Prepared for
KING COUNTY
DEPARTMENT OF NATURAL RESOURCES AND PARKS
WASTEWATER TREATMENT DIVISION
by Carollo Engineers

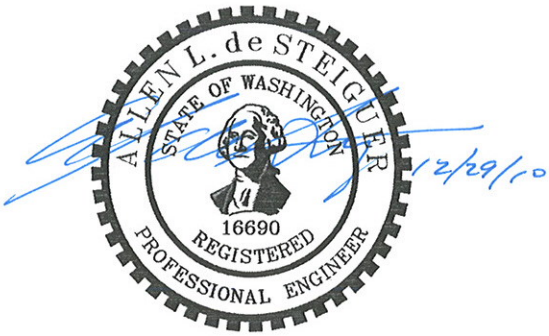
SOUTH MAGNOLIA COMBINED SEWER OVERFLOW CONTROL FACILITY ENGINEERING REPORT

December 2010

This information is available in alternative formats on request at 206-684-1280 (voice) or 711 (TTY)

CERTIFICATION

The South Magnolia Combined Sewer Overflow Control Facility Engineering Report for the King County Wastewater Treatment Division has been prepared under the direction of the following Registered Professional Engineer:



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SOUTH MAGNOLIA COMBINED SEWER OVERFLOW CONTROL FACILITY ENGINEERING REPORT

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2LAET	Second lowest apparent effects threshold
^{o}C	degrees Celsius
AACE	Association for the Advancement of Cost Engineering
ac/hr	air changes per hour
ADA	Americans with Disabilities Act
AQI	Air Quality Index
ASTM	American Society for Testing and Materials
BMP	Best Management Practice
CAD	computer-aided design
CCTV	closed-circuit television
CIP	Capital Improvement Program
CO	carbon monoxide
County	King County
CSL	cleanup screening level
CSO	Combined Sewer Overflow
CSS	Combined Sewer System
CWA	Clean Water Act
DAHP	Washington State Department of Archaeology and Historic Preservation
DNR	Washington State Department of Natural Resources
ECA	Environmental Critical Area
Ecology	Washington State Department of Ecology
EL	elevation (Metro Datum)
ENR CCI	Engineering News Record Construction Cost Index
EPA	Environmental Protection Agency
ESA	Endangered Species Act
ETS	evaporation time series
FEMA	Federal Emergency Management Agency
fpm	feet per minute
ft	feet or foot
GIS	geographic information system
GMA	Growth Management Act
gpm	gallons per minute
GSI	Green Stormwater Infrastructure
HVAC	heating, ventilation, and air conditioning
ID	Internal diameter
I/I	inflow and infiltration
INV	invert
LAET	lowest apparent effects threshold
LF	linear feet or foot
LID	low-impact development
MAGCSO	King County Magnolia CSO Control Structure
MCC	motor control center
MLLW	mean lower low water

MG	million gallon
MGD	million gallons per day
mg/L	milligrams per liter
MH	maintenance hole
mh/yr	manhours per year
mL	milliliter
MSL	Mean sea level
NEPA	National Environmental Protection Act
NHPA	National Historic Preservation Act
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NTU	nephelometric turbidity unit
O&M	operations and maintenance
RDI	Rainfall-Dependent Infiltration
RII	Rainfall-Induced Infiltration
PLC	programmable logic controller
PS	pump station
PVC	Polyvinyl chloride
PWTF	Public Works Trust Fund
PWWF	peak wet-weather flow
RCW	Revised Code of Washington
ROW	Right-of-way
SCADA	Supervisory Control and Data Acquisition
SDOT	Seattle Department of Transportation
SEPA	State Environmental Policy Act
SERP	State Environmental Review Process
SHPO	State Historic Preservation Officer
SLR	sea level rise
SMC	Seattle Municipal Code
SMTS	South Magnolia Trunk Sewer
SPU	Seattle Public Utilities
SQS	sediment quality standards
SRF	State Water Pollution Control Revolving Loan Fund
SS	Sanitary Sewer or stainless steel
TCP	Traditional Cultural Property
TDH	total dynamic head
TYP	typical
UPS	uninterruptible power supply
U.S.C.	United States Code
USFWS	U.S. Fish and Wildlife Service
VFD	variable frequency drive
VOC	volatile organic contaminant
WAC	Washington Administrative Code

WHR	Washington Heritage Register
WPTP	West Point Treatment Plant
WTD	Wastewater Treatment Division
WWHM	Western Washington Hydraulic Model
WWTP	Wastewater Treatment Plant