

Landscape Scale Restoration Project Report



Project Name: Shades of Green II - Las Vegas Valley Forestry
Collaboration

Funding Year: 2009

Stakeholders

Forest Service Region: USDA Forest Service - R4

Sponsoring Organization: Nevada Division of Forestry

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Participating Organizations:

Grantee: Nevada Division of Forestry

Project Funding

Agreement(s): 09-DG-11046000-607

Funding Sources

Project Design

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Project Purpose

This grant's goal is to improve the effectiveness of urban forestry (UF) program delivery and management in the 'Greater Las Vegas Valley metropolitan area' (Valley) through sharing of municipal entities' resources, UF canopy assessment, education and outreach. This grant request is for a Valley tree canopy inventory and study - sampling in each jurisdiction, an i-Tree Stratum-type analysis, workshops to teach municipalities to conduct UF assessments, biomass projections, Project Learning Tree (PLT) facilitator workshops for the Valley's Arbor Days, invasive species removal and revegetation along the Las Vegas Wash Trail - the Valley's only urban multi-jurisdictional trail. The Valley is ranked high priority in the Nevada Division of Forestry (NDF) Forestry Resource Assessment. The canopy study area includes the urbanized areas of Clark County [Cities of: Henderson (COH), Las Vegas (CLV), North Las Vegas (NLV) and Clark County (CC)]. The canopy trend analysis will be used to show how trees could help mitigate the Valley's air quality standards and urban heat island effect. In the desert southwest, the need for shade is crucial to support sustainable living. This study will provide baseline data for Valley entities to analyze existing and potential canopy cover needs, statistically estimate UF characteristics, functions and values (e.g. air pollution removal, carbon sequestration, energy conservation), and guide the Valley's developing UF programs to establish clear goals and objectives. The project will contract for a professional UF canopy study, analysis and training, and contract with Valley municipalities to perform inventories and related activities. Other activities include PLT workshops to teach local teachers to infuse PLT and tree related curriculum in the classroom, remove invasive species (tamarisk spp.) from the Las Vegas Wash (Wash), to eliminate the need for yearly burning, and revegetate the Wash with native and adapted plants. The products of this grant will promote and provide improved coordination among municipal planners.

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National Themes & Outcomes

Conserving and Managing Working Forest Landscapes

- High priority forest ecosystems and landscapes are identified and conserved.

Protect Forests from Threats

- Threats to forest and ecosystem health are identified, managed and reduced.

Enhance Public Benefits from Private Forests

- Water quality and quantity is protected and enhanced.
- Air quality is improved and energy is conserved.
- The economic benefits and values of trees and forests are maintained and enhanced.
- Wildlife and fish habitat is protected, conserved, and enhanced.
- People are connected to trees and forests and are engaged in environmental stewardship activities.
- Trees and forests are managed and restored to help mitigate and adapt to changing conditions.

Strategic Issues

Nevada's State Natural Resource Assessment and Strategy (2010) designated all communities in the state as priority landscapes. The important role urban and community forests play in residents' and visitors' quality of life, as well as their ecological benefits in otherwise impaired environments led to this designation. The assessment identified the Southern Nevada Water Authority's turf removal program for water conservation as a significant threat the region's urban forests. Community Urban Forestry Program Development and Management was identified as an important strategy to help address this problem. Specifically, to utilize partners and funding/expertise to implement or update tree inventories and canopy studies and tree benefits analysis. A comprehensive canopy assessment, inventory and i-Tree analysis will allow careful monitoring of the tree resource and impacts resulting from the turf removal program and provide local governments with a critical tool to help mitigate the impacts.

This is the first large-scale urban forestry assessment for a large urbanized area in the Mojave Desert. Data for this area has previously been extrapolated from data from Arizona, but are not specific to this area. The results of the assessments will be used for setting region-wide goals for canopy cover, tree planting, air quality and storm water runoff.

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Collaboration & Partners

NDF's primary partner on this grant is the Regional Urban Forestry Working Group (RUFWG) of the Southern Nevada Regional Planning Coalition. The RUFWG has representation from the Cities of Boulder City, Henderson, Las Vegas and North Las Vegas, Clark County, Clark County School District, Nevada Division of Forestry, the Southern Nevada Water Authority, NV Energy, University of Nevada-Las Vegas, the Nevada Shade Tree Council, and the Conservation District of Southern Nevada. University of Nevada at Las Vegas (UNLV) and Clark County School District (CCSD) are two new partners who expressed an interest in having a tree inventory on their properties.

Since the start of the project, NDF Southern Region Staff have been an active participant in the RUFWG meetings, using their input to guide the project. In 2010, NDF made two presentations to the Group on the NDF grants and on the value of inventories and canopy assessments. An additional presentation focusing on the i-Tree Streets program was made in May 2011. Members from RUFWG provided input on the Inventory RFP, reviewed the proposals, participated in the selection of a vendor and provided input into the negotiation process with State Purchasing and the approved vendor.

The Southern Nevada Water Authority provided data and maps for the canopy assessment at no charge.

NDF's Stewardship Coordinator took the lead on the Las Vegas Valley Canopy Assessment, meeting with NDF and municipal partners to plan the canopy assessment details and course of action. A portion of the LLV funds have supported this NDF staff position.

Sierra Nevada Journeys is a new partner – they have been awarded a sub grant to provide Project Learning Tree Teacher Training.

*The High-Desert RC&D Coordinator was one of the developers of this grant proposal; however, the position was terminated by NRCS spring of 2011.

Accomplishments

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Deliverables

The grant is for an urban forest assessment in the Las Vegas Valley (LVV) metropolitan area, which includes the municipalities of Henderson, Las Vegas, North Las Vegas, Las Vegas and the unincorporated Clark County areas within the LVV, and UNLV and CCSD. This will be accomplished through tree inventories, i-Tree Street analyses, and canopy assessments. Both City Green and i-Tree Streets programs will be used to quantify the economic and environmental values of the urban forest. City Green software works with Arc View GIS software and uses land cover datasets (tree canopy data) of both private and public trees, and i-Tree uses tree species and DBH from a tree inventory database to analyze the ecological and economic benefits of a community's municipal owned trees. The goal is to use the analyses from these tools to provide a basis for developing urban forestry management plans, for better management of the urban forests, to improve the quality of tree care and the effectiveness of the region's urban forest programs, and to gain an understanding of the economic and environmental values for the LVV urban forests. The canopy analyses will be useful in setting tree canopy goals and showing how trees can help mitigate the Valley's poor air quality, reduce the heat island effect, and reduce stormwater runoff.

A Project Learning Tree (PLT) teacher training workshop will be held focusing on the value of urban forests. Training needs for the municipalities will also be met as needed.

Accomplishments to Date

NDF's regional Community Forester developed a survey to determine tree inventory and canopy assessment needs and preferences of the municipalities, and included UNLV and the Clark County School District. The surveys, done in August 2010, were conducted separately with each entity's parks, public works and planning staff—sometimes taking two meetings with an entity to ensure key staff was surveyed. Henderson was the only community to request a subgrant from NDF to do their own inventory. The remaining entities requested NDF contract for their tree inventories and i-Tree analyses.

In fall 2010, a subgrant was awarded to the University of Nevada Las Vegas (UNLV) GIS lab to develop GIS layers (land classification data sets) and city urban boundaries for a City Green analysis. UNLV completed this portion of the project in August 2011. Additional funding was awarded to UNLV fall 2011 to create additional geographic and political boundary layers and for a heat island study comparing present and past heat data. The Stewardship Coordinator completed a City Green Analysis for each municipality using UNLV and SNWA data to show environmental values of the urban canopy and to present scenarios with increased and decreased canopy cover. The canopy assessments were for unincorporated Clark County areas in LVV, and the cities of Las Vegas, North Las Vegas and Henderson—within the urban boundary and within the city boundaries. An example of the results: LVV has 8.6% canopy cover and Henderson within the urban project boundary is 7%. Results are posted at: <http://forestry.nv.gov>.

NDF used LVV funds to contract for a temporary special projects employee in April 2011 to work with State Purchasing to develop a RFP for the tree inventories. RFP 1934 was announced mid-June and applications were due July 27, 2011. Four proposals were received

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and reviewed August 17, 2011. The winning bid was from Davey Resources. The contract is waiting for final approval from the state's Board of Examiners. The project includes tree inventories and an i-Tree Streets analysis for each entity, a public service announcement, a website, reports and data discs and a final presentation. The analyses will be by entity and for the entire Clark County area. LVV grant funds were combined with other USFS funding for this project to extend the inventories to the entire Clark County Region.

The special projects employee, a graduate of the Davey's 2 day i-Tree Workshop, developed presentations and handouts on tree inventories and i-Tree assessments and made presentations to the RUFWG May 2011, and in August 2011, gave a day long presentation to staff from Clark County, Clark County School District, NDF, and the Cities of Henderson, Las Vegas, Boulder City, and North Las Vegas on how to take a tree inventory and use the data in i-Tree Streets. The position has completed all activities.

NDF awarded a subgrant to the City of Henderson in 2011 for a tree inventory and assessment of their public trees and education for staff. A portion of their project is funded by an ARRA Urban Forestry grant and most activities apply to both funding sources. Henderson distributed the RFP November 2011. Davey Tree was awarded the work December 2011. The Parks Superintendent attended the Partners in Community Forestry Conference November 2011 and introduced the Superintendent to projects and activities from communities nationwide.

A RFP for a Project Learning Tree Teacher Training was distributed fall 2011. The single applicant, Sierra Nevada Journeys, was awarded the subgrant. LVV funds were combined with 08 Spring Mountain Redesign funds and the workshop will include modules on forest health and living with fire in addition to urban forest related modules. This workshop will increase the use of PLT lessons in pre K-12 classrooms and encourage environmental stewardship among students.

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Deliverables in Progress

Canopy Assessment: UNLV is using the planning/zoning data from the municipalities to create a generalized shape file for planning and zoning for the project area by the end of January 2012. Once the zoning data is completed, the NDF Stewardship Coordinator will perform a City Green analysis for each zoning category, within LVV and will also clip the zoning data to each municipality to complete the City Green analyses. NDF will provide PowerPoint Presentations of the results for the municipalities and the LVV region in by the summer 2012. Binders and flash drives containing copies of the data will be provided to each municipality.

A Clark County/LVV inventory project kick-off is tentatively planned for February 14, 2012 with a meeting between the vendor, Davey Tree, and representatives from the municipalities. Davey will provide an introduction on how tree inventories are accomplished, how the data is used; timeline, i-Tree procedures, and final deliverables. Davey will speak with each entity individually to answer questions and determine the needs of each entity.

Subgrantee City of Henderson is having an initial meeting with their inventory vendor in 2012 and will start on their tree inventory shortly thereafter. The city's urban forester will complete the training portion of their grant proposal to improve professional and technical skills.

Subgrantee Sierra Nevada Journeys will hold a PLT teacher training workshop spring 2012 for educators in Southern Nevada.

Subgrantee UNLV is working on creating a heat island data set and map using historic weather measurements throughout the LVV. The results should be finished by the end of May 2012.

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Challenges

Since these funds were not awarded with NDF's CPG09 Consolidated Grant in the spring of 2009 as would have been normal, an additional workload was created with the need for revisions to the CPG09 narrative, budget and award paperwork, and development of a new work program. Funding notification was delayed to mid-October 2009, due to the unavailability of national Urban Forestry Funding. State approval for this grant was then delayed until the next Interim Finance Committee meeting which wasn't held until March 2010. At the same time, we received final notice of this grant award, two urban forestry ARRA projects were awarded to NDF and the implementation of the ARRA grants took precedence over this grant. NDF contracted for part-time Urban Forestry Assistance in August of 2009 for help implementing this grant, but that position terminated in May 2010. An ARRA funded contract community forester was hired April 2010 but has only been able to devote a small amount of time to this grant.

The Las Vegas Wash or Springs Preserve planting project was cancelled for various reasons. The project was originally scheduled for a fall 2010 planting, which was then delayed by the Springs Preserve to fall 2011 implementation. The agreement for NDF to provide funding for the plants for the Springs Preserve Project was cancelled when the Preserve indicated they would not complete the project and that part of the project site was on leased federal lands. Funds budgeted for this project (\$3,000) were allocated to the inventory project.

The Clark County/LVV inventory contract review and approval by the state Board of Examiners (BOE) was scheduled for January 10, 2012, however, due to negative publicity on the Henderson Inventory project, the contract was removed from the January BOE agenda. It is uncertain when the contract will be reviewed and hopefully approved.

The High Desert RC&D Coordinator, a major partner in the development of this grant proposal and active partner in the RUFWG, was eliminated by NRCS in 2011.

Information Last Updated

12/3/2015