

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

**NORTH BEACH
COMBINED SEWER OVERFLOW CONTROL FACILITY PLAN**

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CERTIFICATION

The North Beach Combined Sewer Overflow Control Facility Plan for the King County Wastewater Treatment Division has been prepared under the direction of the following Registered Professional Engineer:



The undersigned has approved this document for and on behalf of
Carollo Engineers, P.C.
Partner

KING COUNTY WASTEWATER TREATMENT DIVISION
NORTH BEACH COMBINED SEWER OVERFLOW CONTROL FACILITY PLAN

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***NORTH BEACH COMBINED SEWER OVERFLOW CONTROL FACILITY PLAN
ABBREVIATIONS AND ACRONYMS***

| | |
|---------|--|
| 2LAET | second lowest apparent effects threshold |
| °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 |
| AWT | advanced wastewater treatment |
| AWWF | average wet-weather flow |
| BAT | best available technology |
| BI | base infiltration |
| BMP | best management practice |
| BNSF | Burlington Northern Santa FE (railroad) |
| CAD | computer-aided design |
| CCTV | closed-circuit television |
| CFR | Code of Federal Regulations |
| 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 |
| DWF | dry weather flow |
| ECA | environmentally 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 |
| FRP | fiberglass reinforced plastic |
| GIS | geographic information system |
| GMA | Growth Management Act |
| gpm | gallons per minute |
| GSI | green stormwater infrastructure |
| HS20 | American Association of Highway and Transportation Officials load rating |
| HVAC | heating, ventilation, and air conditioning |
| I/I | inflow and infiltration |

***NORTH BEACH COMBINED SEWER OVERFLOW CONTROL FACILITY PLAN
ABBREVIATIONS AND ACRONYMS***

| | |
|-------|---|
| INV | invert |
| LAET | lowest apparent effects threshold |
| LF | linear feet or foot |
| LID | low-impact development |
| LIDAR | light detection and ranging |
| LTS | long-term simulation |
| MCC | motor control center |
| Metro | Municipality of Metropolitan Seattle (King County's predecessor agency) |
| MG | million gallons |
| mgd | million gallons per day |
| mg/L | milligrams per liter |
| MH | maintenance hole |
| mh/yr | manhours per year |
| mL | milliliter |
| MSL | mean sea level |
| MS4 | municipal separated stormwater sewer system |
| NBPS | North Beach Pump Station |
| 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 |
| NW | northwest |
| O&M | operations and maintenance |
| PCB | polychlorinated biphenyl |
| PAH | polycyclic aromatic hydrocarbon |
| PHS | priority habitat species |
| PIN | parcel identification number |
| PWWF | peak wet-weather flow |
| QA/QC | quality assurance/quality control |
| RDI | rainfall-dependent infiltration |
| RII | rainfall-induced infiltration |
| PLC | programmable logic controller |
| PS | pump station |
| PSEP | Puget Sound Estuary Plan |
| PVC | polyvinyl chloride |
| PWTF | Public Works Trust Fund |
| PWWF | peak wet weather flow |
| RCW | Revised Code of Washington |
| ROW | right-of-way |
| RWSP | Regional Wastewater Services Plan |
| SCADA | supervisory control and data acquisition |
| SD | storm drain |

***NORTH BEACH COMBINED SEWER OVERFLOW CONTROL FACILITY PLAN
ABBREVIATIONS AND ACRONYMS***

| | |
|--------|---|
| SDOT | Seattle Department of Transportation |
| SEPA | State Environmental Policy Act |
| SERP | State Environmental Review Process |
| SF | sanitary flow |
| SLR | sea level rise |
| SMC | Seattle Municipal Code |
| SPU | Seattle Public Utilities |
| SQS | sediment quality standards |
| SRF | State Water Pollution Control Revolving Loan Fund |
| SS | sanitary sewer or stainless steel |
| SW | southwest |
| TDH | total dynamic head |
| TPPS | Toxicant Pretreatment Planning Study |
| 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 |
| WDFW | Washington Department of Fish and Wildlife |
| WHR | Washington Heritage Register |
| WQA | Water Quality Assessment |
| WTD | King County Wastewater Treatment Division |
| WWF | wet-weather flow |
| WWHM | Western Washington Hydraulic Model |
| WWPUG | Wastewater Planning Users Group |
| WWTP | Wastewater Treatment Plant |