

FINDINGS CONCLUSIONS AND RECOMMENDATION  
OF THE HEARING EXAMINER FOR THE CITY OF SEATTLE

In the Matter of the Application of  
THE MUNICIPALITY OF METROPOLITAN  
(METRO) For Council Conditional Use  
Approval (Project-Level) to Expand  
the West Point Sewage Treatment  
Plant

Project No. 8804596  
C.F. NO. 296799

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I. Summary of Proposal and Recommendation

Proposal

The Municipality of Metropolitan Seattle (METRO) has applied for a project level permit to add a secondary sewage treatment facilities to it's West Point sewage treatment plant (MUP Application No. 8804596).

### Recommendation

The Hearing Examiner recommends approval, subject to conditions.

## II. Background Information

### A. Procedural Information

Prehearing conferences were held on this matter on April 23 and May 14, 1990.

Party status was granted to the following individuals and groups pursuant to the rules of procedure of the Office of the Hearing Examiner:

Municipality of Metropolitan Seattle ("Metro"), represented by Ronald Cox and Ingrid Holmlund, Preston Thorgrimson Shidler Gates & Ellis; Department of Construction and Land Use (DCLU), represented by Mark Sidran and Judith Barbour of the Seattle City Attorney's Office and Jan Mulder of DCLU; Puget Sound Water Quality Defense Fund and Friends of Discovery Park, ("Defense Fund and Friends") represented by Michael Gendler, Bricklin and Gendler; Legal Advocates for Washington, Inc. ("Legal Advocates"), represented by Robert D. Johns, Reed McClure Mocerl Thonn & Moriarty; Magnolia Community Club ("Magnolia") represented by Theresa M. Hansen and Scott Smith; and Citizens to Save Interbay ("CSI"), represented by Scott Missall, The Dubey Law Firm.

Hearings were held by the Hearing Examiner on May 17, 18, 21-25, 28-31, June 1, 6, 7, 11, 14, 15, 18, and 21. Testimony from non-party members of the public were received on the evenings of May 17 and 18, 1990. Written comments from the public were received through June 1, 1990. The record remained open until June 29, 1990.

A site visit to the West Point treatment plant, South Beach, North Beach, the Discovery Park hillside above the treatment plant, and the proposed haul routes through Discovery Park and from Discovery Park to and from 15th Avenue West was taken by the Hearing Examiner in the company of party representatives wishing to attend and private citizens, and unaccompanied on June 13, 1990, with the consent of the parties.

### B. History

Pursuant to the Federal Clean Water Act ("the Act") all publicly owned sewage treatment plants were required to meet secondary treatment effluent standards by July 1977. Metro's West Point plant does not meet the standard. Metro sought, and until September 24, 1984, was granted a waiver from this standard. On that date the Washington Department of Ecology ("DOE"), administering the Act, issued a compliance order requiring Metro to amend it's Comprehensive Plan for Pollution Control to include a secondary treatment and the control of combined sewage overflow; complete plans for the secondary treatment for the West Point service area sewage flow; and complete construction of secondary treatment facilities for the West Point service area by a date certain. Subsequently, Metro and DOE entered into a consent decree (DOE v Metro, King County Superior Court Cause No. 87-2-0595-4) that sets a compliance schedule requiring secondary treatment sewer by December 31, 1995, and that includes potential sanctions (1,000.00/day fine, sewer hook up moratoriums or both), if this date and certain milestone dates established by the decree and not met.

In response to the Order, Metro began, in 1985, to amend its Comprehensive Water Pollution Abatement Plan. November 1985, Metro issued a Final Plan for Secondary Treatment Facilities presenting four system alternatives known as "CORE" alternatives for providing secondary treatment. Metro also issued a plan level Final Environmental Impact Statement (FEIS) evaluating the environmental impacts of the four system alternatives. All four alternatives included an upgrade of the existing West Point plant from primary to secondary treatment. The Core 1, 2, and 3 plans also included secondary treatment plants in the Kenmore and the Duwamish areas. The Core 4 plan included only the expansion of the treatment plant at West Point and did not call for any other major secondary treatment plant in the West Point service area.

Upon reviewing Metro's plan and the FEIS, the City of Seattle ("the City")

concluded that Metro failed to consider all reasonable alternatives because all of the Core alternatives included a major expansion of the West Point plant. Accordingly, the City appealed the EIS pursuant to Metro's administrative appeal process.

Metro and the City settled the City's appeal through a Memorandum of Understanding that required Metro to prepare and issue a Final Supplemental Facilities Plan and EIS analyzing three additional Core alternatives for a secondary plants in entirely non-shoreline locations. In 1986, Metro prepared a plan for and issued an EIS on three non shoreline alternations identified collectively as "Core 5." Core 5D included a large plant in the Duwamish area; Core 5A included a large plant at the Interbay area; and Core 5S included a split Duwamish/Interbay plant. All three of the Core 5 plans called for phasing out the West Point plant.

On July 17, 1986, Metro amended it's Comprehensive Water Pollution Abatement Plan to provide for implementation of a modified version of the Core 4 Plan. The adopted plan amendment calls for upgrading the plants at West Point and Richmond Beach to secondary treatment, converting the plants at Alki and Carkeek to stormwater facilities, and implementing several mitigation measures.

In addition to requiring Metro to prepare and issue a Final Environmental Impact Statement (FEIS) on the Core 5 alternatives, the Memorandum of Understanding between Metro and the City required the City to implement a two step review of Metro's proposal, allowing the City to issue Metro an initial "Plan-Level Permit" or "Feasibility Permit," followed by a "Project-Level Permit" so that Metro could determine whether a shoreline location would be permitted prior to investing the time and incurring the expense of project specific design studies. In July 1986, the City amended it's Shoreline Master Program in accordance with it's agreement with Metro. The amendment provided that a plan level permit for a sewage treatment plant in a shoreline location would be issued only if no non-shoreline location was found to be feasible. The amendment made approval of a plan level permit a prerequisite to any approval of a project level permit. Because the West Point site is zoned for single family residential development, the City similarly amended it's Land Use Code, providing for a two phase review and allowing a sewage treatment plant in a single family residential zone only if no reasonably feasible non-single family zone sites are available. The amendment to the Shoreline Master Program was approved by DOE. The plan level and project level permit applications involve:

1. A report and recommendation by DCLU;
2. A hearing, report, and recommendation by the Hearing Examiner;
3. Findings conclusion, and a quasi judicial decision by the Seattle City Council.

On December 31, 1986, Metro submitted it's application for plan level permits to allow West Point to be the site for a major secondary sewage treatment plant. In July 1987, DCLU issued a report and recommendation recommending that the City Council deny the requested permits, concluding that Metro had not demonstrated that alternative sites in industrial areas outside the shoreline were not feasible. DCLU reported that the industrial sites in Duwamish and Interbay were feasible despite greater costs ranging from 12 to 22 percent more than the West Point site. Subsequently, the Hearing Examiner conducted an extensive hearing and forwarded Findings and Conclusions to the City Council with the official record. The Hearing Examiner recommended denial of the plan-level permit, concluding that the Duwamish site had not been shown by Metro to be infeasible. (The Hearing Examiner did conclude that the Interbay site was not feasible.)

Subsequent to the hearing and recommendation of the Hearing Examiner, the City Council considered the issues, and, citing relative cost and adverse environmental impacts, concluded that there were no feasible alternatives and that the plan permit could be granted with conditions. The City Council sought and received comments regarding proposed conditions from Metro, DCLU and other parties, and in July 19, 1988, after considerable deliberation and debate, the Council attached 11 major conditions to the plan permit (generally identified as, and called "Plan Conditions"). The Council's Findings and Conclusions, including the 11 permit conditions were adopted in October 1988, and DCLU was directed to issue the permits. The permits were issued in November, 1988.

A coalition of groups and individuals opposed to the West Point expansion appealed the plan level decision to both the Shorelines Hearings Board (shoreline permit) and the Superior Court (single family permit.) The Shorelines Hearings Board affirmed the Council's decision. The Board's action has been appealed and to the best knowledge of the Hearing Examiner has not been heard at this writing. The Superior Court decision regarding the single family permit was remanded to the City Council on procedural grounds. On December 1989, the City Council acted to remedy the procedural error and reissued its October 1988 decision. Further litigation on this aspect of the decision is also pending.

In October 1988, Metro applied for project-level Shoreline and single family permits for the West Point plant. At that time, Metro had completed the predesign, or preliminary engineering, for the plant, and the project moved into design development.

In June 1989, as design development near completion, Metro held a value engineering workshop to evaluate the proposed design and suggested approaches that could achieve the project's objectives more effectively and efficiently. The value engineering effort resulted in revisions to the project's design. In November 1989, Metro submitted a revised project permit application reflecting these revisions. On April 5, 1990 the Director of DCLU issued a report and recommendation on the revised application. The report recommended that the projects-level permits be granted subject to 104 conditions.

On May 1, 1990, Metro submitted a set of revised drawings to DCLU incorporating minor changes previously discussed with DCLU. The May 1, 1990 drawings were considered as part of Metro's revised application during these hearings.

#### C. Permits Required

##### City Permit Required

Metro's Application includes requests for the following or approvals:

Council Conditional Use approval is required for expansion of a sewage treatment plant in a single family zone (SMC 23.44.036). The proposed project must be consistent with the conditions specified by the Land Use Code.

Waivers are requested for 18 new structures which would exceed the single family zone development standard of 30 feet. The list below includes two digesters which are not part of this construction and, if the alternative sludge process is successful, may not ever be built. Eight existing structures exceed 30 feet but are existing nonconforming structures and as such do not need waivers.

Waivers of development standards can be granted as part of Council's land use decision in the Master Use Permit Type IV decision (SMC 23.76.036). Waivers are requested for the following structures:

These structures are described below.

##### Structures Needing Waivers

Bldg. Number	Name	Height (feet)	Waiver (feet)
01-01	Administration Building	32.0	2.0
02-01	Maintenance Building	46.5	16.5
07-01	Effluent Pumping	41.5	11.5
08-06	Digester	47.5	17.5
08-07	Digester	41.5	11.5
08-14	Odor Control Unit	31.0	1.0
08-14	Odor Control Unit	31.0	1.0
08-14	Odor Control Unit	31.0	1.0
10-01	HPO Aeration Basins	43.8	13.8
11-01	Oxygen Production	35.8	5.8
11-01	Oxygen Production - LOX area	39.0	9.0
15.01	Solids Handling Facility	47.8	17.8
16-01	Odor control	48.4	18.4
18-01	Facility Services Building	34.8	4.8
23.01	Retaining Wall	46.0	16.0
34-01	Intermediate Pump Station	34.0	14.0

00-02	Waste Gas Incinerator	37.4	7.4
00-01	Riedel/SMI Facility	45.0	15.0

A waiver of the required side yard setback is requested to allow the retaining wall and catchment wall at the heights and in the locations proposed. The side yard requirement in a single family zone is generally a minimum of five feet (SMC 23.44.022.J.2). The proposed retaining wall would be within five feet of the property line and, in some places, would be on the property line.

Shoreline Substantial Development Permit is required for expansion of an existing sewage treatment plant in the shoreline. A Council Conditional Use decision is the Code-prescribed process for a project-specific permit to expand a plant for which a Plan Shoreline Permit has been issued (SMC 24.60.610.C).

Note: SMC 24.60.455 provides that a project for which a shoreline substantial development permit has been granted just be completed within five years of the approval of that permit. This five year permit "life" may be extended for one year by the Director of DCLU upon a showing of good cause. Metro's current construction schedule issuance of the substantial development permit, to complete construction. This means that the shoreline permit could expire before the completion of the project. Metro should begin to address and resolve this problem as soon as possible.

Shoreline Special Use must be approved to allow a new outfall in the CN (Conservancy Natural) and CM (Conservancy Management) shoreline environments (SMC 24.60.420, Table 2; subject to SMC 24.60.600), and to allow landfill (berms) within the dry land portion of the CM environment (SMC 24.60.525.H).

#### D. Site Description

##### 1. Natural Features

West Point is a combination sand spit and fill area that juts into Puget Sound from the Magnolia Bluffs in Northwest Seattle. It is open to the Sound on the north, west, and south and connects on the east to Seattle's Discovery Park.

Metro owns or has a long-term lease hold interest in a total of 72.4 acres at West Point. Approximately 49 acres are situated above the high tide line. The remaining 23 acres are submerged. The submerged acreage is leased from the Washington State Department of Natural Resources.

None of the site can actually be said to be "natural" in the strictest meaning of the term. Much of the site have been created by human activity. Prior to the mid 1930's to mid 1940's much of the site was comprised of a salt marsh. This salt marsh was filled by the Army in 1936 and 1943. When Metro obtained the site it constructed a riprap seawall all along the site's northern beach (known as "North Beach") to protect the influent pipe that connected the North Trunk Sewer Line with the plant headworks.

The portion of the site landward of the seawall is generally triangular in shape, with the majority of the developable area in the center of the site. A long narrow strip of land known as "the panhandle" comprises the northeastern portion of the site. The site is relatively flat with an elevation difference of about 40 feet between the lowest portion of the site near the seawall and the highest portion of the site near a bluff adjacent to the eastern margin of the site.

The existing treatment plant is situated on the southern portion of the upland or dryland side of the site. North of the treatment plant there is a disturbed grassland that has developed on fill material deposited behind the riprap seawall. Until the late 1970's this area was used to dry treated sludge. Introduced grasses and blackberries now dominates this area. This area is regularly disturbed and is identified as having low value as wildlife habitat.

Four small creeks, fed by ground water from a bluff north of the site, cross the northeastern half of the grassland area before discharging into Puget Sound. Stream gradients and flows are very low, and shallow pools characterize the stream surface. The streams banks are dominated by riparian plant species. The small size of the creeks limits their value to water fowl.

A small, fresh water wetland has developed adjacent to the largest creek channel crossing the grassland. Open water is present on a portion of the

wetland throughout the year. This wetland provides open fresh water feeding and resting habitat unavailable elsewhere at West Point. Mallards have been observed at the site and evidence suggest the presence of geese. Blackberries dominate the wetland, with introduced grasses and soft brush providing additional cover.

A second growth broad leaf deciduous forest extends from the Discovery Park hillside for a short distance all along the site southeastern boundary. The characteristic of this second growth forest are discussed in detail in the section of this report describing the surrounding area.

The site includes two beaches: South Beach and North Beach. The line of demarcation between the two beaches is the western most point of the West Point spit, which is the site of a Coast Guard owned and operated lighthouse. The intertidal beach south of the light house (South Beach) consists of a large sand flat backed by steeper driftwood shore. Inland of the shore is a relatively flat area known as the "uplands" or the "upland beach") dominated by non-native European beach grass or doomed grass planted to stabilize the sandy soils, and herbs such as yellow and white sweet clover, beach pea, and Lupine. Exotic and native shore plants have also been planted in this area. This flat area was "created" when Metro removed and enclosed the sludge storage lagoon in 1981. At that time Metro restored the tide lands and planted vegetation along the upper beach to stabilize the soil and improve the appearance of the site.

The intertidal beach north of the lighthouse (North Beach) is steep with sand, gravel, and cobble substrate backed by a riprap bulkhead. A small sand covered "pocket beach" is situated at the very end of the panhandle of the site.

Eelgrass communities are present in the intertidal and subtidal areas of both south and north beach. The general area surrounding West Point, including eelgrass beds, supports one of the major dungeness crab populations in the Puget Sound. The area off south beach also supports a major geoduck population.

## 2. Existing facilities

The existing plant occupies approximately 16 acres. An additional 25 acres are within Metro's existing fence line. Of the 16 acres comprising the plant, 2.5 are within the Shoreline District. The portion of West Point owned by Metro on the outside of its fence line are generally accessible to the public. These areas include North Beach, the North Beach Trail and South Beach, including the upland beach area. The North Beach Trail is restricted between the existing fence line and the riprap revetment or seawall. The City Parks Department conducts beach interpretive programs on North Beach.

The West Point plant presently provides primary treatment for average flows of 125 million gallons per day. Primary treatment consist of screening and settling out of grit and solids, and disinfection by the addition of chlorine prior to discharge. It removes about 60 percent of solids suspended in the waste water.

Existing plant facilities may be divided into three groups: liquid processing facilities, solids processing facilities, and non-processing facilities. Liquids processing involves basically screening and settling of wastewater in large tanks to allow removal of suspended pollutants in the wastewater. The main facilities in which this process occurs are the grit removal structures and the primary clarifiers. There are two grit removal or handling structures; one is for coarse grit removal the other for fine grit removal. There are 12 primary clarifiers housed in two separate buildings on the site. The primary clarifiers allow the suspended particles that are not removed by the grit removal structures to settle. Particles that are too fine to be removed by the grit removal structures and that do not settle to the bottom of the clarifiers are skimmed off the top.

The solids that are filtered from the liquid, settled to the bottom of the clarifiers, or skimmed from the top of the clarifiers, are called sludge. Solids processing consists of anaerobic digesting and dewatering of sludge. Once this is done, the sludge is hauled off site by trucks to be used for composting, silviculture, and land reclamation projects. Solids processing takes place in five anaerobic digesters and a dewatering facility.

Non-processing facilities on the site consists of waste gas burners, a gas storage tank area, buildings housing various pumps, maintenance buildings, an administration building, utility facilities, a chlorine handling area, parking lots, influent and effluent pipes, and a cogeneration plant that uses methane gas produced in the digesters to produce electricity that is sold to Seattle City Light.

#### E. Surrounding Area

The western most point of the West Point spit is owned by the Coast Guard. It is used for a lighthouse and two residences used to house Coast Guard personnel.

East of the site is Discovery Park - the largest park in the City. Discovery Park was acquired from the Federal Government by the City under the 1970 Federal Legislation know as the "Legacy of the Parks Program" which allows surplus federal properties to be acquired by local agencies for public park and recreation purposes. The City initially acquired 397 acres in 1972. Since then the City has increased it's ownership at Discovery Park to 534 acres. According to the Discovery Park Development Plan, "Discovery Park is intended to be an open space park with only those facilities and developments which are absolutely necessary for the enjoyment of the open space experience." The Park Development Plan identifies several objectives. The Park Plan states,

[t]he overall objective for Discovery Park is to preserve or create open space. The development objective is to recreate a natural environment by removing all unnecessary structures and making the retained structures or new structures as unobstrusive as possible.

The general objective of plant development and landscaping in Discovery Park is to obtain a diversity and richness of plants species and growth. The objective will be to support and reinforce native indigenous growth. Arboretum type development of none native species shall not occur.

The general objective of wildlife management in Discovery Park is to preserve and enhance wildlife habitat. (1986 Discovery Park Development Plan, page 4).

Along the eastern boundary of the West Point site is a steep slope leading up to an area generally known or described as "north bluff." This sloped area was developed in part by shoreline erosion and undercutting prior to the placement of the riprap seawall and fill for the original treatment plant. The top of the slope ranges in height from about 240 feet above sea level near the south end of the plant site to about 150 feet in the northern area.

The steepness of the hillside varies. The lower portion is relatively steep with numerous landslide scarps. Above this area the slope is flatter, having a hummocky appearance, and is poorly drained. This mid-slope bench area was formed by landsliding of the upperslope and deposition of slide debris. The slope steepens above the bench (approximately a 1 to 1 slope), becoming near vertical at the top of the slope. The steep upper area is product of relatively recent landslides.

Sixteen small wetlands are present on the hillside. The total wetland area is about 1.26 acres. The four largest wetlands, ranging in size from 0.25 to 0.33 acres contain creeks that eventually cross the grassland area on Metro property and drain into Puget Sound. The remaining smaller wetlands occur in shallow drainage swales and isolated depressions. Most of the wetlands are located on level benches formed by slumps. Wetlands also border the channels of the major creek draining central the portion of the hill side. Some of the wetlands have standing water or saturated soils throughout the year, though most are only seasonally wet.

The hill side supports a second growth deciduous forest with distinct layers of trees, shrubs, and herbs, common to Puget Sound forests. The dominant trees on the hillsides are red alder and big leaf maple. Many of the trees are quite large, with diameters of alders measuring up to 36 inches in diameter and several maples that are considerably larger. The average height of these trees is 84 feet.

A dense shrub community covers most of the hillside. Typical shrubs found on



the hillside include salmonberry, osoberry, hazelnut, straggly gooseberry, red elderberry, oceanspray and blackberry. Shrub height averages 6.5 feet. A variety of herbaceous plants are also found on the hillside. Generally, the vegetation found on the wetland areas and the dryer portions of the hillside are quite similar.

A variety of mammals, amphibians, reptiles and birds are present on the hillside. With over 70 species represented, birds are the most numerous animals on the hillside. Between 1982 and 1989, King County's only known nesting pair of barred owls, a close relative of the spotted owl, resided on the hillside. In May 1989 the male owl died from natural causes. The female owl may still be in the area. Though related to the spotted owl, the barred owl is found in a wider variety of habitat and is not on any list of protected species.

Beginning in 1988, a pair of bald eagles began nesting in Discovery Park approximately 1/2 mile from the plant site. In early 1989, the pair raised two eaglets. The eagles nest is located in a large fir near the Parks Department maintenance building. The area of the nest is subject to ongoing human activity and vehicle use. The nest tree is 135 feet from the maintenance building and 960 feet from the access road leading to the plant site.

The hillside is traversed by two trails: Hidden Valley Trail and North Bluff Trail. Historically, use of these trails has been limited and their presence has not resulted in disturbance of hillside and it's plants and animals.

A meadow is situated at the south western end of the north bluff, near the entrance to the West Point Plant. This meadow contains a variety of grasses and black berries.

The presence of the military has not been completely eliminated from the area within the Discovery Park boundary. The aspect of military presence within the park boundary most significantly affecting the proposed expansion of West Point is the housing for Navy personnel known as the Capehart Housing. This housing is situated on the access road to the site 1/4 mile or so from the site.

Besides the Capehart Naval Housing and the two residences at the Coast Guard lighthouse, the nearest residential areas to the site are the Lawtonwood and Magnolia neighborhoods. The Lawtonwood neighborhood is situated just north of Discovery Park; the Magnolia neighborhood is to the southeast. The Lawtonwood neighborhood is developed with almost exclusively single-family residences. The Magnolia neighborhood is dominated with single family residences; however, there is a mix of commercial uses near the entrance to Discovery Park and a mix of single and multi-family residences along the haul route, which extends from Discovery Park through the Magnolia neighborhood to the east to 15th Avenue West. (The haul route is described in detail below in the section of the report describing the project.)

#### F. Project description

The West Point Treatment Plant will be expanded and upgraded to provide a secondary treatment for an average wet weather flow (AWWF) of 133 million gallons per day (MGD) and a peak wet weather flow of 300 MGD. The design of the plant will allow future expansion of secondary facilities to an AWWF capacity of 159 MGD. Peak combined sewage flows to receive primary treatment in chlorination will 440 MGD. In designing the plant Metro assumed that the affluent discharge from the plant will be required to meet monthly averages of 30 mg. per liter (mgl) of BOD and 30 mgl of total suspended solids (TSS), with weekly averages set at 45 mgl each of BOD and TSS.

##### 1. Proposed facilities

A secondary treatment sewage plant may be generally divided into three groups of facilities; liquid processing facilities, solids processing facilities, and non-processing facilities. Metro considered several technological and locational alternatives for each group of facilities before selecting it's final plant design. This section of this report and recommendation discusses only the design selected by Metro. The other alternatives considered by Metro are discussed below in paragraph III.B.I of this report and recommendation.



a. Liquid processing facilities.

In the design chosen by Metro, liquids processing includes preliminary treatment, preliminary clarification, high purity oxygen activated sludge, secondary clarification and disinfection before the effluent is discharged into receiving waters of Puget Sound. The major liquid processing facilities or structures used to accomplish these steps are:

1. screening and grit removal structures;
2. primary clarifiers;
3. flow diversion structure;
4. intermediate pump station;
5. high purity oxygen (HPO) aeration basin;
6. secondary clarifier; and
7. chlorine contact tank.

These facilities are listed generally in the order in which the sewage or wastewater flows through the plant. Each is described below.

Screening and grit removal structure

This is an existing structure. It's dimensions are 114 feet x 26 feet and it is just over 39 feet tall. This building house facilities to screen and remove grit from the wastewater. There are six existing, mechanically cleaned, bar screens. Screenings are grounded and pumped to two existing rotary overflow screens. Screenings from this unit are discharged to an existing grit hopper for disposal. The grit removal system consists of four grit chambers, each discharging into three primary clarifiers. Grit removed in the chambers is pumped to one of two existing grit cyclone classifiers which discharge grit to a grit hopper for disposal.

Metro has concluded that the building housing the screening and grit removal facilities are generally adequate to meet the needs of the plant expansion; however, it has also concluded that improvements to the facilities are needed. The existing bar screens and the interlocks associated with the rotary overflow screens will be replaced to eliminate flooding and improve system flexibility. New stocklocks will be added to the grit chambers to isolate them from their associated primary tanks so that excessive grit does not carry into the primary clarifiers. In addition, the existing grit cyclone area will be enclosed and force ventilated, and the exhaust air will scrubbed for odors in the odor controls facilities.

Primary clarifiers

The primary clarifiers and the buildings housing them are also already on the site. There are a total of 12 primary clarifiers, each approximately 40 feet and 270 feet long with an average depth of 9.5 feet. Six each are housed in two buildings having dimensions of 318 feet by 246 feet and a height of 30.2 feet. The primary clarifiers are used to settle out primary sludge and remove scum. No additional primary clarifiers are planned; however, the structures, piping, and mechanism associated with the existing clarifiers will be improved. The existing scum removal system will be replaced by helical scum skimmer located at the effluent end of each clarifier. The existing submerged effluent collectors will be modified to reduce head loss. Existing sludge collector motors and drives will be replaced. Liquid level covers will be added and the space underneath the covers will be force ventilated. Exhaust air from this ventilation system will be scrubbed for odors. The existing structural support columns will be modified (not replaced) to comply with seismic codes, and the entire roof will be repainted as part of the plant visual mitigation program.

High purity oxygen (HPO) aeration basin

Primary sewage treatment is largely a mechanical process. Solids are removed from sewage flow by screening, settling, and skimming, and the wastewater is disinfected prior to being discharged into receiving waters. This process generally removes about 60 percent of the waste solids. Secondary treatment employs biological processes to remove additional solids (up to 80 to 85 percent). In the proposed plant expansion, the vast majority of these biological processes will take place in the HPO aeration basin.

Metro presently proposes 24 HPO basins or reactors (6 reactor trains, each with 4 reactors) to handle the initial design AWWF of 133 MGD. They will have

a detention time of 2.5 hours at 133 MGD. Each basin or reactor will have a volume of 78,000 cubic feet. They will be situated in the "panhandle" portion of the site, occupying an area of 805 feet by 164 feet. The height of the basins will vary, the tallest measuring 43.8 feet (this height is dictated by the space need for the aerated and electrical equipment.) They will be covered with earth fill and landscaping. A landscaped berm will be placed around the shoreward perimeter of the basins to screen them from public view.

Metro plans to construct an additional eight basins (two reactor trains, each with 4 basin) in approximately 2025 at the far end of the panhandle, adjacent to the basins proposed for immediate construction. The area proposed for these future basins is within the 32 acre foot print for the plant, and, until the area is needed for the future aeration basins, Metro proposes to enclose it within a security barrier, and develop it with an extended landscaped berm.

As previously stated, secondary sewage treatment generally (almost always) uses biological processes to further remove waste material from sewage. Biological treatment is necessary because much of the waste material in sewage is either so finely divided (small) that it is colloidal in nature and will neither sink nor float or it is in solution. In either case, it cannot be removed from sewage by mechanical means alone. In basic terms, secondary treatment uses microorganism to "eat" or consume the waste material and convert it to energy, which they use to maintain their life cycles. The micro-organisms remove the waste in this process. Activated sludge is the source of the micro-organisms.

Metro selected HPO aeration basins to accomplish this process because the micro-organisms need oxygen to convert the waste to energy and the HPO aeration basin allows essentially (97 percent) pure oxygen rather than air to be put into the waste solution (hence the name) under slightly greater than atmospheric pressure conditions. Adding pure oxygen under pressure conditions to the waste solution allows the micro-organisms to more quickly convert the waste to energy. Increasing the rate at which this process takes place allows a reduction in the volume needed, which in turn allows the reduction in the land area needed to accommodate the aeration basin.

#### Secondary clarifiers

After the secondary biological treatment in the aeration basin, waste water enters the secondary clarifiers, which provide an area for micro-organisms and other solids to settle out of the waste water. Thirteen circular secondary clarifiers, each 142 feet in diameter and 27.2 feet high, with a 16 foot side water depth (SWD) are proposed to handle the AWWF of 133 MGD. Two similarly sized clarifiers are proposed for future development to handle the ultimate AWWF of 159 MGD. The future clarifiers are proposed to be placed in the central portion of the site between the existing primary treatment facilities and the proposed aeration basin. Portions of seven of the clarifiers will extend into the shoreline. Berms and extensive landscaping are proposed to screen views of the structures from the beaches.

#### Chlorine contact chamber

Before effluent from the secondary clarifier is discharged into receiving waters through the outfall, it must be disinfected. The disinfection process at West Point takes place in four chlorine contact chambers. Metro proposes to use liquid chlorine for disinfection. The contact chambers will locate below grade beneath the secondary effluent line. Each contact chamber will have a total length of 1,772 feet. The depth and width of each chamber will vary. The average depth of will be 7 feet; the average width 12.1 feet. Upon disinfection, liquid processing is completed and the waste water enters the effluent line for eventual discharge.

#### b. Solids processing facilities

After the wastewater is treated and discharged into receiving waters, what is left are the solids removed from the water (plus the micro organisms used in secondary treatment.) Collectively these solids are called sludge. These solids or sludge must also be treated or processed. Particular attention has been paid to solids processing or sludge management because method(s) chosen could have a significant impact on the total plant size and the amount of sludge truck traffic coming to and from the plant.

Presently, the solids remaining after primary treatment are first dewatered.

They are then placed in one of 5 anaerobic digesters, each having a diameter of 100 feet and a height up to 47.5 feet. These digesters reduce biogradable organic material and pathogens in the sludge. From the digesters the treated sludge is conveyed to trucks and shipped to different points for beneficial reuse that includes silviculture, land reclamation, and composting. The trucks hauling the sludge travel through Discovery Park and the Magnolia neighborhood. Because secondary treatment removes more of the solids from the wastewater, it increases the amount of solids that have to be processed. This increase in the amount of solids requires additional processing facilities. Additional land is needed to support them. The amount of additional land needed at West Point depends upon the type of processing facilities chosen and whether they will be placed on or off-site. It could also result in additional truck traffic to haul the sludge to reuse destinations, depending upon where the facilities are put (on or off the West Point site).

Metro proposes two alternative solid processing methods. One entails refinement, modification, and possible expansion of the existing process; the other entails an entirely different process generally referred to as the Riedel/SMI process. Of these two, the Riedel/SMI process is generally preferred by all parties because it takes up less land area and can result in reduction in the amount of truck traffic. In fact, it could result in a reduction in truck traffic below current levels. Metro is proposing to initially use both processes to handle a portion of the solids, providing a test period for the high-tech method. It is doing this because it does not believe that it has sufficient evidence to conclude that the high-tech method will work adequately to handle the amount of solids that will be generated by the West Point plant.

Regardless of the method used to process solids, the first step is the same; thickening or dewatering of the raw solids or sludge to about 5 percent to 8 percent total suspended solids. This process will take place in a new solids handling building that will have outside dimension of 193 feet by 170 feet. It will be 47.8 feet tall in order to accommodate a crane. It will be placed along the southeastern boundary the property near the hillside in order to mitigate the impact of it's height.

The facilities needed for the Riedel/SMI method of solids processing will be built, owned, and operated by a private company - Riedel/SMI. The Riedel/SMI process entails reducing the amount of water in the sludge sufficiently to allow it to be made into pellets or granule that can be marketed for fertilizer. Riedel/SMI proposes to place all the facilities necessary for this process in a single building. The maximum outside dimension of that building will be 226 feet x 120 feet. Its maximum height will be 45 feet. It will be placed along the southeast boundary of the building adjacent to the solids handling building described above. Riedel/SMI will be required to control odor emissions from the building.

Metro has entered into a service agreement with Riedel/SMI that provides for implementing the process in three phases. The first phase, a "demonstration" phase, is currently under way. During this phase a one dry ton per day demonstration facility will field test the design criteria. The next phase will be a "primary sludge operation" phase that will occur between 1993 and 1995. During this phase, Riedel/SMI will process approximately 30 dry tons per day of raw primary sludges. The first 12 months of this phase will constitute a full scale acceptance of the proposed sludge process technology. If this phase proves successful, the final phase, the "secondary sludge operation" phase, would be implemented, and the Riedel/SMI facility would be expanded to process 60 dry tons per day of combined primary and secondary sludge. This is about half of the sludge production expected from the upgraded plant. This final phase would begin in about 1996. The agreement between Metro and Riedel/SMI gives Metro the option, after this last phase is implemented, of entering into a further agreement with Riedel/SMI to expand the facility to process all of the sludge generated by the plant, to continuing operation at 60 dry tons per day, or terminating the agreement.

Until the Riedel/SMI facility is expanded to handle all of the sludge generated by the plant, a portion of the sludge will still be processed using anaerobic digesters to process sludge for reuse for silviculture, land reclamation, or composting. During the testing of the Riedel/SMI facility, the existing five digesters will be used much in the same way they are now (after they are modified and improved to control noise and odors and comply with current seismic codes. If the Riedel/SMI system proves successful and Metro decides to maintain it's capacity at 60 dry tons per day, the existing five digester will be adequate and necessary to handle the balance of the

solids. If Metro decides to increase the capacity of the Riedel/SMI facility to handle all of the solids generated by the plant, the existing five digesters will be removed, and the land area that they are occupying will be relandscaped and made available for public access. If the Riedel/SMI system proves to be unsuccessful, two digester approximately the same size as the existing digesters will have to be added. One will be located near two of the existing digesters. One will be located just southeast of the existing administration building.

c. Nonprocessing facilities and structures

The proposed plant will include a large number of facilities and structures not directly involved in liquids or solids processing. These include three pump stations (influent, intermediate, and effluent); an influent control structure; a flow diversion structure; an outfall; an emergency bypass; a chlorine handling building; and oxygen production facility; an order of control facility; an electrical substation; galleries; administration, maintenance, a facilities services building; a security wall; and a retaining wall. Each is described below.

Influent Pump Station

This is an existing 129 feet by 121 feet, 31 feet high building located between the two existing clarifier buildings. It pumps raw sewage to a diversion channel where it flows by gravity through the primary clarifier. Electrical, structural, mechanical modifications will be made to the existing structure to handle the design flow of 440 MGD with all units and service. All modifications to the building will be internal.

Intermediate Pumping Station

This will be a new 86 feet x 118 feet, 34 feet high building located at the northeastern end of the waterside row of secondary clarifiers. It will pump wastewater that has been treated in the primary clarifiers up to the aeration tanks to begin secondary treatment.

Effluent Pumping Station

This pumping station will pump treated wastewater to Puget Sound through existing outfall and diffusion. It will be situated near the retaining wall and will have outside dimensions of 169 feet x 32 feet. The facility will share bridge crane with adjoining maintenance building; however, the majority of the effluent pumping station is below grade. Maximum height will be 41.5 feet, which is measured to the top of the bridge crane.

Influent Control Structure

This will be a new 25 feet x 20 feet, 16.8 feet high building situated near the southeast corner of the primary sedimentation tank. It will direct flow from the influent tunnels or pipes to the influent pump station.

Flow Diversion Structure

Most of this facility will be below grade. The portion that will be above grade will be 21 feet high and have outside dimensions 48 feet x 40 feet. It will be situated at the northeast corner of the primary clarifiers. It will direct flows three ways. During normal operations, it will divert or direct primary treated effluent to the immediate pump station to begin secondary treatment. In the event of a power shortage, it will divert the effluent to bypass secondary treatment. It can also divert combined sewer overflows that have received primary treatment to the contact chamber for disinfection.

Outfall

The outfall is the pipe through which the treated sewage is discharged into receiving waters. The existing outfall will be used without modifications it is 96 feet in diameter and extends 3,650 feet off shore.

Emergency Bypass

Metro originally proposed a new emergency bypass. It subsequently withdrew this portion of its application, indicating that it was not necessary. An existing emergency bypass will be used when necessary. The existing emergency

bypass is situated off of the north beach and is less than 50 feet outward from the main higher water line.

#### Chlorine Handling Building

This building will have outside dimensions of 102 feet x 130 feet with a height of 25 feet. Operations conducted in this building include receiving and storing one ton liquid chlorine containers, evaporating liquid chlorine, supplying and metering gas use chlorine, and preparing chlorine solution to distribute to final uses. Chlorine delivery truck operations and unloading will take place inside of the building. There will be an emergency chlorine scrubber (located in the order control area) to treat chlorine leaks. There will also be an emergency electrical power supply to run the building ventilation system and the scrubber.

#### Oxygen Production Facility

Pure oxygen is necessary for the operation of the HPO aeration basin that will be used in the secondary treatment. Metro considered several ways that this needed oxygen could be supplied:

1. on-site production by Metro;
2. on or off-site production by a private contractor; directly from or
3. purchasing liquid oxygen directly from off-site suppliers.

Metro concluded, given the specialized and complex nature of the process involved in producing oxygen and the cost of operating such a facility or purchasing liquid oxygen, that the most efficient and cost effective way to supply the needed oxygen would be to have a private contractor produce it on-site. On May 3, 1990, the Metro Council passed Resolution 5882 establishing a competitive procurement process for bids to build and operate an oxygen production facility at the Metro West Point site.

Because the decision to seek a private contractor to construct and operate the oxygen production facility was made just recently, no specific details about the facility are available as of the date of this report and recommendation. Metro anticipates that two oxygen production technologies will be submitted by private contractors for Metro's consideration; cryogenic and oxygen absorption. The cryogenic oxygen system compresses air; the water, carbon dioxide, and other impurities are removed in a pre-treatment system. The dry air is then cooled by refrigeration systems to cryogenic temperatures and distilled to separate it into high purity gasses (oxygen and nitrogen). The oxygen can then be delivered at approximately 97 to 99 percentage pure gaseous oxygen and compressed to the required pressures or produced as a liquid for storage. Cryogenic oxygen systems are commonly used at wastewater treatment plants; they have the advantages of proven reliability and increased operation flexibility. Cryogenic oxygen production is the method considered by Metro in its original application. The facility proposed to carry out this process included a 109 feet x 125 feet, 35.8 feet high building and an additional 175 feet x 85 feet for equipment 39 feet tall. The building and the equipment would have been located in the south central portion of the site near the hillside.

The absorption system separates the ambient temperature by passing it through a column of absorbent, which is an inorganic crystal material. The absorbent selectively absorbs nitrogen molecules on its surface, while oxygen molecules pass through the absorbent column. The oxygen then exits the absorbent column at approximately atmospheric pressure. A compressor is used to raise the oxygen pressure to its final pressure. This continuous process will produce about 90 to 93 percent pure gaseous oxygen. According to Metro about 100 absorbent systems are operating in the world, but very few operating at the design capacity needed at West Point. Metro also states that, based on information obtained from manufactures of these system, it appears that such an oxygen production system is feasible and reasonably reliable for use at West Point. The advantage of the absorbent system is that it will not require the air distillation tower (the 39 feet high structures described above) required for a cryogenic oxygen production system, and the facility will have a smaller foot print and lower profile.

#### Odor Control Facility

The purpose of this facility is to remove odors from air originating from the

pre-treatment, primary treatment, and solids handling areas of the plant. In the event of a chlorine leak, the odor control facility will also have the capability to scrub air from the chlorine facility. The facility will be centrally located between the existing eastern primary clarifier building and the proposed solids handling and Riedel/SMI buildings. It will have outside dimensions of 303 feet x 44 feet with a height of 48.4 feet measured from the existing grade to the top of the scrubbers. It is described in more detail in Section III.B of this Recommendation.

#### Electric Substation

Two new electric substations are proposed to replace an existing one. The main substation will have outside dimensions of 62 feet x 125 feet the building was designed to accommodate Seattle City Light transformers and primary switch gear. The top of the transformer will be 20.9 feet high. It will be enclosed by screen walls open at the top. It will be placed behind the west primary clarifier building. A smaller, 1,000 square feet, 9 feet high substation will be placed more or less between the digesters.

#### Galleries

These are below grade utility tunnels sludge, water, and gas pipe lines and electrical wires will be placed in the galleries. They will also be used for maintenance access to various facilities, including the primary clarifiers, the digesters, solids handling building, the effluent pump station, and the secondary clarifier. Some of the galleries are in the shoreline district. Some above grade staircase structures will lead to the galleries. Two staircases next to the digesters will be 10 feet high; one connected to the effluent pump station will be 20 feet high.

#### Administration Building

This building will provide office, laboratory, locker, and control room facilities for use by the treatment plant operation staff. It will be a two story, 32 feet high 18,500 square feet semicircular building having a radius of 129 feet. It will be placed near the entrance to help control the public access to the plant. This building was originally proposed to contain 60,000 square feet and be 51 feet high. It would have been covered with a lattice lid to mitigate its visual impact.

#### Maintenance Building

This building will provide shops, storage, office space, lockers, and day rooms for treatment plant maintenance staff. It will have outside dimension of approximately 335 feet by 82 feet with a maximum height of 46.5 feet. The extra height is necessary to house a bridge crane that will be used for both the maintenance building and the effluent pump building. The building was placed near the hillside to reduce its visual impact. Roof top features include ungulating parapets that will act as architectural mitigation to obscure the hard edges of the building.

#### Facilities Services Building

This building will provide shops, offices, and a day room for facilities services staff. The building will be placed near the hillside. Its outside dimensions will be 115 feet by 56 feet with a maximum height of 34.8 feet.

#### Retaining Wall

A retaining wall 3,000 feet long having a maximum thickness of 5 feet will be built on Metro property parallel to the east property line. The height of the wall will vary. The maximum height will be 46 feet. In all cases the height of the wall is dictated by the height of the adjacent hillside. Methods of construction for the retaining wall will vary depending upon the characteristics of the adjacent hillside. The portion of the retaining wall between the hillside and the aeration basins is needed during the construction of the basins only. Upon the completion of construction of the basins the area between aeration basins and the retaining wall will be backfilled with sand and gravel and portions of the wall above ground level will be removed. (This is possible because upon completion of the aeration basins and the backfilling, the aeration basins themselves will act to stabilize the adjacent hillside.)

Catchment walls will be up to 7 feet high will be placed on top of the retaining walls in some areas, particularly in the area between the south end



of the aeration basins and the northern 4 or 5 secondary clarifiers. This catchment wall is necessary because the hillside adjacent to this area is particularly steep and unstable. The catchment wall will catch any landslide debris resulting from landslides in this portion of the hillside.

Most of the retaining wall will be constructed from Metro property. A portion of it in the vicinity of the meadow near the entrance to the plant site will be constructed from park property. The retaining wall will not be visible from park property.

Both surface and subsurface drainage facilities up the hill ride from the wall are proposed to reduce pressure on the wall. Metro will have to get appropriate easements from the Parks Department to construct the facilities.

#### Security Wall

A security wall will be built around those portions of the plant site that will otherwise be accessible to the public. Security wall will be generally approximately 5 to 6 feet high. Along the hillside portion of the property the security wall will be placed on top or just inside of the retaining wall along the south and north beach areas it will be placed generally parallel to and just outside of the plant footprint. The security wall will not generally be visible from the public because it will be incorporated into the visual mitigation or screening elements of the plant (discussed below).

#### Parking

Parking will provided for 210 cars (206 full sized stalls, 4 handicapped stalls). Additional parking will be provided for 16 cushion vehicles for use by on-site personnel and 8 sludge trucks. Nine parking stalls will also be provided outside of the plant footprint for public use. They will be provided in the vicinity of south beach for access to that area. Use of these stalls will be controlled by the Park Department. The parking areas will be located throughout the site between or adjacent to various structures, with the largest single lot being behind the eastern clarifier building. It will contain 42 stalls. None of the parking lots will be located in the shoreline district.

#### d. Mitigation elements

In an effort to minimize the visual, odor, noise, traffic, and other impacts of the plant on North and South Beaches and the Discovery Park hillside and their use and enjoyment, and in response to City Council imposed plan permit conditions, Metro has incorporated several mitigation elements into its plant design. A landscaped berm is proposed just outside of the plant footprint adjacent to south and north beaches to screen the plant from view from the beaches and, to a lesser extent, to limit odor and noise outside the plant footprint. A landscaped lid extending from the meadow near the plant entrance onto the plant site and on top or over some of the taller buildings in this area is proposed to screen the plant from the metal, and again, to limit noise and odor. A pedestrian over crossing will be built at the plant entrance to separate pedestrian and vehicle traffic. An odor control facility comprised of scrubbing stacks (briefly described above) is proposed to control odor. Other odor control elements as well as noise control elements are included in the design of the facilities themselves. All of these elements and other measures taken to limit the impact of the plant are described in Section III.B of this Recommendation.

#### e. Related Projects

##### Discovery Park Access Roadway

Some parts of the roadway which provides access to West Point through Discovery Park are in poor condition. The increased traffic projected to affect the roadway during construction at West Point, and Metro's need to improve utility services at the plant, necessitate the work proposed. The conditions imposed by the City Council on the Plan Permits for West Point indicate that roadway improvements to reduce noise and to increase pedestrian/-vehicular separation for safety reasons should occur before construction at West Point begins. Land Use permits are not required for the roadway work but Park Department permits and authorization and cooperation of the Seattle Water Department and Seattle City Light are required.



Specific elements of this project include; minor widening, partial realigning, structural upgrading and overlaying of the roadway; installation of a 12-inch waterline and electrical line within the roadway corridor; modification to the existing water, electrical, and mitigation measures (pedestrian undercrossing, sidewalks, landscaping). In addition to the work within Discovery Park (from the intersection of West Government Way and 36th Avenue West), the waterline connection requires work in approximately three blocks of 36th Avenue West (to the intersection of 36th Avenue West and Thurman Street).

#### Fort Lawton Parallel Tunnel

The Fort Lawton parallel tunnel is a pipeline that will convey sewage from the North Trunk line in West Commodore Way, under Magnolia (principally beneath Discovery Park), to the West Point plant. Metro expects to begin construction in early 1990. A structure will be placed beneath the street right-of-way to redirect flows from the existing route to West Point. (After the new tunnel is operating, the existing tunnel will be rehabilitated and, once it is operational, wastewater will flow through both.) A Master Use Permit (8807273) with shoreline substantial development permit and environmental review components has been issued for this project.

#### North Beach Enhancement

One of the Plan Permit Conditions requires Metro to evaluate potentials for a natural beach enhancement project at North Beach. The project would involve lowering the existing riprap seawall, creating a high tide beach berm and sloping foreshore, providing of a freshwater creek outlet to the intertidal area.

#### Construction Barge Facility

Metro has made a separate application to use barging during construction of the plant to transport excavated soil from the site and to bring materials to the site. Barging would replace truck trips that would otherwise be needed to haul these materials. Metro estimates that 5 to 6 barges could be arriving and departing per day. Barges of varying sizes up to 76 feet wide by 286 feet long (approximately 7000-ton capacity) could use the facility. The facility would be in service from March 1991 to December 1996. The initial phase of construction would begin in December 1990 and the demolition would occur after all plant construction is complete.

#### Alki Treatment Plant Conversion

Metro is going to convert the existing Alki primary treatment plant to a stormweather plant that would operate only during high flow storm conditions. To do this Metro must reroute the sewage that is currently being treated at the Alki plant to another plant for treatment. Metro intends to transfer this existing base flow to West Point to receive secondary treatment after completion of the new facilities.

One route that Metro is considering for the future pipeline is a submarine line from Alki to West Point on the bottom of Puget Sound. The 26-inch diameter pipe would enter the West Point site across South Beach. The timing of the construction of this Alki transfer line is not set, but West Point construction plans include a connection for it in South Beach.

## 2. Plant Construction

### Construction Schedule

Construction of the treatment facilities at West Point and related improvements will occur over a period of about seven years, starting in late 1990 or early 1991. In order to meet the consent decree deadline of December 31 1995, for implementation of secondary treatment at West Point, the treatment facilities must be completed in early 1995 to allow time for facilities start up and testing. Therefore, construction of treatment related facilities will occur early on in the construction schedule. Construction of non-processed facilities, including the perimeter landscaped berms and the public trails, will be done after completion of the process facilities. Discovery Park roadway and any off-site roads damaged by construction traffic will be repaired upon completion of all other construction.

Construction activities in 1991 and 1992 will entail primarily site

preparation. This will include excavation of the site, construction of the retaining wall, and demolition of some existing facilities. Metro will install drainage facilities required for stabilization of the upper hillside concurrently with the site excavation work. It will also install utilities at the plant entrance and implement visual mitigation and habitat enhancement on the hillside above the plant during this time as well. If Metro's application for the barge is approved, Metro will also begin construction of the barge in 1991.

In mid to late 1992, Metro will begin to build the new solids processing facilities and rehabilitation of the existing primary treatment facilities and digesters. These activities will continue through 1994.

Metro will begin to build the liquids streams facilities (the HPO aeration basin and secondary clarifiers) in mid 1992 as well. Beginning in 1993, and continuing through 1995, will test the new facilities and put into operation. Metro's construction schedule anticipates that by the end of 1995, the plant will provide secondary treatment, but installation of control systems and other finishing elements will continue to occur through 1996.

Following completion of the treatment facilities, Metro will remove contractor's staging areas and office trailers, and begin to construct perimeter berms, trails, landscaping, and lids. This work is expected to continue into 1997. At the conclusion of construction, Metro will remove the barge and restore the area in which it was located.

During construction, contractors staging areas would be needed on site for assembly and storage of materials and equipment. As construction occurs on various parts of the site, other areas where no activities occurring will be used for staging areas. During much of the construction period, areas toward perimeter of the site will be used for staging and stock piling of materials, since berm construction will be one of the last activities. Some disruption of access to or closure of North Beach and South Beaches is expected to occur during the time of construction. The existing North Beach trail will be closed at some times during the construction as well.

Construction of the temporary barge in 1991 would require closure of the North Beach trail for 40 to 60 work days. Though only a segment of the trail will be directly affected by construction, is not possible to provide an alternative routing for pedestrians around the work area. Therefore, it is likely that entire length of the trail will be closed to the public. Closure of the entire North Beach trail will effectively result in the closure of North Beach to public access as well. The entire North Beach area, including the North Beach trail, would be closed for about a year during the last year of construction when the landscaped berm adjacent to north beach is being built.

As is the case with North Beach, South Beach may be closed for a year during the last year of construction activity to construct the landscaped berm and associated improvements. Portions of South Beach may also be closed for up to a year to allow installation of an influent line between the existing Alki plant and the West Point facility. (As of the date of this report and recommendation, Metro has not made a decision as to whether it will connect the Alki plant to the West Point plant by crossing Elliott Bay or using an overland route. South Beach would be affected only if the Elliott Bay route is used.)

Metro's plans call for relocating an existing roadway that is used by some people to obtain access to South Beach. It also calls for the installation of a final effluent line and other utilities in the vicinity of this roadway. During the relocation of roadway and the installation of the effluent line and utilities, points of access to the beach will be limited though the Beach will not be "closed" per se. These activities could take up to a year.

Metro proposes stockpiling of excavated materials onsite during construction to mitigate the traffic impacts caused by trucks removing excavated spoils and later importing fill material for the perimeter berms. One of several proposed areas for stockpiling is Metro's property between the landward (north) edge of the existing paved trail on the uplands next to South Beach and the existing digesters. The toe of this stockpile area will be at the landward edge of the existing paved trail. The stockpile will slope upward from existing grade at the trail to the level of a temporary roadway that will be used during construction. Access to the beach from the temporary roadway will be provided at the east and west ends of the stockpile area. In two

areas where the trail is located close to the temporary roadway alignment, walls six to eight feet high will be located on the north edge and adjacent to the trail to support the temporary roadway. The stockpile will continue to slope upward from the temporary roadway to a height of approximately 20-30 feet above existing grade near the existing digesters. The public (permit) parking area near the lighthouse will be relocated so that it will remain available during construction. The stockpile will be hydroseeded to mitigate visual impacts and erosion.

The stockpiling of materials in the area described above will allow onsite storage of about 82,000 cubic yards of material. Without this stockpiling, truck traffic would increase by about 135 one-way trips per day for four months during the time of peak truck traffic and during the time when fill is imported to construct perimeter berms, and Metro would incur additional costs of about \$3.2 million (1988 dollars) for transport, disposal, and importation of material. The South Beach trail would not be "closed" as a result of the stockpiling and the public would have access to all portions of the south beach area waterward of the trail. However, points of access would be limited. (In its Report and Recommendation and during the hearing DCLU suggested and argued that this proposed stockpiling would substantially impair the enjoyment of South Beach by some members of the public and, therefore, effectively "close" the beach to them. The City Parks Director and other parties made similar comments. Metro's stockpiling proposal and its effect on south beach are discussed in detail below in section III.B)

The specific times that closure of the beaches will occur are not presently known. As Metro's construction schedule becomes more refined and the specific times of closure become known, Metro will take measures to inform the public of such closures.

#### B. Traffic

Construction of the West Point plant will generate a substantial amount of traffic through Discovery Park and the Magnolia neighborhood. The number of truck trips currently projected by Metro is set out in Table 1, below. Table 1 includes two sets of numbers; the estimated number of truck trips that will be generated if barging of excavated material, fill, and construction materials is not used, and the number of trips that will be generated if barging is used. Metro's witnesses testified during the hearing that Metro is committed to using barging if the barging facility is approved.

Table 1

#### PROJECTED TRUCK TRAFFIC VOLUMES DURING CONSTRUCTION

	Average Daily One-Way Trips (See Footnotes 1 & 2)
Average daily one-way trips (1991-97)	110 - 135
Peak daily one-way trips	490 - 590 (second quarter 1992)
Highest traffic, duration	250 - 590 for 5 quarters (1991-92)
Average trips during non-peak quarters	50 - 65
Barging of bulk materials to limit truck traffic to 200 trips/day (see footnote 3)	
Average daily one-way trips (1991-97)	85 - 100
Peak daily one-way trips	167 - 200 (fourth quarter 1991 - fourth quarter 1992)
Highest traffic, duration	167 - 200 for 5 quarters (1991-92)

Average trips during non-peak quarters 50 - 65

Notes:

1. One-way trips includes trips going to and coming from the site.
2. The following assumptions were used to derive these estimates:
  - a. Construction can start in early 1991. (If it cannot, the construction schedule may have to be accelerated, resulting in an increase in daily trips under all conditions except peak daily/highest traffic without barging, during which the maximum number of daily one way trips will continue to be 200.)
  - b. Quantities of materials that have to be transported are those estimated at 25 percent design level.
  - c. 244,000 cubic yards will be stockpiled on site, including in area of south beach described above.
  - d. 18 cubic yard truck capacity for excavation of backfill.
  - e. 9 cubic yard concrete trucks capacity.
  - f. Per truck is value of material transported to site is \$20,000.
3. Metro proposes to set a ceiling of a total of 200 truck trips per day for all contractors, if barging is used; thus, the maximum number of one way trips that will be generated per day is 200. Figures at times other than at peak times are lower with barging than without because Metro assumes some contracts will choose to use barging even if not contractually required to do so.

The choice of truck haul routes to and from the plant site is very limited. All trucks used at the site must come from and return to 15th Avenue West, a major north/south arterial and designated truck route east of the plant site. There is only one route available to trucks between the site and the entrance to Discovery Park, and between the Park entrance and 15th Avenue West all trucks must use Government Way and Gilman Avenue West. The only section of the route between the site and 15th Avenue West where more than one route is available is the section between Gilman Avenue West and 15th Avenue West. Trucks may use both West Emerson Place and West Dravus Street to travel between 15th Avenue West and Gilman Avenue West. The Seattle Engineering Department (SED) has recommended and Metro has agreed that all in-bound and out-bound construction truck traffic south bound on 15th Avenue West will enter and exit 15th Avenue West at the Dravus Street ramps and that all in-bound and out-bound construction traffic north bound on 15th Avenue West will enter and exit 15th Avenue West at the West Emerson Street ramps.

In order to ease the movement of trucks along the haul route; maintain or enhance traffic and pedestrian safety along the haul route; and generally limit the impact of construction traffic to the haul route; and in response to the City Council imposed plan permit conditions, Metro proposes or has agreed to make the following improvements and take the following measures to and along the haul route;

Inside Discovery Park

Repair the access roadway within Discovery Park prior to major construction activities at the west point site;

Provide a separate pedestrian pathway parallel to the roadway from the park entrance to the south beach at West Point;

Mark trails crossing the access road with crosswalks and pedestrian signals;

Install a pedestrian underpass at the easternly loop trail crossing;

Improve signs for pedestrians and vehicles;

Provide a temporary bicycle bypass route on closed existing roadways in the park; and

Employ flag persons and crossing guards as needed during construction.

#### Outside of Discovery Park

Install a four-way stop control at 36th Avenue West and West Government Way;

Provide a temporary traffic signal for the intersection of 34th Avenue West and West Government Way, unless determined by SED not to be necessary;

Revise pavement markings north of West Dravus Street on 20th Avenue West and Gilman Avenue West to accommodate a bike lane and two traffic lanes in the uphill (north bound) direction that traffic lane and bike lane in the downhill (south bound) direction;

Provide overhead flashing beacons at the intersection of the 15th Avenue West overpass and West Emerson Street in accordance with the requirements of SED, and provide a flag person at the intersection during the month of peak truck activity as needed;

Provide traffic signals on both sides of 15th Avenue West at West Dravus Street;

Undertake a study to determine the best lane design at the intersection of West Dravus Street and 15th Avenue West to accommodate the turning radius need by trucks without changing the existing number of lanes;

Provide a signal for the intersection of West Dravus Street and 20th Avenue West;

Pay \$10,000 to the City of Seattle for traffic control measures for specific improvement to 36th Avenue West between West Government Way and West Emerson Street and another \$10,000 for other traffic related projects to mitigate local traffic impacts within the Magnolia neighborhood;

Install a four-way stop and other measures determined by SED to be necessary at 34th Avenue West and West Emerson Street;

Install curb bulbs with wheelchair ramps or pedestrian refuge islands or both to assist pedestrian crossing at 36th Avenue West and West Government Way and at the "S" curves near 32nd Avenue West and West Government Way;

Provide crossing guards as determined by SED to be necessary at the school crossing at West Government Way and Gilman Avenue West;

Provide funds for a study by SED to identify and design special traffic controls along the haul route to protect pedestrian crossings, school bus access, and school crossings, and provide those improvements specified by SED. (Several of the improvements listed above are ones recommended by DCLU in its report and recommendation to the Hearing Examiner and accepted by Metro, rather than being proposed by Metro in its application.)

Metro also proposes to overlay pavement between 20th Avenue West and 36th Avenue West with a special pavement mix designed to reduce noise and vibration by truck traffic using the roadway. Metro has also agreed to pay for any "wear and tear" resulting to the streets along the haul route from the construction traffic, as determined by "before and after testing" (officially called nondestructive testing or NDT) conducted by SED.

In addition to generating construction truck traffic, the project will generate construction related worker traffic. Metro proposes to bus, or require contractors to bus, workers to the plant site from an off-site, non-shoreline location. Presently, Metro is negotiating with the Washington Army National Guard to lease the National Guard property at the Army relocation in Interbay for a parking area for the construction workers.

### 3. The Plant Operation

The plant will operate 24 hours a day, 365 days a year. Approximately 145 people will be employed at the plant site (not including the personnel needed to operate the Riedel/SMI solid processing facility or to operate the privately owned and run oxygen facility.) Of these, 133 will be at the plant on a typical day and 12 (or 12 "FTE") will be involved in the maintenance of off site facilities. These employees are expected to generate approximately

350 one-way trips per day, including trips made for maintenance at off site facilities. The majority of these trips are expected to occur between 5 and 7 a.m. and 4 and 6 p.m.

The plant will also generate sludge truck traffic. Metro proposes to run sludge trucks from 6:00 a.m. to 10:00 p.m., daily. (The Hearing Examiner recommends more limited hours.) The projected numbers of sludge truck trips is shown in Table 2, below. Metro considered, but presently has rejected, using a barge to haul sludge.

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PROJECTED SLUDGE TRUCK TRAFFIC (1996)  
AVERAGE ONE-WAY TRUCK TRIPS

During Operation of Metro and Private Sludge Management Facilities

Weekdays (6 a.m. to 10 p.m.)	
Metro sludge processing facilities	12
Private sludge management	<u>4</u>
Weekdays total	16
Weekends and holidays (6 a.m. to 10 p.m.)	
Metro sludge processing facilities	12
Private sludge management	<u>0</u>
Weekend days and holidays total	12

During Periods of Downtime for private Sludge Management System

Weekdays and weekends (6 a.m. to 10 p.m.)	
Metro sludge processing facilities	25
Private sludge management	<u>0</u>
Total	25

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Notes:

1. Assumes private sludge management services processing 60 dry tons per day as proposed by Riedel/SMI.
  2. Truck trips based on average annual sludge production.
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In addition to traffic, operation of the plant will also generate noise and odor. These aspects of the plant and the impacts associated with them are discussed below in paragraph III.B.

### III. Findings and Conclusions

#### A. Format

The permits required for the West Point plant expansion have been described earlier. The criteria applying to the required Single Family Zone permits are set out in SMC 23.44.036. The criteria applying to the required Shoreline Permits are set out in SMC 24.60.427. The Plan Permit for the expansion issued by the City Council was similarly subject to these Code Sections. In approving the Plan Permit, the Council concluded that expansion of the plant would be consistent with these criteria, if it substantially complied with all of the Plan Permit Conditions accepted by the Council, and both Code Sections require such substantial compliance. Consequently, the principle focus of the DCLU Report and Recommendation and of the project-level permit hearing was the Council Plan Permit Conditions. It will be the principle focus of this section of this Recommendation as well.

The Report and Recommendation issued by DCLU separately stated and discussed each Plan Permit Condition, and recommended specific project level conditions deemed by it to be necessary to ensure Compliance with the Plan Permit Conditions. At the project level hearing and in proposed findings and

conclusions Metro and other parties responded to DCLU's recommended conditions and submitted their own recommended conditions. As did the DCLU report and recommendation, Section B, below, states each plan permit condition. Following each plan permit condition it states or paraphrases the project level condition recommended by DCLU and other parties. It then states the Hearing Examiner's conclusion regarding the condition and the reasons for, or findings supporting, the Hearing Examiner's conclusion. Following the conclusion and supporting findings, a recommended project level condition is stated.

#### B. Plan Permit Conditions

The City Council made issuance of the plan level or feasibility permit subject to 11 generally very broad conditions (referred to here, in the documents submitted by the parties, and throughout the hearing as the "Plan Permit Conditions"). To be approved, the project proposal must substantially comply with these conditions (SMC 23.44.036.B and SMC 24.60.427.G). Two of the primary purposes of the project-level hearing were to determine if appropriate conditions could be attached to the construction and the operation of the secondary treatment facilities at West Point to ensure substantial compliance with the plan permit conditions, and to determine what those conditions ought to be. Upon reviewing the project-level permit application and relevant information submitted to it by Metro and others, DCLU concluded that substantial compliance could be insured, provided 104 separate conditions were attached to the project-level permit. Of all of these conditions, the parties to the hearing concurred on only 8 of them. Metro and DCLU concurred on only 61. Of the remaining 43, Metro suggested that some of them be deleted and that the wording on others be changed.

Because the plan permit conditions are so broad in their character, they can equally support, in many cases, recommended conditions of all or any of the parties, depending upon how the Plan Permit Conditions are interpreted and the approach taken to project-level conditions (for example, how much flexibility they should permit, how they should be enforced and by whom, how much consideration should be given to cost, and the like). Ultimately, only the City Council can decide how the Plan Permit Conditions should be interpreted and what approach should be taken to project-level conditions. The City Council should adopt only those project-level conditions that reflect its interpretation of the plan permit conditions and the general approach to the project-level conditions that it believes is appropriate. To assist the City Council in its review of the Hearing Examiner's recommended conditions the Hearing Examiner's general interpretation of the plan permit conditions and the Hearing Examiner's approach to the project-level conditions are set forth below. The Hearing Examiner's interpretation of specific plan permit conditions are stated in the discussion of those specific conditions. (If the parties have stated their interpretation of the conditions or their approaches to the project-level conditions, they are also set forth below or in the discussions of the specific plan permit conditions.)

The Hearing Examiner applied the following general interpretations of the Plan Permit Conditions in recommending the project-level permit conditions set forth herein;

1. The plan permit conditions are to be considered general in nature and where conflicts arise, various factors may be considered in balancing them. No single plan permit condition carries any greater weight than any other plan permit condition.
2. The plan permit conditions expect, and are intended to allow, some adverse construction and plant operation related impacts to both Discovery Park and the Magnolia neighborhood. (The City Council plan permit "findings and conclusions" states that there will be some such adverse impacts.)
3. The plan level permit conditions are intended to allow consideration to be given to the cost of mitigating the adverse impacts associated with the construction and operation of the West Point plant. (This interpretation regarding the intent of the plan permit conditions arises out of the substantial weight placed by the City Council on the cost of providing secondary sewage treatment at the West Point site compared to other sites and its conclusion that no non-shore/non-single family residential area was available for development of secondary sewage treatment facilities.)
4. The plan level permit conditions are intended to allow Metro to comply



with the consent decree it has entered into with the State Department of Ecology requiring secondary sewage treatment by December 31, 1995. (The record on the plan permit condition indicates that the City Council was aware that Metro was required to meet this deadline. The Hearing Examiner assumes that the City Council would not grant plan permit approval for the West Point site on the one hand, and on the other to impose conditions on its construction that would not allow it to be completed in a timely manner.)

5. Where specific standards are stated in the plan permit conditions, compliance with these specific standards is both sufficient and necessary to comply with the plan level permit condition, unless the plan permit condition states otherwise.

The Hearing Examiner took the following approach to project level conditions in recommending the conditions set forth herein;

1. Conditions should be as specific and clear as possible.
2. All conditions should be conditions with which Metro can comply, assuming a willingness and all reasonable efforts on its part to comply.
3. Metro should ultimately be held responsible for complying with conditions of approval.
4. Conditions should be written so that compliance with them can be measured and verified by the City and independent parties (with requisite expertise).
5. Conditions should be written so that they can be enforced, and should include some kind of penalty provision such as withholding or withdrawing requisite approvals or permits in order to give some substance to enforcement efforts. The City must have ultimate enforcement authority.
6. When applicable, conditions should include a time element, that is to say, they should state when a specific action should be taken.
7. Subject to the above stated restrictions, flexibility in the manner of complying with a condition should be allowed.
8. Conditions should not seek to mitigate merely speculative impacts; however, they should be written so that they can be amended if it comes to appear that impacts considered merely speculatively at the time the conditions were first written will be realized if appropriate mitigative action is not taken.
9. The project-level conditions should be consistent with the Hearing Examiner's interpretation of the plan level conditions.

DCLU suggested that the following guidelines should be used in developing project-level conditions;

1. Conditions should be written so that a determination can reasonably and readily be made as to whether Metro is complying with them.
2. Conditions should be written to be enforceable.
3. Metro is ultimately responsible for complying with all conditions of approval.
4. The City is ultimately responsible for enforcing and ensuring compliance with all conditions of approval.
5. The conditions must have an element of time so that a determination can be made when it must be done.

The approach taken by Metro to project-level conditions is set forth in its response to DCLU's recommended conditions (Exhibit 246). Metro identifies them as its "guiding principles" They are set out verbatim below.

1. Recommended conditions that are based upon an evident misunderstanding or misinterpretation of Metro's proposal should be corrected.
2. Project-level conditions should implement rather than expand or change the

scope of the plan level conditions adopted by the City Council.

3. Mitigation should be reasonable and related to identified impacts.
4. Needless expense should be avoided.
5. Project-level conditions should advance rather than hinder an orderly sequence of construction.
6. Only important issues warrant the attention of the Hearing Examiner and the City Council. It serves nobody's interest to quibble over language.

The Magnolia Community Club states first that unless all adverse impacts can be mitigated the project should be denied. It states that if the project is not denied that conditions should be imposed that will result in all avoidable impacts being avoided or all mitigatable impacts being mitigated without regard to cost. The other parties to the proceeding did not specifically identify the approaches they took to the project-level permit conditions.

What follows is a verbatim statement of each plan level condition; each plan level permit condition is discussed and analyzed; recommended conditions by the various parties to implement the plan level condition are quoted, paraphrased or summarized; the Hearing Examiner's conclusions regarding the condition and the reasons for the conclusions are stated; and a condition that the Hearing Examiner believes the City Council should adopt is stated as a recommended condition.

#### Plan Permit Condition

##### Plant Footprint and Future Development

In order to minimize impacts related to the size of the plant facilities, Metro's above-ground facilities at West Point shall occupy no more than 32 acres, and no more than 6.1 acres of such facilities shall be located within the shoreline zone. Any parking areas located within the shoreline zone shall be covered with lids that are landscaped and designed to permit public access.

Metro's application for project-specific shoreline substantial development and master use permits shall evaluate alternative layouts that locate some or all solids handling facilities at a different, appropriately zoned and mitigated site. The maximum size of the plant facilities footprint, in and outside of the shoreline zone, shall be reduced to correspond to any changes in layout made to relocate solids handling facilities.

This permit defines the maximum allowable footprint for all current and future wastewater treatment facilities at West Point. Metro shall record a declaration of covenants, conditions, and restrictions containing the limitations described in this condition. After construction, significant changes in the height and appearance of the plant will be prohibited unless they receive prior approval from the City.

Metro shall provide additional analysis of alternatives, including technological alternatives, to further reduce the footprint for possible use at the time of project level review. If an alternative technology is chosen, the maximum feasible footprint reduction from the use of that technology will be implemented as soon as possible.

This condition requires Metro to do several things;

- o It limits the size of the plant footprint to 32 acres, with no more than 6.1 acres in the shoreline.
- o Cover parking areas situated within the shoreline zone with the lids that are landscaped and designed to permit public access.
- o Evaluate alternatives layout that will result in sludge handling facilities being located off-site and to reduce the plant footprint to correspond to any changes in the layout made as a result of the evaluation.
- o Undertake additional analysis of alternatives, including technological alternatives, to further reduce the footprint, and to reduce the footprint as much as possible if an alternative technology is chosen.

- o Record a declaration of covenant conditions and restrictions setting forth the various elements of plan permit condition number 1.

Each of these elements are discussed below.

- o Limit the size of the plant footprint to 32 acres with no more than 6.1 acres in the shoreline.

Metro's proposed facilities would occupy above ground the footprint of 31.42 acres, with 5.97 acres in the shoreline. DCLU recommended that the plan level condition limiting the size of the plant footprint in the area permitted in the shoreline should simply be restated as a project-level permit condition to ensure continuing compliance. Metro agreed to this condition. Legal Advocates, Defense Fund and Friends, Magnolia recommended that the project-level condition should require a substantially smaller footprint than the plan level permit condition, stating that the plant footprint can be substantially reduced by processing solids off-site, locating other facilities off-site, and choosing alternative treatment technologies.

Hearing Examiner's Conclusion:

The Hearing Examiner concludes that Metro's proposal complies with this requirement of the plan level condition. Metro's proposed facility would have a footprint less than 32 acres, with less than 6.1 acres in the shoreline district. As is discussed below, Metro's evaluation of alternatives solids processing layouts and alternatives technologies are reasonable and the layout and alternatives it shows are reasonable.

Hearing Examiner's Recommendation: Condition 1a

The above ground footprint in the plant (as measured with an imaginary line drawn around the above ground facilities shall be no larger than 32 acres, with no more than 6.1 acres in the shoreline district.

- o Parking areas within the shoreline district shall be covered with lids that are landscaped and designed for public access.

Metro's proposal does not include any parking areas in the shoreline area. DCLU recommended a condition for approval stating no parking shall be allowed in the shoreline district. Other parties to the proceeding (with the exception of Citizens to Save Interbay) recommended a condition that would not only prohibit parking in the shoreline district but would prohibit all but absolutely essential parking on the entire site.

Hearing Examiner's Conclusion

Metro's proposal complies with this element of the plan permit condition. Metro's proposal does not include any parking in the shoreline district. The recommendation by parties to the proceedings other than DCLU and Metro goes well beyond the scope of the plan permit condition. Further, almost all parking is located internal to the site, between existing or proposed facilities, and eliminating it would not substantially increase the amount of publicly accessible land.

Hearing Examiner's Recommendation: Condition 1b

Adopt DCLU Condition 1b

- o Evaluate alternatives layouts that locate solids processing facilities off-site.

The purposes of this requirement are to: reduce the size of the plant footprint and reduce or eliminate sludge truck traffic through Discovery Park and Magnolia.

In its revised application and in its Final Environmental Impact Statement on West Point secondary treatment facilities Metro evaluated three layouts that would place solids processing facilities fully or partially off-site as well as two layouts with solids processing facilities located entirely on-site. In making its evaluation Metro considered the cost of the various alternatives and the number of sludge truck trips each would generate, as well as the effect each alternative would have on the size of the facility at West Point. Each of the alternatives, the acreage each

alternative requires at West Point, the acreage each would require off-site, the number of sludge truck trips each would generate, and the cost of each is described below.

HPO-1:

Under this alternative all solids would be processed at West Point. Solids would be processed in much the same manner as they are presently, using anaerobic digesters. Above ground facilities for a 159 MGD plant would require 32 acres, with a 6.1 acres in the shoreline. It would not require any land off-site. It would generate approximately 22 one way sludge truck trips a day and have a present worth cost of \$524.9 million.

HPO-1A:

This is the alternative that has been chosen by Metro. It is described in detail above. It would result in a facility at West Point 32 to 28.4 acres in size, depending upon the success of the Riedel/SMI system. If the system is successful and the digesters can be removed, the size will be 28.4 acres, if it is not successful, the size would be 32 acres. In either case, the area in the shoreline would be 5.7 acres. No land is required off-site. Approximately 4 to 6 daily one way sludge truck trips would be generated if the Riedel/SMI system is successful. No information was provided as to the truck trips that will be generated if the system is not successful. The Hearing Examiner assumes that it will be the same number of trips as generated by the HPO-1 alternative since the HPO-1 and 1A alternatives differ only with regard to the Riedel/SMI system.

HPO-2:

This alternative would place sludge dewatering facilities at an industrially zoned site in either Interbay or Duwamish. Sludge would be digested at the West Point site and conveyed by pipeline. It would result in the facility at West Point being 30 acres, with 5.2 acres in the shoreline. The site in Interbay or Duwamish would have to be approximately 2.6 acres in size. Because the sludge would be conveyed to the off-site facility by pipeline, it would not generate any truck traffic from West Point. Its estimated present worth cost is \$539 million dollars.

HPO-3:

Under this alternative raw sludge would be conveyed by pipeline to a site in Interbay or Duwamish where it would be processed using conventional methods (thickening, digesting, dewatering). The size of the site at West Point would be 25.7 acres, with 3.9 acres in the shoreline. The amount of land required off-site would be 7.5 acres. No sludge truck trip traffic would be generated since raw sludge would be piped to the site. The present worth cost of the facilities would be between \$549.4 million and \$559.5 million.

HPO-4:

Under this alternative raw sludge would be piped again to a site in either the Interbay or Duwamish area where it would be processed using a "high tech" method. As is the case with the HPO-1A alternative, this process would be implemented in several phases until a determination can be made that it would be successful. Until its fully implemented, some solid processing would continue to occur at the West Point site in the same manner that it is presently processed. If it were to prove to be successful, it would not generate any sludge truck traffic, since all sludge would be piped to the off-site facility. This alternative would reduce the size of the site needed at West Point to 26.4 acres, with 4.8 acres in the shoreline. It would require 2.9 to 5.3 acres off-site. Its present worth cost would be \$556.1 million to \$605 million.

DCLU concluded that Metro's selection of the HPO-1A alternative is consistent with the Plan Level Permit Condition, even though it kept all of the solids processing facilities at the West Point site and does not provide the smallest possible West Point layout, finding it to be a reasonable choice. DCLU found that the HPO-1A alternative could result in a smaller plant footprint than either HPO-1 or HPO-2 and that it would generate substantial less sludge truck traffic than HPO-1, if the Riedel/SMI technology proves to be successful. It further found that the

HPO-1A alternative would not have construction impacts at another location nor along the route of a sludge transfer pipeline. DCLU also found Metro's review of the alternatives and the factors considered by Metro to be reasonable. Based on its findings and conclusions, DCLU made the following recommendation:

If the Riedel/SMI sludge processing proves successful and can satisfactorily handle the sludge produced at the West Point plant, the existing digesters...shall be removed within one year of the determination that the alternatives technology has been successful or by December 31, 2005, whichever occurs first. Once the digesters are removed, the area that had been occupied by them shall be dedicated to public use and bermed and landscaped consistent with the public access area proposed and conditioned in this permit action.

Metro shall bear the expense of removing the digesters and associated facilities, and reconstructing/reconfiguring the landscaped berm so as to provide a continuation of the public area. Reconstruction and landscaping of the area must be completed to the Parks Department's satisfaction within one year of the date of the removal of the digesters. At this time, the dedication referred to in recommended condition 2K shall be amended to include this area for public and Park purposes.

Metro took exception with this condition, arguing that the condition more clearly needs to state that Metro shall have the sole discretion to determine the success of the Riedel/SMI process; that as written the condition does not give Metro sufficient flexibility to choose processing technology other than the Riedel/SMI process, if the process proves to be technically capable of processing all of the sludge generated by the West Point facility, thereby placing Riedel/SMI into a monopoly position; and that one year after the determination that the process is successful is not sufficient to implement it at the scale needed to process all of the sludge. Metro stated that the Metro Council is committed to removing the digesters and reconfiguring the berms to provide additional public access if the Council elects to implement a alternative technology that can process all sludge without continued operation of the digesters. It proposed the following conditions:

If Metro determines that an alternative sludge processing technology could be utilized to process all West Point sludge and approval for such a system is obtained from the Department of Ecology, such that it is reasonable to remove the digesters and the pertinent structures, Metro shall remove these facilities at the earliest practicable date.

At such time as the digesters are removed in compliance with this condition, Metro shall reconstruct or reconfigure the landscape berm as appropriate to provide a continuation of public access areas already established. Park staff shall be consulted as to the design of the reconfigured berm. Reconstruction shall be completed within one year after the digesters are demolished. At that time the dedication of the areas for public access referred to in recommended condition 2K shall be amended to include areas outside of the revised security barrier.

In response to Metro's arguments, DCLU offered possible alternative language in its recommended condition for consideration by the Hearing Examiner and City Council. DCLU suggested that the first sentence in its recommended condition could be changed to read as follows, the balance of the condition remaining the same:

If the Riedel/SMI system or other alternative sludge processing technology finally selected by Metro proves successful and can satisfactorily handle the sludge produced at the West Point plant, the existing digesters...shall be removed at the end of one year of successful operation or no later than December 31, 2005.

Legal Advocates, Defense Fund and Friends, and Magnolia all argued that Metro should be required to select an alternative that would place solids processing off-site and recommended conditions accordingly. Their argument is based on the fact that the record demonstrates that it is technologically feasible and that the Plan Permit Condition intended for the solids processing facilities to be placed off-site if it was technologically feasible to do so. Magnolia

further recommended that Metro be required to establish a fund controlled by the City in an amount sufficient to remove the digesters and reconfigure the berm. This recommendation appears to be based on a lack of trust by Magnolia of Metro, though Magnolia does not specifically state that this is the reason for the recommended condition. Citizens to Save Interbay simply recommended that no part of the Metro plant, including the solids processing facility, be allowed in any part of Interbay.

Hearing Examiner's Conclusions and Findings:

The Hearing Examiner concludes that Metro's application complies with this requirement of the Plan Permit Condition. Metro has undertaken an evaluation of alternative layouts for solids processing as required by the Plan Level Permit Condition. Metro evaluated three layouts that would place all or a portion of the solids processing facilities off-site. They evaluated two layouts that would keep them on-site as well. The Plan Permit Condition does not state, and, therefore, it does not limit, the factors that Metro may consider in selecting a solids processing layout. It does not require Metro to select an alternative that would place all solids processing facilities off-site merely because it is technologically feasible to do so. The factors considered by Metro in making its selection are not unreasonable. Though the alternatives selected will not result in the smallest plant footprint, it could result in a footprint smaller than two other layouts considered by Metro. If the Riedel/SMI process (or some other alternative technology eventually used by Metro) proves to be successful, the layout selected by Metro will reduce the plant footprint below the 32 acre footprint established by Plan Permit Condition 1.

The Hearing Examiner also concludes that, though Metro should be given the sole discretion to determine whether the Riedel/SMI is not only successful but will meet Metro's future needs, Metro should be required to account for its decision, particularly if it chooses to not implement the Riedel/SMI process or some other technology that would allow removal of the digester. There may be any number of valid reasons for not choosing the Riedel/SMI process, even though it may be arguably successful. There may also be a number of valid reasons for not selecting some other technology that would allow removal of the digesters. Being the party ultimately responsible for operating the West Point facility and providing sewage treatment in the Seattle Metropolitan area, Metro must be given the flexibility and authority it needs to fulfill these responsibilities effectively and efficiently. However, this does not mean that Metro may be arbitrary in its decision, and while there is nothing in the record to suggest that it has been arbitrary to date or that it will be arbitrary in the future, it is appropriate to include conditions of approval that will ensure that it will not be arbitrary in the future.

Finally, the Hearing Examiner concludes that if the Riedel/SMI process or some other process is determined to be successful enough to allow the removal of the digesters, more than one year is likely to be needed to implement it fully enough to allow the digesters to be removed. Metro proposes to implement the Riedel/SMI process in several phases. In the last phase before a decision would be made to implement the process to handle all of the solids generated by Metro, the Riedel/SMI facility would be processing only 60 dry tons of sludge. To allow removal of the digesters, it would have to be capable of handling 300 dry tons. This would require a substantial expansion of the facility. The testimony given during the hearing indicated that getting all the necessary permits and during all the necessary construction work to expand the facility to this extent would take more than one year.

Hearing Examiner's Recommendation: Condition 1C

The secondary treatment plant at West Point shall include a solids processing facility that, if successful, would allow the eventual removal of the existing digester. Metro may implement the process in phases. If it chooses to do so, it shall time the phases so that a final decision can be made as to whether the process can successfully handle all of the solids generated by the West Point plant with sufficient lead time to allow removal of the digesters and reconfiguration of the perimeter landscaped berm by no later than December 31, 2005. Metro shall make all necessary decisions regarding the success of the process in sufficient time to allow the removal of the digesters and associated buildings and facilities and the reconfiguration of the landscaped berm by December 31, 2005. If Metro determines that the process will not be able to handle all of the solids generated by the West Point plant or will not otherwise be successful, it shall state in writing in the form of a resolution adopted by the Metro Council the reasons for its decision and what further

actions Metro will take to allow the future removal of the digesters.

If Metro determines that an alternative sludge processing technology can and should be used to process all solids generated by the West Point plant, and if Metro is able to obtain all necessary permits for the process, Metro shall remove from the West Point site all solids processing facilities not part of the alternatives technology. It shall remove them at the end of one year of successful operation of the alternative technology or no later than December 31, 2004.

When the digesters are removed in compliance with this condition, Metro shall reconstruct or reconfigure the landscaped berm in a manner determined by the Parks Department to be appropriate providing continuation of the public access areas already established. This work shall be completed within one year of the date of the removal of the unnecessary solids processing facilities or no later than December 31, 2005. Upon the completion of the reconstruction/-reconfiguring and landscaping of the berm, the dedication referred to in Condition 2K shall be amended to include this area for public and park purposes.

o Provide an analysis for alternatives to further reduce the footprint of the plant.

Metro has analyzed a number of alternatives to further reduce the footprint of the plant. It has reviewed or analyzed alternative secondary treatment technologies. It evaluated alternative clarifier configurations. It also used a number of techniques to save space in the design of its final layout.

Metro evaluated the secondary treatment technologies described below. In determining which one to choose for the West Point plant, it considered not only its size, but also reliability in meeting effluent limitations, maintenance requirements, constructibility at the West Point site, visual mitigation potential, odor control potential, cost effectiveness, and experience in the industry. The technologies reviewed by Metro are:

High Purity Oxygen (HPO)

This alternative would result in a 31.9 acre footprint of the West Point site. It is the technology chosen by Metro for development at the West Point site. It is described in detail above. It is the second least costly technology evaluated by Metro. It creates the least odor.

Trickling Filters/Suspended Growth (TF/SG)

This technology would result in a 31.5 acre footprint. It combines a trickling filter tower and an activated sludge process. It would be at least 40 feet tall and be the most costly of the technologies considered by Metro.

Deep Tank Activated Sludge (DTAS)

This technology would result in a footprint of 32.1 acres. It was eliminated from final consideration for three reasons: It generated higher emission than the other processes, it entailed more technical risk, and it resulted in a footprint larger than permitted by the Plan Permit Condition.

Contact Stabilization (CS)

This technology would require a footprint of 29.9 to 30.5 acres. Similar to the HPO technology, it combines activated sludge with high purity oxygen. However, it is not considered as reliable and costs more than HPO. It was eliminated because of its unreliability.

Secondary Clarifier Configuration

Metro evaluated three different secondary clarifier configurations: rectangular tanks requiring 81 acres; stacked rectangular tanks requiring 6.2 acres; and circular tanks requiring 9.6 acres. Metro evaluated these configurations to determine if the same degree of processing efficiency could be achieved in less space. The evaluation considered several factors: space requirements, operation efficiency, reliability in achieving effluent criteria, capital cost, and operation and maintenance cost. Stacked rectangular tanks were eliminated, rectangular tanks were rejected,



and circular tanks were chosen for a number of reasons.

Rectangular tanks were rejected because at the West Point site they would have to be built mostly above ground and would be so tall as to make it unreasonably difficult, if not impossible, to visually screen them from off the site; they have high capital and operational and maintenance cost; and they entail a greater risk of not meeting the effluent requirements. Single decked rectangular clarifiers were rejected because Metro concluded that they would reduce the plant capability to treat peak flows due to lower sludge storage capacity and lower mechanical reliability and that they would reduce the plants capability to remove Nocardia scum. (Nocardia is a type of bacteria prone to grow at West Point. It can be a problem because it tends not to settle to the bottom of the clarifier, but rather floats on top, regardless of tank size. If there is any water moving through a clarifier, the Nocardia goes out with the effluent which can result in a violation of effluent standards.) Single decked rectangular tanks were also rejected because they have higher operation and maintenance cost than circular tanks. Circular tanks were chosen because they were deemed to be the most reliable and generally have the lowest operations and maintenance cost.

In addition to evaluating alternatives treatment technologies and clarifier configuration, Metro evaluated various design techniques to minimize the area occupied by its above ground facilities (plant footprint) and adopted several of them. The design techniques used by Metro include:

- locating the chlorine contact chamber under other treatment facilities;
- consolidating dewatering and thickening into a single building, thus allowing common space for functions that serve both processes;
- using flow sensors and automatic vales for flow conveyance and control, thus allowing pipelines to be buried or stacked;
- consolidating functions in buildings located against the retaining wall;
- putting parking areas in various parts of the site where space is available;
- putting the effluent pump station adjacent to the maintenance building so that these two functions can share a single bridge crane;
- designing the HPO aeration basins to be as deep as practical, thereby providing the needed volume of tankage in the least amount of space; and
- designing the layout of the secondary clarifiers to be as compact as practical by, for example, reducing space allocated for appurtenant structures and reducing the structural clearance between the tank walls.

DCLU concluded that the evaluation undertaken and the information provided by Metro satisfies this element of the Plan Permit Condition. It found that the factors considered by Metro in selecting its alternatives were reasonable, and that, although sizable reductions did not result from the effort, the proposed layout is compact and generally optimizes the use of space at the site.

Other parties, (except CSI) disagree. They argued that Metro put too much emphasis on cost and engineering considerations. They presented witnesses that testified that all non-process facilities (administration, maintenance, oxygen production, hypochlorite, and parking) could be located off-site, and that available technology allowed a large reduction in plant size and should be used.

Defense Fund and Friends offered the testimony of Mr. R.J. Brooks who suggested that the size of the site could be substantially reduced by "enhancing" each phase of the liquids stream processing (and by processing solids off-site.) The witness stated that primary treatment could be enhanced by the addition of alum and polymers which would reduce the amount of solids remaining in the wastewaters after primary treatment through the process of flocculation, which would, in turn, allow a reduction in the size of the facilities needed for secondary treatment. Mr. Brooks also testified that the aeration process (the process that takes place in the HPO basins) could be

enhanced by increasing the atmospheric pressure of the oxygen and increasing the amount of bacteria. He testified that this would allow up to a one acre reduction in the size required for the HPO basins. Mr. Brooks testified that the clarification process could be enhanced by the addition of chemicals that would increase the sedimentation rate (by flocculating them and thereby increasing their bulk or weight) which would allow a reduction in the size of the secondary clarifier of at least one acre. Mr. Brooks further testified that additional size reduction could be used by employing rectangular rather than circular clarifiers.

Mr. Frank Russell testified on behalf of Legal Advocates. Mr. Russell also testified that non-processing facilities and solids processing facilities could be located off-site. He testified that stacked rectangular clarifiers could be used instead of circular clarifiers.

#### Hearing Examiner's Conclusions and Findings:

Metro has complied with this element of the plan permit condition. Metro evaluated alternative treatment technology and alternative clarifier configurations to determine if they would allow a reduction in the size of the plant footprint while adequately addressing other Metro concerns such as capital and operational cost, operational efficiency, and reliability in achieving effluent criteria. There is nothing in the Plan Permit Condition to suggest that they could (or should) consider only the space or size requirement in making its selection regarding treatment technology or clarifier configuration. The factors considered by Metro are reasonable factors to be considered. Metro is responsible for ensuring that the effluent discharged into Puget Sound complies with applicable standards; thus, the reliability of the process to consistently meet those standards is an important consideration. Costs are also an important consideration. Cost were considered by the City Council in its feasibility determination. They should be given equal consideration here. Contrary to suggestions made by witnesses advocating different treatment technologies and clarifier configurations, there is no evidence that Metro did not fully and fairly consider all alternatives or that it was wed to a particular technology or clarifier layout before undertaking its evaluation.

The testimony of Mr. Brooks, though, interesting, was far short of convincing. Mr. Brooks' testimony was only theoretical in nature. Upon cross examination of Mr. Brooks, it became readily apparent that Mr. Brooks did not consider the specifics related to the West Point plant and that no specific factual considerations or assumptions entered into his evaluation of possible treatment alternatives at the West Point site. Further, though certainly well qualified in other areas, the evidence indicates that Mr. Brooks is not an expert in the design of sewage treatment facilities and has not designed or operated a fully functional sewage treatment facility the size of West Point. Mr. Frank Russell is also lacking in the expertise needed to design and operate a sewage treatment facility of the size of West Point.

With regard to the question of whether administration and maintenance facilities could be moved off-site, Metro responded that doing so would result in operational and efficiencies and add costs and would increase the likelihood that the emergency bypass outfall would have to be used in cases of major breakdown. The Hearing Examiner found this testimony to be credible.

#### Hearing Examiner's Recommendation

The Hearing Examiner recommends that the Council adopt the conclusions and findings above and not impose conditions upon Metro requiring adoption of alternative technology or a specific clarifier configuration or requiring removal of non process facilities.

- o Record a declaration of covenants, conditions, and restrictions containing the limitations described in plan permit condition #1

Metro submitted a draft of a declaration of covenants, conditions and restrictions that embodied the size limitations set forth in plan permit condition #1. The City Law Department reviewed the draft and recommended some changes. DCLU recommended the following project-level permit condition:

Recommended Condition 1d - At the time the final design is complete, Metro shall record a declaration of covenants, conditions, and restrictions describing, to the satisfaction of the City's Law Department, the

limitations of the Plan Permit regarding size. If a declaration approved by the Law Department has not been recorded by January 1, 1992, DCLU shall withhold the issuance of any further permits for construction of the West Point facilities until such time as the declaration has been recorded. The declaration shall include the following provisions:

- o Maximum size (32 acres; with no more than 6.1 acres in the shoreline);
- o No parking in the shoreline within the plant footprint;
- o Statement that any reductions in footprint size made possible by use of the Riedel/SMI alternative technology or other means, be implemented as soon as possible (in the case of removing digesters due to the success of Riedel/SMI, removal of digesters and development of landscaped berm (see 1c) would occur within 1 year. The area thus made available for public use would be added to the area dedicated for public access;
- o Any significant changes in the height of appearance of the plant, as determined by the City, shall be prohibited unless prior approval by the City Council is obtained based upon a finding that any such change is consistent with the Plan Permit conditions and project permit conditions.

Metro took exception to this recommended condition for primarily two reasons: the timing established by the recommended condition and the requirement that the declaration include statement regarding reduction in footprint made possible by the use of the Riedel/SMI process. Metro proposed that it not be required to submit the declaration until the issuance of final occupancy permit that the reference to the Riedel/SMI process be deleted.

Other parties stated that Metro should be required to issue the declaration at the time that the Project-Level Permit is issued. The parties argued that Metro would have no incentive to issue the required declaration at the time the final certificate of occupancy is issued because the plant will be fully operational at that time and Metro would have no incentive to issue the declaration.

#### Hearing Examiner's Conclusion and Findings

The recommendation by DCLU is generally appropriate. Metro gives no reason why the timing recommended by DCLU is inappropriate, and the Hearing Examiner cannot think of any reasons why it is inappropriate. The Hearing Examiner agrees with DCLU that Plan Permit Condition #1 contemplates that the declaration would define the ultimate footprint for the plant. The ultimate footprint could be reduced if Metro determines that the Riedel/SMI process or another solids processing technology that would allow removal of the digesters is successful and should be used to process all the solids generated by the West Point plant. It is, therefore, appropriate to require a statement in the declaration that Metro will reduce the size of the plant footprint if it decides to implement a solids processing technology that will allow removal of the digesters. As was the case with Condition 1C, exclusive reference to Riedel/SMI is inappropriate. The recommended language by DCLU refers to "any reductions in footprint size made possible by the use of the Riedel/SMI alternatives technology or other means." (emphasis added by Hearing Examiner.)

#### Hearing Examiner's Recommendation

The Hearing Examiner recommends adoption of DCLU's recommended condition 1d.

#### Plan Permit Condition #2 Public Access

##### 2. Public Access.

Construction activities at West Point shall be organized and carried out in such a way as to avoid any closure of South Beach and to avoid any closure of the North Beach trail, except for temporary short-term closures such as those required to construct a saltwater intake line, construct an emergency outfall,

or implement natural beach protection measures.

Metro shall provide a preliminary construction schedule as part of its project-specific permit application, indicating when beach closures are likely to occur. Metro shall provide updated construction schedules when it applies for construction permits, and at an appropriate later date prior to construction, Metro shall also inform the public and the Seattle Parks Department of any planned beach closures as part of Metro's public information program.

After first phase construction is complete, Metro shall permanently dedicate to the public for park and recreation purposes, through an easement or conveyance of development rights, nonshoreline and shoreline property that is not to be used for Metro's facilities within the footprint defined in Condition 1, including such portions of the perimeter berms and lids as may be consistent with public safety, security, and protection of landscaped plantings. In addition, Metro and the City shall negotiate a memorandum of understanding governing future management of this property.

This condition contains several elements. They are:

- o Avoid any closure of south beach;
- o Avoid any closure of north beach trail, except for temporary short term closures;
- o Provide a preliminary and updated construction schedules and inform the public and the Seattle Parks Department of any planned beach closures;
- o Permanently dedicate to public for park and recreational purposes property that is not to be used for Metro's facilities; and,
- o Negotiate a memorandum of understanding governing future management of the property dedicated to the public.

Each of these elements are discussed below.

#### Avoid any closure of South Beach.

The development of the West Point secondary treatment facility and construction of the perimeter berm between the plant site and the existing South Beach will unavoidably disrupt the use of South Beach. This condition contemplates that such disruption will be minimized to the extent possible. DCLU identifies in its report and recommendation three specific activities that will result in disruption of the use of South Beach. They are: installation of the final effluent line, installation of a influent line for connection to the Alki based transfer line, relocation of the access road, and construction of berms and landscaping. DCLU recommends that none of these activities be permitted to disrupt the use of or close South Beach for more than 12 months and that to the extent possible they be programmed to occur simultaneously. DCLU further recommends that no other activity be allowed to result in the disruption or closure of South Beach. Finally, DCLU recommends that simultaneous closing of the trails along North and South Beach be allowed only during the construction of the perimeter berm and installation of the landscaping and only subject to DCLU's approval upon a showing of necessity by Metro.

Legal Advocates, Defense Fund and Friends, and Magnolia all proposed stricter standards than DCLU. They recommended that no disruption of access to South Beach be allowed during the summer, that South Beach be allowed to be closed for only six months and only to allow construction of the perimeter berm, and that Metro be required to include in its contracts with the contractors who will do the work at the Metro site financial penalties that will be imposed for each day of delay beyond six months not caused by an act of nature. They also recommended that Metro be required to provide free transportation to other beaches during the times south beach is closed.

Metro concurred with DCLU regarding construction of influent line and the perimeter berm. It disagreed with DCLU that construction of the final effluent would disrupt the South Beach, arguing that the effluent line would not be located in South Beach. In support of this argument it stated that south beach should be defined to be the area from the ordinary high water mark waterward, just as "beach" is defined in Plan Permit Condition #6.

#### Hearing Examiner's Conclusion and Findings

The Hearing Examiner concludes that the recommendations by DCLU are generally consistent with the directive to avoid closure of South Beach. The Hearing Examiner agrees with DCLU that the identified activities will result in the disruption or closure of South Beach and that 12 months should be sufficient time to complete these activities. The Hearing Examiner agrees that to the extent practicable, these activities should be programed to occur simultaneously. The Hearing Examiner further agrees that simultaneous closure of the North and South Beach trails should be avoided and that they should be permitted only to allow construction of the landscaped berm and only with the approval of DCLU upon a showing of necessity. The Hearing Examiner believes, however, that, as written, the conditions recommended by DCLU are not enforceable and that a penalty clause similar to the one recommended by Legal Advocates et al. is appropriate.

The Hearing Examiner is not convinced by Metro's argument that the plan permit condition #2 intends South Beach to be defined as only that area waterward of the ordinary high water line. Evidence suggests that the common meaning of South Beach includes the area between the existing access road and the line of ordinary high water as well. This area is widely referred to the Upland South Beach area. Metro witnesses themselves refer to this area as the South Beach area at various times.

Hearing Examiner's Recommendation: Condition 2a

(Note: This condition contains elements of DCLU recommended Condition 2b and c, and is intended to replace both.)

Disruption of access and closures of South Beach for allowed activities shall be kept to a minimum. The following listed activities and only the following listed activities shall be allowed to result in the disruption or closure of access to or use of South Beach and only for the times stated, unless Metro proves to the satisfaction of DCLU and the Parks Department that other activities will necessarily result in the closure of the South Beach. In such instances, South Beach may be disrupted or closed only for the time or duration permitted by DCLU and the Parks Department. In order to minimize disruption of access to South Beach, the effluent and influent line element shall be constructed concurrently and within the time shown, unless Metro can demonstrate to DCLU's satisfaction that this coordination of construction activities is unreasonable. If possible, Metro shall install these elements at or near the end of plant construction and coordinate them with development of perimeter berm to minimize disruptions to South Beach. Simultaneous closing (for a maximum period of one year) of the trails along North and South Beach for construction of the perimeter berm and installation of landscaping may be allowed only upon approval by DCLU and only upon a showing of necessity by Metro.

Metro shall include a penalty clause in its contracts for all construction within the South Beach shoreline district that provides for the imposition of financial penalties for each day of delay not cause by an act of nature. The penalties shall be a minimum of \$1,000 per day or .50 percent of the total value of the contract per day, which ever is greater.

<u>Allowed Activity</u>	<u>Duration</u>	<u>Extent</u>
Installation of final effluent line	12 months	Some disruption of existing roadway
Installation of influent line for connection of Alki base transfer line	12 months	Crossing road, uplands to near MHHW
Relocation of access road and construction of berms and landscaping	12 months	Upland/dune area closed to approximate location of existing path

During the course of the hearing considerable testimony was devoted to the discussion of Metro's stockpiling plan described in Section II.F.2 of this recommendation. DCLU concluded that the proposed stockpiling is inconsistent with the directive of Plan Permit Condition 2 to avoid closure of South Beach, finding that the stockpiling would occur on a portion of the uplands area of South Beach, which would result in the closure of that portion of the beach; that the stockpiling would reduce access to the balance of the beach; and that the stockpiling would interfere with the enjoyment with the balance of the

beach. DCLU further found that Metro's Plan Permit Application did not include stockpiling on the South Beach area and that, therefore, the stockpiling could not have been contemplated as being within the scope of the Plan Permit approval. Legal Advocates, Defense Funds and Friends, and Magnolia generally agreed with DCLU, arguing further that the South Beach will likely have the greatest public recreation value during construction because most activities will be closer to the North Beach and that area waterward of the existing South Beach paved trail on only a few feet of public access during high tide. Both DCLU and the parties other than Metro argued that any cost savings or advantages arising out of a reduction in the number of truck trips were negligible compared to the adverse effects to the public associated with the proposed stockpiling.

Metro argued that the proposed stockpiling is consistent with Plan Permit Condition. It argued that the area proposed for stockpiling is not included in the definition of South Beach, that South Beach ought to be defined as that area waterward of ordinary high water line. It also argued that the stockpiling would not substantially impair access to or use of the beach. Finally, it argued that the advantages arising out of the reduced costs associated with stockpiling and the reduced number of truck trips outweigh the disadvantages associated with any possible interference with South Beach.

Hearing Examiner's Findings and Conclusions:

The Hearing Examiner concludes that the proposed stockpiling does not substantially comply with Plan Permit Condition #2. The evidence of record indicates that proposed stockpiling was not part of Metro's Plan Permit Application. Therefore, it could not have been contemplated to be within the parameters of the Plan Permit Condition. The proposed stockpiling will occur on a portion of South Beach. The argument by Metro that this area is not a part of South Beach is disingenuous. The common understanding of South Beach clearly includes the upland area. Documents submitted by Metro and Metro witnesses refer to this area as South Beach. The suggestion by Metro that the definition of "beach" found in Plan Permit Condition #6 ought to be equally applicable here is without support in the record. The record clearly indicates that that definition was intended to apply to that condition only. The placement of the definition in that condition clearly suggests that it was intended to apply to that to that condition only.

Given that the stockpiling is proposed to be located on a portion of the South Beach, no other conclusion is possible than that the stockpile will close at least a part of the beach to the public. The stockpile will also interfere with the use of the South Beach. If the stockpile is allowed, only a few feet will remain between the water and the toe of the stockpile during high tide. Testimony by Metro witnesses indicated that the removal and addition of stockpile materials will occur throughout the construction, which means that construction activities and associated impacts such as noise and dust will occur in the vicinity of the South Beach for five to six years. The Hearing Examiner agrees with Legal Advocates, Defense Fund and Friends, and Magnolia that during the construction of the West Point facility the recreational value of South Beach will be at a premium because so many of the construction related activities will occur in the vicinity of the North Beach and impair its use. Given that the recreational value of South Beach will be at a premium, any interference with its use must be considered substantial.

Hearing Examiner's Recommendation: Condition 2b

(See DCLU recommended Condition 2a)

The public shall be able to use the South Beach, including the upland/sand dune area (i.e., waterward of the existing or relocated access road) during the construction of the plant. No material stockpiling or closure of the south beach shall be allowed except as allowed by Condition 2.a.

- o Avoid any closure of the North Beach Trail, except for temporary short term closures.

The North Beach Trail (also referred to as the perimeter trail) runs along the northern shoreline between the existing riprap seawall and the treatment plant fence. Access to the trail is provided at the north end of the panhandle where it connects to the Discovery Park North Beach Trail, which climbs up the north bluff hillside of the park. Access to the North Beach Trail is also provided in the vicinity of the U.S. Coast Guard Lighthouse where there is a strip of park land that connects

to the South Beach. The North Beach Trail would be closed by the construction of the perimeter berm and associated improvements between the plant site and North Beach and between the existing digesters and the Coast Guard facility. It would also be closed if the barge for which Metro has made application is approved and Metro decides to construct it. The North Beach Trail could also be closed if the North Beach enhancement project is included in the project as a mitigation element (see Plan Permit Condition #3 - Recreational Opportunities)

DCLU made the following recommendations:

Recommended Condition 2d - Closures of the North Beach and the North Beach Trail shall be minimized. Except for the activities specified below, construction activities in the northern area of the site, including staging, shall be confined within the existing fenceline.

The following listed activities which may result in closure of the trail or part of North Beach shall be permitted. Closures not listed, or closures for durations or extents significantly greater than indicated, shall not be allowed except with prior approval by the Parks Department after a showing of necessity by Metro.

<u>Allowed Activity</u>	<u>Duration</u>	<u>Extent</u>
Construction of visual mitigation elements (berms, landscaping, trail, etc.)	up to one year	North Beach Trail Closed

Metro generally took no exception to this condition as stated above. The condition originally included references to the proposed emergency outfall and required the installation of the berm and the emergency outfall to occur concurrently. Metro withdrew its proposal for the new emergency bypass outfall pipeline and DCLU amended its condition deleting references to it. In the proposed findings and conclusions submitted by DCLU after the hearing, DCLU stated that it recognizes that, with the elimination of the new emergency bypass outfall pipeline, Metro would have to reconnect to the existing bypass early on in its construction phase, this reconnection cannot occur simultaneously with the development of the berms and that it will develop in a separate closure of the North Beach Trail.

Other parties propose that closure of the North Beach Trail be allowed only to permit construction of the perimeter berms, that closure not be allow to exceed one year, and that Metro be required to include in its contracts penalty clauses that would impose financial penalties for delays not caused by act of nature.

#### Hearing Examiner's Conclusions and Findings

The Hearing Examiner concludes that the recommendation by Metro as modified in its Proposed Findings and Conclusions is consistent with Plan Permit Condition #2. This condition is a reasonable one and appears to allow appropriate closure of the North Beach Trail. As is the case with Condition #2a, the Hearing Examiner believes that it is appropriate to include in the condition a requirement that Metro place a penalty clause in its contract imposing a financial penalty in cases of delay.

#### Hearing Examiner's Recommendation: Condition 2c

<u>Allowed Activity</u>	<u>Duration</u>	<u>Extent</u>
Construction of berm landscaping, and trails	12 months	North Beach Trail closed
Reconnection to the existing emergency bypass	up to 2 months	North Beach Trail closed

If the barge facility for which Metro has made an application is approved and Metro decides to construct the barge, closure of the North Beach Trail shall be permitted for up to 6 months. Reconnection to the emergency bypass and construction of the barge shall take place currently, if approval of the barge is granted in sufficient time to allow such concurrent construction.



Metro shall include a penalty clause in the contracts for all construction within the North Beach shoreline district that provides for the imposition of financial penalties for each day of delay not caused by an act of nature. The penalties shall be a minimum of \$1,000 per day or .50 percent of the total value of the contract per day, whichever is greater.

- o Provide preliminary and updated construction schedules and inform the public and Parks Department of any planned beach closures.

These Plan Permit requirements are fairly straight forward. Metro's application includes a preliminary construction schedule. It states that it will provide updated schedules as appropriate and that it will keep the public and the Parks Department informed of any beach closure. DCLU has recommended the following conditions be attached to the Project-Level permit to implement these requirements:

Recommended Condition 2e - Prior to the issuance of permits for any structures, and annually thereafter on the anniversary of that issuance, Metro shall submit to DCLU an updated construction schedule that relates proposed construction activities with anticipated location, duration, and extent of beach and trail closures. This schedule shall be updated and resubmitted prior to the beginning of construction.

Recommended Condition 2f - A plan to maximize access consistent with public safety (e.g., temporary fences, signs, alternative routes, etc.) shall be submitted with the updated schedules (see Condition 2d) for DCLU's approval. This plan shall be implemented throughout the construction period to DCLU's satisfaction unless it is modified with the prior approval of DCLU in consultation with the Parks Department.

This plan shall be revised as necessary and submitted with the updated construction schedule required by Condition 2d.

Recommended Condition 2g - Details of construction as it will occur within or affect use of Discovery Park shall be submitted to the Parks Department for its approval 4 weeks prior to the beginning of any of those activities. The locations, extent, and duration of construction activities must be specified and measures included to minimize disruption of habitat and public use. All areas within Discovery Park involved in construction and use by Metro during construction shall be restored by Metro to the satisfaction of the Park Department within one year of that activity.

Recommended Condition 2h - Metro shall notify the Parks Department and the general public of the closures or physical disruptions of any beach, beach trail, or other trail at least 4 weeks prior to those events. Notification shall include details as to the location, extent, and duration of closure and measures taken to provide alternative access, and other mitigation. This information shall be a regular feature of Metro's ongoing public information program (i.e., included in Metro's Update). Notification to the Parks Department is to be in writing and in a format approved by the Parks Department.

Recommended Condition 2i - Metro shall erect, maintain, and utilize with the approval and direction of the Parks Department, two kiosks (one at the Park entrance, the other near the plant site) for public information regarding construction activities and public access. Notices regarding construction activities and beach or trail closures shall be posted at these kiosks, the Discovery Park Visitor Center, and/or other standard Park bulletin boards or similar facilities at the direction of the Parks Department. Notice of trail closures and/or disruptions shall be posted at trailheads in Discovery Park in order to give warning to hikers. These notices shall be posted at locations and in the form approved by the Parks Department.

Recommended Condition 2j - At the completion of final design or by May 1, 1991, whichever occurs first, Metro shall submit to DCLU a survey of the site establishing construction boundaries. After the completion of construction of all treatment structures, the site shall be resurveyed to establish the legal description to be

recorded with the easement agreement referred to in Condition 2k.

Metro took no exception to these recommended conditions. Legal Advocates, Defense Fund and Friends, and Magnolia Community Club proposed more comprehensive notification requirements than set forth in the conditions recommended by DCLU. They also recommended that Metro be required to coordinate construction activities and closures with the Parks Department, the State Department of Fish and Wild Life and that the condition provide for independent monitoring of compliance with stated closures schedule.

Hearing Examiner's Conclusions and Findings:

Metro's application indicates that it will comply with the requirements to provide construction schedules and keep the public and Parks Department informed about beach closures. The recommendations by DCLU will ensure that Metro lives up to its commitment. The proposals made by Legal Advocates et al. are not necessary to comply with these requirements of Plan Permit Condition #2.

Hearing Examiner's Recommendation: Condition 2e - 2j

The Hearing Examiner recommends that the City Council adopt the DCLU recommended conditions 2e - 2j stated above ("renumbering" this 2d-2i).

- o Permanently dedicate to the public for park and recreation purposes property that is not to be used for Metro facilities.

Metro has prepared a proposed easement for consideration. (Metro included a proposed easement in its application. Subsequently it revised its proposal. See Exhibit 287. References herein are to its revised proposal.) DCLU also submitted a proposed easement. DCLU recommended a condition of approval (DCLU condition 2K) recommending that Metro be required to submit a final copy of the easement to DCLU for Law Department review and approval by no later than January 1, 1992. It recommended that Metro be required to record the easement within one month of the first day of the provision of the secondary treatment at the West Point plant.

Metro proposed adoption of a condition recommending its proposed easement and recommending that the requirements to submit the easement to DCLU by 1992 and that the Law Department review and approve the easement be deleted. Legal Advocates, Defense Fund and Friends, and Magnolia propose that Metro be required to record an easement minus a full legal description prior to the first day of provision of secondary treatment at the West Point plant period. They also propose that the public be allowed to review the easement.

Hearing Examiner's Conclusion and Findings

Both the easement prepared by Metro and the easement prepared by DCLU are consistent with Plan Permit Condition #2. The differences between them do not appear to be substantive differences affecting compliance with the condition. Rather, the differences appear to be in the nature of "mere legalities." The Hearing Examiner assumes that Metro and the City Law Department can and will work out their differences. Review by the City Law Department is obviously necessary and the Hearing Examiner does not believe that Metro would seriously suggest that the City accept the easement without such review. The easement can be prepared for City review prior to preparation of a final legal description for the plant footprint. The date for preparing the easement suggested by DCLU appears to be a reasonable one. There is no evidence of the record that Metro is unable to prepare such an easement. In fact, it has prepared a draft easement already. Metro's preliminary plans provide sufficient detail so that preliminary legal description can be prepared for recommendation. There is no reason apparent from the record why such a description cannot be prepared prior to the completion of the work on the plant. While the Hearing Examiner agrees that Metro may not have any compelling incentive to record the easement after the start up of secondary treatment, there is no evidence in the record to suggest that Metro would not record the easement absent such

incentive. Further, as a public agency, Metro is most certainly interested in its public image. This alone provides a substantial measure of incentive for Metro to "live up to its word." The Hearing Examiner see no value in public review of the easement. The easement is essentially an agreement between the City and Metro. No member of the public has the authority to approve, or withhold approval of, the easement. Without such authority, the review is meaningless, and there is no reason to require it.

Hearing Examiner's Recommendation: Condition 2l

By no later than January 1, 1992, Metro shall submit to the City Law Department a proposed easement for its review and approval. The easement shall include all the provisions set forth in the easement proposed in Metro's Exhibit 287. (Or the provisions set forth in Appendix 6 to DCLU'S Report and Recommendation.) Metro shall record the easement, using an interim legal description complying with the requirements of Condition 21, if necessary, no later than one month from the date of commencement of secondary treatment. Metro shall record an amended easement if the legal description changes after completion of all work on the West Point facility.

- o Negotiate a Memorandum of Understanding governing the future management of the property described by the easement required by Condition 2K.

This requirement is fairly straightforward. Generally, the same issues apply to it as applied to the requirement for an easement. DCLU recommended the following condition:

DCLU recommended Condition 2m. Metro shall prepare a memorandum of understanding to govern the management of the public access area referred to in Recommended Condition 2k. This memorandum of understanding shall provide, to the satisfaction of the Law Department and Park Department, for the public use of the area and the commitment of Metro to maintain and replace plantings as necessary, to provide for adequate litter clean-up and repair and maintenance of trails, road and other features consistent with maximizing the public's use and enjoyment of the area.

If an acceptable memorandum of understanding has not been provided by Metro by January 1, 1992, DCLU shall withhold the issuance of any further permits for construction of the West Point facilities until such time as the memorandum of understanding has been prepared and approved by the Law Department and the Parks Department and signed by the appropriate Metro representative.

Metro, again, took exception with the language in the second paragraph and the other parties, again, suggested that an earlier recording date be required and that public review be required.

Hearing Examiner's Conclusions and Findings

The Hearing Examiner concludes that DCLU's recommendation is consistent with the Plan Permit Condition #2. As is the case with the easement, the Hearing Examiner can find no evidence indicating why the date recommended by DCLU for submission of the memorandum of understanding to the City for review is unreasonable. The memorandum of understanding could easily include language stating that it will not become effective until all the landscape work is completed. Again, the requirement for review by the Law Department is an obvious requirement and one that the Hearing Examiner does not believe Metro seriously objects to. Again, the Hearing Examiner finds no evidence that an earlier recording date is necessary or that public review of the memorandum of understanding would serve any purpose.

Hearing Examiner's Recommendation: Recommendation 2k.

The Hearing Examiner hereby recommends adoption of DCLU's recommendation 2m. If Metro believes that it is appropriate it may add language stating that the effective date of the memorandum shall be the date that the work on the landscape berm is completed.

Recreational Opportunities.

Metro shall work cooperatively with the Seattle Parks Department in designing its secondary treatment facilities at West Point to enhance public access and recreational opportunities. Metro shall also work cooperatively with the Seattle Parks department to develop ways of supervising and carrying out construction activities that will result in improved recreational amenities within Discovery Park.

Metro shall create a South Beach/Lighthouse open space by relocation of the existing effluent pumping and dewatering buildings.

Metro shall evaluate in its design natural beach protection measures and improvements that enhance the public's recreational trails, and paths. Consistent with environmental review and authorization by other agencies with jurisdiction, the City would condition the project-level permit to require such measures and improvements. Funding for such measures and improvements would come from the Shoreline Improvement Fund.

- o Work cooperatively with the Seattle Parks Department in designing its secondary treatment facilities at West Point to enhance public access and recreational opportunities; and to work with the Parks Department to develop ways of supervising and carrying out construction activities that will result in improved recreational amenities within Discovery Park;
- o Create A South Beach/Lighthouse Open Space;
- o Evaluate natural beach protection measures and improvements that enhance the public's recreational experience of North Beach.

Each of these requirements is discussed below.

- o Work cooperatively with the Parks Department.

On its face, this requirement is a process oriented requirement rather than a substantive requirement. By its language, this requirement only states that Metro must "work cooperatively" with the Parks Department. It does not require any particular result to arise out of that process. Clearly, Metro and the Parks Department have different interests and a lack of substantive agreements between the Parks Department and Metro could just as easily arise out of an inability to reconcile those differences as out of a lack of cooperation. By definition, cooperation takes the willingness of both parties to work together, and lack of substantive progress may be attributable the intransigence of one just as well as another. Therefore, lack of agreement should not be construed as evidence of a failure to "work cooperatively." Having said all of this, the record to date suggests that Metro and the Parks Department have worked cooperatively to not only minimize the impact of the construction and operation of the West Point facility on the park and on the beaches, but to enhance park and beach amenities and recreational opportunities. To ensure continued cooperation, DCLU recommended a Project-Level condition of approval requiring such cooperation (DCLU Condition 3c). Metro concurred with DCLU's recommendation. Other parties generally concurred with the recommended condition as well, adding only that the cooperative efforts between Metro and the Parks Department should also consider and reflect the policies of the Discovery Park Master Plan.

Hearing Examiner's Conclusions and Findings

Metro has worked cooperatively with the Parks Department.

Hearing Examiner's Recommendation: Condition 3a - Adopt DCLU Condition 3c as Condition 3a.

Beyond recommending a condition requiring future cooperation by Metro with the Parks Department, DCLU made two substantive requirements under the umbrella of the requirement that Metro cooperate with the Parks Department. DCLU recommended that the Metro be required to mitigate the impact of the construction of the plant facility on Discovery Park Beach Programs by providing funds to the Parks Department's sufficient to add a naturalist and ranger (the equivalent of 1.5 full time

positions) and to purchase a vehicle to allow programs to be relocated to other beaches. DCLU also recommended that Metro be required to make the area at the northern end of parhandle designated by Metro as a site for the future development of additional HPO basins available to the public for access until the future HPO basins are actually constructed.

Each is discussed below.

Requirement for payment of staff and vehicle.

According to DCLU, the recommended condition requiring Metro to pay for Parks Department staffing and the purchase of a vehicle for Parks Department use is justified by disruption to the Park Department Beach Interpretive programs that will result from the closure of the North Beach Trail and general construction activities. According to DCLU, both staff and transportation resources would need to be augmented to conduct interpretive programs at other beaches. DCLU witnesses testified that their request for funds for staffing and the purchase of a vehicle was made by the Parks Department and was adopted as a "pass through" condition that merely adopted the language recommended by the Parks Department. The DCLU witnesses did not have any specific figures justifying the proposed staffing requirement or the proposed purchase of a vehicle. Parks Department witnesses testified that an additional staff naturalist is needed because beach programs are now divided into morning and afternoon programs and an additional staff person is needed to allow a continuation of both the morning and afternoon programs at the two different sites. The Parks Superintendent testified that a half-time clerical person was needed to answer and respond to telephone calls about how West Point construction activities would affect Park programs. The Superintendent also testified that the need to conduct some of the Parks Department Beach Interpretive Programs outside of Discovery Park because of the construction activities at West Point also resulted in the need for a van. According to the Superintendent, the van is needed to transport both Parks staff and program participants to the beaches. The Superintendent testified that presently program participants meet at the Visitor Center in Discovery Park and proceed to the beaches from there. She testified that organizing the movement of the participants as a group would be considerably easier if they were able to all go to the off-site beach in a single vehicle.

Metro testified that it had no particular objection to paying for some Parks Department staffing or making a vehicle available for to the Parks Department for its use, but that it did not believe that the Parks Department justified its specific request. Legal Advocates, Defense Fund and Friends, and Magnolia seemed to suggest that Metro had no right to ask for justification for the request.

Hearing Examiner's Conclusions and Findings

The Hearing Examiner disagrees strongly with the position taken by Legal Advocates and others that Metro does not have the right to ask the Parks Department to justify its request for funds from Metro to pay for Parks Department staffing and a Parks Department vehicle. The money being requested is Metro's money. The beaches on which the Parks Department programs are presently taking place are on Metro's property. Throughout this proceeding, DCLU and others stated that Metro should be treated the same as a private citizen and should not be given any preferential treatment simply because it is a public agency. By the same token, imposing greater burdens on Metro than could be imposed on a private citizen simply because Metro is a public agency is not justifiable. Were Metro a private citizen, the request for funds to pay for Parks staffing and purchase of Parks Department vehicle would have to be justified. And it must be justified in this case.

Metro has agreed to pay for some Parks staffing, and it appears that a request for some payment is justified. The construction activity at the West Point site will place a greater burden on the administration of the Parks Department interpretive program. It appears that some additional staff time will be needed to carry this burden. It further appears that the proposal for the expansion of West Point has, at least temporarily, given rise to a greater burden on Parks Department clerical staff. There is not, however, any evidence in the record indicating how much additional staff time will have to be spent on the

Parks Department interpretive program or how much additional staff time has been required or will be required to answer questions about the effect of the West Point proposal on Parks programs. Not knowing how much additional staff time will be required because of the West Point proposal, it is not possible to state specifically the staffing level that Metro should be required to fund. The request by the Parks Department for funds to purchase a vehicle is not justified by the evidence. The testimony by the Parks Superintendent indicates that the Parks Department is not even sure of what kind of vehicle would be needed. There is no evidence indicating that a vehicle would be needed full time and year around. At best, the evidence suggests that at times the Parks Department may need an additional vehicle to transport either Parks staff or beach programs participants or to both off-site beaches. There is nothing in the record to suggest that these needs can not be met by a vehicle that would be made available on an as needed basis.

Hearing Examiner's Recommendation: Condition 3b

Metro shall compensate the Parks Department for additional staff time spend on administering the Parks Beach Interpretive Program and additional staff time spend by clerical staff answering questions regarding the impacts of the proposed and actual West Point construction activities on Parks programs. The Parks Department shall provide Metro a regular statement of the amount of staff time spend on these two items. Metro shall compensate the Parks Department for the actual staff time at the Parks Department pay rates the specific mechanics of how this payment by Metro to the Parks Department will take place shall be worked out between the Parks Department and to Metro.

Metro shall work cooperatively with the Parks Department to development a program that will make it possible for Metro to make a vehicle available to the Parks Department on a as needed basis to administer its beaches program. Metro shall make a vehicle available to the Parks Department when it is needed.

Requirement to make area proposed aeration basins available to the public.

DCLU suggests that the recommended condition requiring Metro to make the area proposed for future HPO development temporarily available for public access is justified because this area would not be needed for at least 30 years and in the mean time would increase recreational opportunities in Discovery Park, and, at least, temporarily, reduce the plant footprint as directed in Plan Permit Condition No. 1. The Parks Department proposed and requested this condition. Other parties, except Metro, generally concurred with this condition. Metro took exception to it, claiming that making the area available presently only to withdraw it in the future would raise a hue and cry period and cause Metro public relations problems in the future.

Hearing Examiner's Conclusions and Findings.

The Hearing Examiner concludes that requiring Metro to make the future aeration basin area available for public access and recreational use goes well beyond the scope of plan Condition No. 3 and the requirement that Metro "work cooperatively with the Seattle Parks Department in designing its secondary treatment facilities at West Point to enhance public access and recreational opportunities." (Emphasis added by Hearing Examiner.) The evidence of record demonstrates that Metro has worked cooperatively with the Parks Department in designing its plant to enhance recreational opportunities. The evidence demonstrates that Metro has worked with the Parks Department in designing the perimeter berms and other landscaping. The evidence demonstrates that Metro has worked cooperatively with the Parks Department in designing the pathway on the north beach site berm. Making the area proposed for the future aeration basins available for public use has nothing to do with working cooperatively with the Parks Department in designing the secondary treatment facilities. Making the area available is not a design issue.

However, the Hearing Examiner also concludes that the proposed condition is justified by Plan Permit Condition #1 and the requirement that the plant footprint be made as reasonably small as possible. The evidence of record suggests that Plan Permit Condition 1 did not

address this question because it did not appear that the area would remain available for the next 30 years or so. Plan Permit Condition No. 1 clearly intends that the plan footprint be reduced to the extent possible without jeopardizing Metro's obligations to meet secondary treatment effluent requirements. The recommended condition that Metro make the area proposed for future aeration basins available until it is needed would allow a reduction in the plant footprint for a substantial number of years. The Hearing Examiner finds Metro's concern about a future public hue and cry to be inadequate to justify not making the area presently available. The Hearing Examiner agrees with DCLU that Metro can minimize the likelihood that a hue and cry will be raised by posting signs throughout the area stating that it will be only temporarily available and that it is being made available to the public by Metro. The Parks Department Superintendent testified that the Parks Department would work cooperatively with Metro to let the public know that the area will be available only temporarily. (The Hearing Examiner is somewhat surprised that Metro would trade off a merely speculative future hue and cry against what appears to be a certain present hue cry if it does not make the area available. It is the unsolicited opinion of the Hearing Examiner that it would be Metro's interest to make the area presently available.)

Hearing Examiner's Recommendation: Condition 3c

The Hearing Examiner recommends adoption of DCLU recommended Condition 3b with the following addition:

The temporary easement area may be posted with a sign stating that public use of the area is being made available by Metro and is temporary and will terminate when additional HPO basins are built. The signs may be placed in areas that are conspicuous to the public; however, the design shall be subject to approval by the Parks Department.

o Create a South Beach/Lighthouse open space.

The suggestion that such an open space area should be created came from Metro during the Plan Permit hearings. Metro's Project-Level Permit application indicates that it intends to create such an open space area. DCLU recommended the following conditions to ensure that the open space area would be created:

Recommended Condition 3d - Metro shall remove the existing effluent pumping station and dewatering buildings, and create a South Beach/Lighthouse open space as part of the perimeter mitigation/-landscaping. As shown in Figure 7 (also Sheet 99017), the topography of this space shall be developed to integrate with the proposed berms to the east and the relatively flat area to the west. The area shall also be planted with appropriate species for the proposed low forest shrub zone, and a handicapped-accessible path shall connect the North Beach Trail to the trail leading to South Beach.

Recommended Condition 3e - Metro shall consult and work cooperatively with the Parks Department to design and construct this open space area consistent with the mitigation/landscape plan, and to enhance access and recreational opportunities to the satisfaction of the Parks Department. Any use or development of Parks Department property must have the prior approval and permission of that Department.

All parties to the proceeding concurred with these recommended conditions.

Hearing Examiner's Conclusions and Findings

The Hearing Examiner concludes that Metro's Application demonstrates that it will comply with this requirement and that the recommendations of DCLU will ensure such compliance. Metro's application indicates that it will remove the existing effluent plumbing station and dewatering buildings and that it will create South Beach/Lighthouse open space area. (See Metro Application Sheet 990017). The conditions recommended by DCLU clearly state the measures that Metro must take to create the open space area. All parties concur with DCLU's recommendation.



Hearing Examiner's Recommendation:

The Hearing Examiner recommends that DCLU Conditions 3d and 3e be adopted as written.

- o Evaluate natural beach protection measures and improvements for North Beach.

Pursuant to this requirement Metro developed a North Beach enhancement plan with the aid of appropriate experts. The plan was submitted to agencies with jurisdiction for review. Several agencies expressed concerns about the effects the proposed enhancement plan would have on the eel grass beds off of North Beach and on intertidal fauna. Presently, all parties, including Metro, agree that further and more detailed studies will have to be undertaken to satisfactorily address the concerns of various agencies. All parties except Metro believe that Metro should pay for this further studies. Metro believes that the further studies should be paid by or from the Shoreline Improvement Fund. (Created by Plan Permit Condition No. 10). Legal Advocates, Defense Fund and Friends and Magnolia argue that further studies of the eel grass community and intertidal flora and fauna would be needed even if enhancement of North Beach were not being proposed because of the overall impacts the Metro facility will have on the intertidal area off of North Beach, particularly if the proposed barging facility is developed. DCLU makes the following recommendation:

Recommendation 3f. Metro shall prepare at its own expense and submit to the Parks Department a satisfactory quantitative study of the north beach intertidal area, based on several key transects, which provides an inventory and mapping of marine organism communities. Epibenthic and Infaunal organisms, as well as macroalgae and eel grass, are to be included in this study. This study shall be approved by the Parks Department. Metro shall work cooperatively with the Parks Department to revise the north beach concept plan and to obtain the necessary permits for the north beach enhancement measures improvements. The cost of design and construction of the beach enhancement measure and improvements shall be paid from the shoreline improvement fund.

Hearing Examiner's Conclusions and Findings

The evaluation and development of the North Beach enhancement plan by Metro is not sufficient to satisfy this requirement. All parties, including Metro, agree that further studies are needed. Plan Permit Condition No. 3 contemplates that Metro shall undertake and pay for such studies. The Hearing Examiner understands the requirement of Condition 3f to mean that Metro shall undertake all studies that are necessary to satisfy all agencies with jurisdiction. The additional language recommended by the other parties about the barge is not necessary because Metro has made a separate application for the barge. That application will be subject to the requirements of the agencies with jurisdiction deemed appropriate. Generally, those agencies are the same as the agencies that have jurisdiction over the enhancement plan.

Hearing Examiner's Recommendation:

The Hearing Examiner recommends the City Council adopt of DCLU's recommended condition. 3f.

In addition to recommending that Metro be required to undertake additional studies to evaluate plans to enhance north beach, DCLU recommended that Metro be required to improve access to the beach over the existing riprap. It recommended that the riprap be modified to the Parks Department's satisfaction as part of the perimeter mitigation work. It also recommended that Metro be required to lower the riprap to 15 feet above sea level. Metro took exception to the proposed requirement to lower the riprap to a level of 15 feet stating that a higher elevation of the riprap was needed to protect the West Point facility. Metro also proposed that it be required only to consult with the Parks Department rather than obtain approval of the Parks Department on the improvements to be made to the riprap wall. Metro did not object to improve the riprap wall. Other parties generally concurred with DCLU's recommendation, recognizing that the final riprap height could be more than 15 feet.

Hearing Examiner's Conclusions and Findings.

Requiring Metro to improve the riprap wall to enhance access to North Beach is consistent with Plan Permit Condition 3. Metro's expert testified that the riprap was unattractive and detracted from use and enjoyment of the beach. Metro's expert also testified that it could be lowered to 15 1/2 feet without threatening the plant. The wall is higher than 15 1/2 feet at many points. Work on the rip-rap wall must be approved by the City, as must all other work at West Point, to ensure it complies with permit approval. That means the City must be "satisfied." The Parks Department is the appropriate agency to represent the City on this as part of the project.

Hearing Examiner's Recommendation: Condition No. 3g

Metro shall modify the existing riprap revetment along North Beach to the satisfaction of the Parks Department to improve access to North Beach. The concrete debris and other deleterious and inappropriate material shall be cleaned out of the revetment and the level of the riprap shall be lowered to no more than 15 1/2 feet. The inland edge of the riprap shall be backfilled with crushed rock and sand and be planted with doon/beachgrass between the trail and the revetment. Metro shall retain the sandy "pocket beach" at the far end of the panhandle.

Plan Permit Condition #4 - Odor control

In consultation with the Puget Sound Air Pollution Control Agency, Metro shall design and install equipment to control potential emissions of odors and airborne pollutants from sewage handling and processing facilities at West Point (including Metro's manhole covers in Discovery Park) to a level of no more than five odor units as measured at any publicly accessible area outside the West Point plant boundary. Metro's project-level permit applications shall include analytical documentation of the odor control measures and technology that are planned to achieve compliance with this standard.

All loaded sludge trucks leaving West Point shall be covered with impermeable covers.

This condition requires Metro to:

- o Design and install equipment to control potentially emissions of odors and air borne pollutants, with the odor control equipment being designed to reduce identifiable odors to a level of no more than 5 odor units as measured at any publicly accessible area outside the plant boundary;
- o Include analytical documentation of odor control measures and technology;
- o Cover all loaded sludge trucks leaving the West Point plant with impermeable covers.

Each of these requirements are discussed below.

Design and install equipment to control odors and air borne pollutants, with the odor control equipment being designed to reduce identifiable odors to a level of no more than five odor units at any publicly accessible area.

It is probably not a surprise to anyone that sewage treatment plants can stink. This requirement is intended to limit how much the West Point Plant stinks. Generally, the determination as to whether something stinks is fairly subjective - different people will have different opinions as to whether something stinks.

This condition seeks to employ a more objective measure of odor - the "Odor unit." An odor unit is a measure of the concentration of odor in the atmosphere - more specifically, it is a measure of the amount of air that is required to reduce the odor of a sample of air to background levels. An odor unit is one cubic foot of air. The number of cubic feet of air needed to reduce one cubic foot of air sample to background levels is the measure of the odor units of that odor sample. Thus, if one cubic foot of air is needed to reduce a

cubic foot of air sample to background level, the air sample is considered to have an odor level of one odor unit. (One odor unit is considered to be generally undetectable or indistinguishable from background levels. So, as a practical matter no air sample would have an odor unit level of one. Odor levels do become detectable at 2 odor units and distinguishable, that is to say, people can not only detect the odor, but tell what it is, at 3 odor units.) Odor units are measured using "odor panels" a cross section of the population with various senses of smell. In essence, the panel is asked to smell air samples and, as measures of background air are added, to indicate when it can no longer detect a difference between the air sample and a sample of background air. When the panel can no longer detect a difference, the measure of background air that was added is taken. This measure is the measure of odor units. This condition limits the number of permissible odor units to five.

In addition to having to meet the five odor unit standards, the West Point plant will have to comply with the regulations of the Puget Sound Air Pollution Control Agency (PSAPCA) for regulated emissions. PSAPCA does not have a quantitative standard for odor, instead, its regulations require that "effective control apparatus and measures be installed and operated" to reduce odors to a "reasonable minimum", generally considered to be just below the "complaint level." If the reasonable minimum standard is not met, additional control apparatuses and measures have to be installed.

Metro's application states, and its witnesses testified, that the West Point plant is being designed to prevent discernible odors at publicly accessible areas beyond the plant boundary and that the plant will comply with or do better than the five odor unit standard established by this Plan Permit Condition. To meet this standard, Metro will employ various measures and technologies. The single most important element of Metro's odor control plan is a high efficiency "packed tower" type liquid scrubber. This scrubber would use hydrogen peroxide to increase oxidation and sodium hydroxide to control pH. It would be comprised of six single-stage packed towers. Three would be for the liquid stream process (influent control structure, wet well/screening/grit removal, and the primary clarifier basins). The other three would serve the solids part of the process (sludge thickening, dewatering, and truck loading). Space is also being reserved for another tower if future monitoring determines there is need for additional odor control equipment. Space would also be provided for a second-stage scrubber to supplement the single-stage scrubbers used for solids processes. All the equipment associated with odor control is to be sized to accommodate an expanded system if such a system is warranted in the future.) Odor control for the sludge digester vents would be an activated carbon system. The foul air would be collected and passed through the activated carbon before being vented to the atmosphere. Minor odor control systems (e.g., liquid absorption or activated carbon scrubbers) are proposed at various places, including at manholes near the site and in Discovery Park.

In addition to proposing specific odor control technology, Metro's odor control plan calls for odor control or odor levels to be considered a factor in selecting processing facilities. Odor levels played an important consideration in Metro's selection of HPO to treat the sewage at West Point. HPO has the least odor generating potential of all secondary treatment processes.

Metro has included the five odor unit standard in its contract with Riedel/SMI and will require the facility to comply with the standard. Metro's application indicates that the Riedel/SMI building (where the sludge will be processed) will be maintained at a negative pressure, and potentially odorous gasses will be segregated and treated by either incineration or scrubbing towers.

In addition to odor, other air emissions that could affect air quality will be produced during plant construction and operation. Substantial amounts of fugitive dust and vehicle and equipment exhaust will be generated during excavation and construction-related activities at the site. During plant operation, air emissions, including nitrogen oxides, sulfur oxides, methane, VOC (volatile organics), particulate matter, and air toxics will be produced.

These emissions are considered "pollutants" (i.e., are regulated because of potential for adverse effect) and must meet the emission standards set for each.

Metro will be required to get approval of all its emission controls for PSAPCA through a review and permit process called "Notice of Construction". Metro must demonstrate that the plant will be in compliance with ambient air quality standards. PSAPCA reviews and evaluates the types and amount of equipment proposed and requires that the Best Available Control Technology (BACT) be used. Metro does not specifically state how the West Point will meet PSAPCA standards; rather, it simply states that it will.

DCLU recommended several project level conditions to ensure compliance with the five odor unit standard and other emission standards (4a through 4g). Of those, only 4a, 4b, and 4d gave rise to objections by Metro or other parties or both.

DCLU's recommended Condition 4a states:

Odors emanating from the treatment plant shall not exceed five (5) odor units as measured from any publicly-accessible area outside the plant footprint. Processes shall be chemically treated, facilities enclosed, ventilating air treated, and/or other measures employed as necessary to achieve the required performance standard. Metro shall be responsible for compliance with this condition regardless of the source of odor within the plant.

This condition is basically just a restatement or more detailed statement of the Plan Permit Condition. Nonetheless, all other parties, except Metro (and CSI) objected to it. They recommended that the standard be lowered to two odor units, arguing that odors above 2 odor units are detectable and two odor units is achievable.

Subsequent to the hearing, DCLU recommended that Condition 4a be amended to establish an upper odor unit limit of three. It based this recommendation on testimony by witnesses that odor becomes distinguishable at three units and that three odor units can be accomplished. DCLU argued that lowering the level is appropriate under these circumstances because the Council's interest when it adopted Plan Permit Condition 4 was to reduce odor levels to nondetectable levels.

#### Hearing Examiner's Conclusions and Findings

The Hearing Examiner concludes that the odor standard intended by the City Council is five odor units and that compliance with this standard is sufficient to satisfy Plan Permit Condition 4. This conclusion is based on the unambiguous language of the condition. When language is as clear and unambiguous as it is in Plan Permit Condition 4, it is contrary to accepted rules of interpretation to go beyond the plain meaning of the words to determine intent.

The Hearing Examiner concludes that Metro's application and evidence of record indicate that the West Point Plant will comply with the five odor unit standard and all other standards. Metro will employ a number of odor and emission control measures intended to ensure that the plant meets or does better than the required standards. The measures that Metro proposes to employ are described in detail above.

All evidence of record indicates that the plant will meet the five odor unit standard. The PSAPCA odor standard is a "reasonable minimum" standard. This is essentially a "nuisance" standard or the odor level at which odors are detectable. Odors are detectable between two and three odor units (and distinguishable or identifiable as to source between two and three odor units. Testimony by Metro's experts indicates an odor unit of 1.5 odor unit can be met at plant boundaries employing the odor control measures proposed by Metro.

Evidence of record similarly indicates other emission standards can be met or bettered. As indicated below, PSAPCA raised some questions about Metro's initial evaluations proposed emission control measures to which Metro attempted to respond. There is not any evidence in the record indicating that Metro's response satisfied PSAPCA; however, the issues raised by PSAPCA related more to the methodologies employed by Metro in

its evaluation than to the substantive question of whether emission standards can be met. The Hearing Examiner assumes that Metro can adequately address PSAPCA's concerns, if it has not done so already. There is no question the requisite technology exists to meet all required emission standards. There is no question that Metro is legally obligated to meet them. If presently proposed control measures do not meet the standards, Metro will be required to employ additional or different measures.

Hearing Examiner Recommendation: Condition 4a

Adopt DCLU's recommended condition 4a as written (with references to 5 odor units).

DCLU's recommended Condition 4b stated:

Prior to issuance of building permits for any structure which will house process facilities, Metro shall demonstrate to DCLU's satisfaction that odor control equipment and measures have been incorporated into the building design. Special situations, including but not limited to manhole covers in Discovery Park and digester vents, shall be included in the odor control program and shall be equipped with odor control systems.

Metro took exception to this recommended condition stating that it erroneously assumes that every structure housing process facilities will have odor equipment. It recommended that the condition specifically identify the structures that would include odor control equipment. It also recommended that the second sentence of the condition should focus on "problem" manholes.

In response to Metro's objection, DCLU amended its recommendation to read:

Metro shall demonstrate to DCLU's satisfaction that odor control equipment and measures have been incorporated into the plant design. This information shall be provided prior to issuance of the first building permit for a process facility structure. Special situations, including but not limited to manhole covers in Discovery Park and digester vents, shall be included in the odor control program and shall be equipped with odor control systems.

Hearing Examiner's Conclusions and Findings

The change made by DCLU to its recommended Condition 5b appears to adequately address Metro's concern about having to demonstrate that odor control facilities are included in every structure. DCLU's reference to manhole covers reflects the language in the Plan Permit Condition.

Hearing Examiner's recommendation: Condition 4b

Adopt DCLU's amended Condition 4b

DCLU's recommended Condition 4d establishes a testing program for odor control. It reads:

After the plan is operational and within three months of the completion of all construction (including mitigation elements), Metro shall test odor levels to establish whether or not the five odor unit standard is being met. Every four months thereafter, in August, December, and April, beginning with the month that is not more than four months after the initial test, Metro shall repeat the testing. Metro shall also test at other times at the request of DCLU in response to complaints. The methodology and the manner of conducting the testing must have approval of DCLU. If DCLU deems it necessary, Metro shall pay for independent verification of tests and test results.

At any time the results of testing indicate that the standard is being exceeded, Metro shall, upon receipt of notice from DCLU that this condition is not being met, have 30 days in order to bring odor emissions into compliance using existing equipment or whatever modifications would be effective. After such remediation is complete, or 30 days, whichever come first, Metro shall repeat the testing process. If results still indicate that the standard

is not being met, Metro shall, upon notice from DCLU, have up to 90 days to install additional controls and/or adjust its processes in order to bring odor emissions into compliance.

Failure to regularly meet the standard (i.e., three test results indicating non-compliance in any 2-year period) shall be considered evidence of chronic and/or repeat violation of this condition and DCLU shall take appropriate action for non-compliance as prescribed by the Seattle Municipal Code.

After five years of testing as prescribed above without exceeding the five odor unit standard, the requirement for scheduled testing shall cease and Metro shall test at the request of DCLU.

All parties agree that testing is appropriate; however, they disagree about how often, when, and how long it should take place. Metro objected to this condition. It argued that odor did not have to be measured as frequently as recommended or for as long. It argued that odor testing during the worst possible odor conditions late summer when warm weather and slow moving sewage conditions generally prevail - is sufficient. It also argued that a two year testing period should be sufficient since odor control equipment is not generally effected over time. It proposed the following alternative condition 4d:

For the first two years after the treatment facilities have become operational and perimeter berms and landscaping have been installed, Metro shall determine the odor levels generated by plant operations by collecting air samples on South Beach and North Beach once a week for four weeks during the month of August. Wind direction and speed and tide level shall be noted at the time of each test. The samples shall be tested for odor levels in accordance with procedures approved by PSAPCA, and test results shall be provided to DCLU within 30 days after the test period.

If the tests show that the standard set forth in Condition 4a is not met at any sampling point due to operation of the treatment facility, Metro shall submit a written report to DCLU within 30 days after test results are provided, setting forth corrective action and a schedule for implementing such action. Metro shall verify the effectiveness of corrective measures to the satisfaction of DCLU.

Metro shall conduct additional testing upon request by DCLU to confirm ongoing compliance with this condition. If DCLU deems it necessary, Metro shall pay for independent verification of tests and test results.

Other parties generally agree with the frequency of testing recommended by DCLU, but state that it should generally be done randomly by, or at the direction of independent parties. All parties agree that in addition to any scheduled times, testing should be done in response to complaints and at the request of DCLU to ensure continuing compliance.

#### Hearing Examiner's Conclusions and Finding:

Presently, the ability of the West Point plant to meet odor and emission standards is only theoretical. Whether the plant will meet the standards cannot be determined until appropriate odor and emission testing is undertaken when the plant is in operation. Therefore, it is necessary to require testing for compliance with the standards after the plant is in operation.

The Hearing Examiner concludes that the testing program proposed by Metro is generally sufficient to ensure compliance with the Plan Permit Condition. All witnesses agreed that odor is likely to be worst in August when temperatures are high, winds are weak and infrequent, and sewage flows are slow. There is no evidence in the record that testing at other times of the year (except in response to complaints) is likely to result in public benefit. There is also no evidence that testing for a duration exceeding two years is likely to result in any appreciable added public benefit. On the other hand, additional testing in response to complaints or in response of requests made by DCLU will result in additional public benefits. Such testing will allow problems to be detected and corrected as they arise.

Though the frequency, time, and duration of testing proposed by Metro is reasonable, the time Metro proposes to start testing is not. There will be an approximate two year span between the start of plant operation and completion of the berm. This is a long time with no initial testing for compliance. Also, there is no evidence that the berms will play a significant role in controlling odors.

The compliance schedule proposed by Metro is also unreasonable. There is no evidence in the record stating why it should take 30 days to make the test results available to DCLU and another 30 to do nothing more than set a course of correction. Such a delay can be significant if there is a violation of the odor standard. This is particularly true when any odors generated by the plant are likely to linger as they are in August and when the beaches and hillside are most likely to be used, as they are in August.

Approval of the testing procedure by PSAPCA and DCLU is appropriate since both PSAPCA and project (and plan) permit conditions must be met. Since DCLU may lack the requisite expertise, it is also appropriate to require Metro to pay for an expert of DCLU's choice to devise the testing procedure, if DCLU chooses.

Hearing Examiner's Recommendation: Condition 4d

The Hearing Examiner recommends adoption of the following Condition 4d:

For the first two years after the treatment facilities have become operational, Metro shall determine the odor levels generated by plant operations by collecting air samples on South and North Beach and the Discovery Park hillside trails once a week for four weeks during the month of August. Wind direction and speed and tide level shall be noted at the time of each test. The samples shall be tested for odor levels in accordance with procedures approved by PSAPCA and DCLU. Test results shall be provided to DCLU within five days after the test period. If DCLU deems it necessary, Metro shall pay for an expert of DCLU's choosing to devise testing procedures. Also, if DCLU deems it necessary, Metro shall pay for independent verification of the tests and test results.

At any time the results of testing indicate that the standard is being exceeded, Metro shall, upon receipt of notice from DCLU that this condition is not being met, have 30 days in order to bring odor emissions into compliance, using existing equipment of whatever modifications would be effective. After such remediation is complete, or after 30 days, whichever comes first, Metro shall repeat the testing process. If results still indicate that the standard is not being met, Metro shall, upon notice from DCLU, have up to 90 days to install additional controls and/or adjust its processes in order to bring odor emissions into compliance.

Failure to regularly meet the standard (i.e., three tests results indicating non-compliance in the two-year period) shall be considered evidence of chronic and/or repeat violation of this condition and DCLU shall take appropriate action for non-compliance as prescribed by the Seattle Municipal Code.

In addition to the conditions discussed above, DCLU recommended four additional conditions regarding odor or emission controls (Condition 4c, e, f, and g). DCLU and Metro concurred on them. Other parties did not necessarily agree, but their points of disagreement were minor. Generally, other parties proposed more stringent and elaborate compliance and enforcement standards. Defense Fund and Friends proposed a system of compliance and enforcement standards and procedures that would have required creation of new City permits and new administrative procedures.

Hearing Examiner's Conclusions and Findings

The proposed conditions and existing code provisions are adequate to ensure compliance. The proposals of other parties evince a general distrust of Metro and assume it will violate conditions of approval and will not be responsive in correcting violations. The record does not support this distrust or assumption. The compliance/enforcement system proposed by Defense Fund and Friends is well beyond the scope the project level permit process and to this recommendation.

Hearing Examiner Recommendation: Conditions 4.c, f, and g.



Adopt DCLU's recommended conditions 4c, e, f and g. These conditions are set out below for the Council's reference.

Recommended Condition 4c - Odor control equipment and other measures shall be installed and fully functional by the time operation of the secondary treatment facilities begins. Metro shall ensure that all odor control equipment and other measures shall be operated and maintained in a manner that is consistent with the five odor unit standard of Condition 4a.

Recommended Condition 4e - Prior to the issuance of building permits for construction of any process structures that are subject to Puget Sound Air Pollution Control Agency (PSAPCA) permits, Metro shall demonstrate to DCLU's satisfaction through obtaining the requisite permits or other evidence from PSAPCA that the proposed emission controls are designed to achieve compliance with applicable standards for all regulated emissions.

Recommended Condition 4f - Emission control equipment and measures approved and/or required by the Puget Sound Air Pollution Control Agency shall be installed, operated, and maintained in a manner necessary to at minimum meet the level of control mandated by all applicable standards.

Recommended Condition 4g - In order to control the release of particulate matter and other pollutants into the atmosphere during construction, dust suppression measures and/or other techniques shall be used as needed to minimize adverse air quality impacts to the satisfaction of DCLU, consistent with the regulations of the Puget Sound Air Pollution Control Agency and with reasonable mitigation of potential adverse health impacts. Control measures should include, but not be limited to, truck wheel cleaning/washing to ensure that construction vehicles do not track dust and dirt onto the streets; sprinkling construction area or otherwise providing that dust and dirt is not blown into the atmosphere; and controlling vehicle exhaust. Metro shall employ effective controls and DCLU may require other or additional controls as needed to provide effective mitigation.

o Include analytical documentation of the proposed odor controls

This requirement is straightforward, and does not require elaboration.

Hearing Examiner's Conclusions and Findings

Metro has complied with this requirement. It submitted analytical documentation with its application.

Metro has investigated the causes of odor in sewage treatment, the various rates at which odors are emitted from various processes, the rate of the dilution of odor under different conditions, and the equipment and processes available to control odor. Metro did dispersion modeling to assess the potential for detectable odors to occur off-site.

Metro used an EPA-approved mathematical air dispersion model (the "Industrial Source Complex-Short Term" model) to make its assessment of odor control effectiveness. Projected odor concentrations were calculated relative to 91 receptor sites in and around the proposed plant under several different conditions. Five odor sources (nine odor control scrubber, digesters, HPO aeration basins, secondary clarifiers, chlorine contact chamber) were included in the analysis.

Metro concluded that under the conditions it analyzed, odors would not be detectable (i.e., odor unit levels would be less than one), except within a limited area north of the existing east primary clarifier. Odor levels in that area would approach three units, but would do so less than five percent of the time. In any event, the Metro study states "Odors from the West Point treatment plant should always be less than the plan permit limit of five odor units, even under the worst-case atmospheric conditions..."

PSAPCA raised questions about the documentation submitted, and Metro submitted additional documentation in an attempt to respond to PSAPCA's

questions. At this writing, the hearing examiner does not know if PSAPCA is satisfied with Metro's response. However, the response does appear to at least address the questions raised by PSAPCA.

Hearing Examiner's Recommendation: Condition 4h

(This is a condition not specifically recommended by DCLU).

Metro shall submit to PSAPCA odor and emission studies satisfactory to PSAPCA prior to the issuance of building permits for any process facilities.

As part of preparing to judge the effectiveness of the controls in the future, Metro has also proposed odor complaint procedures that would include: a description of odor complaint procedures in Metro publications, listing the West Point telephone number in the "blue pages of the telephone book; sending all complaints to the plant's main control center to be investigated by the supervisor; logging each complaint; making corrections as needed; contacting the complaint for additional information; keeping all information in a data file to document trends and recurring problems and to aid in setting priorities for correcting action.

DCLU recommended a condition of approval embodying these elements (4h). It also recommended that Metro be required to post signs on the beach areas and the hill informing people of odor complaint procedures (4i). Metro took exception with this condition arguing that it would encourage complaints.

Hearing Examiner's Conclusions and Findings

The Hearing Examiner concludes that Metro's proposed odor complaint procedure is adequate. The Hearing Examiner is at a loss as to the authority to require any kind of complaint procedure, let alone one more comprehensive or extensive than the one proposed by Metro. Plan Permit 4 does not, at least on its face, require implementation of such a program. The Hearing Examiner agrees that signs on the beach would generate some level of unwarranted complaints and that they are not necessary.

Hearing Examiner's Recommendation: Condition 4i

Adopt DCLU's recommended Condition 4h (and renumber it 4i).

The Hearing Examiner also recommends that the Council reject DCLU recommended Condition 4i.

Cover sludge Trucks.

Metro proposes to cover filled sludge trucks with an impermeable cover. The testimony (deposition) of a Metro witness described a system of covering the trucks that would not only cover the trucks but, would eliminate the odors emanating from them by drawing the air under the covers through a carbon canister.

Hearing Examiner's Conclusions and Findings

Metro's proposal complies with this requirement. Metro has stated that it will require Riedel/SMI to cover the trucks as well. The Hearing Examiner assumes "impermeable" to mean impermeable to odors.

Hearing Examiner's Recommendation: Condition 4j

Metro shall ensure that all loaded sludge trucks are covered with covers impermeable to odors as soon as they are loaded. All loaded sludge trucks must remain covered at all times while on site and during transit. If the system described by Mr. Mark Poling in his deposition is available, it shall be used (or one similar to it). In any case, the best available technology shall be used.

Plan Permit Condition #5 - Traffic

Metro's application for project-specific permits shall include Facilities management and Transportation Plans for construction and operation that have

as their goals minimizing traffic impacts caused by the West Point treatment facilities.

A. The construction transportation plan shall provide for the following mitigation measures:

1. Temporary measures to better separate pedestrians and vehicles and promote safety along the construction haul route leading from 15th Avenue West to the West Point site e.g., traffic signals, crossing guards, pedestrian overpasses);
2. A non-shoreline location for any off-site construction staging area, approved by the City;
3. Busing construction workers to West Point from an offsite, non-shoreline location that has access to major arterials;
4. A construction schedule that limits construction traffic during rush hours, at night, and on weekends and holidays, consistent with the terms of the Seattle construction noise ordinance;
5. Identification and repair/reconstruction of streets adversely impacted by construction traffic, including assessment of preconstruction street improvements to minimize traffic noise; and
6. Provisions to ensure that construction traffic complies with posted speed limits in Discovery Park.

B. The operational transportation plan shall provide for the following mitigation measures:

1. Limitations on operational truck traffic at night and on weekends and holidays;
2. Provisions to ensure that operational traffic complies with posted speed limits in Discovery Park; and
3. Limitations on the volume of sludge truck traffic. The number of loaded sludge trucks leaving West Point shall not exceed 13 per day (yearly average).

C. The transportation plan shall also evaluate the following potential mitigation measures:

1. Barging of bulk materials;
2. Alternative truck routes; and
3. Measures to separate pedestrians and operational traffic within Discovery Park.

D. Metro shall locate its plant entry gate in an area that avoids adverse impacts on slope stability and hillside habitat and separates plant traffic from pedestrians using the beach.

As indicated in Section II E.2.b of this report and recommendation, construction of the West Point site will generate a large amount of traffic on a daily basis for up to seven years. The amount of traffic generated is bound to have an impact on roads in and out of the park, the use and enjoyment of the park, and the use and enjoyment of the homes and businesses along the truck routes. This Plan Permit Condition seeks to require Metro to mitigate those impacts pursuant to construction and operations transportation plans that address or contain specific elements and requirements. These elements and requirements are well set out in the Plan Permit Condition and need not be repeated. They are discussed below. This condition also requires Metro to evaluate additional measures that could further mitigate traffic associated impacts. This requirement is discussed below as well.

Provide for better separation between pedestrians and vehicles; promote safety along haul route.

The proposals made by Metro and the Conditions recommended by DCLU can be broken down into two groups: Physical improvements and related measures

and measures not requiring or relating to physical improvements. Each is discussed below.

#### Physical Improvements

In response to this requirement Metro proposed as agreed to make various improvements mark crosswalks and take other measures described in Section II B.2.b of this Recommendation. DCLU recommended conditions requiring Metro to make various improvements, mark crosswalks and take other measures along the haul route in and out of Discovery Park (DCLU recommended Conditions 5a and 5b). The improvements and measures Metro proposed or agreed to make and DCLU recommended are generally the same. They disagree only as to the timing of the improvements. DCLU recommends that Metro be required to make the improvements prior to the issuance of a grading permit, arguing that the improvements need to be made before a substantial amount of truck traffic is generated and that the issuance of the grading permit is the only event over which the City has control that will occur before a substantial amount of traffic is generated. Metro proposes that the improvements not be required to be in place until fifty truck departures per day (including sludge trucks) are generated by or from the West Point site, arguing that 50 truck departure per day is not a substantial number of truck trips, and allowing a grading permit before all of the improvements are made would give Metro a good start on the construction work it has to do.

In response to Metro's argument DCLU testified that Metro's recommendation would put the burden on the City to determine when 50 departures are being generated more accurately when they are likely to be generated, since Metro proposes that the improvements be completed rather than commenced with 50 departures. DCLU did indicate, however, that a phased grading permit based on a grading schedule prepared by Metro could be issued to Metro. According to DCLU a phased grading permit would allow Metro to do some preliminary grading work (enough to generate up to 50 truck departures per day less sludge truck departures), while empowering DCLU to prohibit any additional work until the improvements are made. Other parties generally concurred with DCLU's recommendation requiring all improvements to be made before any grading permit could be issued.

#### Hearing Examiner's Conclusions and Findings.

The Hearing Examiner concludes that allowing initial grading work to be done pursuant to a phased grading permit before all improvements have to be made is reasonable and consistent with Plan Permit Conditions 5. Fifty (50) truck departures (including sludge trucks) per day will not have a significant adverse impact on the Park or the residential areas along the haul route. The improvements will actually be in place by the time 50 trucks will depart from the site. Evidence of record indicate that at substantially higher levels of traffic Levels of Service (LOS) will not be adversely effect and that noise will remain below levels where it is likely to have an adverse effect. A phased grading permit places the burden on Metro to prepare and comply with a schedule that relates grading work to truck traffic, whereas Metro's proposal would place the burden on the City to try to figure out when 50 departures will be generated and to take some affirmative action if required improvements are not in place when they are supposed to be. The burden should be on Metro. A phased grading permit empowers DCLU to ensure the improvements are made, because, if they are not, further grading permits can be withheld.

Note: Level of Service or LOS is a measure of delay at intersections. These six levels of service Table A-F. They are referred to as LOSA, etc. If an intersection is described as functioning at LOS A; it means no delays are expressed at that intersection. Moving from LOS A to LOS F, the amount of delay increase. Levels E and F are generally considered unacceptable LOS F represents "Gridlock". Level of Service is an indicator of whether additional traffic (or how much traffic can be added to street. LOS is measured at only major intersections.

#### Hearing Examiner Recommendation - Conditions 5a abd 5b.

Metro shall complete all of the improvements listed in DCLU recommended Conditions 5a and 5b prior to 50 truck departures (including sludge truck departures) being generated from the site and prior to the issuance of a final grading permit. Prior to any grading activity on the site or any other action that will generate any and truck departures in addition to

sludge truck departures, Metro shall obtain a preliminary grading permit from DCLU. The application for the preliminary grading permit shall identify to DCLU's satisfaction when 50 truck departures (including sludge truck departures) will be generated from the site and when the required improvements will be completed.

Other Measures.

In addition to physical improvements and measures both Metro and DCLU suggested other measures to minimize the impacts of construction traffic. Metro's application stated it would comply with the following measures:

- Require contractors hauling excavated materials to clean haul route roadways on a weekly basis.
- Haul trucks leaving the site to be run through wheel wash system.
- Prohibit contractors from discharging smoke, dust or other contaminants into the atmosphere.
- Require contractors to comply with state regulations regarding covering loads (cover or leave 6 inches of "freeboard" at top of load).
- Prohibit unmuffled compression brakes ("jake brakes").
- Establish a traffic review committee composed of Metro and City staff to meet regularly during construction to discuss the elements and ongoing features of the Transportation Management Plan. the committee would develop modifications to the plan as needed.

DCLU recommended the following condition:

Recommended Condition 5c -- Metro shall implement the following measures to the satisfaction of the Director of DCLU and the City's Traffic Engineer based upon recommendation of the City's Traffic Management Team.

1. Metro shall be responsible for ensuring that the haul route is kept clean of dust and dirt from construction traffic. Daily street cleaning of all haul route streets between the construction site and 15th Avenue West shall be required as needed to accomplish this and result. (7)
2. Metro shall be responsible that construction traffic does not track mud and dirt into the streets along the haul route. To this end, Metro shall ensure that all trucks leaving the construction site are run through a wheel washer as needed to eliminate the debris that could otherwise be dropped along the haul route. (6)
3. Metro shall ensure that soil is kept from falling or blowing off construction-haul vehicles. To this end, Metro shall require that trucks hauling soil to or from the construction site have their loads covered. (5)
4. To help provide safe operation of construction trucks, Metro shall establish a procedure whereby all construction trucks are inspected and maintained to ensure that each construction truck is in good operating condition at all times. Any truck not passing inspection or failing to provide documentation of having passed the inspection shall be barred from hauling. (4)
5. Metro shall minimize the noise of construction traffic by ensuring that during hauling operations, all truck shall have all loose equipment secured. Metro shall also ensure that trucks are not allowed to use unmuffled compression brakes. (3) and (4)
6. Metro shall minimize the impact of construction traffic in the Magnolia community and at intersections along the haul route by ensuring that construction trucks shall depart the site at a rate no greater than one truck every and one-half minutes during non-rush-hour traffic.

7. Metro shall reduce traffic safety risks in the Magnolia community by ensuring that contractors are aware that speed limits along the haul route are to be obeyed. Metro's contract documents and specifications shall include this requirement. If it is determined necessary by the Seattle Police Department, in consultation with the TMT, Metro shall provide funds as necessary to enable the Police Department to enhance the enforcement of speed limits along the haul route.

Metro took exception with 5c3 and 5c6 Metro argued that the requirement to keep construction loads covered goes beyond the recommendation of SED and beyond what is required by law. It also argued that requiring loads to be covered would be inefficient and that it is unnecessary to keep soil from blowing or falling from the trucks. It proposed that Metro be required to comply with State law, which allows either maintaining a six inch free board or covering.

Other parties agreed with DCLU that covering should be required, arguing that State law was inadequate and that it should be treated as a minimum requirement rather than a maximum requirement. They provided evidence of problems caused by failing to cover loads (primarily cracked windshields).

#### Hearing Examiner's Conclusions and Findings

Requiring loaded trucks to be covered is not justified. It does go beyond State law. None of the expert witnesses on this issue, including Magnolias' witnesses, were willing to state that loads should be covered in all cases, and only one witness testified that they should be covered in some cases. The one witness who testified that they should be covered in some cases, testified that it should depend upon soil conditions. Another witness testified that the vast majority of soil at the site is a material not likely to generate fugitive, air blown particulates. All parties testifying on the issue testified covering loads is very time consuming (several minutes per truck). The benefit to be derived from covering loads (if any) is small compared to the costs in terms of inefficiency. Having said all of this, the Hearing Examiner, nonetheless, recognizes that there is still a possibility that dust and debris from truck loads will be a problem. Accordingly, the Hearing Examiner, concludes that it is appropriate to allow for that possibility.

#### Hearing Examiner's Recommendation: Condition 5c3.

The Hearing Examiner recommends the Council to adopt the following condition:

All construction vehicles hauling soil, rocks, and other excavation or fill materials to and from the site shall comply with state law. Upon a determination by the Traffic and Management Team (TMT) (as described in Condition 5x) that maintaining a 6 in. freeboard, as opposed to covering loads, is not adequate to prevent spillage and reasonably control fugitive particulates from the construction trucks, the construction trucks shall be covered. The TMT shall monitor and determine the need for covering on a continuing basis. Metro shall include language in its contracts with its haulers that states that at times during the construction of West Point loaded construction trucks entering and leaving the site may be required to be covered.

Metro argued that 5c6 goes beyond what is required by Plan Permit Condition 5 and that it is unnecessary. Metro argued that Plan Permit Condition 5 requires limits on construction truck traffic only during rush hours, at night, and on weekends. Metro argued that 5c6 is not necessary because it would not have any effect level of service. It also argued that wheel washing provided some limitations on the rates of truck departure from the site.

Other parties generally concurred with DCLU. Magnolia proposed a similar interval be imposed on return trucks. Magnolia and Defense Fund and Friends, proposed that there be a ten (10) minute delay in truck departure when chlorine is being hauled to the site from the interbay area.

#### Hearing Examiner's Conclusions and Findings

The Hearing Examiner concludes that DCLU Condition 5c6 is not justified by traffic concern alone (i.e., effect on Levels of Service) but that it may be justified by reasonable concerns about noise levels. The only evidence on Levels of Service demonstrates that condition 5c 6 would not affect Levels of Service. A Seattle Engineering Department witness testified that this condition was based more on people's concerns and perceptions about delays than on any evidence that delays would actually occur without the proposed departure intervals.

Contrary to the testimony on LOS, the testimony on the effects that a departure limitation would have on noise levels was not conclusive. Metro's expert and DCLU's experts disagreed about the specific impacts of unregulated versus regulated departures. All agreed that noise levels would be higher if departures are unregulated (because there is a correlation between noise levels and no amount of truck traffic). They did not agree, however, as to how much higher it would be.

Under these circumstances, the Hearing Examiner concludes that it is inappropriate to require departures to be timed initially, but that is appropriate to allow for the possibility of timing them.

Hearing Examiner's Recommendation: Condition 5c6

The Hearing Examiner recommends that the City Council adopt the following condition.

During non-rush hours Metro shall limit departures from the West Point site to intervals determined by the Traffic Management Team to be necessary to limit outdoor noise level increases to no more than 10 dBA (Leq). Metro shall include language in its contracts with its haulers that states that they may be required to limit their departures from the site to intervals sufficient to ensure that outdoor noise levels are not increased by more than 10 dBA (Leq).

(Text continues on next page)



- o Provide a City approval non-shoreline location for any off-site construction staging area

This is a straight forward requirement about which there is no fundamental disagreement. Defense Fund and Friends and Magnolia propose that the Project-Level Permit condition should clearly state that stockpiling is included.

Hearing Examiner's Conclusion and Findings

The Hearing Examiner concludes that this requirement will be satisfied. Metro has agreed to include language in its contracts to require contractors to use City approved non-shoreline locations for off-site construction staging. Including stockpiling as a clarification of the meaning of "construction staging" is reasonable.

Hearing Examiner's Recommendation - Condition 5d

Metro shall ensure that any off-site staging areas, including areas for stockpiling, shall be in non-shoreline areas approved by the City.

- o Bus construction workers to West Point from Non-Shoreline Location.

Metro proposes to make available an off-site, non-shoreline location for construction worker parking. Metro has arranged to use the parking facilities at the Washington Army National Guard Armory in the Interbay area on West Armory Way near 15th Avenue West. Parking for approximately 450 vehicles would be provided at this location.

DCLU recommends the following Conditions:

Recommended Condition 5e - Metro shall be responsible for minimizing traffic and parking impacts during construction. Metro shall ensure that construction workers are shuttled to and from the site to an off-site non-shoreline location. Further, Metro shall ensure that construction workers do not park in Discovery Park or on the streets in the vicinity of the Park. Prior to the issuance of a grading permit for the site, Metro shall demonstrate to the satisfaction of the Seattle Engineering Department that it has provided for continuing compliance with this condition.

Other parties generally agree with this condition.

Hearing Examiner's Conclusions and Findings

Metro will comply with this requirement. It is well on its way to obtaining the necessary approvals to use the parking lot at the Armory. Metro's contract specifications would require that contractors bus their workers from the parking lot to and from the West Point site. Given the peak estimate of 460 round trips (FEIS, page 5-25), the National Guard parking lot should be sufficient to accommodate construction worker parking demand. Specifications also would prohibit the use of private vehicles at West Point, and would prohibit worker parking in Discovery Park or on residential streets.

To ensure that off-site parking and worker shuttle is implemented consistent with the Plan-Permit, the project permit should include requirements that Metro is responsible for compliance, as recommended by DCLU.

Hearing Examiner's Recommendation: Condition 5e.

Adopt DCLU Condition 5e.

- o Limit Construction Traffic During Rush Hours, At Night and Weekends and Holidays.

This requirement has two purposes:

1. To limit the noise impact of construction truck traffic;
2. To limit the rush hour traffic impact of construction truck traffic. In response, to this requirement Metro generally proposes to limit the hours of construction traffic to weekday, daytime

hours; limit peak hour truck trips; require contractors to prepare and adhere to noise mitigation plans; improve streets; and relocate some Capehart Naval Housing.

DCLU recommended six detailed conditions in response to this requirement and Metro's proposals for addressing it (5f - 5k). One or another party took exception to all but one of these conditions (5j). So, to make review of them easier, each recommended DCLU condition will be separately setout in full and discussed.

DCLU recommended condition 5f:

Recommended Condition 5f - Metro shall ensure that on non-holiday weekdays between the hours of 7:00 a.m. to 9:00 a.m., and 4:00 p.m. to 6:00 p.m., trucks leaving the construction site shall depart at a rate no greater than one truck every 4 minutes. At all other times when construction traffic is permissible, the rate of departure shall not exceed one truck every 1.5 minutes.

Metro took exception to this condition, proposing instead a 1 1/2 minute delay at other times. Metro argued that LOS analysis did not justify delay proposed by DCLU. (See discussion of LOS in discussion of Condition 5c 6.) Other party's proposed that the required delay should be responsive to actual conditions and that a Traffic Management Team or the Police Department should have the authority to impose delay restrictions in response to actual conditions.

#### Hearing Examiner's Conclusions and Findings

The delay proposed by DCLU is not justified by LOS analysis. The only evidence in the record indicates that Levels of Service will not be degraded below existing levels with a 1 1/2 minute delay, as proposed by Metro. A Seattle Engineering Department witness testified that the reason for the proposed four minute delay was related to the concerns of people in the Magnolia neighborhood as to what might happen and SED's desire to respond to those concerns. The proposals by other parties that a condition be written so delays could be imposed to respond to actual traffic conditions seems entirely reasonable. As stated above in the discussion regarding recommended Condition 5c 6 not only in LOS affected by the amount of traffic, noise levels are as well, and it may be appropriate to improve delay restrictions to reduce noise to acceptable levels. Further, there may be other times when traffic conditions are comparable to rush hour traffic or worse. It is necessary to respond to such conditions.

#### Hearing Examiner's Recommendation - Condition 5f

During rush hour periods, Metro shall limit departures of construction trucks from the site to no more than one construction truck every 1.5 minutes. Rush hour periods shall be defined as 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m., weekends and holidays excluded. The TMT (see Condition 5x) may impose greater delay restrictions or it may impose restrictions, or both to reduce noise to acceptable levels as defined in Condition 6 or in response to times when traffic conditions or similar to rush hour traffic conditions, using such indicators as the number of vehicles on or intersecting the haul route and the length of delays (LOS) on the haul route and at intersections with the haul route.

Recommended Condition 5g: Throughout the entire construction period, Metro shall be responsible for implementing an ongoing truck traffic noise evaluation and abatement program to the satisfaction of DCLU based upon recommendations of the Traffic Management Team (TMT). A plan for the program approved by the TMT shall be prepared by Metro and the initial monitoring completed and notices provided prior to the issuance of the grading permit for site work. The plan for the program shall include, but not be limited to, the following components:

1. Complete a preconstruction noise inventory report including documentation of noise readings conducted along the haul route for this permit application and monitoring data from noise readings of existing conditions at the second row of residences at the Naval Capehart housing area. All noise documentation and evaluation of noise levels along the haul route should be supplied to DCLU and to Seattle-King County Health within thirty days;

2. Conduct ongoing monitoring at 6-month intervals, with the raw data provided to Seattle-King County Health within 3 days. Residents should be notified of any change from the baseline noise level of 3 dBA or more.
3. Notify neighborhood and Navy housing residents of mitigation options;
4. Include all addresses along haul route on public information mailing list;
5. Include hotline phone number and noise complaint procedure information in every issue of project update publications sent to the mailing list;
6. Upon request, complaint, or based on ongoing monitoring results, evaluate existing noise levels compared to preconstruction levels and provide this data to the Public Health Department.

Metro should monitor residential noise levels within 2 working days of a complaint. The monitoring results should be available in a form requested by the Health Department. The raw data should be provided to the complainant, DCLU, and the Seattle-King County Health Department within 3 days;

7. Upon request of the residents, where interior noise levels during construction truck traffic show an increase of 5 dBA or an hourly Leq of 67 dBA, over noise levels when no construction truck traffic is present, provide noise insulating windows or other mitigating measures;
8. Where mitigation is not effective or verified adverse health impacts are occurring, arrange and pay for suitable relocation for those affected. Adverse health shall be verified by the Health Department, upon receipt of a physician's report;
9. A copy of all noise complaints and Metro's review and response will be sent to the Public Health Department within 30 days.

Note: This Condition is different from the Condition in the Report and Recommendation. It was changed after the hearing in DCLU's proposed findings and conditions.)

Metro took exception with this condition on three counts: The methodology for measuring noise levels, the noise levels at which mitigation would be required, and the types of mitigation that would be required. Metro proposed that noise levels should be measured outside instead of inside; that mitigation should not be required unless noise levels increase by 10 dBA and exceed 67 dBA (Leq); and that insulating windows not be required and that Metro simply be required to take appropriate mitigation measures. Other parties proposed more stringent conditions than DCLU.

#### Hearing Examiner's Conclusions and findings

This analysis is divided into the three areas of disagreement between DCLU and Metro identified above.

Methodology. The question here is should noise levels be measured inside or out. The answer is, it probably doesn't matter. Witnesses for both DCLU and Metro said either was possible and both have advantages and disadvantages. If measures are taken outside, certain assumptions have to be made about the sound attenuation capabilities of receiving structures, that is how much is the sound reduced going from outside a house to inside. This can vary depending upon a number of factors. To ensure residences are protected it is appropriate to assume minimal attenuation capabilities. If Metro wishes to measure noise levels outside in light of such an assumption it should be allowed to so; otherwise, it can choose to take the measurements inside. If Metro chooses to take outside measurements the following assumptions should be made about the capabilities of structures to reduce sounds:

If windows are open the maximum assumed attenuation will be 10dBA;

If the windows closed, the maximum will be 20 dBA: These assumptions are supported by both DCLU and Metro witnesses.

Noise levels to be mitigated. The Hearing Examiner concludes that

mitigation should be required at the level recommended by DCLU. Metro and DCLU experts disagree on what this level ought to be. Both were able to cite regulations from other agencies in support of their stands. Neither provided particularly relevant information about the effects of noise increases on human health.

Metro's expert said there were none. DCLU's witness testified that some studies tie noise to stress related dysfunctions. It is the opinion of the Hearing Examiner that, though, as a general rule, mitigation of merely speculative impacts should not be required, in this case it is appropriate to take a conservative approach for two reasons: 1. The Metro expert could not (and did not) discount the possibility of adverse health effects associated with noise; he testified that he knew of none. 2. If there are adverse effects they may not be immediately detectable, and may not be capable of being remedied.

Method of Mitigation. The Hearing Examiner concludes that Metro's proposed recommendation is appropriate. The concern is that noise levels be reduced, not how they are reduced. Metro's proposal however, has to be expanded so that Metro is required to notify contractors of all possible mitigation measures Metro might use or require.

With regard to proposals by other parties the Hearing Examiner concludes that the more stringent conditions proposed are not supported by any evidence in the record. The proposal by DCLU is adequate to ensure compliance with the Plan Level Condition.

Hearing Examiner's Recommendation: Condition 5g

The Hearing Examiner recommends that the Council adopt DCLU recommended Condition 5g, parts 1, 2, 3, 4, 5, 6, 8, and 9 and the following condition 5g-7:

Upon request of the residents, where interior levels during truck construction show an increase of 5dBA or more or where interior noise levels indicate a likely interior increase of 5 dBA or moreover noise levels without West Point construction traffic, or an hauling Leq of 67 dBA. Metro shall provide noise insulating windows or take other mitigating measures, including reducing the amount of traffic or requiring departure delays. If Metro chooses to take exterior noise level measurements, the following assumptions shall be made: exterior noise levels is measured in accordance with the evaluation and abatement program required by fair condition; maximum noise attenuation going from outside to in 10 dBA between May 1 and October 31, (when windows are likely to be open) and 20 dBA between November 1 and April 30 (when windows are likely to be closed). If Metro choose not to provide sound insulating windows or take other measures to increase the sound attenuation capabilities of the residences, the residence occupant may request DCLU to order Metro to delay truck departures from the site. Metro shall inform the occupant of this right. Metro shall include language in its hauler contracts stating that there may be future delays in the frequency of permissible departures.

DCLU Recommended Condition 5h

Recommended Condition 5h - Metro shall limit construction truck traffic to and from the West Point site to the hours between 7 a.m. and 9 p.m. on weekdays. No construction truck traffic shall be allowed at other hours or during weekends or holidays except with the express authorization based upon the recommendation of the City's Traffic Management Team (TMT) for special circumstances that require extended hours.

The Director may approve extended hours of construction activities at the site but truck trips outside the hours established in this condition must have prior authorization based upon the recommendation of the TMT except where emergency situations make prior authorization impossible. The Director of DCLU shall be notified in the event of an emergency. The necessity for and duration of any irregular hours shall be determined by the Director of DCLU with the recommendation of the TMT.

Only Magnolia took exception to this, proposing that a member of Magnolia be present at the TMT meeting and that Metro notify Magnolia residents of emergency construction activities.

Hearing Examiner's Conclusions and Findings

Magnolia's request is reasonable. The Magnolia neighborhood is the most likely to be effected.

Hearing Examiner's Recommendation - Condition 5h

The Hearing Examiner recommends that the Council adopt DCLU recommended Condition 5h with the following additions: to the end of the first paragraph: "The TMT shall notify the Magnolia Community of such a request and shall allow a representative of the Community to be present at the TMT meeting where the extended hours request is being considered." To the end of the second paragraph: "Metro shall notify the residents along the haul route as early as possible of emergency construction activities."

DCLU Recommended Condition 5i - Throughout the construction, Metro shall, to the satisfaction of the City's Traffic Management Team, ensure that all contractors are aware of and comply with speed limits (e.t., 30 m.p.h. on arterials) along the haul route. Metro shall provide sufficient funds to enhance police speed limit enforcement as deemed necessary by the Traffic Management Team.

Metro took no exception with this. Defense Fund and Friend and Magnolia proposed the Police Department be given kind of legal authority to change the speed limit in response to existing traffic and road conditions.

Hearing Examiner's Conclusions and Findings

The Condition as recommended by DCLU is generally appropriate. However, given that time will be of the essence, there will be a significant incentive to speed. Testimony during the public portion of the hearing indicated speeding by haulers working on the Fort Lawton Tunnel has been a significant problem. The Hearing Examiner is concerned that speeding citations may be viewed as part of the acceptable cost of closing businesss. The cost of speeding should be made unacceptable high by adding appropriate penalty clauses to Metro's contracts with the haulers. Road and Traffic conditions themselves will tend to effect speed drivers. Further, the possibility for the police to reduce speed limits (or to cite a driver for exceeding a safe speed limit, even if below the posted limit) already exists.

Hearing Examiner's Recommendation:

Adopt DCLU condition 5i with the following addition after the last sentence:

Metro shall include in its contracts with its haulers a statement that all employees of, or subcontractors to, the hauler shall obey the speed limit at all times and a penalty clause that provides for a payment of \$1,000 to the City of Seattle for each speeding citation in excess of three issued to all of the haulers employees or subcontractors collectively and for termination of the contract if more than seven citations are issued to the hauler's employees or subcontractors collectively.

DCLU Recommendation Condition 5k

Metro shall provide relocation housing for the residents of the first row of the Navy's Capehart housing to the Navy's satisfaction. The relocation shall be completed prior to the issuance of grading permits for site work.

The Capehart housing shall be included in the Noise Evaluation and Abatement Program described in Recommended Condition 5f, (sic) and Metro shall provide additional mitigation for noise impacts if it is determined appropriate through that program.

Metro took exception to this condition on two grounds. First, it argued that Metro is negotiating of Memorandum of Agreement (MOA) with the Navy regarding the Capehart housing and that the condition should refer to that agreement. Second it stated the reference to Capehart housing in Condition 5g is adequate to address other noise issues as they relate to Capehart housing. Metro recommended the following conditions:

Metro shall relocate residents of the Navy's Capehart housing and/or implement other measures to address noise and safety concerns that may effect residents of Navy housing, consistent with the terms of a Memorandum of Agreement between the Navy and Metro.

Defense Fund and Friends and Magnolia recommended that the MOA between Metro and DCLU should be subject to review and approval by the City.

Subsequent to date of DCLU's Reported Recommendation and Metro's response to DCLU's recommended condition, the Metro Council authorized an MOA with the Navy that address relocation and other measures including limiting traffic to the hours of 7:00 a.m. to 7:00 p.m. to mitigate the impact of construction traffic on Capehart housing. In response to the Metro Council action DCLU amended the Recommended Condition 5k to read:

Metro shall relocate residents of the Navy's Capehart housing and/or implement other measures to address noise and safety concerns that may effect residents of Navy housing, consistent with the terms of the Memorandum of Agreement between the Navy and Metro which provides, inter alia, for restrictions on truck hauling operations to weekday from 7:00 a.m. to 7:00 p.m., except when prior written approval for extended hours is obtained. The Capehart housing shall be included in the Noise Evaluation and Abatement Program described in Recommended Condition 5f, and Metro shall provide additional mitigation for noise impacts if it is determined appropriate through that program.

Hearing Examiner's Conclusions and Findings

DCLU's amended recommended condition addresses Metro's concern. DCLU's reference to Condition 5g is appropriate. (The condition says 5f. The Hearing Examiner assumes this is a mistake.) Condition 5g is intended to protect residences along the haul route from excessive noise. The Capehart housing is particularly susceptible to impacts associated with construction traffic noise. Metro's own figures indicate there will be a 20 dBA increase along the haul route adjacent to the Capehart housing. The proposal by Defense Fund and Friends and Magnolia appears to have been satisfied. The City has had an opportunity to review it and appears to support it.

Hearing Examiner's Recommendation

The Hearing Examiner recommends that the City Council adopt amended DCLU Condition 5k.

- o Identify and repair reconstruct/sheets adversely affected by construction traffic (including assessment of preconstruction sheet improvements to minimize noise).

The construction traffic generated by the West Point project will result to wear and tear to the streets used for the haul route. This requirement seeks to make Metro financially responsible for that wear and tear. By requiring improvements to be made to streets before the project generates construction traffic, it seeks to reduce noise levels (trucks running on

smooth surfaces are not as noisy as trucks running on rough surfaces) and avoid the need to make repairs during construction that could cause lane closures.

To ensure that this requirement will be satisfied, DCLU and SED identified the streets most likely to be significantly affected by construction traffic and devised a method to identify needed repairs and to determine the wear and tear caused to the streets by West Point construction.

The wear and tear to the streets will be determined by taking "before and after" measures of an array of streets conditions. Any deterioration to the streets greater than might be expected to normally occur over the length of the construction traffic will be presumed to have been caused by the construction traffic. SED identified those streets as: West Government Way, Gilman Avenue West, 20th Avenue West, Discovery Park access road, West Emerson Place West Emerson Street, and West Dravus Street at the intersection with 20th Avenue West. It included the West Emerson Street Bridge in this list as well. It developed a program to identify and make needed preconstruction repairs and to measure the wear and tear on the streets covered by West Point Construction. That program is reflected in DCLU's recommended conditions. DCLU recommended the following conditions:

Recommended Condition 5l - Metro shall provide funds sufficient for SED to complete a pavement testing and analysis to determine existing conditions and remaining useful life of the following haul route streets: West Government Way, West Emerson Place, Gilman Avenue West, West Emerson Street, 200th Avenue West, West Dravus Street at 20th Avenue West, and the Discovery Park access roadway. At the end of the construction period the testing and analysis shall be repeated and Metro charged for street deterioration which exceeds the expected normal deterioration anticipated by the remaining life calculation.

At the end of construction, prior to the issuance of the Final Certificate of Occupancy or 18 months after the first day of operation of the facilities as a secondary treatment plant, whichever comes first, Metro shall to the satisfaction of SED, provide monetary payment to the City for any loss of pavement life as determined by the remaining life calculations.

Recommended Condition 5m - Metro shall provide, to the satisfaction of SED, that the haul route streets are in reasonable repair prior to the beginning of and throughout construction. If maintenance and repairs are not timely or properly made, SED shall have repairs made and Metro shall reimburse SED for the costs of the work. At the end of construction, prior to the issuance of the Final Certificate of Occupancy or 18 months after the first day of operation of the facilities as a secondary treatment plant, whichever comes first, Metro shall to the satisfaction of SED, ensure that streets along the haul route are in reasonable repair.

Recommended Condition 5n - Metro shall provide prior to the issuance of grading permits for site work, to the satisfaction of SED, appropriate surface treatment (overlay, replacement panels, striping, etc.) on West Government Way and on West Dravus along the haul route.

Recommended Condition 5o - Metro shall ensure that construction traffic loads and stresses do not damage the West Emerson Street Bridge. Prior to the issuance of grading permits for site work, Metro shall provide funds for SED to conduct a structural and deck surface inspection; provide temporary timber shoring at each of the crossbeams; and smooth the deck surface. Metro shall also provide, to the satisfaction of SED, post-construction reinspection and repair of the bridge as needed to compensate for the impacts of construction traffic.

Recommended Condition 5p - All street work, restoration, drainage restoration, signals, signage, pavement working and all other work done in City right-of-way shall conform to City standards.

Metro took exception to Conditions 5n and 5o. In both cases, Metro identified the requirement that work be done in advance of a grading



permit to be a problem and suggested (as it had in the case of Condition 5a) that repairs should not be required to be in place until the number of trucks departing West Point reaches fifty. Metro also stated with regard to Condition 5o that temporary shoring of the Emerson should be required only if it is determined to be necessarily a structural analysis.

Defense Fund and Friends and Magnolia proposed that 15th Avenue West and Elliott Avenue and other streets that the construction traffic will use should be added to Condition 5l. Magnolia proposed that all other bridges and overpasses that construction traffic will use to enter the Magnolia neighborhood should be added to Condition 5o. Both Defense Fund and Friends and Magnolia proposed that the Magnolia Community be involved in identifying needed repairs and in approving the work done. Defense Fund and Friends recommend an elaborate enforcement/compliance system to ensure Metro complies with the conditions.

#### Hearing Examiner's Conclusions and Findings

The Hearing Examiner concludes that the conditions recommended by DCLU are generally adequate and appropriate. The streets identified by SED/DCLU will realize a significant increase in construction traffic as a result of the West Point project. Though the construction traffic will use 15th Avenue West and Elliott Avenue, the construction traffic will be a relatively small portion of the traffic on those streets. Also, when the traffic reaches those streets, it can disperse onto several routes, depending upon its final destination, making administration of the program almost impossible.

The Hearing Examiner draws the same conclusion regarding the timing in Condition 5l as it did regarding the timing issue in 5a for the same reasons. With regard to 5o, however, the Hearing Examiner draws a different conclusion. Metro seeks not only to not do the work before getting a grading permit, it seeks to not even provide the funds for the structural analysis of the bridge. This is inappropriate, particularly in light of Metro's additional objection to the recommendation that the bridge be temporarily shored unless found by the study to be necessary. There is no reason the study recommended by DCLU cannot be done immediately upon Metro receiving its project-level permit if it is approved. The study will allow any problems associated with the bridge and any needed repairs to be identified. It will allow a determination to be made if temporary shoring is needed. Upon adoption of the study, SED could make a determination as to which repairs require immediate attention (such as those affecting safe use of the bridge) and which do not.

The Hearing Examiner concludes that it is appropriate to include Magnolia citizens in the process of identifying needed repairs. They are bound to be aware of needed repairs and their knowledge can be useful. It is not, however, appropriate to require their approval of the repairs. Requiring repairs to comply with accepted standards is sufficient. Requiring Magnolia citizens approval of the repairs would allow the imposition of standards both greater and lesser than appropriate. Further, the Magnolia community is not a homogenous group. There are people in the community who favor the project just as there are those who oppose. Who among these people would be responsible for opposing (or not) the repair on behalf of the community?

There is no evidence in the record indicating why SED chose to include only the Emerson Street Bridge in the program. The Hearing Examiner assumes that SED determined that the other bridge/overpasses were in sufficient repair to meet required inclusion in the program. However, it seems reasonable to authorize SED to request additional funds for inspections of repairs to other bridges and overpasses.

#### Hearing Examiner's Recommendations - Condition 5l, 5m, 5n, 5o and 5p

Adopt DCLU Recommended Conditions 5l, 5m and 5p as written. Adopt 5n and o as written below:

Condition 5n: SED shall provide to Metro and the Magnolia community, at the earliest practicable date, a list of appropriate surface treatment (overlay, replacement panels, striping, etc.) on the haul route, between Discovery Park and the intersection at 15th Avenue West and West Dravus Street, that is expected of Metro as part of this condition. Metro shall prepare a plan for how

this work is to accomplished, including how traffic will be managed during this work. The Magnolia community shall have the opportunity to respond to the scope of work and Metro's proposed plan prior to SED allowing the work to proceed. Metro shall complete this work, to the satisfaction of SED, prior to any grading activity on the site or any other action that will generate construction truck departure, Metro shall obtain a preliminary grading permit from DCLU. The Application for the preliminary grading permit shall identify to DCLU's satisfaction when 50 trucks departure will be generated from the site and when the required opponents will be completed.

Condition 5o: Metro shall ensure that construction traffic loads and stresses do not damage the West Emerson Street Bridge. Prior to the issuance of grading permits for site work Metro shall provide funds to SED to conduct, and SED shall construct a structural and deck surface inspection and to determine the need for temporary shoring. SED shall determine what, if any, improvements must be made prior to the issuance of a grading permit and what, if any improvements do not need to be made until there are fifty truck departures (including sludge trucks) from West Point. Prior to the issuance of a grading permit, Metro shall do all work SED determines is necessary prior to issuance of a grading Permit. Metro shall update all other work determined by SED to be necessary prior to 50 truck departures (including sludge trucks) from West Point.

Prior to any grading activity on the site or any other action that will generate any truck departures in addition to sludge truck departures, Metro shall obtain a preliminary grading permit from DCLU. The application for the preliminary grading permit shall identify the DCLU's satisfaction when 50 truck departures (including sludge truck departures) will be generated from the site and when the required improvements will completed.

Metro shall also provide, to the satisfaction of SED, post construction reinspection and repair of the bridge as needed to compensate for the impacts construction traffic.

SED may, if it determines that it would be in the public's interest to do so, request similar funding and require similar repairs to the Dravus Street Bridge and other bridges and overpasses along the haul route leading from 15th Avenue West to Magnolia.

o Ensure that construction traffic complies with the speed limit in Discovery Park

This is a straightforward requirement with which no one disagrees. DCLU recommended the following conditions:

Recommended Condition 5g - Metro shall ensure that throughout the construction of the facilities subject to this permit, construction traffic complies with speed limits in Discovery Park (25 mph). Metro shall provide adequate funds to the Seattle Police Department to enhance the enforcement of speed limits to the satisfaction of the Police and Parks Departments. (Correcting the speed limit, which it originally misstated.)

No one took exception to this condition.

Hearing Examiner's Conclusions and Findings

DCLU's Condition is generally appropriate. However, given that time will be of the essence in doing the construction work until at least secondary treatment is in place, there will be a significant incentive to speed. Testimony during the public portion of the hearing indicated speeding by hauling working on the Fort Lawton tunnel has been a significant problem. The Hearing Examiner is concerned that speeding citations may be reviewed as part of the acceptable cost of doing business. Such cost should be made sufficiently high to make speeding an unacceptable cost. This can and should be done by adding appropriate penalty clauses to Metro's contracts with its haulers.

Hearing Examiner's Recommendation - Condition 5q

Adopt DCLU condition 5q with the following addition after the last sentence:

Metro shall include in its contracts with its haulers a statement that all employees of, or subcontractors to, the hauler shall obey the speed limit at all times and a penalty clause that provides for a payment of \$1,000 to the City of Seattle for each speeding citation in excess of three issued to all of the haulers employees or subcontractors collectively and for termination of the contract if more than seven citations are issued to the hauler's employees or subcontractors collectively.

- o Limit operational truck traffic at night and on weekends, and holidays, ensure that operational traffic complies with speed limits in Discovery Park.

Operational truck traffic refers to truck traffic that will be generated when the plant is in operation: sludge trucks and other large trucks that deliver supplies and equipment. The only real issue raised during the hearing was, what hours should be permitted for sludge trucks: DCLU proposed 9:00 a.m. to 9:00 p.m. Metro proposed 6:00 a.m. to 10:00 p.m., arguing that allowing the earlier morning traffic would have a lesser impact on park users. Defense Fund and Friends and Magnolia proposed 9:00 a.m. to 4:00 p.m. arguing that earlier sludge truck traffic would affect people in Magnolia and that neither earlier morning or evening departures (or arrivals) of sludge trucks is necessary, because Metro does not need to haul the sludge to final destination points in one day.

Hearing Examiner's Conclusions and Findings

The Hearing Examiner agrees with Defense Fund and Friends and Magnolia. The testimony of a Metro witness indicated that if sludge trucks arrive at a destination point in the evening, it will not be unloaded and will have to wait until morning. So, there is no reason for a late evening departure. The loaded sludge trucks could go to Renton or stay on site overnight (since the park is not used at night) so long as they are covered once they are loaded. The earlier morning hours will have an impact on Magnolia residents. It is one that can be avoided without significant cost to Metro by not allowing early morning departures.

Hearing Examiner's Recommendation - Condition 5r

Metro shall ensure that sludge hauling truck trips and other non-emergency operational truck trips are limited to those hours between 9:00 a.m. to 4:00 p.m. No other hours shall be allowed.

To ensure compliance with the speed limit, DCLU made the following recommendation.

Recommended Condition 5s - Metro shall ensure that all operational traffic complies with the speed limits in Discovery Park. If determined necessary by the Parks or Police Departments, Metro shall provide adequate funds to enhance speed limit enforcement consistent with this condition.

All parties agreed to this recommendation.

Hearing Examiner's Conclusions and Findings:

DCLU's recommended condition is appropriate and adequate. The Hearing Examiner does not have the same concerns as expressed with regard to condition 5q because there is less incentive to speed.

Hearing Examiner's Recommendation - Condition 5s

Adopt DCLU Condition 5s.

- o Limit number of truck trips leaving Discovery Park to 13 per day

This is a straightforward requirement. To ensure compliance with it DCLU recommended:

Condition 5t: Metro shall limit and ensure that loaded sludge trucks leaving West Point shall use the same route to 15th Avenue West as that indicated for construction in Recommended Condition 5v. Also the number of loaded sludge trucks shall not exceed thirteen per day on average over a year period (January through December). By the last day in January every year, Metro shall provide SED for its review, the record of sludge truck trips from the prior year (from both standard and alternative sludge processes). SED will inform DCLU if the condition is not being set and enforcement action can be pursued as necessary.

Defense Fund and Friends and Magnolia proposed that Metro be required to evaluate ways to reduce trip with or without Riedel/SMI, citing the fact that DCLU's condition would allow 4745 loaded sludge truck trips a day through Discovery Park and the Magnolia neighborhood.

#### Hearing Examiner's Conclusions and Findings

DCLU's condition is adequate and appropriate and will ensure compliance with the Plan Level Permit condition. The evaluation proposed by Defense Fund and Friends and Magnolia has already been undertaken. Barging sludge has been evaluated (and rejected as not being cost effective), piping the sludge has been evaluated. (See discussion regarding Plan Permit Condition No. 1.) Other solids process technologies have been explored. It does not appear that there is any thing left to evaluate.

#### Hearing Examiner's Recommendation - Condition 5t

Adopt DCLU Condition 5t.

Though Plan Permit discussions focused on sludge trucks trips, DCLU believes it is necessary to address the impacts plant employees going to and from the plant will have. Accordingly, it recommended the following condition:

Recommended Condition 5u - To reduce the number of daily vehicle trips to and from the plant, the off-site maintenance personnel (see Report page 13 and Application page 4-2) shall not be based at West Point, and Metro shall prepare and implement to the satisfaction of DCLU, a transportation management plan that includes a worker shuttle bus, carpools, and/or other means which result in a rate of single occupancy vehicle trips for commuting workers of 50 percent (i.e., at least 50 percent of all workers commute to and from the plant site via alternative modes of transport other than single occupancy vehicles).

Metro took exception to this, stating that DCLU misunderstood the "off-site" personnel to mean identified individuals who work off-site, whereas its real meaning refers to Full-time Equivalents (FTE's) working off-site, that is, the total number of "person hours" spent away from the West Point site. Metro also objected to the requirement that at least 50 percent of the workers arrive to work at the site by some means other than single occupancy vehicle (SOV), arguing commuting opportunities are limited, and that the appropriate requirement is compliance with DCLU Director's Rule 24-88/SED Director's Rule 88-1. Other parties proposed that all maintenance activities be moved off-site to not only reduce traffic but some land at West Point as well.

DCLU generally accepted Metro's arguments and amended its condition to read:

To minimize the number of daily vehicle trips to and from West Point, Metro shall develop to DCLU's satisfaction a transportation management plan (TMP) in compliance with DCLU Director's Rule 24-88/SED Director's Rule 88-1. Prior to issuance of the Master Use Permit prepared after the Council's decision and TMP shall include the programmable actions along with the single occupancy vehicle (SOV) top goal of 50 percent.

#### Hearing Examiner's Conclusions and Findings

Reducing West Point employee traffic further advances Plan Permit Condition 5. The opportunities to reduce it are limited. The Hearing Examiner has previously addressed with regard to Plan Permit Condition No.

1 why it would not be reasonable to require Metro to move the maintenance facility (and personnel) to an off-site location. Metro's maintenance staff is not organized into two distinct groups - off-site and on-site workers. Rather there is a pool of maintenance workers with various skills, any of whom can be called or dispatched to an off site location, depending upon the work that has to be done. Commuting opportunities are limited. Nonetheless, a goal of 50 percent commuters is certainly worth working toward.

Hearing Examiner's Recommendation - Condition 5u.

Adopt the amended DCLU condition

o Evaluate Barging

Metro has evaluated the possibility of barging and has concluded that though it may not be economical, it will require some barging during construction, if a barge facility is approved, because of the reduction of traffic that would result. Metro proposes that if a barge is approved, it would place a cap of 200 in the number of trucks that could use the haul route. This would reduce the peak period number of daily one way truck trips from 590 to 200. Metro predicts some reduction at other times, but at times when the number of truck trips goes below 200, use of the barge by haulers would be voluntary and reductions are expected to be small. There would be concomitant reductions in traffic related impacts. Metro has made applications to agencies of jurisdiction for a temporary barge facility. Defense Fund and Friends, Magnolia, and Legal Advocates argued that discussions regarding barging should not be even heard. Citizens to Save Interbay and others urged that if a barge is approved, that Metro should be required to mandate its use by its contractors.

Hearing Examiner's Conclusions and Findings

Metro has generally complied with the requirement to evaluate barging. Beyond that, it has made application for a barge facility and has committed to requiring its use to at least a limited extent, if it is approved. The Hearing Examiner is not sure of the reason for the cut off of 200 (that is why barging would not be required if daily trips falls below 200) and no analysis was done (or at least provided) regarding the benefits and costs associated with requiring barging at levels below 200 one way daily trips. However, the evaluation done by Metro is sufficient to allow the Council to act on Metro's application for the West Point Plant (not for the barge itself).

Hearing Examiner's Recommendation - Condition 5v

Prior to approval of the barge application by the Director of DCLU, Metro shall provide additional information to the Director of DCLU and the Director of SED regarding the costs and benefits of using the barge facility for times when daily one way truck trips fall below 200. Metro shall demonstrate to the satisfaction of the both that 200 one trips is a reasonable cut off.

If the barge facility is approved, Metro shall place a cap of a maximum of 200 trips/day permitted on the haul route and shall require all other construction vehicles leaving the site to use the barge. The Director of DCLU in consultation with the Director of SED may reduce this cap, if the further evaluation required by this condition indicates that it is reasonable to do so.

o Evaluate alternative Truck Routes

DCLU has recommended Condition 5V to advance this requirement. All parties concurred. The Hearing Examiner recommends adoption of DCLU condition 5V (numbering it to 5w).

o Locate entry gate to separate pedestrian/plant traffic and to avoid adverse impacts on the hill side.

All parties agreed to DCLU's recommended condition regarding this requirement (DCLU Condition 5w) and the Hearing Examiner recommends that the Council adopt it as Condition 5x.

In addition to the conditions listed above, Magnolia proposed an additional condition stating:

MCC 5x. Metro shall, throughout the construction period, cause no net increase in traffic as a result of this project. To this end, Metro shall prepare and implement a plan that will cause regular traffic on the haul route to use alternative transportation at a rate that is approximately equivalent to the volume of construction related traffic adjusted for the size and type of vehicles involved.

The rationale given for this condition is that it would come closer to eliminating traffic related impacts.

Hearing Examiner's Conclusions and Findings

There is no evidence in the record to support this condition or to show that it will have significant benefits relative to its cost or that it can be accomplished.

Hearing Examiner's Recommendation: Condition 5x

The Hearing Examiner recommends that the City Council not adopt Magnolia proposed condition 5x.

In addition to the conditions discussed above, the Hearing Examiner recommends that the City Council direct the formation of a Traffic Management Team (TMT) that would have the authority to implement the conditions identified above and allow for flexibility in their administration; to respond to emergency and unforeseen problems (and benefits); to modify, add, or delete conditions as appropriate or to recommend to the Council that it modify, add, or delete conditions as appropriate, and to take such other actions regarding traffic and traffic related issues as are necessary and appropriate. The TMT should be an entity within the City bureaucratic structure and DCLU or SED should have ultimate authority to make decisions or recommendations on matters before it. Metro should be required to be a member and representatives from the Magnolia and Interbay neighborhoods should be allowed to participate not only as liaisons between the neighborhoods and the TMT, but in an advisory capacity.

Such an organization would allow all parties to respond to actual conditions. At this time all the City has are projections and guesses (albeit, exceptionally well educated guesses) as to what will happen. The TMT will be able to respond to and make changes in response to what does happen.

Plan Permit Condition 6 - Noise Control

Metro shall require all contractors performing work at West Point to comply with the City's construction noise ordinance. Operational plant noise shall be consistent with the City's noise ordinance and shall not exceed 55 dB(A) as measured at any publicly accessible area outside the West Point plant boundary. Specific identifiable mechanical sounds from operation of fixed equipment will not exceed 52 dB(A) on the beaches.\* Metro's project-level permit application shall include analytical documentation of the structural and operational noise control measures that are planned to achieve compliance with this standard.

\*The beaches shall be defined as those areas below the ordinary high water mark.

This condition contains four essential requirements:

- o All Metro contractors shall comply with the construction noise ordinance.
- o Operational plant noise shall not exceed 55 dBA as measured at any publicly accessible area.
- o Specific identifiable mechanical sounds will not exceed 52 dBA on the beaches below the ordinary highwater mark.
- o The project land permit must include analytical documentation regarding

the proposed noise control.

Each of these requirements is discussed below.

- o All Metro contractors shall comply with the construction noise ordinance.

To ensure compliance with this requirement, DCLU recommended the condition quoted below. All parties agreed to it, and the Hearing Examiner recommends that the City Council adopt it.

Recommended Condition 6a - Metro shall require all contractors working on site to comply with the noise ordinance standards. Construction specifications shall include the ordinance standards and penalty or other enforcement clauses as needed to ensure compliance.

- o Operational plant noise shall be consistent with the noise ordinance and shall not exceed 55 dBA as measured at any publicly accessible area.

To ensure compliance with this requirement DCLU recommended one condition establishing the standard (6b) and one to test compliance with it (6c). Each condition is discussed separately, below.

Recommended Condition 6b - Noise levels of the plant during operation shall be consistent with the City's noise ordinance and shall not exceed 55 dBA as measured at any publicly accessible area outside the plant footprint. The security wall, as shown in the plans for this permit, shall establish the limits of public accessibility for the purpose of measuring compliance with this noise condition.

The main issue raised by this condition is where should the noise levels be measured. The City's noise ordinance contains a night time noise standard of 45 dBA, as measured at the property line. Metro may comply with this standard in three ways: meet the standard as written, obtain a variance, or change the standard. Metro has indicated that it will seek a variance so that it may measure the noise level at the nearest residence. DCLU concurs that this is reasonable.

DCLU does not agree with Metro as to where the 55 dBA standard established by the Plan Permit condition should be measured. DCLU states it should be measured at the security walls at the plant limits. Metro seeks to measure it on the hillside adjacent to the plant at the hillside trails, which are a considerable distance from the plant security wall. Metro apparently seeks to measure the noise level at the plant boundary because the noise will not meet the 55 dBA level at plant perimeter on the hillside. It argues that there is no reason to require the noise level to be measured at the security wall because, though the hillside area between the trails and the wall is legally accessible to the public, it is not practically accessible.

Magnolia proposes that the standard the plant has to meet should be lowered to 45 dBA every place but the hill side, where it should be (presumably 55 dBA). Magnolia states all measurements should be taken at the plant security walls.

Defense Fund and Friends and Legal Advocates propose an elaborate system of special noise permits issued by the City to address noise related issues and compliance and enforcement.

#### Hearing Examiner's Conclusions and Findings

The nighttime dBA should be measured at nearest residence. The purpose of the lower permitted nighttime dBA is to protect residents in their sleep and enjoyment of their home at times they are most likely to be home. This purpose will be no better served if the nighttime level is measured at the plant perimeter than if it is measured and enforced at the nearest residence. Allowing it to be measured at the nearest residence gives Metro added flexibility without added detriment to the public.

The 55 dBA level should be measured at the hillside trails rather than the hillside security barrier. The most recent noise modeling work Metro has done indicates that the 55 dBA level will not be met at the hillside security wall, using the noise control and attenuation measures presently proposed by Metro. In order to minimize the visual impact of the plant and minimize the noise level near the beaches, Metro moved several



buildings that generate high noise levels adjacent to the hillside. Though the hillside between the plant perimeter and the trails is legally accessible, it is not practically so. It is very steep and covered with a thick growth of shrubs and trees. There is no practical reason for the public to use the area. The Discovery Park Comprehensive Plan states public access to the area should be discouraged and Park Department employees stated that public access is discouraged in fact. No witnesses, including DCLU or Parks Department witnesses, were able to state any practical reason to require the measurements to be done at the security wall.

The proposal by Magnolia goes beyond the Plan Permit Condition and the noise ordinance and is not necessary. The enforcement scheme proposed by Defense Fund and Friends and Legal Advocates is not supported as being necessary or practical by evidence of record. In fact no testimony was offered on it.

Hearing Examiner's Recommendation: Condition 6b

Noise levels generated by operation of the upgraded plant shall be within the limits specified by the City's noise ordinance and shall not exceed 55 dBA at the publicly accessible areas outside the plant footprint. On the perimeter berm, the security wall, as shown in the plans (drawing 99017), shall establish the limit of public accessibility for the purpose of measuring compliance with this condition. On the Discovery Park hillside, the Hidden Valley Trail and North Bluff Trail shall establish the limit of public accessibility for the purpose of measuring compliance with this condition.

Because it will not be possible to tell if plant will comply with Condition 6b, testing for compliance must be done after the plant is operational. DCLU recommended the following testing program or schedule:

DCLU recommended Condition 6c - After the plant is fully operational and within three (3) months of the completion of all construction (including visual mitigation elements), Metro shall monitor noise levels at the same receptor points used in its noise model to determine if the noise standards are being met. This information, including data input and output, qualitative evaluation, and noise readings at each receptor point reported in tabular form and shown in noise contours, shall be submitted to DCLU and the Seattle-King County Department of Public Health within a month of the required testing.

Every four months, beginning with the fourth month following the initial test, Metro shall repeat the noise monitoring. Metro shall also test at other times at the request of DCLU and/or the Seattle-King County Department of Public Health in response to complaints. The methodology and the manner of conducting the testing must have the approval of DCLU and the Seattle-King County Department of Public Health. If DCLU and/or the Seattle-King County Department of Public Health deem it necessary, Metro shall pay for independent verification of tests and test results.

At any time the results of testing indicate that the standards are being exceeded, Metro shall, upon receipt of notice from DCLU that this condition is not being met, have 30 days in order to bring the plant into compliance using existing equipment or whatever modifications would be effective. After such remediation is complete, or 30 days, whichever comes first, Metro shall repeat the testing process. If results still indicate that the standards are not being met, Metro shall, upon notice from DCLU, have up to 90 days to install additional controls and/or adjust its processes in order to bring the plant into compliance.

Failure to regularly meet the standard (i.e. 3 test results indicating non-compliance period) shall be considered evidence of chronic and/or repeat violation of this condition and DCLU shall take appropriate action for non-compliance as prescribed by the Seattle Municipal Code.

After five years of testing as prescribed above without exceeding the standards, the requirements for scheduled testing shall cease and Metro shall be required to test at the request of DCLU and/or

the Seattle-King County Department of Public Health.

Metro took exception with this recommendation on several grounds and offered the following alternative:

Three months after the treatment facilities have become operational and the perimeter berms and landscaping have been installed, Metro shall monitor noise levels at 10 locations selected by DCLU in publicly accessible areas, as shown on Figure XXXX. Noise levels shall be measures at each location for a total of 15 minutes, during which no noise sources other than treatment plant operations are noticeable (e.g., aircraft or vehicles outside the plant boundary.)

The noise monitoring results shall be reported to DCLU and to the Seattle-King County Department of Public Health within 30 days after the testing is complete. If the tests show that the standard set forth in Condition 6b is not met at any receptor location due to operation of the treatment facility, Metro shall submit a written report to DCLU within 30 days after test results are provided, setting forth corrective action and a schedule for implementing such action to the satisfaction of DCLU or the Seattle-King County Department of Public Health.

Metro shall conduct additional testing upon request by DCLU to confirm ongoing compliance with this condition. If DCLU deems it necessary, Metro shall pay for independent verification of tests and test results.

Magnolia proposed that noise monitoring be done regularly during plant construction as new facilities come on line to determine if they meet expected specification. Defense Fund and Friends suggested that noise monitoring should be started with the commencement of secondary operation.

#### Hearing Examiner's Conclusions and Findings

The Hearing Examiner concludes that noise monitoring should begin immediately after the plant is operational and regularly thereafter for compliance with the nighttime ordinance and after completion of the landscaped berm for the daytime standard. The landscaped berm is an element of the noise control system at the plant. It makes sense to measure the noise level after all noise control measures are in place because that measure will reflect if the plant need comply. The distinction between nighttime measurements and daytime measurements is reasonable. During the daytime construction actually will continue to generate noise levels that exceed the 55 dBA standard until the berms are in place. At night however, the construction noise will not be a factor. It is possible that the plant may be in operation for up to two years before berms and landscaping are in place. Unless nighttime noise measurements are taken when the plant is in operation, night time peaceful enjoyment of nearby residences could be seriously impaired for up to two years.

Noise levels need not be measured for five years as recommended by DCLU. There is no evidence in the record to support requiring the noise levels to be measured for five years. Witnesses did testify that machinery does get noisier from wear and tear. It is not unreasonable to assume that such wear and tear is more likely to occur after the first five years than during them. Evidence that the machinery night break down is not enough to require testing for five years, without evidence about the pattern of machinery breakdowns. There is no evidence that five years of testing will result in any public benefit.

On the other hand, requiring seasonal testing for the first year of operation is reasonable. Unlikel the case with odors which are most likely to be highest during the summer, there are no distinctive seasonal differences that give rise to particularly high noise levels. So, it is reasonable to take measures at all seasons under all conditions to ensure compliance.

Rather than requiring noise levels to be measured at all model receptors they should be required at only ten to twenty required by DCLU and the King County Health Department. (DCLU's post hearing closing argument stated this change is appropriate.)

The proposal to take measurements as the plant is being constructed is a good idea from Metro's point of view, because if it finds out after one plant is up and running that equipment is not working as expected, corrective measures could be very expensive. However, the Magnolia proposed testing program is not necessary for Plan Permit Compliance.

Hearing Examiner's Recommendation - Condition 6c

Adopt DCLU recommendation except as follows:

(1) Change first sentence to read "nighttime noise measurements shall be taken starting three months after the plant becomes operational and every four months thereafter as provided in this condition. Daytime measurements shall start immediately upon construction and landscaping of perimeter berms and continue every four months thereafter as provide by this condition. After daytime measures are commenced the schedule of nighttime measures may be changed to conform to the daytime schedule. Monitoring shall be done at reception points required by DCLU and the King County Health Department. (2) In the fourth paragraph eliminate reference to non-compliance in "any two-year period," otherwise maintaining standard for non compliance. (3) Last paragraph change reference to 5 years to 1 year.

- o Limit distinguishable fixed equipment mechanical sounds to 52 dBA below the ordinary high water mark

This is a straight forward requirement. DCLU recommended the following condition:

Recommended Condition 6d - Specific identifiable mechanical sounds shall not exceed 52 dBA at the beaches as measured at the ordinary high water mark. Compliance with this condition shall be tested and enforced as part of the procedure specified in Recommended Condition 6c.

Metro proposed that it be the condition clearly state that it applies to only fixed equipment and proposed the same monitoring scheme as it did for Condition 6c. Defense Fund and Friends and Magnolia argued that the permitted dBA level should be 50 dBA rather than 52 dBA because an identifiable mechanical is the same as a pure tone, which suffers a 5 dBA penalty in the noise ordinance.

Hearing Examiner's Conclusions and Findings

DCLU's recommended condition should be changed to clearly indicate that it applies to fixed identifiable mechanical sounds. That is what the Plan Permit Condition says. Defense Fund and Friends and Magnolia are incorrect when state identifiable mechanical sounds and a pure tone are the same. The testimony consistently stated they are not the same.

Hearing Examiner's Recommendation - Condition 6d

Adopt DCLU recommendation 6d with the following change: Add "fixed" between specific and identifiable.

Plan Permit Condition 7 -- Visual Mitigation

(Text continues on next page)

7. Metro shall design its facilities to blend with the shoreline, park, and hillside environment at West Point. Taller structures, such as the effluent pumping station and new digesters, will be located near the retaining wall along the hillside.

Texture, facility placement, and color shall be used to minimize the visual impact of the West Point treatment facilities.

Metro shall provide a landscaped terrace extending from the hillside meadow over the administration building.

No lidding for visual mitigation other than that described in this condition shall be required.

Metro shall provide an earthen berm with landscaping to screen the West Point treatment facilities from the view of those using the adjacent beaches and tide flats. The Seattle Parks Department will be consulted on all landscaping proposals.

Metro shall provide a broad and winding trail adjacent to the water, creating a diversity of foreshore and protected dryland vantage points and experiences.

Metro shall reduce the apparent size of the facility at the north end of the West Point site by providing landscaping on top of the aeration basins.

Metro shall provide improvements authorized by the Seattle Parks Department on the hillside above the plant to redirect views away from the West Point facilities.

Metro shall evaluate the impact of alternative plant lighting schemes upon nearby nocturnal wildlife and consult with the Coast Guard regarding the impact of glare upon navigation.

Metro's project-level permit application shall include computer-assisted design and photo analyses that demonstrate the effectiveness of the screening and landscaping measures required by this condition.

The requirements of this condition are clearly stated and need not be repeated. They reflect an obvious concern about the visual impact the plant will have on Discovery Park, the City's major natural park, and on the beaches.

To ensure compliance with this condition, DCLU recommended the following conditions:

Condition #7 - Visual Mitigation

Recommended Condition 7a - The taller structures shall be located near the retaining wall along the hillside as shown in Figure 3 of this Report and Sheet 99007 of the Application.

Recommended Condition 7b - Metro shall revise plans for the Administration Building so that the height is reduced by approximately 20 feet (i.e., roof not to exceed elevation 146 Metro datum; see Sheet 99027). The building area shall be approximately 17,300 gross square feet.

With the reduction in the building's size required above, the landscaped terrace and/or lid to extend over part of the Administration Building is unnecessary and not required as a condition of this permit. The elimination of the lid over the Administration Building requires that the lid proposed to extend partly over the solids handling and Riedel/SMI buildings (see Figure 7 and Sheet 99014) needs to be modified to "feather" it into the hillside, wall, and buildings. Metro shall modify the lid design to accomplish this "feathering" to the satisfaction of the Parks Department, but the remaining lid must at least reach to where the area for the Riedel/SMI structure and the area for the solids handling building meet at the retaining wall.

Recommended Condition 7c - A lattice lid shall be required over the roadway north of the existing primary clarifiers as shown in

Sheet 990021 of the Application.

Recommended Condition 7d - Metro shall provide an eastern berm with landscaping to screen the facilities from view of those using the beaches and tide flats. The berm and landscaping will be developed and maintained to the satisfaction of the Parks Department as indicated in Sheets 99014, 99017, and 99020 through 99023, and described in Section 6 of the Application. Modifications in the form of reduction in size or elimination of parts of the wall proposed in the plans reviewed with this Application may be permitted with the approval of the Parks Department.

Recommended Condition 7e - Metro shall, to the satisfaction of the Parks Department, provide a primary trail and secondary trails in the public access area outside the footprint as shown in Sheets 99014 and 99017 with the following modifications: the primary trail shall be surfaced so that it is wheelchair-accessible through South Beach and at least a portion of North Beach; the trails shall range in size from 4 to 10 feet in width; a trail shall extend along the shoreline of North Beach waterward of the fresh water wetland; and interpretive overlooks shall be included at several locations.

Recommended Condition 7f - The HPO basins in the panhandle part of the site shall be landscaped to screen them from view as shown in Figure 7 of this Report and Sheets 99017, 99023, and 99054 of the Application.

Recommended Condition 7g - The layout and design of all facilities, structures, and mitigation elements shall strictly conform to the goal of screening the plant from public views and blending the appearance of the facilities into the shoreline and hillside environments. The final design and construction of berms, landscaping, other elements of visual mitigation and structures needing visual mitigation, shall provide, to the satisfaction of the Parks Department, that the treatment facilities are effectively screened from view and substantially in conformance with this condition.

Recommended Condition 7h - The exterior finishes of all structures shall minimize visual impacts by using colors, textures, and other means as appropriate to blend in with the surrounding shoreline and hillside environments. Earth tones (grays, tans, ochres, etc.) and coarse textured finishes should be used, roof materials (and screening of rooftop equipment) should be the same or similar color as adjacent walls. No smooth reflectorized finishes or bright colors that would draw attention to the plant shall be allowed. Glazing reflectivity shall be minimized consistent with energy code thermal requirements.

Recommended Condition 7i - Prior to the issuance of building permits for the HPO basins (facilities 10-01, Sheets 99053 and 99054), Metro shall, to the satisfaction of the Parks Department, complete and implement a plan to redirect views on the hillside away from the plant through a combination of trail relocation (including a portion of the North Beach Trail), planting, and other means.

Recommended Condition 7j - Prior to the issuance of permits for the construction of any building, Metro shall complete and submit to the satisfaction of the Parks Department, plans and specifications for the installation of all perimeter and hillside plantings. (Only plantings within the plant footprint shall be exempt from this requirement.) The plans and specifications shall be organized in a comprehensive and easily understood format with detail as to the number and species of plants, their sizes at time of planting and at maturity, and planting instructions.

Because some of the plants proposed to be used are not readily available at sizes contemplated, Metro shall contract to have the plants grown by the time these plans and specifications are submitted to the Parks Department. Evidence of the contract arrangements shall be included with the submittal of the plans and

specification.

Metro shall ensure that planting is carried out consistent with the plans and specifications to the satisfaction of the Parks Department prior to the issuance of the Final Certificate of Occupancy, or one year after the first day of full operation of the plant providing secondary treatment, whichever comes first.

A vegetation management plan shall also be required at the same time. This plan shall provide clear directions and guidance for the maintenance and care of the plantings, indices of appropriate health (i.e., conditions which trigger replacement of unhealthy or dead plants and replacement requirements), and other material specified by the Parks Department as necessary to make the plan complete and usable.

For the life of the project, Metro shall maintain all plantings as per the vegetation management plan and consistent with the plans and specifications. If dead or dying plants are not replaced by Metro in a timely manner with like species (similar in sizes and age), the Parks Department may make the replacement(s) and Metro shall pay for the expenses incurred.

Metro took exception with 7b, i and j. Its exception to 7b concerned the height of the administration building, which changed slightly (to 32 feet) since DCLU wrote to recommendation. All parties agreed the condition should be changed to reflect the change in the height of the building.

Metro's stated objection to 7i is the timing it establishes for completion of the hillside work. Metro testified that the condition states its goal and intention, but that it cannot guarantee that planting on the hillside will be completed by the time it needs its building permits for the HPO basins (to meet its schedule and comply with the consent decree). Metro expressed concern that if it were forced to comply with this condition it could be put in a position where it would have to try to do the hillside work at a time when it could not be successful and could damage the hillside.

Its apparent unstated objection to 7i is the language requiring the work to be done to the satisfaction of the Parks Department. Its proposed condition states it will "consult" with the Parks Department.

Subsequent to the date of the reported recommendation, DCLU had the opportunity to review plans required by 7i that are 95 percent complete. DCLU indicates that the Parks Department is pleased with it. Based upon its review of the plans and the Parks Department comments and in response to Metro's concerns DCLU modified the proposed condition 7i to read:

Recommended Condition 7i - No later than the issuance of building permits for the HPO basins (facilities 10-01, sheets 99053 and 99054), Metro shall, to the satisfaction of the Parks Department, complete a plan to redirect reviews on the hillside away from the plant through a combination of trail relocation (including a portion to the North Beach Trail), planting, and other means. Implementation of this plan shall be completed to the satisfaction of the Parks Department no later than May 31, 1993.

#### Hearing Examiner's Conclusions and Findings

The Hearing Examiner concludes that Metro's concerns about making the issuance of building permits for HPO basins subject to completion of hillside planting could create a situation where either it could not obtain the building permit sufficiently early to complete the HPO basins in a timely manner or it would have to do the hillside work at an inappropriate time. The Hearing Examiner also concludes that the amended DCLU condition addresses this concern.

Metro's language changing Park's status to a "consultant" is not reasonable. The City must approve the plans to ensure compliance with the permit and it must approval the final work to ensure compliance with the approved plan. The Parks Department is the best qualified City agency to act on behalf of the City in this core.

Hearing Examiner's Recommendation - Condition 7i  
Adopt DCLU's recommended condition

Metro's primary stated objections to condition 7j is the requirement to replace dead and dying plants. According to Metro, losses of up to 30 percent could be sustained without compromising screening objectives because of the density in which planting will be done. Metro states:

To require that any dead or dying plants be replaced is to deny the role natural forces will play in shaping the final planting plan. It also disregards the habitat value of dead and decaying plants. The success of this plan cannot be measured by conducting counts of what lives and dies, but rather by examining the extent to which mitigation goals of blending, screening, and enhancing wildlife habitat have been achieved.

As is the case with Condition 7i, Metro also apparently objects to the role given the Parks Department.

Metro proposed the following condition 7j:

Metro shall be required to implement the landscape plan for the perimeter berm shown in Drawing 99017 and 99018 of the permit application. In implementing this landscape plan, Metro shall ensure the plant materials required will be available at the time of installation and for replacement of losses. In developing detailed plans and contract documents, Metro shall regularly consult with Parks staff, and Parks shall review and evaluate plans and specifications at the 50 percent and 90 percent stages of completion. Landscaping, grading, and other improvements shall be installed in substantial conformance with the planting plans and contract documents.

Metro shall also consult with Parks in developing a vegetation management plan (maintenance manual). This plan will include guidelines and standards for maintenance of plants during the establishment period, as well as guidelines and standards for long-term maintenance and landscape management.

One year after completion of the landscape installation, and again after two years, Metro shall remove and replace plants as necessary to meet overall mitigation and screening objectives.

At the end of the third growing season after completion of landscape installation, Metro shall assess the success of the landscaping plan, including the effectiveness of visual screening. The person(s) conducting the evaluation shall have expertise in visual screening, landscape restoration, and wildlife habitat enhancement. Recommendations included in this landscaping assessment shall be shared with the Parks Department and implemented by Metro.

Thereafter, Metro and the Parks Department shall conduct an annual visual evaluation of the plantings on the berm. Based on these evaluations, Metro shall carry out maintenance activities consistent with the vegetation management plan.

Other parties proposed that final approval of completed mitigation efforts and modifications to plans should not be allowed by the Parks Department without first consulting interested citizens groups. Some also proposed additional mitigation.

#### Hearing Examiner's Conclusions and Findings

Notwithstanding Metro's waxing eloquent, its primary objection to this condition appears to be its unstated one; the role it gives the Parks Department. The Hearing Examiner does not understand DCLU's recommended condition to require Metro to replace every dead and dying plant. It does not say that. What it says is Metro must maintain the hillside plantings in accordance with a Parks Department approved vegetation management plan. Metro objects to the plan being subject to Parks Department approval. As stated above, its objection is not reasonable. Metro has the opportunity to prepare for Parks Department review and approval a vegetation management plan that calls for replacement to be based on whether the functions of the hillside plants are being served. Such a plan would be entirely reasonable. There is no evidence that the Parks Department is not.

#### Hearing Examiner's Recommendation - Condition 7j



The Hearing Examiner recommends that the City Council adopt DCLU recommended condition 7j with the following addition to the fourth paragraph: "This plan shall include policy statements regarding the role and function of the hillside plantings and stating the purpose of the plan and its elements, including the plant replacement program. Dead and dying plants shall be replaced in accordance with this plan."

Objections to the remaining conditions recommended by DCLU to implement Condition 7i were generally minor. Some parties proposed additional mitigations. Some proposed more stringent compliance and enforcement requirements.

#### Hearing Examiner's Conclusions and Findings

DCLU's recommended conditions are adequate to ensure compliance with Plan Permit Condition 7. Together they simply give sufficient body to elements of the plan condition to allow enforcement.

#### Hearing Examiner's Recommendation - Condition 7a, c, d, e, f, h and k.

Adopt DCLU recommended conditions.

##### o Include computer - assisted design and photo analysis

Metro's application includes several illustrations, including photos with computer-assisted design elements, intended to demonstrate that the proposed mitigation plan (perimeter berm and plantings) would be effective in providing effective visual screening in key areas. Computer generated views superimposed over photographs of key areas show the effectiveness of the proposed berm and landscaping.

A view analysis done by Metro concludes:

The top 3 to 4 feet of approximately 50 lineal feet of the retaining wall behind the HPO basins would be visible; the landscaped covers of the HPO basins would be visible (these structures would extend 25 feet above grade versus 10 feet proposed in the original application); the secondary clarifiers might be visible from the hillside but landscaping would screen potential views from hillside trails; some views of the taller buildings would be visible from the hillside and color, texture, and screen walls should help blend them with the surroundings.

#### Hearing Examiner's Conclusions and Findings

The application submitted by Metro (and similar information presented at the hearing) includes the material required by this Plan Permit condition.

From these materials, it appears that views can be effectively screened. People visiting the publicly-accessible areas of West Point would not be able to see the plant except for distant, oblique views. That is, someone walking along the beach would not see plant facilities when they looked directly toward the plant, but when looking at some distance (e.g., walking toward the lighthouse from the panhandle) the top portions of the taller facilities would be visible.

The contribution of the proposed landscaping cannot be overstated. It is the plantings that block the nearer views, including the views of the security wall. Without the vegetative screening the plants provide, facilities would be significantly more impacting in terms of visual effect (See the computer-generated views which do not include the screening provided by the proposed plantings.)

#### Plan Permit Condition 8 - Habitat and Hillside Stability.

Adverse impacts to wildlife habitat areas, including beach, intertidal, and hillside/bluff areas, shall be mitigated during construction and operation at the West Point treatment facilities. As part of its application for project-specific permits, Metro shall describe the measures that will be utilized to mitigate adverse impacts upon habitat during construction.

In consultation with the Seattle Parks Department and relevant resource agencies, Metro shall do an inventory of existing habitat

and evaluate the extent to which development of Metro's proposal and associated mitigation will result in a net improvement of or reduction in quality of habitat at the West Point site. Metro shall implement specific measures, consistent with sound environmental planning, to enhance existing and potential habitat areas and values at West Point, and shall maintain those measures on an ongoing basis. All enhancement projects shall be reviewed by the Seattle Parks Department and shall be completed within two years of the granting of the final occupancy permit.

The existing Discovery Park nature trail on the hillside above the plant shall not be physically disturbed during construction, except for trail improvements approved by the Parks Department.

As part of its application for project-specific permits, Metro shall demonstrate that the planned retaining wall will stabilize the lower hillside east of the plant. Metro's application shall also evaluate potential methods of stabilizing the upper hillside east of the plant while preserving its current habitat. Hillside drainage patterns shall be monitored periodically during construction and operation.

In addition to demonstrating that the retaining wall will structurally stabilize the lower part of the hillside, Metro will address prospective visual impacts associated with the wall. Metro's application will identify which portions of the wall will be visually exposed from various vantage points, identify the quality of view anticipated from that exposure, and address specific techniques that will be utilized for color and texture treatment of the wall.

All construction run-off will be subject to best management practices for control of erosion and sedimentation.

This condition touches upon two more less distinct concerns: Preservation of habitat and hillside stability. (Existing habitat are described in Section I.D. above. It requires Metro to:

- o Mitigate impacts to wildlife areas during construction/operation of plant and describe the methods that will be used.
- o Evaluate the extent to which project will effect a net loss or gain in quality of habitat areas.
- o Enhance existing and potential habitat areas and values
- o Avoid disturbing hillside trails.
- o Demonstrate that the retaining wall will stabilize the lower hillside and evaluate ways to stabilize the upper hillside while preserving its current habitat.
- o Monitor hillside drainage pattern during construction.
- o Address potential visual impacts of the retaining wall.

Each of these is discussed below

o Mitigation impacts to wildlife areas

Measures proposed by Metro to mitigate the impact of construction on wildlife habitat include:

Hillside

Construct most of the retaining wall from the Metro side of the property line (to avoid disturbance of hillside).

Define "construction corridors" (i.e., limit where on the hillside that access to construction areas will be allowed to specifically-marked corridors).

Fence or flag allowable construction areas on the hillside to prevent workers and equipment from affecting adjacent habitats.

Sequence and scope construction activities to minimize the need for

heavy equipment on the hillside; if possible, schedule installation of hillside drains during the dry season; use lightweight equipment wherever possible.

Stockpile excavated material off site, if necessary, to maintain habitat on the hillside.

Require contractors to prepare an Erosion Control Plan (page 5-26). Use best management practices to control erosion. Contractors would be required to maintain inventory of pollution control materials and to be responsible for the detection of contaminated groundwater.

Restore and revegetate affected areas on the hillside as soon as possible after completion of construction activities (about 2.5 acres of hillside will require restoration and 0.4 acre of hillside wetland will be lost).

#### Beach and Intertidal Area

Minimize sedimentation during in-water construction (emergency outfall and barge facility) to minimize impacts on eelgrass beds.

Restore native sediments in disturbed intertidal and subtidal areas; transplant eelgrass if large areas are disrupted.

Stockpiled soil stored on South Beach will be supported by walls and the top of the piles will be graded and equipped with drain systems to allow runoff water to percolate.

Habitat mitigation measures related to long-term operation of the plant include:

Plantings on the perimeter berm and hillside would be planned by a team of landscape architects, foresters, and wildlife biologists to optimize benefits for park visitors and wildlife.

Habitat values would be enhanced by using native plants on the perimeter berms (about 19 acres of landscaped area would be added to the site).

Loss of surface water from wetlands would be mitigated by allowing water drained from the hillside to supply the freshwater wetland proposed as part of the perimeter public access area of North Beach.

Monitor restored areas on the hillside to assess success of plantings and allow for installation of replacement or changes in plantings as warranted.

DCLU found these proposals to be generally reasonable stating that some of Metro's proposal lacked sufficient specificity to allow compliance to be measured and that some that should be mandatory were identified by Metro as discretionary. DCLU also suggested some additional measures would be appropriate. It recommended the following conditions:

Recommended Condition 8a - To minimize the amount of hillside area impacted, the retaining wall shall be constructed from Metro's property, except for the area included within the construction easement shown on Sheet 99019 (see Figure 4).

Recommended Condition 8b - To keep construction activities from affecting areas not directly involved in construction, contract specifications and drawings shall include and clearly mark to DCLU's satisfaction, the allowable "corridors" of construction activity on the hillside (including limits of contractor work areas; location of temporary fences and markers; trees to be removed; trees, snags and other features not to be disturbed). Metro shall provide the pertinent drawings/plans to DCLU and the Parks Department, and shall ensure that the corridor markers, fences, and other elements indicated are provided during construction and that construction activities adhere to the limitations indicated by the approved plan(s) to the satisfaction of those agencies.

Recommended Condition 8c - To minimize the amount of hillside

habitat disturbed by construction activities, heavy equipment shall not be allowed on the hillside outside the areas specified in the construction easement. Unless Metro demonstrates to DCLU's satisfaction that it has no reasonable alternative, hillside drains shall be installed in the dry season (August to October), using lightweight equipment and hand tools.

Recommended Condition 8d - To avoid destruction and disturbance of hillside habitat and to minimize the potential for unnecessary erosion and sedimentation impacts, no stockpiling of excavated soil shall be permitted on the Discovery Park hillside outside the construction easement shown on Sheet 99019.

Recommended Condition 8e - Grading plans shall include to DCLU's satisfaction, the locations of best management practices proposed for the control of erosion and sedimentation. Metro shall ensure that the practices in the DCLU approved plans are effectively utilized to minimize erosion and sedimentation. During construction, DCLU may require or authorize modifications and/or additions to erosion and sediment controls as necessary to achieve satisfactory results in light of actual conditions.

Recommended Condition 8f - Metro shall ensure that proper pollution control measures and materials are onsite and that contaminated groundwater and/or soils are properly treated in accord with applicable regulations.

Recommended Condition 8g - Every area of the hillside disturbed by construction activities shall be restored (including, but not limited to, regrading and revegetation with native plants) within 12 months of the completion of the construction-related activities directly affecting each area. Any area from which vegetation has been removed shall at least be hydroseeded and/or other measures used to stabilize them to control erosion prior to rainy season (October through March) and full restoration shall be completed as soon as possible.

The restoration shall be completed to the satisfaction of the Parks Department (including, but not limited to, the number, location, and species of plantings and the timing and extent of regrading and revegetation). The completion of restoration efforts shall be indicated by a determination of the Parks Department.

Recommended Condition 8h - Areas of the hillside which are restored shall be Metro's responsibility for five years after the completion of restoration (see Recommended Condition 8g) and during this period, dead or dying plants shall be replaced to the Parks Department's satisfaction.

Recommended Condition 8i - For the duration of the construction activity, Metro shall provide funds for the Parks Department to hire a qualified habitat biologist to review plans for construction and restoration activities on and affecting the Discovery Park hillside, and to monitor and modify those activities (including the dewatering) to ensure that impacts are mitigated and the restoration implemented consistent with the conditions of this permit.

Recommended Condition 8j - Water collected from the hillside shall be used to supply freshwater for the wetland located in the proposed North Beach public access area as indicated in Metro's mitigation plan, Sheet 99017.

Recommended Condition 8k - To ensure that the bald eagles which nest nearby in Discovery Park are not unnecessarily and adversely impacted by construction activity, any and all provisions and/or conditions of the biological assessment and/or an eagle management plan prepared pursuant to federal or state eagle protection regulations, shall become conditions of this permit to be met by Metro and enforcement by the appropriate federal and/or state agencies as well as by DCLU.

Metro objected to 8c, h, and i. Each of these conditions is discussed below.

It objected to 8c, saying that while constructing the hillside drains during the "dry" season, its schedule for completing the retaining wall might not allow it to limit the construction activity to the dry season.

Defense Fund and Friends, proposed that language be added to Condition 8c that states that Metro would ensure that all construction workers engaged in hillside work be properly trained to do so. Other parties proposed similar concepts. In response to Metro's objections and testimony given during this hearing DCLU amended the Condition 8c to read:

Recommended Condition 8c: To minimize the amount of hillside habitat disturbed by construction activities, heavy equipment shall not be allowed on the hillside outside the areas specified in the construction agreement. Hillside drains shall be installed in the normally dry season of August to October, unless Metro demonstrates to DCLU's satisfaction that the construction site and weather conditions are suitably dry and/or acceptable precautions and mitigation measures are incorporated into the construction plans. Installation of the hillside drainage system shall be done by a contractor with demonstrated experience in doing such work in similar sensitive areas, using specialized lightweight equipment and hand tools.

#### Hearing Examiner's Conclusions and Findings

The Hearing Examiner concludes that DCLU's amended condition is appropriate. The issue that is important when considering doing construction on the hillside is under what circumstances should the work be done, not when should it be done. The work needs to be done when the hillside is adequately dry. This may occur during the so-called "dry season" or some other time of the year. Adequately dry conditions are more likely to occur and predict during the dry season; thus, it is appropriate to target this time to do work on the hillside -- as does DCLU's recommended amended Condition 8c. At the same time the amended condition allows Metro flexibility by allowing it to do the work at other times which dry conditions prevail.

DCLU's amended condition also recognizes that the extent of the protection given to the hillside during construction depends upon how the work is done. To ensure that it is done correctly, the condition requires the work to be done by contractors with the necessary experience doing work in sensitive areas.

#### Hearing Examiners Recommendation: 8c

Adopt DCLU recommended amended Condition 8c.

Metro also objected to Condition 8h, stating that losses of 30 percent to 40 percent could be sustained, without causing harm to the purpose of the plantings. It also argued that it should be responsible for the planting for only two years instead of five. Magnolia proposed that Metro be required to pay a lump sum to the Parks Department to maintain the planting, rather than requiring Metro to be involved in their maintenance at all.

#### Hearing Examiner's Conclusions and Findings

Metro's concerns are the same here as they are about Condition 7j discussed earlier. The resolution should be the same: require a vegetation management plan that states the purpose of the planting and states that replanting should be done to ensure those purposes are fulfilled. DCLu argued convincingly that among those purposes must be maintaining hillside stability. Testimony during the hearing indicated that Parks Department has the required experience regarding habitat preservation and visual mitigation and that DCLU has the required experience regarding hillside stability. Five years is not an unreasonable time to require Metro to maintain planting.

#### Hearing Examiner's Recommendation: Condition 8h

Adopt DCLU recommended Condition 8h with the following changes: dead or dying plants shall be replaced in accordance with a vegetation management plan prepared to ensure that the purposes of the planting -- visual mitigation, habitat preservation and maintaining hillside stability will continue to be served. The plan shall be approved by and administered with the approval of the Parks Department and DCLU.

Metro objected to Condition 8i, stating that it did not adequately define the authority or reporting relationship of the wildlife biologist. It proposed that the biologist's authority be limited to observing work activity and reporting problems to the Metro construction manager. In response to Metro's concern about DCLU's recommended condition lacking clear reporting authority DCLU amended its Condition 8i to read:

Recommended Condition 8i. Prior to construction on the hillside, Metro shall provide funds to hire a qualified habitat biologist to review the plans for construction activities on and affecting the Discovery Park hillside, and after construction begins, to act as a DCLU special inspector to monitor and modify those activities (including the dewatering) to ensure that impacts are mitigated and the best restoration implemented consistent with the conditions of the permit.

Defense Fund and Friends proposed that the wildlife biologist should be a Parks Department employee.

#### Hearing Examiner's Conclusions and Findings

DCLU's amended Condition 8i is appropriate to ensure protection of the hillside during construction. Testimony indicated that activity that could potentially threaten the hillside could occur very quickly. The reporting relationship prescribed by Metro does not guarantee that action can be taken quickly enough to avoid damage to the hillside during construction, nor does it guarantee appropriate action will be taken. The Metro construction manager could be put in a position where he/she would have to decide between taking appropriate action to protect the hillside and meeting what will be a tight construction schedule.

#### Hearing Examiner's Recommendation: Condition 8i

Adopt DCLU's amended 8i.

Condition 8l and 8m no longer pertain because the emergency bypass has been withdrawn from the application.

Metro objected to Condition 8n for the same reasons it objected to 2a. The Hearing Examiner rejects Metro's arguments here for the same reasons, and recommends that the City Council adopt Condition 8n.

Condition 8k is intended to protect the eagles. Metro concurred with it. Other parties had minor objections. The Hearing Examiner recommends that the City Council adopt it. This condition will provide protection to the eagles.

- o Evaluate the extent to which the project will effect a net gain/loss on habitat quality.

Metro has done such an evaluation and has concluded that there will be some loss to habitat. Expected losses to different types of habitat are shown in the table below:

<u>Habitat Type</u>	<u>Existing</u>	<u>Acres</u> <u>Proposed</u>	<u>Net Change</u>
<u>North Bluff (Discovery Park)</u>			
Forested Upland	32.2	32.6	0.4
Forested Wetland	1.3	0.9	-0.4
Meadow Grassland	<u>1.5</u>	<u>1.5</u>	<u>0.0</u>
Total	35.0	35.0	0.0
<u>West Point (Metro property)</u>			
Forested Upland	6.0	5.0	-1.0
Costal Shrub	0.2	9.0	8.8
Meadow Grassland	9.8	0.6	-9.2
Beach Grassland	4.5	3.7	-0.8
Wetland	<u>0.5</u>	<u>1.1</u>	<u>0.6</u>
Total	21.0	19.4	-1.6

Metro concluded that this loss of habitat would not result in a loss of habitat value. It based this conclusion on its analysis, which employed the "Habitat Evaluation Procedures" program developed by the Department of Fish and Wild Life.

Parks Department expressed some concern about the evaluation of the effect of construction of the emergency bypass on intertidal habitat. The emergency bypass has been withdrawn from the application.

#### Hearing Examiner's Conclusions and Findings

Metro has satisfied this requirement. The procedures it used are recognized and accepted as appropriate.

##### o Enhance existing and potential habitats and values.

Metro has proposed the following measures to enhance habitats and habitat values.

- Create freshwater wetland habitat as a part of the perimeter mitigation, enhancing the variety of plants and animals.
- Create upland forest habitat and coastal shrub by planting appropriate native species on the berms and landscaped basin covers.
- Re-created beach grassland habitat along the outer edge of the berm.
- Place large snags, driftwood, and logs at appropriate locations to enhance wildlife habitat values.

Enhancement measures proposed for the hillside include:

- Restore disturbed wetland areas with appropriate plant species that tolerate moist conditions.
- Enhance upland habitat by introducing native conifers and large shrubs to accelerated natural successional changes in vegetation.

Metro proposes to maintain all enhancement projects on an on-going basis and to discuss maintenance requirements with the Parks Department. Current schedules call for completion of habitat enhancement on Discovery Park property by 1993 and on Metro property by the end of 1997.

DCLU proposed the following condition to ensure Metro implemented these measures.

Recommended Condition 8o - Metro shall implement the proposed enhancement measures described in Section 7 of its Application (including, but not limited to: freshwater wetland features on North Beach, upland forest and coastal shrub habitats, beach grassland, and the placement of snags, driftlogs, etc. at appropriate locations, restore disturbed hillside areas with appropriate native species, introduce native conifers and large shrubs on the hillside), to the satisfaction of the Parks Department.

Final design and specification for the enhancement projects shall be made in consultation with the Park Department. All enhancement projects shall be completed to the Parks Department's satisfaction within 24 months of the completion of construction or prior to the issuance of final certification of occupancy, whichever occurs first.

Metro objected to the inclusion of "prior to" in the last sentence of the condition, stating the issuance of the certificate of occupancy.

#### Hearing Examiner's Conclusions and Findings

The reason for the requirement that the work be done "prior to" issuance of the Certificate of Occupancy (CO) is to ensure that the work will be done. Requiring work to be done prior to a CO is common practice. An alternative is to require a bond to be posted. The effect is the same incentive to do the required work is provided.

#### Hearing Examiner's Recommendation: Condition 8o



Adopt DCLU recommended Condition 8o, with the following addition: If Metro desires to obtain a certificate of occupancy prior to completion of the work, it may post a bond or other appropriate security to ensure the work will be done. The bond shall have value 1.25 times the estimated cost of doing all required work, including cost of plants and other materials and labor, including consultants.

o Avoid disturbing hillside trails.

This is a straightforward requirement. Metro has stated it will avoid disturbing the trails except as required to fill other conditions and except as authorized by the Parks Department. DCLU recommended and Metro accepted the following Condition 8p.

Recommended Condition 8p - The trails on the Discovery park hillside shall not be physically disturbed during construction except as noted in other project permit conditions and for improvements authorized by the Parks Department. Metro shall, to the satisfaction of the Parks Department, replace stairs on the Hidden Valley Trail as partial compensation for Metro's geotechnical explorations on the hillside.

Hearing Examiner's Conclusions and Findings

This condition will ensure compliance with the requirement to avoid disturbing the hillside and trails.

Hearing Examiner's Recommendation: Condition 8p

Adopt DCLU recommended Condition 8p.

o Demonstrate that the retaining wall will stabilize the lower hillside and evaluate ways to stabilize the upper hillside while preserving its habitat value.

To ensure compliance with this requirement DCLU has recommended the following conditions:

Recommended Condition 8q - Metro shall ensure that a full-time licensed geotechnical engineer shall be on-site and supervise the construction of the hillside retaining wall. Metro shall be responsible for all aspects of wall construction being consistent with the goal of this condition and the performance objectives of the proposed design.

Recommended Condition 8r - Metro shall employ a special inspector with geotechnical expertise and licensing satisfactory to DCLU. This special inspector shall provide continuous on-site monitoring and inspection of the construction for the excavation, shoring, and construction of the hillside retaining wall. The special inspector is to verify to DCLU through regular weekly reports (and special reports as s/he finds necessary) that all the various aspects of retaining wall and hillside drainage measures construction are implemented per plan and consistent with sound engineering practice throughout the construction of the wall and associated drainage elements.

Recommended Condition 8s - Metro shall ensure that all aspects of Director's Rule 2-87 are met, including those that repeat or overlap conditions included in this permit action.

Recommended Condition 8t - Metro shall, prior to issuance of any construction permits for the hillside retaining wall or associated drainage elements, provide a document satisfactory to the City's Law Department, that clearly indemnifies and holds the City harmless for future slides, erosion, surface sloughing, and/or similar events or effects from the upslope property under City ownership.

Recommended Condition 8u - Metro shall remove slide debris from catchment walls and other parts of its property as soon as possible and in no event longer than two months from the slide occurrence, in order to prevent the build-up of such debris and the potential for damaging the effectiveness of the facilities'

ability to withstand slide damage.

Recommended Condition 8v - When it removes the slide debris referred to in Recommended Condition 8u, Metro shall also clear the hillside area(s) of slide debris and damaged vegetation. These hillside areas shall be restored and revegetated with native plants as soon as possible to the satisfaction of the Parks Department.

Recommended Condition 8w - During Construction and throughout the life of the facility, Metro shall monitor, repair and maintain hillside drainage facilities consistent with ensuring their proper function as designed. Inspection of the drainage facilities shall occur at least yearly. All activities shall require prior notice to the Parks Department consistent with easements, and inspection, repair, and maintenance shall be accomplished on foot, with hand tools, unless the magnitude of the tasks is so great as to require other type of equipment.

#### Hearing Examiner's Conclusions and Findings

Metro objected to Condition 8t and 8y. Other parties proposed alternative language for several of these conditions. In general, the differences between DCLU and the other parties were minor. These findings and conclusions and the recommendation that follows apply to only Metro's general compliance with the Plan Permit requirement and DCLU's recommended conditions to which Metro did not object or with which other parties did not significantly disagree. Findings and conclusions and recommendations regarding those conditions to which Metro did object and with which other parties disagreed are set out separately below.

It is in Metro's best interest to take whatever measures are necessary to ensure that the hillside adjacent to the West Point plant is stabilized. The safety of the plant depends upon it. Consequently, if for no other reason, Metro has vigorously complied with this Plan Permit requirement.

Metro employed a "team approach" to designing the retaining wall, using geotechnical and civil engineers to address all design issues. Metro has stated that it will continue to use the "team" as needed during the construction of the wall. The result is a wall design that responds to the features of the hillside. So, in the panhandle, where the massive HPO basins are able to resist loading from the hillside, the retaining wall will be a temporary shoring wall needed only during construction. Where as near the south end of the site, where there are no facilities as massive as the HPO basins, concrete columns with permanent tiebacks anchored deep into the firm soil under Discovery Park are used.

To ensure that these design feature would work Metro conducted tests and made of soil conditions as part of the geotechnical investigations. Metro field tested the anchoring system, and purposes to continue testing during the construction of the wall.

Metro addressed earthquake safety in its analysis of predicted ground motion, current design practice, and past performance of similar structures. The proposed wall would be designed to move with the hillside and would be tied together along its length to compensate for local variations in loading and hillside displacement.

The wall is proposed to maintain soil stability near the property line but would not eliminate erosion or surface sloughing of soil uphill from the wall. Some localized slides would be expected to continue after the plant is constructed. The catchment wall is proposed to protect plant facilities from those minor slides. The permanent drainage of seeps and the elimination of ponded areas on the hillside above the wall is proposed in order to reduce moisture as the accelerating factor in producing slides. Existing slide debris would be removed, and many areas overexcavated and new soil brought in to provide for foundations and backfill.

Metro has evaluated measures to stabilize the "upper" hillside (actually comprised of two distinct areas of the hillside: the midslope and the upper slope). It first analyzed the stability of the upper hillside to determine the bend and causes of instability. It determined that the upper 20 feet to 30 feet of the slope is unstable due to a continuation of high groundwater, low soil strength and steep slopes. To help stabilize the "upper" hillside Metro

purposes to dewater or drain wet portions of the hillside using both surface and subsurface drainage. Metro has determined that this approach would reduce the risk of sliding to a level considered acceptable within the "standards of practice of geotechnical engineering."

In addition to complying to this Plan Permit requirement the design of the retaining wall must meet DCLU Director's Rule 2-87, as well as conforming to this condition. Director's Rule 2-87 specifies the requirements for construction in potential slide areas, to reduce injury to persons and property that could result from slides. A geotechnical checklist and analysis, detailed plans and specifications are required by the Rule, along with other provisions, including a waiver of claims against the City and contractor insurance for slide damage resulting from construction.

DCLU has conducted a geotechnical review of the retaining wall design presented in the Application and the supporting documentation provided by Metro. DCLU's geotechnical review concludes that with proper construction the proposed retaining wall can be build and would perform as Metro anticipates; that is to say, it would stabilize the hillside.

For these reasons the Hearing Examiner concludes that Metro has complied with this requirement. The Hearing Examiner further concludes that if the retaining wall is built as designed, it will stabilize the hillside by reducing the risk of damaging slides to unacceptable level of risk.

To ensure that the design of the retaining wall continues to comply with this Plan Permit requirement and DCLU Director's Rule 2-87 (which requires appropriate measures to be taken to protect hillside property owners) DCLU recommended the conditions stated above. The Hearing Examiner concludes that generally the recommended conditions serves their purpose in a reasonable way. They provide for continuing review of all plans pertaining to the construction of the wall and associated features. They include measures to protect the park and park users from the effect of hillside slides. They generally do not put an undue burden on Metro.

#### Hearing Examiner's Recommendation

The Hearing Examiner recommends the City Council adopt DCLU recommended Conditions 8 through 8w as written, except as modified below.

Metro objected to condition 8t, stating the condition's indemnification requirement is too broad because it would require to indemnify the City for injury to persons using the park, rather than just injury to Metro. Metro argued that it had no control over the park property or future slides, and that it should not be deemed liable for injury resulting to third parties.

DCLU responded that Metro chose to build on or adjacent to the hillside and to do so it had to alter the hillside. It responded further that Metro could have chosen to eliminate all landslide sections uphill, and thereby reduce or eliminate its exposure. DCLU suggested that as an alternative to indemnifying the City, Metro could take out a "public liability" insurance policy naming the City as an additional insured.

#### Hearing Examiner's Conclusions and Findings

The position of both DCLU and Metro are extreme. The park hillside is unstable naturally. DCLU's condition as written appears to attempt to make Metro assume liability to persons for injuries sustained by a slide in the park regardless of the cause of the slide (assuming the City could be found liable). Metro on the other hand seeks to avoid liability in such cases, regardless of the cause of the slide, even if the cause is Metro's work on or alteration of the hillside. An approach more reasonable then either is to make Metro responsible or liable for slide caused injuries resulting from Metro caused slides. Recognizing that it may not always be possible to determine the cause of a slide, it is reasonable to establish certain presumptions as to the cause of a slide.

#### Hearing Examiner's Recommendation: Condition 8t

Prior to the issuance of any construction permits for the hillside retaining wall or associated drainage elements, Metro shall provide a document satisfactory to the City's Law Department, that clearly indemnifies and holds harmless the City for any injury caused to Metro or third persons injured by future slides, erosion, surface sloughing, or similar events attributable to

Metro's construction of the hillside and associated drainage elements. Slides and other earth movements on the hillside shall be presumed to be caused by Metro construction activity when: a slide occurs in any area disturbed by Metro during the construction of the retaining wall and associated drainage features; or a slide occurs in the area "dewatered" by Metro; or the frequency of slides increase after the retaining and drainage facilities construction occur, using the frequency over the past fifty years as a base; and when a slide occurs within the first five years of the construction of the wall and drainage elements is completed. In all other cases, slides shall be presumed to be natural slides that would have occurred even if the plant had not been built.

If Metro carries or chooses to carry public liability insurance for personal injury death, property damage or loss due to slides and other earth movements, a policy naming the City as an additional insured may be substituted for that part of the hold harmless agreement indemnifying the City against third party claims.

Metro also objected to DCLU recommended Condition 8v, stating (1) slides on the hillside are the Parks Department's responsibility and (2) slides occur naturally on the hillside and the Parks Department has taken the stand that "restoration" of slides should occur naturally. Defense Fund and Friends and Magnolia generally agreed with the DCLU recommended condition, adding that restoration of hillside trails should also be included in the condition.

In response to Metro's objection, DCLU stated that the intent of Condition 8v is to ensure Metro removes slides that have the potential to adversely affect the plant's ability to withstand landslide damage, and that it intended that restoration and revegetation occur only when, in the judgment of the Parks Department, the removal of the debris or good erosion control practice requires such restoration measures. It offered the following alternative Condition 8v:

Amended Recommended Condition 8v - When it removes the slide debris referred to in Recommended Condition 8u, Metro shall also remove from the hillside area(s) slide debris which has the potential for building up behind the catchment wall and for damaging the effectiveness of the facilities' ability to withstand slide damage. When requested to do so by the Parks Department, Metro shall as soon as possible restore and revegetate with native plants those hillside areas cleared of slide debris as well as any related area where the potential for erosion due to the slide activity requires restoration and revegetation.

#### Hearing Examiner's Conclusion

DCLU's amended recommended Condition 8v, modified to require Metro to restore affected hillside trails is reasonable and necessary. Though slides do occur naturally on the hillside, and natural revegetation and regrowth of slides and slide debris may generally be consistent with Discovery Park policies and Parks Department philosophy, this condition is needed because there will be times when Metro must remove debris to provide continued protection to the plant. Removing the debris can give rise to two impacts that have to be remedied, if they occur: opportunities for "natural" revegetation can be reduced and damage can be done to areas adjacent to the slide area. This condition addresses those possibilities. It also allows for "natural" revegetation consistent with Park policies and philosophy by giving the Park Department the authority to decide where revegetation is necessary and when it is not.

Requiring restoration of the hillside trails when they are damaged or adversely affected by measures taken by Metro to protect the West Point plant. Such a requirement does nothing more than make Metro responsible for its actions.

#### Hearing Examiner's Recommendation: Condition 8v

Adopt DCLU's recommended Condition 8v, as amended, adding after the last sentence:

"Metro shall restore hillside trails if affected by the removal of the slide debris referred to in Condition 8u."

- o Monitor hillside drainage patterns during construction.

The apparent reason for this requirement is concern that the proposed hillside dewatering would adversely affect hillside revegetation. Metro's application indicates that this concern was unwarranted. According to the application, the dewatering effort will eliminate two small saturated areas on the hillside (reducing the overall forested wetland area to about 0.0 acre from the current 1.3 acres). This 0.4 acre would be replanted as upland forest habitat. Dewatering would thus cause only minor changes in vegetation. To ensure that unanticipated adverse impacts do not cause loss of existing vegetation, part of the work expected to be done by the habitat biologist required in Recommended Condition 8i would include monitoring the effects of dewatering on the hillside habitat. (Recommended Condition 8w would also require monitoring of hillside drainage patterns.)

Hearing Examiner's Conclusions and Findings.

The Hearing Examiner concludes that Metro has complied and will continue to comply with this requirement. This conclusion is based on the discussion above.

- o Address prospective visual impacts of the retaining wall and address specific techniques that will be used for color and texture treatment of the wall.

According to Metro, the retaining wall "will be visible only from the down slope or treatment plant side," and there may be some views of the catchment wall and screen walls. Metro will screen these views by vegetation or visual integration.

Hearing Examiner's Conclusions and Findings

The Hearing Examiner concludes that Metro has and will continue to comply with this requirement. Metro has determined what areas of the retaining wall will be visible from where and what it intends to do about it. Metro has indicated that it will have the wall comply with recommended Condition 7h. Clearly making the retaining wall subject to Condition 7h will ensure that color and materials used on the retaining wall will blend with the surrounding area.

Hearing Examiner's Recommendation: Condition 8x

The Hearing Examiner recommends that the City Council adopt the following Condition 8x:

The colors and materials used on the retaining wall shall comply with the requirements of Condition 7h.

Plan Permit Condition No 9 - Potentially Hazardous Chemicals.

The risks associated with the use of potentially hazardous materials shall be minimized in accordance with all applicable regulations. Metro shall consult with the Seattle Fire Department regarding methods of storing, handling and transporting any potentially hazardous chemicals used at the West Point plant. Metro shall evaluate whether hypochlorite generated on-site, rather than chlorine transported by the plant, should be used as a disinfectant at West Point. Metro shall also document the risks, costs, and public health benefits of alternative potential disinfectants considered, including the use of ozone.

Prior to receiving final occupancy permit(s) for plant operation, Metro shall secure Seattle Fire Department approval of a hazardous materials handling program that describes how hazardous materials will be transported, used and disposed of, including emergency procedures.

This is a straightforward Plan Permit Condition and DCLU has recommended the following straightforward project level conditions to compliment it:

Recommended Condition 9a - Metro shall consult with the Seattle Fire Department and abide by the Fire Department's directions regarding the appropriate methods for storing, handling, using, and transporting any and all chemicals and potentially hazardous materials (including but not limited to: chlorine, sodium hydroxide, hydrogen peroxide, liquid oxygen and liquid air).

Recommended Condition 9b - Metro shall prepare, submit, and

obtain Seattle Fire Department approval for a West Point Treatment Plant Hazardous Materials Handling Plan prior to the issuance of building permits for any of the following structures indicated on sheet 99007: #13-01 chlorine handling facility; #15-01 solids handling facility; 11-01 oxygen production facility; and 00-01 privatized sludge management facilities.

Metro concurred with these conditions. Defense Fund and Friends and Magnolia proposed that the plan required by condition 9b include as elements training and security. Magnolia proposed with regard to 9b that the Magnolia community should participate in the preparation of the plan.

#### Hearing Examiner Conclusion and Findings

The proposal to include training and security as elements of the plan required by 9b is very reasonable and should be included. The best plans are of little value if people are not trained to act in accordance with the plan. Security is in both Metro's and the general public's best interest.

Magnolia's suggestion of participation by Magnolia in preparation of the plan to handle hazardous chemicals is not reasonable. That responsibility must be ultimately with the Fire Department. However, it is entirely reasonable to keep Magnolia informed of what the plans are and of appropriate action to take in case of an emergency in the Magnolia community.

#### Hearing Examiner's Recommendation - Conditions 9a and 9b

Add the following to Condition 9a: Metro shall apprise the Magnolia Community of the Fire Department's direction regarding transportation of hazardous chemicals. It shall offer annual classes regarding accidents, spills and other emergencies that might occur that could affect their health or property.

Change 9b to add: The Plan shall include elements regarding security and training, if they are not already included by the Fire Department.

#### Plan Permit Condition 10 - Shoreline, Park and Community Improvements.

##### -- Mitigation Fund

To mitigate the loss of potential shoreline recreation, access, and other unavoidable impacts at West Point, a shoreline and park improvement fund shall be established pursuant to Metro Council Resolution No. 4780 and shall be funded by Metro in the total amount of \$30 million. Of this total, \$25 million shall be used solely within the City of Seattle and \$5 million will be available for regional projects in the Metro service area.

The principal use of the fund will be to enhance public use of, access to, and access along bodies of water. The fund will be used for projects that compensate for the impact of the West Point plant by replacing, enhancing, or providing substitute resources or environments. Within this category of use, the first priority will be the acquisition, construction, expansion, and rehabilitation of salt water beaches, such as those at Carkeek Park, Golden Gardens, West Point, Myrtle Edwards park, Alki, and Lincoln Park. Acquisitions and improvements that provide or increase public access to bodies of fresh water will also be eligible for funding. At least \$2 million of funds allocated to the City will be set aside as a permanent trust fund. Interest earned on the trust fund will be used to maintain beaches in their original or restored conditions.

The \$25 million allocated to the City will also be used to compensate for the unavoidable impacts of plant construction on Discovery Park. The fund will be used to provide improvements and enhance park facilities. These improvements and enhancements will be identified by the Parks Department and could include a new visitor center, improved trails and roads, or enhanced entrances to the Park.

The \$25 million City portion of the mitigation fund will be administered by the City of Seattle. The City will make final decisions about the choice of projects, budgets, and schedules. The City will provide Metro with an annual report describing the projects funded in the previous year. The \$5 million regional portion of the fund will be administered by Metro.

Metro shall make annual payments of \$6 million each year for five years, with \$5 million going to the City fund and \$1 million to the regional

fund. The first payment shall be made with the issuance of the project level shoreline permit.

-- Community Improvement Fund

To compensate for unavoidable impacts in communities affected by West Point and Alki construction, Metro shall provide \$2 million to the City for improvements in these communities.

The wording of the conditions give rise to a "check point Charlie" sort of argument about the timing of the exchange of the first check and the project level permit. DCLU and Metro resolved the issue. They agreed that payment should be made simultaneously with the issuance of the Project Level Permit.

Hearing Examiner's Conclusions and Findings

The recommended conditions will implement Plan Condition 10. The difference between Metro and DCLU seemed more apparent than real, but they worked it out.

Hearing Examiner's Recommendation

Condition 10a and b adopt DCLU recommended conditions 10a and b with the following changes to each. "The first payment shall be made when the project level permit is issued." (as approved to when DCLU informs Metro the permit is ready to be issued.)

Plan Permit Condition 11 - Implementation

Public information program

Metro shall establish a public information program to facilitate exchange of information concerning construction plans and activities at West Point. This program shall include a citizens' advisory committee on West Point site design and mitigation.

City's satisfaction

All of the conditions of this permit must be met to the full satisfaction of the City, as demonstrated by the City Council's granting of required project-level permits. The project-level permit process includes a DCLU report and recommendation, Hearing Examiner review (public hearing, record and recommendation to City Council), and consideration by the City Council.

Processing costs

Metro shall reimburse the City for all costs incurred in reviewing Metro's application for project-level permits, including City staff time, consultant fees, and out-of-pocket costs. The City shall act expeditiously in reviewing Metro's application.

Substantial conformance

Metro's application for project-specific permits shall be organized to demonstrate substantial conformance with these plan-level permits, including satisfaction of each of the conditions described above.

This condition clearly states what is required of Metro to implement the Plan and Project 2 Level Permits. DCLU seeks to give them body with its recommended conditions. Differences between the parties are minor. Metro's only objection is to condition 11e. Metro believe it requires Metro to pay for more things than the Plan Permit Condition, including for review of permits for any North Beach enhancement program that Metro might submit for approval to appropriate agencies. Metro believe this condition needs to be clarified. Metro also states that its condition fails to state that DCLU should act expeditiously on its permits, as the Plan Permit Condition does.

Other parties, particularly, Magnolia, took exception with some others. Magnolia seeks greater participation by Magnolia and proposes that Metro put an office in Magnolia.

Hearing Examiner's Conclusions and Findings



The Plan Permit Condition states that Metro must pay for review of associated permits. At the same time, Conditions 3 and 10 do state that the shoreline improvement fund shall be used to pay for North Beach enhancement. The question is, is the North Beach enhancement project an associated permit? The answer depends on what the City Council wants it to be. There is nothing in the record, one way or the other.

Metro is correct the Plan Permit requires expeditious review of permit. The project level should as well.

Putting an office in Magnolia is not necessary to satisfy this Plan Permit Condition, nor is it necessary as a practical matter, so long as Metro follows condition 11b requiring a "hot line".

#### Hearing Examiner's Recommendation - Condition 11a - 11e

The Hearing Examiner recommends that the City Council adopt DCLU recommendations 11a - d and that it adopt a condition 11e that specifically states for which project permits Metro is expected to pay. It should also state that the City will act expeditiously on all permit applications made by Metro. Conditions 11a - 11e are set out below.

Recommended Condition 11a - Metro shall continue to mail issues of its informational bulletin, Update, to interested and affected citizens until the time of project completion (as evidenced by the issuance of a Final Certificate of Occupancy by DCLU). Circulation shall include Metro's current mailing list for the Update, as modified by those individuals who request their names be added or deleted, plus those persons who have commented to the city on this project permit. Issues shall be prepared and mailed as needed, but not less than once every three months.

Every issue shall include instructions to citizens as to how to get construction and other treatment plant information and how to make a complaint. The phone number of a 24-hour information/complaint center shall also be included.

Recommended Condition 11b - Prior to the issuance of a grading permit, Metro shall establish to DCLU's satisfaction, a 24-hour information/complaint "hot line" and a procedure for responding to requests and resolving complaints. The "hot line" phone number shall be prominently indicated on all notices that Metro is required to post in compliance with other project permit conditions.

The procedure for handling calls shall include a log with the name, address, and phone number of each caller (if provided by caller), date, time, and nature of call, and response provided by Metro (including time of response). A copy of this log shall be provided to DCLU every month and upon request.

Recommended Condition 11c - Metro shall comply with all project permit conditions to the satisfaction of the City. For conditions which specify approval by a particular agency of the City, that approval will constitute satisfactory compliance. Where a City agency is not specified by a condition, or in cases of disagreements between City agencies, the Director of DCLU shall determine the issue of satisfactory compliance.

Recommended Condition 11d - To ensure adequate water service and fire flow, Metro shall, prior to the issuance of the grading permit, comply with the water service and connection requirements of the Seattle Water Department.

Recommended Condition 11e - Metro shall reimburse the City for all costs incurred in the review of associated permits and completion of the West Point project, and compliance with permit conditions.

#### C. Single Family Code Requirements

This section identified, and analyzes the proposal with regard to Sections of the Seattle Municipal Code that apply to it. It quotes or summarizes the applicable code section and sets forth the Hearing Examiner conclusions and supporting findings with regard to the section. The Code sections substantially mirror or overlay the Plan Permit Conditions. Therefore, heavy reliance is placed on the analysis of the project vis-a-vis the Permit Conditions and frequent references are made to the

Plan Permit analysis and conclusions.

To be approved the West Point project must comply with the criteria set forth in SMC 23.44.036(B)(3) and (4). This Code section contains the criteria for review of a Council Conditional Use application for a sewage treatment plant. SMC 23.44.036B requires:

- a. The adverse impacts of the plant on residential areas to be minimized.
- b. A facility and management transportation plan.
- c. Measures to minimize odor and air pollutants.
- d. Fire Department approved methods of handling dangerous chemicals.
- e. Suitable available access from the plant to an arterial improved to City standards.
- f. Mitigation measures to be incorporated into the design of the plant.

Hearing Examiner's Conclusions and Findings

These requirements are reflected in the Plan Permit Conditions discussed in detail above. Indeed, they had to be considered by the Council in its decision to approve the Plan Permit. The findings and conclusions of the Hearing Examiner state that the proposal complies with the Plan Permit Conditions. The project complies with these requirements for the same reasons it complies with the Plan Permit Conditions.

SMC 23.44.036(B)(4) states:

Substantial conformance. If the application for a project-specific proposal is submitted after an early determination that location of the sewage treatment plant is not feasible in a zone where establishment of the use is permitted, the proposed project must be in substantial conformance with the feasibility determination.

Substantial conformance shall include, but not be limited to, a determination that:

- a. There is no net substantial increase in the environmental impacts of the project-specific proposal as compared to the impacts of the proposal as approved in the feasibility determination.
- b. Conditions included in the feasibility determination are met.

Hearing Examiner's Findings and Conclusions

There will not be a net increase of environmental impacts provided the proposal complies with all of the Hearing Examiner's recommended conditions. Though the project has changed in some ways since the Plan Permit approval through the process of quality engineering, it remains the same in its elemental form: The size is the same or smaller, anticipated sound and odor levels are the same or lower; anticipated truck traffic is the same or lower, access to the beaches remains preserved; the amount of land available for public access is the same or more; the site will continue to be visually screened; and wild life habitats will still be preserved. All evidence of record indicates that all changes give rise to impacts that are within the parameters contemplated by the Plan Permit Conditions.

Conditions in the feasibility (or Plan) Permit will be met. The analysis done regarding the Plan Permit indicates that the project will comply with the Plan Permit Conditions provided all recommendations are met. The conditions were drafted to permit efficient enforcement.

Because Metro's proposed project complies with the requirements in SMC 23.44.036(B)(4)(A) and (b), the project is in substantial conformance with the feasibility determination.

SMC 23.44.036(C) prescribes development standards for public projects in single family zones, as follows:

Development Standards. Public projects and City facilities shall be developed according to the development standards applicable to institutions, SMC 23.44.022, unless the Council determines that a particular standard must be waived or changed.

Under SMC 23.44.022(C), the development standards for uses permitted outright in single family zones apply generally to the West Point project. These standards include lot requirements in SMC 23.44.010 and height limits in SMC 23.44.012.

The proposed West Point project is located in the SF 7200 zone. SMC 23.44.010(A) provides that the minimum lot area in the SF 7200 zone shall be 7200 square feet. Metro's lot is larger than this.

SMC 23.44.010(C) provides that the maximum lot coverage permitted for principal and accessory structures shall not exceed 35 percent of the lot area or 1750 square feet, whichever is greater. Metro's proposed facilities in the single family zone cover 26.2 percent of the lot. This complies with the maximum allowed lot coverage of 35 percent.

SMC 23.44.012 provides that generally the maximum permitted height in the single family zone is 30 feet. Metro has requested waivers from the height limit for certain structures that will exceed the limit. Those structures were previously described.

Metro's request for these height waivers is generally reasonable. Generally, the heights of buildings/structures for which Metro is seeking waivers is a function of the jobs they perform -- they need to be as high as they are. The one notable exception to this is the administration building. Metro has not stated why it must be 32 feet high, as opposed to 30. The City Council is authorized to grant waivers when it determines a standard must be waived. SMC 23.44.022(G) provides that mitigation of odor and noise impacts may be required and that the facilities must be designed and operated in compliance with the Seattle noise ordinance. This is also a requirement of the Plan Permit (Plan Permit Condition 6). As stated above, the proposal will comply with the noise ordinance.

SMC 23.44.022(H) provides that landscaping shall be required to integrate the facilities with adjacent areas, reduce erosion or extensive stormwater runoff, reduce coverage of the site by impervious surfaces, screen parking, or reduce the appearance of bulk. SMC 23.44.036(H) further provides that landscaping plant materials shall be species compatible with surrounding flora and maintenance of landscaped areas shall be the continuing responsibility of the owner there standards are similar to the landscaping requirements established in the Plan Permit Conditions.

SMC 23.44.022(I) provides that exterior lighting shall be shielded or directed away from adjacent residentially zoned lots and nonreflective surfaces shall be used to help reduce glare. Metro is required to do these things by Plan Permit 7. As stated above, Metro's proposal will comply with Plan permit Condition.

SMC 23.44.022(J)(1) provides that the Director of DCLU may require certain bulk and siting standards in relation to the lot area. The DCLU Director has determined that such standards are not applicable to the West Point proposal. Exhibit 2: 137.

SMC 23.44.022(J)(2) and SMC 23.44.014 set forth minimum yard sizes. The front yard shall be either the average of the front yards of single-family structures on either side or twenty feet, whichever is less. SMC 23.44.014(A). The rear yard shall be twenty-five feet, or when the rear lot line abuts upon a public park, playground or open water, not less than fifty feet in width, the rear yard need not exceed the depth of twenty feet. SMC 23.44.014(B). The side yard shall be ten feet, except that five feet may be allowed for freestanding walls or similar structures. SMC 23.44.022(J)(2).

Metro's proposed facilities will have a front yard of 431 feet and a rear yard of 326 feet, thus meeting the minimum requirements for front and rear yards. On the west side of the plant, the side yard is 140 feet, meeting the minimum requirement for side yards. However, on the east side of the

plant, the retaining wall will be located within the side yard setback area in some parts of the site.

Metro has requested a waiver from the side yard setback on the east property line. The retaining wall is located along the property line so that taller buildings can be located as far as possible from the shoreline.

SMC 23.44.022(J)(5) provides that facades adjacent to the street or a residentially zoned lot may be required to be developed with design features intended to minimize the appearance of bulk. The West Point project includes design features that will minimize the appearance of bulk, including the location of taller facilities near the retaining wall, incorporation of the perimeter berm, landscaping, and other visual mitigation measures.

Parking and loading berth requirements are established in SMC 23.44.016, SMC 23.44.022(L) and SMC Ch. 23.54. Metro has designed parking for the West Point project so that it meets the design standards and access requirements in these code provisions.

SMC 23.44.022(M) requires a transportation plan for the facilities. Such a plan is required by Plan Permit Condition 5. As stated above, the proposal will comply with Plan Permit Condition 5 so long as all the Hearing Examiner's recommended conditions are adopted and met.

#### Hearing Examiner's Conclusions and Findings

The proposal complies with 23.44.036(C) except as stated below. This Code section states that the proposal must comply with the standards of SMC 23.44.022(C) unless the Council determines "that a particular standard must be waived or changed." (Emphasis added.) These standards address lot size, lot coverage building height, odor and noise, landscaping, exterior lighting, yards (setbacks), facades, and parking. All but lot size and coverage, building height and yards are also the subjects of Plan Permit Condition. In most, if not all cases the Plan Permit Standards are more stringent. Since the proposal complies with the Plan Permit Standards, if all recommended conditions are met, it will also comply with the standards of SMC 23.44.022.(C). The proposal complies in lot size (7200 square feet) and coverage (35 percent) requirements. Twenty-six buildings exceed height standards (30 Feet). In all but one case the excessive height of these buildings is justified -- form follows function. Their height is dictated by the use of the structures they house. The Council must waive the height standard for these buildings so that they may perform their function. Such is not the case with the administration building. Metro has not stated why it has to be 32 feet as opposed by 30 feet high. In other words, Metro has not stated why the Council must waive the height standard for the administration building. The side yard standard must be waived to allow the retaining wall, which is needed to hold up the adjacent hillside.

#### Hearing Examiner's Recommendation

The Hearing Examiner recommends that the Council approve the Single Family Council Conditional Use Permit subject to the project level condition identified above in Section III A of the Recommendation. Waive the height standard for all of the buildings except the administration building. The Hearing Examiner recommends that the Council deny the waiver for the administration building, unless Metro demonstrates to the satisfaction of the Council that the standard must be waived for the administration building.

#### D. Shoreline Requirement

The proposal must comply with the standards of the Shoreline Code. Those standards are set out in SMC 24.60. The analysis that follows generally adopts the proposed findings of Metro regarding the Shoreline Code. SMC 24.60.427 establishes requirements for approval of a project-specific shoreline permit application that relies upon a Plan Shoreline Permit. These requirements include compliance with the provisions of SMC Ch. 24.60. Among the applicable provisions of SMC Ch. 24.60 are the general criteria in SMC 24.60.525 for evaluating all shoreline developments.

SMC 24.60.525(A) provides:

All proposed developments shall be consistent with the requirements of the Shoreline Master Program and the provisions of the Shoreline Management Act of 1971, as amended, expressed in RCW 90.58.

The Shoreline Management Act, RCW Ch. 90.58, includes policy statements on management of the state's shorelines. These include: providing for the management of the shorelines by planning for and fostering all reasonable and appropriate use; promoting and enhancing the public interest; protesting against adverse effects to the public health, the land and its vegetation and wildlife, and the waters and their aquatic life, while protecting public rights of navigation; preserving the public's opportunity to enjoy the physical and aesthetic qualities of natural shorelines of the state to the greatest extent feasible consistent with the overall best interest of the state and the people; preferring uses that are consistent with control of pollution and prevention of damage to the natural environment, or are unique to or dependent upon use of the state's shoreline; facilitating public access to shorelines of the state; and minimizing, insofar as practical, any resultant damage to the ecology and environment of the shoreline area and any interference with the public's use of the water.

The City Council's decision to allow the siting of upgraded sewage treatment facilities at West Point included consideration of the policies of the Seattle Shoreline Master Program and the Shoreline Management Act. The Shoreline Hearing Board (SHB) also assessed the West Point facilities' consistency with Shoreline Management Act policies when it affirmed the City's Plan decision on appeal. The consistency of the West Point project proposal with the policies of the Shoreline Management Act and the Seattle Shoreline Master Program is inherent in both the City Council's plan decision and the decision of the SHB.

Many features of the West Point project demonstrate its consistency with the Shoreline Management Act policies. The West Point project is a major water pollution control project, promoting the preference for uses that control pollution and prevent damage to the natural environment. It enhances public access and recreational opportunities at West Point, promoting the policy of facilitating public access to shorelines. The project also is designed and will be conducted to minimize resulting adverse impacts to the shoreline.

SMC 24.60.525(B) provides:

All proposed developments must conform to permit requirements of all other agencies having shoreline jurisdiction or responsibility, and authority to proceed under a substantial development permit may be conditioned upon the applicant's obtaining such other permits.

Metro must obtain other permits from agencies with jurisdiction over the shoreline, such as the Corps, for aspects of the West Point project. Neither DCLU nor the Hearing Examiner has recommended conditioning the West Point project shoreline permit to require Metro to obtain these other permits. Such a condition is unnecessary. Metro cannot proceed with the project in the absence of other necessary permits.

SMC 24.60.525(C) provides:

All proposed developments must conform with applicable federal, state and local regulations relating to air and water quality and noise pollution.

Metro has acknowledged that it must meet applicable regulations, including City of Seattle noise ordinance requirements, PSAPCA air quality standards, and state and federal water quality regulations. Compliance with these requirements will be ensured by obtaining related permits and approvals.

SMC 24.60.525(D) provides:

The proposed development must satisfy any substantive requirements of the State Environmental Policy Act.

Metro stated in its Revised Application that it will comply with lawful

requirements that are based on the substantive provisions of SEPA. The relevant substantive policies of SEPA are generally reflected in the Plan Permit Condition. As stated above, the proposal will comply with Plan Permit Conditions.

SMC 24.60.525(G) states:

Uses which cause or result in significant concentrations of harmful pollutants and materials subject to blowing which may enter runoff waters shall provide means to insure that such pollutants will not enter the water or air. Uses not connected to a storm drain shall provide means acceptable to the Director capable of containing and providing for the slow release of surface runoff, provided such requirement shall not apply to sites where the applicant can clearly demonstrate that surface runoff from shoreline uses will not create or significantly contribute to a flood, erosion or pollution hazard.

Operation of the West Point facilities will not result in significant concentrations of harmful materials that may enter runoff waters. Storm water will be collected in drains onsite. Stormwater from paved areas where vehicles are located will be subject to oil/water separation or other pretreatment prior to discharge to Puget Sound. During construction, runoff will be controlled by requiring contractors to take measures such as dust dampening, erosion control and maintaining an inventory of pollution control materials.

SMC 24.60.427(G) states that a project-specific shoreline permit application that relies on a Plan Shoreline Permit must provide for reasonable mitigation of environmental impacts. Metro's West Point project proposal mitigation traffic, noise, odor, social and visual impacts.

SMC 24.60.427(G) states that a project-specific shoreline permit application that relies on a Plan Shoreline Permit must be in substantial conformance with the Plan Shoreline Permit. Substantial conformance includes a determination that the following standards have been met:

1. There is no increase in the amount or change in location of landfill on submerged lands;
2. There is no increase in lot coverage over water;
3. There is no net substantial increase in environmental impacts in the Shoreline District compared to the impacts of the proposed development allowed in the Plan Shoreline Permit; and
4. Conditions included as part of the Plan Shoreline Permit are met.

Metro's proposed West Point project involves no increase in the amount or change in location of landfill on submerged lands. The proposal also does not involve any lot coverage over water.

Because Metro's proposed project complies with the requirements in SMC 24.60.427(G)(1) through (4), the project is in substantial conformance with the Plan Shoreline Permit.

SMC 24.60.385 establishes maximum heights of buildings and structures in the shoreline district. SMC 24.60.385(A) states that where the height limit of an underlying residential zone is less than the limit in the Shoreline District, the more restrictive limit shall apply. In this case, the height limit in the Shoreline District is 35 feet, while the height limit in the underlying single-family residential zone is 30 feet. The 30-foot height limit, therefore, applies in the Shoreline District as well as on the rest of the site. All of Metro's proposed structures and buildings that are located in the shoreline District comply with the 30-foot height limit. Penthouses to enclose mechanical equipment are proposed on top of the HPO basins and the intermediate pump station. These penthouses are less than 10 feet above the tops of the facilities and cover less than five percent of the lot coverage in the Conservancy Management ("CM") shoreline environment. Thus, they are exempt from the height limits according to SMC 24.60.385(B)(4).

SMC 24.60.390 establishes maximum allowable lot coverage in the Shoreline District. The maximum lot coverage allowed in the CM shoreline environment is 35 percent of the lot area. Metro's proposed facilities in the CM environment cover 22.7 percent of the total area on the site in the CM environment, in compliance with the maximum allowed lot coverage.

SMC 24.60.395 establishes standards for review corridors. View corridors are generally required on waterfront lots. SMC 24.60.395(C). However, the Director of DCLU may modify view corridor requirements if there is no available clear view of the water from the street or if the shape of the lot is unusual or irregular. SMC 24.60.395(E). In the Report, the Director has stated that the view corridor requirement should be modified in this case. The West Point site has an unusual shape. Views of the water are available from the beaches adjacent to the plant and Metro's proposed visual mitigation measures will improve the public's views of the water. Thus, the goal of the view corridor requirement will be fulfilled.

SMC 24.60.400 states that regulated public access shall be provided for developments on all publicly owned and controlled waterfront property. Metro will provide public access to the shoreline at West Point, by permanently dedicating to the public, for park and recreation purposes, shoreline and nonshoreline property that is not to be used for Metro's facilities within the footprint. The Hearing Examiner recommends above that Metro be required to temporarily dedicate for public use the area proposed for future aeration basins at the end this site's parhandle.

SMC 24.60.410 established general conditions applicable to regulated public access. SMC 24.60.410(B) provides that regulated public access shall be appropriately indicated by signs provided by the applicant. Metro will provide appropriate signs to indicate public access areas. SMC 24.60.410(C) provides that regulated public access shall be a physical improvement. Metro's proposed mitigation includes a landscaped perimeter berm with trails and other improvements in the public access areas. SMC 24.60.410(D) states that regulated public access may be limited in its location and area, but that certain minimum public access shall be provided. Metro's proposal provides more area for public access than the minimum required by the code. SMC 24.60.410(E) provides that regulated public access may be limited as to hours of availability and types of activities permitted, but it shall be available to the public on a regularly scheduled basis and shall allow water activities appropriate to the site. The public access area at West Point will be available on a regularly scheduled basis, consistent with the open hours of Discovery Park, and will allow water activities as appropriate to the site. SMC 24.60.410(F) provides that where extreme irregularity in topography, shape of the lot, location and existing structures, or other circumstances present practical design difficulties, the type and location of public access shall be determined by the City. The public access area at West Point will be the area outside the plant footprint, except for portions of the berm that will be closed to public use for purposes of plant security and public safety. This is consistent with the City Council's requirements for public access in Plan Condition 2. SMC 24.60.410(G) provides that regulated public access shall be open to the public at the time of occupancy of the proposed development. The perimeter berm and other new public access elements will be constructed after completion of the upgraded treatment facilities. However, public access to the water will be maintained throughout construction of the project. Metro's proposal calls for stockpiling excavated material on upland South Beach. DCLU and the Hearing Examiner both recommend against this proposal, stating it would substantially impair access to the beach during the time of the construction.

SMC 24.60.415 provides that review for visual design quality by appropriate experts may be required for any public development. The Seattle design Commission has reviewed Metro's West Point project proposal and has provided comments on the visual mitigation design. The West Point Citizens Advisory Committee and Parks have also viewed closely the visual mitigation design of the project. Various recommended conditions requires the continued participation of the Parks Department.

SMC 24.60.725(E) states that landfill on wetlands in excess of 500 cubic yards is a special use and is permitted if conditions in SMC 24.60.525(H) are satisfied. "Wetlands" refers to all lands within 200 feet of the ordinary high water mark. SMC 24.60.275. Metro's proposed construction of the perimeter berm required by the Plan Conditions is landfill subject



to special use approval under SMC 24.60.725(E). SMC 24.60.525(H) states that special uses must not have a significant adverse effect on the environment or adjacent or nearby uses, must not interfere with public use of public shorelines, that design and appearance of the development must be compatible with the design and appearance of surrounding uses, and that the use must not be contrary to the general intent of the Shoreline Master Program.

#### Hearing Examiner's Conclusions and Findings

The Hearing Examiner concludes that the West Point project will comply with the Shoreline Management Code. The purpose of the project is to reduce the level of pollutants entering Puget Sound. Though development of the West Point site, more or less permanently, makes the site unavailable for public use, the development as proposed and conditioned will improve or enhance the public use of the project. More land will be available for public access than is now available. The appearance of the site will be improved substantially. Experts in all areas of environmental concerns have been involved in the development of the project to ensure that the Plan does not distract from the enjoyment of the beach and Discovery Park Hillside. The specific standards regarding height and lot covering will be met, as well as other specific standards.

#### Hearing Examiner's Recommendation

The Hearing Examiner recommends that the Council approve the Shoreline permit subject to the project Final Conditions described or established above in Section III. 13.

#### E. Procedural Issues and Recommendations

Time allowed for completion of work.

Metro has indicated that it will take approximately seven years to complete all of the work required for the West Point project, with the work of the perimeter berms being done last. Both SMC Chapter 24 (Shoreline Code) and 23 (Single Family Code) provide for a limited "life" for permits.

SMC 24.60.455 states that a project for which a shoreline substantial development permit has been granted must be completed within five years of the date of approval, with the possibility of a one year extension granted by the Director of DCLU upon a showing of good cause. SMC 23.76.060 provides that a project approved pursuant to a Council Conditional Use approval unless: (a) within the two-year period, an application is filed for a Master Use Permit ("MUP") which is subsequently issued; or (b) another time is specified in the Council's decision. SMC 23.76.060(B)(1). Based on this section, Metro has proposed that the Hearing Examiner recommend to City Council language that extends the life of the permit until all elements of the project, including mitigation, are complete.

#### Hearing Examiner's Conclusions and Findings

The work on West Point is projected to take seven years. Both SMC Chapter 23 and 24 provide for less time to complete projects approved pursuant to them. SMC 23.76.060 allows the City Council to specify the "life time" of a permit in its decision approving a Council Conditional Use Permit. This provision allows the Council to grant Metro a permit that will remain valid until the West Point Project is completed.

The maximum possible life of a shoreline permit is six years -- five years on the original approval plus a possible extension of one year approved by the Director of DCLU upon a showing of good cause. This limitation may not be extended pursuant to SMC 23.76.060. SMC 23.76.060(A) specifically provides that "approvals granted under Title 24, ...shall be governed by the applicable provisions of SMC Title 24. Further the expiration date of SMC 24 is specifically set out in the Washington Administrative Code.

For these reasons, the Hearing Examiner concludes that City cooperation with Metro is needed to ensure all of the work on West Point, including final mitigation work, can be done.

#### Hearing Examiner's Recommendation

The Hearing Examiner recommends that the City Council grant the Council Conditional Use for a period of seven years. The Hearing Examiner further recommends that the City Council direct the City Law Department to work with Metro to find ways to allow sufficient time under the Shoreline Permit to complete all required work and that the City Council support all reasonable efforts by Metro to obtain any change in the Shoreline Code or in WAC necessary to allow the time needed to finish the West Point project.

#### IV. Recommendation

The Hearing Examiner hereby recommends that the City Council approve all necessary permits to allow the West Point plant to be expanded to provide secondary sewage treatment. The Hearing Examiner further recommends that all said approval be made subject to the conditions recommended above.

Entered this 25<sup>th</sup> day of July, 1990.

  
Campbell H.D. Kintz  
Hearing Examiner Pro Tempore

#### Notice of Right to Petition For Further Consideration

Pursuant to Seattle Municipal Code Section 23.76.054, as amended, any person substantially affected by a recommendation of the Hearing Examiner may submit a petition in writing to the City Council requesting further consideration. The petition must be submitted within fifteen days after the date of mailing the recommendation of the Hearing Examiner and addressed to: City Council Urban Redevelopment Committee, Municipal Building, Seattle Washington 98104. The request for further consideration shall clearly identify specific objections to the Hearing Examiner's recommendation, facts missing from the record, and the relief sought.

Pursuant to Seattle Municipal Code Section 23.76.054(D), if there is no request for further consideration Council action shall be based on the record established by the Hearing Examiner.

The City Council Urban Redevelopment Committee should be consulted for further information on the Council review process.