

ENVIRONMENTAL USER FEE SYSTEM (EUFS) IN THE LAGUNA DE BAY BASIN



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Sustainable Financing for Nature Positive Investments: Tools for Integrating Economic and Market-Based Instruments into Projects

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Laguna de Bay – a multiple use resource



Fisheries



Drinking Water Supply



Irrigation



Transport Route



Recreation



Power Supply



Industrial Cooling



Flood Reservoir

A natural waste treatment facility.

Rationale - EUFS



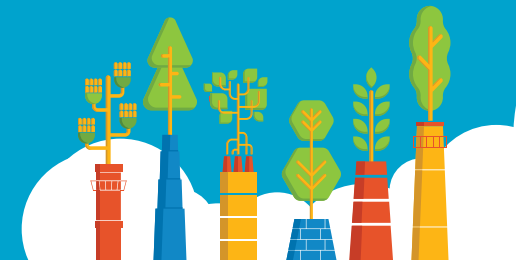
- Laguna de Bay was identified as a source of domestic water supply
- With the rapid growth of industrial and urban activities around the lake, it was imperative that major steps be taken to make environmental management efforts more effective
- The LLDA Board of Directors, with the DENR Secretary as Chair, approved the implementation of the 1st market-based instrument in the country.
- Goal – enhancement of the environmental quality of the lake by providing the industrial firms with an incentive to reduce pollution and use the fees to finance structural and non-structural measures for environmental management control.

Environmental User Fee system



- Implemented in January 1997 within the Laguna de Bay Region
- Applies the Polluters Pay Principle
- Encourages dischargers to internalize the cost of environmental degradation and enhancement into their business decisions and actions
- Harmonizes and integrates command and control with economic instruments
- Adopted in the Clean Water Act of 2004 as the Wastewater Charge System for DENR's implementation nationwide

Coverage



- First year – top polluters (with 4000 kg/yr BOD Loading)
 - Food processing firms
 - Pig farms and slaughterhouses
 - Beverage manufacturers
 - Textile industries
 - Paper and pulp mills

- 2nd year
 - All industries that generate process wastewater
- 3rd year
 - Residential subdivisions
 - Commercial establishments including food chains and restaurants

Annual User's Fee = Fixed fee + Variable fee



• Fixed Fee

Amount	Volume of Discharge
PhP 24,000.00	> 150 cu. m./ day
PhP 16,000.00	Between 30 and 150 cu. m. /day
PhP 8,000.00	< 30 cu. m./day

• Variable Fee

- PhP 5.00 / kg of total BOD, when the BOD concentration is < 50 mg/L
- PhP 30.00 / kg of total BOD, when the BOD concentration is > 50 mg/L

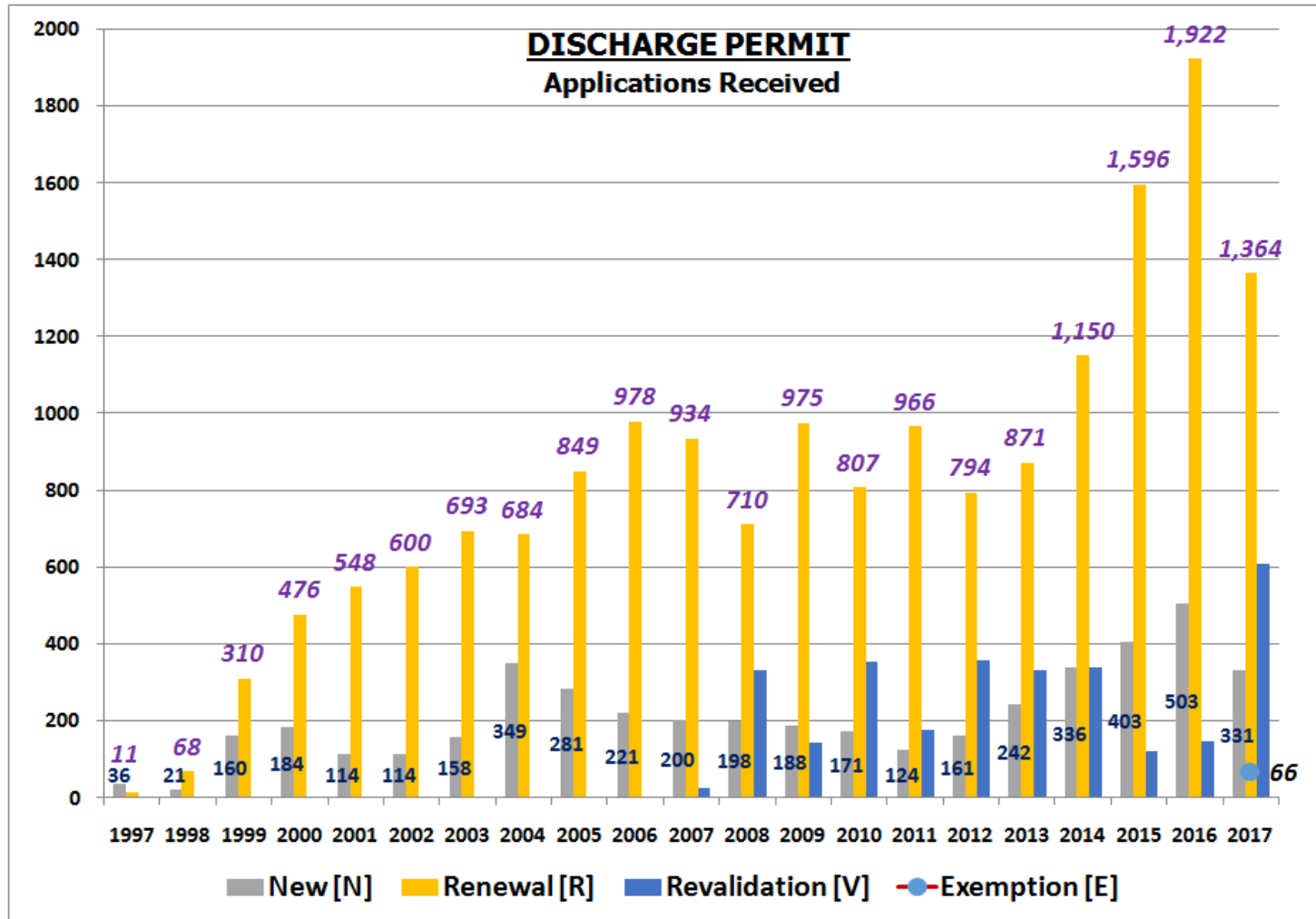
$$\begin{aligned} \text{Total BOD} = & \text{Ave. conc. BOD (mg/L)} \times \\ & \text{Daily wastewater discharge (m}^3\text{/d)} \\ & \times \text{\# of discharging days / year} \\ & \times 10^{-3} \text{ (conversion factor)} \end{aligned}$$

Discharge Permit



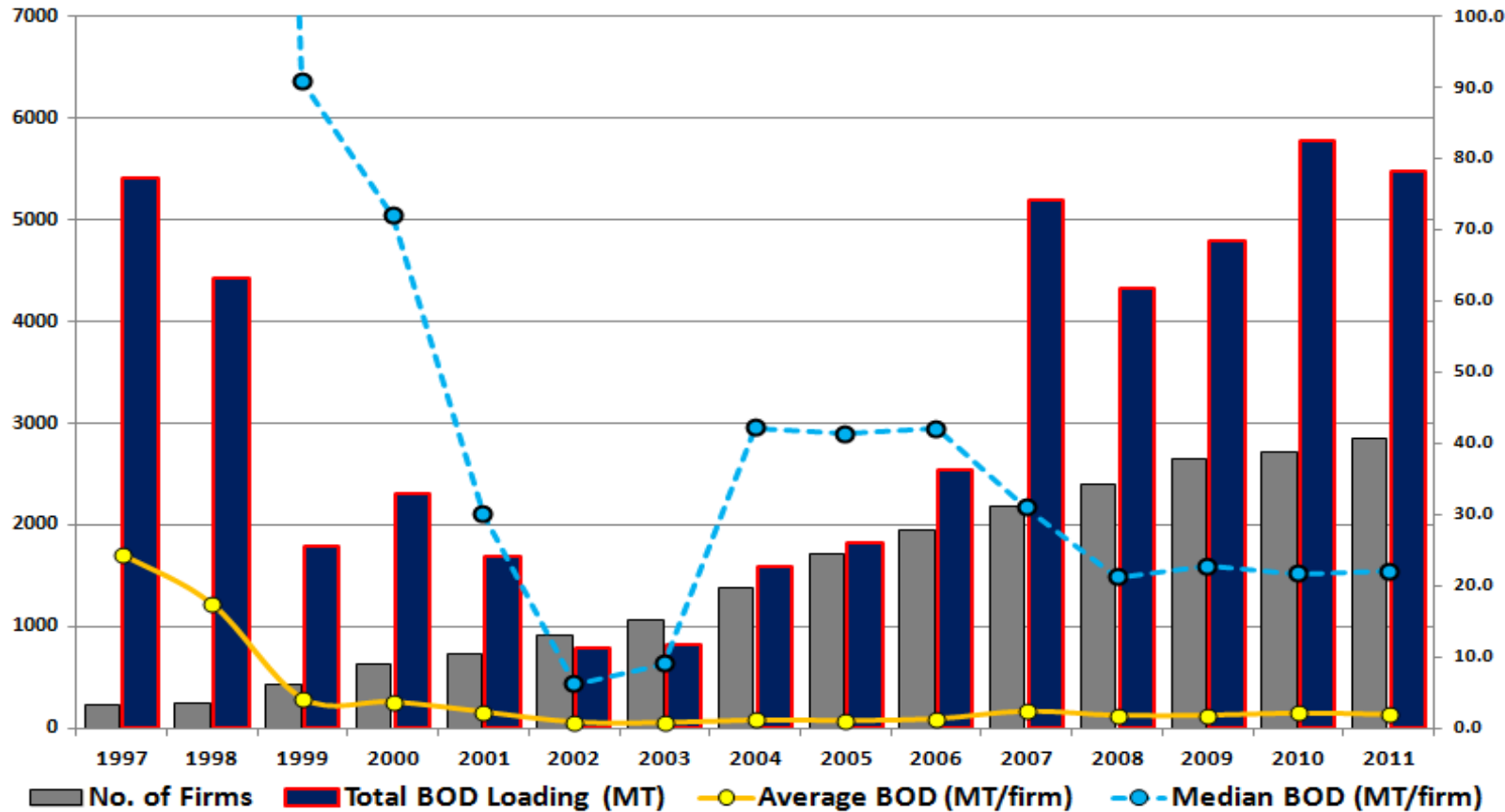
- Discharge Permit (DP) is a legal authorization for an establishment to discharge their effluent into the water bodies
- DPs are issued only if the wastewater being discharged complies with the effluent standards set by DENR
- Long term DP (3-years) is issued to industries in good standing; revalidation on an annual basis
- Pollution case is filed against firms discharging wastewater exceeding standards for BOD5 and other regulated parameters and penalties are imposed accordingly.

Permit Issuances



Graph courtesy of Engr. Emil Hernandez, Department Manager of the Environmental Regulations Department, Laguna Lake Development Authority

Reduction in BOD Loading



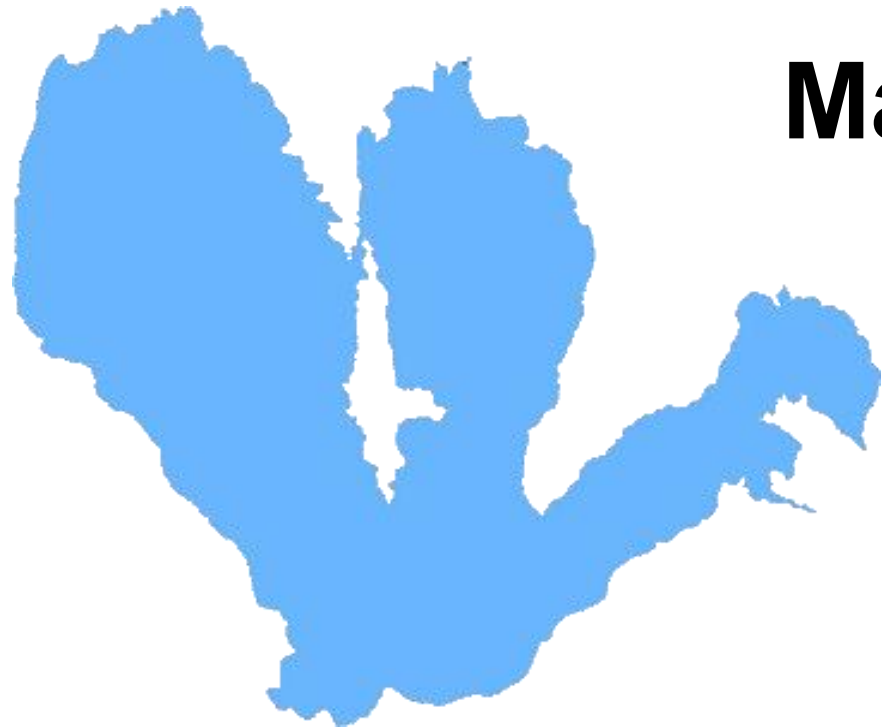
The reduction in BOD loading was due to several factors:

- (a) increased efforts among the sources to treat their wastewater,
- (b) wastewater recycling activities,
- (c) waste minimization,
- (d) voluntary closure or relocation,
- (e) conversion from wet to dry process.

Issues/ Challenges



- Tendency for some industries to dilute their wastewater in order to lower the variable fee
- More expensive to operate within the Laguna de Bay Region
- Applicable pollutant parameter for different industries



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