Summary to GPAC on Open Space and Natural Resources Workgroup

General Plan Guiding Principles related to this topic:

1. Achieve carbon neutrality by 2030 and equitably foster a sustainable and resilient community in which today's needs do not compromise the ability of the community to meet its future needs.
2. Preserve and enhance Petaluma's natural environment and surrounding open spaces.
3. Protect and restore the natural function of the Petaluma River and its tributaries while expanding complementary recreational, entertainment, and civic opportunities.
4. Promote social and economic justice to address structural social and economic inequities and racism.
5. Ensure the health and wellness of all residents.
6. Physically and psychologically integrate and connect the East and West sides of town.
7. Create a welcoming, affordable, accessible, and age- and family-friendly city.
10. Enhance Petaluma's historic downtown by preserving its historic character, expanding pedestrian and bicycle access and safety, providing public gathering spaces, and promoting a diverse mix of uses.
11. Honor, celebrate, and preserve Petaluma's heritage and historic character and its place in the modern city.
13. Ensure infrastructure supports infill development and addresses the impacts of climate change.
14. Advance Petaluma as a hub for the arts, creativity, and innovation.
15. Advance a forward-looking economic development strategy that focuses on diversity, opportunity, innovation, and resilience.
16. Be a leader in advancing these guiding principles within the region and beyond.

Defining Open Space

In general, "Open Space" in Petaluma includes all outdoor areas, whether public or private, natural or developed, urban or rural. These are the places where ecological systems, wildlife, and people interact. They include intact riparian corridors, ball fields, urban plazas, parking lots, and everything in between. For the purposes of the General Plan, various categories of open space have been defined and are described later in this document.

Defining Natural Resources

"Natural Resources" are all living and organic materials and organisms that contribute to local and global environment and ecological systems. They may be naturally occurring, installed, or have migrated from outside the region. These include, but are not limited to the flora, fauna, soils, waters, and people of Petaluma.

Listening Session Summary

Citizen and Stakeholder concerns and goals expressed consistent overlapping themes.

Interconnectivity of everything, flooding protection, importance of habitat from north river to our southern wetlands, trees, restoration and preservation of biodiversity, maintained wildlife corridors, and new connections and linkages for wildlife and people to access natural open spaces that were slated for development in the previous general plan, preserving the Corona/Rainier Reach in its natural state and the promotion of restoration efforts, vision of a linear river-walk/bike path/open space zone from Denman Reach north of the city to Ellis Creek south of the city along the Petaluma River as the centerpiece of our town

Recommendations and Priorities

Preserve, Restore, Plant and Connect open spaces and the urban forest within the city to the greatest extent possible across public, private, natural, developed, and agricultural lands by following objectives set down by Sonoma County "Resiliency Lands Strategy " (recent draft published for public review)

- Focus early actions on areas with the greatest potential for carbon sequestration, climate risk reduction, and biodiversity enhancement.
- Participate in forum(s) for coordinated action on climate resilience in Sonoma County.
    - Advocate more for County attention, esp. for the Petaluma River, its tributaries and watershed zones, and Petaluma Marsh and connected Wildlands.
- Reduce fragmentation of the natural lands system by adding to conserved spaces, increasing connections and corridors, and working with private landowners to develop shared management strategies.
- Partner with Native American tribes within Sonoma County to advance traditional ecological knowledge and preserve tribal cultural resources and tribal cultural properties.
- Identify funding and financing strategies from the county, state, and federal governments, as well as private funding sources, to advance this innovative and bold plan. Identify new concepts for funding and financing sources as well.
- Prioritize equity and climate justice approaches that are measurable and clear.

Create Dedicated Chapter/Section in new General Plan for Open Space and Natural Resources

- We encourage GP policy to express value for environmental and ecological categories and benefits by creating a separate section that supports the shift to using

environmental resources and hazards as our base map and reframes human centric development to integrate it into natural systems.

- Create enforceable, objective standards and policies to implement ideas contained here-in
- Recreation, Music and Art are overlapping but separate sections from Open Space and Natural Resources so think about creating separate sections. Keep Parks in Open Space.
- Our new general plan should have expanded land use definitions and include goals, objectives, and policies to provide a broader range of public and ecological benefits.
- Multiple categories of Open Space ranging from "Sportsfield" to "Wildlife Mobility Corridor". Some or all of which can be applied to parcels in order to create a hierarchy of use intensity, and to allow or restrict development to meet the needs of the community and improve urban ecology.
- Recognize the role of natural resources, open spaces and the urban forest in creating a healthy and liveable environment, and reversing climate change.
- Elevate the importance of open space and natural resources so they are considered at every level of planning and policy
- Identify and promote development strategies which are beneficial to urban ecology while prohibiting or discouraging those which are not.
- Growth, development, and urbanization must not be exclusive of ecologically beneficial resources (trees, useful landscapes, wildlife corridors, etc.)
- Use land use designation/overlays to Establish corridors that can be connected over time, as parcels are re-developed
- Do not over-regulate landscapes. Create goals, guidelines, standards, but allow for creativity and experimentation

Elevate Parks/Natural Resources Department to have equal footing with Public Works/Utilities

- Open Spaces and Natural Resources become "infrastructure" equal to streets and utilities.
- Allow them to share resources, personnel, and have common, equal priorities
- PW/U and Parks Dept do not have to compete for budget, can have common goals and take responsibility for maintenance, and monitoring and management of trees and natural resources
- An Open Spaces and Natural Resources Department in the City organization would provide more consistent long range implementation of policies recommended by this workgroup due to overlap and integration with many other General Plan topics
- Street trees are maintained by well trained city staff and not left to homeowners
- Establish an Urban Forestry Officer and staff
    - Conduct a City wide tree inventory
    - Develop new standards and strategies for weed abatement
    - Develop and publish a palette of successful, wildlife supporting plant species, with specific landscape purposes
    - Full time staff for Gator-bag filling / street tree irrigation and maintenance

    - Heritage tree survey, mapping and designation
    - Invasive species control / eradication
    - Integrated Pest Management Plan for city parcels and publish BMP's for private landowners
    - Education and outreach for residents to promote healthy urban ecology
    - Manage urban Forestry Web page interface with public
- Shift city policy to using environmental resource and hazard policy throughout all departments as basis of decision making.Planning and Land Use Policies need to be reframed with natural systems approach
- Tree Ordinances Update to require arborist advice before removal of all large trees on both public and private lands (city council priority 2022-23)
- Tree ordinance to require mitigation (replacement trees or fees) for removal of all trees greater than 4" caliper d.b.h. (similar to Santa Rosa and many other communities)
- Urban Forest Management Plan (in development)
- Parks Plan (In development)
- Require plans for future construction of both buildings and transport systems to include open space and trees/vegetation that tie in with Natural Systems Approach
- Provide city staff to coordinate and manage a corps of volunteers to work with local nonprofits for both maintenance and construction programs and initiatives
    - local nonprofits such as Daily Acts, Friends of Petaluma River, Petaluma Wetlands Alliance, ReLeaf Petaluma, Rebuild Together Petaluma, River Park Foundation, Petaluma People's Services, Rotary, Kiwana, Bicycle Clubs, Sierra Chapter
    - place based groups like Sunrise Community Garden, La Tercera Community Garden, Petaluma Bounty, church gardens
    - Function based groups for cleaning up graffiti, trash and litter pickup, and restoring benches
    - school programs working with students such as Interact and Environmental clubs

Use Climate Change Actions/Strategies in all policy decisions for Open Space and Natural Resources

Climate Change is happening sooner than expected with greater impact locally, so we need to put more effort into being prepared and take adaptive actions as well as corrective actions. We need to recognize the city is part of a larger ecosystem as well as larger civilization and our human centered systems need to be in balance and be part of the larger natural system.

Acknowledge Prior Inhabitants of our Land and Follow Their Long Perspective

We need to acknowledge that our Industrial lifestyle and values have dramatically changed the landscape that was nurtured by Indigenous Peoples and other species who lived here for many thousands of years before Europeans arrived 150 years ago. A key element of decision by consensus amongst leaders was the question: "Is it good for 7 generations from now?" Think long term, not just 20 years. We should do what we can to restore sustainable ecology.

Incorporate Natural Systems Approach in All Future Planning

- Our natural resources and environment form the base map for city planning
- Look at Long Term Strategies (see addendum article) to protect entire watershed and cooperate with county, bay area, state, and federal government agencies and environmental nonprofits to improve city life as well as our natural systems
- Air, water, land, biota (all living organisms) need to be considered for all projects and initiatives so human centered interests do not conflict or cause harm considering the numerous benefits: social, physical and mental wellbeing, ecology, biodiversity, protection from fire and flooding, personal and city-wide economics
- Stormwater management BMP's must not supplant or displace real tree plantings
- Buildings and businesses along the river and open spaces should face the river and open spaces to emphasize our relationship to the river and natural world/ecosystem
- Develop landscape GUIDELINES with a palette of appropriate plants with associated bioregions
- Petaluma UGB puts us in the middle of a defined watershed, so movement of water and wildlife needs to be considered before any development occurs
    - Create ecologically beneficial landscapes such as vernal pools or dense stands of trees in otherwise inaccessible open space (Highway interchanges, Fallow farmlands)
    - Ensure livestock fencing does not prohibit mobility of wildlife species
    - Ensure livestock waste does not directly drain into watershed or river
    - Remove all barriers to terrestrial and aquatic migration
    - Map existing wildlife corridors and identify gaps. Develop strategies to connect/bridge corridors across private lands
- Increase Tree Canopies throughout town. Trees provide multiple benefits including heat island reduction, safer roads, added economic values, and improved health and need to be included in parks, transport corridors, wildlife corridors, parks, and private land
- Protection from natural hazards such as polluted land, water, and air
    - Further develop and implement pollution prevention policies and strategies at all levels (litter, sedimentation, sanitation, chemical/hazmat, groundwater…
    - Identify and eliminate all sources of river and riparian corridor pollution
- Evaluate BAASMA (Bay Area Stormwater Management Agencies Association) BMPs (Best Management Practices). Prioritize strategies that use biological treatment controls over mechanical systems, develop additional BMP's, and allow for site-specific custom solutions.

Rethink Water Sources and Use

- Undertake large scale water retention systems during flood years to store water for drought years.
- Ensure we meet future water needs given required housing by state, supporting new and old businesses, expanding population, limited water supply from SCWA, variable groundwater systems, regulated water rates and fees, competition from other growing cities

- Consider consolidating management of all Water resources (potable, storm, river…)
- Promote rainwater harvesting from rooftops and impervious surfaces
- Encourage installation and maintenance of rain gardens, bioswales and permeable paving
- Promote use of greywater irrigation systems, provide standard details and instructions
- Encourage agriculture in watershed to construct or improve water catchment ponds and use land management BMPs for increasing infiltration to groundwater
- Plan for drought and flooding since both will be more intense and duration in future.
- Improve flood water sewer system (with trash collection)
- Study (in progress) using winter excess Russian River water in winter months to recharge local groundwater supplies by pumping down with current city well system and retrieve in summer when needed using same pumps
- Construct more water tanks or reservoirs for storage
- Dig new wells for direct water sourcing
- Prioritize irrigation of trees during drought
- Restrict planting and irrigation of turfgrass lawns to public or quasi-public accessible landscapes. Prohibit use of turf for ornamental landscape purposes
- Provide recycled water to all neighborhoods and parks.
- Provide recycled water filling stations for all citizens to use for irrigation in small open spaces and tree watering during drought on both public and private properties.
- Conserve water use and irrigation during drought - increased education, incentive programs and regulations/fees (Water-wise House Calls, Mulch Madness, etc.)
    - New neighborhoods to be dual-plumbed and provided for efficient for street tree irrigation
    - Allow for landscape metering or sub-metering to deduct wastewater fees for irrigation
    - Increase capacity for water recycling and distribution
    - Identify alternative water sources, recharge strategies
    - Consider additional water storage infrastructure
    - Develop city standards for rainwater harvesting
    - Develop city standards for private use of greywater and black water
    - Develop standards for residential stormwater management BMPs
    - Prioritize stormwater management BMP's that facilitate groundwater recharge

Create More Open Spaces and Improve Existing Open Spaces

- Identify existing Open Spaces and natural resources on private lands that significantly contribute to the health of our Urban forest. Develop planning tools to protect these
- Develop overlay zones for various social and ecological benefits that can be applied to private parcels to allow development while providing wildlife corridors and trees
- Evaluate our more urban parks and plazas for ways to improve environmental quality with natural resources (adding trees, replacing un-sustainable landscapes)

- **Develop River Park (McNear Peninsula) and improve Steamer Landing Park**
- **Develop Lafferty Ranch into improved watershed and accessible park**
- Improve all parks with local community input (e.g. see suggestions in S. Kirks letter of 8-5 and M. Sullivan letter on Fairgrounds)
- Create teams of park and trail stewards from local neighborhoods and increase neighbor participation in upkeep such as workdays
- Identify and designate opportunities to add micro-parks and plazas downtown and within shopping centers or parking lots and spaces, such as parklets, to provide usable outdoor space, accessible to anyone. May need a new classification for this scale of open space.
- Create more seating, signage, interpretation with help from Parks/Trails Stewards
- Identify neighborhoods lacking open space, and parcels within which can be "Converted", to include pocket parks and street parklets and/or neighborhood services and retail (with outdoor gathering space and trees)
- identify a list of low-water-use, durable, weed suppressing, wildlife friendly groundcover plants, and plant these in unmanageable weed-patches within existing parks and plazas
- replace un-sustainable, thirsty landscapes with sustainable plants as described above.
- **Identify parcels for potential 30x30 acquisition**
    - **Parcels in upper river area N and S of Outlet Mall**
    - Kelly Creek Extension for Helen Putnam Park in cooperation with County
    - 10 acre parcel next to Arroyo Park
    - Stuart St. Pocket Park purchase from Caltrans
    - Adobe Golf Course and parcel next to PGE substation
    - Fairgrounds
    - Strips of undeveloped land adjacent to Eastside walkway
    - Parcels on Adobe Creek
    - 18 acre Parcel next to Casa Grande High School
- Reimagine Adobe Golf Course and Open Space between it and PGE substation and ensure whatever redevelopment occurs includes open space and possibly neighborhood services which will enable adjacent residents to not use their cars Consider possibilities outside the box, for example:
    - reset zoning and density and policy
    - as a new food forest
    - multi use area for recreation, park, neighborhood services, affordable housing, energy production and storage
    - maybe start a new development integrating the 15 minute neighborhood concepts with habitat for biodiversity or
    - develop large green energy production and storage in cooperation with PGE
- Allow/support neighborhoods to create community spaces and gardens
- Create pocket park and street parklet system so neighborhoods can create shared space
    - eg. Caltrans removed 2 houses on Stuart Dr. which neighbors want to turn into a pocket park/playground/solar array
    - eg. remove one car park space, dig out asphalt, add trees for shade and benches for people

- Reinvent Fairgrounds into a plan that maintains and promotes local agriculture including small farms, nurseries, and ranchettes. Create a city park. Reduce noise pollution by:
    - a central food forest and community vegetable garden
    - Build enclosed auditorium for music venues that can also house many other events including vehicle races and sports events
    - Create a year round agricultural unit with 4-H and PHS Ag Dept. with an active farm and dairy that students can see, touch, and learn agriculture.
    - I support something similar to this, but not as stated. suggest removing or discussing an alternate recommendation

Create more Wetlands and Improve Waterways

- Improve floodplain near Outlet Mall and restore with wetland vegetation and using BMPs for wetland restoration
- Construct rainwater catchment basins in upper river and tributaries
- Work with RCD, County, landowners, and other agencies for reducing erosion, sediment, and trash in creeks and watershed
- Increase effort to clean out trash, debris, large objects along river and creeks, e.g. Corona Creek has several abandoned vehicles and highly eroding near school grounds
- Increase setbacks for construction on properties along river and creek corridors
- Improve downtown river with Boat House in development, maintained docks, and restored river banks with wetland vegetation for erosion control and wildlife habitat
- Sea Level Rise adaptations, esp. in downtown area
- Create regional solution to dredging and dike management for sea level rise
- Build flood protections using nature based systems and flood walls if needed
- Prohibit development in the upper reach area - create North River Parkand Open Space between north river and freeway, use for water catchment and infiltration
- Prevent the construction of an asphalt plant opposite Shollenberger Park
- Apply stormwater management BMP's and pollution prevention measures to existing storm drain inlets

Improve our Urban Canopy and Ecology and Heat Island Reduction

- See recommendations listed under "Merge Parks and PW/U departments" listed above
- Inventory trees in city (part of Urban Forestry Management Plan grant)
- Create UFMP
- Identify and protect heritage trees and significant stands of established or naturally occurring trees
- Support 10,000 Tree Initiative stated by ReLeaf Petaluma to provide multiple benefits
- Add trees along existing streets and corridors
- Partner with shopping centers and large parking lot owners to add shade trees and irrigation in parking lots
- Trees should be considered "infrastructure" equal to sidewalks, streetlights, signs, signals, benches, etc.
- Support Food Coops, Community Gardens and front yard neighborhood food gardens

    - support Bounty Farms
    - support Daily Acts effort to transform front lawns into sustainable landscapes
    - support local farm to table restaurants
- Prohibit “Filterra” or other types of stormwater management devices type stormwater management devices that displace real street trees
- Create more under road space for tree roots using modern techniques
- Identify areas of expansive pavements
- Work with property owners to add trees on private parcels
- Add/replace street trees where they do not exist or have been removed
- place utilities under roads and trails so they do not interfere with street trees
- All transportation, road and development projects maximize inclusion of trees
- Monitor establishment and maintenance of new trees
- Develop a list of recommended trees for uses (not just street trees)
- Have a webpage on the City's website dedicated to trees and the urban forest, with management practices, lists of recommended trees, featured heritage trees, permit requirements and info…
- All new pavements are required to include trees. Develop standards and allow for off-site mitigation, or in-lieu fee
- Establish mitigation standards and in-lieu fees for tree removals which go into a city account dedicated to planting and maintaining trees (similar to Santa Rosa)

Select and use appropriate plant materials

- Select and install plant species to maximize potential environmental, ecological, social and aesthetic benefits, such as: carbon sequestration, micro-climate control (wind, shade, glare), habitat creation, biodiversity support, heat island reduction, traffic calming, pedestrian protection, visual mitigation, etc.
- Plants should be chosen which are best suited to the specific conditions in which they are to be installed (soils, exposure, available space, surrounding conditions)
- Petaluma has a variety of soil types and ecologies. Plants “native” to certain areas of our bioregion are not necessarily appropriate in all areas, or for all situations.
- Prioritize “native” plants when appropriate and when considering characteristics of the specific location
- There are also many acceptable non-native species and cultivars that are well suited to Petaluma, are adaptable to harsh urban conditions that don’t support some sonoma county natives, and have the capability to provide great ecological benefit.
- Domestic landscapes must be symbiotic with natural landscapes
- Invasive species must not be used (refer to Cal IPC)
- Be conscious of management/maintenance strategies when selecting plants (water, pest management, ultimate growth habit)

Perform Wildlife Surveys and Education, Maintain and establish wildlife corridors

- Inventory our wildlife corridors by species and update maps, use this information to develop base map
- Create Habitat Map to illustrate locations, corridors, and pockets where wildlife occurs
- Over 230 species of birds have been surveyed at Shollenberger Park and ECWRF and we need to create a similar list for our urban forest
- More education is needed to illustrate the diversity of species in our urban ecosystem including natural environment web pages on city website
- Create zoning overlays, land-use designations, other tools to establish, protect, and maintain wildlife corridors on public and private lands.
- remove unnecessary barriers to wildlife mobility
- Tree canopy can mitigate barriers in some instances, for some species.
- Use a multi-tiered approach including Trees, shrubs and groundcovers where appropriate.
- Encourage planting of ecologically beneficial plant materials. Develop a "Wildlife Friendly Plant List" and make available to public
- Develop integrated pest management strategies and educate residents to avoid use of harmful pesticides.
- Strengthen pollution prevention measures through education and other reminders ("no dumping, flows to creek" signs, watershed education in schools)

Increase Access to Open Space, Wetlands and Waterways

- Enhance the river habitat, beautify the downtown section, and prepare for sea level rise using natural systems approach
- Create more Open Space with access esp. river and creek corridors, River Park, North River OPen Space, Fairgrounds, Helen Putnam Park, Lafferty Park/Watershed
- River Enhancement and Access in Downtown area - revisit prior report and prioritize
- River Access points and path along entire riverfront from Petaluma Marsh to Cotati including bike path entire length of Petaluma River
- Develop our transport system away from car centric roads toward ped, bike, and micro-mobility including trails and paths in natural settings and especially use Rainier underpass and trail system to connect Lynch Creek trail and Petaluma Blvd. and Corona Rd. and Denman Reach area.
- Create city wide Bike and Ped Paths and Trails with WayFinding and with rideshare systems so entire city becomes more ped, bike and micro-mobility centric shifting away from our car centric policies which will not only reduce our carbon footprint but also improve air quality and overall citizen health and also include bench maintenance and addition to all paths so pedestrians can rest and enjoy their surroundings
    - Create a well-connected network of alternative transportation corridors which include trees, veg, and bike/ped routes
    - Identify tree-less corridors and strategies for retro-fitting to add street trees
    - Re-envision existing street network to identify corridors needing transformation

- Allow/Encourage businesses to create parklets where appropriate and include trees and vegetation (must be open to public when on public land)
- Consider creating a walking mall on Kentucky St. as community space
- Renovate Historic Trestle and improve Water St. to create continuous public open space along the river including walkway, bikeway, restaurant seating, art display

Sources of funding

- Shift some of city staff/time/budget to Parks, Open Space, River, and Natural Resources
- Regional, State, and Federal Agencies, eg. 30% by 2030 Initiative (30x30)
- Nonprofits working in county such as Ag and Open Space, Sonoma Land Trust
- Foundations with grant opportunities
- Carbon Trade and Cap Funds, Mitigation Funds

Constraints to Future Actions

- Staff trained in Nature Based Solutions and making Environment a higher level priority
- Disagreements, conflicting views on prioritizing initiatives and projects
- Prioritizing and integrating natural systems over or into human based systems
- General US Economy and source of grants to do nature based solutions
- Uncertainty of future (growth, expectation, City Council makeup,
- Certainty of Sea Level Rise, Atmospheric Rivers causing flooding, Climate Change
- Meeting state housing requirements and water supply/use expectations
- Including social and environmental justice issues in decisions

Natural Resource - Water

Climate Change can also be called “Water Cycle Disruption”. Water is and will remain our limiting factor in the foreseeable future.

Supporting Documents and Appendix

Letters/Statements from many advocates

Stakeholder Meetings Summaries

County Land Resiliency Plan Executive Summary

Prior General Plan items related to this topic

Watershed Long Term Strategies by John Shribbs