2025

Community Forest Management Plan

Village of Santa Clara

Photo shows local art on a dead tree in Hurley, another Mining District community. The project team has dubbed it "Tree Rex" and it has become a mascot for the project.

Acknowledgments

Village of Santa Clara Leadership

Mayor: Arnold Lopez

Mayor Pro Tem: Albert Esparza

Board of Trustees: Olga Almador, Peter Erickson, Ralph Trujillo

Village Administrator: Sheila Hudman

Chief of Police: Lonnie Sandoval

Fire Chief: Larry Montoya

Maintenance Supervisor: Angel Granadino

Municipal Judge: David Grijalva

Partner Organizations

Western New Mexico University: Marivel Medel, Erik Geyer, Chala Werber, Eric Casler

Gila Resources Information Project (GRIP): Allyson Siwik, Mariah Runnels, Denise Smith

Integrated Biological Solutions, LLC (IBIS): Sarah Hurteau, Jennifer Dann, Eliza Kretzmann

Spatial Informatics Group-Natural Assets Laboratory (SIG-NAL): Shelby Stimson, Guillermo Escobar

Grant County: Chris Ponce, Eloy Medina, Nancy Stephens, Eddie Flores, Thomas Shelley

Southwest NM Council of Governments: Priscilla Lucero

Southwest Tree Solutions: Joseph Franklin-Owens

Stream Dynamics: Van Clothier, Jaclyn Bartlett

SWNM Arts Culture Tourism: Bridgette Johns, Michael Olson

Tree New Mexico: Shannon Horst, Beth Forman, Luis Santiago

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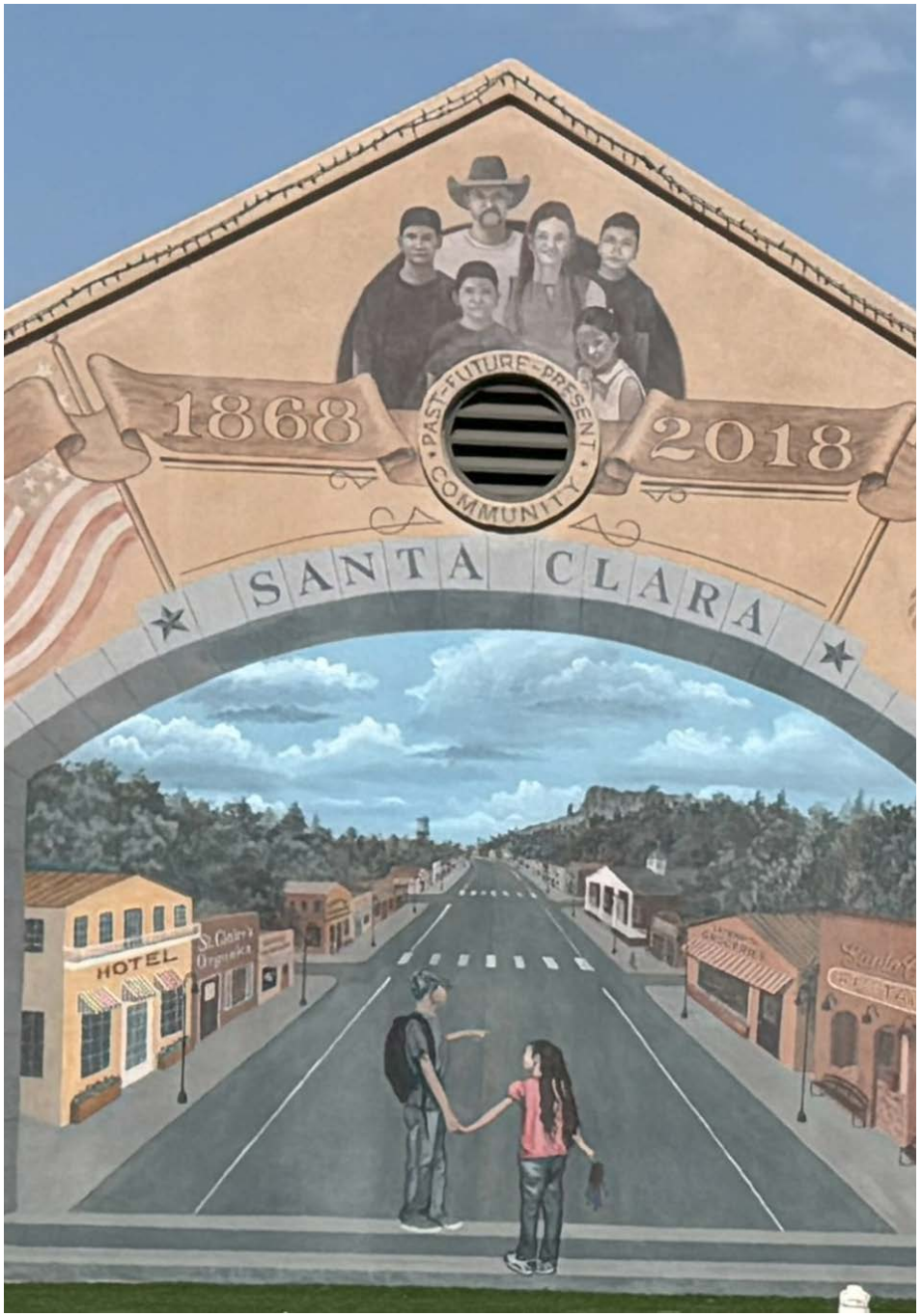


Santa Clara City Hall Mural.

Summary

Welcome to Santa Clara's Community Forest Management Plan! This plan contains helpful information about Santa Clara's community forest, with specific recommendations for its growth and care. The plan is just one part of a greater effort to increase tree equity in Southwestern New Mexico. Santa Clara, along with Bayard, Deming, Hurley, Lordsburg, and Silver City, is part of the Southwest New Mexico Community Forestry Network (CFN), a regional coalition that is designed to help coordinate efforts that advance urban forestry practices and share information between the six communities and project partners.

Definitions of Important Terms

Before getting started, here are **definitions for some important terms** that are used throughout this plan.

Community Forest: The word "forest" might suggest an area up in the mountains that is dense with trees. Just as a wildland forest is made up of all the trees and vegetation within a specific area, Santa Clara's community forest (also known as an "urban forest") is made up of all the trees and plants within the village's municipal boundaries. All the trees and other vegetation in parks and public spaces, residential and business lots, and open and undeveloped space comprise Santa Clara's community forest.

Wildland foresters take a landscape-scale approach to evaluating and managing threats to forest health and productivity. The same principle applies to community forestry. Urban forests are managed by examining all of a town's trees and vegetation as a whole to assess the trends, patterns and priorities that emerge. This approach allows managers to respond with informed strategies to improve and protect the overall community forest, while still addressing the health needs of individual trees.

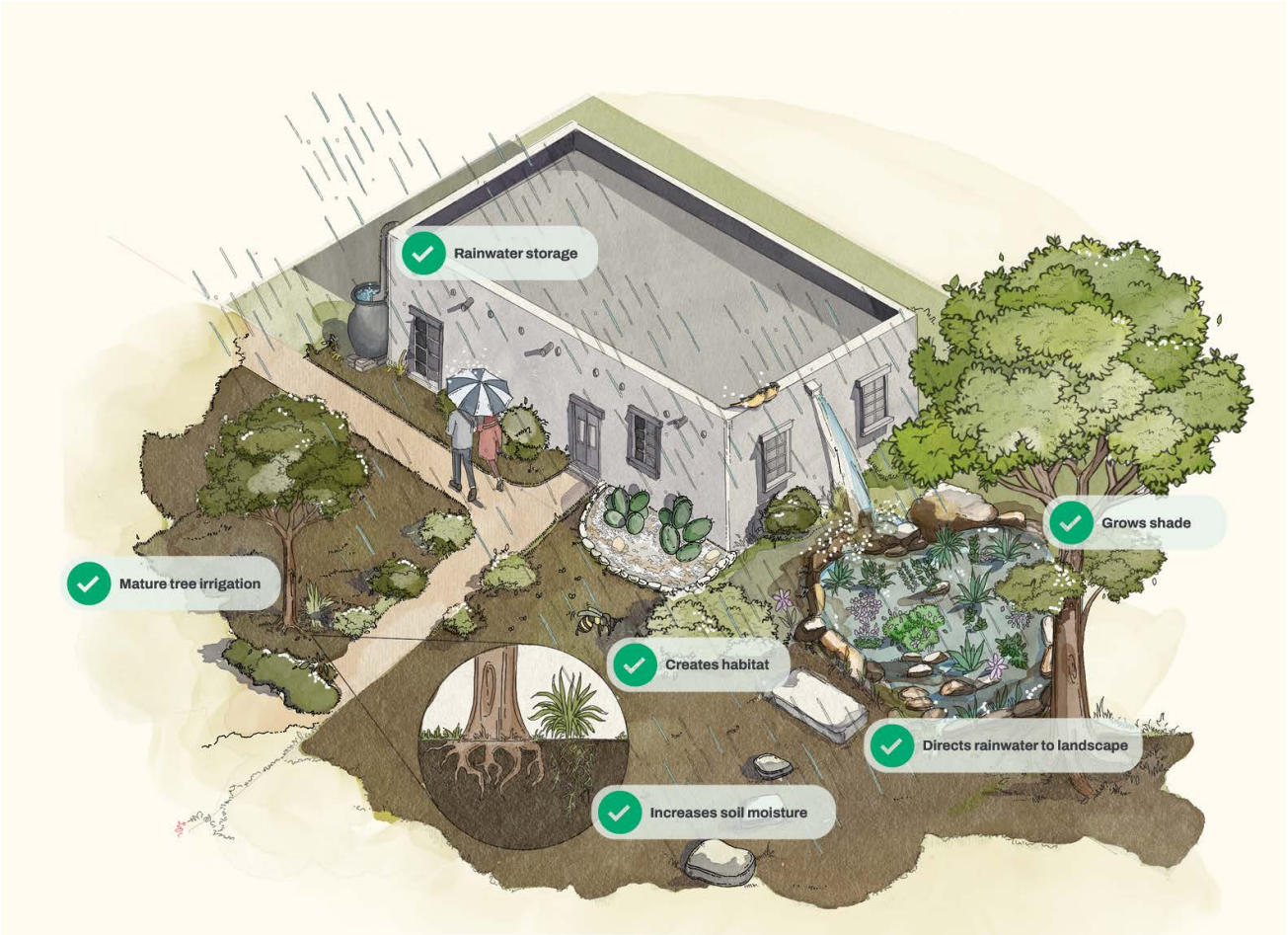
Wildland foresters manage forests to provide wood products, natural resources, ecosystem services, and public recreation opportunities. Similarly, Santa Clara's community forest can be strategically managed to provide multiple environmental, economic, and social benefits to the community.

Urban forests, and the individual trees they are comprised of, play a crucial role in enhancing the livability, sustainability, and resilience of our communities, particularly in the arid Southwest. Trees provide a wide variety of social, environmental and economic benefits that can be maintained or even enhanced through best management practices.

Urban: The term urban might not be particularly relatable for Santa Clara, but in the context of this plan, urban simply means an area that has a higher density of developed land for residential, industrial, commercial, and institutional uses.

Green Stormwater Infrastructure (GSI): Green Stormwater Infrastructure, or GSI, is an approach to stormwater management that creates many small, distributed green spaces that soak up rainwater where it falls, reducing stormwater runoff that carries pollution to waterways. GSI captures rainwater and recharges soil moisture, bringing much needed water to plants and trees that create shade for people and habitat for wildlife.

GSI features are designed to leverage the power of living, natural systems to provide the community with many benefits. By directing rainwater from roadways and other impervious surfaces to landscaped areas, GSI can reduce nuisance flooding and support irrigation of trees and other plants, which helps to grow more green space while conserving Santa Clara's drinking water supply.



Green stormwater infrastructure (GSI) provides multiple benefits. Image credit: Arid Low Impact Development (LID) Coalition

"I love trees. Their shapes. The way they attract wildlife and create refuge."

-Santa Clara Resident

Southwest New Mexico Community Forestry Network

The USDA Forest Service awarded Western New Mexico University (WNMU) a 5-year grant to increase tree equity in six rural communities in Southwestern New Mexico: Bayard, Deming, Hurley, Lordsburg, Santa Clara, and Silver City. While WNMU is the grant lead, Gila Resources Information Project (GRIP) and Integrated Biological Solutions (IBIS) serve together with WNMU as the project team.

As part of the project, IBIS developed Community Forestry Management Plans for Santa Clara and each of the five other communities. **These management plans serve as the foundation to guide all subsequent project work to be done in each community over the next several years,** including tree planting and tree maintenance (e.g., tree pruning, irrigation assistance, pest management). The project team is guiding the implementation of these plans by providing technical and capacity building support. GRIP is leading the planting of 1,000 trees across all six communities, and providing at least one week of tree maintenance work in each community each year for the remaining three years of the project. Prioritization of planting and maintenance work is informed by the assessments and recommendations provided in the Community Forest Management Plans.

One of the key outcomes of the project is the formation of the Southwest New Mexico Community Forestry Network (CFN), which is facilitated by the project team and includes all six communities. The CFN was designed to help coordinate efforts and share information between communities and project partners. The CFN website, swnmforestry.org, includes links to additional resources that are referenced in this management plan and a curated list of other useful resources. The network and the project team will continue producing tools and materials as needed to help the communities put their Community Forest Management Plans into action.

The CFN's work is focused on:

- Providing guidance and on-the-ground support for tree planting and maintenance.
- Sharing educational resources for a variety of audiences, from community members to tree care professionals.
- Encouraging collaboration between communities in the region.
- Supporting municipalities to engage community members in the care and development of their urban forest.
- Supporting communities to leverage the Community Forest Management Plans to obtain additional funding for implementation.
- Connecting southwest New Mexico communities to statewide resources and other networks.
- Assisting communities to address resource shortfalls.
- Building municipal staffing capacity through training and program development.

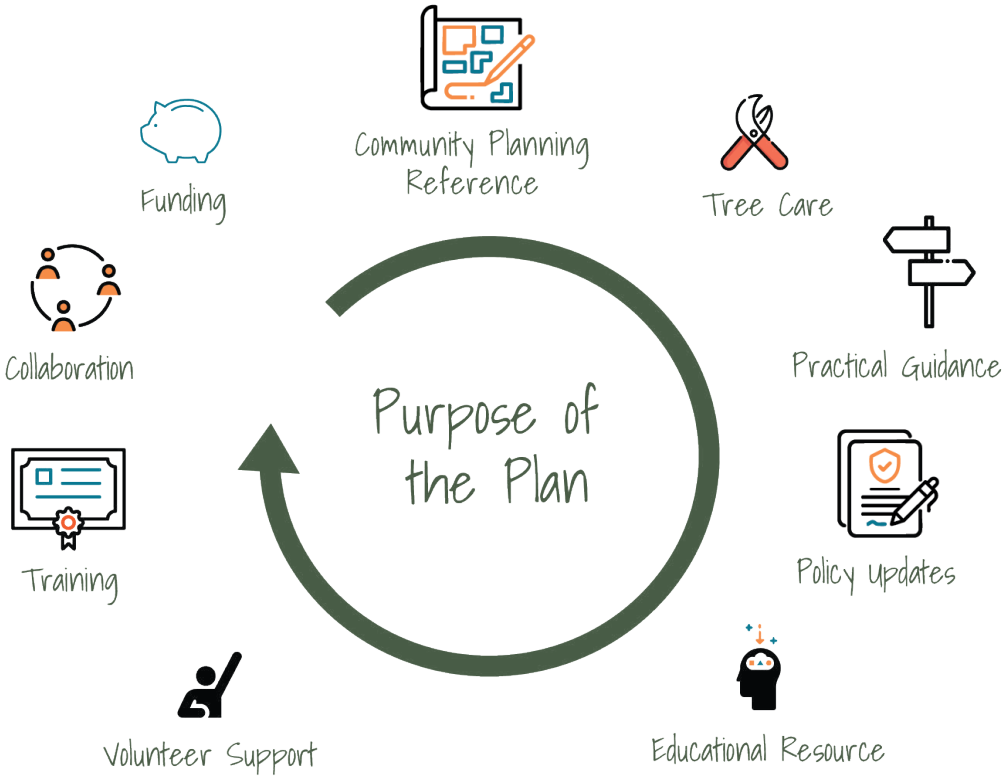
Community Forestry Network partners attending the Think Trees New Mexico Conference in Albuquerque, February 2025.

Purpose of the Plan

At first glance, it might seem as though a community forest management plan would only need one sentence: Plant more trees! As wonderful as they are, trees and green spaces require an investment of both money and time to make sure they produce maximum benefits without posing unnecessary risk, such as falling limbs and infrastructure interference. And in New Mexico's desert communities, the water requirements for planting additional trees must also be carefully considered and budgeted for.

A well-managed community forest can provide multiple benefits that support Santa Clara's goals for its development. However, just like any infrastructure, urban trees require an ongoing investment of both time and money to ensure they remain healthy to provide these services that the community values. This plan strives to balance the cost and benefits of urban trees within Santa Clara's unique community context, and identify opportunities for the CFN to support efficient community forest management.

This plan is designed to be a practical guide for the Village of Santa Clara, outlining specific implementation strategies for the planting, care, and general management of the community forest. It reflects the community's stated values, plays to the village's strengths, identifies key challenges and opportunities, and charts a path toward achieving Santa Clara's goals for the development of both the urban forest and the village at large.



"I used to climb giant trees when I was a child. I always felt safe in their branches."

-Santa Clara Resident

Scope of the Plan

This plan defines Santa Clara's community forest as all trees and vegetation within village limits (including Fort Bayard), but the **focus of the plan is on trees, shrubs, and other woody perennial plants**. The reason for this is that these plants have a long-term presence and represent the highest potential benefit to Santa Clara. However, they can also represent the highest cost and risk due to their size, requiring long-term planning and specialized management. Other vegetation, like grasses and flowers, are important and are often included in this plan's discussion, but they are not the primary focus.

For this plan, the area of analysis was limited to the densely populated or urbanized portion within the boundary of the village. Fort Bayard was also included in the analysis, but is discussed separately. While this plan considers Santa Clara's entire community forest, much of **the emphasis of the plan is on assessing trees and vegetation in public spaces and providing municipal recommendations**. Due to Santa Clara's smaller size, this allows the plan to make some very specific recommendations, down to individual trees.

Crews installed rock gardens with new plantings in the buffer strips along Fort Bayard Road along with green stormwater infrastructure basins installed by Stream Dynamics.

Santa Clara's Community Forest Management plan cannot be static if it is to be successful. The plan must be a dynamic document that encourages the application of adaptive management practices in order to respond to changing conditions and shifting priorities or funding. The management plan was written with a **five-year lifespan in mind (i.e., 2025-2030)**, at which time it should be updated and adjusted based on progress made and lessons learned over the coming years. Throughout the remainder of the project, the project team will develop supplemental, action-oriented resources that are designed to support Santa Clara staff with the implementation of the goals and strategies recommended in this plan. Additionally, the CFN and the recently expanded New Mexico Tree Alliance serve as community educational resources and technical and logistical support for Santa Clara's priority projects. As Santa Clara continues to work to strengthen its approach to community forest management, there are many resources available to aid in this effort.

How to Use This Plan

Basis for the Plan

This section provides background information on how this plan was developed, including community context, analytical data regarding Santa Clara's urban forest, and methodology for identifying key priorities and strategies. This section can help grant writers and project planners to **provide justification for proposed projects and budgets** and may be of interest to those actively engaged in Santa Clara and its community forest. However, it is not necessary to read this section to understand and implement the Action Plan.

Action Plan

This section identifies three broad goals for Santa Clara's community forest and a fourth goal for Fort Bayard's community forest, strategies within each of these goals, and specific actions to achieve these goals. It provides tailored recommendations for the physical care of trees as well as recommendations on policy, funding, community planning, training, and municipal and volunteer support. **Santa Clara's *Action Plan* is meant to be a working "to do" list.**

Additional Resources

This section is an appendix to the plan and provides guidance and templates to support the implementation of activities identified within the Action Plan. It is meant to serve as an **educational resource** for anyone actively involved in Santa Clara's community forest. Many of these resources are linked on the CFN website **(swnmforestry.org)**, which will continue to be updated as more resources are created and collected by the CFN.

"Trees make me feel good and bring so much peace, and of course shade when I need it most."

-Santa Clara Resident

Recommended Goals and Strategies

Santa Clara's Community Forest Management Plan sets three primary **Goals** that support a vision of a healthy community forest in Santa Clara and organize the work ahead. **Strategies** within each goal set actionable and measurable tasks to help realize those goals. The Action Plan expands upon these Goals to recommend **Actions** within each strategy, including timelines, partners and collaborators, and available resources.

Goal 1

Santa Clara's community forest strengthens community pride and promotes economic development.

Strategies:

1A. Develop cohesive landscapes along Main Street (Fort Bayard Road) that highlight Santa Clara's existing community services.

1B. Integrate the community forest into broader community goals and emergent projects.

1C. Improve and expand the community forest in recreational areas that serve Grant County and attract visitors to Santa Clara.

Goal 2

Santa Clara's community forest contributes to the health and wellbeing of both people and nature.

Strategies:

2A. Invest in community forest improvements surrounding Central Recreation Park and the Elementary School.

2B. Utilize the community forest to promote the walkability of Santa Clara.

2C. Manage a healthy community forest to conserve water resources, mitigate risk, and enhance environmental health.

Goal 3

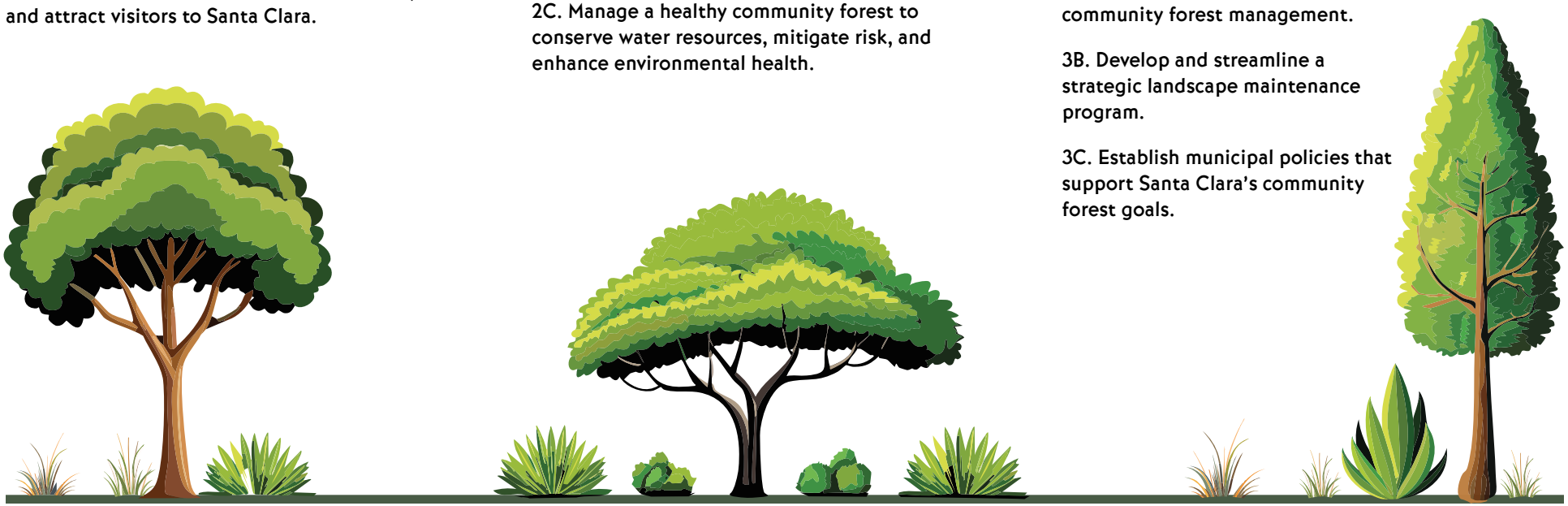
Santa Clara fosters a thriving community forest through proactive management, skilled staff, and informed policy.

Strategies:

3A. Invest in building staff expertise to strengthen Santa Clara's community forest management.

3B. Develop and streamline a strategic landscape maintenance program.

3C. Establish municipal policies that support Santa Clara's community forest goals.



Recommended Goals and Strategies - Fort Bayard

In addition to the goals and strategies for the Village of Santa Clara, one primary **Goal** with **Strategies** and **Actions** is recommended for Fort Bayard, as this campus is an important resource to the community.

Goal

4 The community forest at Fort Bayard is well maintained and supports economic activity in the region.

Strategies:

1A. Monitor high risk trees in Fort Bayard and elevate issues to the State of New Mexico.

1B. Coordinate with the State of New Mexico and other partners on the development and restoration plan for Fort Bayard to ensure the community forest is included as infrastructure that requires funding and maintenance.

1C. Create a long-term plan for Fort Bayard's community forest that identifies responsibilities, processes, and sustained funding.

Community Forest Best Management Practices for Santa Clara

The assessments and recommendations presented in Santa Clara's Community Forest Management Plan are rooted in science-based best management practices in the field of urban forestry. To produce the goals, strategies, and actions featured in the Action Plan, the following best management practices were considered in the context of Santa Clara's vision, capacity, strengths, and ongoing challenges.

Planning

- Select a wide variety of tree and plant species adapted to thrive in local conditions to conserve water, increase biodiversity, and improve forest health.
- Establish and implement an irrigation plan for all new plantings.
- Select the right tree for the right place, considering both plant and site characteristics.
- Stagger tree plantings over time to grow a resilient, community forest with a distributed age structure.
- Prioritize planting in underserved neighborhoods and high-use pedestrian spaces.
- Incorporate trees and irrigation into public infrastructure projects whenever possible to maximize opportunities for greening public spaces.
- Integrate Green Stormwater Infrastructure with community forestry projects to reduce flooding, provide trees with supplemental irrigation and promote water conservation.

Plants

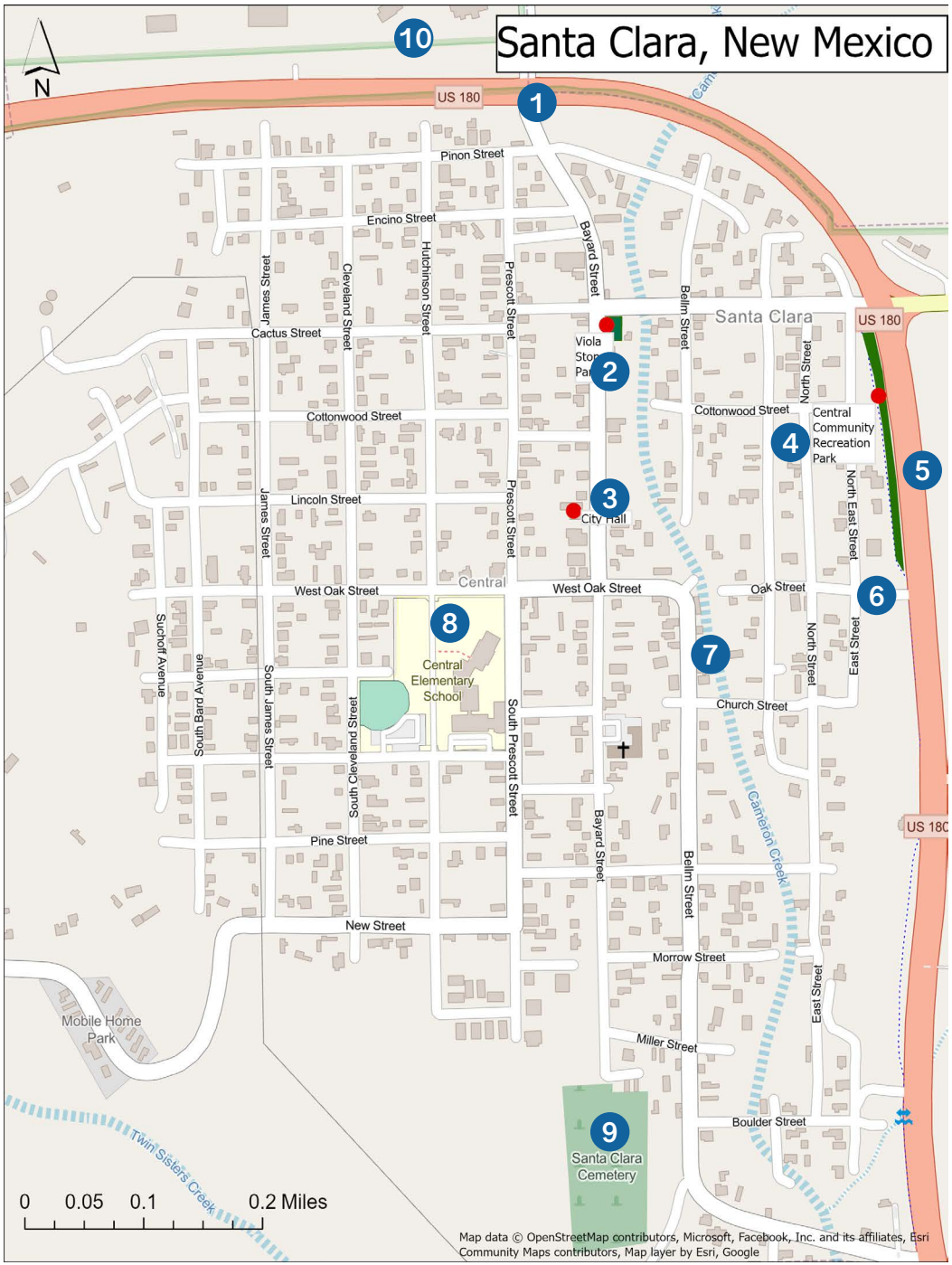
- Prioritize the maintenance and health of mature trees to retain canopy and maximize tree benefits.
- Create and maintain an urban tree inventory to actively monitor tree health and prioritize work.
- Support soil health by using organic mulch and reducing soil compaction.
- Use correct pruning techniques, eliminating tree “topping” and other common mistakes.
- Address public safety concerns by proactively identifying and mitigating high risk trees through trimming or removal.

People

- Engage and empower community members to support community forest goals on both public and private property.
- Invest in workforce development and ensure tree care workers are trained in proper maintenance, monitoring and integrated pest management techniques.
- Establish city policies, ordinances, programmatic workflows, and budgets that support the goals of sustainable community forest management.
- Collaborate with regional and statewide forestry programs and networks to leverage resources, expertise, and funding opportunities.

"I love the mixture of native plants and non-invasive pollinators that attract wildlife and create habitat."

-Santa Clara Resident



Santa Clara's Priority Community Forest Project Locations

1 Entrances to Santa Clara
Native shrubs complementing welcome sign

2 Main Street: Existing Community Amenities
Shade trees and buffer strip plantings along sidewalk
Existing tree maintance, GSI and additional planting

3 Main Street: New Project Locations
GSI and planting

4 Central Community Recreation Park
Park and Orchard - Pruning, irrigation, and planting

5 Pedestrian/Bicycle Trails
Complementary plantings for Highway 180 trail
Residential ROW planting to support walking loops

6 Oak Street and East Street
GSI and planting at El Grito Learning Center, Senior Center, Health Clinic and Grant County Regional Water Supply Project

7 Cameron Creek
Invasives removal, native tree maintenance

8 Elementary School
Shade trees for outdoor areas and GSI modification

9 Cemetery
Pruning and maintenance, shade tree planting

10 Bataan Memorial Park
Pruning, maintenance, shade tree planting

Basis for the Plan

To develop the Santa Clara Community Forestry Management Plan, the project team gathered information in multiple ways:

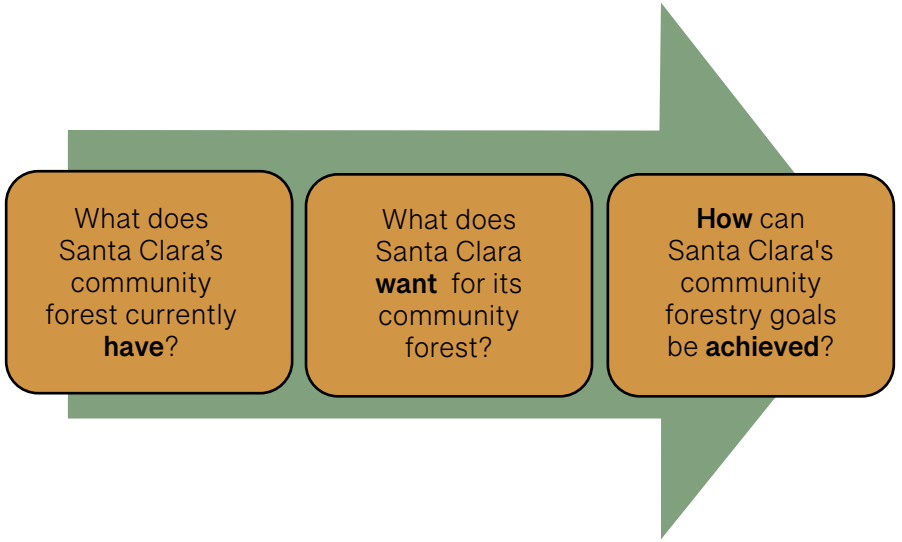
- Conducted multiple interviews with Santa Clara Village officials, staff, and local experts to introduce them to the project, get initial input on priority areas, and understand the basics of the Village's current approach to landscape management.
- Reviewed the Santa Clara Comprehensive Plan Update (2013), Infrastructure Capital Improvement Plan (ICIP), and other available planning documents to identify community goals and opportunities to integrate with upcoming community forestry projects.
- Reviewed and analyzed data regarding Santa Clara's community forest such as climate conditions, natural vegetation types, socioeconomic measures, and existing policies and ordinances.
- Met with partners frequently between September 2024 and June 2025 to conduct a broad assessment of existing trees, irrigation and public spaces to identify opportunities and challenges for planting and maintenance.
- Worked closely with the project team to glean local knowledge and incorporate their implementation and training experiences to help shape goals, strategies, and actions.

Public Survey for Santa Clara's Community Forest Management Plan

Public input and local knowledge are critical components to any community planning effort. One of the key community engagement strategies used by the project team was a public survey that was open to all Santa Clara residents. Sixteen Santa Clara residents responded to the survey, which was open for a period of three months. To ensure that all residents in Santa Clara had an opportunity to contribute, the team used a range of outreach strategies. The public surveys were made available in both English and Spanish.

The survey requested information about potential priority tree planting locations, tree maintenance locations, and locations with flooding that could benefit from green stormwater infrastructure. Residents also had the opportunity to share which benefits of trees are most important to them, to give opinions about their preferred plant palettes (or plant "menus") for community forest projects, and to share their personal "Tree Stories". Responses to the survey questions highlighted that **Santa Clara residents value their existing trees and strongly believe the Village will benefit from having more**. The survey revealed overwhelming support from the community for this initiative. According to the survey, Santa Clara residents were most interested in community forest health benefits including improved air quality, cooling pedestrian areas, and positive impacts on mental health. Another high priority identified by community members was for village beautification and supporting biodiversity such as bee populations.

Community input in these various forms was integrated into a broader assessment of the village of Santa Clara, which is discussed in the following sections: the **Community Profile**, the **Community Forest** and the **Community Vision**. This assessment was guided by three key questions:



Community Profile

The Village of Santa Clara is located in southwestern New Mexico along the Highway 180 corridor in Grant County, situated between the northern tip of the Cobre Mountains and the southern slope of the Pinos Altos Mountains. Together with the nearby Town of Hurley and City of Bayard, these three communities comprise what is locally referred to as the "Mining District", named in reference to the historical and cultural significance of mining in the area. Indigenous communities mined copper in the area long before the arrival of Spanish colonists, who began mining the Santa Rita deposit around 1799. Their discoveries – including the discovery of gold in the Pinos Altos Mountains – led to the establishment of several settlements and mining towns in the area, including the Village of Santa Clara, originally named "Central City" by settlers.

Santa Clara has an area of a little over one square mile with approximately 1,600 residents. A large portion of Santa Clara is privately owned, with approximately 550 housing units, and a 69% home ownership rate. The majority of Santa Clara's residential development is located southwest of Highway 180, and is laid out in a traditional grid pattern. Fort Bayard Road runs north-south and serves as the main connector between Santa Clara and Fort Bayard across Highway 180.

Santa Clara's community services are centered in three locations:

- Fort Bayard Road on the south side of Highway 180 runs through the heart of Santa Clara, serving as the Village's "Main Street". This key corridor houses Viola Stone Park, City Hall, the Post Office, the Roger T. Silva Splash Park, the historic Bradley Hotel, the developing "Mercado", and the Fire Department. The Elementary School is located one block off Fort Bayard Road.
- A constellation of sites including the Senior Center, El Grito Early Learning Center, and Central Community Recreation Park is located on the west side of Highway 180 with connectivity to the walking path along Highway 180 to Bayard.
- Fort Bayard Road on the north side of Highway 180 leads to Fort Bayard National Historic Landmark (with community and cultural events, a museum and theater, and trails) and the National Cemetery. Other popular nearby recreation sites draw locals and tourists alike, including the Bataan Memorial Park and the Fort Bayard Disc Golf Course. In addition to the Grant County Public Shooting Range, several businesses are also located north of Highway 180.

"We need color in our towns. Trees and flowers and plants that are colorful and brighten up our towns."

-Santa Clara Resident

Fort Bayard's Parade Grounds, used as a Santa Clara gathering space.

Santa Clara Governance and Landscape Management

The Village of Santa Clara is led by a Mayor, Mayor Pro Tem, a Village Clerk, an Administrator and a Board of Trustees with three members. There is also a volunteer Action Committee focused on helping the Village grow and improve.

The Village of Santa Clara currently has a team of four maintenance staff, including a supervisor, who oversees all maintenance needs for the community, including parks and other landscaping needs. Maintenance staff work in pairs for safety reasons, and generally rotate through different tasks for breadth of training and experience. Safety training on a variety of topics is also regularly conducted. All tree work is done by maintenance staff with no contractor support, unless trees conflict with utility lines. Maintenance is often supported during the growing season with Youth Conservation Corps crews (YCC), and sometimes other seasonal workers such as Americorps when funding is available. Maintenance staff currently do not receive much training specific to tree care, and they expressed an interest in building knowledge and skills in community forestry through participation in the CFN. **Active participation in the CFN is a good investment of Santa Clara staff time and will support the implementation of this Community Forest Management Plan.**

The Village of Santa Clara has a set of municipal ordinances, but none that directly govern vegetation or irrigation. **Establishing a basic vegetation ordinance gives municipal staff the authority to address community forest issues effectively, such as vandalism, tree risks, invasives, and pest management.** In the future, the Village may want to consider more complex ordinances that can define residential and commercial responsibilities for landscapes and set landscaping requirements for new development. Additionally, Santa Clara may explore the formation of a Tree Board, a group of residents who are dedicated to enhancing the well-being of trees in a community and may be called upon for consultation and support.

Fort Bayard

Fort Bayard is a National Historic Landmark near Santa Clara, north of US-180. Fort Bayard was established in 1866 to provide a permanent Army presence in the mineral-rich area and protect settlers, travelers, and miners. In 1899, Fort Bayard became the first Army Tuberculosis Hospital, then a Veterans Administration Hospital in 1920, and remained in service until 1964. The property now includes the Fort Bayard Medical Center. Fort Bayard is owned by the State of New Mexico, which took control of the property in 1965.

Currently the Village of Santa Clara has a 99-year lease to manage portions of Fort Bayard. It is an important gathering space for Santa Clara and nearby communities, with events including historical preservation activities, a film series, cultural festivals, and recreation events. The Fort Bayard Historic District campus, which includes the cemetery, is 468 acres. Fort Bayard is included in this community forest management plan, but recommendations are provided separately from those for the Village of Santa Clara.

The Fort Bayard Historic Park campus still includes historically planted trees (including a rare palm tree) and large, stately evergreen trees. The trees are in need of care and irrigation, and while an old irrigation system exists, the state holds the water rights. **Policy that establishes authority, funding, and water rights is critical to the health of the community forest at Fort Bayard.**

Santa Clara's southern skyline.

Climate and Geography

Santa Clara sits within the foothills of an area characterized by copper mineralization. At an elevation of 5,998 feet, the landscape surrounding the village is at the edge of Great Basin Conifer Woodland and semi-desert grasslands. Great Basin conifer woodlands are characterized by the dominance of piñon pine and juniper trees with a vast understory of native bunch grasses. Semi-desert grasslands were historically punctuated by native bunch grasses within a matrix of bare ground and minimal trees. Changing temperature and precipitation patterns and a legacy of grazing practices has reduced grass cover in both vegetation communities, leaving more bare ground open to wind and water erosion.

There is also a riparian channel, Cameron Creek, that bisects Santa Clara, with a high tree density that serves valuable ecological functions but also brings the risk of fire and flooding to several residential neighborhoods. These riparian forests historically were dominated by cottonwood and willow species, but have shifted to a non-native plant palette that includes salt cedar (Tamarix species) and Siberian elm (Ulmus pumila).

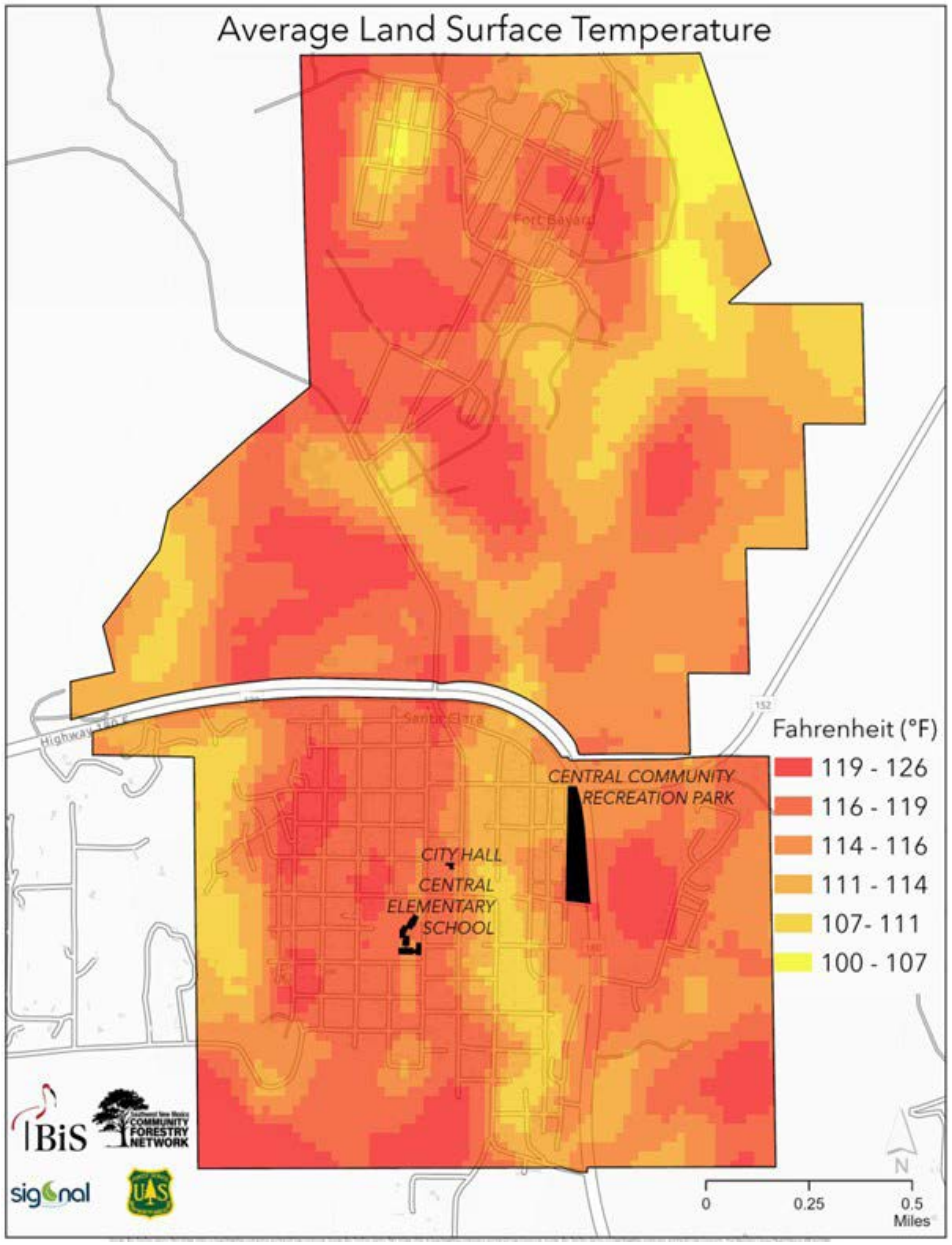
Like many southwestern communities, Santa Clara's precipitation primarily comes in the winter and during summer monsoonal rain events. Winter and spring rain events appear to be in decline, leading to earlier and more intense seasonal drought periods.

Winter temperatures are mild, with short freezes and occasional snow. Summer temperatures in Santa Clara are increasingly getting warmer, with some days reaching the mid 90s or higher. The monsoon rains bring much needed moisture and help cool temperatures during the heat of summer. Generally, monsoon weather patterns are active between July and September, but the patterns are becoming more variable as is the total amount of rain that falls during each event.

Santa Clara isn't the only community experiencing these changes. Average temperatures in New Mexico have increased by 2°F since the beginning of the 20th century, causing many communities to reexamine what types of vegetation are prudent choices for new planting projects. The annual number of days reaching 100°F in New Mexico has increased from an average of 12 days (1900 - 2020) to nearly 20 days per year (2015-2021). This same pattern is seen in increasingly warm evening temperatures, with the number of nights above 70°F nearly doubling in recent decades compared to the previous century.

To plan for a long-lived, resilient urban forest, tree species selected for planting must be drought tolerant to perform well in Santa Clara's arid environment, and should be adapted to withstand the range of temperatures in Santa Clara - both summer highs and winter lows. The USDA Plant Hardiness Zone designations help guide the selection of trees and plants that have the best chance of succeeding in Santa Clara throughout their lifespan. Each Zone designation is based on the 30-year average of recorded temperatures, with an emphasis on the lower threshold of temperatures. The 2023 Hardiness Zone map has Santa Clara and Fort Bayard classified as Zone 7b. Trees have a multi-decade lifespan, and because the temperature is projected to increase substantially over the next several decades, it is strategic to prioritize planting tree species that function well in the current zone designation but will also be able to thrive under the projected zone designation for the future: 9a.

Developing and using a diverse and regionally native-focused plant palette that is well adapted for Santa Clara's specific climate and geography will help prepare Santa Clara's community forest for a resilient future as summers become hotter and drier.



Santa Clara summer heat: this map of land surface temperatures (LST, May through September, 2019–2024 mean values) illustrates how hot Santa Clara can get. Heat can have significant human health impacts.
Image Credit: SIG-NAL

Land Surface Temperature

Land surface temperature refers to how hot the "surface" of the Earth feels to the touch, as opposed to the ambient air temperature. This data is collected by satellite, and the "surface" from the satellite's perspective could be pavement, roofs, plant leaves, bare ground, or other surfaces.

Land surface temperature data demonstrates how hot Santa Clara can get, with mean surface temperatures in many areas reaching 119– 126 degrees Fahrenheit. This level of heat can have serious human health impacts, particularly for vulnerable populations. Heat is the number one weather-related cause of death in the United States. New Mexico's Department of Health estimates that heat related deaths will double between 2020 and 2030, based on climate models that project an increase of up to 111 days of extreme heat conditions per year (90º or higher).

The land surface temperature map shows that areas with vegetation have lower surface temperatures, illustrating that trees and other plants can help mitigate high temperatures. Cooler land surface temperatures around Cameron Creek and Twin Sisters Creek are apparent on the map as ribbons of yellow and light orange. The hotter areas of Santa Clara (appearing in red or dark orange) coincide with where there is more development and less deciduous vegetation. Deciduous plants and grass have leaves that transpire more readily than evergreens, leading to cooler temperatures. However, deciduous plants typically need higher levels of irrigation than established evergreens. A balanced approach in selecting species for planting is required to optimize the heat mitigation benefits of trees while maintaining Santa Clara's water conservation goals.

While the land surface temperature map gives an overall picture of heat, the resolution of data is not fine enough to prioritize specific tree planting locations. However, knowing that areas with heat absorbing surfaces (like roadways, sidewalks, and buildings) will have higher surface temperatures indicates that **recreation areas, pedestrian walkways, and bike paths should be prioritized for tree planting to help lower harmful heat levels**.

Trees and plants can help combat heat, yet heat can also be extremely detrimental to tree health. Trees planted near roads, sidewalks, and other heat absorbing surfaces must survive both ambient heat and additional heat reflected from the pavement. **Using light-colored, organic mulch materials and/or having living ground cover around trees, and providing adequate irrigation,** are key to helping trees survive heat stress**.**

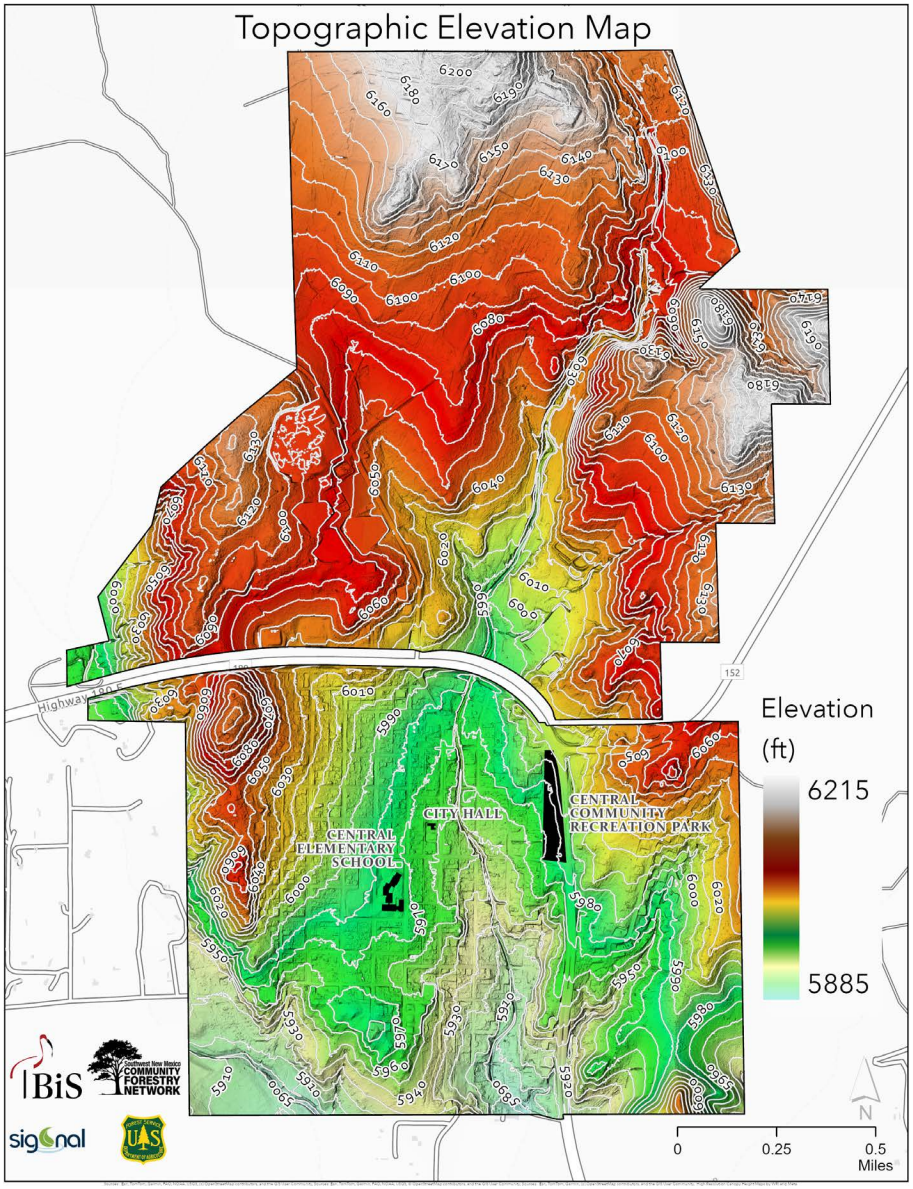
Water Sources

Santa Clara's primary source of water is subsurface groundwater aquifers. Frequent and persistent drought conditions have led to increased pumping to meet residential and commercial water demands, depleting the aquifer over time. Santa Clara has been working with a variety of agencies and organizations to create a more sustainable supply through regional water planning efforts. While significant improvements in water conservation and supply have been made to date and additional water infrastructure through the Grant County Regional Water Supply Project is planned, Santa Clara has little water to spare. This requires careful planning when considering planting additional trees and plants, both at a municipal and residential scale.

The village acquired water rights in the 1960s, and there is no limit on municipal water use. However, community members do conserve water, as it is an expensive resource for residents.

In addition to persistent drought conditions, residential areas in Santa Clara are experiencing more frequent flood threats, as stormwater runoff flows heavily through Cameron Creek and many streets flood every time there is a major rain. As new development is charted, the increase of impervious surfaces from buildings, sidewalks and streets will only add to the problem. Green stormwater infrastructure (GSI) practices are an increasingly common solution in this region to mitigate flooding from stormwater runoff. **GSI can repurpose this underutilized water resource to irrigate plants and create a more vibrant and beautiful village while helping to address flooding problems.**

All trees and landscaping will need some form of irrigation throughout their lives, especially during the first 3-5 years of establishment and during periods of drought. Water conservation is another benefit of co-locating GSI with plantings, minimizing the use of drinking water for landscape irrigation.



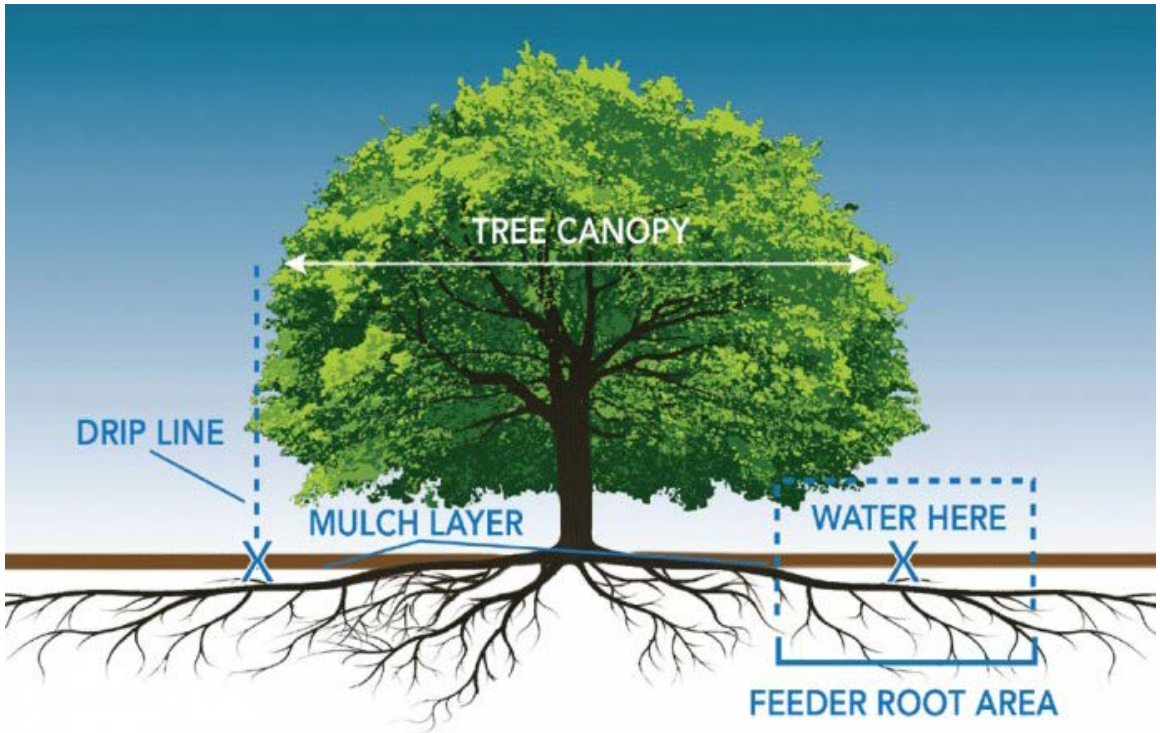
The elevation map for Santa Clara clearly shows how stormwater flows from high elevation (white/red) to low elevation (green), resulting in flooding in the central village area. Using GSI practices can help alleviate flooding and irrigate plants.

Soils

The USDA Natural Resource Conservation Service Web Soil Survey provides complex geo-referenced information about soils. The data is not precise at small municipal scales, and urban soils are often very different compared to surrounding natural areas. However, the soil survey provides useful insight into potential challenges with soil related to community forest management in Santa Clara.

Most of Santa Clara's soil is well drained coarse sandy loam. Loamy, well-drained soils are generally good for tree planting. However, Santa Clara's soil has low organic matter content. Organic matter is critical to plant growth and helps stop soil degradation and erosion. It is possible to add organic matter to soil, such as manure and compost; however, because organic matter will decompose at a faster rate than the surrounding soil, too much organic matter can eventually cause destabilized soils. **Using organic mulch around trees and plants allows nutrients and water to seep into the soil slowly to be held longer where they are available for uptake by tree roots.**

Within the Village proper, past excavation has revealed about two feet of soil over bedrock. Large trees need at least two feet of soil to establish structural roots, and roots will not be able to travel through bedrock. During tree planting, extra care may be needed to ensure there is adequate soil volume available for the tree, considering the expected mature size of the tree species being planted. Roots generally extend several feet beyond the canopy drip line of the tree, and these fine roots tips are where the tree pulls in most of its water from the soil. Some areas of Santa Clara may not be appropriate for large tree planting. Digging test holes will be a critical step of planning for planting projects.



Trees take up most of their water using fine roots located near the tree canopy drip line (Graphic credit Denver Water).

"We need trees to bring us beauty, peace, life and good oxygen."

-Santa Clara Resident

Newly planted trees in Santa Clara's Mercado area along Fort Bayard Road.

Community Forest

Santa Clara's community forest is made up of both naturally-occurring and human-introduced trees. The piñon and juniper of the mountain foothills is found in the higher elevations of the village. The Cameron Creek riparian area and smaller mountain drainages that run through the village have many trees including both native cottonwoods (although these have mistletoe infestation) and ashes and non-native salt cedar (*Tamarix species*) and Siberian elms (*Ulmus pumila*). These non-native trees have spread into surrounding areas.

Trees on village property are mainly limited to parks, where Santa Clara has invested in planting trees and shrubs and maintaining naturally-occurring trees. Both village property and residential properties boast some beautiful landscape trees, some of which are quite old, indicating that tree planting was a part of the development of the village and continue to be valued by residents today.

"Nothing like skipping home from shade tree to shade tree after school on a hot summer day."

-Santa Clara Resident

Tree Canopy Cover

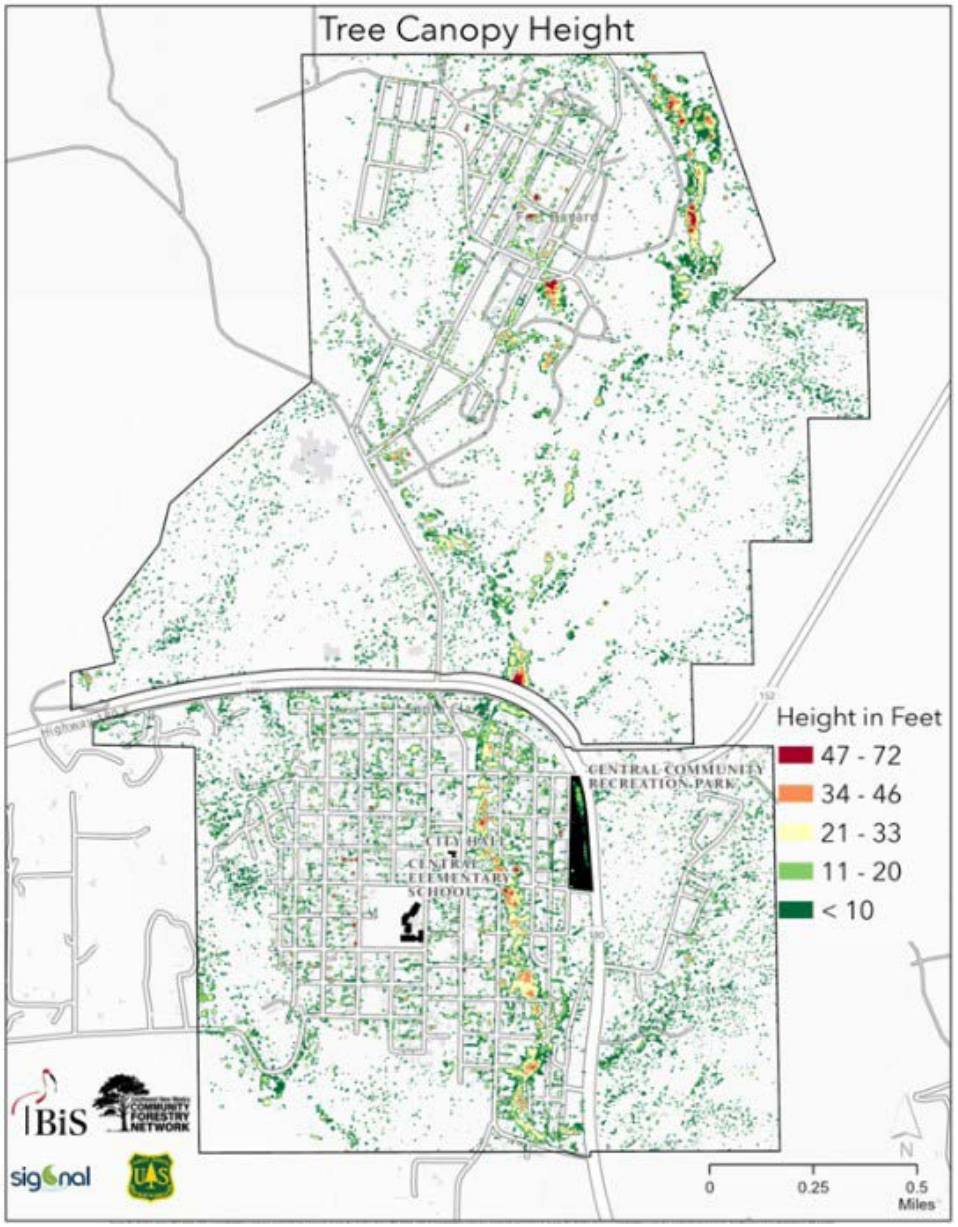
One way to assess the overall condition of an urban forest is to review tree canopy cover data. The canopy cover of a community is the percentage of land area that is covered by the leaves, branches, and stems of trees and plants when viewed from above. Satellite imagery provides both total canopy cover and data to assess the range in height of vegetation. The total canopy cover analysis includes all trees and plants greater than one meter (3.3 feet) tall across the whole community, in both public and private spaces.

The satellite imagery analysis shows Santa Clara's total canopy cover (the percentage of land that is covered in plants and trees greater than 3 feet tall) is 15%, while Fort Bayard's total canopy cover is 10%. Santa Clara's tree canopy (plants taller than 10 feet) is 7.8%, while smaller understory plants (between 3 and 10 feet tall) contribute an additional 7.2% to the total canopy. In Fort Bayard, tree canopy is 5.2% while understory plants contribute an additional 4.8% to total canopy coverage.

Larger tree height and a more dense canopy are generally associated with greater benefits, such as providing more shade and heat mitigation. The highest tree density and tallest trees are located in the Cameron Creek riparian area. Residential areas throught the village have shorter vegetation, with a few tall trees scattered throughout. Noticeably lower tree density levels are found at the elementary school and around the athletic fields of Bataan Memorial Park. Fort Bayard has a higher density of trees and plants along its streets, with many tall trees.

USDA Forest Service research shows that in a desert community, a tree canopy goal of 15% is a realistic goal. While it can be motivational for a community to set tree canopy goals, and it's clear that it would be beneficial to increase Santa Clara's tree canopy from its current rate of 7.8%, it is important to consider this goal in the context of the region's limited water availability. **To conserve water resources while increasing tree canopy for maximum community benefit, it is recommended to concentrate on increasing tree canopy in high use areas where people need shade the most**, rather than aiming to reach 15% tree canopy across the entire village.

It is also important to consider that much of Santa Clara's land area is privately owned and is the determining factor in Santa Clara's overall



Map of tree canopy cover in Santa Clara including all trees and plants more than one meter (approximately three feet) tall. Image Credit: SIG-NAL

canopy cover. **Engaging Santa Clara residents in planting, growing, and caring for trees on their property can play a critical role in enhancing the overall health of the Santa Clara's community forest.**

The CFN will provide resources to help Santa Clara in engaging residents, including educational resources on plant selection and irrigation recommendations. The network can also provide guidance on community engagement strategies such as establishing a volunteer program for tree maintenance and planting, and establishing a Tree Board to lend expertise to community forest initiatives.

	Large Trees	Small Trees & Shrubs
Santa Clara	7.8%	7.2%
Fort Bayard	5.2%	4.8%

In Santa Clara 15% percent of the land area is covered by the leaves, branches, and stems of trees and plants when viewed from above. 7.8% of Santa Clara's canopy cover comes from trees over 6 feet tall, while 7.2% comes from trees and plants between 3 and 6 feet tall. Image credit: IBIS.

Tree Inventory

While tree canopy cover data is useful, it does not tell us much about the health of Santa Clara's urban forest. For example, Cameron Creek has a higher canopy cover, but many of these trees are less desirable invasive species such as salt cedar and Siberian elm. Conducting tree inventories is a common management technique that provides more detailed information such as genus/species, height, and condition, and informs decision making.

Tree inventory efforts can be scaled depending on the resources available and the information most needed for urban forest management. In Santa Clara, the CFN project team has conducted a basic tree inventory of key parks and other public spaces to assess tree species, height, and condition. This was completed for the cemetery, Bataan Memorial Park, and several locations in the village noted to be of interest in Santa Clara such as Viola Stone Park, Central Community Recreation Park, and City Hall.

The tree inventory data was entered into Tree Plotter, an online tool for urban forest asset management. The New Mexico Forestry Division has supplied a license for communities within the state who wish to use this tool to map, manage, and enhance the care of their urban forest. **It is recommended that the Village of Santa Clara develops and maintains its tree inventory data to support effective and efficient management of the urban forest.**

For each tree that was inventoried, the following data was collected: genus/species, tree height, health condition and tree risk.

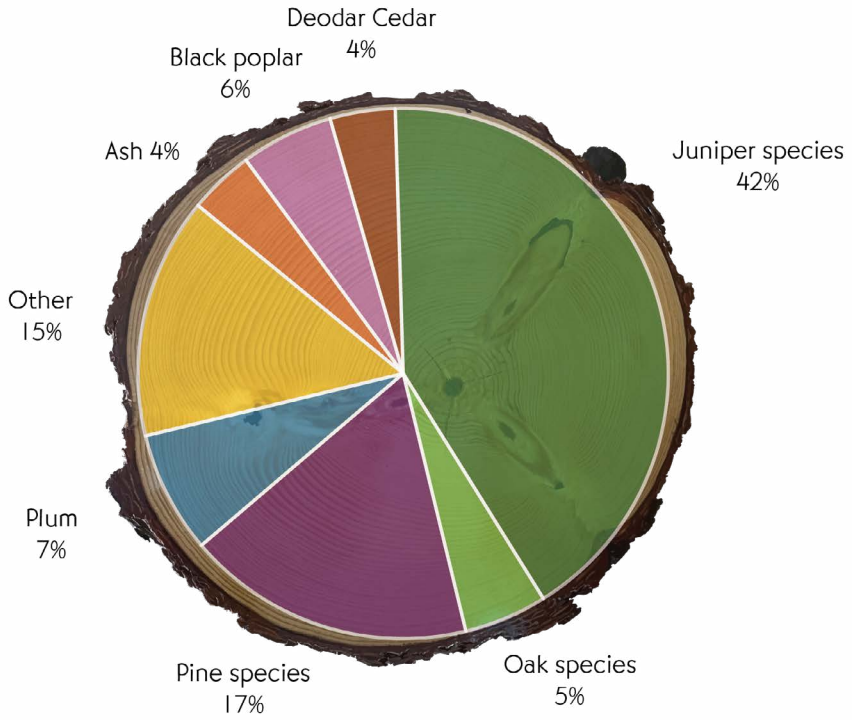
Tree genus or species. A diverse community forest is considered healthier compared to a forest dominated by just a few species. Increased biodiversity allows an ecosystem to better adapt to changing environmental conditions, maintain ecosystem functions, and provide a wide range of ecosystem services and habitat for diverse wildlife.

Pests generally target trees by genus or species, and therefore having a community forest without much biodiversity makes that forest particularly vulnerable to outbreaks that could cause wide-spread tree mortality. In the field of urban forestry, a standard goal is that a healthy urban forest should be made up of no more than 10% of any one species, 20% of any one genus, or 30% of any family of trees. Of the trees in Santa Clara's inventoried public spaces, there is a predominance of juniper (Juniperus spp) at over 42% of the inventoried trees. The next highest genus is pine (Pinus spp) at 18.9%. Both

juniper and pine genera are native to Santa Clara and are often naturally occurring. Overall, there is a diversity of over 20 species in Santa Clara.

An emerging alternative goal for tree diversity is that there should be at least three or more species in any given group of trees in a community area. While many of Santa Clara's inventoried spaces meet this goal, Viola Stone Park contains only ash (Fraxinus) trees.

As new planting projects are developed for Santa Clara's public spaces, it will be important to **diversify the tree species used, prioritizing regionally native trees**.



The trees in Santa Clara's public spaces are a variety of different species and genera, a good health indicator for a community forest. The only dominant species is juniper, which is native to the area.

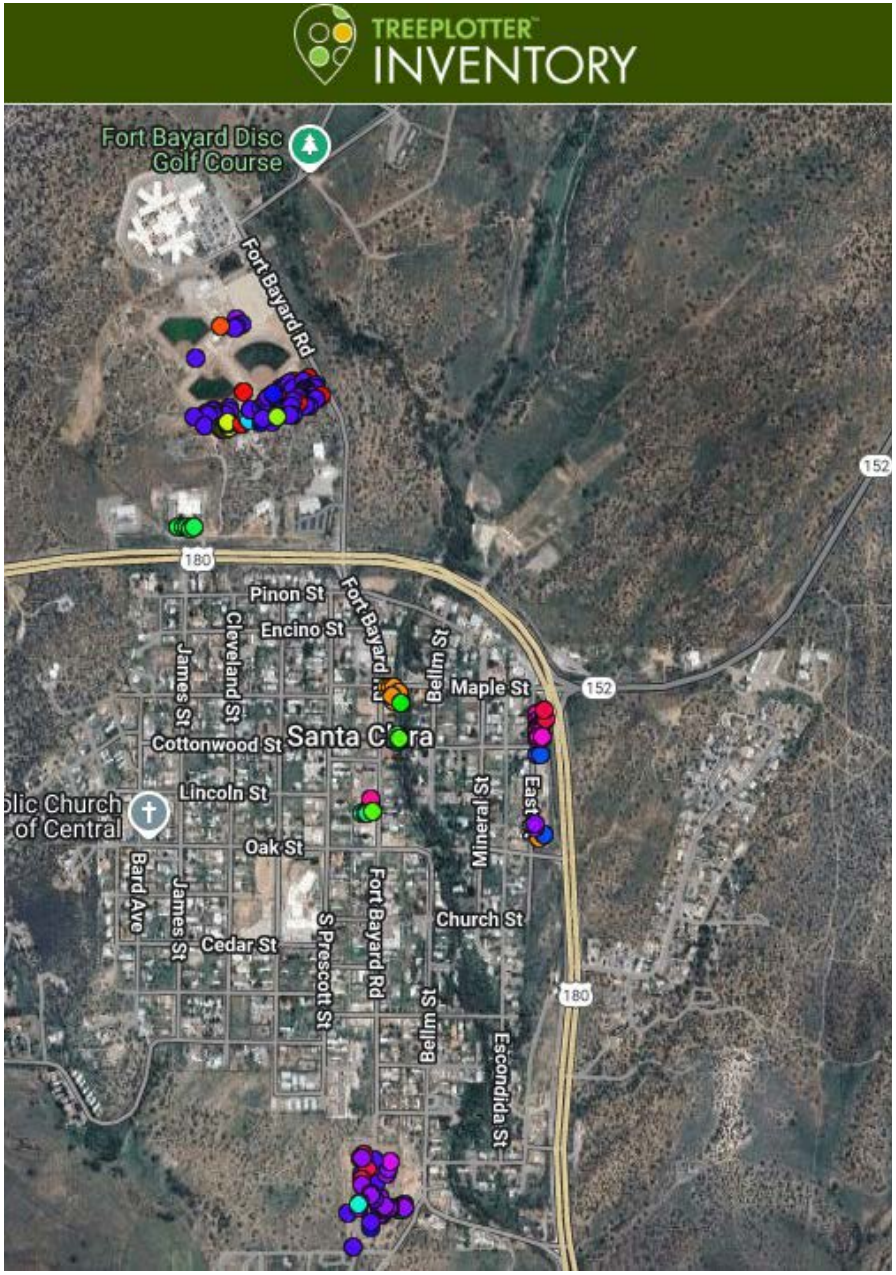
Tree height. Tree height provides two pieces of data - the risk posed by a tree if it were to fail or fall (larger trees can impart more damage), and an approximation for the age of a tree, or group of trees. If an urban forest has trees that are all in a similar age range, those trees are likely to die within the same range of time. Just as a lack of species diversity can cause problems for a community forest, a lack of age diversity can result in inconsistent canopy coverage over time when mature trees die off without the presence of slightly younger large trees to replace them.

Satellite data shows that the mean tree height in Santa Clara is 11.8 feet. Santa Clara has some very tall shade trees and windbreak trees in parks and residential neighborhoods, as well as tall trees in its riparian areas, but also has many shorter stature native trees and shrubs. The trees in many of Santa Clara's public landscapes were all planted at the same time, such as in Viola Stone Park, the Central Community Recreation Park orchard, and Bataan Memorial Park. Until recently there has been a lack of young trees in Santa Clara public spaces, indicating the potential for a future canopy gap.

To ensure future generations can consistently enjoy the benefits of a robust community forest, **Santa Clara should employ the concept of succession planting**. This requires long-term planning to space out planting projects over time to cultivate a diverse age range of trees in key areas of town. The CFN project will result in another surge of tree planting in Santa Clara. Over time, Santa Clara should **monitor these landscapes and supplement them with new plantings to avoid a single generation community forest.**

Tree condition. An assessment of the health condition of individual trees gives an idea of the overall health of the urban forest. During the basic tree inventory conducted by the project team, conditions were assigned using a simple scale:

- *Excellent* - nothing is apparently wrong with the tree
- *Good* - the tree has minor issues, routine monitoring and maintenance needed, with no need for immediate care
- *Fair* - the tree has issues which will require maintenance to bring it back to good form
- *Poor* - the tree has issues that will likely not be able to be corrected to bring it back to good form
- *Dying/Dead*



A tree inventory is a common management technique that provides more detailed information about the overall health of the community forest and informs decision making. This plot shows Santa Clara trees inventoried as of June 2025, with each color representing a different tree species.

It is important to note that in Santa Clara, tree condition was evaluated by a cursory visual assessment and without tree health assessment tools. Assigned conditions may not accurately reflect the actual health of individual trees. As the tree inventory is being completed, **a thorough tree health assessment should be conducted to gain a more accurate understanding of Santa Clara's overall tree canopy health.** This information informs the development of a maintenance schedule, prioritization and replacement or succession planning. Tree Plotter can be used to keep track of specific trees in priority locations for this purpose.

The trees in areas that have been inventoried in Santa Clara show the majority of trees are in "Good" condition (about 74%), with about 19% in "Fair" condition, and about 7% in "Poor" or "Dying/Dead" condition. Deciduous tree species, including the ash trees in Viola Stone Park and fruit trees in the Central Community Recreation Park generally seem to be in poorer condition, which is likely indicative of lack of sufficient irrigation.

Tree risk. Assessing tree risk is a good approach for prioritizing the maintenance work that needs to be done in a community forest. Tree risk is a combination of tree condition, tree height/size, and potential consequences should the tree fail (such as causing injury to people or damage to utility lines, buildings/infrastructure, vehicles, etc.). Accurate and individual tree risk assessment is most reliably done by qualified professionals who are trained in tree health assessment and in understanding site conditions. **Training Santa Clara landscape maintenance staff in basic tree risk assessment principles will allow them to provide risk management recommendations,** proactively plan the village's tree maintenance needs into the future, and identify when the help of a professional arborist may be needed.

All trees in Santa Clara's parks and community gathering spaces that are dead or in poor condition should be considered higher priority for removal because of their location in high public use areas. Thus, the area along Fort Bayard Road, including sites such as Viola Stone Park, and the area that includes the Senior Center, the El Grito Early Learning Center, and Central Community Recreation Park, are high priority. The cottonwood overhanging the gazebo in Viola Stone Park is a high risk tree because of its size and location. The recreation areas north of Highway 180, especially Bataan Memorial Park, maintained by the County, are also a high priority for maintenance due to their use by the entire Mining District and surrounding areas.

Irrigation Infrastructure

All trees and landscaping will need irrigation throughout their lives. Therefore, understanding the existing irrigation infrastructure is an important indicator of the sustainability of Santa Clara's community forest. **Santa Clara can employ strategies to increase irrigation efficiency and ensure adequate watering in areas with trees to improve plant health and maximize community forest benefits**.

Automatic irrigation systems are generally the most effective, since manual watering often results in inconsistent or insufficient water for trees and shrubs. While there is access to water in many public spaces in Santa Clara, most areas do not have irrigation systems installed. For example, Viola Stone Park and the Mercado do not have an automated irrigation system. The cemetery has a drip irrigation system, but needs upgrades to handle high pressure water flow. The lack of automatic irrigation systems results in a burden on Santa Clara municipal staff time, and when other maintenance issues take precedence, tree health will suffer.

Insufficient irrigation is a very common cause for poor tree health in urban areas. Trees need slow, deep watering to saturate the soil deep into the root zone (about 18-24 inches). Trees should be watered near the canopy drip line where its fine roots are located, rather than at the base of the trunk. The volume and frequency required for proper tree watering is dependent on a number of factors, including the time of year, the age and size of the tree, and the tree species. Soil moisture should be monitored regularly to ensure sufficient irrigation and avoid overwatering, which can also be harmful to the tree. Placing a ring of organic mulch (with a radius of at least 3 feet) can help conserve water in the soil and reduce evaporation. **For more information and resources to support proper tree irrigation in Santa Clara, visit swnmforestry.org.**

Santa Clara can support its community forest by **investing in efficient automatic irrigation systems in strategic planting areas** that can deliver the most benefit to Santa Clara's residents. Take advantage of planned infrastructure improvement projects to install irrigation infrastructure. **It is recommended that Santa Clara establish irrigation standards** in their community forest management program so that all irrigation infrastructure is the same, simplifying irrigation system maintenance and minimizing staff time required to make upgrates or repairs.

There are many great irrigation resources available including the Bernalillo County guidelines and instructions on how to build an efficient watering system for mature trees. See the 'Additional Resources' section of this plan for links to this and other resources.

For trees and large plants, drip emitter systems with mulch rings are recommended for greatest efficiency and flexibility. Drip irrigation systems need to be expanded over time to provide the proper volume and location of water to trees as they grow.

Until automated irrigation systems can be installed, an option to make tree irrigation easier is to pursue purchasing or renting a water truck or a water trailer. This would allow more targeted irrigation where watering is needed most. Additionally, a water truck/trailer could utilize wastewater effluent instead of drinking water.

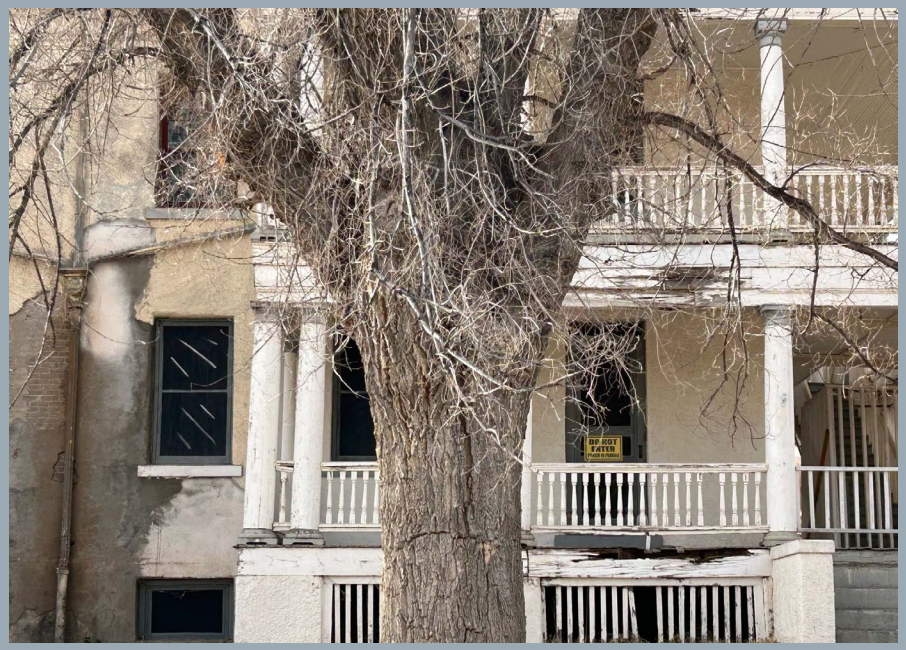
"I love to sit outside under the trees and sometimes grill hamburgers and hot dogs."

-Santa Clara Resident

Fort Bayard

The community forest in Fort Bayard includes a wide variety of tree species including some rare species that are not native to the region. While the trees at Fort Bayard were not inventoried by the project team, this is an important area to Santa Clara and the surrounding areas. Siberian elms, likely planted during the New Deal era, line many of the streets of Fort Bayard. Most of the trees in Fort Bayard are old and large, and many are in increasingly poor condition due to lack of irrigation and maintenance.

Fort Bayard's irrigation system is in need of repair. Additionally, the State of New Mexico holds the water rights and has turned off the water to the irrigation system. The mature trees that are planted here, many of which are not native, are quickly dying from lack of irrigation. **Immediate coordination with the State to reestablish water supply and repair the irrigation system is imperative to the future health of the community forest at Fort Bayard.**



Siberian elm trees, an invasive species, line many of the streets at Fort Bayard.

Curb cut, bioswale and basin complex in Silver City constructed by Asher Gelbart, Green Energy Now, that will allow stormwater to irrigate the landscape and reduce flooding in streets during storm events.

Green Stormwater Infrastructure. When combined with green stormwater infrastructure (GSI) features, trees can help address flooding by slowing the flow of water, infiltrating stormwater runoff, and intercepting precipitation before it hits the ground. GSI features such as curb cuts or cores, bioswales, and stormwater harvesting basins can be implemented alongside tree planting projects to catch stormwater and repurpose it for irrigation, mitigating nuisance ponding in streets while also improving watershed health and providing a range of other benefits to the community. **As the landscapes along main streets and walking paths are revitalized in Santa Clara, look for opportunities to incorporate GSI into the landscape design.**

There are several opportunities for GSI in Santa Clara:

Central Elementary School: Modify the existing stormwater retention pond at the site to allow water to infiltrate the soil on site to support new plantings, or redirect the stormwater to other areas of the site to irrigate landscape instead of pumping water out of this pond to the storm drain that flows to Cameron Creek.

Along Fort Bayard Road: This street is a low point in Santa Clara, running alongside Cameron Creek, and therefore experiences significant runoff-induced flooding during storm events. A series of distributed GSI features along Fort Bayard Road can help mitigate this issue. GSI is already planned as part of the Five Points Initiative at the historic Bradley Hotel grounds, and will be incorporated into the landscape and parking lot design. GSI may also be applicable at other locations along this Village 'Main Street', including in the Mercado area, along slopes between Fort Bayard Road and the creek, and in streetscaping.

Neighborhoods uphill from Fort Bayard Road: The most effective way to reduce flooding at lower elevations in Santa Clara is to intercept runoff at higher elevations. Opportunities for GSI in village rights-of-way have been identified in upland neighborhoods, including along Aspen Street and Pine Street between Cleveland Street and S. Prescott Street. A series of vegetated eddy basins along these streets would help reduce the amount of runoff that pools along Fort Bayard Road.

Tree Equity Score

American Forests created a Tree Equity Score tool to "help address damaging environmental inequities by prioritizing human-centered investment in areas with the greatest need." By assessing tree canopy in relation to demographic statistics at a census block scale - such as poverty, race, age, languages spoken, health burden index, unemployment and heat disparity- this tool aims to assess how equitably urban forest is distributed across a community. If a census block has a lower Tree Equity Score (a number assigned out of 100), this indicates an area with less canopy and a higher concentration of vulnerable populations and should therefore be prioritized for new planting projects.

Santa Clara, as part of the Mining District, has been assessed under this methodology. While the Tree Equity Score has significant limitations for identifying priority sites in small, rural areas like Santa Clara with only a few census blocks, the tool does provide useful data and statistics that may be helpful for grant writers as they are developing funding proposals for new projects. The Tree Equity Score National Map can be accessed via the web at treeequityscore.org.

"I have a pine tree I bought for Christmas the year my mom died and it's planted in my yard. "Mom's tree" is now 20 feet high."

-Santa Clara Resident

Established trees in front of El Grito Head Start Center in Santa Clara help mitigate heat and improve air quality.

Rendering of the Bradley Hotel, Mercado, and pump track, imagining the area with green stormwater infrastructure and healthy trees. Created by Anthropopulus Design + Planning.

Community Vision

Santa Clara's community vision is set forth in the Santa Clara Comprehensive Plan Update (2013) and the Infrastructure Capital Improvement Plan (ICIP). Santa Clara's Community Forest Management Plan offers strategies that advance many of the goals in these complementary plans, including town beautification, protecting Santa Clara's natural assets, strengthening economic activities for residents, instilling civic pride, promoting water conservation, and creating a safe, healthy and family-friendly village. In addition to reviewing these planning documents, this plan was informed by interviews with Santa Clara leadership and staff about areas where they would like to see improvement. A community survey was also distributed asking for residents' priorities for their community forest, where they would most like to see new trees, and areas of the village in need of maintenance.

Both the Comprehensive Plan and community survey reflect clear goals for revitalization and beautification in Santa Clara to recruit businesses, improve public and environmental health, and elevate community pride. The community forest can be a key component in achieving these goals and further developing Santa Clara's small-town character and identity, helping to make it a pleasant place to live and visit. Trees have been shown to have economic benefits for communities, enhance social cohesion, promote a sense of place and community pride, and even strengthen social bonds and trust between neighbors.

Of special note to the community forest and to life in the Village is Fort Bayard Road, a historic hub of civic and economic activity. This corridor includes parks, important municipal buildings such as City Hall and the Fire Station, the historic Bradley Hotel, and the nascent Mercado space across from City Hall. Serving as the village's "Main Street", Fort Bayard Road is a focus of recent revitalization efforts in Santa Clara, with several new and upcoming projects that provide the opportunity for continued beautification and "placemaking". Placemaking is the process of creating quality places that people want to live, work, learn and play in. The Village is working to make this corridor as beautiful, welcoming and shaded as possible to enhance quality of life, tourism, and economic development in Santa Clara.

The following sections expand upon how Santa Clara's vision for its community, the current conditions in Santa Clara's community forest, and best practices in the field of urban forestry have been woven together in order to produce the tailored recommendations that are featured in Santa Clara's Action Plan.

"In my youth my friends and I would look for the biggest cottonwoods. We would get a rope and tie a tire at the end of it, and there you have it, we would have the baddest swing in the Barrio."

-Santa Clara Resident

Santa Clara Vision Statement

Santa Clara 2013 Comprehensive Plan Update

"The Village of Santa Clara is a proud multicultural community with a strong connection to its history through future generations of families.

This is a safe and family-friendly village where everyone knows one another and possesses great educational and entrepreneurial opportunities.

We seek to develop a sustainable future based on respecting our cultural heritage, protecting our natural assets, and strengthening the economic opportunities for our residents that is environmentally safe and economically competitive.

The redevelopment initiative for our village builds on our historic architecture, is a center for creating locally based products, promotes reinvestment in our neighborhoods, and instills civic pride as a healthy community."

Air Quality, Urban Heat, and Public Health

Santa Clara residents highly value trees for their ability to enhance public health by improving environmental conditions, with 75% of surveyed Santa Clara residents citing improved air quality as one of the most critical benefits provided by the urban forest. Urban trees act as natural air filters by absorbing pollutants such as carbon dioxide, nitrogen oxides, ozone, and airborne particulate matter. They also release oxygen and improve the overall air quality. This is particularly important in mining communities like Santa Clara where air pollution can be a major health concern, especially for the most vulnerable populations. Perhaps the most impactful area for tree planting to improve air quality is along the pedestrian and bicycle trail along Highway 180, where trees can help absorb pollution from vehicles and provide a windbreak to the neighborhoods. Furthermore, **prioritizing tree plantings in areas that serve vulnerable populations is a strategic way to provide equitable access to the human health benefits of trees.**

Heat is another major concern for Santa Clara residents, with 60% of survey respondents citing heat mitigation as a highly important urban forest benefit. Trees play a key role in mitigating urban heat and the associated human health impacts. **The American Public Health Association identifies heat-related illness as a leading cause of death nationally in terms of weather and environmental events.** This is particularly acute in desert communities like Santa Clara, where hot summer temperatures can be made more extreme in areas with a higher concentration of heat-absorbing surfaces like buildings, roads, and pavement. By providing shade and releasing moisture into the air through the process of transpiration, urban trees provide a cooling effect that increases pedestrian comfort and reduces urban heat. **Prioritizing tree plantings in high-use pedestrian spaces like sidewalks, outdoor recreation spaces, and community parks is an efficient way to provide the cooling benefits of trees where people need it the most.**

"Using native species is very important to me."

-Santa Clara Resident

The planting space in front of Santa Clara Senior Center is an opportunity for street tree planting with GSI that can reduce heat and improve air quality for vulnerable people.

Wildlife and Watershed Health

Supporting urban wildlife habitat and biodiversity is of great importance for residents in Santa Clara, with 75% of public survey participants indicating that this is one of the benefits of the urban forest that they value the most. Community trees not only enhance the quality of life for humans but also serve as vital habitats for diverse native wildlife, including birds, beneficial insects, and small mammals. **Planning for a community forest with an abundance and variety of native species** can support biodiversity in Santa Clara by creating nesting sites, food sources, and corridors for wildlife to thrive.

Selecting native trees and plants for landscaping projects also supports water conservation efforts. These desert-adapted plants are drought tolerant and well suited to prosper in local climatic conditions and will therefore require less irrigation, helping to conserve water in underground aquifers. The presence of tree and plant roots also helps water infiltrate better where it can be stored in the soil, which can contribute to improved water quality, soil health and overall watershed health.

Southern Live Oak
Quercus virginiana

Thornless Honey Locust
Gleditsia triacanthos

Deodar Cedar
Cedrus deodara

Aleppo Pine
Pinus halepensis

Arizona Rosewood
Vauquelinia californica

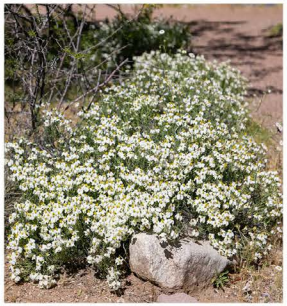
Three Leaf Sumac
Rhus trilobata

Chaste Tree
Vitex agnus-castus

New Mexico Olive
Foresteria neomexicana

Darcy Sage
Salvia darcyi

Showy Milkweed
Asclepias speciosa



Desert Zinnia
Zinnia acerosa

Goodding's Verbena
Glandularia gooddingii

Example of a regionally appropriate plant palette for Santa Clara.

Cameron Creek runs through the heart of the village, adjacent to Fort Bayard Road, and is a significant part of Santa Clara's community forest. This riparian area was historically dominated by cottonwood and willow species, but has since shifted to a predominately non-native plant palette that includes salt cedar (*Tamarix spp.*) and Siberian elm (*Ulmus pumila*). The Cameron Creek riparian area serves valuable ecological functions, but also poses a particular maintenance challenge. In addition to aiding the spread of non-native and invasive species, these drainage corridors bring risk of fire and flooding to several residential neighborhoods. To manage these risks, it is recommended that Santa Clara **develop a comprehensive approach to managing these riparian areas by coordinating with the New Mexico Energy, Minerals, and Natural Resources Department (NM EMNRD) Forestry Division, the Natural Resources Conservation Service (NRCS), and water agencies**. The NM Forestry Division's Forest Action Plan provides detailed maps of fire and post-fire debris flow risk that can be helpful planning tools to safeguard smaller communities from wildfire events that occur higher in the watershed.

With Cameron Creek running through or abutting private property, the management approach may include an **ordinance to control how residents with adjacent properties can build in, alter or impact these riparian areas to address fire and flood risk**. A vegetation control ordinance that specifies the proper disposal of yard waste, limiting the discard of green materials into natural arroyos will help reduce fire hazard and flood risk to local and downstream properties. Santa Clara may also consider an ordinance that requires new developments to retain stormwater on-site, using GSI features when appropriate, to mitigate excess runoff that carries pollutants into waterways.

"Children need shade to play. People that walk downtown need shade and sidewalks."

-Santa Clara Resident

The community forest of Cameron Creek in Santa Clara provides great benefit, but must be actively managed to reduce the risk of fire and flooding.

Economic Development and Revitalization

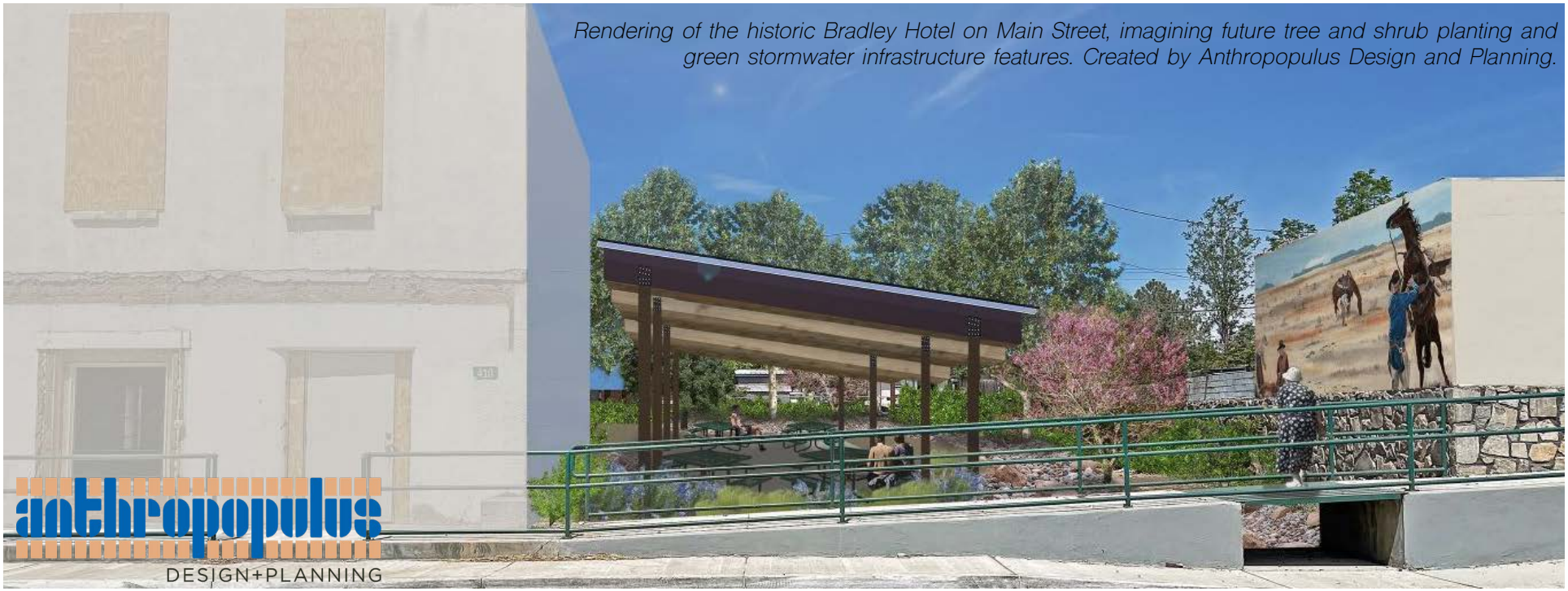
Santa Clara's Comprehensive Plan Update outlines a strong commitment to revitalize the village and develop economic opportunities. Studies show that that the presence of trees in business districts has economic benefits for communities by attracting more visitors, encouraging them to stay longer, and ultimately increasing foot traffic for local businesses. Strategically developing cohesive and complementary landscaping projects along key streets can contribute to Santa Clara's goals for economic development.

The heart of the Village of Santa Clara is its "Main Street", Fort Bayard Road. It serves as Santa Clara's central corridor, connecting multiple community services and spanning Highway 180. Developing cohesive and complementary landscaping projects along Fort Bayard Road is a strategic way to use the community forest to achieve multiple benefits, including economic development, community development and civic pride, social cohesion, shade and cooling, and improved walkability.

Key project areas along Main Street (Fort Bayard Road) include:

The Entrance to Fort Bayard Road from Highway 180 is the main gateway for Santa Clara. The Village of Santa Clara has created a new Village logo and plans to install a sign at this intersection. There is an opportunity for trees and landscaping to highlight the signage and draw travelers to stop in Santa Clara. The Santa Clara Comprehensive Plan includes the strategy to establish "gateway features" at the three main entrances of the Village along Highway 180. Of the three, the Fort Bayard Road entrance would be the most impactful intersection to focus resources. This is a challenging initiative because of the wide NMDOT right-of-way abutting private ownership and the coordination needed with NMDOT. Currently the NMDOT is creating a statewide aesthetics plan, providing a potential opportunity to highlight the needs of Santa Clara and other towns in the area for roadside improvements.

The historic Bradley Hotel was built in 1890. Throughout the years it has been a hotel, a convenience store, a liquor store, a brothel, and a furniture



Rendering of the historic Bradley Hotel on Main Street, imagining future tree and shrub planting and green stormwater infrastructure features. Created by Anthropopulus Design and Planning.

making shop. It is one of five cultural destinations within Grant County being revitalized by Southwest New Mexico Arts Culture and Tourism (swnmACT), known as the Five Points Initiative. The Village purchased the building in 2023 and is working with partners on extensive renovations, including the grounds. Trees and landscaping, including GSI features, are planned as part of the renovations.

The Mercado is a recently developed lot across the street from the Bradley Hotel, with colorful stalls to host vendors, farmers markets, and other events. Tree plantings and other landscaping are planned to help develop this currently mostly vacant site into a bustling community destination. The empty lot next to the Mercado may also be developed into a pump track or other recreational amenity. Trees and landscaping are included in these plans to provide shade and visually incorporate the amenity into the rest of Main Street.

The **Roger T. Silva Splash Park** and **Viola Stone Park** are community gathering spaces with popular amenities used by residents of Santa Clara and the Mining District as a whole. Neither park has room for planting, but small GSI features along the streets could help attract people to these village amenities and beautify the Village. The existing trees in Viola Stone Park are all ash trees that appear to be struggling and in poor health. They would benefit from improved irrigation and pruning, and may need to be phased out over time and replaced with a more diverse species palette. The large cottonwood in Cameron Creek that is hanging over the gazebo in Viola Stone Park needs ongoing maintenance to maintain its health.

Rendering of the Mercado on Main Street, imagining future tree and shrub planting. Created by Anthropopulus Design and Planning.

Youth Conservation Corps crews helped installed rock gardens and plants in the Main Street buffer strips.

Municipal Buildings including City Hall, the Fire Department, the Animal Shelter, and the Post Office have small areas that can accommodate trees and landscaping to help create a more vibrant, walkable neighborhood and a more cohesive look for Santa Clara's Main Street.

Fort Bayard Road has a **Buffer Strip** across from the Village municipal buildings. This buffer strip was recently improved with rock gardens, small plants, and GSI features to add attractive landscaping that advances Santa Clara's goals for beautification. Shade trees along the sidewalk opposite from the buffer strips were also planted, and more trees are planned as part of the Mercado development.

The entrance to the **Cameron Creek Pedestrian Bridge** could be landscaped with GSI features to add attractive landscaping and encourage people to use this community amenity with its well-lit sidewalk. The far side of the bridge, on Cypress Street, also has space for small stature plantings that would help create an entrance to Fort Bayard Road from the residential neighborhood.

North of Highway 180, there is a group of businesses set back from Fort Bayard Road at the northwest corner. There may be an opportunity for GSI landscaping at this corner to take advantage of the stormwater drainage at this location. Complementary landscaping could also be used to highlight these businesses.

At a community meeting to inform the Comprehensive Plan Update, "Promoting a Village beautification program" was ranked the third highest strategy out of 70 total strategies presented.

Central Community Recreation Park

Another key hub for community services in Santa Clara centers around Central Community Recreation Park, located on East Street. This location includes the El Grito Early Learning Center, the Senior Center, and a Health Clinic. The park contains playground equipment, seating areas, and a fruit tree orchard. The area has connectivity to the multi-modal transportation path between Santa Clara and Bayard that runs along Highway 180, and provides a buffer from Highway 180 to the dense residential neighborhood. **Improvements in the community forest near Central Community Recreation Park can contribute to positive health outcomes for Santa Clara's most vulnerable residents.**

Recommended projects in Central Community Recreation Park include:

Prioritize the care and maintenance of existing orchard trees. Assess and improve irrigation efficiency at the orchard, install organic mulch rings around the trees, and conduct structural pruning. Develop an integrated pest management plan for the orchard, which might include planting additional pollinator plants.

Prioritize the maintenance of existing mature trees at the park and the El Grito Early Learning Center. These trees are established and are in good condition, providing some of the greatest benefits of any trees in the village. Routine maintenance and an irrigation assessment will ensure that their benefits continue for years to come.

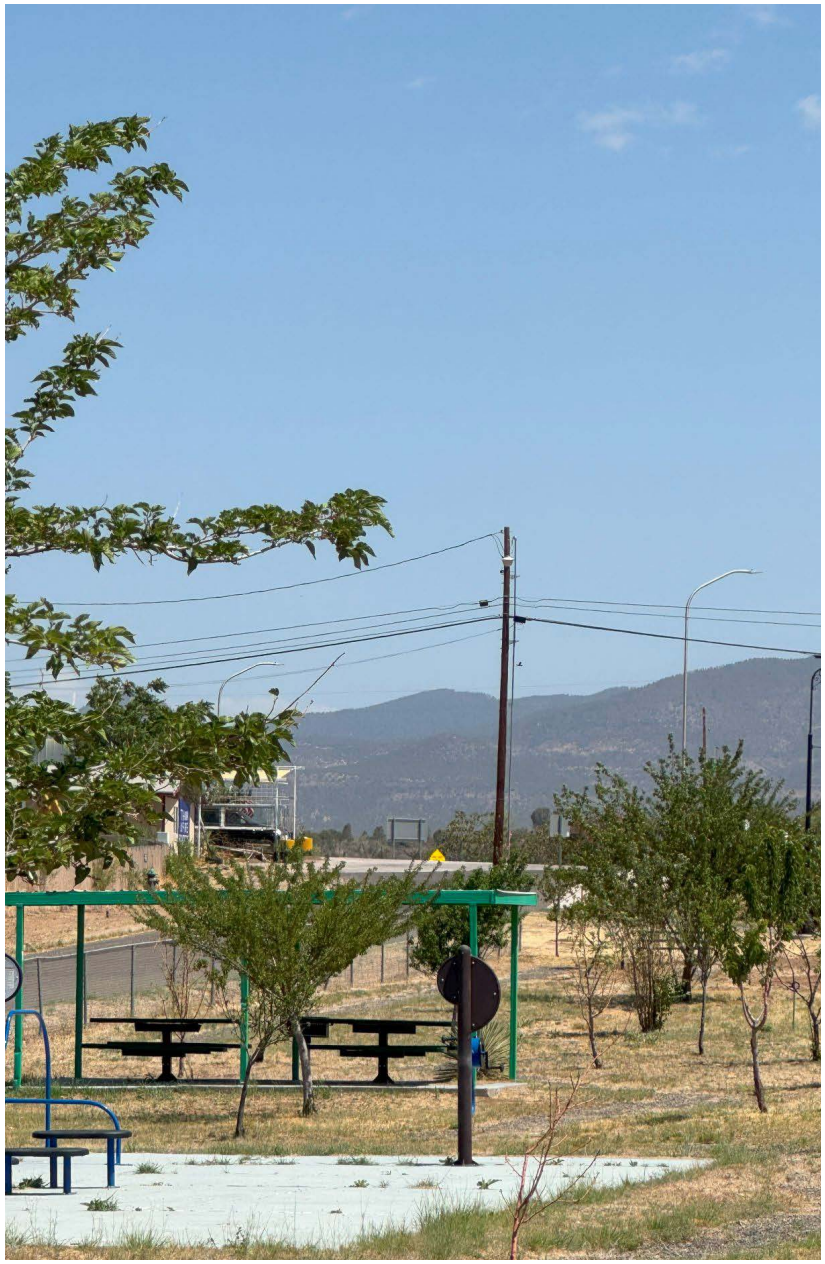
Install streetscaping with GSI features in front of the Senior Center, Health Clinic, El Grito Learning Center, and Grant County Regional Water Supply Project. The entrances to these locations all have streetside spaces that can accept stormwater runoff and accommodate trees and plants that would beautify the area, mitigate heat, and create a pedestrian-friendly corridor.

Plant shade trees in the park around playground areas and seating areas. Complete an irrigation assessment and install irrigation with these plantings, to ensure newly planted trees receive adequate irrigation.

Plant windbreak trees behind the complex, to help improve air quality along Highway 180. Remove dead trees and phase out Siberian elms.

Remove poor condition non-native Siberian elm and Tree of Heaven (*Ailanthus*) trees along the walking path within the park and replace them with shade trees. Install irrigation with these plantings to ensure trees receive adequate water.

Formal landscaping at the entrance to the pedestrian/bike trail to Bayard would attract people to this wonderful amenity and make the area feel safer.



Central Community Recreation Park in Santa Clara could benefit from additional tree planting, removal of invasive species, and maintenance of existing trees.

Outdoor Recreation and Walkability

Santa Clara has a generous number of outdoor and recreation sites for a small village that serve both residents and the entire Mining District. The Village's Comprehensive Plan emphasizes parks and green space with the goal to "create additional neighborhood parks and recreation facilities and enhance the landscaping in existing parks, community facilities and along streets using reclaimed water."

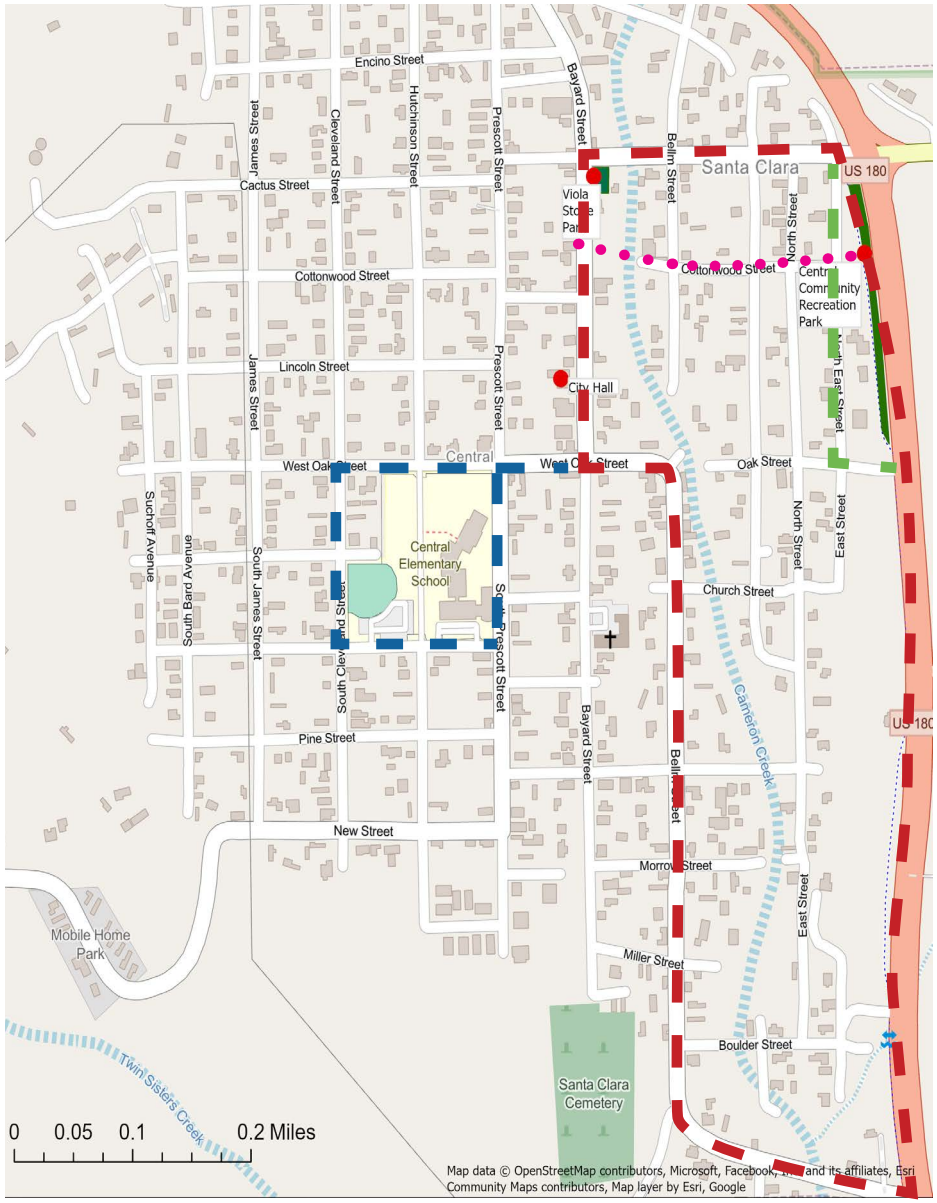
Santa Clara residents emphasized the vital role these green spaces play in promoting the health and well-being of their community. 50% of community survey participants indicated that they value the urban forest for encouraging outdoor recreation. Studies show that residents who live in areas with more green space are three times more likely to exercise regularly, which may reduce risk of many chronic illnesses like heart disease, obesity, and diabetes. Daily exposure to nature has also been shown to have positive effects on mental health and overall wellbeing, a benefit highly valued by 75% of Santa Clara residents who responded to the public survey.

Because of their high use and human risk potential, **prioritize existing outdoor recreation areas** for tree pruning and when necessary, tree removal. Plan and maintain irrigation systems to increase efficiency to improve plant health and decrease the use of drinking water for irrigation by incorporating GSI features or using reclaimed water.

In addition to the community forest planting and maintenance initiatives mentioned in previous sections, the following initiatives could expand and improve the community forest to support outdoor recreation in Santa Clara:

Bataan Memorial Recreational Park, owned and maintained by Grant County, is a large recreational complex and community gathering space. It has several large baseball fields, athletic courts, playground equipment, and picnic areas, centered around a monument. The existing trees in this park are primarily native junipers and pines. The Bataan Memorial Park baseball diamonds are one of the highest temperature areas in Santa Clara, likely because the fields are made of dark rubber-based artificial turf that absorbs heat from the sun and radiates it back out into the atmosphere at night. Planting deciduous trees with irrigation in key areas, such as ballfield spectator areas, could help address the heat issues at this park.

The **pedestrian/bike trail to Bayard** is an exceptional recreational amenity for Santa Clara. The trail is maintained by the NMDOT. Actively working with



Three walking loops could be formalized with trees and plants to take advantage of existing trails and connecting paths and improve Santa Clara's walkability.

the NMDOT to install low water use native plants along the trail, focused on the intersections of Oak Way and Fellner Road in Santa Clara, would draw more people to utilize the trail and help beautify the Village as a whole.

Creating a **walking path over the Cameron Creek Bridge** on Cottonwood Street between Main Street (Fort Bayard Road) and the Central Community Recreation Park would provide a convenient link for residents between the two main community service areas in the village. There is an opportunity to implement formal landscaping, including GSI features, at the Cottonwood Street entrance to the Cameron Creek Bridge, and at the intersection of Cottonwood Street and East Street on the other end of the connection. The Village of Santa Clara can seek funding to install a sidewalk here and look for opportunities to work with the residences along Cottonwood Street to plant trees and shrubs along the sidewalk.

Consider formalizing walking loops that capitalize on the existing pedestrian/bike trail from Santa Clara to Bayard, using landscaping to emphasize them and encourage their use. For example, a short walking loop around the Central Community Recreation Park could be improved with streetscape plantings along East Street. A longer walking loop could be created along Fellner Road to Bellm Street to Main Street (Fort Bayard Road) to Maple Street. Look for opportunities to install creative landscaping at intersections, or in village-owned properties along these routes to help encourage use of these routes.

The **Grant County Public Shooting Range** north of Highway 180 has some large cottonwoods and Siberian elms in high use areas that require pruning and maintenance.

"When fall comes around, trees bring so much color to this world."

-Santa Clara Resident

Cemetery

The **Santa Clara Cemetery**, located south of the Village, has almost 50 trees scattered throughout that are primarily evergreens, both native and introduced. There are a few Siberian elms, which should eventually be phased out as their condition deteriorates. Most of the trees at the cemetery are in good health, but there are a few struggling or dead trees (mostly pines) that require maintenance or removal. As of the writing of this plan, Santa Clara has requested funds through the ICIP for cemetery improvements. Additional tree planting and irrigation should be included in future cemetery improvement projects and funding requests. There is a significant potential for construction of green stormwater infrastructure (GSI) to capture surface runoff from the cemetery's steep slope and channel it into tree plantings on the east side of the property.

To support community forest management at this site, Santa Clara has an established policy that restricts residents from planting in the cemetery and gives municipal staff the authority to make decisions about new tree plantings. This policy may serve as an example for other Mining District town cemeteries.

Fort Bayard National Cemetery

The Fort Bayard National Cemetery is managed by the Department of Veterans Affairs. The grass and trees at the cemetery contribute to the cool temperature in the area, one of the coolest areas in or near Santa Clara.

Trees and other landscaping keep the Fort Bayard National Cemetery cooler than surrounding areas. Image credit: U.S. Department of Veterans Affairs

Central Elementary School

Central Elementary School provides important outdoor recreational space for children. The school has limited ground cover and only a few trees on the entire site. Existing trees appear to be struggling from insufficient irrigation and are in need of maintenance. The school would benefit from additional landscaping near fields, along walkways, and in play areas. **Shade trees around the campus would make play and outdoor learning more pleasant for students, provide sun protection, and allow outdoor activities to extend across all seasons**. Research has shown that children who can see trees and plants outside their school windows have better focus, and score higher on standardized tests.

The school buildings and grounds are under the jurisdiction of the New Mexico Public Schools Facility Authority (NMPSFA). Before any planting projects are planned at the elementary school, coordinate closely with the NMPSFA to understand landscaping or building expansion projects that may already be planned, and what the funding prioritization is. If a project is already planned, but funding is not expected soon, a community group could coordinate a planting project with CFN's help, with the understanding that the trees may be replaced during future school landscaping projects.

The aerial view of the Central Elementary School grounds shows few trees. Trees can provide shade and a positive learning environment.

Once trees and other landscaping are installed, ongoing maintenance and irrigation adjustments must be scheduled and performed in order for these trees to continue to be beneficial resources. The stormwater retention pond at the school is currently being pumped into Cameron Creek, and could instead serve as a supplemental irrigation source for some of the tree plantings. To support tree planting on campus, **coordinate with school leadership to make plans for long-term irrigation and maintenance, including sharing CFN training and tree care resources with school maintenance staff.**

"Our Elementary School should have trees for shade and beauty as well as for our young children to breathe better and have shade to sit under to eat lunch, to read a book, play with their friends or just relax."

-Santa Clara Resident

Residential Landscapes

The majority of Santa Clara is residential, which means residential trees are a major contributor to Village aesthetics and the overall benefits that the community forest can provide. Encouraging residents to plant trees will help beautify the community and create a network of walkable streets that all residents can enjoy. Targeted outreach to residents who live along walking corridors or near the school would help enhance walkability and connectivity in key areas that have been identified in this plan.Trees in the front yards of residential homes can benefit everyone by providing shade and cooling and cleaning the air near sidewalks and roads. **Residents should also be encouraged to install rainwater harvesting features on their properties to help reduce stormwater runoff and provide supplemental irrigation for residential landscapes**, reducing the use of drinking water for outdoor use.

Partnering with neighborhood tree planting programs and encouraging residents to maintain and plant trees on their property will expand Santa Clara's community forest much more than the village can do on its own. The Village of Santa Clara can also look for opportunities to assist residents with dead or dying tree removals. The Santa Clara Action Committee and "Beautiful Yard of the Month" award program are both initiatives that can incorporate the community forest into their scope.

Santa Clara can encourage residents to connect with CFN partners that can help provide them access to educational resources about tree care and connect them to tree planting opportunities. This engagement may also result in establishing a cohort of volunteers that can assist with maintaining public landscapes and help advise the future of Santa Clara's community forest.

"The trees make shade for our home and birds and my rabbit and dog."

-Santa Clara Resident

Albuquerque Neighborwoods tree planting. Image Credit: Tree New Mexico

Fort Bayard

The Village of Santa Clara has a 99-year lease from the State of New Mexico to manage Fort Bayard. It is an important gathering space for residents of Santa Clara and nearby communities, and is host to a variety of community events at the Parade Grounds. While this seems an obvious place for recommendations regarding both tree maintenance and increased plantings, the existing irrigation system is not operational, and the State of New Mexico holds the water rights.

Most of the trees at Fort Bayard are in serious decline, with many posing increasingly high risk to humans. In order to support the community needs and economic activity at this site, **significant investment and collaboration will be needed to improve existing tree health, remove high risk trees, replace failing trees with new plantings, and in general cultivate a cohesive, resilient urban forest in Fort Bayard**. The Village of Santa Clara should not undertake this effort independently, and without significant coordination with the State of New Mexico and a plan about if and how they are addressing the maintenance of the entire campus of Fort Bayard.

Significant investment and collaboration will be needed to improve tree health at Fort Bayard, requiring coordination with the State of New Mexico.

Maintenance Staff Support

Proper maintenance of trees and landscapes is a key component of revitalization efforts in the Village of Santa Clara. Over the next five years, significant investment will be made in expanding Santa Clara's community forest through the CFN, including the addition of irrigated landscapes and green stormwater infrastructure (GSI). One of the primary objectives for the CFN is to support municipal staff with landscape maintenance to help ensure the long-term success of this investment. Santa Clara staff will have the opportunity to engage with the CFN, which offers additional access to training, resources and strategies that can help increase the efficiency and effectiveness of the community forestry program. **Active participation in the CFN is a good investment of Santa Clara staff time and will support the implementation of this Community Forest Management Plan.**

As Santa Clara's community forest continues to develop in public spaces, it is recommended to **establish internal processes that ensure landscaping needs do not exceed available human and financial resources**. The CFN can support Santa Clara in creating these processes, such as establishing a strategic maintenance and irrigation schedule, creating a prioritized list of tree removal, developing an integrated pest management program and offering specialized training to staff. These are all strategies that are achievable within Santa Clara's current capacity, and can support the Village's goals for community forest management.

The adoption of landscaping policies and ordinances also contributes to effective and proactive management of urban trees. **Establishing a basic vegetation ordinance gives municipal staff the authority to address community forest issues effectively**, such as vandalism, tree risks, invasives, and pest management. In the future, the Village may want to consider more complex ordinances that can define residential and commercial responsibilities for landscapes and set landscaping requirements for new development.

Tree and plant maintenance and irrigation are specialized fields with regionally-based best management practices that are evolving based on emerging science. Some of the existing maintenance and irrigation practices in Santa Clara need to be updated to protect tree health and support a thriving urban forest. Santa Clara staff would benefit from additional training, mentorship, and opportunities to engage with regional experts. To further strengthen Santa Clara's ability to manage its community forest, **investment in annual staff training in tree care, irrigation, and GSI** is recommended.

Tree care sometimes requires highly specific expertise and can be dangerous work, especially when working at heights in large mature trees - either climbing or using bucket trucks. Working with arborists is valuable, but it is usually not cost-effective to have this level of expertise on staff full-time. It is prudent to establish a mechanism to access tree expertise when needed, either via an on-call contractor or by sharing regional personnel resources.

Future Plans and Projects

As the Village of Santa Clara continues its revitalization efforts, the community forest stands as a vital asset in shaping a greener, healthier, more resilient future. Trees and green spaces can play an important role in addressing local challenges such as flooding, economic growth, aging infrastructure, and public health concerns, while also enhancing the beauty and character of the village. By incorporating the goals, strategies, and actions outlined in this Community Forest Management Plan into ongoing and future projects, Santa Clara can ensure that urban forestry remains a central part of its growth and transformation.

As Santa Clara continues to prosper and grow, the community forest should keep pace. Looking ahead, the community forest will be an important contributor to Santa Clara's broader vision for economic development, enhanced public and environmental health, and vibrant public spaces. Thoughtfully integrating trees and landscaping into redevelopment and infrastructure projects will help strengthen community identity, foster civic pride, and improve quality of life for residents and visitors alike. As new projects are planned, **look for opportunities to integrate trees and landscaping to simultaneously support a thriving community forest that helps make Santa Clara a pleasant place to live, work, and visit**.

"The trees provide shade and in neighborhoods you can put swings for the children."

-Santa Clara Resident

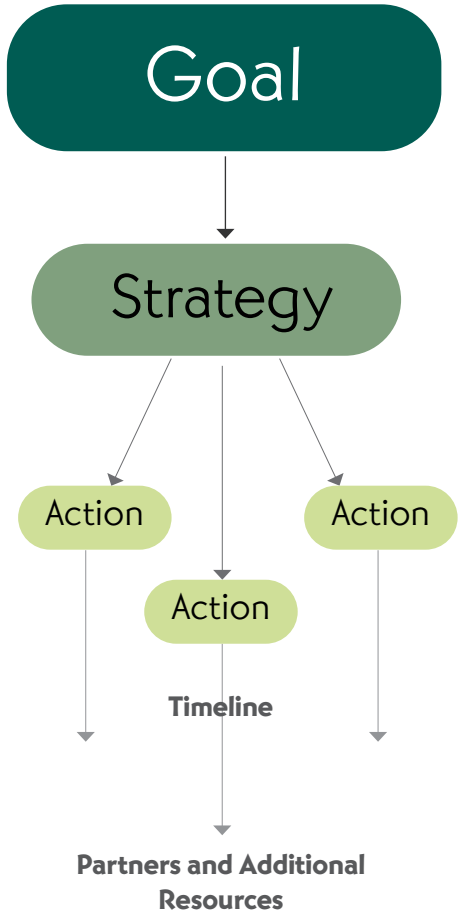
Visualization of a new Santa Clara welcome sign at the intersection of US-180 and Fort Bayard Road.

Action Plan

A significant investment is being made to enhance Santa Clara's community forest through the Southwest New Mexico Community Forest Network (CFN) project. This *Action Plan* outlines the foundational steps necessary to guide, support, and sustain this effort in Santa Clara throughout the remaining years of the project.

The *Action Plan* sets three primary Goals that establish a vision of a healthy and resilient community forest in Santa Clara. Each Goal is supported by targeted, actionable Strategies that work together to help Santa Clara make progress towards this vision. The Strategies are further broken down into a series of specific Actions with defined timelines for completion, which are outlined in the tables below. Additionally, each Strategy is presented with a list of potential partner organizations and available supporting resources.

The Goals, Strategies and Actions were informed through engagement with Santa Clara leadership, staff, and community members, Grant County staff leadership, and local experts. The project team also carefully reviewed Santa Clara's Comprehensive Plan and other available planning resources like the Infrastructure Capital Improvement Plan (ICIP). The results of this engagement and the analyses that informed the *Action Plan* are summarized and analyzed in the previous section, *The Basis for the Plan.*



Goals are the foundation for any Strategic Plan. They are a collective vision for the Village to aspire to. They organize strategies and actions to help realize the plan fully.

Strategies are measurable approaches of "how" to achieve a given goal.

Actions are individual steps or sets of steps to be taken to support a strategic approach to achieving the goal.

Timeline proposes a time frame for an action. This plan proposes Short Term actions (1-2 years), Mid Term (2-5 years), and Long Term (5+ years).

Partners and Additional Resources are vital to completing the Action Plan. Partners can support municipal staff with ongoing training, implementation of actions, and the creation of additional resources. Additional Resources can provide the specific guidance to help residents and municipal staff to carry out the actions identified in the plan.

Santa Clara Action Plan

Goal 1

Santa Clara's community forest strengthens community pride and promotes economic development.

Strategy 1A

Develop cohesive landscapes along Main Street (Fort Bayard Road) that highlight Santa Clara's existing community services.

Actions		Timeline
1A.1	Develop and maintain landscaping projects at key locations along Main Street to create a cohesive and beautiful downtown: » Install landscaping and GSI features in the buffer strip along Fort Bayard Road. » Plant trees along the east sidewalk along Main Street. » Install small plantings with GSI features at entrances to Viola Stone Park and Splash Park. » Maintain the new plantings at Mercado. » Maintain and develop an irrigation system for existing trees at Village Hall. » Maintain landscaping at the Fire Department, Animal Shelter, and Post Office. » Landscape the Main Street entrance to Cameron Creek.	2-5 Years (Medium Term)
1A.2	Prioritize maintenance at Viola Stone Park. » Address irrigation issues for ash trees. » Conduct pruning and maintenance on the large cottonwood tree overhanging the gazebo. » Replace ash trees as needed with a more diverse tree palette.	2-5 Years (Medium Term)

Partners include:

- SWNM Community Forestry Network
- Santa Clara Action Committee
- Youth Conservation Corps

Resources include:

- Recommended Tree and Plant List for Santa Clara
- Guide to Planning and Implementing Community Forestry Projects
- Green Stormwater Infrastructure Implementation Guide
- Irrigation Resource

Santa Clara Action Plan

Goal 1

Santa Clara's community forest strengthens community pride and promotes economic development.

Strategy 1B

Integrate the community forest into broader community goals and emergent projects.

Actions		Timeline
1B.1	Utilize cohesive landscaping and develop irrigation and maintenance plans for new and upcoming Main Street Projects: » GSI installation and tree planting as part of the Bradley Hotel Renovation Five Points Initiative. » Landscaping at the future recreational amenity planned for the empty lot on Main Street next to the Mercado.	1-2 Years (Short Term)
1B.2	Work with the NM Department of Transportation (DOT) to landscape the three entry points into the Village off Highway 180 and highlight Village signage on Highway 180, prioritizing the south Fort Bayard Road entrance.	2-5 Years (Medium Term)
1B.3	Explore GSI installation opportunities at northwest corner of Highway 180 and Fort Bayard Road to attract attention to entrance to Santa Clara and highlight businesses.	2-5 Years (Medium Term)

Partners include:

- SWNM Community Forestry Network
- Southwest New Mexico Arts, Culture, and Tourism (swnmACT)
- NM Department of Transportation
- Youth Conservation Corps

Resources include:

- Recommended Tree and Plant List for Santa Clara
- Guide to Planning and Implementing Community Forestry Projects
- Green Stormwater Infrastructure Implementation Guide

Santa Clara Action Plan

Goal 1

Santa Clara's community forest strengthens community pride and promotes economic development.

Strategy 1C

Improve and expand the community forest in recreational areas that serve Grant County and attract visitors to Santa Clara.

Actions	Timeline
1C.1 Revitalize Grant County Bataan Memorial Park: » Prioritize mature tree maintenance and improve irrigation efficiency. » Plant shade trees in key gathering areas of the park to address heat issues.	2-5 Years (Medium Term)
1C.2 Conduct pruning and other maintenance at the Shooting Range and the Disc Golf Course, and conduct replacement planting as needed.	Ongoing

Partners include:

- Grant County
- SWNM Community Forestry Network

Resources include:

- Recommended Tree and Plant List for Santa Clara
- Guide to Planning and Implementing Community Forest Projects
- Irrigation Resource

Santa Clara Action Plan

Goal 2

Santa Clara's community forest contributes to the health and wellbeing of both people and nature.

Strategy 2A

Invest in community forest improvements surrounding Central Recreational Park and the Elementary School.

Actions		Timeline
2A.1	Prioritize the maintenance and irrigation of existing trees at the Central Community Recreation Park area: » Review and improve irrigation at the orchard. » Develop an integrated pest management plan. » Perform routine maintenance and an irrigation assessment for mature trees at park and El Grito Learning Center.	1-2 Years (Short Term) On-going
2A.2	Expand the community forest near Central Community Recreation Park to gain additional health benefits: » Plant shade trees around the playground area and seating areas. » Plant windbreak trees, remove and replace dead trees, and phase out Siberian elms and Ailanthus between the complex and the Highway 180 walking path. » Install GSI features and streetscaping in front of the Senior Center, Health Clinic, and El Grito Learning Center. » Landscape the entrance to the Highway 180 pedestrian/bike trail to Bayard to draw attention to the amenity. » Install streetscaping and GSI features along East Street and Oak Way, including the location of the Grant County Regional Water Supply Project.	2-5 Years (Medium Term)
2A.3	Collaborate with Central Elementary School to bring shade trees and ground cover to school grounds.	2-5 Years (Medium Term)

Partners include:

- NM Public Schools Facilities Association
- SWNM Community Forestry Network

Resources include:

- Recommended Tree and Plant List for Santa Clara
- Guide to Planning and Implementing Community Forestry Projects
- Green Stormwater Infrastructure Implementation Guide
- Irrigation Resource

Santa Clara Action Plan

Goal 2

Santa Clara's community forest contributes to the health and wellbeing of both people and nature.

Strategy 2B

Utilize the community forest to promote the walkability of Santa Clara.

Actions		Timeline
2B.1	Utilize landscaping to create a link between Main Street and the Central Community Recreation Park across the Cameron Creek Bridge: » Landscape Cypress Street entrance to the bridge, including GSI. » Landscape the intersection of Cypress Street and East Street. » Work with residential properties along Cypress Street to encourage streetside trees and landscaping.	2-5 Years (Medium Term)
2B.2	Work with NM DOT to install drought tolerant native plants along Highway 180 pedestrian/bike trail, prioritizing intersections of Oak Way and Fellner Road.	5+ Years (Long Term)
2B.3	Implement strategic streetscaping at Village properties and encourage/support streetside residential landscaping to create walking loops around Santa Clara, with connections to the Highway 180 pedestrian/bike trail: » Short loop around Central Community Recreation Park using East Street. » Long loop from Fellner Road to Bellm to Main Street to Maple Street.	5+ Years (Long Term)
2B.4	Prioritize use of tree understory plantings and organic mulch in streetscapes to mitigate heat for both pedestrian comfort and tree health.	1-2 Years (Short Term)

Partners include:

- » SWNM Community Forestry Network
- » New Mexico Department of Transportation (NM DOT)
- » New Mexico Neioghorwoods

Resources include:

- » Recommended Tree and Plant List for Santa Clara
- » Guide to Planning and Implementing Community Forestry Projects
- » Green Stormwater Infrastructure Implementation Guide
- » NM DOT Statewide Aesthetics Plan (under development 2025)

Santa Clara Action Plan

Goal 2

Santa Clara's community forest contributes to the health and wellbeing of people and nature.

Strategy 2C

Manage a healthy community forest to conserve water resources, mitigate risk, and enhance environmental health.

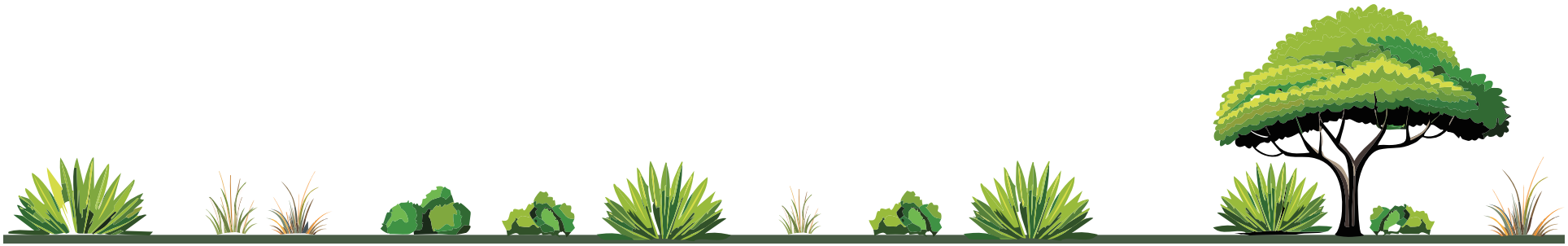
Actions		Timeline
2C.1	Publish a tree list and plant palette appropriate for Santa Clara's climate and geography, focused on drought-tolerant plants native to the southwest U.S./northern Mexico.	1-2 Years (Short Term)
2C.2	Practice succession planting by phasing new trees and plants into landscapes over time to avoid having a single generation community forest.	On-going
2C.3	Proactively identify opportunities to co-locate GSI and tree plantings to supplement irrigation with stormwater, mitigate ponding, and support watershed health.	On-going
2C.4	Collaborate to develop a program to proactively manage Cameron Creek and prioritize work to minimize fire danger, flood risk, and invasive species migration. Perform maintenance to mitigate risk of falling limbs on footpaths.	2-5 Years (Medium Term)
2C.5	Maintain existing trees and do additional landscape plantings and GSI at the Santa Clara cemetery.	On-going

Partners include:

- SWNM Community Forestry Network
- New Mexico Energy, Minerals, and Natural Resources Department Forestry Division
- Natural Resources Conservation Service
- Water Agencies

Resources include:

- Recommended Tree and Plant List for Santa Clara
- Guide to Planning and Implementing Community Forestry Projects
- Green Stormwater Infrastructure Implementation Guide



Santa Clara Action Plan

Goal 3

Santa Clara fosters a thriving community forest through proactive management, skilled staff, and informed policy.

Strategy 3A

Invest in building staff expertise to strengthen Santa Clara's community forest management.

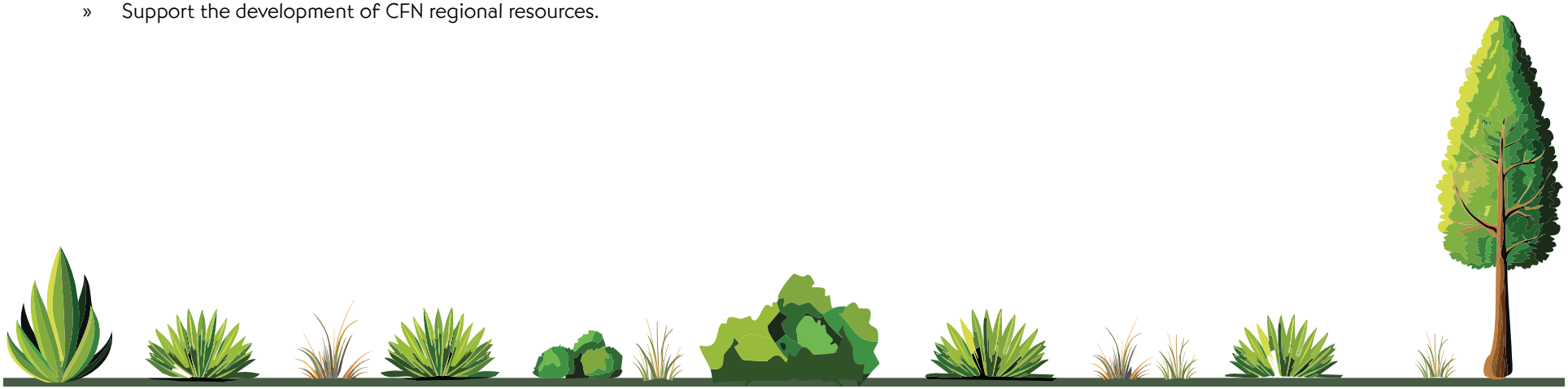
Actions		Timeline
3A.1	Support Santa Clara staff to actively participate in the CFN, where they can connect to educational resources and events to further their skills in urban forestry and GSI implementation and maintenance.	Immediate and On-going
3A.2	Invest in staff training for tree care, irrigation maintenance, tree risk assessment, integrated pest management, and GSI maintenance. » Invite school staff to CFNtree care trainng events	1-2 Years and On-going
3A.3	Create a mechanism to access tree expertise: » Establish contracts with certified arborists. » Support the development of CFN regional resources.	1-2 Years (Short Term)

Partners include:

- SWNM Community Forestry Network
- New Mexico Urban & Community Forestry Program
- NM Tree Alliance

Resources include:

- SWNM Community Forestry Network Website and Printed Materials
- Arborist Contract Template



Santa Clara Action Plan

Goal 3

Santa Clara fosters a thriving community forest through proactive management, skilled staff, and informed policy.

Strategy 3B

Develop and streamline a strategic landscape maintenance program.

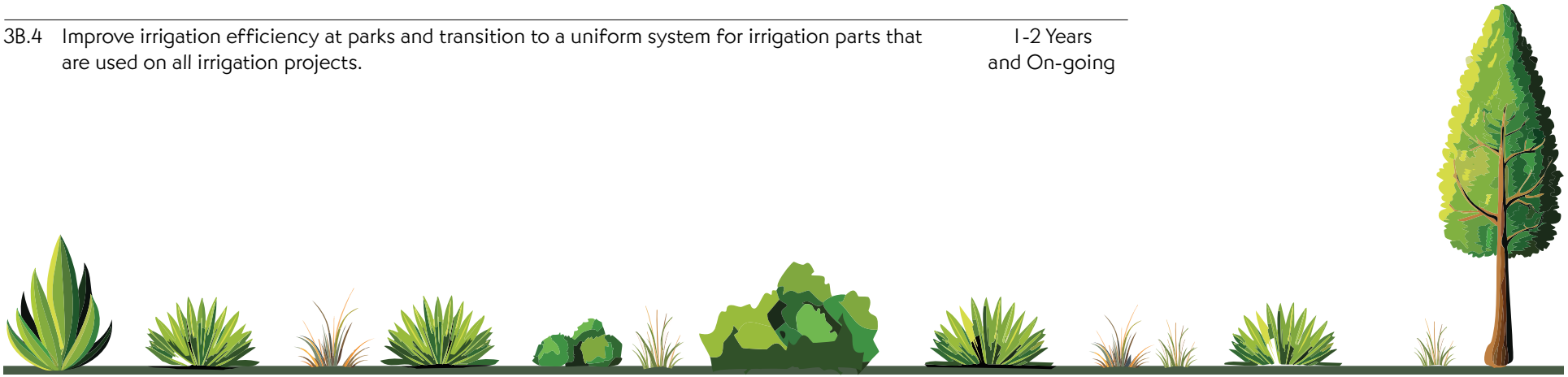
Actions		Timeline
3B.1	Complete the existing Santa Clara tree inventory in Tree Plotter and periodically update the data set to inform priorities for maintenance and high risk tree risk reduction.	1-2 Years (Short Term)
3B.2	Establish and adhere to a tree maintenance schedule, to include: » Tree pruning/removal. » Irrigation checks. » Mulch and understory planting maintenance. » Insect and disease checks.	1-2 Years (Short Term)
3B.3	Identify opportunities to integrate GSI practices into landscaping projects to re-purpose stormwater to irrigate plants, curb flooding, and provide multiple community benefits.	On-going
3B.4	Improve irrigation efficiency at parks and transition to a uniform system for irrigation parts that are used on all irrigation projects.	1-2 Years and On-going

Partners include:

- » SWNM Community Forestry Network
- » NM Urban and Community Forestry Program
- » NM Tree Alliance

Resources include:

- » Example Maintenance Schedule
- » GSI Implementation Guide
- » Irrigation Resource



Santa Clara Action Plan

Goal 3

Santa Clara fosters a thriving community forest through proactive management, skilled staff, and informed policy.

Strategy 3C

Establish municipal policies that support Santa Clara's community forest goals.

Actions		Timeline
3C.1	Establish a vegetation ordinance that includes: » Formalized authority of town staff. » Protection and preservation of existing healthy, mature trees. » Irrigation and water conservation policy. » Designated responsibilities in ROWs and buffer strips - municipal, private, and public. » New development landscaping requirements.	2-5 Years (Medium Term)
3C.2	Establish and update an annual budget for landscaping projects, including irrigation and maintenance.	Immediate 1-2 Years (Short Term)
3C.3	Update the Santa Clara Community Forest Management Plan.	2029

Partners include:

- SWNM Community Forestry Network
- NM Urban and Community Forestry Program

Resources include:

- Example Vegetation Ordinance
- Example Budget Template

Fort Bayard Action Plan

Goal 4

The community forest at Fort Bayard is well maintained and supports the economic activity of the region.

Strategy 4A

Monitor high risk trees in Fort Bayard and elevate issues to the State of New Mexico.

Actions		Timeline
4A.1	Review the tree inventory (4.A.1) annually and identify high risk trees that need immediate maintenance. Elevate to the responsible party identified in Fort Bayard policy (4.C.1).	Ongoing

Partners include:

- State of New Mexico General Services Department
- New Mexico Energy, Minerals, and Natural Resources Department Forestry Division

Resources include:

- New Mexico Tree Plotter

Fort Bayard Action Plan

Goal 4

Fort Bayard's community forest is well maintained and supports economic activity in the region.

Strategy 4B

Coordinate with the State of New Mexico and other partners on a development and restoration plan for Fort Bayard to ensure the community forest is included as infrastructure that requires funding and maintenance.

Actions		Timeline
4B.1	Request that the State of New Mexico conduct a tree inventory in main parade grounds and other high use areas in Fort Bayard, and use it to complete a cost estimate of maintenance and removal needs.	1-2 Years (Short Term)
4B.2	Request that the State of New Mexico conduct an assessment of the irrigation system at the parade grounds and other high use areas in Fort Bayard, with a cost estimate to make it functional again.	1-2 Years (Short Term)
4B.3	Stay engaged on the funded project to upgrade the water infrastructure system at Fort Bayard and monitor how it impacts irrigation of the landscape.	1-2 Years (Short Term)
4B.4	Update the Fort Bayard Historic District Plan infrastructure list to include trees and other landscapes, to ensure the community forest is included as infrastructure that requires funding and maintenance.	1-2 Years (Short Term)

Partners include:

- State of New Mexico General Services Department
- New Mexico Energy, Minerals, and Natural Resources Department Forestry Division

Resources include:

- New Mexico Tree Plotter
- Fort Bayard Historic District Business Plan (2016)
- Irrigation Resource

Fort Bayard Action Plan

Goal 4

The community forest at Fort Bayard is well maintained and supports the economic activity of the region.

Strategy 4C

Create a long-term plan for Fort Bayard's community forest that identifies irrigation responsibilities, maintenance responsibilities and processes, and sustained funding.

Actions		Timeline
4C.1	Establish a vegetation policy for Fort Bayard that includes: » Responsibilities for irrigation and other landscape maintenance. » Protection and preservation of existing, mature trees. » Irrigation and water conservation policy. » Operational funding and staffing.	2-5 Years (Medium Term)
4C.2	Work with the State of New Mexico to establish and update an annual budget for landscaping projects, including irrigation and maintenance.	2-5 Years (Medium Term)

Partners include:

- State of New Mexico General Services Department
- New Mexico Energy, Minerals, and Natural Resources Department Forestry Division

Resources include:

- Template Vegetation Ordinance
- Example Maintenance Schedule
- Irrigation Resource

Supporting Documents

The CFN website, swnmforestry.org, was designed to help coordinate efforts and share information between communities and project partners, including links to additional resources that are referenced in this management plan. The network and the project team will continue producing and curating tools as needed to help the towns to put this plan into action, such as:

- Examples of seasonal maintenance schedules and checklists.
- Guides to planning and implementing community forest projects.
- Guides to planning and implementing green stormwater infrastructure projects.
- Templates for recommended policies, such as a Vegetation Ordinance, a Complete Streets Ordinance and/or a Cemetery Tree Policy.
- Templates for contracts to enlist the support and specialized skills of a Certified Arborist, and a list of recommended questions to ask when selecting a practitioner to hire.
- Example landscape maintenance and irrigation budgets.
- Landscape irrigation guides and other resources.
- Guide to connecting with regional resources and groups, such as the NM Tree Alliance and the SW Directory of Tree Care Practitioners.
- Resources for soil testing and promoting soil health.
- Resources for engaging residents and exploring neighborhood tree planting programs.

Supporting Networks & Organizations

Gila Resources Information Project (GRIP)

Integrated Biological Solutions (IBIS)

Western New Mexico University (WNMU)

Grant County Cooperative Extension

New Mexico Tree Alliance

New Mexico Urban Forest Council

New Mexico Forestry Division

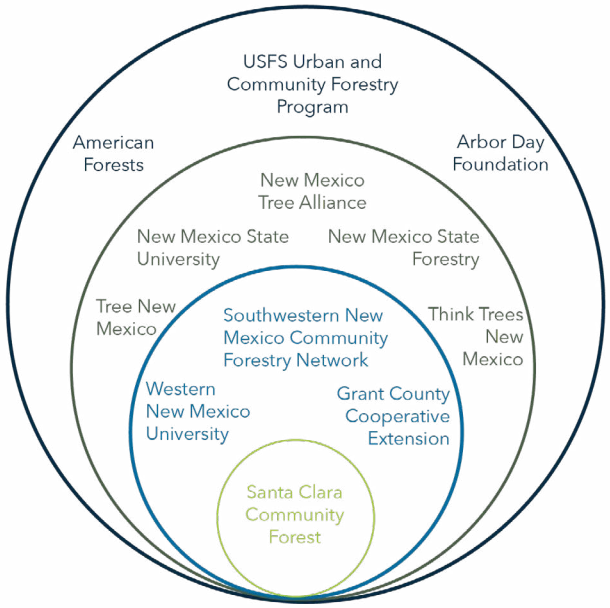
Arid LID (Low Impact Development) Coalition

Tree New Mexico

Arbor Day Foundation
- Partners in Community Forestry
- Trees are Good
- TreeCity USA

American Forests

US Forest Service, Urban and Community Forestry Program



Additional Resources

CFN Community Engagement Roadmap

Public input and local knowledge are critical components to any community planning effort. In September 2024 the project team produced the Community Engagement Roadmap, which can be found on the CFN project website. This document outlined the project's approach to engaging various audiences in the development of the Community Forestry Management Plans. The project team employed a unique set of strategies tailored specifically to each of the six community's needs and public practices.

The Roadmap includes actionable engagement strategies that can be adapted and applied to a variety of future projects in Santa Clara that have a public outreach component, such as:

- Using different approaches to reach a variety of community audiences in a way that best suits their needs and interests.
- Informing, consulting, involving, collaborating with, or empowering the engagement audiences at strategic points in the project (Source: Spectrum for Public Participation, International Association for Public Participation).
- Establishing clear objectives for community engagement.
- Employing a variety of engagement techniques to "meet people where they are," such as: community surveys, outreach booths at well-attended events, presentations, informational handouts, consultations with community groups and municipal leaders, use of social media and traditional media, flyers and door hangers, providing access to translation services, mailings, and creation of "Info Hubs" and a project website.

CFN team conducted community outreach at the Santa Clara Music in the Park event asking residents to provide input for the development of the Santa Clara Community Forest Management Plan.

As Santa Clara works to champion projects featured in this plan, the Comprehensive Plan, the Infrastructure Capital Improvement Plan (ICIP) or other plans, **this Community Engagement Roadmap can serve as a useful resource to help project planners conduct meaningful community engagement**.

Large Shade Trees

Common Name	Latin Name	Water Needs	Local Expert Notes
Persian Silk Tree/ Mimosa	*Albizia julibrissin*	Medium	Susceptible to freeze damage when young. Avoid riparian areas.
Common Hackberry	*Celtis occidentalis*	Medium	Very drought tolerant.
Netleaf Hackberry	*Celtis reticulata*	Low	Not a good street tree, but good for natural & challenging landscapes.
Osage Orange	*Maclura pomifera*	Medium	Great tree, seedless and thornless varieties available.
White Mulberry	*Morus alba*	Medium	Very tolerant. High invasive potential. Allergy and overplanting issue.
Chinese Pistache	*Pistacia chinensis*	Medium	Performing very well. Very popular; beware of overplanting.
Mexican Sycamore	*Platanus mexicana*	High	Hopeful species; requires careful site selection.
Honey Mesquite	*Prosopis glandulosa*	Low	Look for Texas variety that are thornless and more tree like in form.
Bur Oak	*Quercus macrocarpa*	Medium	Experimental at this point, may not tolerate the heat well.
Chinqapin Oak	*Quercus muehlenbergii*	Medium	Not widely available yet.
Southern Live Oak	*Quercus virginiana*	Medium	Doing well in many locations.
Western Soapberry	*Sapindus saponaria var. drummondii*	Low	Great tree that does well. Can form thickets, and has toxic properties.
American Elm	*Ulmus americana*	Medium	Gorgeous old specimens in area. Mostly sold as hybrid cultivars.
Cedar Elm	*Ulmus crassifolia*	Medium	
Lacebark/Chinese Elm	*Ulmus parvifolia*	Medium	Prolific seeds in fall - concern about invasiveness.

Evergreen Trees

Common Name	Latin Name	Water Needs	Local Expert Notes
Deodar Cedar	*Cedrus deodar*	Medium	Performing well in Silver City, struggling in other parts of the state.
Arizona Cypress	*Cupressus arizonica*	Medium	Great tree with good hybrids available.
Yaupon Holly	*Ilex vomitoria*	Medium	Performing well in other areas of the state.
Alligator Juniper	*Juniperus deppeana*	Low	Exhibiting some dieback locally. Does need supplemental irrigation.
Rocky Mountain Juniper	*Juniperus scopulorum*	Low	
Eastern Red Cedar	*Juniperus virginiana*	Low	
Aleppo Pine	*Pinus halepensis*	Low	Few examples locally, but seem to be doing well.
Single leaf pinyon pine	*Pinus monophylla*	Low	Small, but grows well locally.
Italian Stone Pine	*Pinus pinea*	Medium	Few examples locally, but seem to be doing well.
Arizona White Oak	*Quercus arizonica*	Low	
Emory Oak	*Quercus emoryi*	Medium	
Escarpment Live Oak	*Quercus fusiformis*	Medium	
Mexican Elder	*Sambucus mexicana*	Medium	High performer. Fast growing, needs pruning to maintain its tree form.
Texas Mountain Laurel	*Sophora secundiflora SEE Dermatophyllum secundiflorum*	Low	Strugglng with cold hardiness.

Small/Medium Trees

Common Name	Latin Name	Water Needs	Local Expert Notes
Mexican Redbud	*Cercis mexicana*	Medium	Redbuds are doing well locally. Texas and Mexican species are doing particularly well. Eastern redbud (Cercis canadensis) is not generally recommended due to its intolerance to wind, but 'Forest pansy' varietal has grown well. Redbuds greatly benefit from good pruning.
Western Redbud	*Cercis occidentalis*	Medium	
Oklahoma Redbud	*Cercis reniformis*	Medium	
Texas Redbud	*Cercis texicana*	Medium	
Desert Willow	*Chilopsis linearis*	Low	Highly recommended.
Texas Persimmon	*Diospyros texana*	Low	Not much local experience with this species.
New Mexico Olive	*Forestiera neomexicana*	Medium	Highly recommended.
Golden-ball Leadtree	*Leucaena retusa*	Low	Good tree, but currently difficult to find.
Southern Wax Myrtle	*Morella cerifera*	High	No local experience with this species.
Little Leaf Mulberry	*Morus microphylla*	Low	Highly recommended.
Hoptree (Wafer Ash)	*Ptelia trifolata*	Low	Recommended by local experts. Drought tolerance.
Screwbean Mesquite	*Prosopis pubescens*	Very Low	Thorny, and concerns regarding their ability to handle local soil.
Texas Red Oak	*Quercus buckleyi*	Medium	Highly recommended.
Chaste Tree	*Vitex agnus-castus*	Medium	Performing well locally, and can achieve small tree size in right conditions.


Thank you Santa Clara, for planting
the next generation of trees!