

**Notes from SF Biodiversity Vision 2020
November 18, 2019**

San Francisco Biodiversity Vision 2020 Survey:

What's the number one barrier to improving biodiversity in San Francisco?

<u>Answer</u>	<u>Percentage</u>	<u>Number (total 48)</u>
Public/Awareness of the problem	35%	17
Funding	17%	8
Lack of local policies	17%	8
Other	13%	6
<ul style="list-style-type: none"> • No strategy or plan • Political will>importance of local gov't priorities • There is no one barrier - all of the above • No understanding of need for locally adapted native species 		
Habitat loss	10%	5
Climate Change	4%	2
Staffing	4%	2
My dang boss	0%	0
New Development	0%	0
What barriers? We are improving Biodiversity	0%	0

Question 1: How can we improve biodiversity in San Francisco?

Government Policy:

- Ordinances around planting native plants in public/private lands
- Native plants - can we enforce and regulate
- Government: require developers to use 70% native plants (minimum)
- Government: Have SF policy to always use native plants first (e.g., trees) no excuses
- 70% native plant for new plantings
- City's recommended list of street trees and shrubs should be only natives
- Get RPD to change their nursery from predominantly non-natives to SF natives
- Mandate local native plant on all city lands
- Government Policy: Adopt "native only" requirements on publicly-owned land
- Require city to do natives-only landscaping
- Plant local natives on all large landscapes in the city
- Restore derelict city land with native plant restoration
- Provide land in Golden Gate Park for expanded "native-plant only nurseries"
- Government policy: New development must have biodiverse landscape plan at last 90% native relevant to micro-neighborhood.
- Policies requiring all new developments to plant native plants
- Government policy: new developments have 80% native plantings
- Policy requiring developers to choose from portfolio of native plants
- Get FUF to plant more native trees
- Every resident gets free "native plant allowance"

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- Penalize residents for paving over their land
- Government policy and home ownership
- Make a Biodiversity Council (a la Urban Forest Council)
- Biodiversity Master Plan (a la Urban Forest Plan) with teeth
- Strategic plan and action items for biodiversity vision
- Citywide strategy for biodiversity
- Create a city-wide plan for biodiversity
- Set biodiversity targets
- Measure and report biodiversity by city area so that info could be used in development, garden, etc. plans
- City wide biodiversity conservation goals - target conservation of locally rare plants
- Biodiversity targets and guidelines for planning and design
- Translation of biodiversity strategy into city department policies
- Move the biodiversity resolution to an ordinance (awareness, too, if that has to happen)
- Make resolution into ordinance
- Move biodiversity resolution to ordinance
- Policies aren't rules - need ordinances or laws or code - need to make plans into rules
- Provide consistent government funding to support biodiversity-focused non-profits
- Commitment from government officials and funding
- More money
- Create a fund/grant program to improve city biodiversity
- SF City: Support for non-profits, like they do for homeless services
- Government: Advocate for government to fund on-going maintenance of native habitat
- Fully resource RPDNR division (Rec and Park Division of Natural Resources)
- Government: Scientists in all the departments for expertise
- City biologist position
- Biodiversity class for City gardeners
- Have every city department involved
- A biodiversity expert in every city department
- Tax rebates
- Conference about policy
- Make a policy of no more loss of the remaining habitat remnants
- City departments' inventory of what is being done
- City plan to implement all-landowners meeting
- Integrate informed policy into other areas of Rec/Park (e.g., natural areas program concepts to other non-natural area sites)
- Enforce leash laws in sensitive areas

Landscaping

- 100% native plants for city landscaping, new developments
- Have native plant nurseries throughout the city

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- Plant natives in public projects - require native plants
- College campuses plant natives
- Free native plants for residents
- Pilot project for native plant landscaping in new developments
- Create native plan training program for area landscapers
- Ordinances around planting native plants in public/private lands
- Recommend native plant guides for all nurseries and landscape companies
- Plantings in city-owned properties should be converted to native
- Mandate local native plant on all city lands
- Plant local natives on all large landscapes in the city
- Restore derelict city land with native plant restoration
- Require city to do natives-only landscaping
- City's recommended list of street trees and shrubs should be only natives
- Incentivize planting natives in corridors
- Native plants - can we enforce and regulate
- Convert golf courses to native landscapes
- Increase native plant abundance
- Create education program with developers and landscape architects to improve knowledge about native urban ecology and friendly design
- Biodiverse certification for landscapers
- Native-plant training and certification for landscape architects
- Create habitat zones to guide appropriate plant choices across city using historical ecology
- Restoration of natural areas should be stepped up with dedicated staffing and funding
- Provide land in Golden Gate Park for expanded "native-plant only nurseries."
- Indigenous ecology requires indigenous-led stewardship
- A "Bradley Method" like approach to remnant native plant populations - where you start with the places with the most species or most or last or most unique and protect no matter what, and then work your way out to do more.
(<https://static1.squarespace.com/static/585dc42c725e25ca57806ffc/t/58870aa31b631b203a2a303c/1485245092145/Bradley+Method.pdf>)
- Living roof - green
- Living shoreline
- Bring back priority species - quail, native pollinators, red-legged frog
- More outdoor meeting places
- Tear out a street and green it
- Less concrete, less cars, less parking lots, more parks
- Rip out a street

Developers/development:

- Density transfer for developers to protect open natural areas
(<https://www.greenbelt.org/land-use-planning-dictionary/density-transfer/>)

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- Policies requiring all new developments to plant native plants
- Government policy: New development must have biodiverse landscape plan at least 90% native relevant to micro-neighborhood.
- Government: require developers to use 70% native plants (minimum)
- Government policy: new developments have 80% native plantings
- Government: Have SF policy to always use native plants first (e.g., trees) no excuses
- Policy requiring developers to choose from portfolio of native plants
- Pay to install natives
- Create education program with developers and landscape architects to improve knowledge about native urban ecology and friendly design
- Require all new development to use native plants
- Strenuously advocate on community level for developers to increase open space
- Development: require building happen a certain amount of space from shoreline and public transport
- Create habitat zones to guide appropriate plant choices across city using historical ecology

Homeownership:

- Home ownership - expand the pie of available land
- Home ownership and education
- Give homeowners a break on sidewalk project if they plant needed plants
- Government policy and home ownership
- Home ownership and property owners: give more incentives \$ for including biodiverse landscape and water conservation, energy conservation
- Subsidize consultation to home gardeners who are interested in installing native plant gardens
- Incentivize homeowner landscaping with native plants
- Rebates for homeowners to re-landscape with native plants
- Subsidize backyard natives
- Native plant promotion for backyards
- Homeownership - improve access if free/subsidized plants and gardening materials to homeowners
- Every resident gets free “native plant allowance”.
- Rebates for backyard native garden who replace non-native garden
- Free native plants for residents
- Expanded front yard ambassador program - with natives
- Education: Education campaign to tell homeowners the value of planting natives in their yards. Every lot counts.
- Require backyard greening and permeability
- Penalize residents for paving over their land
- Have a “Native garden certification” at the city level

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- Use a backyard certification program, which already exists with the National Wildlife Federation Program (<https://www.nwf.org/garden-for-wildlife/certify>)

Education

- Local education
- CCSF naturalist course
- Get CCSF and other schools to teach gardeners/landscapers ecology, the biodiversity crisis, and the solution (plant SF natives)
- Native plant gardens and curriculum at SFUSD
- Fund restoration educators to be stationed at each public school
- Teach biodiversity in all grades, beginning in kindergarten
- Environmental stewardship: more education in elementary schools
- Incorporate native biodiversity into K-12 education system in a systematic way with teacher training and funding
- Public education pipeline is also really key
- Education: Greening of public schools including biodiversity into school curriculum
- Greening programs for school yards.
- Outdoor education for children
- More hands-on interpretation of biodiversity, specifically with youth
- Early education programs about biodiversity
- More outdoor experiences and overnights for SF school kids - Field trip structure
- Create funding mechanism for institutional education curriculum-based culture at K-colleges
- Landscape architect nature certification
- Native-plant training and certification for landscape architects
- Have a “Native garden certification” at the city level
- Biodiverse certification for landscapers
- Create education program with developers and landscape architects to improve knowledge about native urban ecology and friendly design
- Create native plan training program for area landscapers
- Biodiversity class for City gardeners
- Native plant program for nurseries
- Seed collecting workshops
- Adult education
- Develop short online training modules with topics that help landscapers, homeowners and students learn about biodiversity and native plants. Then promote it.
- Education: Beyond climate change and ocean acidification more on the why behind them - i.e., impacts on biodiversity, 6th mass extinction, etc.

Marketing/Awareness/Media/Community outreach

- Social media campaign
- Funny billboards for biodiversity

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- Biodiversity documentation campaigns for the city
- Marry concepts of carbon sequestration and climate resilience with access to nature and parks with biodiversity and native plants with Vision Zero and traffic calming with Bay Ridge Trail into a public education campaign
- Public awareness campaigns
- Getting the public aware of native biodiverse spaces - Signage
- Large scale citizen science native-plant monitoring
- More bio blitzes and focus on inverts or base of food chain
- Stewardship
- Community: Gather paid and volunteer habitat stewards to participate in care of natural environments
- Community: Expose people to natural environments so that they can envision what could be in their homes and parks
- Free native plant consulting for DIY backyard gardeners
- Develop short online training modules with topics that help landscapers, homeowners and students learn about biodiversity and native plants. Then promote it.
- Biodiversity videos, caterpillars, Doug Tallamy
- How do we engage everybody: IMAX, virtual reality
- Gateways - bugs and insects
- Focus species: quail, butterflies, poppies, etc. to rally public attention
- Classes/brochures on appropriate native plants and ecological interactions of plant and other wildlife
- Urban native TED talks
- Create watershed awareness programs modeled after the Friends of Sausal Creek - city to provide \$25,000 a year in base funds for a coordinator (<https://www.sausalcreek.org/>)
- Connect the carbon market to local plant impact on carbon sequestration
- Increase diversity equity and inclusion in conservation community
- Put up plaques around town calling attention to this or that bygone pond or dune or marsh
- Make biodiversity much more obvious to people - have visual clues. For example, coyote signs in park - do that with many other organisms, plants and animals
- Create culture of celebrating/having fun and pride in biodiversity. Ex. Birds and beer and flower and trees festivals
- CNPS members leading more neighborhood gardening clubs
- A month of nature - talks about elk and grizzlies and explain biodiversity
- Educate people about how biodiversity relates to their lives. For example, connect biodiversity to food/ag. Many places to educate people - Presidio food trucks on Sunday, farmers markets, etc.
- Outreach specifically to non-homeowners (who outnumber homeowners and vote)
- Free native plants for residents
- Every nursery to sell natives

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- At community events: get Department of Environment and others to advocate for SF native plants
- Develop a native prairie landscape to replace a large lawn landscape to demonstrate its beauty (irrigate it for success). Do it in a very public/well-traveled area to encourage architect adoption
- Ohlone Garden
- Ethnobotany demo garden
- Demonstration garden
- Living roof green
- Living shoreline
- Indigenous ecology requires indigenous-led stewardship
- More equity and inclusion in biodiversity organizations
- Can culturally-relevant non-natives be a gateway to native ecology stewardship?
- A comprehensive identification list of what is left and where and a localized education/public awareness campaign based on that
- Get neighborhoods involved
- Go through community groups - religious groups, dog owners, etc.
- Convey the idea of Malcolm Margolin “inexpressible fertility” of the Bay Area prior to the arrival of Europeans
- 50th anniversary of Earth Day
- Have a city-wide festival to announce and celebrate biodiversity
- Make message hopeful and fun and community building festivals and events
- How to focus attention given all other issues? The fight is to get people together - so making mandatory is key
- Connect to other issues - food, loneliness, etc.
- Public engagement/public knowledge
- Annual biodiversity festival
- Community science group expansion
- Education: Education campaign to tell homeowners the value of planting natives in their yards. Every lot counts.
- More hands-on interpretation of biodiversity, specifically with youth
- Partner with local nurseries/plant stores to educate consumers (i.e., SF Native section)
- Expand Conservation Corps Jobs program to reach more areas and more people

Connectivity/Corridors/public space/trees

- Focus on identifying high-priority areas and increasing connectivity
- Streets > wildlife corridors
- Incentivize planting natives in corridors
- Connect corridors
- Strategic corridors and connecting streets, parks, yards and walls/roofs
- Improve connectivity through creating new corridors and greenways

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- UCSF/GGNRA/SFSU corridor planning
- Spatial, science-based strategy showing how to link parks, greenways, street trees, green roofs, landscape into a biodiversity system
- Increase connectivity between natural space in a way that encourage biodiversity
- More sidewalk native plant gardens
- Get FUF to plant more native trees
- Government: Have SF policy to always use native plants first (e.g., trees) no excuses
- Plantings in city-owned properties should be converted to native
- City's recommended list of street trees and shrubs should be only natives
- Public lands as priority for native plant restoration
- Habitat restoration
- Increasing habitat restoration project in all SF open spaces and parks
- Reduce/eliminate chemicals in city plantings
- Mandate local native plant on all city lands
- Plant natives in parks and streets
- Adopt sidewalks and median strip
- Open SF sidewalks - engage with International Society of Arboriculture Western Chapter (<https://www.wcisa.net/>)
- Partner with SFPUC on native plants to be used in commercial/green infrastructure grant program
- Partner with all Bay Area water districts to use native plants in all turf charge out programs (check language??)
- More native restoration in Golden Gate Park
- Preserve what diversity we currently have. E.g., preserve *Silene Verecunda* on Mt. Davidson
- Daylight Islais Creek to make a living shoreline at SF Bay
- Restore estuarine shoreline in Islais Creek and Mission Creek Channels
- Sunlight underground streams
- Restore Sharp Park
- Restore Lake Merced and Sharp Park
- Replace sports stadia with natives
- Shoreline wetland buffer
- Shoreline: promote living shoreline and retreat for habitat where possible
- Innovative solutions for open space - roofs, Doyle Drive-type treatment of roadways, particularly in South East area of SF (<http://www.presidioparkway.org/about/>)
- Shrink Great Highway to expand dunes and create walking/cycling boardwalk
- Create biodiversity pollinator corridor in Dolores Street median
- Create Twin Peaks biodiversity park on public lands between Glen Park and Golden Gate Park
- Shrink Alemany and I-280 to re-create Islais Creek
- Create oyster beds where derelict piers now stand
- Solar on all parking lots of public buildings

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Land acquisition

- Indigenous land trusts (ex. Sogorea Te <https://sogoreate-landtrust.com/>)
- Land acquisition
- Acquire new open space parcels in park-poor neighborhoods

Manage problematic plants/nurseries

- Ban sale of problematic plants
- Outlaw invasive and damaging plants at point of sale
- Try to get neonics banned at commercial nurseries
- Policies that force nurseries to improve; close their market if they don't get better with -cides or phytophthora
- Ban neo-nics
- Education: educate nurseries to promote native plants and ban invasive plants

Research/Science/Technology

- Understand historic and current inventory
- A comprehensive identification list of what is left and where and a localized education/public awareness campaign based on that
- A “Bradley Method” like approach to remnant native plant populations - where you start with the places with the most species or most or last or most unique and protect no matter what, and then work your way out to do more.
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- Biodiversity documentation campaigns for the city
- Spatial analyses of greenspace access, citizen science data
- Create a computer program modeled after the “Mannahatta project” to help inspire/educate people about what historic SF was like
(https://www.youtube.com/watch?v=cKNEu_8t65s)
- SF historical ecology map
- Remap SF remnant habitat patches (last map was 20 years ago)
- People's survey/inventory baseline
- Create biodiverse inventory as a unifying project
- Spatial, science-based strategy showing how to link parks, greenways, street trees, green roofs, landscape into a biodiversity system
- Survey: evaluate, protect, restore
- Have a native plant website that helps match native plants with local conditions of need
- Provide a tool to show which plants would most improve biodiversity
- Create habitat zones to guide appropriate plant choices across city using historical ecology

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- Science: design/conduct scientific projects that can test/demonstrate the value and importance of native species
- Citizen science
- More bio blitzes and focus on inverts or base of food chain
- Large scale citizen science native-plant monitoring
- City wide biodiversity conservation goals - target conservation of locally rare plants
- Citywide biodiversity challenge and data gathering in partnership with tech
- Set biodiversity targets
- Government: Scientists in all the departments for expertise

Advocacy

- Coordinated advocacy at City Hall on behalf of biodiversity
- Strenuously advocate on community level for developers to increase open space
- Government: Advocate for government to fund on-going maintenance of native habitat
- At community events: get Department of Environment and others to advocate for SF native plants
- Make resolution into ordinance
- Ability to sue - legal aid
- Float Muni Bond for green infrastructure/water use efficiency with biodiversity elements

Question 2: How do we better collaborate with one another?

Events

- A coordinated month of nature - April 2020 City Nature Challenge 50th anniversary of Earth Day
- City Nature Challenge - encourage iNaturalist usage
- 50th anniversary of Earth Day
- More gatherings for nature advocates for knowledge-sharing and networking
- Need to have regular in-person meetings to promote shared work/project to build trust and shared vision
- Face-to-face meetings with different institutions host the meetings
- Outward event

Collaboration

- More collaboration between non-profits
- Bridge between scientific community and activism
- Coordinated implementation across sectors
- We need a unified network that interconnects different groups with different perspectives
- More work swaps (e.g., Rec/Park>Presidio Trust)
- Work swaps
- Get a list together of all non-profits in city doing outreach about nature

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- Specialization between groups with strong connectivity and resource-sharing
- Provide connections
- Need an organizing/coordinating entity and having top down mandate (like biodiversity resolution) is helpful
- Collaborate with potential funders like Salesforce
- Find philanthropists who are interested in biodiversity

Technology

- Biodiversity Listserv to unify network
- Better data-sharing platform
- Local nature wiki - comprehensive resource forum
- Central information: hub for environmental groups, forum, resource that is comprehensive (likely online)
- Collective impact model could be helpful
(<https://www.collectiveimpactforum.org/what-collective-impact>)

Planning/organization

- Unifying plan that is created/built together - synergy between NGOs and Gov. and communities
- Figure out what the goals are, shared goals - what do we need to do
- Community-based process to set nature goals - what are we trying to collaborate to do?
- Biodiversity inventory - what's where now
- Create deadlines for projects we are working on
- Making the case for local nature with other people - focused causes - public health/water/homeless
- How to get the public right-of-way agencies involved? Public health interest groups
- Get to know who the various groups are, what is their expertise: agencies, NGOs, funders, public action committees, citizen groups
- Promote stewardship as a recreational/healing activity
- Get landowners together - UCSF, CCSF, SFSU

Opportunities

- Find the groups that have already solved the problem
- Bring in other sectors/benefits - traffic calming, greenways, bicycles
- Get all groups in attendance tonight to support a petition asking the City to take action with an ordinance/policy/plan to prioritize SF native plants
- Use knowledge to enforce policies
- Hard for city workers to advocate - we help them, show up for public comment
- Make job opportunities in conservation field for under-represented populations