



**NATIONAL POLLUTANT DISCHARGE
ELIMINATION SYSTEM (NPDES) PROGRAM
LONG-TERM FUNDING PLAN**

STATE WATER RESOURCES CONTROL BOARD

REPORT TO THE LEGISLATURE

May 2013



STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS



STATE OF CALIFORNIA

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Executive Summary

The report is being submitted pursuant to the requirements of the Supplemental Report of the 2012-13 Budget Package (item # 3904-001-0193) which requires the State Water Resources Control Board (State Water Board) to submit to the Legislature by May 2013 a report on “the long-term funding plan for the National Pollutant Discharge Elimination System (NPDES) program taking into account the shift in costs and fees from once-through cooling facilities to other facilities and (to) demonstrate how the costs of the program will achieve sustainability and equitable funding across the program areas.”

This report provides a broad overview of water quality fees assessed by the State Water Board, summarizes the State Water Board’s 2010 Statewide Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling (also called the “Once-Through Cooling (OTC) Policy), and discusses the projected impact on fees from facilities complying with this policy.

This report finds that the OTC Policy will have a relatively modest impact on fees paid by OTC facilities and by other industrial and municipal facilities. Specifically, the report finds that fee revenues derived from OTC facilities will decline by nine percent by 2029 compared to the current year, as the OTC policy is implemented over the next 17 years. The reduction in fee revenue from OTC facilities will result in an increase over the next 17 years of fees paid by other industrial and municipal dischargers. The largest impact would be an increase in fees paid by wastewater treatment facilities of approximately five percent by 2029-30.

This report also discusses the State Water Board’s work with fee stakeholders to examine alternative fee structures. These structures include the status quo, which calculates fees based on the volume discharged by facility, a threat and complexity methodology, and an actual flow assessment model. The long-term fiscal health of the NPDES program will be most effectively sustained by maintaining the current fee structure because this approach offers 1) equity in its application, 2) ease of understandability, 3) stability in fees for dischargers and the State Water Board, and 4) fee assessments that are reflective of dischargers’ potential impact on water quality.

Background

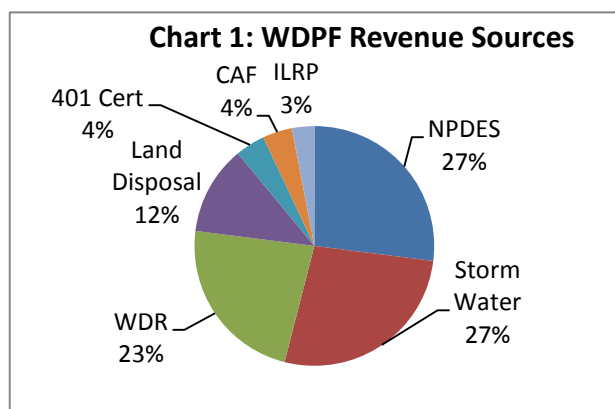
Water Code section 13260 requires each person who discharges or proposes to discharge wastes that could affect the quality of the waters of the State to file a report of waste discharge and to pay an annual fee set by the State Water Board. Revenues from the fees are deposited into the Waste Discharge Permit Fund (WDPF). Water Code section 13260 also requires the State Water Board to adopt a fee schedule that conforms to the WDPF annual budget revenue levels for persons discharging waste to the waters of the State. These fees may include costs recoverable for the issuance, administration, review, monitoring and enforcement of each permit. The State Water Board has adopted a fee schedule that assesses fees on dischargers based on the quantity of pollution discharged to the State’s waters and, depending on the type of permit, the toxicity of the discharge. This fee schedule is designed to include

recoverable costs in fee revenues, apply fees to the dischargers in an equitable manner, and to be efficient to administer.

There are three major water quality programs for which fees are assessed:

- **NPDES.** The federal Clean Water Act requires all persons who wish to discharge pollutants into a water of the United States to first obtain an NPDES permit. The State Water Board and Regional Water Quality Control Boards (Regional Water Boards) (collectively referred to as “the Water Boards”) are authorized to administer the NPDES permit program in California. NPDES permits are required for all point source pollution discharges of waste into California’s surface waters to prevent pollution and loss or impairment of beneficial uses of the waters, prevent damage to or loss of aquatic species and habitat, and prevent human health problems and waterborne diseases. Point sources are discrete conveyances such as pipes or man-made ditches. NPDES permits are issued by the Water Boards either as individual facility permits, or as general permits that apply to an entire category of dischargers.
- **Waste Discharge Requirements (WDR).** The Water Code requires the Water Boards to establish policies to protect the State’s waters through the development of Water Quality Control Plans (Basin Plans) and the issuance of WDRs. The purpose of Basin Plans and WDRs is to ensure, to the greatest extent possible, that discharges to the State’s waters do not adversely affect the quality and beneficial uses of such waters. WDRs are issued under state authority to regulate discharges to land or surface waters of the State for specified types of discharges not covered by NPDES permits.
- **Storm Water.** Storm water discharges are runoff from land and impervious areas such as paved streets, parking lots and building rooftops during rainfall and snow melt-off. These discharges often contain pollutants in quantities that could adversely affect water quality. Discharges of pollutants to storm water conveyance systems are significant sources of pollution to surface waters. Federal law designates these discharges as nonpoint source discharges subject to a NPDES permit. Storm water activities are separated into three major categories: construction, industrial and municipal.

In addition, fees also are assessed for several smaller programs, such as the Clean Water Act Section 401 Water Quality Certification, Irrigated Lands Regulatory Program (IRLP) Land Disposal, and Confined Animal Facilities (CAF). Chart 1 shows the percentage of revenue received from each of these programs. As shown in Chart 1, the NPDES program accounts for 27 percent of total WDPF revenues.

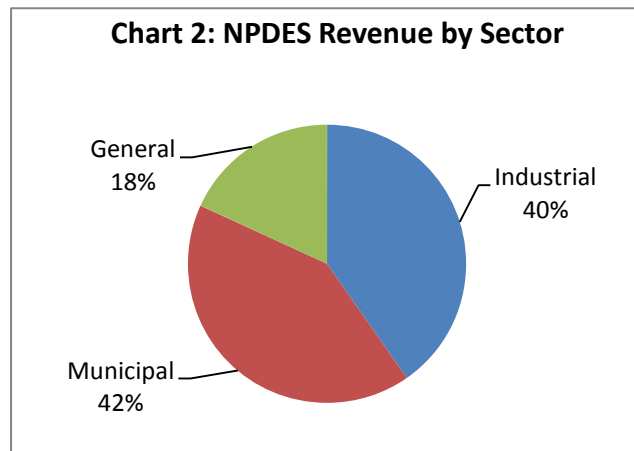


NPDES Facility Fees

The NPDES program consists of three main groups or sectors of permit holders – general, municipal (municipal facilities are publicly owned and domestic wastewater treatment works), and industrial. The latter group includes OTC facilities. Chart 2 shows the percent of revenue generated by each sector in FY 2012-13.

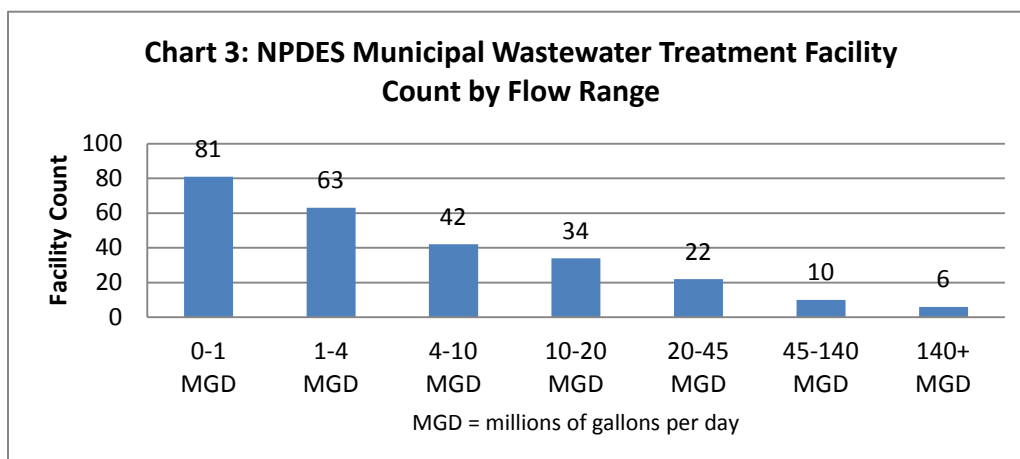
The State Water Board assesses fees on NPDES facilities based either on a set fee (for general permits) or a flow-based fee (for individual permits). General permit fees are assessed by category as follows:

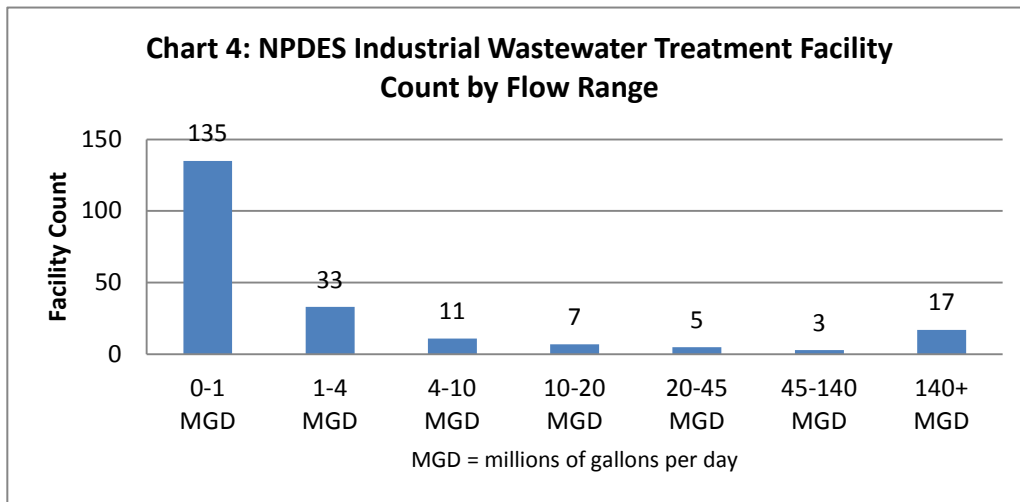
- Category 1 (discharges that require treatment systems to meet priority toxic pollutant limits) - \$9,252;
- Category 2 (discharges that require treatment systems to meet non-priority pollutant limits) - \$5,590; and
- Category 3 (discharges that require minimal or no treatment systems to meet pollutant limits) - \$1,606.



The flow-based fee is calculated by starting with a base fee of \$1,606 (FY 2012-13 fee), which is then added to the facility's design flow in millions of gallons per day (MGD) multiplied by \$2,840. For example, for a facility that has a flow of 10 MGD, the calculation would be \$1,606 + (10*\$2,840) with an assessed fee of \$30,006. There is a maximum cap on these fees of \$401,568, which is reached when a facility's flow is over 140 MGD.

Chart 3 shows the number of permitted municipal facilities by flow and Chart 4 shows the number of permitted industrial facilities by flow. The industrial permit category includes a wide range of facility types, in addition to OTC facilities, such as petroleum





refineries and food processors.

Once-Through Cooling Program

OTC facilities are power plants that depending on their location withdraw seawater or estuarine water on a daily basis for cooling purposes in generating electricity. In the process, millions of aquatic animals and other organisms are killed annually when they become trapped (impingement) or drawn into the cooling system (entrainment). The State Water Board's 2010 OTC Policy established standards to reduce the harmful effects associated with the cooling water intakes on life in the ocean and estuaries. In addition to being regulated with an NPDES permit, OTC facilities are also required to comply with the OTC Policy by choosing one of the following options: Track 1) reduce their intake flow rate at each unit by, at minimum, 93 percent or Track 2) to reduce impingement mortality and entrainment of marine life per unit to a level comparable to what would be achieved under Track 1. The dates by which each facility must comply are stated in the OTC Policy, with the last facility required to comply by December 2029. Facilities choosing Track 1 will have their fee potentially reduced upon compliance due to the significant reduction in flow. A reduction in fees will not occur for facilities that remain over the maximum flow cap even after coming into compliance with the OTC Policy. In these cases, the facilities' original flows are large enough in volume that their flows remain above a specified threshold despite the 93 percent reduction. Facilities selecting Track 2 will not receive a reduction in fee upon compliance because their flow is not anticipated to change. Some facilities will determine that it is infeasible to keep operating and will choose to shut down.

Impact on Fees from the OTC Policy

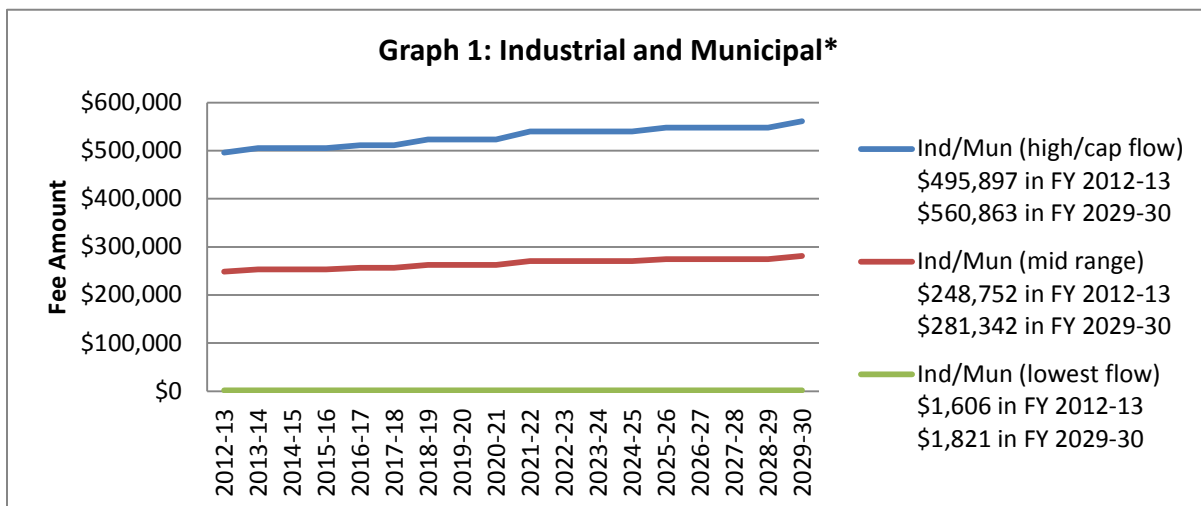
Due to the State Water Board's requirement to annually establish a fee schedule to generate sufficient revenues to pay for expenditures authorized from the WDPF, the loss in fees from OTC Track 1 facilities must be made up through an increase in fees to all other NPDES dischargers. Based on the current fee schedule and current OTC Policy requirements, there is a minimal average yearly increase of approximately 0.7

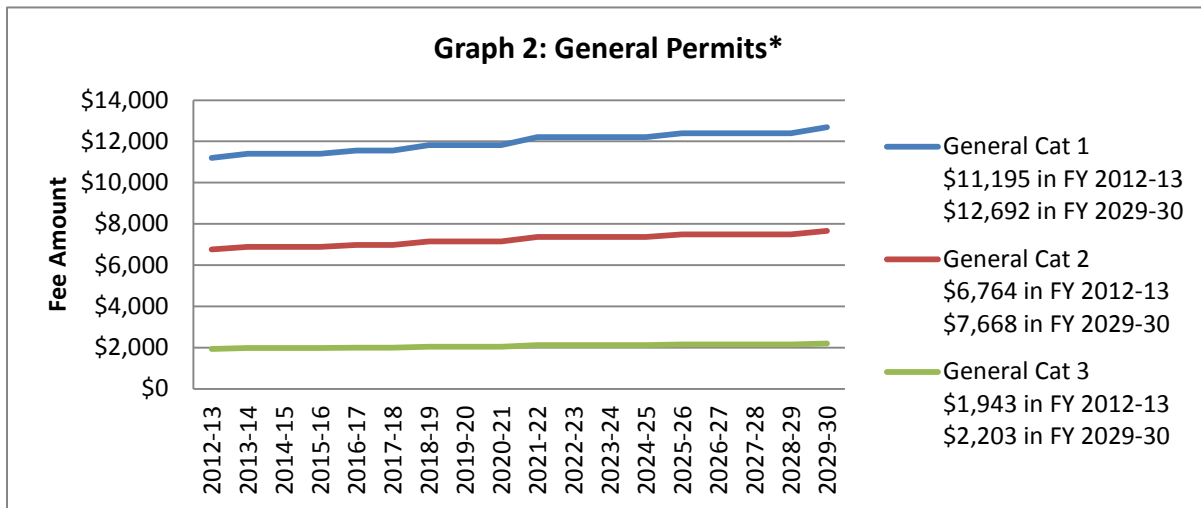
percent and a total increase of approximately 12.6 percent through FY 2029-30 resulting from changes anticipated at OTC facilities. As seen in Table 1, of the 17 current OTC facilities, nine will be complying with Track 1, and one is planning to be retired. The remaining facilities have chosen to comply with Track 2. The largest single-year increase in fees resulting from anticipated changes at OTC facilities, approximately 3 percent, will occur in FY 2021-22 when three of these facilities will come into compliance with the OTC Policy.

Fiscal Year	OTC Retire (1) or Track 1 (9)	Percent Increase in Fees due to OTC Policy Implementation	General Permits			Non General (Flow) Permits	
			Category 1	Category 2	Category 3	Once-Thru Cooling (OTC)	Municipal Industrial
FY 12-13			\$11,195	\$6,764	\$1,943	\$388,074 - \$500,897	\$1,606 - \$495,897
FY 13-14	1	1.9%	\$11,410	\$6,894	\$1,981	\$395,233 - \$510,221	\$1,637 - \$505,221
FY 14-15		0.0%	\$11,410	\$6,894	\$1,981	\$395,233 - \$510,221	\$1,637 - \$505,221
FY 15-16		0.0%	\$11,410	\$6,894	\$1,981	\$395,233 - \$510,221	\$1,637 - \$505,221
FY 16-17	1	1.3%	\$11,556	\$6,982	\$2,006	\$167,734 - \$516,588	\$1,658 - \$511,588
FY 17-18		0.0%	\$11,556	\$6,982	\$2,006	\$167,734 - \$516,588	\$1,658 - \$511,588
FY 18-19	2	2.3%	\$11,826	\$7,145	\$2,053	\$171,291 - \$528,271	\$1,696 - \$523,271
FY 19-20		0.0%	\$11,826	\$7,145	\$2,053	\$171,291 - \$528,271	\$1,696 - \$523,271
FY 20-21		0.0%	\$11,826	\$7,145	\$2,053	\$171,291 - \$528,271	\$1,696 - \$523,271
FY 21-22	3	3.2%	\$12,207	\$7,376	\$2,119	\$152,466 - \$544,837	\$1,751 - \$539,837
FY 22-23		0.0%	\$12,207	\$7,376	\$2,119	\$152,466 - \$544,837	\$1,751 - \$539,837
FY 23-24		0.0%	\$12,207	\$7,376	\$2,119	\$152,466 - \$544,837	\$1,751 - \$539,837
FY 24-25		0.0%	\$12,207	\$7,376	\$2,119	\$152,466 - \$544,837	\$1,751 - \$539,837
FY 25-26	1	1.5%	\$12,389	\$7,485	\$2,151	\$149,186 - \$552,716	\$1,777 - \$547,716
FY 26-27		0.0%	\$12,389	\$7,485	\$2,151	\$149,186 - \$552,716	\$1,777 - \$547,716
FY 27-28		0.0%	\$12,389	\$7,485	\$2,151	\$149,186 - \$552,716	\$1,777 - \$547,716
FY 28-29		0.0%	\$12,389	\$7,485	\$2,151	\$149,186 - \$552,716	\$1,777 - \$547,716
FY 29-30	2	2.4%	\$12,692	\$7,668	\$2,203	\$46,656 - \$565,863	\$1,821 - \$560,863

*Based on the FY 2012-13 fee schedules and does not take in account inflation or the possibility of increased staff costs.

Graph 1 shows the effect of the fee increase on a high, middle and low flow range of facilities for the Industrial and Municipal sectors in general, and Graph 2 shows the





*The categories are defined as follows: category 1 = discharges that require treatment systems to meet priority toxic pollutant limits; category 2 = discharges that require treatment systems to meet non-priority pollutant limits; category 3 = discharges that require minimal or no treatment systems to meet pollutant limits. Furthermore, Graphs 1 and 2 are based on the FY 2012-13 fee schedules and do not take in account inflation or the possibility of increased staff costs.

effect of the fee increase on General Permits by category.

Table 2a and Table 2b provide a more detailed look at the impact of the OTC policy on fees for different categories of fee payers. Table 2a shows the amount and proportion of WDPF revenue from various categories of fee payers, and the portion of existing fee revenue from each category of fee payers that are based on flow. Table 2b provides corresponding information for the fees levels that are expected to be paid in 2029-30, when the OTC policy will be fully implemented.

Table 2a: Current View for FY 2012-13*

Facility Type	Facility Count	Facility Type Revenue FY 2012-13	Percent of Total NPDES Revenue	Percent of Flow Based Revenue	Total Design Flow** (MGD)	Percent of Total Design Flow	Total Capped*** Flow (MGD)	Percent of Total Capped Flow
Wastewater Treatment Facility	251	\$11,729,962	40.7%	49.8%	3,983	20.4%	3,058	49.4%
Power Plant - OTC	17	\$8,387,431	29.1%	35.6%	14,783	75.5%	2,361	38.1%
Petroleum Refinery	14	\$617,803	2.1%	2.6%	146	0.7%	146	2.4%
Manufacturing NEC****	11	\$524,903	1.8%	2.2%	172	0.9%	145	2.3%
Water Treatment Plant	7	\$234,944	0.8%	1.0%	60	0.3%	60	1.0%
Food Processor	7	\$164,637	0.6%	0.7%	40	0.2%	40	0.6%
Service/Commercial Site, NEC	30	\$154,610	0.5%	0.7%	24	0.1%	24	0.4%
Power Plant - Other	11	\$146,717	0.5%	0.6%	32	0.2%	32	0.5%
Groundwater Cleanup Site	12	\$91,343	0.3%	0.4%	15	0.1%	15	0.2%
Other	56	\$430,023	1.5%	1.8%	71	0.4%	71	1.2%
Not Defined	53	\$1,083,701	3.8%	4.6%	243	1.2%	243	3.9%
General Permit	1081	\$5,221,467	18.1%	N/A	N/A	N/A	N/A	N/A
Grand Total	1550	\$28,787,541			19,569		6,195	

*Represents current NPDES fee payers and is based on the Fiscal Year 2012-13 fee schedules.

** A facility's maximum flow capacity.

***The flow at which the fee is capped. For FY 2012-13 the cap is set at 140 MGD.

****NEC = Not Elsewhere Classified.

Table 2b: Forecast View for FY 2029-30*

Facility Type	Facility Count	Facility Type Revenue FY 2012-13	Percent of Total NPDES Revenue	Percent of Flow Based Revenue	Total Design Flow (MGD)	Percent of Total Design Flow	Total Capped Flow (MGD)	Percent of Total Capped Flow
Wastewater Treatment Facility	251	\$13,160,014	45.7%	57.5%	3,983	36.8%	3,058	58.0%
Power Plant - OTC	16	\$5,862,093	20.4%	25.6%	6,050	55.8%	1,438	27.3%
Petroleum Refinery	14	\$688,372	2.4%	3.0%	146	1.3%	146	2.8%
Manufacturing NEC	11	\$594,415	2.1%	2.6%	172	1.6%	145	2.8%
Water Treatment Plant	7	\$264,351	0.9%	1.2%	60	0.6%	60	1.1%
Food Processor	7	\$184,644	0.6%	0.8%	40	0.4%	40	0.8%
Service/Commercial Site, NEC	30	\$173,276	0.6%	0.8%	24	0.2%	24	0.4%
Power Plant - Other	11	\$164,328	0.6%	0.7%	32	0.3%	32	0.6%
Groundwater Cleanup Site	12	\$101,551	0.4%	0.4%	15	0.1%	15	0.3%
Other	56	\$476,822	1.7%	2.1%	71	0.7%	71	1.4%
Not Defined	53	\$1,208,085	4.2%	5.3%	243	2.2%	243	4.6%
General Permit	1081	\$5,919,591	20.6%	N/A	N/A	N/A	N/A	N/A
Grand Total	1549	\$28,797,542			10,836		5,272	

*Represents current NPDES fee payers and is based on the Fiscal Year 2012-13 fee schedules.

Table 2b does not take in account inflation or the possibility of increased staff costs.

Table 2b shows that while the percentages of total revenue are forecasted to change slightly, each facility type's portion of total NPDES revenue does not change significantly from the current levels. Currently, OTC facilities generate approximately 29 percent of total NPDES revenue, and while they make up approximately 76 percent of the total NPDES design flow, they are only assessed fees, as a whole, on approximately 38 percent of their flow as a result of reaching the maximum flow cap. It is forecasted that in FY 2029-30, OTC facility fees will decrease as a percentage of total NPDES revenue by approximately nine percent. While the percentage of total design flow for OTC facilities is expected to decrease by approximately 20 percent by 2029, the percent of flow on which they are assessed fees is expected to only decrease by approximately 11 percent due to many Track 1 facilities that will continue to exceed the maximum flow cap despite reducing their flow by at least 93 percent.

NPDES Fee Workgroup

The State Water Board staff met with NPDES dischargers in 2010 to address their concerns regarding the volatility of their fees and the methodology used to assess fees. The fee stakeholders formed a NPDES Workgroup (Workgroup), consisting of representatives from each sector of NPDES permit holders, to examine alternative fee structures that would be less volatile and more equitable than the State Water Board's existing fee structure. The Workgroup was self-directed, with the State Water Board serving only in a support roll. The initial task of the Workgroup was to review the NPDES fee structure and develop an equitable, feasible, stable and sustainable fee methodology for dischargers, avoiding wide swings in fees from year-to-year. During the course of the Workgroup meetings, members were aware of the impending OTC Policy and took into account its effect on NPDES fees in the future. The Workgroup

considered several different options of fee structures and methodologies that are detailed below:

Option 1 – Sector Approach

After reviewing the NPDES program's fee history and discussing various fee structures, the Workgroup decided to explore a sector allocation approach. The dischargers were divided up into general, municipal and industrial sectors, with the OTC facilities forming a fourth specific sector. The Workgroup first looked at the 2001 Statewide Needs Analysis (Analysis) for the NPDES program, which assigned staff workloads to each sector by identifying staff tasks, such as permit issuance, inspections and enforcement. The Workgroup then used the Analysis as a basis for each sector's fees, and allowed each sector to determine the fees for their own fee payers, as long as the sectors met their percentage allocation of NPDES fee revenue. This "sector approach" is different from the current methodology in which fees are assessed by permit type. The Workgroup, however, was unable to reach a consensus about this methodology, because some sectors' fees would increase significantly using this methodology (specifically non-OTC industrials), and some sectors' fees would decrease significantly (specifically OTCs). While this methodology brought fees in line with the staff time required to administer each permit type, the Workgroup determined that this methodology was not feasible for the majority of fee payers based on their ability to pay, especially during the current difficult economic conditions.

Option 2 – Threat to Water Quality (TTWQ) and Complexity (CPLX) Ratings

Another methodology for assessing NPDES fees is to assign a TTWQ/CPLX rating, similar to that which is used in the WDR program, to all facilities that currently pay their fees based on flow. In the WDR program, the Water Boards use the following definitions for assigning a Threat to Water Quality (TTWQ) and Complexity (CPLX) rating for each facility:

THREAT TO WATER QUALITY

Category "1" – Those discharges of waste that could cause the long-term loss of a designated beneficial use of the receiving water. Examples of long-term loss of a beneficial use include the loss of drinking water supply, the closure of an area used for water contact recreation, or the posting of an area used for spawning or growth of aquatic resources, including shellfish and migratory fish.

Category "2" – Those discharges of waste that could impair the designated beneficial uses of the receiving water, cause short-term violations of water quality objectives, cause secondary drinking water standards to be violated, or cause a nuisance.

Category "3" – Those discharges of waste that could degrade water quality without violating water quality objectives, or could cause a minor impairment of designated beneficial uses as compared with Category 1 and Category 2.

COMPLEXITY

Category “A” – Any discharge of toxic wastes; any small volume discharge containing toxic waste; any facility having numerous discharge points and groundwater monitoring; or any Class 1 waste management unit.

Category “B” – Any discharger not included in Category A that has physical, chemical, or biological treatment systems (except for septic systems with subsurface disposal), or any Class 2 or Class 3 waste management units.

Category “C” – Any discharger for which waste discharge requirements have been prescribed pursuant to Section 13263 of the Water Code not included in Category A or Category B as described above. Included are dischargers that have no waste treatment systems or that must comply with best management practices; dischargers having passive treatment.

The Workgroup identified a number of concerns with applying this methodology to the NPDES fees. First, the Water Boards currently do not have sufficient data to assign each facility a TTWQ/CPLX rating, and the Water Boards would incur significant costs to collect the data to accurately assign TTWQ/CPLX ratings to facilities, including potential inspections and review of facility data, that would be passed on to fee payers. Second, this methodology is unlikely to result in a significant change in the amounts paid by most fee payers. This is because, unlike WDR discharges that vary greatly in both threat and complexity, most NPDES discharges are similar in complexity, but vary mostly in flow (or threat). As a result, this methodology would continue to rely on flow as a key variable. Finally, this methodology would likely increase, rather than reduce, the volatility of NPDES fees for fee payers. This is because although most NPDES discharges generally are similar in complexity (i.e. including toxicity of the wastes), there would be some annual variation in fees for all NPDES fee payers using this methodology to the extent that some dischargers make changes in their processes that either increase or reduce the complexity of their discharge in the prior year.

Option 3 - Current Fee Structure

The State Water Board currently assesses fees to NPDES dischargers based on permit type and for individual permits, by the design flow of the facility. This fee assessment model was chosen based on the following:

- This structure not only provides an equitable basis for assessing fees, but it is also easy to understand and implement. If there is a fee increase, all components of non-General (flow-based) Permit fees (base, multiplier and cap), and all General Permit fees are increased by the same percentage;
- This structure offers a stable revenue source because it based on the design flow, a measure which does not significantly change from year-to-year. (Although the fee stakeholders originally established the Workgroup to examine alternative fee structures that would be less susceptible to change as result of new regulatory requirements (such as the OTC Policy), the Workgroup concluded that the current fee structure is less volatile than the alternatives); and
- This structure effectively assesses fees that are proportionate to the degree of damage discharges will impose on water quality. For example, dischargers operating facilities that are designed to release large amounts of harmful

wastewater will pay relatively substantial fees when compared to dischargers operating facilities that are designed to release harmful, but exceptionally small, amounts of toxic material. Moreover, the latter type of discharger will exert smaller impacts on water quality.

Option 4 – Actual Flow Assessment

The Workgroup also proposed to modify the current methodology by assessing fees based on actual flow as opposed to the current method of design flow. While a fee based on actual flow would be the most accurate assessment of dischargers, it is neither a stable nor feasible alternative based on the following:

- High flow facilities would meet the maximum fee cap using both actual and design flow;
- Low flow facilities would not experience a significant change in fees because they generally operate close to their design flow levels;
- Using actual flows would cause fees for many dischargers to vary from year-to-year and would make stability and predictability difficult to attain for all fee payers. This also would require the State Water Board to hold a large amount of funds in reserve to account for year-to-year fluctuations in fee revenues; and
- A switch to actual flow would create additional workload and costs for the State Water Board, Regional Water Quality Control Boards and dischargers for the required monitoring and reporting.

Conclusion

The NPDES program issues permits to a wide variety of dischargers with different types of facilities, resources and requirements. Attempting to establish fees that are equitable to all groups, efficient for the State Water Board to administer and that are sustainable over a long period of time is a difficult task. The Workgroup discussed this task at length without reaching a consensus. The current method of assessing NPDES fees takes into account the complexity and similarities among discharges and also the wide variety of flow (or threat) to the waters of the State. Furthermore, this report shows that the effects of OTC facilities complying with the OTC Policy will have a modest fee impact to other facilities distributed over a 17 year period. As a result, the State Water Board believes that the current fee methodology, which also provides budgeting stability for dischargers, remains the most equitable, feasible and sustainable method of assessing NPDES fees.