California Native Plant Society

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City of San Diego
Wetlands Advisory Board

May 10, 2009

RE: Sewer Design Guidelines

Dear Wetlands Advisory Board:

We would like to bring to your attention part of the City of San Diego's Sewer Guidelines that affect restoration in the City's open space Preserve and wetlands therein. We understand that these guidelines will be under review shortly by the Metropolitan Wastewater Department; therefore it would be an opportune time to make recommendations for changes to improve them. We find that the current guidelines and additional guidelines recommended by the department will reduce the success of wetland revegetation projects and in so doing will negatively affect water quality and coastal resources.

The current guidelines state:

1. *Trees or shrubs that mature over 3 feet in height shall not be permitted within 10 (horizontal) feet of sewer mains.* Sewer Design Guide 2004 Section 3.3.3.

2. *Shrub plantings that will over grow the access road (path) shall not be planted in the first 3 feet adjacent to the edges of the road (path) surface.* Sewer Design Guide 2004 Section 3.2.3.5.

Additional guidelines: MWWD is recommending further exclusions in a recent memo (see attachment, "Planting Near Sewer Lines and Canyon Access Paths", March 30 2009)

3. *Many native shrubs appropriate in habitat restoration projects can grow to heights and widths larger than 3 feet and should not be planted directly adjacent to access paths.*

4. Sensitive plant species should not be planted within 10 feet of sewer lines or within 3 feet of sewer access paths regardless of size at maturity.

We find these guidelines to be difficult to reconcile with numerous other critical municipal objectives such as the need to stabilize creek beds, prevent erosion, slow and filter storm water, and restore wetland vegetation in City open space. Ignoring these other objectives will result in increased cost to the City in the future.

In regards to paragraph 1 – sewer mains: City open space and MHPA preserve areas are crossed by 253 miles of sewer mains, many of them in wetlands because of the gravity-flow nature of the system. Multiplying this by 20 foot-wide exclusion zones results in a 613 acres of land covered by this guideline.

Almost all perennial wetland-associated species and other locally native shrubs are over three feet tall when mature. Excluding these species results in a small list of suitable plants, many of them shallow-rooted annuals that are not effective at erosion control. In narrow canyons, this guideline eliminates the chance to restore substantial deep-rooted vegetation to the entire wetland. Erosion of San Diego's canyons and streams is a serious problem for which deep-rooted native plants can be part of the solution.

We understand that MWWD wishes to avoid infiltration of the sewer system by roots, which may be the basis for this guideline. However, to be effective this would require the removal of plant life along the entire extent of the sewer system, which is not a realistic goal as it would negatively affect the MHPA Preserve and worsen an already severe erosion problem. San Diego's creeks and canyons are naturally vegetated by species such as mountain mahogany *(Cercocarpus minutiflorus*), toyon (*Heteromeles arbutifolia*), lemonadeberry (*Rhus integrifolia*), laurel sumac (*Malosma laurina*), manzanita (*Arctostaphylos* spp.), California lilac (*Ceanothus* spp.), and holly-leaved cherry (*Prunus ilicifolia*), all of which are named in the guidelines as recommended for exclusion by MWWD from restoration projects.

- **We recommend that this Guideline be eliminated, as it excludes major components of San Diego's natural vegetation from the Open Space Preserve.**

In regards to paragraph 2 & 3 – access paths. We understand that the intention of MWWD is to avoid damage to shrubs by crews using the paths to access the system for maintenance. However, we find that this guideline prevents the use of many appropriate species that are able to withstand disturbance, such as felt-leaf yerba santa (*Eriodictyon crassifolium*) and mugwort (*Artemisia douglasiana*) and marsh-elder (*Iva hayesiana*).

These species spread by underground roots and are excellent at stabilizing soil and reducing erosion. They are able to withstand occasional crushing by maintenance vehicles and therefore we recommend that they be used more widely, not excluded. Additionally, we find that wetland species such as mule fat (*Baccharis salicifolia)* and willows (*Salix* ssp.) which accommodate disturbance caused by flooding, would be suitable for edges of access paths since they are flexible and can be easily pushed aside for vehicle passage. Occasional damage to these plants by vehicles is similar to damage experienced in floods and not likely to be fatal.

The list of "low growing native plant species" is helpful. However, most of the plants on the list are annuals, or drought deciduous species. Few are wetlands species. MWWD has admitted to a lack of success in using these species to cover access paths (and therefore are planning to use mulch instead). Excluding larger perennial species from the edges of access paths increases the visual impact of the paths and results in a *de facto* increase in the width from 8 feet to 14 feet. In addition, annual species are more susceptible to competition form non-native annual weed species, resulting in long-term degradation of the surrounding Preserve. The path is also likely to increase in width over time if vehicles have no visual incentive to stay in a particular track. We would recommend that the plants in the paragraph above be used in wetland areas.

- **We recommend that Guidelines 2&3 by amended to include larger plants that can provide excellent erosion controls for the edges of paths such as felt-leaf yerba santa (*Eriodictyon crassifolium*) and mugwort (*Artemisia douglasiana*), mule fat (*Baccharis salicifolia),* and giant wild-rye (*Elymus condensatus*).**

In regards to paragraph 4 – sensitive species, we understand that MWWD wishes to prevent damage to sensitive plants. However, we recommend that this exclusion be limited to listed species and species that are the subject of active management, such as *Monardella linoides ssp. viminea*. Exclusion of all MSCP-covered plants near sewer mains is not consistent with the fact that many of the lines are in the MSCP Preserve. Exclusion would effectively remove hundreds of acres from the Preserve.

We understand that MWWD is concerned about the possibility of repeated mitigation for damage to plants near access paths and manholes. We recommend that MWWD develop an agreement with MSCP and the City's Open Space Division allowing for a single mitigation in return for appropriate management of the system by MWWD. We interpret appropriate management to include support of revegetation of our local native vegetation in open space preserves.

- **We recommend that Paragraph 4 be amended to name the short list species excluded.**

Thank you for consideration of our comments. This issue has also been scheduled for

discussion at the City's Open Space Canyon Advisory Committee on July 9. We look forward to developing Guidelines that preserve our Open Space Preserve as well as the sewer system.

Sincerely,

Carrie Schneider, Conservation Chair CNPS-San Diego

Cc:

Robert Ferrier, Assistant Director, MWWD

Ann Sasaki, Deputy Director, MWWD

Keli Balo, MWWD

Paul Kilburg, Parks and Recreation, Open Space Division

THE CITY OF SAN DIEGO

M E M O R A N D U M

DATE: March 30, 2009

TO: Paul Kilburg, Senior Planner, Open Space Division, Park and Recreation Department

FROM: Keli Balo, Environmental Biologist, Engineering and Program Management Division, Metropolitan Wastewater Department

SUBJECT: Planting Near Sewer Lines and Canyon Access Paths

In determining what planting activities are appropriate in Open Space areas near sewer access paths and sewer lines please consider the following guidelines prepared by the Metropolitan Wastewater Department.

1. *Trees or shrubs that mature over 3 feet in height shall not be permitted within 10 (horizontal) feet of sewer mains.* Sewer Design Guide 2004 Section 3.3.3.
2. *Shrub plantings that will over grow the access road (path) shall not be planted in the first 3 feet adjacent to the edges of the road (path) surface.* Sewer Design Guide 2004 Section 3.2.3.5.

The full Sewer Design Guide text can be found at: http://www.sandiego.gov/mwwd/pdf/sewerdesign.pdf

Though not a comprehensive list, the following are examples of trees that should NOT be planted within 10 horizontal feet of sewer mains:

- California box elder (*Acer californicum*)
- California sycamore (*Platanus racemosa*)
- western cottonwood (*Populus fremontii*)
- willows (*Salix* spp.)
- white alder (*Alnus rhombifolia*)
- Mexican elderberry (*Sambucus mexicana*)
- Red bud (*Cercis occidentalis*)
- oaks (*Quercus* spp.)
- California black walnut (*Juglans californica*)
- Arizona Ash (*Fraxinus veluntina*)
- Torrey Pine (*Pinus torreyana*)
- California Bay (*Umbellularia californica*)

Additionally, many evergreen upland species grow to heights of 12-20 feet tall and should not be planted within 10 feet of sewer lines. Examples include:

- mountain mahogany (*Cercocarpus minutiflorus*)
- toyon (*Heteromeles arbutifolia*)
- lemonadeberry (*Rhus integrifolia*)
- laurel sumac (*Malosma laurina*)
- manzanita (*Arctostaphylos* spp.)
- ceanothus (*Ceanothus* spp.)
- holly-leaved cherry (*Prunus ilicifolia*)

Invasive non-natives that should not be planted in canyon areas near sewer lines include:

- Eucalyptus
- peppers (*Schinus* spp.)
- olive (*Olea europaea*)
- myoporum (*Myoporum laetum*)
- tree of heaven (*Ailanthus altissima*)
- fan palm (*Washingtonia robusta)*
- date palm (*Phoenix canariensis*)
- pampas grass (*Cortaderia* spp.)

Sensitive plant species should not be planted within 10 feet of sewer lines or within 3 feet of sewer access paths regardless of size at maturity. Additional sensitive species information is included as Attachment 1.

Many native shrubs appropriate in habitat restoration projects can grow to heights and widths larger than 3 feet and should not be planted directly adjacent to access paths. Large shrubs like mulefat (*Baccharis salicifolia*), lemonadeberry, toyon, laurel sumac, and many chaparral hardwoods should not be planted within 3 feet of the edge of the sewer access paths as they will overgrow into the paths and be removed as part of regular path maintenance.

MWWD also requests that poison oak (*Toxicodendron diversilobum*) not be planted within 3 feet of sewer access paths.

All planting plans should be submitted to MWWD for review when proposed planting could compromise the integrity of City owned and managed sewer mains and access paths.

Attachment 2 is a list of low growing native species that are suitable for seeding/planting on and adjacent to sewer access paths that provide native cover and erosion control and also provide for continued Canyon Proficient Equipment (CPV) access by MWWD field crews.

Keli Balo

Attachments:

1. Sensitive Species Information
2. Low Growing Native Species List

Sensitive Plant Species

All plant species that are listed under the federal Endangered Species Act (ESA) as endangered or threatened are considered sensitive. Lists of these plant species may be found at the U.S. Fish and Wildlife website http://www.fws.gov/endangered/wildlife.html

The California Department of Fish and Game maintains lists of species that are sensitive that include state listed endangered and threatened species as well as other sensitive species that have not been listed. A complete list of California sensitive plant species may be found at the CDFG website http://www.dfg.ca.gov/habcon/plant/.

City of San Diego sensitive plant species include those covered by the MSCP (which include narrow endemics). A full list of covered species may be found in the MSCP Subarea Plan page 41-42, which can be found at http://www.sandiego.gov/planning/mscp/index.shtml.

The California Native Plant Society publishes a list of California rare plant species. Information may be found at http://cnps.web.aplus.net/cgi-bin/inv/inventory.cgi

Low Growing Native Plant Species

(Good for erosion control and access path areas)

Scientific Name	Common Name
Achillea millefolium	yarrow
Ambrosia psilostachya	Western ragweed
Amsinckia menziesii	rancher's fiddleneck
Anemopsis californica	yerba mansa
Bloomeria crocea	common goldenstar
Bromus carinatus	California brome
Camissonia californica	sun cup
Calystegia macrostegia	morning glory
Castilleja affinis	coastal paintbrush
Chaenactis artemisiifolia	white pincushion
Cryptantha intermedia	cryptantha
Cyperus eragrostis	tall flatsedge
Dienandra fasciculatum	fascicled tarweed
Distichlis spicata	salt grass
Eleocharis macrostachya	spike rush
Encelia californica	California encelia
Epilobium canum	California fuchsia
Eriophyllum confertiflorum	golden yarrow
Eschsholzia californica	California poppy
Eremocarpus setigerus	doveweed
Gnaphalium californicum	everlasting
Gutierrezia californica	matchweed
Hordeum californicum	California barley
Lasthenia californica	goldfields
Lessingia filaginifolia	California aster
Lotus scoparius	deerweed
Lupinus bicolor	miniature lupine
Lupinus succulentus	arroyo lupine
Melica imperfecta	tall melic
Mulenbergia rigens	deergrass
Nassella lepida	foothill needlegrass
Nassella pulchra	purple needlegrass
Phacelia distans	common phacelia
Pluchea odorata	salt marsh flea-bane
Rorippa nasturtium	watercress
Sisyrinchium bellum	blue-eyed grass
Trifolium tridentatum	valley clover
Verbena lasiostachys	western vervain
Vulpia microstachys	fescue

- Seed mixture composition will need to be determined based on a variety of conditions present at site.

- Species suited to a variety of differing conditions including geographic location, soils, wetland versus upland, salinity, slope and aspect, disturbance levels, etc.