


**CITY OF LOS ANGELES  
INTERDEPARTMENTAL CORRESPONDENCE**

**DATE:** October 13, 2022

**TO:** Honorable Mitch O’Farrell, Chair  
Honorable Paul Koretz, Member  
Honorable Kevin De Leon, Member  
Honorable Gilbert Cedillo, Member  
Energy, Climate Change, Environmental Justice, and River Committee

**FROM:** Barbara Romero, Director and General Manager, LA Sanitation and Environment  
(LASAN) 

**SUBJECT:** **REPORT ON HEALTHY SOILS MOTION/REGENERATE LA (CF 20-1225)**

**EXECUTIVE SUMMARY**

This document is a formal report-back to the [RegenerateLA Healthy Soils Motion \(CF 20-1225\)](#); included is a list of specific recommendations and requests for City Council. The body of this report provides background information and lists existing initiatives for each of the ten topics the RegenerateLA Motion instructed LASAN to report back on. It then provides a composite list of recommended implementation strategies and next steps the City can take to further the outlined healthy soils goals.

As defined by the National Resources Conservation Service (NRCS), healthy soils are soils with the continued capacity to function as a vital living ecosystem that sustains plants, animals, and humans. Healthy soils, from the perspective of supporting human needs and interests, are often rich in organic matter, have pore space, which allows movement and infiltration of air and water, have the capacity to hold water, and are structured (i.e., not compacted). Indicators of urban soil health include presence of native plant communities, physical, chemical, and biological characteristics that are similar to appropriate reference or native soils, and the ability to support a biologically complex plant community with minimal intervention.

LA Sanitation & Environment created the Healthy Soils Interdepartmental Group, composed of representatives from various City Departments (see full list on page 3), in order to coordinate departmental efforts on healthy soils and chart a path forward on the RegenerateLA Motion. To address special topics, namely outreach and brown jobs, two committees were formed that included City staff and representatives from select Community-Based Organizations and Non-Profits. The group convened six times in late 2021 to discuss opportunities to build healthy soils on City lands, ways to integrate regenerative practices into City operations, to create brown jobs, to provide training, to conduct outreach, and much more. During these meetings, and via post-meeting surveys, members of the Healthy Soils Interdepartmental Group provided information on existing initiatives, suggested pilot projects, and provided ideas on how their individual departments, or how the City as a whole, could advance various components of the RegenerateLA Motion. While individual departments will have unique approaches to

how they integrate healthy soils and regenerative landscape management into their operations, training, and outreach, convening the Healthy Soils Interdepartmental Group led to an incredible exchange of innovative ideas and resource sharing, demonstrating the power of collaboration across the City family. The group ultimately agreed upon the following five major goals:

1. Support and enhance organic waste recycling.
2. Enhance City soil health thereby improving risk mitigation, soil water infiltration/holding capacity, and biodiversity.
3. Educate new staff, existing staff, and relevant land managers on soil health, regenerative landscape management, and integrated pest management.
4. Create and improve local employment opportunities linked to healthy soils and composting (i.e., brown jobs).
5. Launch public-awareness outreach efforts on the importance of healthy soils and regenerative land management for LA communities.

In order to achieve these goals, and associated subgoals, funding and resources will be required from City Council to support initiatives, plan and implement pilot projects, develop job pipelines, increase staff working on these issues, and launch an ambitious outreach campaign. Exact funding needs and mechanisms still need to be determined. Still, the Healthy Soils Interdepartmental Group is eager to continue collaborating on these topics and to share future progress.

## INTRODUCTION

In response to the healthy soils goals set forth in the [RegenerateLA Healthy Soils Motion \(CF 20-1225\)](#) and outlined in LA's Green New Deal, LA Sanitation & Environment (LASAN) created the Healthy Soils Interdepartmental Group (HSIG) in order to coordinate departmental efforts. The Group included representatives from various City departments, community organizations, and job development organizations. Representatives were divided into the Core Team, the Outreach Committee, and the Brown Jobs Committee. The LASAN Healthy Soils Program hosted a series of six HSIG meetings from August to December of 2021, each of which focused on a different topic in relation to the Motion. Each meeting included a guided discussion and was followed by a survey sent to each HSIG member. These post-meeting surveys offered attendees opportunities to discuss the topics at hand, share their involvement in any relevant initiatives, and brainstorm ideas and best practices moving forward. Information shared in the meetings and surveys guided the creation of this document. Moving forward, LASAN will continue to coordinate the efforts of this collaborative.

### HEALTHY SOILS INTERDEPARTMENTAL GROUP PARTICIPANTS

#### Core Team

Bureau of Engineering (BOE)  
Council District 5 (CD 5)  
Climate Emergency Mobilization Office (CEMO)  
Los Angeles City Planning (LACP)  
Department of Recreation and Parks (RAP)  
Economic and Workforce Development Department (EWDD)  
General Services Department (GSD)  
Los Angeles Department of Transportation (LADOT)  
Los Angeles Department of Water and Power (LADWP)  
Los Angeles Public Library (LAPL)  
Los Angeles Sanitation and Environment (LASAN)  
Los Angeles World Airports (LAWA)  
Mayor's Office  
Port of Los Angeles (POLA)  
StreetsLA

#### Outreach Committee

Climate Emergency Mobilization Office  
Council District 5  
Council for Watershed Health  
Department of City Planning  
Kiss the Ground  
LA Compost  
Los Angeles Public Library  
Los Angeles Sanitation and Environment  
Neighborhood Council Sustainability Alliance (NCSA)  
Northeast Trees (NET)  
Public Affairs Office (PAO)  
TreePeople

#### Brown Jobs Committee

Climate Emergency Mobilization Office  
Council District 5  
Economic and Workforce Development Department  
Homeboy Industries  
LA Conservation Corps  
LA Trade Tech  
Los Angeles Sanitation and Environment  
Kiss the Ground  
LA Compost  
Northeast Trees  
Pacoima Beautiful

Given the rapid and ongoing implementation of Citywide healthy soils-related measures, several topics and initiatives discussed in the HSIG meetings and surveys are already dated. As such, some information in this report has been updated to reflect our current situation as accurately as possible. Additionally, the HSIG members have been invited to review this document and provide updates on any relevant initiatives or recommendations, and their suggestions have been incorporated.

As initiatives outlined in this document advance, and policies or implementation projects are instituted, additional representatives may be recruited to participate on the Core Team, the Outreach Committee, or the Brown Jobs Committee.

## RECOMMENDATIONS

### General:

Direct LASAN to serve as the City’s lead on healthy soils and to continue overseeing interagency coordination on Healthy Soils efforts.

Support the LASAN Healthy Soils Program in implementing the initiatives outlined in the Healthy Soils Strategy document and in the RegenerateLA pilot project.

Direct LASAN to work with the HSIIG to develop and implement best management practices for healthy soils.

### Organics Management:

Provide all City Departments and their facilities with the tools and resources to divert organic waste and, as feasible, pursue on-site organics processing and/or surplus edible food donation to achieve goals in the Green New Deal and comply with or exceed the requirements of SB 1383.

Support LASAN, RAP, and LACompost in establishing additional compost drop-off sites and local community composting hubs across RAP facilities to establish a robust community composting network.

Provide funding for departments that produce excess mulch (e.g., LASAN, StreetsLA) to transport it to potential end-users for beneficial reuse.

### Candidate Site Identification (unpaving efforts and new composting/mulching facilities):

Direct GSD to review the City’s real estate portfolio to identify sites/surplus properties that could be considered for unpaving, urban agriculture, and/or the development of composting and mulching facilities.

Direct BOE to evaluate project sites during the pre-design phase to assess, identify, and encourage the pursuit of unpaving and/or composting/mulching opportunities.

Direct LASAN to coordinate the work of relevant departments to prioritize unpaving efforts in areas with the highest need, according to project feasibility, and in underserved and/or environmental justice (EJ) communities. Consider directing efforts towards parking lots, vacant lots, medians and roundabouts, tree wells, parkways, and LAUSD schoolyards.

Direct the LASAN Citywide Brownfields Program to perform environmental assessments, and financial assessments as needed to understand remediation costs, for underutilized sites throughout the city that can be decontaminated and/or used for healthy soils projects.

Request LADWP to establish new MOUs with members of the HSI, like the one with StreetsLA at the Van Norman Complex, to support healthy soils and biodiversity projects.

### **Implementation of Unpaving Efforts:**

Direct StreetsLA to prioritize the removal of existing tree well covers and enlarge existing tree wells as feasible.

Direct StreetsLA to pilot unpaving median islands and installing biodiversity-friendly landscaping to better manage stormwater.

Direct LASAN to establish an unpaving committee, composed of departments involved in unpaving efforts, to enhance communication and improve overall planning and collaboration on efforts to unpave public spaces, such as parking lots, wherever feasible. If unpaving is not a possibility, the group should assess the feasibility of utilizing pervious surfaces.

Direct LA City Planning to draft potential mitigation measures that could be applied to development projects that will address unpaving and soil health.

Direct the LA Department of Building and Safety to examine the feasibility of codifying unpaving/paving alternatives within the Los Angeles Green Building Code (LAGBC) as all new construction and major renovation projects, public and private, must comply.

### **Soil Health Improvements/Remediation:**

Direct RAP landscaping maintenance staff to implement and expand water conservation methods at publicly managed green spaces, including the use of drought-tolerant biodiversity-friendly landscaping, adhere to integrated pest management principles, and use sustainable irrigation methods (e.g., passive irrigation, drip irrigation, and recycled water/purple pipe).

Direct LA City Planning to develop land cover, vegetation, and disturbance limitations within existing and proposed ordinances, such as the wildlife/ridgeline ordinance, potential mitigation measures, and restoration measures that will contribute to improving water infiltration/holding capacity, soil health, and soil stability.

Establish requirements/conditions (e.g., conditional use permits) to include chemical use reduction in projects and condition/mitigation projects to disallow use of chemical products.

Direct LASAN to coordinate the work of relevant departments to establish a stringent Citywide protocol (or department-specific protocols) for protecting soils at construction projects to reduce soil compaction caused by heavy equipment, contamination, or other disturbance. City project sites should be inspected consistently and haul routes should be monitored throughout construction.

Direct City Departments to pursue low impact development (LID) and green infrastructure projects and consider creating a City of LA mitigation banking system for development projects that need to offset ecological impacts. To create a mitigation bank, the City should identify land that could be used for off-site, applicant-initiated projects to create habitat and support protected species.

**Training and Brown Jobs:**

Direct EWDD to lead an assessment of employment needs, employment opportunities, and existing training programs related to brown jobs in order to identify any training gaps and barriers to employment.

Support RAP, LASAN, and nonprofit partners in piloting the RegenerateLA training course/curriculum. Support the creation and dissemination of high-quality digital training modules to relevant City staff.

Direct LASAN to coordinate the work of the Brown Jobs Committee to develop a formal training program and work projects to address the goals of the RegenerateLA project.

Direct LASAN to coordinate the work of relevant departments to focus outreach, training, job investments, and pilot projects in disadvantaged communities (DACs) and Neighborhood Councils with high CalEnviroScreen scores.

Provide resources to EWDD to establish brown job pipelines to employment in the public sector.

**Outreach:**

Direct LASAN and the Public Works Public Affairs Office to examine the feasibility of developing a marketing plan and campaign strategy to raise public awareness of soil health issues, promote Climate Victory Gardens, encourage regenerative management techniques, and more. LASAN and the Public Works Public Affairs Office to report-back on who will execute the campaign (e.g., City staff or consultants), the desired duration of a campaign, and on the budget needed to support the campaign.

## MOTION TOPICS

### **I. Opportunities for unpaving underutilized spaces and using them for composting/mulching operations and/or to create healthy soil.**

#### BACKGROUND:

There exists immense opportunity to unpave and repurpose underutilized sites in the City of Los Angeles. [Land cover data](#) provided by TreePeople demonstrates that, as of 2016, 48% of the City of Los Angeles is composed of impervious surfaces. Impervious surfaces, or hard or built surfaces such as buildings, roads, and parking lots, prevent water from seeping naturally into the earth beneath. As such, impervious surfaces contribute to worsened flooding, increased runoff, and decreased aquifer recharge, in addition to serving as poor wildlife habitat. Unpaving underutilized sites to reduce impervious land cover may mitigate these and other environmental impacts, and repurposing those sites provides added co-benefits, including:

- Increased wildlife habitat, biodiversity, water recharge and retention;
- Carbon sequestration;
- Opportunity for recreational or other beneficial uses of those sites (e.g., public parks and gardens);
- Development of composting and/or mulching operations;
- Promotion of urban agriculture; and
- Shade and cooling/mitigation of the urban heat island effect.

#### EXISTING INITIATIVES:

There are several existing departmental efforts related to unpaving and/or repurposing underutilized spaces. The [Citywide Brownfields Program](#), managed by the LASAN Solid Resources Citywide Recycling Division (SRCRD), is an initiative to remove barriers to redevelopment posed by brownfields (i.e., vacant sites that contain, or may contain, a hazardous substance, pollutant, or contaminant). The Brownfields Program assists property owners, community organizations, and City agencies in assessing and cleaning Brownfield sites. Additionally, Los Angeles World Airports was successful in using a California Coastal Commission grant to remove streets and restore natural dunes habitat. In total, the project removed three streets, gutters, and sidewalks and seeded six acres of new dune habitat. Lastly, GSD facilitated use rights for a number of vacant properties that were repurposed by nonprofit and community-based organizations as community gardens or adopted through the Adopt-A-Lot programs. Programs and initiatives like these need to be replicated and expanded throughout the City.

## **II. Opportunities to develop small- and mid-scale compost operations on public lands.**

### **BACKGROUND:**

Organic materials, including food and green waste, make up a large portion of the waste stream entering landfills. Residential food waste alone comprises an estimated 20.1% of LA County's total residential waste, or over 500,000 tons annually (CalRecycle LA County Residential Waste Characterization). In a statewide push to expand organic recycling, California legislature passed [SB 1383](#) establishing 2025 targets to achieve a 75% reduction of statewide organic waste disposal from the 2014 baseline level and to ensure that no less than 20% of currently disposed edible food is recovered for human consumption. Prior to and after the introduction of SB 1383, both Council and Mayor implemented multiple aggressive environmental policies and programs to address climate change, food insecurity and advance the goals of environmental justice. In addition, City Council and Mayor Garcetti directed City departments to achieve zero waste (90% landfill diversion) by 2025; and further increase landfill diversion to 95% by 2035, and no waste to landfills by 2050. In addition, Mayor Garcetti's Green New Deal (GND) calls for the elimination of organic waste going to landfills by 2028. The GND outlined supporting goals of establishing food scrap drop-off locations at all City farmers markets, partnering with local organizations to ensure food scraps are composted locally, launching Citywide residential food scraps collection, and developing a composting master plan to expand community and regional composting infrastructure.

Although food waste reduction and food rescue strategies should be prioritized, with no shortage of organic waste there exist immense opportunities to develop small- and mid-scale compost operations on public lands. And, while Citywide curbside collection of commingled green and organic waste is going to be expanded over the course of 2022, expanding and enhancing community composting efforts presents an effective solution in the interim, as well as an opportunity to supplement curbside collection in the future.

Community composting is a closed-loop approach to organic waste management. Often located at parks, community gardens, or other public lands, community compost sites allow for food scraps and other organic waste produced by a community to be locally processed into compost, which can then be used within the same community. Composting at the community level not only diverts organics from entering landfills, but also provides residents with hands-on opportunities to learn about the benefits and uses of compost, contribute to food waste diversion, and support healthy soils and urban agriculture efforts. Community compost development initiatives need to ensure adequate and reliable services are in place to collect and process organic waste, utilize composted material, and spread awareness/educate residents of the process and benefits of community composting.

### **EXISTING INITIATIVES:**

There are several current programs and initiatives supporting organics management and community composting. LASAN is involved in a number of pilot projects related to these efforts. Curb Your Food Waste LA is a LASAN food waste prevention and recycling pilot program. Participants are asked to place their food scraps in the provided kitchen countertop green bins. The food scraps are then collected and recycled into fertilizer. The program plans to expand curbside commingled collection to all 750,000



residential customers by January 1, 2023 after establishing new contracts with commercial facilities. More on the City's plan to expand this program and achieve the ambitious organics goals in the Green New Deal can be found in the [SB 1383 Overview Report](#) prepared by LASAN in February 2022.

Additionally, LASAN has an Organics Master Plan, which aims to meet SB 1383 and GND goals by comprehensively implementing the following program areas: Residential, Commercial and City Facilities, City Infrastructure, and Community-based programs. More specifically, the plan calls for:

- Launching a Citywide food waste reduction education/campaign;
- Developing a Citywide residential collection and food scraps processing program;
- Establishing additional drop-off sites and local community composting hubs;
- Developing resources for City Departments for food scraps collection and surplus edible food donation;
- RecycleLA service providers to collect and process food scraps from service accounts; and
- Continuing food rescue/recovery efforts.

Pilot projects to equip City Departments to handle organic waste are underway. As an example, GSD's Office of Sustainability is currently working on a pilot project with LASAN to collect organic waste at Los Angeles City Hall. This project is in the early development phase; however, if successful, this project may be expanded to other municipal buildings.

While City Departments have strategized how to meet SB 1383 mandates and achieve various GND goals, LASAN believes that partnerships with community organizations will be essential to developing small- and mid-scale composting operations on public lands. LA Compost is a non-profit organization that supports community composting by providing a network of compost locations, regional compost hubs, farmers' market compost drop-offs, and community composting and soil health training programs. LASAN and LA Compost recently received a USDA grant to expand food scrap collection to additional farmer's markets. In April 2021, RAP approved an agreement with LA Compost for the establishment of a community composting hub pilot project in Griffith Park. Based on this model, in partnership with RAP and LASAN, LA Compost is planning to create a network of community composting hubs at RAP facilities across the City that will provide access to local composting and opportunities to educate and engage the public on soils and organics recycling. The LASAN Solid Resources Support Services Division (SRSSD) is also developing regional community composting hubs, which may be located at schools or other public sites.

### **III. Opportunities to reduce chemical and water use in parks through compost and mulch use and other regenerative land and tree management in public green spaces.**

#### **BACKGROUND:**

Regenerative land management is a holistic approach to land maintenance that focuses on restoring and sustainably maintaining an ecosystem as a whole. Regenerative management practices specifically prioritize soil health because healthy, clean soils offer a number of environmental, ecological, and social benefits. By definition, healthy soils are soils with the continued capacity to function as a vital living ecosystem that sustains plants, animals, and humans (NRCS). Clean soils are soils that are free of contaminants (i.e., compounds and materials that are damaging to the plants and animals above and within the soil, as well as the water flowing through the soil and into the aquifer below). Improving soil health, promoting clean soils, and restoring soil biodiversity enables the soil ecosystem (e.g., microorganisms, plant roots, etc.) to sequester carbon from the atmosphere, filter water, recharge water tables, support biodiversity and biodiversity habitats, mitigate flood and drought risk, and produce high-quality foods. Regenerative management practices include applying organic soil amendments (e.g., compost and/or mulch) rather than chemical fertilizers, implementing non-toxic pest management strategies, planting diverse species, minimizing soil disturbance, and introducing trees and other perennial plants. Regenerative management practices, like planting deep-rooted native species, have the ability to restore compact, urban soils and improve soil structure over time. Overall, regenerative management practices are key in creating and maintaining healthy and clean soils across the City.

#### **EXISTING INITIATIVES:**

Several City departments have already begun utilizing compost, mulch, and other regenerative land management practices in order to benefit soils and biodiversity. LASAN, StreetsLA, and POLA apply compost and/or mulch to various sites. RAP applies soil amendments to some parks (e.g., herbivore organic waste from the LA Zoo is applied to golf courses and other developed landscapes within Griffith Park) and has been steadily moving away from dependence on pesticides and synthetic fertilizers. LASAN incorporates integrated pest management strategies and POLA incorporates various regenerative management techniques whenever practicable. LADWP has planted pollinator gardens at the department's facilities and maintains California-friendly landscapes. Additionally, the landscape group in the BOE Architectural Division generally avoids the specification of chemical fertilizers and regularly specifies organic fertilizer, organic compost, humic acid, and organic soil penetrant where necessary in order to build healthy soil as a standard practice.

The LA Green New Deal has included a target to “achieve and maintain ‘no-net loss’ of native biodiversity by 2035” along with a supporting goal to update a Citywide Integrated Pest Management plan. This plan should prioritize a reduction in pesticide use, encouraging non-toxic pest management strategies instead, and develop guidance and training for City maintenance staff on non-toxic pest, weed, and invasive species management.

**IV. The current use and any excess availability of mulch from City forestry and landscaping operations across all departments, including proprietaries, and green-bin collection to support healthy soil in the City.**

**BACKGROUND:**

Organic mulch is produced by processing/shredding plant waste, such as tree and landscape trimmings and leaf litter. Applying mulch to the top of the soil supports healthy soils by improving water and air movement through soil, retaining soil moisture, suppressing weed growth, minimizing soil erosion, and reducing the leaching of fertilizers. As mulch on the soil decomposes, it also provides nutrients to the soil, improving soil biodiversity and productivity.

There are several City departments (e.g., LASAN, StreetsLA) currently processing organic waste collected in the City and producing mulch. While some of this mulch is applied to public lands, such as parks, the garden areas at the LA Zoo, and LAUSD schools, there remains an excess availability of mulch. Despite this, none of the City departments participating in the HSIG expressed a current or future need for additional mulch. As such, connecting mulch producers with end-users and streamlining and/or funding the transportation and delivery of mulch should be prioritized. Efforts must ensure that adequate and reliable services are in place to collect, distribute, and receive excess available mulch in order to support existing mulching operations and organics recycling. Mulch use should be enhanced across the City to make use of its healthy soils benefits and continue diverting organic waste from landfills, and excess mulch should be offered to non-departmental entities, including schools and universities, individual homes and businesses, private landscaping companies, and non-profit organizations. If there is still excess mulch, it should be offered to residents outside of the City of LA.

**EXISTING INITIATIVES:**

Mulch is currently produced at several sites across the City, much of which is available for free pick-up by City residents. LASAN processes organic waste and produces mulch at the Griffith Park Composting Facility, the Harbor Yard Trimming Facility, and the Lopez Canyon Environmental Center. As part of their [Free Mulch Giveaway program](#), LASAN provides free high-quality mulch to all residents at [locations](#) across the City. LADWP and StreetsLA work in partnership to process tree waste at the Van Norman Complex. The site is used as a mulch chipping and grinding facility that is permitted to recycle up to 500 tons of organic waste each day and, as with LASAN sites, excess mulch is available for free pick-up. The RAP Forestry Division contributes to these efforts by bringing tree waste to the Van Norman chipping facility or the Griffith Park green waste facility and applying mulch produced at Griffith Park on-site. The Port of Los Angeles creates approximately 10 cubic yards/month of mulch from tree trimmings and places the mulch in their "urban forest," a site for transplanted trees that would have otherwise been destroyed.

**V. Current and future availability of anaerobic digested “cake” that can be used to support healthy soil.**

**BACKGROUND:**

Anaerobic digested “cake” (or biosolids) is a byproduct of the wastewater treatment process. During wastewater treatment, the liquids are separated from the solids. The solids then undergo further treatment including anaerobic, thermophilic digestion. During this process, the heat helps kill bacteria, such as Salmonella, viruses, and other pathogenic organisms and breaks down the sludge into nutrient-rich, harmless organic matter. Decades of research have proven that organic matter can be safely used to fertilize crops, including those intended for human consumption, and to create compost. When done in accordance with federal guidelines and regulations (40 CFR PART 503), the use of biosolids in the production of crops intended for human consumption presents negligible risks to consumers or to the environment. The use of biosolids as a soil amendment provides various healthy soil and environmental benefits, including replacing or reducing chemical fertilizer use in urban agriculture, orchards, agroforestry, and other settings of high nutrient demand, diverting organic waste from landfills.

**EXISTING INITIATIVES:**

Departmental production of anaerobic digested “cake” is currently limited to LASAN’s production of biosolids at the Hyperion Water Reclamation Plant (HWRP) and the Terminal Island Water Reclamation Plant (TIWRP). Each day, the HWRP and TIWRP produce approximately 673 and 33 wet tons of biosolids, respectively. The biosolids produced meet the most stringent standards and are treated to above Class A Exceptional Quality levels (meaning they contain little to no pathogens, including viruses, and are safe to touch and use as fertilizer). LASAN’s Class A Exceptional Quality biosolids are applied as a soil amendment and fertilizer for non-food crops, such as animal feed. The biosolids are also used to produce compost that is then sold to local landscape companies and used on City-owned properties.

The City’s anaerobic digestion capacity can be expanded in order to support broader organics recycling efforts and minimize the amount of organic waste entering landfills.

## **VI. Opportunities for increased soil carbon and risk mitigation (flooding/drought) by increased water infiltration/holding capacity on managed lands.**

### BACKGROUND:

#### Water Infiltration/Holding Capacity

Healthy soils have an increased water infiltration capacity (i.e., amount of surface or rain water that seeps into the soil) and water holding capacity (i.e., amount of water that is retained within the soil). Avoiding soil compaction, increasing plant and mulch cover, and applying organic soil amendments are all ways to increase a soil's water infiltration and holding capacities. Both water retention and water holding capacities support plant growth, thereby increasing soil carbon sequestration and storage, as well as mitigating climate change risks.

#### Soil Carbon

Soil carbon sequestration and storage are incredibly important aspects of soil health. Carbon enters soil via living plants (which convert atmospheric carbon dioxide into carbon-containing compounds and exude those compounds into the soil through plant roots), as well as dead organic matter (which decomposes and incorporates into the soil). Since healthy soils better support soil biodiversity and plant growth, they have a greater capacity for storing carbon and therefore aid in climate regulation.

#### Risk Mitigation

Additionally, healthy City soils present immense risk mitigation benefits. As healthy soils are better equipped to absorb and store water, they reduce the risk and severity of droughts and floods. Maintaining soil cover via compost/mulch application and/or perennial plants further mitigates flood and drought risk, lessens potential runoff, and improves overall soil health.

### EXISTING INITIATIVES:

The LASAN Healthy Soils Team and various soil experts prepared and published the [Guidelines for Applying Organic Soil Amendments](#), a document outlining best practices and recommendations for applying organic soil amendments, such as compost or mulch, in order to preserve and improve soil health. See the "EXISTING INITIATIVES" related to reducing chemical and water use in parks and training (above) for additional details on this item.

**VII. Opportunities with the Departmental Chief Sustainability Officers to educate new and existing staff and other relevant managers on soil health, regenerative land management, and integrated pest management.**

**BACKGROUND:**

Teaching new and existing land managers how to use sustainable, regenerative practices, and how to apply integrated pest management is an important way to ensure that the practices and ideas presented in this report-back are institutionalized. As such, an effort is underway to create a comprehensive training course that will train relevant staff on regenerative management (detailed in the “EXISTING INITIATIVES” section below). Members of the HSIG and Departmental Chief Sustainability Officers (DCSOs) have been surveyed on the City job classifications that would benefit from such a training and the topics that should be included.

**EXISTING INITIATIVES:**

The RegenerateLA Pilot Project, named after the RegenerateLA Motion, is an initiative imagined by two nonprofit organizations, Kiss the Ground and LA Compost, aimed at achieving the healthy soil goals outlined in the RegenerateLA Motion. One component of this pilot is to train all LA grounds maintenance staff on organic regenerative land maintenance. The training will include hands-on and classroom-based learning on a variety of topics. The training is scheduled to launch in May 2022 in collaboration with RAP for a cohort of grounds maintenance parks staff and will eventually be developed into master class style modules that can be hosted and viewed on the Cornerstone training platform.

The RegenerateLA Healthy Soils curriculum is currently slated to include a variety of topics:

- What is soil?;
- What is compost?;
- Why compost and regenerative approaches are important for soil and climate mitigation;
- Biodiversity;
- Soil testing;
- Compost science and management;
- Sourcing organic material;
- Application of compost to green spaces;
- Environmental justice; and
- Community engagement.

Recommendations, made by members of the HSIG, for other topics to include have been communicated to the individuals developing the training curricula and revisions have been made.

**VIII. Public/private funding sources, including grants, for projects that will help the City expand its healthy soils efforts.**

BACKGROUND/EXISTING INITIATIVES:

LASAN's Healthy Soils Team has compiled a comprehensive database of over 30 grant programs and incentives that can be used to fund healthy soil related efforts. The database is updated regularly to reflect currently available funding opportunities. The grants and incentives tracker can be accessed on the [LASAN Healthy Soils webpage](#) (Healthy Soils [Grant/Incentive Tracker PDF](#) - 12/1/2021).

A list of grants that could directly aid the City in expanding its healthy soils efforts is included below:

- The CalRecycle [Community Composting for Green Spaces Grant Program](#) aims to increase small-scale community composting programs in green spaces (e.g., community gardens or urban farms) within disadvantaged and low-income communities, and to increase the capacity of those composting programs.
- The California Department of Food and Agriculture [Healthy Soils Program Incentives Program](#) provides financial incentives to California growers and ranchers to implement conservation management practices to improve soil health, among other environmental factors.
- The National Association of Conservation Districts [Urban Agriculture Conservation Grant Initiative](#) aids conservation districts in implementing proposed projects to improve agricultural conservation and address natural resource concerns, including soil health.

Additionally, members of the HSIIG and external partners, such as the Council for Watershed Health, have expressed a willingness to partner on grant projects that support healthy soils, stormwater, biodiversity, and organics diversion.

**IX. Opportunities for the creation and improvement of local, ‘green’ employment opportunities linked to healthy soil and compost projects and programs.**

**BACKGROUND:**

Green employment refers to “jobs in businesses that produce goods or provide services that benefit the environment or conserve natural resources” and “jobs in which workers’ duties involve making their establishment’s production processes more environmentally friendly or use fewer natural resources” (U.S. Bureau of Labor Statistics). Brown jobs are a subset of green jobs that are specifically linked to healthy soil efforts and compost projects and programs. Expanding and enhancing green and brown employment opportunities promotes environmental benefits while simultaneously improving quality job opportunities and economic activity, both of which are imperative as the country and City aim to recover from the impacts of the COVID-19 pandemic.

In support of achieving this environmental and economic opportunity, the LA Green New Deal sets a target of creating 300,000 green jobs by 2035 and 400,000 by 2050. The LA GND also highlights several goals aimed at improving both green employment opportunities and environmental justice:

- Offering Green Jobs courses at L.A. Trade Technical College for 250 students and placing them in internships;
- Retraining workers whose jobs have been or will be automated;
- Adding sustainability curriculum to WorkSource Development Center training;
- Offering two free years of community college for eligible high school graduates, exposing students to hundreds of courses in sustainability;
- Launching the Advanced Prototyping Center Fellowship at the Los Angeles Cleantech Incubator (LACI) to place 50 people in jobs per cohort;
- Collaborating with stakeholders on a just transition for workers into the green jobs of the future;
- Ensuring contracts for City construction projects that provide opportunities for local hiring and disadvantaged worker employment;
- Supporting LACI to create an inclusive green economy by taking on applicants and helping them gain access to capital and resources, providing office space and executive coaching;
- Launching the Founders Business Accelerator at LACI to help entrepreneurs in low-income communities grow their businesses and increase their impact; and
- Engaging individuals with high barriers to employment with opportunities in street cleanup through LA:RISE.

As the City pushes to achieve the LA Green New Deal green employment goals, the RegenerateLA healthy soil goals, and the SB 1383 organics recycling goals, there are extensive opportunities to create and enhance green and brown employment in the City.

The HSIG thus created a Brown Jobs Committee in order to discuss efforts specifically related to this goal. This committee included City staff from various departments and representatives from external organizations. The Brown Jobs Committee members suggest directing green and brown job creation efforts towards the following career paths:



- Compost creation and application,
- Tree planting,
- Soil remediation,
- Regenerative agriculture/landscape maintenance,
- Green stormwater infrastructure O&M,
- Seed collection and propagation,
- Native plant horticulture, and
- Outreach and education.

Committee members identified two pivotal factors in improving and creating green jobs: training future employees and forming employment pathways. As such, efforts should prioritize collaboration with potential employers to understand their employment needs and desired skills; the development of training/certification programs to enable potential employees to fill those roles; and the establishment of formal partnerships with workforce development organizations to connect individuals with employment opportunities.

#### EXISTING INITIATIVES:

Several local initiatives and projects already in effect provide excellent opportunities for green and brown job training and employment. Los Angeles organizations that have already begun working on this topic provide a foundation to further create and improve green and brown employment opportunities.

#### Training

Several departments and organizations are developing or have developed training programs and resources that can be used to equip residents with the skills and knowledge needed for green and brown employment opportunities. The RegenerateLA Pilot Project (as detailed within the “opportunities with Departmental Chief Sustainability Officers to train staff on healthy soils practices” section) has developed a training curriculum for LA grounds maintenance staff on organic regenerative landscape maintenance. As the training will be turned into digitally available modules, it can be used, and adapted if necessary, to prepare individuals for a variety of green and brown jobs.

Other related training curricula/certificate programs are offered by the following organizations:

- The Theodore Payne Foundation (TPF) – TPF is a nonprofit organization dedicated to preserving and enhancing native plant landscapes in California. TPF provides numerous educational opportunities on sustainable gardening on landscape maintenance practices, including the [California Native Plant Landscaper Certificate Program](#), a vocational training program designed for landscape professionals, as well as [classes and workshops](#) on a variety of topics, most of which are related to gardening and tending to native plants.
- The Council for Watershed Health (CWH) – CWH has developed [landscape maintenance manuals](#) and provides information on climate-appropriate landscape design and maintenance strategies.
- The Los Angeles Department of Recreation and Parks (RAP) – RAP has developed landscape maintenance training programs for new and existing gardener caretakers. These trainings occur weekly for ten weeks and cover topics such as pest control, water conservation, tree planting and

pruning, as well as maintenance of recreational equipment, and safety practices. RAP may opt to integrate the RegenerateLA training curriculum with the landscape maintenance training program in the future.

- Seed LA – [Seed LA](#), a collaborative of six non-profit organizations, is working to enhance ecosystem resilience in Los Angeles. They are currently developing a training program on seed collection and propagation.

Various local projects provide excellent opportunities for hands-on learning as well, including the [Commonwealth Nursery at Griffith Park](#), and the [Bowtie Demonstration Project](#). North East Trees (NET) would be willing to host seed propagation, transplanting, and mulching workshops at their native plant nursery in Ascot Hills Park. Additionally, NET may also be interested in implementing a home composting program similar to the City Plants shade tree program in which residents are provided with composting bins and instructions on how to use them.

### Employment Pathways

Several job development organizations are well suited to establish green and brown employment pathways. The Economic and Workforce Development Department (EWDD) works with applicants and employers to establish job pathways and administers funding Citywide to support employment and economic development opportunities. The EWDD has piloted transitional employment programs like [LA:RISE](#) to support vulnerable populations in gaining work experience and transitioning into the workforce. With over \$95 million in funding for workforce development, the EWDD could support recruitment, augment funding to develop funding streams for training, and aid in developing a network of employers and a pipeline to employment on this topic. Additionally, the LA Conservation Corps (LACC) has developed a proposal to CalRecycle for a pilot project that aims to train and hire at-risk-youth in urban agriculture and recycling, create 10 composting hubs at community gardens and/or parks, and divert organic waste from landfill and create compost. If funded, this pilot could serve as a model and be expanded regionally, or even across the State, in the future. Integrating outreach and education elements into the pilot would further assist with green and brown job training. Lastly, Homeboy Industries is developing an urban agriculture social enterprise seeking to integrate urban agriculture projects with external training and employment opportunities.

**X. Opportunities for public-awareness efforts on the importance of healthy soil and regenerative land management for LA communities.**

**BACKGROUND:**

Spreading awareness on the importance of healthy soils and regenerative land management is crucial to engaging LA communities in order to achieve related goals and activities. As outlined in the City of LA's [Healthy Soils Strategy Document](#), an effective outreach campaign should include the following elements:

1. Raise awareness of the key issues at hand;
2. Educate individuals on the issues and why they are important to them; and
3. Enable individuals to take action by providing tools, resources, and support.

In alignment with these strategies, healthy soil/regenerative land management public-awareness efforts should aim to educate Angelenos on the importance of healthy soils and regenerative land management; encourage Angelenos to engage in individual action (e.g., residential composting, organic regenerative land management, and urban agriculture); and provide resources that aid Angelenos in supporting healthy soils goals. Additionally, outreach should emphasize the idea that actions supporting healthy soils and regenerative management can be simple and feasible rather than daunting or inconvenient. In line with these goals, the HSIG feels that the core messaging of public-awareness efforts on healthy soils and regenerative land management should include the following topics:

- Define "healthy soils" and "regenerative land management";
- Explain why healthy soils and regenerative land management are important;
- Describe current healthy soils and regenerative land management efforts, as well as what efforts can/should be pursued;
- Describe actions that individuals and organizations can take to support healthy soils and regenerative land management (e.g., composting, urban agriculture, gardening without pesticides or herbicides, etc.);
- Provide direction to additional resources to educate on these topics and assist in implementing supportive actions; and
- Keep the audience informed on progress to date and additional opportunities for public engagement.

In order to ensure outreach efforts reach the most people, as well as the appropriate audience, HSIG members recommend disseminating public-awareness messaging via multiple avenues, including partner/advocate channels (e.g., LA Public Library), booths and hand-outs at events (e.g., LASAN Earth Day, farmer's markets, City Plants LA distribution days, etc.), informational videos and online meetings, social media, newsletters, flyers, and earned media (e.g., newspapers, billboards, bus signage, etc.). Additionally, sharing messages from the Mayor and other leaders serving as role models of healthy soils efforts (e.g., a video of the Mayor composting) on social media and/or other platforms would attract attention to educate the public and encourage community action. Members recommend outreach collateral prioritizing fact sheets and graphics, but collateral may also include print and digital ads, toolkits, and bus benches/shelters. Utilizing an adaptive design process allows for a trial-and-error process in order to gauge which outreach streams are most effective and adjust accordingly.

HSIG members would additionally like to see more personalized, community-driven outreach initiatives, similar to the wartime Victory Gardens campaigns. During both World Wars, the U.S. Government encouraged citizens to plant “Victory Gardens” to increase the availability of fresh produce in their communities. Participation in the Victory Gardens efforts were promoted via propaganda posters and partner advocacy channels such as civic associations. Citizens were also provided with instructional pamphlets covering the basics of gardening (e.g., selecting crops, when and where to sow, disease and pest prevention, etc.), as well as manuals on preserving surplus produce (i.e., drying and canning). Gardens were planted in areas such as backyards, vacant lots, city rooftops, school and company properties, and parks, and many communities developed cooperatives and neighborhood gardens. This campaign saw tremendous success during both wars. In 1944, for instance, there were an estimated 20 million victory gardens, which produced approximately 8 million tons of food, or more than 40% of all fresh fruits and vegetables consumed in the United States at the time ([Schumm 2014](#)). Implementing a “Climate Victory Gardens” campaign similar to Victory Gardens would be an excellent way to create more home and community gardens, and ultimately advance climate- and soil-related goals. Campaign outreach would both encourage citizens to participate (by demonstrating the importance and benefits) and enable them to do so (by providing instruction and developing the needed infrastructure). A campaign of this type would cultivate a “we’re all in this together” mindset consistent with the Victory Gardens idea, thereby fostering self-sufficiency, climate resilience, and collective, cooperative action.

#### EXISTING INITIATIVES:

Outreach efforts to educate the public on healthy soils and regenerative landscape management can utilize resources from City departments and local organizations and build on their existing initiatives. The following organizations can enhance their existing practices to support healthy soils public-awareness efforts:

- LA Compost – distribute informational materials at their farmers market booths.
- Pacoima Beautiful – include healthy soils and regenerative land management topics during their Urban Gardening classes.
- The LA Conservation Corps – conduct community-level outreach.
- The Neighborhood Council Sustainability Alliance (NCSA) – leverage the [Cool Blocks LA](#) program, Neighborhood Councils, the [Green New Deal Neighborhood Council Toolkit](#), as well as their own newsletter and social media.
- The Council for Watershed Health – host symposia to educate the public on healthy soils and regenerative landscape management. CWH can also utilize their behind the scenes work on the Safe Clean Water Program to support outreach efforts.

## IMPLEMENTATION STRATEGIES & NEXT STEPS

The tables below outline several action items, and accompanying specific implementation suggestions, within various goals and subgoals. The content in this section is based largely on recommendations provided in the HSIg meetings and post-meeting surveys and is meant to strategically guide the enhancement and expansion of healthy soil efforts Citywide.

These goals and subgoals are items for the HSIg, and other City departments, to jointly or independently pursue. However, as many of these actions can also be taken by private property owners, businesses, and residents, these recommendations also serve as a general list of good goals and practices to promote healthy soils.

<b>Goal 1: Support and enhance organic waste recycling.</b>
<b>Subgoal: Develop new small- and mid-scale composting operations on public lands.</b>
Identify candidate sites for composting/mulching facility development efforts.
Collaborate with City departments to expand and/or establish composting/mulching sites on their properties.
Work with LA Compost to create a network of community composting hubs across RAP facilities, to educate and engage the public, and meet SB 1383 goals.
<b>Subgoal: Expand organic waste collection.</b>
Expand residential food waste reduction and edible food recovery efforts.
Expand residential organic waste collection and recycling in line with SB 1383 goals and the Organics Master Plan.
Establish additional compost drop-off sites (e.g., farmer’s markets, parks, community composting hubs).
Facilitate and enhance departmental organic waste collection.
<b>Subgoal: Find uses for excess available compost, mulch, and biosolids.</b>
Connect mulch producers with end-users and streamline the transportation and delivery of mulch.
Offer excess mulch to non-departmental entities, including schools and universities, homes, businesses, private landscaping companies, and non-profit organizations.

**Goal 2: Enhance City soil health thereby improving risk mitigation, soil water infiltration/holding capacity, and supporting biodiversity.**

**Subgoal: Increase open, permeable surface area.**

Identify candidate sites for unpaving, both on public and private property, to mitigate the urban heat island effect and promote water infiltration.

Implement unpaving efforts Citywide paired with other urban cooling strategies such as tree planting.

Minimize new paving and impervious land cover, especially in hillsides and other ecologically sensitive areas.

Utilize permeable covers, like plants or mulch, whenever possible in future development or renovation projects and when leaching of site contamination/pollutants is not an issue. When paving is required, permeable pavement options should be examined first and impervious surfaces (e.g., concrete, asphalt, etc.) should be a last option.

As surfaces are unpaved, removed materials should be recycled and repurposed.

**Subgoal: Improve degraded open, permeable surfaces.**

Support bioremediation efforts (e.g., the LASAN Brownfields Program).

Pursue grant funding to support healthy soils, stormwater, biodiversity, and organics diversion.

**Subgoal: Expand regenerative land management practices in public green spaces.**

Implement water-use reduction strategies and practices to increase water-holding capacity of soils.

Reduce chemical use.

Encourage City staff and residents to adhere to the [Guidelines for Applying Organic Soil Amendments](#).

Incorporate integrated pest management strategies.

Avoid soil compaction and actively employ strategies to rehabilitate compacted soils.

Support the implementation of BOE's [GREEN STREETS Standard Plans](#).

**Goal 3: Educate new staff, existing staff, and relevant land managers on soil health, regenerative landscape management, and integrated pest management.**

**Subgoal: Promote training among City Staff via Departmental Chief Sustainability Officers, in-person training, and via digital modules on Cornerstone.**

Formalize training curricula to train staff on healthy soils issues and regenerative land management techniques.

Mandate and/or incentivize the completion of the RegenerateLA curriculum and/or any other training curricula for relevant staff (e.g., land managers).

**Subgoal: Ensure training content is broadly accessible.**

Provide a variety of training formats (e.g., digital modules, in-person sessions, field visits, handouts, etc.).

Offer training in Spanish, Chinese, Tagalog, and other commonly-spoken languages as appropriate to the learning context.

**Goal 4: Create and improve local employment opportunities linked to healthy soil and composting (i.e., brown jobs).**

**Subgoal: Develop accessible training resources and certification programs that prepare future employees to meet green/brown job requirements.**

Expand existing soils and regenerative management curriculum and develop new curriculum where gaps exist.

Identify local projects and sites that can be used to provide hands-on training.

Promote pathways into related higher education programs (e.g., horticulture, engineering, landscape architecture, urban planning, etc.).

**Subgoal: Create employment pathways.**

Establish formal partnerships with potential employers, including City departments, non-profit organizations, conservation corps, and private sector companies.

Encourage job development organizations (e.g., EWDD, CEMO, local trade schools, conservation corps, Homeboy Industries) to promote and create pathways to green and brown employment opportunities. Job development organizations should provide assistance in obtaining relevant certificates or licenses.

Raise awareness of green employment opportunities via outreach efforts targeted towards local technical colleges, universities, high school counselors, and job fair participants.

Collaborate with local organizations, such as agricultural unions and restaurant associations, to sponsor training and apprenticeships.
<b>Subgoal: Direct job creation and training efforts to communities with the greatest need.</b>
Focus outreach, training efforts, and job investments in areas of the greatest need, including disadvantaged communities and Neighborhood Councils with high CalEnviroScreen scores.
Collaborate with organizations focused on workforce development in the environmental field and on improving equity.
<b>Subgoal: Establish and track metrics to assess the success of job creation and/or training initiatives.</b>
Develop specific metrics in partnership with CEMO. Recommended metrics include accessibility, certifications, further education, employment, retention, and equity.
Establish clear methods for the City to track the determined metrics.
Establish and track healthy soils metrics as part of DCSO sustainability dashboards.

<b>Goal 5: Launch public-awareness outreach efforts on the importance of healthy soil and regenerative land management for LA communities.</b>
<b>Subgoal: Secure funding to support a comprehensive outreach plan.</b>
Identify the feasibility of and costs associated with launching an outreach campaign and work to fund the campaign.
<b>Subgoal: Develop public-awareness messaging.</b>
Educate Angelenos on the importance and benefits of healthy soils, encourage Angelenos to engage in individual action, and provide direction to resources that aid Angelenos in supporting healthy soils efforts.
Promote collaboration among departments and other organizations to ensure outreach messaging is clear, digestible, and consistent.
Ensure messaging is inclusive and accessible to all communities by sharing in multiple languages and ensuring wide geographic coverage.
<b>Subgoal: Ensure public awareness efforts reach the most people and the right audience.</b>
Collaborate with external organizations to establish reliable and effective platforms to deliver messaging, including schools, Neighborhood Councils, youth groups, parent centers, and churches.



Utilize multiple outreach avenues, including partner/advocate channels, booths at in-person events, hand-outs/flyers, virtual meetings/events, social media, and earned media (e.g., media ad campaigns).

Incorporate an adaptive design process allowing for trial-and-error to gauge which outreach streams are most effective and adapt accordingly.

**Subgoal: Personalize outreach to inspire Angelenos to take action.**

Develop a Climate Victory Garden campaign, modeled after the Victory Garden initiative, aimed at improving climate resilience, supporting local agriculture, increasing food security, and promoting soil health.