

ENVIRONMENTAL ASPECTS OF BUSINESS GROWTH ECONOMIC CONSIDERATIONS FOR WATER COMPLIANCE

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In order to maximize business growth and avoid unforeseen costs, it is important to know ahead of time what potential environmental aspects must be considered for a new business venture or project. Planning ahead of time to meet required compliance objectives will reduce later expenses in retrofit or remediation, and limit potential legal costs for non-compliance.

When looking at a business growth venture or project, there are several environmental media to consider right off the bat. In particular, any project involving air emissions must obtain any required air permits **before** construction. Water and waste permits can be obtained during and after construction as the facility starts up, but similarly planning ahead for the anticipated permitting and compliance requirements can be equally helpful for these media.

PLANNING FOR GROWTH WITH WATER IMPACTS

Whether for a new facility or expansion of an existing operation, water utilization and discharge should be considered during project planning. Will water supply for the facility (potable and/or process) be obtained from a public source, on-site groundwater wells, or surface water withdrawal? Depending on the source and quantity, permits may be required from the state Environmental Permitting agency. If the facility will discharge process water into a drainage ditch or receiving stream, a permit will be required from the permitting agency. If the wastewater is accepted by the local publicly owned wastewater treatment plant (POTW), then the permit is obtained from the local authority. In either case, pretreatment requirements will likely apply and will add to process costs.

Pre-project planning is also the time to review construction plans and the anticipated final facility footprint to determine potential storm water discharge volume and points. While planning for construction activity-related storm water impacts (and associated permitting requirements) has become more routine, the minimum surface area permitting thresholds for land disturbances have become increasingly smaller. Furthermore, the potential stormwater impacts after the facility is built/expanded may not be critically reviewed during the planning stages; however on-site management of stormwater is becoming an important and potentially expensive issue in water quality as well as quantity - particularly in drought-prone regions where stormwater recharge is a critical water supply resource.

STORM WATER DISCHARGES

Project construction activities may require permitting under state laws. In many states, construction general storm water permits are required for land disturbances as small as one (1) acre (or less without a common plan of development). These permits typically require a storm water pollution prevention plan (SWPPP) to address erosion and sediment control during construction and runoff subsequent to

development. Along with a SWPPP, permit requirements often include weekly inspections, monitoring, sampling, and regular maintenance and repair of installed best management practices (BMPs). Many states require that only certified inspectors perform these activities, which may further increase unplanned project costs in training and/or consultant help if a project owner is not prepared.

To address facility associated storm water discharges after construction, states have adopted their own regulations, or defer to the federal Clean Water Act to support implementation of a General Industrial Storm water Permit if the facility is engaged in industrial activities defined by select SIC codes. Similarly, the facility may be subject to an individual source permit depending on the complexity of their operation and/or the conditions of the receiving water body.

If the facility or expansion will involve outside storage of any industrial materials, stormwater compliance begins with registering a Notice of Intent for a storm water permit with the permitting agency. The subsequent permit application typically will include development of a SWPPP which describes the controls/BMPs to be utilized to mitigate storm water impact from site activities. The permit will include this plan as well as require inspections (at least quarterly) and may include monitoring. Increased monitoring is becoming and will continue to be more common as the regulations become more stringent to address the adverse impact of storm water discharges on water quality.

The most cost-effective method to avoid these issues is generally to design (and keep) everything (including materials storage, dumpsters, etc.) under roof. If this can be done, the facility can file with the permitting agency for a No Exposure Exclusion certificate, and with the agency concurrence, avoid permitting and all permit associated costs.

TMDLS

Under the Clean Water Act, all U.S. waters are to be “fishable” and “swimmable”. The states establish uses and adopt water quality standards to protect these uses. Every two (2) years the states identify “impaired” waterways and develop total maximum daily loads (TMDL) for the pollutants that are impairing the waterways. TMDL plans are developed in coordination with state agencies, watershed groups, academia, businesses, etc. If a facility discharges water with a TMDL pollutant of concern into an impaired waterway, it will be required to meet the receiving water body’s load allocation(s) which may involve costly controls and pretreatment. Therefore, the planning process for construction or expansion of a facility should include an assessment of the proposed location to determine if there is an impaired waterway and why is it listed as impaired. With research and planning the facility may be able to mitigate this potential issue.

LOCAL ISSUES: CHESAPEAKE BAY AREA CONCERNS

The Chesapeake Bay is an extremely important watershed of approximately 64,000 square miles covering six (6) states and the District of Columbia. Bay restoration has been the subject of research and environmental initiatives since 1983. Continuing efforts focus on both point source and non-point source nutrient management (e.g., nitrogen, phosphorus, and sediment), toxics reductions and other initiatives. EPA has established a Bay TMDL which addresses all segments of the Bay and its tidal tributaries that are on the impaired waters list. Measures to restore the Bay are addressed in the EPA approved Watershed Implementation Plans which prescribe waste load and load allocations and actions and control measures to be implemented. At least 60% of these measures are to be in place by 2017 and the remainder by 2025. In addition to the Clean Water Act, nitrogen contribution to tidal waters from air deposition is addressed under the Clean Air Act.

What does this mean for business growth in the Chesapeake Bay area? The Chesapeake Bay Watershed along with its bay tributary river basins covers a large portion of the Mid-Atlantic region. General permits, as well as individual permits, are already requiring facilities to sample and analyze for nitrogen, phosphorus, and total suspended solids (TSS) against benchmark concentrations designed to be protective of the Bay TMDL. If benchmark sampling results indicate that thresholds are exceeded, the facility will be required to develop a Loading Plan to address the problem. It is fair to assume that waste load allocations and effluent limitations will be further imposed, as the regulations become ever more stringent. Many municipal treatment plants are already charging their users surcharges for nutrients, and those costs are likely to increase as allocations and effluent limitations emerge. All of these issues have the potential to impact site selection for new business ventures and/or influence considerations or facility expansions.