# 6.0 METHODS OF MITIGATING ADVERSE ENVIRONMENTAL IMPACTS

## 6.1 Short Term Impacts

### 6.1.1 Soils

Best management practices (BMPs) will be employed during construction of the TPCR to minimize soil movement. These BMPs include using stabilized crushed stone construction entrances and exits, sediment basins, silt fences, hay bale sediment barriers, mulching and revegetation of exposed soils, and soil wetting to reduce airborne dust. Construction activities will adhere to Soil Erosion and Sediment Control Plans to be certified by the Freehold and Somerset-Union Soil Conservation Districts.

### 6.1.2 Air Quality

Although fugitive dust emissions have the potential to create locally high levels of total suspended particulates due to construction activities, impacts will be minimized by use of appropriate mitigation measures. Measures to minimize the generation of fugitive dust include:

- The use of properly maintained construction equipment;
- The use of tarp covers on trucks transporting materials to and from the site;
- The use of tarps or other storage methods to prevent exposure of on-site materials that can become airborne;
- The prohibition of open burning of construction waste products on the site; and
- The dampening of unpaved roadway areas and excavation areas at the site to suppress dust.

### 6.1.3 Noise

The following steps will be taken, as appropriate, to control noise levels generated during construction:

- Maintain exhaust mufflers on mobile equipment (such as bulldozers, trucks and cranes) in good working condition;
- Operate noisy equipment during periods when ambient sound levels are high (e.g., during daytime on weekdays); and
- Maintain mechanical equipment such as trucks, compressors, and cranes in good working condition and turn the equipment off when not in use, rather than allowing the engines to idle.

### 6.1.4 Hazardous Materials

Depending upon the alternative alignment that will be used for the project, materials from a former landfill and existing waste lagoon areas may be encountered within the TPCR during construction activities. If so, special considerations will have to be incorporated into the procedures utilized in driving of piles and site grading with regard to the handling of landfilled materials. These procedures will be pre-approved by the NJDEP through a Landfill Disruption Permit. It is anticipated that minimal landfill materials will be disturbed as part of pile driving. Any disturbed landfill materials that are encountered will be re-used in embankments and covered with soil or disposed of at an appropriate off-site facility.

Due to past industrial uses in the project area, contaminated soils, particularly in regard to oil, gasoline, metals, semi-volatiles and PCBs, may be present in the soils along the right-of-way of the TPCR. Initial environmental borings efforts in the western most Cytec lagoon detected lead and thallium is excess of NJDEP standards. Further soil sampling and laboratory analysis will be conducted prior to construction to identify any additional contaminant concentrations necessary to substantiate appropriate re-use and/or disposal of these materials, as may be required. Soil contaminated above NJDEP Cleanup Criteria identified during preconstruction remedial investigations will be handled, re-used, segregated, and/or appropriately recycled/disposed as per procedures in an NJDEP-approved RAW.

### 6.1.5 Traffic

Traffic on Tremley Point Road and Industrial Highway may be temporarily impacted during construction of the TPCR to allow for construction equipment access and construction. Traffic delays from such closures will be minimized in accordance with policies and procedures to be coordinated with the Linden and Carteret Police Departments. Police officers will be utilized to direct traffic around construction activities to help maintain the flow of traffic.

### 6.1.6 Historic and Archaeological Resources

As there is a low potential for archaeological resources it the project area, a site specific Stage 1B Prehistoric Survey is recommended within the right-of-way of the area, once a preferred alternative alignment has been determined. If any archaeological resources are found on the site, the extent of the resources will need to be better defined in consultation with the State Historic Preservation Officer (SHPO).

## 6.2 Long-Term Impacts

### 6.2.1 Water Quality

The amount of chlorides present in the highway runoff is a function of the area of pavement treated with seasonal de-icers and the type and quantity of the de-icers used. Although the proposed TPCR and the surrounding roadways will result in an increase in the area of pavement that will be treated with de-icers, the additional chloride load will be incremental and will be minimized through the application of best management practices and the implementation of stormwater management systems designed pursuant to the NJDEP Stormwater Management regulations.

### 6.2.2 Wetlands

Construction of the TPCR will impact wetlands (i.e., predominantly shading impacts) with up to 14.2 acres of wetlands resources (i.e., for the alternative with the greatest wetlands impacts) depending upon any alternative alignment selected by the agencies. In order to mitigate/compensate for unavoidable wetlands impacts and night heron foraging areas, the Authority is proposing the enlargement of the Piles Creek Wetlands Mitigation site located on Tremley Point by creating additional tidally influenced wetlands from existing uplands (see Figure No. 22). The creation of wetlands is sufficient to reduce wetlands impacts of the proposed project alternative to a non-significant level. The purchase of wetlands credits from a wetland mitigation bank will also be pursued as an additional remedy to compensate for the unavoidable impacts of the TPCR should an alternative alignment be selected that would require such. The existing wetlands areas on the brownfield redevelopment site total 0.455 acres and are not to be adversely impacted as part of the redevelopment of the Tremley Point area.

### 6.2.3 Wetlands Findings

In accordance with Executive Order 11990, Protection of Wetlands, the USCG has determined that there is no practicable alternative to construction in wetlands and that the proposed action includes all practicable measures to minimize harm to wetlands, which may result from such use.

### 6.2.4 Air Quality

The results of the Traffic Modeling Analysis for the TPCR obtained a LOS C or better by implementation of the project. As such, detailed air quality modeling is not required by the NJDEP. With the advent of improved vehicular access in the region through implementation of the project, long-term benefits to air quality should be realized.

### 6.2.5 Noise

The noise level disturbances at the closest residential receptors (Garden Apartments) are predicted to be below 3 dBA, which is defined as barely perceptible. Other receptors identified in the Noise Analysis to have slightly over 3 dBA noise level are not defined as "permanent residences" and therefore, noise barrier consideration is not applicable as per Authority noise criteria. Anticipated increases in noise levels above 67 dBA within Carteret are attributed to several approved developments in Carteret and not from the TPCR.

### 6.2.6 Traffic

#### 6.2.6.1 Opening year (2010) Traffic Mitigation

The implementation of the TPCR will serve as mitigation in its own right. The City of Linden has already approved the redevelopment of existing sites (Tremley Expansions). While some of the approved redevelopment of existing facilities has not yet been undertaken, once implemented, these projects are anticipated to significantly increase traffic on South Wood Avenue. The current AM peak traffic on South Wood Avenue is 87 trucks and 248 vehicles. If all of the approved Tremley Expansions are implemented, the AM peak traffic on South Wood Avenue will increase to 401 trucks and 714 vehicles. Based upon the modeling conducted for the project, with the construction of the TPCR, a significant percentage of these vehicles are expected to abandon the use of South Wood Avenue and instead use the TPCR. (See Table 5-5 in Section 5.1.6.4.)

The traffic modeling results indicate that with the TPCR in place intercepting traffic, the Tremley Expansion traffic on South Wood Avenue during the AM peak period would actually decrease to 50 trucks and 200 vehicles, a significant decrease over existing traffic conditions even without the Tremley Expansions.

By providing a direct access from Tremley Point Road to Industrial Highway, it is anticipated that traffic will be decreased in the residential section of Linden and a direct connection to Interchange 12 in Carteret will be provided. With anticipated future growth and associated increased traffic in the area, the LOS at the intersection with local roads should dramatically improve over the existing conditions.

#### 6.2.6.2 Future year (2029) Traffic Mitigation

Traffic analysis for future year (2029) traffic has been designed with projections for future growth in the area. No further mitigation measures are deemed necessary.