Planting Perennial Polycultures For Carbon Sequestration and Pollinators

http://archive.is/ue5g2 - https://www.nrs.fs.fed.us/niacs/carbon/forests/carbon_sequestration/
http://pnwsteep.wsu.edu/edsteep/GlobalWarming/CarbonSequestrationFactSheet.doc
https://www.nrcs.usda.gov/wps/portal/nrcs/detail/plantmaterials/technical/publications/?cid=stelprdb1044847
http://sustainability.tufts.edu/carbon-sequestration/ ,
http://archive.is/WyQiD -
http://portal.nifa.usda.gov/web/crisprojectpages/1007823-multifunctional-agroforestry-as-a-sustainable-food-production-option-in-illinois.html

Goals

Goal: Sequester CO2
Goal: Support Soil Ecology
Goal: Support Pollinator Diversity

Proposed Actions

Action: Locate underutilized landscapes
Action: Assess feasibility of garden construction
Action: Create a carbon sequestration planting plan
Action: Create a pollinator corridor plan
Action: Evaluate impacts of existing species (deriving from the 'tree ordinance') for carbon sequestration and pollinator habitat/forage
Action: Create a perennial plant palette composed of species which support soil and pollinator ecology
Action: Evaluate and expand on the garden design principles currently available at http://www.southportland.org/files/6613/6744/4992/Planting_guidelines.pdf

Existing Regional Projects:

Portland, ME:

Existing Polyculture Planting Programs:

" Mt. Joy Orchard, a public orchard located on a slope of land the city owns behind the East End Community School. Last year, the city planted about 40 apple trees there, along with some pear and peach trees. The trees were funded by the city, public contributions and John Bunker, head of Fedco seeds in Waterville. The Resilience Hub, a nonprofit Portland-based group that promotes permaculture, will provide the labor to maintain and develop the orchard. Volunteers intend to write a master plan to guide food and medicinal plant production, removal of invasives

ustainable-food-system/
http://archive.is/nTONA -
http://www.pressherald.com/2015/05/10/maine-gardener-orchard-atop-munjoy-hill-bears-fruit-for-children-and-community/
http://archive.is/nimES - http://portlandmaine.gov/605/Community-Gardens

Portland Pollinator Corridor Proposal:

Stakeholders: Portland Pollinator Partnership, Bayside Neighborhood Association, Portland West End Neighborhood, City of Portland, US Fish & Wildlife Gulf of Maine Coastal Program

Advocates: portlandpollinators.org, wildseedproject.net

In The Press: thewestendnews.com/building-a-pollinator-corridor

Washington DC:

Impetus: "Urban runoff and agricultural waste are leading contributors of nutrient, bacterial, and toxic pollution to area waterways including the Anacostia Watershed and the Chesapeake Bay11. Agroforestry and polyculture systems use nitrogen fixing trees and bushes along with cover crops to provide nitrogen. Polycultures and closed loop systems of food production have the potential of significantly lessening pollutants by decreasing agricultural inputs and limiting potentially toxic outputs"

Policy: DC Urban Food Farm and Food Security Act of 2014; Status: Passed: Under this act, the mayor will identify urban plots to lease out to qualified applicants, offer tax credits for land owners who lease their land to growers, and work to promote buying locally grown food in order to support urban food production within the District3.
http://dcclims1.dccouncil.us/images/00001/20140211114248.pdf

http://archive.is/csi83 http://archive.is/NgbBG
http://portal.nifa.usda.gov/web/crisprojectpages/1010123-determining-effects-of-nitrogen-fixing-plants-on-nutrient-density-and-productivity-in-agroforesty-and-polyculture-systems.html

Seattle, WA:

Existing Planting: "..garden project that utilizes a gardening technique that mimics a woodland ecosystem using edible trees, shrubs, perennials, and annuals. Fruit and nut trees make up the upper level, while berry shrubs, edible perennials, and annuals make up the lower levels."

https://www.planning.org/blog/blogpost/9107338/
http://www.seattle.gov/neighborhoods/programs-and-services/p-patch-community-gardening/p-patch-list/beacon-food-forest

Precedents:
Seattle: http://archive.is/hCMPC, http://archive.is/xQoFD, http://www.harrisondesignla.com/, http://archive.is/Cqt7i, http://archive.is/XhIla
Portland: http://archive.is/gpSyc, http://archive.is/XMr9l
Kuai: http://archive.is/DpCbN, https://www.facebook.com/groups/kauaifoodforest/
Edmonton: http://archive.is/rBQwl, http://dustinbajer.com/edmonton-river-valley-food-forest/,
EPG: http://archive.is/YXfpO
Austin: http://archive.is/hPRWP, http://festivalbeachfoodforest.weebly.com/, http://www.austintexas.gov/department/austin%E2%80%99s-urban-forest-plan, Includes plans for food forests, http://archive.is/gkP9d
Philadelphia: http://phillyfoodforests.org/, http://archive.is/BXaem, http://www.phila.gov/ParksandRecreation/environment/forestry/PDF/PPR_Food_Forest.pdf
Calgary: http://regeneratedesign.ca/, http://archive.is/C8i2G, http://archive.is/2sUnG, http://calgary.ca/CSPS/Parks/Pages/Programs/Community-orchards.aspx
Toronto: Ben Noblemen Community Orchard, http://archive.is/QPnZk, Urban Ecofarm, http://www.blackcreekfarm.ca/about-us/,
Youngstown, Ohio: http://archive.is/WtTUM, http://archive.is/mpXou, http://archive.is/eOBfh http://wkbn.com/2014/08/16/volunteers-ready-for-niles-food-forest/
Bloomington, Indiana: http://archive.is/jJbeo, http://www.bloomingtoncommunityorchard.org/site/

Plant references:

Mass: http://www.mass.gov/eea/agencies/czm/program-areas/stormsmart-coasts/coastal-landscaping/plant-highlights.html
Rhode Island: http://cels.uri.edu/testsite/coastalPlants/CoastalPlantGuide.htm
Delaware:
https://s3.amazonaws.com/delawareestuary/publications/factsheets/EXAMPLES.PDF
Connecticut: http://media.ctseagrant.uconn.edu/publications/coastalres/CTCoastal_planting.pdf
Cordgrass: https://www.nrcs.usda.gov/Internet/FSE_PLANTMATERIALS/publications/lapmspg5832.pdf

Woody Plants:

Prunus Maritima- Beach Plum
Myrica Pensylvanica- Bayberry
Viburnum Dentatum - Arrowwood Viburnum
Clethra alnifolia- Sweet pepperbush
Ceanothus americanus - New jersey tea
Celtis occidentalis - Hackberry
Ilex Verticillata - Winterberry
Acer rubrum - Red Maple
Cornus alternifolia - Pagoda Dogwood
Cornus florida - Flowering Dogwood
Alnus serrulata - Smooth alder
Aesculus flava - Buckeye
Amelanchier canadensis/laevis - Serviceberry
Betula nigra - River Birch
Betula populifolia - Grey Birch
Parthenocissus quinquefolia - Virginia Creeper
Aronia arbutifolia - Aronia
Sassafras Sassafras- Sassafras
Pinus rigida - Pitch Pine
Juniperus virginiana - Eastern red cedar

Herbs

Echinacea purpurea - Coneflower
Monarda fistulosa - Bergamot
Rudbeckia hirta - Black eyed susan
Spartina alterniflora - smooth cordgrass
Spartina patens - salt meadow cordgrass
Symphyotrichum novae-angliae - New england aster
Symphyotrichum tenuifolium - Perennial saltmarsh aster-
Juniperus horizontalis - Creeping juniper
Andropogon gerardii - Big Bluestem
Schizachyrium scoparium - Little Bluestem
Juncus gerardii - Saltmeadow rush
Panicum amarum virgatum - Switchgrass-
Liatris sp. - Gayfeather
Dasiphora fruticosa - Shrubby cinquefoil
Prunus serotina - Black Cherry
Asclepia tuberosa - butterfly weed
Lathyrus japonicus var. Maritimus - Beach Pea
Solidago sempervirens - Seaside goldenrod
Lupinus perennis - Sundial lupine
Baptisia australis - Blue wild indigo
Baptisia tinctoria - Yellow false indigo
Baptisia tinctoria - False indigo
Eupatoriadelphus dubius - Coastal plain Joe Pye Weed
Vernonia noveboracensis - New York Ironweed
Lobelia cardinalis - Cardinal flower
Prunus virginiana - Chokecherry
Comptonia Peregrina - Sweetfern

Great guide - http://clear.uconn.edu/projects/crlg/
http://clear.uconn.edu/projects/crlg/documents/z3.pdf
http://clear.uconn.edu/projects/crlg/documents/z2.pdf