiple environmental, economic, and cultural benefits. The Institute for Sustainable Infrastructure’s (ISI) Envision™ Sustainability Rating System (Envision) provides a powerful tool for assessing and improving on the Strategy as a whole, and the individual UTR restoration projects, with respect to sustainability.

Envision is a unique sustainability rating system developed specifically for civil infrastructure projects, including restoration projects, which uses a holistic approach to evaluating projects against the community’s needs and values over the entire project life cycle. In addition to asking the question, “Will we do the project right?” use of Envision encourages the project team to also ask the question, “Will we do the right project?” This paper provides an overview of the Envision Sustainability Rating Tool and an initial cursory level review of the Strategy to identify strengths and potential opportunities to increase its overall sustainability. A more comprehensive application of this tool would help to ensure a consistent approach is used in sustainability planning, resulting in higher value projects and increased public support.

Institute for Sustainable Infrastructure and the Envision Sustainability Rating System

Envision was developed by the Institute for Sustainable Infrastructure (ISI) in collaboration with the Zofnass Program for Sustainable Infrastructure at Harvard University Graduate School of Design. Other rating systems exist for infrastructure projects; however, they are specific to particular types of infrastructure and their uses. ISI, is a not-for-profit education and research organization, dedicated to developing and maintaining a civil infrastructure rating system. ISI was founded by the American Council of Engineering Companies (ACEC), the American Public Works Association (APWA), and the American Society of Civil Engineers (ASCE).

Envision provides a more holistic approach that considers the triple bottom line of social, economic and environmental benefits and provides a standardized framework for evaluating and rating these benefits. Envision has similarities to the U.S. Green Building Council’s Leadership in Energy and Environmental Design (LEED) rating system for sustainable building but with a broader focus on civil infrastructure and how projects integrate with community goals and policies, economic goals and the environment. Various levels of achievement are possible ranging from a bronze to a platinum level award.

The Envision rating system is a project assessment and guidance tool for sustainable infrastructure design. It is an objective framework of criteria and performance achievements that helps users identify ways in which sustainable approaches can be used to plan, design, construct, and operate infrastructure projects. The goal is to improve the sustainable performance of infrastructure projects in terms of the technical performance and also from social, environmental, and economic perspectives. Envision provides an opportunity for infrastructure owners and designers to be recognized for using a life cycle approach, working with communities, and using a restorative approach to infrastructure projects.

In addition to the Envision Sustainability Rating System Tool, ISI offers a credential program to certify Envision Sustainability Professionals (ENV SP). Most engineers, planners or other related fields would qualify to apply for a credential. At least one person on a project team seeking an award must be trained and credentialed to use the Envision web portal. That person guides the project team in applying the Envision rating system to their project. Online training and testing is available to credential the project guide on their knowledge of the rating system and rating process.

More information about ISI and the Envision rating system may be found at:

<http://www.sustainableinfrastructure.org/>.

Why is a holistic approach to infrastructure important?

Unlike buildings, convergence and optimization of the various elements of infrastructure are accomplished at the community level. At this level, community infrastructure development is subject to the resources and constraints of multiple departments and agencies, each with different schedules, agendas, mandates, budget cycles, and sources of funding. Thus, rating systems that evaluate and recognize sustainable performance in a single infrastructure element will miss the more important aspects of sustainable performance, i.e., how that element contributes to the overall sustainability of the community that it serves.

Using the example of UTR Restoration Strategy, in addition to improving habitat and water quality, are other environmental improvements possible, and what opportunities exist to improve social and economic benefits to the community?

The Envision Self-Assessment Checklist (Checklist) in Appendix A is an educational tool that helps users become familiar with the sustainability aspects of infrastructure project design. It can be used as a stand-alone assessment to quickly compare project alternatives or to prepare for a more detailed assessment using the full Envision rating system. The Checklist is structured as a series of Yes/No questions based on the more comprehensive Envision rating system, which is organized into five categories and fourteen subcategories. The five categories are listed and briefly described below.

Quality of Life specifically addresses a project's impact on communities including both the health and well-being of individuals and the larger social fabric as a whole.

Leadership evaluates project related tasks that demonstrate effective leadership and commitment to sustainability by all parties involved in a project including the owner, team leaders, and constructors. For example: are there policies for sustainability practices in place already?

Resource Allocation measures the use of renewable and non-renewable resources for the project and the benefits of managing resources to allow for a longer life of those resources.

Natural World allows project teams to assess the effect of the project on the preservation and renewal of ecosystem functions. This section addresses how to understand and minimize negative impacts while considering ways in which the infrastructure can interact with natural systems in a synergistic and positive way.

Climate and Risk looks at two main concepts: minimizing emissions that may contribute to increased short- and long-term risks and ensuring that infrastructure projects are resilient to short-term hazards or altered long-term future conditions.

Envision Checklist for the Upper Truckee River Restoration Strategy

For the purpose of assessing the UTR Restoration Strategy by using the Envision Rating System Checklist, the UTR Restoration Strategy was reviewed. Our experience as the planning consultant for two UTR restoration projects; and our experience with preparation of an Envision application for the Placer County Snow Creek SEZ Restoration project also add to our knowledge related to UTR projects and their goals as well as sustainability planning and design.

While some of the topics are not specifically addressed in the Strategy document, assumptions were made based on prior project experience, stated project goals, existing regulation or common practice for Tahoe basin projects. Some example recommendations for sustainability improvements to increase a project's sustainability performance are discussed. The discussion of the checklist results is organized by the 5 credit categories: Quality of Life, Leadership, Resource Allocation, Natural World and Climate. The Self-Assessment Checklist Scorecard is included on the following page and is discussed below.

The initial evaluation of the Strategy using the Checklist indicates that the Strategy provides a strong basis for planning the individual restoration projects. This exercise also identifies areas where additional sustainability related enhancements may be possible. The Strategy excels in the Leadership and Natural World categories, while the results from the Quality of Life, Resource Allocation and Climate categories indicate potential opportunities for some improvement.

**Envision Rating System
Self-Assessment Checklist
For Public Comment Only - Not for Project Use**

			Y	N	NA			
1	PURPOSE	QL1.1 Improve community quality of life	2	1	0		2 of 3	NA 15%
2		QL1.2 Stimulate sustainable growth and development	1	1	1		1 of 2	
3		QL1.3 Develop local skills and capabilities	0	3	0		0 of 3	
4	COMMUNITY	QL2.1 Enhance public health and safety	0	1	0		0 of 1	No 42%
5		QL2.2 Minimize noise and vibration	0	0	1		0 of 0	
6		QL2.3 Minimize light pollution	1	0	0		1 of 1	
7	WELLBEING	QL2.4 Improve community mobility and access	0	2	1		0 of 2	Yes 42%
8		QL2.5 Encourage alternative modes of transportation	1	1	0		1 of 2	
9		QL2.6 Improve site accessibility, safety and wayfinding	1	1	1		1 of 2	
10	WELLBEING	QL3.1 Preserve historic and cultural resources	1	1	0		1 of 2	Yes 42%
11		QL3.2 Preserve views and local character	2	0	0		2 of 2	
12		QL3.3 Enhance public space	2	0	0		2 of 2	
		TOTAL	11	11	4		11 of 22	
13	COLLABORATION	LD1.1 Provide effective leadership and commitment	3	0	0		3 of 3	NA 8%
14		LD1.2 Establish a sustainability management system	1	0	0		1 of 1	
15		LD1.3 Foster collaboration and teamwork	3	0	0		3 of 3	
16	MANAGEMENT	LD1.4 Provide for stakeholder involvement	3	0	0		3 of 3	Yes 95%
17		LD2.1 Pursue by-product synergy opportunities	1	0	0		1 of 1	
18		LD2.2 Improve infrastructure integration	3	0	0		3 of 3	
19	PLANNING	LD3.1 Plan for long-term monitoring and maintenance	2	0	0		2 of 2	Yes 95%
20		LD3.2 Address conflicting regulations and policies	2	0	0		2 of 2	
21		LD3.3 Extend useful life	0	0	1		0 of 0	
		TOTAL	18	0	1		18 of 18	
22	MATERIALS	RA1.1 Reduce Net Embodied Energy	0	1	1		0 of 1	NA 37%
23		RA1.2 Support Sustainable Procurement Practices	0	3	0		0 of 3	
24		RA1.3 Use Recycled Materials	1	1	0		1 of 2	
25	ENERGY	RA1.4 Use Regional Materials	2	0	0		2 of 2	No 24%
26		RA1.5 Divert Waste from Landfills	1	2	0		1 of 3	
27		RA1.6 Reduce Excavated Materials Taken off Site	2	1	0		2 of 3	
28	WATER	RA1.7 Provide for Deconstruction and Recycling	0	2	1		0 of 2	Yes 39%
29		RA2.1 Reduce energy consumption	0	0	3		0 of 0	
30		RA2.2 Use renewable energy	0	0	2		0 of 0	
31	WATER	RA2.3 Commission and monitor energy systems	0	0	3		0 of 0	Yes 39%
32		RA3.1 Protect fresh water availability	6	0	1		6 of 6	
33		RA3.2 Reduce potable water consumption	4	0	0		4 of 4	
34		RA3.3 Monitor water systems	0	0	4		0 of 0	
		TOTAL	16	10	15		16 of 26	
35	SITING	NW1.1 Preserve prime habitat	5	0	0		5 of 5	NA 9%
36		NW1.2 Protect wetlands and surface water	2	1	0		2 of 3	
37		NW1.3 Preserve prime farmland	0	1	0		0 of 1	
38	LAND & WATER	NW1.4 Avoid adverse geology	3	0	0		3 of 3	No 11%
39		NW1.5 Preserve floodplain functions	3	1	2		3 of 4	
40		NW1.6 Avoid unsuitable development on steep slopes	1	1	0		1 of 2	
41	BIODIVERSITY	NW1.7 Preserve greenfields	1	1	0		1 of 2	Yes 80%
42		NW2.1 Manage stormwater	1	0	1		1 of 1	
43		NW2.2 Reduce pesticide and fertilizer impacts	4	0	1		4 of 4	
44	BIODIVERSITY	NW2.3 Prevent surface and groundwater contamination	4	0	-1		4 of 4	Yes 80%
45		NW3.1 Preserve species biodiversity	4	0	0		4 of 4	
46		NW3.2 Control invasive species	3	0	0		3 of 3	
47		NW3.3 Restore disturbed soils	2	0	0		2 of 2	
48		NW3.4 Maintain wetland and surface water functions	4	0	1		4 of 4	
		TOTAL	37	5	4		37 of 42	
49	EMISSION	CR1.1 Reduce greenhouse gas emissions	0	1	1		0 of 1	NA 9%
50		CR1.2 Reduce air pollutant emissions	1	1	0		1 of 2	
51		CR2.1 Assess climate threat	0	1	0		0 of 1	
52	RESILIENCE	CR2.2 Avoid traps and vulnerabilities	2	0	0		2 of 2	No 11%
53		CR2.3 Prepare for long-term adaptability	1	0	0		1 of 1	
54		CR2.4 Prepare for short-term hazards	2	0	0		2 of 2	
55		CR2.5 Manage heat islands effects	0	0	1		0 of 0	
		TOTAL	6	3	2		6 of 9	

Quality of Life

The Strategy scored positively for questions related to: preservation of views and local character, public space enhancement and minimization of light pollution. Mixed response were attained for: improving community quality of life; stimulation of sustainable growth; encouragement of alternative modes of transportation; improvement of site accessibility, safety and way finding; and preservation of historic and cultural resources. Negative responses are shown for development of local skills and capabilities; enhancement of public health and safety; and improvement of community mobility and access.

Quality of Life improvements to a restoration project's design and planning effort may help to promote better public acceptance of that project. Below are some examples of planning and design changes that could help to improve the sustainability of the projects under the Quality of Life category and are arranged by the subcategories where the strategy scored negatively.

Develop Local Skills and Capabilities.

The intent of this subcategory is to expand the knowledge, skills and capacity of the community workforce to improve their ability to grow and develop. Measures that could be implemented to improve the sustainability rating for this subcategory include:

- Encourage the use of local workers by providing an incentive for local planning and design firms and contractors to propose and bid on projects.
- Encourage contractors and consultants to hire local subcontractors and suppliers.
- Provide educational and stewardship training funding to non-profit organizations who work with local residents or school children.

Enhance Public Health and Safety

The intent of this subcategory is to take into account the health and safety implications of using new materials, technologies or methodologies above and beyond meeting the minimum regulatory requirements. This question was answered "no", although it could be answered "yes" for some projects. Either way, it is worth discussing as a point to be considered during the planning and design of projects to go above and beyond the minimum requirements for health and safety planning. During construction of the UTR projects, work will take place within river channels and dewatering and diversion designs need to provide for maximum safety of the workers and the public downstream of project areas. The water quality and existing utility infrastructure also needs to be protected for the public. The public safety risks associated with use of innovative technologies and materials must also be considered and methodologies developed to reduce risks and exposures to workers and the community.

Improve Community Mobility and Access

The intent of this subcategory is to locate, design and construct the project in a way that eases traffic congestion, improves mobility and access, does not promote urban sprawl, and otherwise improves community livability. It can be argued that this question may not apply to restoration projects, but if we are considering a holistic approach and the existence of user-created trails within the vicinity of project

areas than public access could be considered. Often times, there is no funding related to public access associated with restoration projects so the subject is not identified in project goals. Providing public access may be counter to restoration goals, although the negative effects associated with public access can be managed.

A few of the UTR projects are located near SR 50 through the urban area and there could be opportunity to provide pedestrian linkages to and from recreation areas, residential and commercial areas and transit stops. Public trails or trailheads could be considered at less restrictive areas of the river corridor. Existing user-created trails could be relocated to help with restoration efforts and minimize negative impacts from unmanaged trails. Other planning considerations that could help to improve the Quality of Life rating are related to the rich history of the UTR corridor. The Bureau of Reclamation has indicated that heritage resource data associated with the individual Middle Reach projects could be pieced together revealing a more complete account of native American history, logging history and ranching history of the early settlers. While the planned projects help to preserve historical and cultural resources, there could be some opportunity to restore historical and cultural resources on or near the project sites or consider the entire UTR corridor as a heritage site in itself instead of considering each project area an individual site.

It is important to continue encouragement of public participation according to what is described in the Strategy. Design charrettes, social media, and other strategies are useful for engaging the public and should continue. Other creative ways to engage the public could be providing a booth at a local event which brings the project team out to the public instead of asking the public to come to meeting at an agency board room. Public involvement programs in some instances work well when they are implemented at the early stages of the project, before the preferred alternative has been developed. This way the public may feel that they have more of a stake in the project.

Leadership

The Strategy scored positively for all questions related to Leadership. The UTR Strategy document itself provides for leadership and commitment to establish a sustainability management system for project designs. Collaboration, stakeholder involvement and infrastructure integration are already a significant part of the planning process for the projects. Long-term maintenance and monitoring frameworks are already provided through the adaptive management monitoring approaches and strategies already in place. However, it is important that these systems continue to be funded in the future. Also, use of the Envision tool during planning could help to ensure that existing regional policies and goals will be reviewed and considered during planning and design of projects. In some instances there could be conflicting regulations to attaining the project goals and an opportunity to refine conflicting regulations or policies to remove barriers to attaining project goals efficiently.

Resource Allocation

The Strategy scored positively for questions related to: use regional materials, protection of fresh water availability and reduction of potable water consumption. Mixed responses were attained for reduction of excavated materials taken off site and use of recycled materials. Negative responses are shown for: reduction of net embodied energy; support of sustainable procurement practices; diversion of waste

from landfills; and providing for deconstruction and recycling of project components once they reach the end of their useful life for the project.

Resource Allocation measures incorporated during the design and planning effort for the UTR restoration projects would help to provide for more sustainable projects. Below are some examples of planning and design changes that could help to improve the sustainability of the projects under the Resource Allocation category and are discussed by the subcategories where the strategy scored negatively.

Reduce Net Embodied Energy

The intent of this subcategory is to conserve energy by reducing the net embodied energy of project materials over the project life. Embodied energy is the energy associated with the extraction, processing, manufacturing, and transport of materials and components. This energy can be consumed prior to project planning and implementation. The amount of embodied energy that could be consumed by a project can be calculated by conducting a life cycle energy assessment or other applicable method. Using local materials requiring less mileage for transport, or specifying use of materials that are manufactured or produced using less energy are examples of design modification that could promote reductions in net embodied energy consumption by projects.

Support Sustainable Procurement Practices

The intent of this subcategory is to obtain materials and equipment from manufacturers and suppliers who implement sustainable practices. Project proponents and project teams can specify programs or preferences to be granted during procurement processes that encourage use of manufacturers, suppliers and service companies that have strong sustainable policies and practices in place. Third party verification for business sustainability practices already exist. Project teams now have the ability to find and review of sustainability practices of these companies.

Divert Waste from Landfills

The intent of this category is to reduce waste, and divert waste streams away from disposal to recycling and reuse. For example, reducing off hauling of soil and logs are already a priority for the fill removal and logging aspects of the restoration projects. Project teams are encouraged to try to balance the cut and fill amounts and reuse the logs to reduce off hauling. However, there are a some projects where excess soil and logs are in need of disposal. To add to this problem, the timing for project implementation of other projects in need of more soil or logs may not be ideal for use or stockpiling of these materials at other UTR project sites. In these cases, effort taken to re-use excavated clean soil at other local non-UTR projects in the region where the timing for reuse at these sites coincide better with implementation at UTR project sites would help to increase the project's sustainability . Increased effort for recycling and composting of other waste during construction and use of recycled materials for design components would also increase the sustainability rating of a project. Some examples of recycled materials that could be used on a UTR restoration project include use of railroad cars for temporary or permanent bridges, recycled fencing for gabions, or natural materials existing onsite for revegetation, bank stabilization and restoration measures.

Provide for Deconstruction and Recycling

The intent of this subcategory is to encourage future recycling, up-cycling, and reuse by designing for ease and efficiency in project disassembly or deconstruction at the end of its useful life. For constructed project components such as crossings, bridges, and utility improvements to name a few, more thought given to the deconstruction and recycling of these project components at the end of their useful lives would help to improve the sustainability rating for a project.

Natural World

The Strategy scored positively for all applicable questions related to the Natural World category. The Strategy scored highest in this category which is no surprise due to its heavy restoration and stormwater management focus.

Climate and Risk

The Strategy scored positively for questions related to: avoiding traps and vulnerabilities, preparing for long-term adaptability, and preparing for short-term hazards. Mixed responses are shown for reduction of air pollutant emissions. A negative response is shown for assessment of climate threat. Below are some examples of planning and design changes that could help to improve the sustainability of the projects under the Climate and Risk category.

Assess Climate Threat

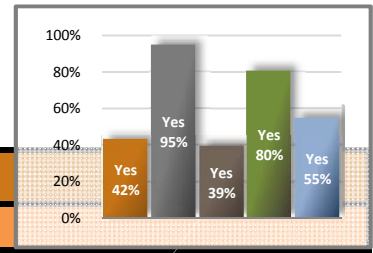
The intent of this subcategory is to develop a comprehensive Climate Impact Assessment and Adaptation Plan. While the Strategy addresses the climate change issue, it does not clearly state that a Climate Impact Assessment and Adaptation Plan be prepared by the project teams. Another option, which may be a better solution, would be to prepare one document that covers the entire UTR restoration corridor. Preparation of this plan could be added to the UTR Strategy. Once the Climate Impact Assessment and Adaptation Plan is prepared each project alternative may be evaluated and compared related to how the project would adapt to climate change. The results of the comparison would help to ensure that a project is resilient and would perform efficiently during extreme climate conditions.

In conclusion, the application of the complete Envision Rating Tool would provide a more comprehensive and detailed analysis, resulting in more sustainable individual projects. Envision provides a framework for a consistent sustainability planning approach applicable to any of the UTR projects.

Appendix A

Envision Rating System Self-Assessment Checklist for the Upper Truckee River Restoration Strategy

**Envision Rating System
Self-Assessment Checklist**



Quality of Life

1. Purpose

QL 1.1 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.

Assessment Questions:	Yes	No	N/A	
Are the relevant community needs, goals and issues being addressed in the project?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Are the potentially negative impacts of the project on the host and nearby communities been reduced or eliminated?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Has the project design received broad community endorsement, including community leaders and stakeholder groups?	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	?
Total	2 of 3			

QL 1.2 Stimulate Sustainable Growth and Development

Intent: Support and stimulate sustainable growth and development, including improvements in job growth, capacity building, productivity, business attractiveness and livability.

Metric: Assessment of the project's impact on the community's sustainable economic growth and development.

Assessment Questions:	Yes	No	N/A	
Will the project contribute significantly to local employment?	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	?
Will the project make a significant increase in local productivity?	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	?
Will the project make the community more attractive to people and businesses?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Total	1 of 2			

QL 1.3 Develop Local Skills and Capabilities

Intent: Expand the knowledge, skills and capacity of the community workforce to improve their ability to grow and develop.

Metric: The extent to which the project will improve local employment levels, skills mix and capabilities.

Assessment Questions:	Yes	No	N/A	
Does the project team intend to hire and train a substantial number of local workers?	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	?
Does the project team intend to use a substantial number of local suppliers and specialty firms?	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	?

**Envision Rating System
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Will the project, through local employment, subcontracting and education programs, make a substantial improvement in local capacity and competitiveness?	<input type="radio"/> <input checked="" type="radio"/> <input type="radio"/> <input style="color:blue" type="radio"/> ?
Total 0 of 3	

2. Wellbeing

QL 2.1 Enhance Public Health and Safety

Intent: Take into account the health and safety implications of using new materials, technologies or methodologies above and beyond meeting regulatory requirements.

Metric: Efforts to exceed normal health and safety requirements, taking into account additional risks in the application of new technologies, materials and methodologies.

Assessment Questions: Yes No N/A

Does the owner and the project team intend to identify, assess and institute new standards to address additional risks and exposures created by the application of new technologies, materials, equipment and/or methodologies?
 ?

Total 0 of 1

QL 2.2 Minimize Noise and Vibration

Intent: Minimize noise and vibration generated during construction and in the operation of the completed project to maintain and improve community livability.

Metric: The extent to which noise and vibration will be reduced during construction and operation.

Assessment Questions: Yes No N/A

Will the project reduce noise and vibration to levels substantially below local permissible levels during construction and operation?
 ?

Total 0 of 0

QL 2.3 Minimize Light Pollution

Intent: Prevent excessive glare, light at night, and light directed skyward to conserve energy and reduce obtrusive lighting and excessive glare.

Metric: Lighting meets minimum standards for safety but does not spill over into areas beyond site boundaries, nor does it create obtrusive and disruptive glare.

Assessment Questions: Yes No N/A

Will the project be designed to reduce excessive lighting, prevent light spillage and preserve/restore the night sky?
 ?

Total 1 of 1

QL 2.4 Improve Community Mobility and Access

Intent: Locate, design and construct the project in a way that eases traffic congestion, improves mobility and access, does not promote urban sprawl, and otherwise improves community livability.

Metric: Extent to which the project improves access and walkability, reductions in commute times, traverse times to existing facilities and transportation. Improved user safety considering all modes, e.g., personal vehicle, commercial vehicle, transit and bike/pedestrian.

Assessment Questions: Yes No N/A

Will the project provide good, safe access to adjacent facilities, amenities and transportation hubs?
 ?

**Envision Rating System
Self-Assessment Checklist**

Will the project design take into consideration the expected traffic flows and volumes in and around the project site to improve overall mobility and efficiency?	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	?
Has the project team coordinated the design with other infrastructure assets to reduce traffic congestion, and improve walkability and livability?	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	?
Total	0	of	2	

QL 2.5 Encourage Alternative Modes of Transportation

Intent: Improve accessibility to non-motorized transportation and public transit. Promote alternative transportation and reduce congestion.

Metric: The degree to which the project has increased walkability, use of public transit, non-motorized transit.

Assessment Questions:	Yes	No	N/A	
Will the project be within walking distance of accessible multi-modal transportation?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Through its design, will the project encourage the use of transit and/or non-motorized transportation?	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	?
Total	1	of	2	

QL 2.6 Improve Accessibility, Safety and Wayfinding

Intent: Improve user accessibility, safety, and wayfinding of the site and surrounding areas.

Metric: Clarity, simplicity, readability and broad-population reliability in wayfinding, user benefit and safety.

Assessment Questions:	Yes	No	N/A	
Will the project contain the appropriate signage for safety and wayfinding in and around the constructed works?	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	?
Will the project address safety and accessibility in and around the constructed works for users and emergency personnel?	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	?
Will the project extend accessibility and intuitive signage to protect nearby sensitive sites or neighborhoods?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Total	1	of	2	

3. Community

QL 3.1 Preserve Historic and Cultural Resources

Intent: Preserve or restore significant historical and cultural sites and related resources to preserve and enhance community cultural resources.

Metric: Summary of steps taken to identify, preserve or restore cultural resources.

Assessment Questions:	Yes	No	N/A	
Will the project minimize negative impacts on historic and cultural resources?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Will the project be designed so that it fully preserves and/or restores historic/cultural resources on or near the project site?	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	?
Total	1	of	2	

QL 3.2 Preserve Views and Local Character

**Envision Rating System
Self-Assessment Checklist**

Intent: Design the project in a way that maintains the local character of the community and does not have negative impacts on community views.

Metric: Thoroughness of efforts to identify important community views and aspects of local landscape, including communities, and incorporate them into the project design.

Assessment Questions:	Yes	No	N/A	
Will the project be designed in a way that preserves views and local character?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Will the project be designed to improve local character, views or the natural landscape through preservation and/or restorative actions?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Total	2	of	2	

QL 3.3 Enhance Public Space

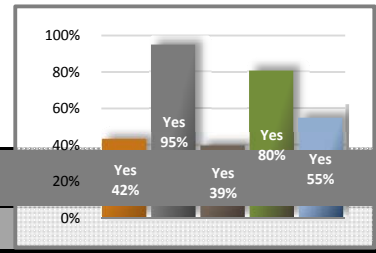
Intent: Improve existing public space including parks, plazas, recreational facilities, or wildlife refuges to enhance community livability.

Metric: Plans and commitments to preserve, conserve, enhance and/or restore the defining elements of the public space.

Assessment Questions:	Yes	No	N/A	
Will the project make meaningful enhancements to public space?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Will the project result in a substantial restoration to public space?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Total	2	of	2	

CONTINUE ON TO THE LEADERSHIP CATEGORY →

**Envision Rating System
Self-Assessment Checklist**



Leadership

1. Collaboration

LD1.1 Provide Effective Leadership and Commitment

Intent: Provide effective leadership and commitment to achieve project sustainability goals.

Metric: Demonstration of meaningful commitment of the project owner and the project team to the principles of sustainability and sustainable performance improvement.

Assessment Questions:	Yes	No	N/A	
Has the project team issued public statements stating their commitment to sustainability?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Is the project team's commitment to sustainability backed up by examples of actions taken or to be taken?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Does these commitments and actions demonstrate sufficiently that sustainability is a core value of the project team?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Total	3 of 3			

LD 1.2 Establish a Sustainability Management System

Intent: Create a project management system that can manage the scope, scale and complexity of a project seeking to improve sustainable performance.

Metric: The organizational policies, authorities, mechanisms and business processes that have been put in place and the judgment that they are sufficient for the scope, scale and complexity of the project.

Assessment Questions:	Yes	No	N/A	
Does the project team intend to establish a sound, workable sustainability management system that meets the requirements of the project?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Total	1 of 1			

LD 1.3 Foster Collaboration and Teamwork

Intent: Eliminate conflicting design elements, and optimize system by using integrated design and delivery methodologies and collaborative processes.

Metric: The extent of collaboration within the project team and the degree to which project delivery processes incorporate whole systems design and delivery approaches.

Assessment Questions:	Yes	No	N/A	
Are the project owner and the project team intending to take a systems view of the project, considering the performance relationship of this project to other community infrastructure elements?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Will the project owner and the project team establish a collaborative relationship on the project to achieve higher levels of sustainable performance?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Will the project owner and the project team institute a whole systems design and delivery process with the objective of maximizing sustainable performance?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Total	3 of 3			

**Envision Rating System
Self-Assessment Checklist**

Intent: Establish sound and meaningful programs for stakeholder identification, engagement and involvement in project decision making.			
Metric: The extent to which project stakeholders are identified and engaged in project decision making. Satisfaction of stakeholders and decision makers in the involvement process.			
Assessment Questions:	Yes	No	N/A
Will key stakeholders in the project be identified and lines of communication established?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/> ?
Does the project team plan to engage with stakeholders and solicit stakeholder feedback?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/> ?
Will the project team establish a strong stakeholder involvement process designed to involve the public meaningfully in project decision-making?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/> ?
Total	3	of	3

2. Management

LD 2.1 Pursue By-Product Synergy Opportunities

Intent: Reduce waste, improve project performance and reduce project costs by identifying and pursuing opportunities to use unwanted by-products or discarded materials and resources from nearby operations.

Metric: The extent to which the project team identified project materials needs, sought out nearby facilities with by-product resources that could meet those needs and capture synergy opportunities.

Assessment Questions:	Yes	No	N/A
Will the project team establish a program to locate, assess and make use of unwanted by-products and materials on the project?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/> ?
Total	1	of	1

LD 2.2 Improve Infrastructure Integration

Intent: Design the project to take into account the operational relationships among other elements of community infrastructure which results in an overall improvement in infrastructure efficiency and effectiveness.

Metric: The extent to which the design of the delivered works integrates with existing and planned community infrastructure, and results in a net improvement in efficiency and effectiveness.

Assessment Questions:	Yes	No	N/A
Will the project team seek to optimize sustainable performance at the infrastructure component level?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/> ?
Will the project team seek to optimize sustainable performance by designing the project as an integrated system?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/> ?
Will the project be planned and designed so that its operation and functions are fully integrated with all infrastructure elements in the community?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/> ?
Total	3	of	3

3. Planning

LD 3.1 Plan For Long-term Maintenance and Monitoring

Intent: Put in place plans and sufficient resources to ensure as far as practical that ecological protection, mitigation and enhancement measures are incorporated in the project and can be carried out.

**Envision Rating System
Self-Assessment Checklist**

Metric: Comprehensiveness and detail of long-term monitoring and maintenance plans, and commitment of resources to fund the activities.

Assessment Questions:	Yes	No	N/A	
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Will the project have a plan for long term monitoring and maintenance?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
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Will that plan be sufficiently comprehensive, covering all aspects of long-term monitoring and maintenance?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
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Total	2	of	2
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LD 3.2 Address Conflicting Regulations and Policies

Intent: Work with officials to identify and address laws, standards, regulations or policies that may unintentionally create barriers to implementing sustainable infrastructure.

Metric: Efforts to identify and change laws, standards, regulations and/or policies that may unintentionally run counter to sustainability goals, objectives and practices.

Assessment Questions:	Yes	No	N/A	
------------------------------	------------	-----------	------------	--

Will an assessment of applicable regulations, policies and standards be done, identifying those that may run counter to project sustainable performance goals, objectives and targets?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
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Do the owner and the project team intend to approach decision-makers to resolve conflicts?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
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Total	2	of	2
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LD 3.3 Extend Useful Life

Intent: Meet energy needs through renewable energy sources.

Metric: Extent to which renewable energy resources are incorporated into the design, construction and operation.

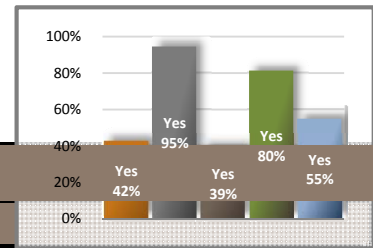
Assessment Questions:	Yes	No	N/A	
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Will the project be designed in ways that extend substantially the useful life of the project?	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	?
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Total	0	of	0
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CONTINUE ON TO THE RESOURCE ALLOCATION CATEGORY →

**Envision Rating System
Self-Assessment Checklist**



Resource Allocation

1. Materials

RA1.1 Reduce Net Embodied Energy

Intent: Conserve energy by reducing the net embodied energy of project materials over the project life.

Metric: Percentage reduction in net embodied energy from a life cycle energy assessment.

Assessment Questions:	Yes	No	N/A	
Does the project team plan to conduct an assessment of the embodied energy of key materials over the project life?	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	?
Will the project achieve a significant reduction in net embodied energy over the life of the project?	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	?
Total	0 of 1			

RA 1.2 Support Sustainable Procurement Practice

Intent: Obtain materials and equipment from manufacturers and suppliers who implement sustainable practices.

Metric: Percentage of materials sourced from manufacturers who meet sustainable practices requirements.

Assessment Questions:	Yes	No	N/A	
Will the project team establish a preference for using manufacturers, suppliers and service companies that have strong sustainable policies and practices?	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	?
Will the project team establish a sound and viable sustainable procurement program?	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	?
Does the project team intend to source a significant proportion of project materials, equipment, supplies and services from these companies?	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	?
Total	0 of 3			

RA 1.3 Use Recycled Materials

Intent: Reduce the use of virgin materials and avoid sending useful materials to landfills by specifying reused materials, including structures, and material with recycled content.

Metric: Percentage of project materials that are reused or recycled.

Assessment Questions:	Yes	No	N/A	
Will the project team consider the appropriate reuse of existing structures and materials and incorporated them into the project?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Will the project team specify that a significant amount of materials with recycled content be used on the project?	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	?
Total	1 of 2			

RA 1.4 Use Regional Materials

Intent: Minimize transportation costs and impacts and retain regional benefits through specifying local sources.

**Envision Rating System
Self-Assessment Checklist**

Metric: Percentage of project materials by type and weight or volume sourced within the required distance.			
Assessment Questions:	Yes	No	N/A
Will the project team work to identify local/regional sources of materials?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/> ?
Does the project utilize a significant amount of locally sourced materials?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/> ?
Total	2	of	2

RA 1.5 Divert Waste from Landfills			
Intent: Reduce waste, and divert waste streams away from disposal to recycling and reuse.			
Metric: Percentage of total waste diverted from disposal.			
Assessment Questions:	Yes	No	N/A
Will the project team identify potential recycling and reuse destinations for construction and demolition waste generated on site?	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/> ?
Will the project team develop an operations waste management plan to decrease and divert project waste from landfills and incinerators during construction and operation?	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/> ?
Will the project divert a significant amount of project waste from landfills?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/> ?
Total	1	of	3

RA 1.6 Reduce Excavated Materials Taken Off Site			
Intent: Minimize the movement of soils and other excavated materials off site to reduce transportation and environmental impacts.			
Metric: Percentage of excavated material retained on site.			
Assessment Questions:	Yes	No	N/A
Will the project be designed to balance cut and fill to reduce the amount of excavated material taken off site?	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/> ?
When necessary, will the project team taken steps to identify local sources/receivers of excavated material?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/> ?
Will the project reuse a significant amount of suitable excavated material onsite?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/> ?
Total	2	of	3

RA 1.7 Provide for Deconstruction and Recycling			
Intent: Encourage future recycling, up-cycling, and reuse by designing for ease and efficiency in project disassembly or deconstruction at the end of its useful life.			
Metric: Percentage of components that can be easily separated for disassembly or deconstruction.			
Assessment Questions:	Yes	No	N/A
Will the project team assess whether materials specified can be easily recycled or reused after the useful life of the project has ended?	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/> ?
Will the project be designed so that a significant amount of project materials be easily separated for recycling or readily reused at the end of the project's useful life?	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/> ?
Will the project team incorporate methods for increasing the likelihood of materials recycling when the project is operating?	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/> ?
Total	0	of	2

**Envision Rating System
Self-Assessment Checklist**

2. Energy

RA 2.1 Reduce Energy Consumption

Intent: Conserve energy by reducing overall operation and maintenance energy consumption throughout the project life cycle.

Metric: Percentage of reductions achieved.

Assessment Questions:	Yes	No	N/A	
Will the project team conduct reviews to identify options for reducing energy consumption during operations and maintenance of the constructed works?	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	?
Will the project team conducted feasibility studies and cost analyses to determine the most effective methods for energy reduction and incorporated them into the design?	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	?
Is the project expected to achieve significant reductions in energy consumption?	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	?
Total	0 of 0			

RA 2.2 Use Renewable Energy

Intent: Meet energy needs through renewable energy sources.

Metric: Extent to which renewable energy resources are incorporated into the design, construction and operation.

Assessment Questions:	Yes	No	N/A	
Will the owner and project team identify and analyze options to meet operational energy needs through renewable energy?	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	?
Will the project meet a significant amount of its energy needs through renewable energy?	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	?
Total	0 of 0			

RA 2.3 Commission and Monitor Energy Systems

Intent: Ensure efficient functioning and extend useful life by specifying the commissioning and monitoring of the performance of energy systems.

Metric: Third party commissioning of electrical/mechanical systems and documentation of system monitoring equipment in the design.

Assessment Questions:	Yes	No	N/A	
Does the owner and project team intend to conduct an independent commissioning of the project's energy and mechanical systems?	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	?
Will the project team assemble the necessary information needed to train operations and maintenance workers in a way that facilitates proper training and operations?	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	?
Will the design incorporate advanced monitoring systems, such as energy sub-meters, to enable more efficient operations?	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	?
Total	0 of 0			

3. Water

RA 3.1 Protect Fresh Water Availability

Intent: Reduce the negative net impact on fresh water availability, quantity and quality.

Metric: The extent to which the project uses fresh water resources without replenishing those resources at its source.

**Envision Rating System
Self-Assessment Checklist**

Assessment Questions:	Yes	No	N/A	
Will the project team assess project water requirements?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Does the project team plan to conduct a comprehensive assessment of the project's long-term impacts on water availability?	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	?
Will the project only access water that can be replenished in both quantity and quality?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Will the project consider the impacts of fresh water withdrawal on receiving waters?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Will the project discharge into receiving waters meet quality and quantity requirements for high value aquatic species?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Will the project achieve a net-zero impact on water supply quantity and quality?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Will the project restore the quantity and quality of fresh water surface and groundwater supplies to an undeveloped native ecosystem condition?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Total	6 of 6			

RA 3.2 Reduce Potable Water Consumption

Intent: Reduce overall potable water consumption and encourage the use of greywater, recycled water, and stormwater to meet water needs.

Metric: Percentage of water reduction.

Assessment Questions:	Yes	No	N/A	
Will the project team conduct planning or design reviews to identify potable water reduction strategies?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Will the project team conduct feasibility and cost analysis to determine the most effective methods for potable water reduction and incorporated them into the design?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Will the project achieve a substantial reduction in potable water consumption?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Will the project result in a net positive generation of water, and water up-cycling, as a result of on-site purification or treatment?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Total	4 of 4			

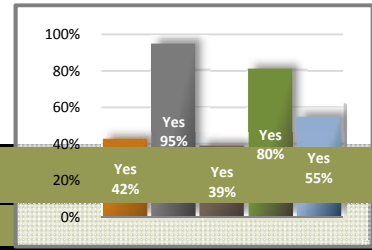
RA 3.3 Monitor Water Systems

Intent: Implement programs to monitor water systems performance during operations and their impacts on receiving waters.

Metric: Documentation of system in the design

Assessment Questions:	Yes	No	N/A	
Will the owner and project team conduct an independent commissioning/monitoring of the project's water systems in order to validate the design objectives?	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	?
Will the project design incorporate the means to monitor water performance during operations?	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	?
Will the project integrate long-term operations and impact monitoring to mitigate negative impacts and improve efficiency?	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	?
Will specific strategies be put in place to utilize monitoring and leak detection in order for the project to be more responsive to changing operating conditions?	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	?
Total	0 of 0			

**Envision Rating System
Self-Assessment Checklist**



Natural World

1. Siting

NW 1.1 Preserve Prime Habitat

Intent: Avoid placing the project – and the site compound/temporary works – on land that has been identified as of high ecological value or as having species of high value.

Metric: Avoidance of high ecological value sites and establishment of protective buffer zones.

Assessment Questions:	Yes	No	N/A	
Will the project team take steps to identify and document areas of prime habitat near or on the site?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Will the project avoid development on land that is judged to be prime habitat?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Will the project establish a minimum 300 ft. natural buffer zone around all areas deemed prime habitat?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Will the project significantly increase the area of prime habitat through habitat restoration?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Will the project improve habitat connectivity by linking habitats?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Total	5	of	5	

NW 1.2 Protect Wetlands and Surface Water

Intent: Protect, buffer, enhance and restore areas designated as wetlands, shorelines, and waterbodies by providing natural buffer zones, vegetation and soil protection zones.

Metric: Size of natural buffer zone established around all wetlands, shorelines, and waterbodies.

Assessment Questions:	Yes	No	N/A	
Will the project avoid development on wetlands, shorelines, and waterbodies?	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	?
Will the project maintain soil protection zones (VSPV) around all wetlands, shorelines, and waterbodies?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Will the project restore degraded existing buffer zones to a natural state?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Total	2	of	3	

NW 1.3 Preserve Prime Farmland

Intent: Identify and protect soils designated as prime farmland, unique farmland, or farmland of statewide importance.

Metric: Percentage of prime farmland avoided during development.

Assessment Questions:	Yes	No	N/A	
Will this project avoid development on land designated as prime farmland.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	?
Total	0	of	1	

**Envision Rating System
Self-Assessment Checklist**

Intent: Avoid development in adverse geologic formations and safeguard aquifers to reduce natural hazards risk and preserve high quality groundwater resources.			
Metric: Degree to which natural hazards and sensitive aquifers are avoided and geologic functions maintained.			
Assessment Questions:	Yes	No	N/A
Will the project team identify and address the impacts of sensitive or adverse geology?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/> ?
Will the project be designed to reduce the risk of damage to sensitive geology?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/> ?
Will the project be designed to reduce the risk of damage from adverse geology?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/> ?
Total	3	of	3

NW 1.5 Preserve Floodplain Functions			
Intent: Preserve floodplain functions by limiting development and development impacts to maintain water management capacities and capabilities.			
Metric: Efforts to avoid floodplains or maintain predevelopment floodplain functions.			
Assessment Questions:	Yes	No	N/A
Will the project avoid or limit development within the design frequency floodplain?	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/> ?
Will the project maintain pre-development floodplain infiltration and water quality?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/> ?
Will the project design incorporate a flood emergency operations and/or evacuation plan?	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/> ?
Will the project maintain or enhance riparian and aquatic habitat, including aquatic habitat connectivity?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/> ?
Will the project maintain sediment transport?	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/> ?
Does the project team intend to modify or remove infrastructure subject to frequent damage by floods?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/> ?
Total	3	of	4

NW 1.6 Avoid Unsuitable Development on Steep Slopes			
Intent: Protect steep slopes and hillsides from inappropriate and unsuitable development in order to avoid exposures and risks from erosion and landslides, and other natural hazards.			
Metric: The degree to which development on steep slopes is avoided, or to which erosion control and other measures are used to protect the constructed works as well as other downslope structures.			
Assessment Questions:	Yes	No	N/A
Will the project team use best management practices to manage erosion and prevent landslides?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/> ?
Will the project team minimize or avoid all development on or disruption to steep slopes?	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/> ?
Total	1	of	2

NW 1.7 Preserve Greenfields

**Envision Rating System
Self-Assessment Checklist**

Intent: Conserve undeveloped land by locating projects on previously developed greyfield sites and/or sites classified as brownfields.

Metric: Percentage of site that is a greyfield or the use and cleanup of a site classified as a brownfield.

Assessment Questions:	Yes	No	N/A	
Will the project team consider how the project can conserve undeveloped land?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Will a significant amount of the project development be located on previously developed sites, that is, sites classified as greyfields or brownfields?	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	?
Total	1	of	2	

2. Land and Water

NW 2.1 Manage Stormwater

Intent: Minimize the impact of infrastructure on stormwater runoff quantity and quality.

Metric: Infiltration and evapotranspiration capacity of the site and return to pre-development capacities.

Assessment Questions:	Yes	No	N/A	
Will the project be designed to reduce storm runoff to pre-development conditions?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Will the project be designed to significantly improve water storage capacity?	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	?
Total	1	of	1	

NW 2.2 Reduce Pesticides and Fertilizer Impacts

Intent: Reduce non-point source pollution by reducing the quantity, toxicity, bioavailability and persistence of pesticides and fertilizers, or by eliminating the need for the use of these materials.

Metric: Efforts made to reduce the quantity, toxicity, bioavailability and persistence of pesticides and fertilizers used on site, including the selection of plant species and the use of integrated pest management techniques.

Assessment Questions:	Yes	No	N/A	
Will operational policies be put in place to control and reduce the application of fertilizers and pesticides?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Will the project include runoff controls to minimize contamination of ground and surface water?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Will the project team select landscaping plants to minimize the need for fertilizer or pesticides?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Will the project team select fertilizers and pesticides appropriate for site conditions with low-toxicity, persistence, and bioavailability?	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	?
Will the project designed to eliminate the need for pesticides or fertilizers?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Total	4	of	4	

NW 2.3 Prevent Surface + Groundwater Contamination

Intent: Preserve fresh water resources by incorporating measures to prevent pollutants from contaminating surface and groundwater and monitor impacts over operations.

Metric: Designs, plans and programs instituted to prevent and monitor surface and groundwater contamination.

**Envision Rating System
Self-Assessment Checklist**

Assessment Questions:	Yes	No	N/A	
Will the project team conduct or acquire hydrologic delineation studies?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Will spill and leak prevention and response plans and design be incorporated into the design?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Will the project design reduce or eliminate potentially polluting substances from the project?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Will the project team seek to reduce future contamination by cleaning up areas of contamination and instituting land use controls to limit the introduction of future contamination sources?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Total	4 of 4			

3. Biodiversity

NW 3.1 Preserve Species Biodiversity

Intent: Protect biodiversity by preserving and restoring species and habitats.

Metric: Degree of habitat protection.

Assessment Questions:	Yes	No	N/A	
Will the project team identify existing habitats on and near the project site?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Will the project protect existing habitats?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Will the project increase the quality or quantity of existing habitat?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Will the project preserve, or improve, wildlife movement corridors?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Total	4 of 4			

NW 3.2 Control Invasive Species

Intent: Use appropriate non-invasive species and control or eliminate existing invasive species.

Metric: Degree to which invasive species have been reduced or eliminated.

Assessment Questions:	Yes	No	N/A	
Will the project team specify locally appropriate and non-invasive plants on the site?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Will the project team implement a comprehensive management plan to identify, control, and/or eliminate, invasive species?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Will the project team implement a comprehensive management plan to prevent or mitigate the future encroachment of invasive species?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Total	3 of 3			

NW 3.3 Restore Disturbed Soils

Intent: Restore soils disturbed during construction and previous development to bring back ecological and hydrological functions.

Metric: Percentage of disturbed soils restored.

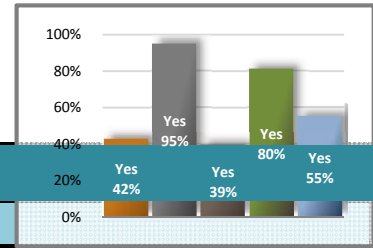
Assessment Questions:	Yes	No	N/A	
Will the project restore 100% of soils disturbed during construction?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?

Envision Rating System
Self-Assessment Checklist

Will the project restore 100% of soils disturbed by previous development?	<input checked="" type="radio"/> <input type="radio"/> <input type="radio"/>
Total 2 of 2	
Will the project maintain or enhance hydrologic connection?	<input checked="" type="radio"/> <input type="radio"/> <input type="radio"/>
Will the project maintain or enhance water quality?	<input checked="" type="radio"/> <input type="radio"/> <input type="radio"/>
Will the project maintain or enhance habitat?	<input checked="" type="radio"/> <input type="radio"/> <input type="radio"/>
Will the project maintain or restore sediment transport?	<input type="radio"/> <input type="radio"/> <input checked="" type="radio"/>
Will wetlands and surface water be maintained or restored so as to have a fully functioning aquatic and riparian ecosystem?	<input checked="" type="radio"/> <input type="radio"/> <input type="radio"/>
Total 4 of 4	

CONTINUE ON TO THE CLIMATE AND RISK CATEGORY →

**Envision Rating System
Self-Assessment Checklist**



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, reducing project contribution to climate change.

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

Assessment Questions:	Yes	No	N/A
Will a life-cycle carbon assessment be conducted on the project?	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Based on that assessment, will the project be designed in a way that substantially reduces carbon emissions?	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Total	0	of	1

CR 1.2 Reduce Air Pollutant Emissions

Intent: Reduce the emission of six criteria pollutants; particulate matter (including dust), ground level ozone, carbon monoxide, sulfur oxides, nitrogen oxides, lead, and noxious odors.

Metric: Measurements of air pollutants as compared to standards used.

Assessment Questions:	Yes	No	N/A
Will the project be designed in a way that substantially reduces dust and odors on the site?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Will the project be designed in a way that substantially exceeds the National Ambient Air Quality Standards (NAAQS) for the six criteria pollutants?	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Total	1	of	2

2. Resilience

CR 2.1 Assess Climate Threat

Intent: Develop a comprehensive Climate Impact Assessment and Adaptation Plan.

Metric: Summary of steps taken to prepare for climate variation and natural hazards.

Assessment Questions:	Yes	No	N/A
Will the project team develop a Climate Impact Assessment and Adaptation Plan?	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Total	0	of	1

CR 2.2 Avoid Traps and Vulnerabilities

Intent: Avoid traps and vulnerabilities that could create high, long-term costs and risks for the affected communities.

Metric: The extent of the assessment of potential long-term traps, vulnerabilities and risks due to long-term changes such as climate change and the degree to which these were addressed in the project design and in community design criteria.

**Envision Rating System
Self-Assessment Checklist**

Assessment Questions:	Yes	No	N/A	
Will a comprehensive review be conducted to identify the potential risks and vulnerabilities that would be created or made worse by the project?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Is there an intent by the owner or the project team to alter the design to reduce or eliminate these risks and vulnerabilities?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Total	2	of	2	

CR 2.3 Prepare for Long-Term Climate Adaptability

Intent: Prepare infrastructure systems to be resilient to the consequences of long-term climate change, perform adequately under altered climate conditions, or adapt to other long-term change scenarios.				
Metric: The degree to which the project has been designed for long-term resilience and adaptation.				
Assessment Questions:	Yes	No	N/A	
Will the project be designed to accommodate a changing operating environment throughout the project life cycle?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Total	1	of	1	

CR 2.4 Prepare for Short-Term Hazards

Intent: Increase resilience and long-term recovery prospects of the project and site from natural and man-made short-term hazards.				
Metric: Steps taken to improve protection measures beyond existing regulations.				
Assessment Questions:	Yes	No	N/A	
Will a hazard analysis be conducted covering the likely natural and man-made hazards in the project area area?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Will the project be designed so that it is able to recover quickly and cost-effectively from short-term hazard events?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Total	2	of	2	

CR 2.5 Manage Heat Island Effects

Intent: Minimize surfaces with a high solar reflectance index (SRI) to reduce localized heat accumulation and manage microclimates.				
Metric: Percentage of site area that meets SRI Criteria.				
Assessment Questions:	Yes	No	N/A	
Will the project be designed to reduce heat island effects by reducing the percentage of low solar reflectance index (SRI) surfaces?	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	?
Total	0	of	0	