

NS Credit: Natural Resources Conservation and Restoration

This credit applies to

- ▶ Cities (2-5 points)
- ▶ Communities (2-5 points)

Intent

To conserve and restore the natural resources within the city.

Requirements

CITIES, COMMUNITIES

Natural Resource Acreage (3 points)

Maintain natural resource⁹ acreage at 80 square meters per person (861 square feet per person).

OR

Maintain natural resource acreage at 11.5% or more of total jurisdictional land area.

Reference:

STAR Communities V2 NS-3: Natural Resource Protection Outcome 1: Natural Resource Areas

Natural resource areas include but are not limited to critical aquifer recharge areas; deserts and arid lands; fish or wildlife habitat, natural deltas or floodplains, steep slopes, natural parkland, forests, geologically hazardous areas, grasslands and prairies, habitats of endangered and threatened species, shorelines and their buffers, streams and their buffers and wetlands. Green spaces as defined and /or provided under *NS Prerequisite: Green Spaces* can be included within the Natural Resource Acreage.

AND / OR

Natural Resource Conservation and Restoration Plan¹⁰ (2 points)

Develop a Natural Resource Conservation and Restoration Plan based on the study carried out under *NS Prerequisite: Ecosystem Assessment* to meet requirements of ANY two of the following ecosystems as applicable to the city. Adopt policies or regulations to support the execution of the Plan.

1. Steep Slopes:

⁹ Natural resource areas include but are not limited to critical aquifer recharge areas; deserts and arid lands; fish or wildlife habitat, natural deltas or floodplains, steep slopes, natural parkland, forests, geologically hazardous areas, grasslands and prairies, habitats of endangered and threatened species, shorelines and their buffers, streams and their buffers; and wetlands.

¹⁰ In lieu of a consolidated Natural Resources and Conservation Plan, cities and communities may provide individual plans, ordinances, regulations or policies to demonstrate compliance to credit requirements.

- ▶ Do not permit development on slopes greater than 40% and do not disturb portions of the land area within 50 feet (15 meters) horizontally of the top of the slope and 75 feet (23 meters) horizontally from the toe of the slope.
- ▶ For undeveloped slopes from 26% to 40%, development can be permitted on 40% of the area.
- ▶ For undeveloped slopes from 15% to 25%, development can be permitted on 60% of the area.
- ▶ For previously developed slopes (above 15%) restore a minimum of 50% of the slopes with native vegetation or noninvasive adaptive plants within a period of 5 years.

OR

If construction is permitted on steep slopes (greater than 15%), adopt a regulation to the effect that development permits and building permits will be issued after reviewing the following for each project:

- ▶ A general site survey, topographic and land feature survey along with geotechnical evaluation.
- ▶ A grading plan that indicates a clear feasibility for roads, driveways and building envelop without massive manipulation of the site.
- ▶ A tree and vegetation plan.
- ▶ A drainage management plan.
- ▶ An erosion control plan that avoids massive manipulation of the site.
- ▶ An Environmental Inventory and Assessment to identify environmentally sensitive areas and features to be protected, and to measures to avoid, minimize or mitigate environmental impacts of the proposed development and development activities.

Reference:

LEED v4 ND SLL Credit: Steep Slope Protection

2. **Agricultural land and food production:**

Do not disturb prime farmland, unique farmland, or farmland of statewide or local importance as defined by the U.S. Code of Federal Regulations, Title 7, Volume 6, Parts 400 to 699, Section 657.5 and identified in a state Natural Resources Conservation Service soil survey (or local equivalent for projects outside the U.S.).

Reference:

LEED v4 ND SLL Prerequisite: Agricultural Land Conservation

OR

If the development footprint affects farmland of any category, mitigate the loss by providing alternative area for farming such as rooftop farming or vertical farming in the ratio of 2:1 (i.e. two square meters of alternative area for every one square meter farmland affected). In addition, plan for farmer's markets or supermarket or grocery stores with a produce section in residential areas which will be within 1/2 mile (800 meter) walking distance.

3. **Vegetation and Habitat:**

- ▶ If the site has any threatened or endangered species or ecological communities, as identified during the ecosystem assessment, comply with an approved habitat conservation plan under the U.S. Endangered Species Act (or local equivalent for cities outside the U.S.) for each identified species or ecological community.

- ▶ Conserve any Significant Habitat¹¹ present within the city.
- ▶ Adopt or enforce an ordinance requiring control of listed top three invasive species or enact a preferred plant ordinance for private and public landscaping.
- ▶ Restore degraded vegetation and habitats within the city, identified during the Ecosystem Assessment. Restoration strategies must be developed based on Society for Ecological Restoration Science & Policy Working Group. 2002, The SER Primer on Ecological Restoration, Section 3, Attributes of Restored Ecosystems¹².

References:

SLL Prerequisite: Imperiled Species and Ecological Communities Conservation
 LEED v4 ND SLL Credit: Site Design for Habitat or Wetland and Water Body Conservation
 SITES v2 Prerequisite 4.2: Control and manage invasive plants
 SITES v2 Credit 4.4: Conserve healthy soils and appropriate vegetation
 SITES v2 Credit 4.5: Conserve special status vegetation
 SITES v2 Credit 4.8: Optimize biomass
 STAR Communities v2 Action 2: Policy and Code Adjustment

4. Aquatic Ecosystems:

Do not permit any development within limits specified below except for minor improvements or comply with the equivalent local or national regulations.

- ▶ Shorelines and coastal areas: Within 200 feet (61 meters) from normal high tide line.
- ▶ Floodplains, rivers and streams: A flood hazard area shown on a legally adopted flood hazard map or otherwise legally designated by the local jurisdiction or the state or entirely outside any floodplain subject to a 1% or greater chance of flooding in any given year.
- ▶ Wetlands: Within 50 feet (15 meter) of a wetland, except for minor improvements.
- ▶ Water bodies: Within 100 feet (30 meters) of a water body which is greater than 50 contiguous acres (20 hectares) and within 50 feet (15 meters) for waterbodies less than 50 contiguous acres (20 hectares).
- ▶ Restore degraded aquatic ecosystems identified during the Ecosystem Assessment. Restoration strategies must be developed based on Society for Ecological Restoration Science & Policy Working Group. 2002, The SER Primer on Ecological Restoration, Section 3, Attributes of Restored Ecosystems.

References:

LEED v4 ND SLL Prerequisite: Wetland and Water Body Conservation
 SITES v2 Prerequisite 1.3: Conserve aquatic ecosystems
 SITES v2 Credit 3.6: Restore aquatic ecosystems

OR

Demonstrate a local Watershed Health Index of greater than or equal to 70.

Reference:

¹¹ Significant Habitat for the purpose of this prerequisite is defined as (i) locally or regionally significant habitat of any size, or patches of predominantly native vegetation at least 150 acres (60 hectares) (even if part of the area lies outside the project boundary) (ii) Special status plants which include plants designated as special status in the region. These plants may include, but are not limited to, heritage or legacy trees, specimen trees (as designated by a local tree board), rare vegetation in a unique habitat, and unusual genetic variants of a particular species; and any (iii) habitat flagged for conservation under a regional or state conservation or green infrastructure plan.

¹² https://www.ctahr.hawaii.edu/LittonC/PDFs/682_SERPrimer.pdf , accessed on December 17, 2018.

Guidance

Behind the Intent

Ecosystems around the world have been impacted extensively by human influence, particularly over the past 50 years. In response, communities are taking action to protect and restore natural systems and maintain ecosystem services. Natural systems provide a wide range of services for human populations, such as clean water, food, forest products, and flood control. Cities and communities demonstrate leadership conservation and restoration by establishing robust natural resource protection goals and implementing strategies that improve the quality of natural resource areas.¹³ At times, cities must weigh trade-offs between protecting ecological services in undeveloped areas while also managing land to prevent urban sprawl and overcrowding.

Further Explanation

Required Documentation

Documentation	Natural Resource Acreage	Natural Resource Conservation and Restoration Plan
Master Plan with mapping of natural resources and schedule and/or table listing the natural resource type and area of each.	X	
Calculations demonstrating achievement of point threshold	X	
Natural Resource Conservation and Restoration Plan highlighting the sections demonstrating the achievement of the listed requirements		X
Supporting documentation for each of the ecological systems (as applicable)		X

Exemplary Performance

This credit is not eligible for exemplary performance.

¹³ STAR Communities V2.0 Technical Guide, NS-3: Natural Resource Protection
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