ENVISION A MORE SUSTAINABLE PLAN FOR INFRASTRUCTURE

September 14, 2015

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Presentation Outline

- Overview of ISI and Envision
- Envision as a Tool for Planning and Design
- Envision Application Process
- Case Study – Snow Creek SEZ Restoration
- Sustainable Design Concepts Considered
- Lessons Learned
- Credit Review for Snow Creek Project
- Questions
Institute for Sustainable Infrastructure (ISI)

- Not for profit education and research organization
- Dedicated to developing and maintaining a civil infrastructure rating system

www.sustainableinfrastructure.org
2013 ASCE’s Report Card for America’s Infrastructure

**Overall grade D+**

$3.6$ trillion

- Aviation: D
- Bridges: C+
- Dams: D
- Drinking Water: D
- Energy: D+
- Hazardous Waste: D
- Inland Waterways: D
- Levees: D-
- Ports: C
- Public Parks & Recreation: C-
- Rail: C+
- Roads: D
- Schools: D
- Solid Waste: B-
- Transit: D
- Wastewater: D
2014 ASCE’s Report Card for Nevada’s Infrastructure

**Overall grade of C-**

- Aviation: C-
- Dams: D+
- Water: C-
- Flood Control: C-
- Schools: D
- Solid Waste: B-
- Transportation: C-
- Wastewater: B
The Future of Infrastructure
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
ISI and the Zofnass Program for Sustainable Infrastructure, Harvard University Graduate School of Design

Collaborated to develop the Envision Sustainability Rating System
Envision Sustainability Rating System

- New in 2012
- The Envision tool is a good framework for sustainable project design and planning
- GBA’s LEED™ for buildings
- FREE
Envision Applies to all Types of Infrastructure Projects

- Energy
- Water
- Waste
- Transportation
- Information
- Public Spaces
- Ecosystem Services

Restored creek channel for stormwater conveyance & treatment

Trails and mobility improvements
Envision Tools

- Self Assessment Checklist
- Infrastructure Sustainability Rating System/Project assessment and guidance tool
- Guidance Manual
60 Credits in 5 Categories

Purpose, Community, Wellbeing

Collaboration, Management, Planning

Materials, Energy, Water

Siting, Land & Water, Biodiversity

Emissions, Resilience
Full Envision evaluation uses 680 possible points within 5 categories:

- Quality of Life
- Leadership
- Natural World
- Resource Allocation
- Climate and Risk
### 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.

<table>
<thead>
<tr>
<th>Assessment Questions</th>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are the relevant community needs, goals and issues being addressed in the project?</td>
<td></td>
<td></td>
<td>?</td>
</tr>
<tr>
<td>Are the potentially negative impacts of the project on the host and nearby communities been reduced or eliminated?</td>
<td></td>
<td></td>
<td>?</td>
</tr>
<tr>
<td>Has the project design received broad community endorsement, including community leaders and stakeholder groups?</td>
<td></td>
<td></td>
<td>?</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**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.

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<tr>
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<th>Yes</th>
<th>No</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Will the project contribute significantly to local employment?</td>
<td></td>
<td></td>
<td>?</td>
</tr>
<tr>
<td>Will the project make a significant increase in local productivity?</td>
<td></td>
<td></td>
<td>?</td>
</tr>
<tr>
<td>Will the project make the community more attractive to people and businesses?</td>
<td></td>
<td></td>
<td>?</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**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.

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<thead>
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<th>Yes</th>
<th>No</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does the project team intend to hire and train a substantial number of local workers?</td>
<td></td>
<td></td>
<td>?</td>
</tr>
<tr>
<td>Does the project team intend to use a substantial number of local suppliers and specialty firms?</td>
<td></td>
<td></td>
<td>?</td>
</tr>
<tr>
<td>Will the project, through local employment, subcontracting and education programs, make a substantial improvement in local capacity and competitiveness?</td>
<td></td>
<td></td>
<td>?</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

- **Series of Yes, No and N/A answers.**
- **Conduct early in the planning and design process**
- **May be used to help evaluate alternatives**
- **Promotes ideas to make a project more sustainable**
- **Quick evaluation**
- **Not meant to determine rating score**
## Q1.1 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

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<th>IMPROVED</th>
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<tr>
<td>The project team has located and reviewed the most recent 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 serious adverse community effects are caused by the project.</td>
<td>More efforts to locate, review, assess, and incorporate the needs, goals, and plans of the host community to 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.</td>
<td>All 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.</td>
<td>The project makes a 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 trade-offs for benefits achieved. The project has broad community endorsement.</td>
<td>Through rehabilitation of important community assets (e.g., 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.</td>
</tr>
</tbody>
</table>
EVALUATION CRITERIA AND DOCUMENTATION

A. Has the project team identified and taken into account community needs, goals, and issues?
   1. Lists and examples of documents obtained and reviewed; minutes of meetings with key stakeholders, community leaders, and decision makers; letters; and memoranda.

B. Has the project team sought to align the project vision and goals to the needs and goals of the host and affected communities?
   1. Evidence showing a comparison of the project vision and goals to the needs, goals, plans, and issues of the community.

C. Has the project team sought to identify and address potential adverse impacts to the host and affected communities?
   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 memoranda with key stakeholders, community leaders, and decision makers for obtaining input and agreement regarding the impact assessment and planned actions.

D. Have the affected communities been meaningfully engaged in the project design process?
   1. Reports and documented results of meetings, design charrettes, and other activities conducted with representatives of affected communities.
   2. Evidence of project processes for collecting, evaluating, and incorporating community input into the project designs. Demonstration of the thoroughness of the evaluation and incorporation to the designs.
   3. Evidence showing the extent to which options were identified, and any needed, reasonable changes to the project made in accordance with community needs or plans.

E. Are the affected communities satisfied that the project is addressing their immediate and long-term issues, needs, and goals?
   1. Acknowledgments and endorsements by the community that the design participation process was helpful and that their input was appropriately assessed and incorporated into project design.

F. Have the project owner and the project team designed the project in a way that improves existing community conditions and rehabilitates infrastructure assets?
   1. Plans, designs, and meeting minutes with community stakeholders and decision makers demonstrating an understanding of community conditions and assets and substantive efforts to rehabilitate.
Envision Rating System Process

- Use Envision Workbook to prepare Envision application.
- Submit online application with documentation by ENV SP – fee required
- Third party verification by Envision Verifier
- Respond to verification – two or three times
- Authentication of verification by ISI
- Rating determination
## Rating System

### QUALITY OF LIFE

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

Notes:
"Raingardens"

**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>
</tr>
</thead>
<tbody>
<tr>
<td>QL</td>
<td>141</td>
<td>91</td>
<td>3</td>
<td>94</td>
</tr>
<tr>
<td>LD</td>
<td>106</td>
<td>66</td>
<td>0</td>
<td>66</td>
</tr>
<tr>
<td>RA</td>
<td>162</td>
<td>71</td>
<td>0</td>
<td>71</td>
</tr>
<tr>
<td>NW</td>
<td>177</td>
<td>118</td>
<td>2</td>
<td>120</td>
</tr>
<tr>
<td>CR</td>
<td>122</td>
<td>40</td>
<td>0</td>
<td>40</td>
</tr>
<tr>
<td>Total Project Points</td>
<td>700</td>
<td>396</td>
<td>5</td>
<td>391</td>
</tr>
</tbody>
</table>

**Envision™ Section Scores**

[Bar chart showing points for each section: QL (141), LD (106), RA (162), NW (177), CR (122)]
## Award Levels

<table>
<thead>
<tr>
<th>Recognition Level</th>
<th>Minimum Applicable Points</th>
<th>Minimum in Each Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bronze</td>
<td>20%</td>
<td>No minimum category percentage required</td>
</tr>
<tr>
<td>Silver Award</td>
<td>30%</td>
<td></td>
</tr>
<tr>
<td>Gold Award</td>
<td>40%</td>
<td></td>
</tr>
<tr>
<td>Platinum Award</td>
<td>50%</td>
<td></td>
</tr>
</tbody>
</table>
Envision Sustainability Professional

- Envision Sustainability Professional (ENV SP)
  - ISI Credentialed Practitioner Trained to Use the Envision Rating System
- Role
  - Guide the project team in using Envision
Envision™ Verifiers

- Independent, Third-party Verification of Project Certification Applications
- Role
  - Mentor ENV SP in Application Process
  - Verify Documentation, Levels of Achievement, and Overall Score
Snow Creek Wetlands Restoration Project

- **Location:**
  - North Lake Tahoe, CA

- **Owner:** Placer County

- **Funding:**
  - US Bureau of Reclamation
  - US Environmental Protection Agency
  - California Natural Resources Agency
  - California Abatement Account
  - Tahoe Regional Planning Agency
  - North Lake Tahoe Resort Association

- **Planning and Design:** CDM Smith Inc.
1954 Aerial Photo
Initial concrete batch plant
Snow Creek wetlands
Before…
Project History

- Community Vision in 1996 for Restoration
- Contamination discovered on the site
- Placer County worked with property owner to acquire Brownfields funding for cleanup
- Placer County purchased the site
- Planning started to convert site from industrial use and restore SEZ and wetlands
Regional and Project Planning Studies

Regional Planning Documents

• Tahoe Vista Community Plan (1996)
• Lake Tahoe Environmental Improvement Program (1997)
• North Lake Tahoe Tourism and Community Investment Master Plan (2004)
• Lake Tahoe Region Bicycle and Pedestrian Plan (2010)

Project Planning Documents

• Environmental Studies – CEQA/NEPA/TRPA
• Existing Conditions Analysis
• Formulation and Evaluation of Alternatives Report
• Recommended Project Alternative Report
• Final Design Report
Initial Project Objectives

- Improve water quality
- Convey stormwater runoff
- Relocate commercial space
- Improve aesthetics
- Remove fill & restore wetlands
Project Evolution

- Implement a multi-objective project that provides
  - Restored stream zone habitat
  - Improved water quality and aesthetics
  - Public access to sensitive areas and open space
  - Alternative transportation modes and routes
  - Environmental educational opportunities

- Applied Envision
Applying Envision™ to the Snow Creek Project

- CDM Smith R&D Project
- Applied Envision during planning and design
- Submitted application for ISI rating
- Received first platinum rating awarded by ISI
Why Restore Snow Creek SEZ?

- Fill placed on site encroached on wetland
- Operated as a concrete batch plant for 50 years
- Soils impacted (high pH, residual hydrocarbons)
- Stormwater runoff flowed through the property causing erosion and transported pollutants to Snow Creek and Lake Tahoe
Ideal Location for Additional Opportunities

- Between two existing recreational trail systems
- Undisturbed meadow, wetlands and mountain forest
- Extensive residential neighborhoods
- Lake Tahoe beach
- Bus stop and boat launch
Project Site: 6 acres
Restoration Area: 3.5 acres
Construction Cost: $1.7M
How we used Envision...

- **Self-Assessment Checklist – yes/no questions**
  - Screening level evaluation
  - Educated team on sustainable infrastructure planning
  - Provided new value added ideas
  - Enhanced the alternatives evaluation process

- **Applied the full Envision rating system to evaluate the project and applied for rating from ISI**
  - Staff accreditation
  - Development and compilation of documentation
  - Completion of online application
  - Coordination for verification and authentication
## 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.

<table>
<thead>
<tr>
<th>Assessment Questions</th>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has the project team taken steps to identify and document areas of prime habitat near or on the site?</td>
<td>●</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Does the project avoid development on land that is judged to be prime habitat?</td>
<td>●</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Does the project establish natural buffer zones around all areas deemed prime habitat?</td>
<td>●</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Does the project significantly increase the area of prime habitat through habitat restoration?</td>
<td>○</td>
<td>●</td>
<td>○</td>
</tr>
<tr>
<td>Does the project improve habitat connectivity by linking habitats?</td>
<td>○</td>
<td>●</td>
<td>○</td>
</tr>
</tbody>
</table>

**Total** 3 of 5
Key Questions

Will we do the right project?

- Restoration
- Transportation improvements
- Stakeholder involvement

Will we do the project right?

- Salvage and re-use
- Recycled materials
- Plan for climate change
Quality of Life

◆ New multi-use trails
◆ Aesthetic improvements
◆ Educational opportunities
◆ Way-finding
Mobility Improvements
Leadership

- Incorporate Regional Sustainability Policies
- Engagement of stakeholders
- Public outreach beyond CEQA
Resource Allocation

- Re-used existing onsite materials
- Used recycled materials
Re-use of On-site Boulders
Re-use of Wetland Sod, Willows and Cobbles
Recycled Railroad Flatcar for Bridge
Natural World

- Restored sensitive habitat
- Improved water quality
- Created buffer for adjacent meadow and Snow Creek
Water Quality Improvements
Climate and Risk

- Reduced emissions
- Resilience to predicted climate change impacts
Envision Results per Category

<table>
<thead>
<tr>
<th>Credit Category</th>
<th>Applicable Points</th>
<th>Earned Points</th>
<th>Percentage of Applicable Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>QUALITY OF LIFE</td>
<td>149</td>
<td>114</td>
<td>77%</td>
</tr>
<tr>
<td>LEADERSHIP</td>
<td>121</td>
<td>58</td>
<td>48%</td>
</tr>
<tr>
<td>RESOURCE ALLOCATION</td>
<td>111</td>
<td>38</td>
<td>34%</td>
</tr>
<tr>
<td>NATURAL WORLD</td>
<td>177</td>
<td>163</td>
<td>92%</td>
</tr>
<tr>
<td>CLIMATE AND RISK</td>
<td>122</td>
<td>55</td>
<td>45%</td>
</tr>
<tr>
<td><strong>Total Points</strong></td>
<td><strong>680</strong></td>
<td><strong>428</strong></td>
<td><strong>63%</strong></td>
</tr>
</tbody>
</table>

> 50% = Platinum Award
Lessons Learned

- Address multiple objectives
- Integrate with existing infrastructure
- Promote stakeholder and public engagement
- Provide long-term O&M
- Identify regional or agency sustainability programs and policies
Lessons Learned

◆ Early application is key
◆ Work with ISI
◆ Can increase grant funding opportunities
◆ Increased the project’s sustainability!
**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

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<thead>
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F. Have the project owner and the project team designed the project in a way that improves existing community conditions and rehabilitates infrastructure assets?
   1. Plans, designs, and meeting minutes with community stakeholders and decision makers demonstrating an understanding of community conditions and assets and substantive efforts to rehabilitate.
QL 1.1 Improve Quality of Life Documentation

- List of planning documents
- TAC Meeting Minutes
- CTC Staff Recommendations to Purchase Property and Restore
- Public Meeting Notices
- Community Relations Plan - Brownfields Grant for NEPA
- Project Plans
- Joint CEQA/TRPA Environmental Document
- Kickoff Meeting Minutes
- Preliminary Design Alternatives Report
- Final Design Report
# LD2.2 IMPROVE INFRASTRUCTURE INTEGRATION

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

## LEVELS OF ACHIEVEMENT

<table>
<thead>
<tr>
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<th>RESTORATIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Narrow optimization focus.</td>
<td>(3) Internal systems focus.</td>
<td>(7) Infrastructure bundling and synergies.</td>
<td>(13) Full infrastructure integration.</td>
<td>(16) High performance through restorative actions.</td>
</tr>
<tr>
<td>Project performance improvements in the triple bottom line, including</td>
<td>Project owner and designer look at the project and its delivered works</td>
<td>Project is planned and designed with other related community infrastructure taken into account (i.e., how its design and operation will work in harmony with other infrastructure elements external to the project). Additional investments are planned to create linkages and improve synergies and, by doing so, improve overall performance. Infrastructure deficit (i.e., need to repair and refurbish existing infrastructure) is factored in.</td>
<td>The project owner and designer place the project in a community context and participate in multisectoral regional strategic planning for integrated community sustainability plans. They assess the existing community’s physical infrastructure as well as its nonphysical assets. Project is planned and designed to take into account not only physical infrastructure, but also related community infrastructure. The project incorporates and takes advantage of valuable community assets (e.g., knowledge and social capital). The project integrates with the community’s asset management program.</td>
<td>Early in project development, the project owner and project team work with the community to identify existing community assets in the natural or built environment that, when restored, would improve the economic growth and development capacity of the community. The project incorporates restoration of those assets as part of a comprehensive strategic sustainability plan. The project takes into account other related community infrastructure as well as sustaining and/or restoring community assets to enhance overall community efficiencies and effectiveness. There is integration with, and restoration of, natural systems, resources, community knowledge, and social capital assets.</td>
</tr>
<tr>
<td>resource conservation and use of renewable resources. Protection of</td>
<td>as a system. Triple bottom line project performance improvements are</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>environmental, economic, and social systems are substantive, but are</td>
<td>significant because of efforts to optimize performance across the entire</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>confined to individual components. Individual gains are present, but</td>
<td>project and its delivered works</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>are suboptimal because of the lack of component integration. Little or</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>no exploration of synergies among components.</td>
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<tr>
<td>(A)</td>
<td>(A)</td>
<td>(A, B)</td>
<td>(A, B, C)</td>
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</table>
EVALUATION CRITERIA AND DOCUMENTATION

A. To what extent did the project team seek to improve project sustainability performance through project-wide systems integration?
   1. Design documents showing improvements made and the degree to which these improvements were integrated with other community infrastructure elements.

B. How detailed was the assessment of their potential for use on the project either in the design and construction stage or in operations?
   1. Scope and details of assessment processes used and assessments made.

C. To what extent did the project team pursue promising by-product synergy opportunities?
   1. Records of by-product synergy opportunities identified, assessed, and pursued. Results of pursuits documented.

D. Did the project team achieve success in making use of unwanted byproducts or discarded materials on the project either in the design and construction stage or in operations?
   1. Documentation of successful by product synergy opportunity capture and application.
LD 2.2 Improve Infrastructure Integration Documentation

• Joint CEQA/TRPA Environmental Document
• Project Plans
• TRPA Bicycle and Pedestrian Trail information about bike trail. Exec Summary, Maps, Table
• Preliminary Design Alternatives Report
• Final Design Report
• Sawmill Bike Path Design Sheets and Bid
• Tahoe Vista Recreation Area Parking and Trail Plan
• Lake Forest ECP Bridge Asbuilt and Spec
• Lower Blackwood Creek Restoration Project Plans
NW2.1 MANAGE STORMWATER

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

**LEVELS OF ACHIEVEMENT**

<table>
<thead>
<tr>
<th>IMPROVED</th>
<th>ENHANCED</th>
<th>SUPERIOR</th>
<th>CONSERVING</th>
<th>RESTORATIVE</th>
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<tr>
<td>(4) Increased storage capacity. The target water storage capacity for greyfields is a 30% improvement in water storage capacity. For brownfields, it is 20% improvement. Greenfield site maintains 100%. (A)</td>
<td>(9) Extended storage capacity. The target water storage capacity for greyfields is a 60% improvement in water storage capacity. For brownfields, 40% improvement. Greenfield site maintains 100%. (A)</td>
<td>(17) Sustainable stormwater management. The target water storage capacity for greyfields, is 90% improvement in water storage capacity. For brownfields, 60% improvement. Greenfields maintain the pre-development water storage capacity. (A)</td>
<td>(21) Enhanced stormwater management. Runoff is maintained on site and/or restores the hydrologic conditions of the undeveloped regional ecosystem. Stormwater management programs and stormwater handling structures are designed to capture and repurpose more than 100% of stormwater on site as part of overall water management regime. (B)</td>
<td></td>
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</table>
EVALUATION CRITERIA AND DOCUMENTATION

A. What percentage of improvement for a greyfield or brownfield site does the site’s proposed water storage, infiltration, evapotranspiration, and/or water harvesting capacity achieve or does the site maintain a greenfield site water storage capacity?

1. Documentation of the initial, final post-development, and target water storage, infiltration, evaporation, water harvesting, and/or cistern storage capacities using TR-55 Curve Numbers (CNs) or other continuous simulation-modeling methods to describe site conditions.

B. Is 100% of the target water storage capacity achieved for greyfield and brownfield sites or does the greenfield site exceed 100% target water capacity to mitigate the impact of adjacent developed sites?

1. Documentation of the initial, final post-development, and target water storage, infiltration, evaporation, water harvesting, and/or cistern storage capacities using TR-55 Curve Numbers (CNs) or other continuous simulation modeling methods to describe site conditions.
NW 2.1 Manage Stormwater Documentation

- Final Design Report
- Preliminary Design Alternatives Report
CR1.2 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, and lead, as well as noxious odors.

LEVELS OF ACHIEVEMENT

<table>
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<tr>
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<tr>
<td>(2) Improved air quality standards. California’s standards are more stringent than the National Ambient Air Quality Standards and address additional pollutants beyond the six common air pollutants. Meet California Ambient Air Quality Standards for all project activities. Create a maintenance program to ensure that these standards remain met throughout the life of the project. (A)</td>
<td>(6) Enhanced air quality standards. Meet South Coast Air Quality Management rules in section XI and XIV, as applicable, for Source Specific Standards and Toxics and Other Non-Criteria Pollutants. (B)</td>
<td>(12) Negligible air quality impact. Project has only negligible air pollution impacts or net zero impacts from criteria pollutants. (C)</td>
<td>(15) Air quality improvement. Project not only achieves zero net production of criteria pollutants, but improves air quality to a level higher than pre-development. (C)</td>
<td></td>
</tr>
</tbody>
</table>
EVALUATION CRITERIA AND DOCUMENTATION

A. Has the project team designed the project to follow CAAQS?
   1. Documentation of expected emissions according to CAAQS and strategies implemented to reduce air pollutions to required levels.
   2. Monitoring and control program documents.

B. Has the project team designed the project to follow Sections XI and XIV of SCAQM rules?
   1. Documentation of applicable rules and strategies for compliance.

C. Does the project reduce air pollution to the required level or below predevelopment levels?
   1. Documentation of expected emissions of the six criteria pollutants and strategies implemented to reduce air pollutions to required levels.
CR 1.2 Reduce Air Pollutant Emissions Documentation

- Joint CEQA/TRPA Environmental Document

Required Review by Quick Response Team

Additional Documentation included:
- Project Timeline – Demolition
- Photographs of Previous Uses
- Project Plans Showing No Pollutant Sources
QUESTIONS ?

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